



## INNOVATION FACTORS IN THE AGRICULTURE SECTOR IN ALBANIA

A Master's Thesis submitted for the degree of  
"Master of Business Administration"

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## Affidavit

I, **DENALDA KUZUMI**, hereby declare

1. that I am the sole author of the present Master's Thesis, "FACTORS OF INNOVATION IN THE AGRICULTURE SECTOR IN ALBANIA", 75 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted this Master's Thesis as an examination paper in any form in Austria or abroad.

Vienna, 29.07.2009

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## Abstract

This paper deals with innovation in the agricultural sector in Albania by looking at it primary from a company level perspective, but in correlation with the environmental settings and sector situation.

A large amount of the population (more than 50 percent<sup>1</sup>) is depended on agriculture activity and contributes with almost one fifth of the approx. 10 billion USD Gross Domestic Production of Albania. The sector is by facts an important pillar of the economy but is trapped by several development problems. The decrease of its weight to the GDP from 50 percent in 1990 to 18.5 percent in 2008 and the many other problems related to underdevelopment that it encounters such as insufficient supply with infrastructure, high land fragmentarisation, poor irrigation systems of farms speak per see. Yet it can become a potential sector for the future and among the reasons: the good geographical position and natural conditions such as climate sun, natural water supply, fertile land, skilled labor force.

There are several reasons found in different papers and theories, starting from the Schumpeterian view of innovations as a driving force of development of the society as a resultant of a chain of small innovations brought about by little firms, to the 2008 World Development Report, which conclude that agricultural development through innovation will be central to reducing poverty.

This thesis looks at the challenge of further development of this sector form the innovation and entrepreneurship spectrum and it recognizes three main objectives. The first objective is to investigate the factors of innovation and how innovation happens in the agriculture sector in Albania by focusing in its core unit the agriculture businesses.

Drawing a sector pattern of innovation management with respect to theoretical background on innovation factors within a company goes hand in hand with the situational analysis and business environment of the agriculture sector. Therefore the second objective is a deeper understanding of the actual situation of the sector through a) a detailed investigation of competitiveness related economic facts such as domestic production vs. domestic demand, yields of specific crops, turnover, trade flows etc with the aim of insight on competitiveness characteristics by subsectors; b) investigation of environmental settings of the sector with respect to innovation through the loop of innovation systems theory.

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<sup>1</sup> Institute of Statistics Online [www.instat.gov.al](http://www.instat.gov.al)

The third objective is to integrate findings at a company level and from the situational analysis of the sector with respect to competitiveness and environmental settings, in broad recommendations on how to better enable innovation and development in this sector by addressing weak points at a micro and macro perspective.

The core theory I am relying on is the systemic perspective to innovation within a company, introduced from Prof. Franke in the Innovation Management Module, which presented a set of important dimensions with respect to innovation such as top management/entrepreneurs leadership and his role as a promoter of innovation, organization culture, marketing and organization processes as enhancers of innovation within a company. The extent of integration of company dimensions such as innovation marketing, sources of innovation, innovation climate, and processes of innovation will provide the mix of innovation factors that can be identified as a pattern for the sector.

To link this with the bigger frame I rely on the concept of national innovation systems. Innovation Systems are treated often from recent research as a promising yet difficult to implement concept for the further development of agriculture, also in developing countries. The innovation systems literature represents a significant change from conventional linear approach to research and development by providing an analytical framework that explores complex relationships among heterogeneous agents, social and economic institutions and endogenously determined technological and institutional opportunities. This shift in perspective is appropriate for the study of developing country agriculture because it captures the intricate relationships between diverse actors, processes of institutional learning and change, market and non market institutions, public policy, poverty reduction and socioeconomic development (Spielman 2005).

I found it was important to implement an approach that entangles the diversity of actors that are core to the above mentioned concepts. To achieve this approach towards innovation in agriculture I focused on two main streams: i) the agricultural business as the core unit of this sector of the economy ii) the existing business environment and regulatory framework with respect to this unit.

The first part of this thesis concentrates in the actual situation of the sector, in order to better understand by means of economic fact and figures its structure, the level of competitiveness and the overall picture of the sector, companies are operating in.

This was followed by a careful analysis of the regulatory, governmental and institutional framework in agriculture, on how this important complementary asset to the agriculture development in overall (I say complementary asset because it is very common especially in developing countries that agriculture is totally depending to the state support in terms of R&D and many other services) has contributed till now.

The empirical part focuses on the field investigation and findings from qualitative interviews with different actors, part of value chains of some agricultural subsectors which were chosen for their higher competitiveness ranking (qualitative ranking) as compared to other sectors. Findings concentrate on the level of innovativeness of the agriculture businesses, factors of innovation within these companies, while always comparing it with the systemic perspective and theoretical background of innovation management within companies.

Then I try to integrate my findings at a firm, sector and business environment level and formulate future prospects for development with respect to the findings and existing development theories that have innovation at their core.

Innovation and entrepreneurship are two non familiar concepts for the core unit of the agriculture sector. Signs of both concepts in the every day activity of agricultural businesses, even though implemented unconsciously, were traceable. Some factors were typical for the agricultural sector firm more than others.

The level of innovativeness varied according to the activity the company was engaged. It was possible to differentiate innovation management patterns between two main categories: the agricultural production firms and firms providing services for the agricultural farm, such as seedling providers, input providers, consolidators etc.

Agricultural farms fit totally in the concept of survival entrepreneurship. They innovate and came up with new solutions because of the need to survive in the market. Innovation comes only and mainly in the form of product innovation in an incremental form that was backed up usually only by the initiative entrepreneurship of the owner of the farm. Other factors of innovation such as marketing of innovation, innovation processes, innovation culture, are not recognized and not implemented.

The other category, services providers are more entrepreneurial, accounting for vertical integrations upon the value chain, for the application of new business models and innovation at different levels within their company. Innovation here is still concentrated within the product innovation concept but is correlated with some marketing of innovation and strategic thinking at the entrepreneur's decision making level. Even though the services providers are a step forward a lot needs to be done to address the issue of innovation management in the agricultural sector.

Rural population involved in agriculture activities has shown features of survival entrepreneurship and innovation while it is time to shift from a need based survival innovation, into better and more competitive ways of doing business in agriculture while considering innovation and entrepreneurship as an important factor of progress.

How can their achievements be rated when we consider the external development of the sector?

This brings us to the next finding related to the environmental settings and actual competitiveness of the sector. Some subsectors of agricultural production have shown to be more competitive than others with respect to turnover, yields of areas planted and agricultural production. Subsectors like horticulture and vegetables production seem to have better chances of further development, accompanied by natural and climate conditions of the country. Even though these subsectors seem to do better than the other sectors they are posed to problems that the agricultural sector carries for years since the system change such as: high land fragmentation, insufficient infrastructure supply, an overall production portfolio of the farms that includes agriculture production that are not competitive, non well functioning value and supply chains, insufficient supporting environment.

On the other hand the environmental settings covering business in agriculture such as legislative framework, strategies of development, regulation have shown to be very weak. While attempts for improvement through the implementation of strategies for the development of the agricultural focus on issues such as competitiveness, market efficiency, and other exogenous factors entrepreneurship and innovation of the core unit, do not play a substantial role in the agricultural business environment till now and they are also not a substantial part of the action to implement the strategic vision of agriculture development. While among the the strategy aims of agriculture development marketing of agricultural products and overall economic efficiency of the sector is included, approaches are traditional and too broad, leaving room for under performance to a certain extent. State measures for reaching the above mentioned goals are divided only in financial and legislative measures. Despite that, innovation is seen as a process related to technology and crop quality improvement research, concentrated in the TTCs (technology transfer centers), while entrepreneurship in agriculture is not mentioned in the strategy at all. These two concepts so much related to competitiveness and to dynamic economic development from theory are only fragmentary placed in the overall strategic and action plan.

The approach to innovation is concentrated in top-down technology transfer structures represented by TTCs and extension services with weak two sided interactions of actors, low performance, capacity and organizational problems.

There are different ways to go about to increase competitiveness but there are two good reasons why the approach to address development challenges in the sector should have innovation and entrepreneurship at its core: first because similar attempts based on a traditional approach to problem definition and solution have shown not to be effective till now, second because it is important to design a process that entangles all the problems, whose core is the process not the identification of problems and their solutions from a static perspective.

A systemic innovation approach can concentrate on the nodes and their interaction at the same time for a more complete and impactful, yet stepwise intervention for the sector development.

Taking in consideration the problems of the core unit and of the environmental settings in Albania, the innovation system is suggested as one approach to be considered in the socio-economic and development context of the country. A system that would allow the interaction and inclusion of both main stream state and private entities since innovation and entrepreneurship for development in agriculture can not be implemented one without the other. The innovation system approach should also consider the local development context of the core unit – the private agricultural firm- with respect to innovation and entrepreneurship. It should be designed with respect to the innovation system theory but also with the strategic aim of enhancing the systemic innovation and innovation success at a micro level. This strategic aim can be the driving force of the creation of an innovation system for the agriculture sector and a main performance indicator for its outcome.

## Table of Contents

1. Introduction.....	8
1.1 Objective of Master Thesis .....	8
1.2 Problem Formulation .....	9
1.3 Findings and conclusions.....	11
2. Literature and Methods.....	13
2.1 MBA Literature.....	13
2.2 Other Theoretical Sources.....	14
2.3 Methodology.....	16
2.3.1 Secondary data research.....	16
2.3.2 Empirical Part.....	17
2.3.1.1 Criteria of the selection of the subsectors and of the specific companies.....	17
2.3.1.2 Companies Sampling.....	18
2.3.3 The questionnaire .....	19
2.3.4 Data elaboration and interpretation.....	19
3. Situational Analysis of the Agriculture Sector.....	20
3.1 Agriculture – An overview.....	20
3.2 Crops and Subsector.....	20
3.2.1 Production.....	20
3.2.1.1 Vegetables Production – A closer look.....	21
3.2.2 Advantages and disadvantages in production and yield-A regional view.....	21
3.2.2.1 Cereals.....	16
3.2.2.2 Vegetables production as compared to the region.....	22
3.3 Fruits Production.....	23
3.3.1 Production of fruit as compared to countries of the region.....	23
3.4 Trade of agricultural products.....	24
3.5 Household Farm as production unit of agricultural goods.....	25
3.6 Supply Chains.....	26
3.7 Business environment for agriculture business units.....	27
3.7.1 Legislative Framework.....	27
3.7.2 Government Orientation-Strategy Development.....	28
3.7.3 Institutional/Organizational Framework.....	30
3.8 Summary on the situational analysis of agriculture sector and its effects on innovation management in the sector.....	32
4. Factors of innovation in agriculture.....	34
4.1 Theoretical Background.....	34
4.2 Perceptions about innovation.....	37
4.3 Product Innovation.....	37
4.3.1 Company specific findings.....	38
4.3.2 Summary on Product Innovation in Agriculture Businesses.....	39
4.4 Sources of innovation.....	40
4.4.1 Category specific findings.....	40
4.4.2 Summary on findings on sources of innovation.....	41
4.5 Marketing of innovation.....	42
4.5.1 Sample categories findings on marketing of innovation.....	42
4.5.2 Summary on marketing of innovation findings.....	45
4.6 Business Model vs. Business Model Innovation.....	46
4.6.1 Services providers implementation of the entrepreneurs business model.....	46
4.6.2 Farmers decisions vs. entrepreneur’s business model.....	48
4.7 Organization and processes enhancing Innovation.....	48
4.8 Innovation Culture and Entrepreneurial Leadership.....	50
4.8.1 Outcomes with respect to innovation culture.....	50
4.8.2 Entrepreneurial mindset.....	51
5. Conclusions.....	51
5.1 The Macro Perspective.....	52
5.2 The Micro Perspective.....	54
5.3 Future Prospects -Enhancing Innovation and entrepreneurship in agriculture -The bigger frame.....	57
6. Bibliography.....	62
7. Annexes.....	65



## Figures and boxes

Figure 1: Vegetables production in Albania during 2007.....	21
Figure 2: Production of vegetables in the countries of the region 1992-2007, in tones.....	22
Figure 3: Yield per hectare of vegetables for the countries of the region 1992-2007.....	22
Figure 4: Detailed production of fruits in 2007.....	23
Figure 5: Yield per hectare of fruits for the countries of the region 1992-2007.....	23
Figure 6: Trade of crops and fruits vs. production during 2000-2008 in 000 ton.....	24
Figure 7: Success factors of innovation.....	35
Figure 8: Level of innovativeness and positioning of companies in the agriculture sector.....	40
Figure 9: Approaches to marketing of innovation in agricultural firms.....	46
Figure 10: Different kinds of companies' organizational cultures.....	50
Figure 11: Innovation factors and the innovation management process in agricultural farms.....	56
Figure 12: Innovation factors and management- services providers around agricultural production.....	56
Box 1: Means induced innovation in Divjaka.....	40
Box 2: Defining Bruka Company Blue Ocean.....	49

## Abbreviations

FAO – Food and Agriculture Organization

ACIT – Albanian Centre for International Trade

AAC – Albanian Competitiveness Project

IFPRI – International Food Policy Research Institute

NARS – National Agriculture Research System

USAID – United States Agency for International Development

GDP – Gross Domestic Product

CMD – Council of Ministers Decision

IBRD – International Bank for Reconstruction and Development

USD – United States Dollars

R&D – Research and Development

B2B – Business to business

HS – Harmonized System

TTC- Technology Transfer Center

SAA- Stabilization and Association Agreement

EU –European Union

LINK – Learning Innovation Knowledge

# 1. Introduction

Agriculture accounts for 18.5 percent of the around 11 billion USD Gross Domestic Product in 2008 in Albania<sup>2</sup>. Even though its GDP share has been decreasing from 54.2 percent of the GDP in 1992 to 34.2 percent in 2001 to 18.5 percent in 2007 agricultural production has just experienced stagnation in terms of value and quantity. Figures of employment speak up for an important sector of the economy. Other natural indicators such as climate, geographical position, are favorable to the further development of the agriculture sector and compose a natural competitive advantage. Its complex positioning to the overall economy and its stagnation make me believe that it is a very specific moment of its development: an observable pause that comes as a result of the unsuccessful struggle to find the right path of development within the complex constellation of country's development, strategic aims, existing market economy, globalization and global competition.

## 1.1 Objective of the thesis

This thesis looks at the challenge of further development from the innovation and entrepreneurship spectrum and it recognizes three main objectives. The first objective is to investigate the factors of innovation and how innovation happens in the agriculture sector in Albania by focusing in its core unit the agriculture businesses. I focus on innovation within agriculture businesses in order to understand and show how innovation happens, its characteristics and dynamics, a process that finalizes with the introduction of patterns of innovation management for agriculture sector. This will be enabled by identification of the primary substance of innovation management for agriculture businesses out of a set of predefined components. The extent of integration of company dimensions such as innovation marketing, sources of innovation, innovation climate, and processes of innovation will provide the mix of innovation factors that can be identified as a pattern for the sector.

Drawing a sector pattern of innovation management in agriculture businesses with respect to theoretical background on innovation factors within a company and differentiating among interviewed firm categories goes hand in hand with the situational analysis and business environment of the agriculture sector. A resulting standing point from empiric research completed with the sectors analysis where they operate will create conditions for practical and down to earth suggestions for improvements related to innovation processes at the company level.

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<sup>2</sup> The figures of the first paragraph are taken from Bank of Albania Economic Bulletin on [www.bankofalbania.org](http://www.bankofalbania.org) and World Bank Online Database <http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/0,,contentMDK:20535285~menuPK:1192694~pagePK:64133150~piPK:64133175~theSitePK:239419,00.html>

Therefore the second objective is a deeper understanding of the actual situation of the sector through a) a detailed investigation of competitiveness related economic facts such as domestic production vs. domestic demand, yields of specific crops, turnover, trade flows etc with the aim of insight on competitiveness characteristics by subsectors; b) investigation of environmental settings of the sector with respect to innovation through the loop of innovation systems theory.

The third objective is to integrate findings at a company level and from the situational analysis of the sector with respect to competitiveness and environmental settings in broad recommendations on how to better enable innovation and development in this sector by addressing weak points at a micro and macro perspective.

## **1.2 Problem Formulation**

A large amount of the population (more than 50 percent<sup>3</sup> of the population) is depended on agriculture activity with farming being its main economic activity and contributing almost one fifth to the approx. 10 billion USD gross domestic production of Albania. The sector is by facts an important pillar of the economy and for the further economic development of the country. Agriculture in Albania suffers unfavorable and favorable conditions. Among favorable conditions are the very adapt climate for the growth of agriculture crops, the vicinity to European markets, the still low wages and standards of living in the country, abundant water supply, high percentage of rural population, a very adaptive farming population, which without much support and with the small farm structure (approx 1.2 ha per farm) has shown to be capable of smart decisions in production shifts towards more rentable agricultural crops in order to remain competitive. Among unfavorable conditions I would mention the high fragmentarisation of the land that brought farmers to the situation of abruptly thinking with their own head and having to suddenly make their own decisions on what to plant, when to harvest, how to market, how to be technologically and economically efficient, how to make a profit, after 50 years of central and state planed economy,

This very difficult starting point is accompanied with difficulties brought by an insufficient supply with basic infrastructure such as the watering and irrigation systems for the highly fragmented parcels, the low level of technology usage<sup>4</sup>, low level of investments, low harmonization with hygiene and quality standards.

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<sup>3</sup> Institute of Statistics Online [www.instat.gov.al](http://www.instat.gov.al)

<sup>4</sup> Mechanical expenditures account for only 5% of total farm expenditures in 2007 according to figures in the Statistical Yearbook 2007, Ministry of Agriculture

In a legislative setting where all farmers are seen and treated as sole entrepreneurs under the Albania law, under the conditions of a free market economy and very symbolic state support and intervention during the last 18 years of market economy, the question on how entrepreneurship happens in Albania in the agriculture sector and when and how it involves innovation, is almost legitimate.

Innovation is usually seen as a feature of developed countries and an exclusive tool for the more advanced ones, this maybe the reason why many papers with recommendations for policies and country strategies focus on traditional economic theories and practices, reach as far as competitiveness, while innovation has never been a topic. Innovation, essential for economic growth according to Schumpeter, embraced more and more in the modern economic thinking is not easily encountered in agriculture economic and policy research, especially in developing countries. This is about to change; several papers and recent studies have concentrated recently on innovation in agriculture, what it means in a holistic sector view and at a firm level, how innovation can enhance the competitiveness of agriculture in developing countries and contribute as a mean of poverty elevation and community development.

Therefore it is time to consider this concept as an important feature and driving force of moving away from transition features of the agriculture sector in Albania.

The investigation of innovation factors of micro enterprises based on a systemic perspective of innovation management as well as on the macro perspective is an important starting point. The missing basic understanding of innovation in agriculture at a firm level acts as a burden for the implementation of innovation and entrepreneurship concept through a tailored approach, focusing on the core unit of the sector (the agricultural firm), by means of enhancement of the environmental settings, external support, strategies and policies focus.

Innovation and entrepreneurship may happen every day in agriculture sector while a little is known about innovation features in overall in Albania and of course much less in the agriculture sector. Coverage of firm innovation and patterns of innovation management in agriculture sector can give answers through the innovation loop of the actual situation at a company level: why things are where they are and why some approaches have better outcomes than others.

Finding out about the level of innovation in the Albania agriculture sector, trying to formulate it in terms of innovation factors as described by theory becomes necessary for the next step: integration and linkage to a more systemic approach towards innovation.

This on the other hand requires knowledge and deeper understanding of the actual situation of the agriculture sector with respect to economic facts, business enabling environment and state support.

### 1.3 Findings and Conclusions

Innovation and entrepreneurship are two non familiar concepts for the core operating unit (the agriculture business/farm) of the agriculture sector. Even though implemented unconsciously I was able to trace signs of both concepts in the every day activity of agricultural businesses. I was able to identify among the innovation factors, some that were typical for the agricultural sector firm. Level of innovativeness varied according to the activity the company was engaged. A difference in innovation management patterns between two main categories: the agricultural production firm and firms concentrated in services around the agricultural farm such as seedling providers, input providers, consolidators, resulted from close observation.

Agricultural farms fit totally in the concept of survival entrepreneurship. They innovate and came up with new solutions because of the need to survive in the market. Innovation comes only and mainly in the form of product innovation in an incremental form that was backed up usually only by the initiative entrepreneurship of the owner of the farm. Other factors of innovation such as marketing of innovation, innovation processes, innovation culture, are not recognized and not implemented. Survival entrepreneurship exercises had mostly played well for the small farm till now but it is time to shift to a better and stronger business concept.

The other category, services providers are more entrepreneurial, accounting for vertical integrations upon the value chain, for the application of new business models and innovation at different levels within their company. Innovation here is still concentrated at the product innovation level but is correlated with some marketing of innovation and strategic thinking at the entrepreneur's decision making level. Even though the services providers are a step forward, a lot needs to be done to address the issue of innovation management in the agricultural sector.

Rural population involved in agriculture activities has shown features of survival entrepreneurship and innovation, while it is time to shift from a need based survival innovation, into better and more competitive ways of doing business in agriculture while considering innovation and entrepreneurship as an important factor of progress.

How can their achievements be rated when we consider the external development of the sector?

This brings us to the next finding related to the environmental settings and actual competitiveness of the sector. Some subsectors of agricultural production have shown to be more competitive than other with respect to turnover, yields of areas planted and agricultural production. Subsectors like horticulture and vegetables production seem to have better chances of further development, accompanied by natural and climate conditions of the country. Even though these subsectors seem to do better than the other sectors they are posed to problems that the agricultural sector carries for years

since the system change such as: high land fragmentation, insufficient infrastructure supply, an overall production portfolio of the farms that includes agriculture production that are not competitive, non well functioning value and supply chains, insufficient supporting environment.

On the other hand the environmental settings covering business in agriculture such as legislative framework, strategies of development, regulation have shown to be very weak. While attempts for improvement through the implementation of strategies for the development of the agricultural focus on issues such as competitiveness, market efficiency, and other exogenous factors entrepreneurship and innovation of the core unit, do not play a substantial role in the agricultural business environment till now and they are also not a substantial part of the action to implement the strategic vision of agriculture development. While among the the strategy aims of agriculture development 2007-2013 is marketing of agricultural products and overall economic efficiency of the sector approaches are traditional and in a sense broad, leaving room for under performance to a certain extent. State measures for reaching the above mentioned goals are divided only in financial and legislative measures. Despite that, innovation is seen as a process related to technology and crop quality improvement research, concentrated in the TTCs (technology transfer centers), while entrepreneurship in agriculture is not mentioned in the strategy at all. These two concepts so much related to competitiveness and to dynamic economic development from theory are only fragmentary placed in the overall strategic and action plan.

The approach to innovation is concentrated in top-down technology transfer structures represented by TTCs and extension services with weak two sided interactions of actors, low performance, capacity and organizational problems.

There are different ways to go about to increase competitiveness but there are two good reasons why the innovation approach entangling the whole system should and could have been considered. First because similar attempts based on a traditional approach to problem definition and solution with its roots at neoclassical economy (similar problem definition and solutions such as institutional building, fragmentary financial support in competitiveness related areas: marketing, production, technology transfer) have shown not to be effective till now. Second because it is important to design a process that entangles all the problems, whose core is the process not the identification of problems and their solutions from a static perspective.

A systemic innovation approach can concentrate on the nodes and their interaction at the same time for a more complete and impactful, yet stepwise intervention for the sector development.

Taking in consideration the problems of the core unit and of the environmental settings in Albania, the innovation system is suggested as one approach to be considered in the socio-economic and development context of the country. A system that would allow the interaction and inclusion of both

main stream state and private entities since innovation and entrepreneurship for development in agriculture can not be implemented one without the other. The innovation system approach should also consider the local development context of the core operating units with respect to innovation and entrepreneurship. It should be designed with respect to the innovation system theory but also with the strategic aim of enhancing the systemic innovation and innovation success at a micro level. This strategic aim can be the driving force of the creation of an innovation system for the agriculture sector and a main performance indicator for its outcome.

## **2. Literature and methods**

### **2.1 MBA Program Literature**

There has been a lot of theoretical data that has been elaborated during the MBA modules, which helped me design the right qualitative metrics for the measurement of inclusion of factors of innovation in the company and innovation management. The core theory I am relying on is the systemic perspective to innovation within a company, introduced from Prof. Franke in the Innovation Management Module, which presented a set of important dimensions with respect to innovation such as top management/entrepreneurs leadership and his role as a promoter of innovation, organization culture, marketing and organization processes, as enhancers of innovation within a company.

“The success factors constitute a complex and interdependent system in each company. This means that it is not enough to copy single factors. Also a company cannot simply “Switch to innovativeness” overnight –systems need time to evolve.” (Franke, 2008)

This systemic way of looking at innovation in a company was also backed up and elaborated further by the other single modules throughout the MBA. Papers and slides from all modules especially from innovation management, sources of innovation, innovation culture, organization of innovation and entrepreneurship module were very useful in this context. The marketing, organizational, culture and management movements and decision makings of companies in my sample were valued through the loop of theoretical background gained in these modules.

In more details:

Sources of innovation: Companies usage of sources of innovation was qualitatively contested with the theory of the innovation funnel and the level of engagement of all possible sources of innovation as found in Dr. Pruegel MBA- Handouts on sources of innovation.

Product Innovation: Lectures on radical and all levels of innovation were a backbone of rating the level of innovativeness of the companies; this was a starting point on deciding on characteristics of innovation in agriculture firms.

Marketing of innovation: Methods and approaches of marketing in the interviewed companies were compared to traditional marketing methods with respect to the 4ps and other marketing processes such as marketing plans, market research etc. Innovation marketing specific methods such as mass customization, customer involvement and the extent of customer involvement were also a point of reference for discovering the extent of implementation of marketing of innovation in the sample.

Organization of innovation: The different approaches and processes that could be included in the company with the aim of enhancing innovation, such as incentive systems, innovation culture, were a good ground of knowledge to estimate how this should happen in a company and if it is happening in the selected companies.

This theoretical perspective makes possible deeper understanding of how innovation happens and which of the above mentioned factors are more engaged in innovation management in agriculture firms in Albania.

## **2.2 Other theoretical sources**

Other research sources containing firm oriented innovation studies conducted in developing countries or studies that concentrate on the environmental analysis of developing countries with respect to innovation were a useful source in many levels.

Sources like World Bank papers, World Economic Forum Indexes were of great help to estimate the environmental framework in which companies are operating and understand the macroeconomic aspects of the country. Country specific data on agriculture firms and agriculture sector, like their average turnover, average sizes, sector growth and other info were available from in country sources such as the national Institute of Statistics, The Ministry of Agriculture Publications, and The National Bank of Albania etc. These sources were very useful for the analysis of the actual situation of the sector.

There are several reasons found in different papers and theories, starting from the Schumpeterian view of innovations as a driving force of development of the society as a resultant of a chain of small innovations brought about by little firms, to the 2008 World Development Report, which conclude that agricultural development through innovation will be central to reducing poverty. I would also mention recent studies and researches on innovation in agriculture in developing countries such as the IFPRI conference papers, LINK papers I found online concentrating on the subject: innovation systems in agriculture in developing countries.

Innovation Systems are treated often from recent research as a promising yet difficult to implement concept for the further development of agriculture, also in developing countries.



As different researchers admit in their papers in the framework of the IFPRI conference with this theme, advancing agricultural development requires knowledge and innovation in several areas

- Technology – finding the best fit instead of the best practice
- Institutions- more socioeconomic research is needed to understand institutional constraints to innovating to improve livelihoods. Institutions as the system of rules that constitutes the environment within which innovation occurs- laws regulations traditions, customs, beliefs and norms
- Policies – Appropriate, relevant and timely public interventions are needed to promote and facilitate the creation sharing and use of knowledge for innovations
- Organizations – Public and private groups and companies must innovate to become more effective and efficient in the services and products they provide.

According to Spielman (2005) the innovation systems literature represents a significant change from conventional linear approach to research and development by providing an analytical framework that explores complex relationships among heterogeneous agents, social and economic institutions and endogenously determined technological and institutional opportunities... This shift in perspective is appropriate for the study of developing country agriculture because it captures the intricate relationships between diverse actors, processes of institutional learning and change, market and non market institutions, public policy, poverty reduction and socioeconomic development. In this way the concept of a national system is now used as a kind of shorthand for the network of inter-institutional linkages that apparently successful countries have built up as a support system for economic production across the board. In this sense it has been explicitly recognized that economic creativity is actually about the quality of “technological linkages” and “knowledge flows” among and between economic agents.

This is linked with the information theory which makes information independent from meaning concentrating in the quantitative aspects of the flow in a network of an intangible attribute called information.

According to Andy Hall’s New Innovation Paradigm, agriculture is like other sectors. Innovation and innovation capacity is characterized by networks or systems to mobilize knowledge and use it in new ways, and a diversity of innovation arrangements which are: i) Research-intensive for innovation process with high technological content ii) peer-intensive for innovation process with high organizational and design content iii) user-intensive for innovation process to match products with consumer niches (plant breeding / natural resource management)

## **2.3 Methodology**

I found it was important to implement an approach that entangles the diversity of actors that are core for the above mentioned concepts. To achieve this approach towards innovation in agriculture I focused on two main streams: i) the agricultural business as the core unit of this sector of the economy ii) the existing business environment and regulatory framework with respect to this unit.

The first part of this thesis concentrates in the actual situation of the sector, in order to better understand by means of economic fact and figures its structure, the level of competitiveness and the overall picture of the sector, companies are operating in.

This was followed by a careful analysis of the regulatory, governmental and institutional framework in agriculture on how this important complementary asset to the agriculture development in overall (I say complementary asset because it is very common especially in developing countries that agriculture is totally depending to the state support in terms of R&D and many other services) has contributed till now.

The empirical part focuses on the field investigation and findings from qualitative interviews with different actors, part of value chains of some agricultural subsectors, chosen for their higher competitiveness ranking (qualitative ranking) as compared to other sectors. Findings concentrate on the level of innovativeness of the agriculture businesses, factors of innovation within these companies, while the system perspective and theoretical background of innovation management within companies serves as a reference.

Then I try to integrate my findings at a firm, sector and business environment level, with respect to innovation in the agriculture sector, and formulate future prospects for development with respect to the findings and existing development theories that have innovation at their core.

### **2.3.1 Secondary data research**

The secondary data elaboration composes an essential part of my research. I had to rely on statistical data from country sources including here also the project database, in order to understand trends and patterns of development of the sector. Based on these I was able to draw my conclusions on the actual situation of the agricultural sector with respect to the competitiveness level of the sector in overall and for the identification of promising subsectors. I based my decision for the selection of the subsectors on the data elaboration from these secondary sources.

The data on the environmental setting were also taken from secondary sources and elaborated further. A closer look at the below given components was important to understand the extent to which the macro environment contributes to innovativeness of the sector.

*Technology Transfer:* How does counseling and technology transfer happen from the public to private sector? What are the institutional units that stand behind and what is their role?

- *Institutions:* In this context I investigated mainly the legislative and strategic frame work with respect to supporting development in agriculture. What has been their focus? How efficient were they with respect to entrepreneurship and innovation?
- *Policies:* What is the focus of agricultural policies today?
- *Organizations.* The private sector was covered form the empiric investigation while the public sector is treated in an overview perspective.

### **2.3.2 Empirical part**

My research was based on qualitative methods, which included distant and close observation of the targeted companies. I did both and this was possible because most of the interviewed companies are clients of the Albanian Agriculture Competitiveness Project. Therefore before getting to the field and having open discussions on innovation I was able to get data and information on the companies enabled form experts of the sector and our outreach specialists without being severely influenced, but to a certain extent. I knew before getting there on their situation with respect to revenue, number of employees, investments, new products, new business model if, etc. This made it easier to adopt the questionnaire to the features and characteristics of each interviewed. Visits to the farms or business units and discussions on the open on issues treated by the questionnaire, were usually able to cover all areas covered on the questionnaire and when not this was because calling the innovation factor with its real name would not had added value to the overall pool of existing opinions. Empirical information was gained from non-formal focus groups and the **interviews** with the selected companies-part of the sample. More detailed data on the sample with respect to general information and characteristics of the companies are to be found in Annex 2.

#### *2.3.2.1 Criteria of the selection of the subsectors and of the specific companies*

1. subsectors more competitive than others, deriving from the situational analysis of the sector
2. geographical areas with a favorable climate and setting
3. agricultural business that represented the farm structure
4. actors along the value chain of the subsector
5. actors that had at least introduced some kind of innovation recently and incorporate the 4 above points

The sector analysis was important for the identification of more competitive sectors. I focused on the vegetables and horticulture subsectors of agriculture production. Livestock was excluded at the very beginning, mainly because of strong non tariff barriers such as phytosanitary and hygiene regulations

especially in the EU that hinder in short term the rapid development of this sector beyond the domestic scene. The competitiveness of this sector is paused to high initiatory investments at the farm level.

The fruits and vegetables subsector has shown high rates of growth in production and yield terms. It is substantial for the economic development because a large group of farmers are oriented toward vegetables production. This subsector has shown better performance than countries of the region in terms of production and yields as the figures in chapter 3 show. Watermelon is one of the few agricultural products being exported at the moment with a positive trade balance, while good developments have been achieved in terms of exports of tomatoes, cucumber and dried apple in the countries of the region lately.

#### *2.3.2.2 Companies Sampling*

16 companies were interviewed in the selected areas. Most of the interviewed were farmers but other actors important for the value chain such as input suppliers, seedling suppliers, consolidators, exporters, traders, post harvesting services providers (cold store or just storing) were also interviewed with respect to innovation in agriculture. The fact is that some of the company representatives entangled at once many levels of the supply chain, input supplying, seedlings, production, consolidation and exports.

Farmers represent the typical farm structure of the Albanian Agriculture as above explained with a small farm around 1 hectare, treating it as a family business where the whole family works all year around for the agricultural produce, with an above average farm turnover but the typical problems related to access to finance, market linkages, post harvesting practices, insufficient road infrastructure, insufficient irrigation and drainage systems etc.

For the company sampling I orientated towards apple farmers in the area of Korca, tomatoes and greenhouse farmers in the area of Lushnja and watermelon growers in the area of Divjaka. The reasons for this was the fact that they have concentrated in high value products such as greenhouse tomatoes and cucumbers, tree fruits and exotic fruits trying to maximize their profit through clever choices, higher investments (for their stakes), better production practices (seedling selections, input supply selection etc) and early season market entry, attempts that have shown successful and are starting to pay off. .

Geographic orientation was also subject of preference. The area of Lushnja and Divjaka lies in the heart of the Muzeqe Field which is a very fertile area and very adapt for agricultural production accounting for a large share of agricultural production. Companies from the greenhouse vegetables were chosen from this area since they are mainly concentrated there, because the climate conditions there foster their activity. The area of Korca is known for the apple production, with horticulture becoming almost a tradition there. The climate is also favorable for this activity there. The area of

Divjaka is characterized by a very fertile land for the production of different vegetables and now also watermelon. Usually the first to market watermelon were farmers from the area of Xarra further down south next to the border to Greece yet variety intervention and new planting techniques combined with the fertility of the land have given ultimate competitive advantage to the farmers of the area of Divjake. This made the area extremely interesting with respect to innovation.

### **2.3.3 The questionnaire**

The survey on innovation factors, where a system with preset factors is designed was of great value and a very good reference and starting point for the design of the questionnaire. The questionnaire used for the interviews can be found in annex 1.

I tried to and was very flexible in adopting the questionnaire around the specific activity, where sometimes full questionnaire components like innovation culture were skipped or derived indirectly. Most of the time preliminary explanation of broad terms such as sources of innovation, marketing of innovation was necessary. Actors were asked mainly about the extent of correlation of their activity with the term innovation, their experience with sources of innovation or new technology, on how they conducted product innovation, marketing of innovation, but also about culture of innovation, entrepreneurial spirit and organization of innovation. Many of these concepts such as entrepreneurship, culture of innovation, entrepreneurial spirit and organization of innovation being non tangible will come more through my personal perception about them derived from direct and indirect observation and secondary and indirect questions, rather than from direct questioning and answering about these issues. Interviews were conducted near the farm or respective activity of the interviewed. It was conducted more as a non formal discussion on the subject.

### **2.3.4 Data elaboration and interpretation**

The interview was qualitative and with many open questions that left room for own interpretation or deviation from main stream if necessary. This enabled the creation of a fruitful course of discussion at a holistic and micro level about what innovation meant for each participant at an abstract level, how innovation was implemented in their company and how regulatory framework and business environment was positioned to this process.

The treatment of innovation management case by case enabled the creation of a general pattern of innovation management in the agriculture sector. A clustering of companies with similar activities and the effects on the pattern of innovation management were also taken in account and interpreted.

### **3. Situational Analysis of the agricultural sector**

#### **3.1. Agriculture – An overview**

Agriculture accounts only for 18.5% of the GDP in Albania in 2008<sup>5</sup> with its share constantly decreasing constantly after the system change (share to GDP in 1992 54.2 percent). Arable land in Albania composes one forth of the country or 7000 km<sup>2</sup> (699, 000 ha)<sup>6</sup>. The total farm population is 1762556 or 55 percent of the population in Albania. The family/ farm ration in 2007 was 1.2 while there are around 370000 farm households in Albania. Albanian agriculture is characterized by its operating unit - the rural family, which is referred to as the farm household and by the high land fragmentarisation. The average farm size is 1.1ha. Agriculture sector is considered as a troublesome sector which is operating far less than its potential (Economic Bulletin of the Bank of Albania, 2009). Yet in terms of employment agricultural sectors plays also an important role since 58.2%<sup>7</sup> of the working force in Albania is engaged in agricultural activities.

In terms of trade flows, total agriculture production (agricultural, livestock and agro industry) accounts for 8.2% of total exports and 18.0% of total imports in 2006<sup>8</sup> and both trade flow directions have accounted for increase in the following years (ACIT Trade Reports 2007, 2008)

Livestock production together with field crops, account for the highest share of agricultural production contributing with 57% and 43 % respectively. Further down there is a closer look with respect to agricultural production sector excluding livestock production and agro-industry. The focus is on agricultural production (hereunder crops and fruits production understood) because

1. agro-industry falls already in the industry sector, which is not in my research focus
2. This sector has higher chances of competitiveness without being posed to high initiatory costs to secure high levels of quality security and hygiene in harmonization with EU laws in the framework of the SAA with the EU like in the case of livestock farms.

#### **3.2 Crops Subsector**

##### **3.2.1 Production**

Commercial crops production (not including crops that go for animal feed) is strongly represented from vegetables production, which accounts for a large quantity and percentage of production of commercial crops (49.0%). Crops production is further represented from cereals and potatoes which

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<sup>5</sup> Sectorial Strategy of Food and Agriculture, Ministry of Agriculture

<sup>6</sup> Agriculture indicators in this page are taken form the Statistical Yearbook Series of the Ministry of Agriculture unless otherwise indicated

<sup>7</sup> Labor Market 2005

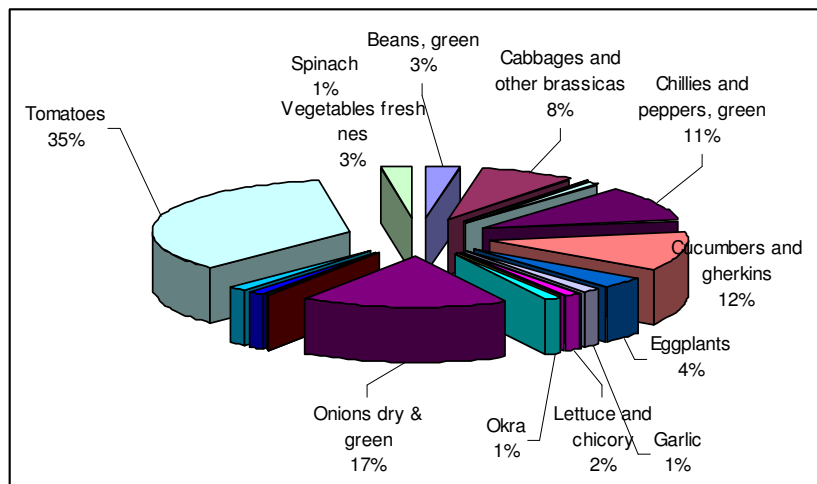
<sup>8</sup> Trade Report 2006, ACIT

account for 37 percent and 12 percent of crops production respectively. Despite considerable shares of cereals and vegetables only this last accounts for an upwards trend in production as compared to previous years.<sup>9</sup>

### 3.2.1.1 Vegetables production – A closer Look

Some of the most produced **vegetables** during 2007, characteristic for Albania are tomatoes, onions, cucumbers, peppers and brassies family, shown in figure 2. Even though the production of tomatoes, the most produced within the vegetable group, has decreased by 3.7 percent (FAO: Online Database) weight giving vegetables production has been more or less stable in the recent years. This is accompanied by a more or less stable and sometime decreasing yield of production of most important group vegetables.

Figure 1: Vegetables production in Albania during 2007



Source: Faostat Online Database, own elaboration

This is sometimes related to economic oriented decisions of farmers like in the case of watermelons and melons. For instance the change from the variety crimson sweet into the variety Gulliver is expected to bring import requests from European countries for this product. If this is the case most of the surface planted in Divjaka (one of the most known regions of watermelon in Albania) will switch to that variety, which has production quantity and yield decrease implications (covered by a higher price related to consumer choice).

## 3.2.2 Advantages and disadvantages in production and yield –A Regional View.

### 3.2.2.1 Cereals

Albania has a lower production of cereals when compared to other countries of the region. None of the cereals production reveals comparative advantages in terms of production.

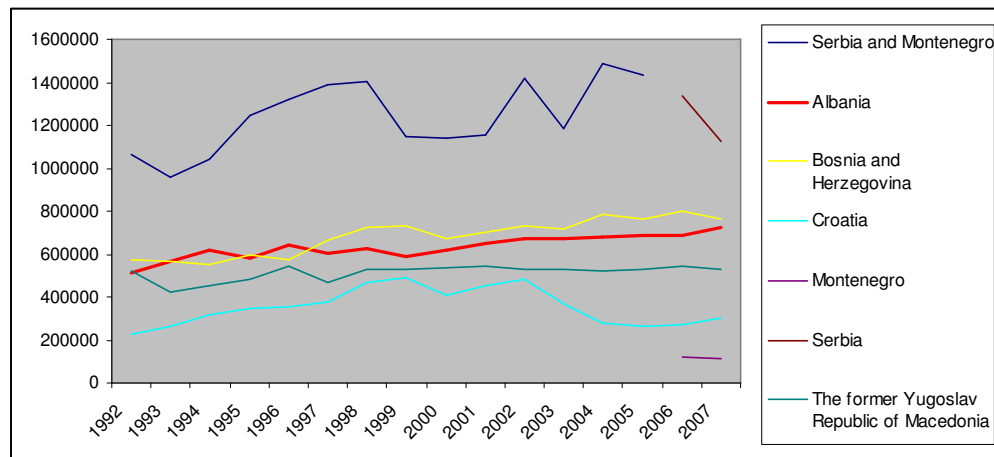
She is forth in terms of yields of production of cereals despite the low production value.

<sup>9</sup> Statistical data taken from the Statistics Yearbooks of the Ministry of Agriculture 2004-2008

### 3.2.2.2 Vegetables production as compared to the region

The vegetable production has remained more or less stable in Albania accounting for an increase trend and positioning the country 3<sup>rd</sup> in terms of production in the region. We are one of the few countries producing eggplants in the region, therefore ranked first with 17000 tones in 2006. The country is ranked second for the production of dried onions (61,600 tones), second for the production of peppers (50,000 tones), second for the production of cucumbers (53000 tones), second for the production of tomatoes and so on. We are one of the few countries that produce spinach in the region.

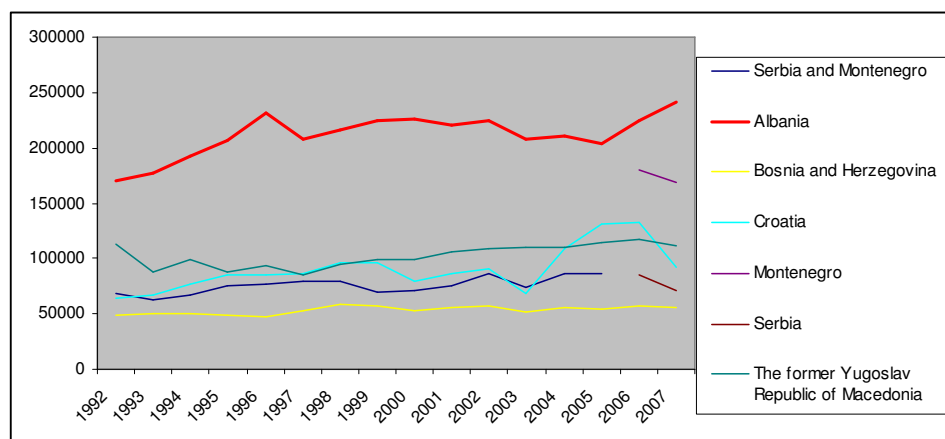
Figure 2: Production of vegetables in the countries of the region 1992-2007, in tones



Source: Faostat Database (incl. watermelon)

Even though quantities of vegetables produced account for only 20.5 percent of total production of the region, the yields per hectare of vegetable production have increased and are the best in the region. This applies to all vegetables we produce since 1992. Almost all vegetables produced account for highest yields in the region.

Figure 3: Yield per hectare of vegetables for the countries of the region 1992-2007



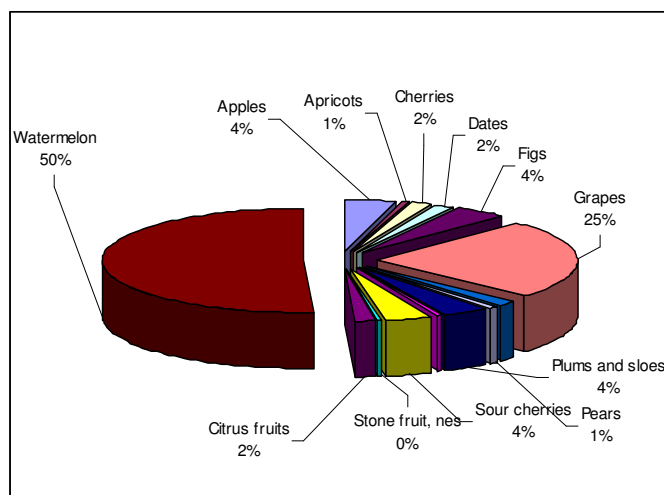
Source: Faostat Database (incl. watermelon)



### 3.3 Fruits production

Albania accounts for 516.3 thousand tones of fruits produced in 2007 accounting for 14 percent increase as compared to 2006. Division in group commodities is shown in the table below. Watermelon accounts for the highest values of fruits production (215000 tonnes) followed by grapes and apples as you can see in figure 4.

Figure 4: Production of fruits detailed in 2007



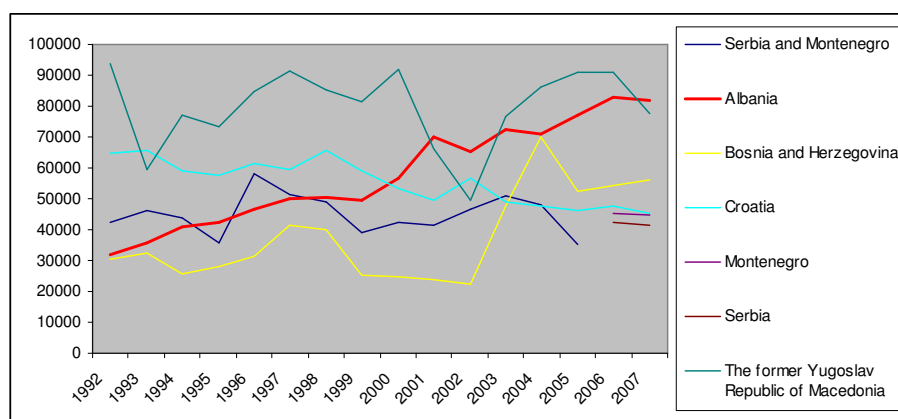
Source: Faostat Online Database

#### 3.3.1 Production of fruits in comparison to other countries of the region

We are ranked almost last for the production of fruits in the region. Nevertheless there are some goods the production of which does not reflect this tendency such as oranges (3,6 tones ranked second), lime and lemons and figs production (16,6 tones, ranked first in the region). This situation is related to the fact that watermelon production is not included in this figure. Albania accounts for 7 percent of the regional fruit production (excluding watermelon). Nevertheless other countries of the region account for similar values except Serbia which accounts for 55.4 percent of the fruit production in the region.

The yield of fruits production is as well at very satisfactory levels when compared to other countries of the region as Albania is ranked first in terms of fruits yields even with the exclusion of watermelons and olives in figure 5.

Figure 5: Yield per hectare of fruits for the countries of the region 1992-2007

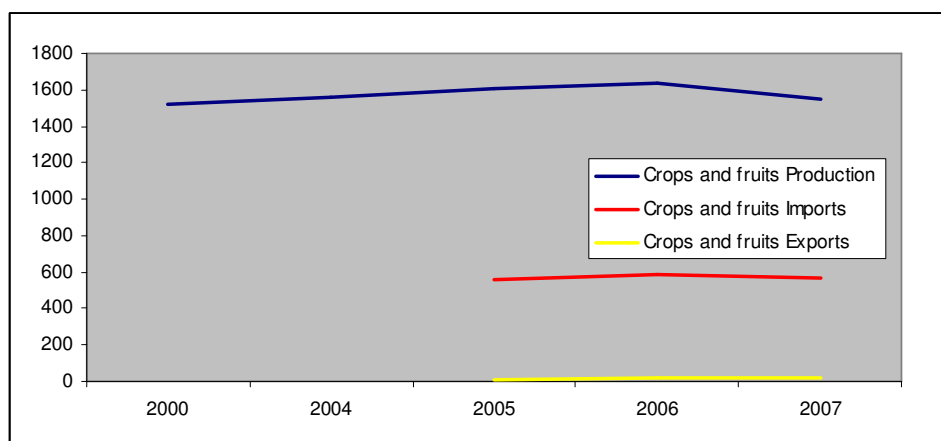


### 3.4 Trade of agriculture products<sup>10</sup>

The trade flows of crops and fruits (chapters 6, 7, 8,9,10, 11, 12 of the Harmonised system, excluding agro-processing and livestock) reached 208,3 million Euros in 2008, experiencing 94 % increase since 2000. Imports reached 183.7 million Euro or 561 thousand tones in 2008. Wheat accounts for 50 percent of imports of agricultural products while fruits for 23 percent followed by vegetable imports accounting for 9 percent and herbs and spices, 7 percent. This increase is mainly due to the increase of import prices since quantities imported have not changed a lot. Imports account for 88 percent of total trade flows in Euro value.

Exports account for 12 percent of the trade flows of crops and fruits. Their value has increased by 92 percent as compared to 2000. Exports were valued at 24.7 million Euros in 2008. Medicinal herbs account for 70 percent while fruits and trees account for 17.3 percent of exports of agriculture products and vegetables for 7.4 percent. Exports of all this subsectors have been increasing in the last years, so fruits exports account for 3159 percent increase since 2000 having reached around 3 million Euro value, vegetables and medicinal herbs account for 75 percent increase respectively. All together they account for 41.9 percent of agriculture products exports (chapters 1-24 of the HS).

Figure 6: Trade of crops and fruits vs. production during 2000-2008 in 000 ton



Source: Statistical Yearbook 2006, Ministry of Agriculture

Yet when compared to the domestic supply of these products in tons as we can observe from the figure the below average performance of the agricultural products is obvious, while there is still some space for imports substitution in the areas where Albanian products can still be competitive.

Domestic production accounts for the highest share of domestic supply as it can be derived from figure 10 Imports account for 27 percent of total derived supply with agricultural products in Albania (P + I – E).

<sup>10</sup> Trade data is taken from own access to ACIT raw database, with main origin Customs Directory. Raw data became subject of further elaboration

If we give a closer look to the composition of exports of crops and fruits during the last years we can get a better idea about what we are exporting at the moment and which are the products that are more competitive and have found their way outside the domestic market. Fruits alone account for 11 % of exports in 2008 but here watermelons account for the highest share (approx 40%). Medical plants account for another 29.6% of total agriculture exports (chapter 1-24) **Products within crops and fruits with a positive trade balance are: watermelons and medical plants.**

**The imported goods fall under the cereal crops category.** This category represents 58 percent of imports of agricultural products in the narrow sense followed by fruits which account for 21 percent. The imports orientation gives us an idea about agricultural goods which are mainly covered by imports and for which agriculture business seems less competitive.

### **3.5 Household Farms as production units of agricultural goods**

The Albanian farm structure is strongly represented from the family household farm.

There are 431469 household farms in 2006 in total and the family-farm ratio 1,2. These family farms engage 1,762,556 people that account for 55% of the total population. The average size of the Albanian household farm is 1,1 hectare. These farms try to find their way to the market keeping one foot in agriculture production and the other in the livestock production usually. 332014 farms or 89.9 % of the total farms are considered also as livestock household farms while 100% of them are engaged in crops production. 93.4% of the total of farms are selling farms in 2006.

The main production unit of agricultural goods: the family-farm is widespread in the rural area. There is no further specification and division of the family farm, usually the farm is a crop and livestock farm being engaged in both activities simultaneously.

Annual turnover from livestock in 2007 accounts for 63% of the farm turnover, while turnover from crops account for only 37% according to figure. On the other hand expenditures for crops account for 66% of the yearly overall expenses while livestock only for 19%.

The average yearly turnover of the Albanian farm is 184,286.00 lek, while the average expenditure on the other hand is 3,534.00 lek. The average turnover from crop per farm is 68714 lek while the average turnover from livestock activities per farm is 126,199.00 lek.

These farms as small and fragmentarised as they are produce nevertheless approximately 6 times more crops and fruits than what is being imported at the moment.

### 3.6 Supply Chains

The figure below shows the value chain of watermelon in Albania from an AAC project study. I choose this figure as the most complex agricultural commodity value chain. Most agricultural commodities are going through a similar process, but since most of them are not being exported at the moment they engage sometimes only part of the chain.

Value is brought to the customer through two channels:

#### **Channel 1: Small traders spot buying and selling from fragmented producers**

Products are bought directly from producers by traders who then sell them on the wholesale market, to other traders, or directly to retail. These agricultural products are most often bought from producers in the fields, who wait for traders to come to them at harvest time; these are called also non commercial producers. Non commercial producers engage in spot market transaction, use low technologies and are rarely organized in producer groups. Producers then compete against each other for buyers and drive down the prices. There is usually no established relationship between the producer and the trader or commitment to buy before the point of sale. While there are some nascent producer groups in this channel, the chain is still highly fragmented and consolidation in this channel takes place at the trader level. There is relatively little marketing strategy at any level of this channel and the marketing is characterized by spot buying...

This channel is highly inefficient due to the high transaction costs involved in consolidating volume from a large number of unorganized producers, the asymmetrical availability of information and the lack of a marketing strategy. This channel should shrink as the producers and traders become more commercially oriented accounts for the largest share of trade transactions of agricultural goods (f.e watermelon 80% of total traded value). Actors involved in this value chain are input suppliers, non commercial producers, small traders and regional importers.

#### **Channel 2: Integrated consolidators & commercial producers**

Channel two is characterized by the presence of consolidators who are active in multiple functions of the value chain and provide embedded services to other actors in the chain. This channel is generally characterized by more commercial and larger producers who have established relationships with the integrated consolidators. The decision of variety selection is driven by the consolidator who acts sometimes also as a seedling supplier, tries to identify markets, close contractual deals and notifies the producers of what to plant for the targeted market. Together with the closed deals, consolidators provide their producers with embedded services such as finance, technical advice, and a market link. These consolidators are now moving toward identifying markets before the season begin which is crucial for the strengthening and consolidation of this trading channel. This channel has high potential,

as there are opportunities for farmers to increase production of high value and demand driven agricultural products and increase their profit margins therefore under conditions of lack of consolidation at the producer level, lack of marketing strategy and market information at the producer level.

### **3.7 Business environment for agricultural businesses units**

What about the business climate, state intervention, legislation all that forms the business environment, what are they doing with respect to agriculture production how are they positioned and are they doing anything to address the challenges above mentioned? What is the focus of strategies and capacity building with respect to innovation in agriculture? The following pages try to gather insight in that perspective as well.

#### **3.7.1 Legislative framework<sup>11</sup>**

After a detailed research among strategy papers and official journals homepage with respect to legislative framework covering agriculture in Albania I observed the following:

Firstly the legislative framework is characterized from two approaches, the strategic framework oriented law making and the sporadic law making. The strategic oriented law making comes in place with the approval of several national strategies that influence directly or indirectly the development of agriculture from 2007 on.

The legislative framework with focus on agriculture before 2007 has covered issues of financial support for the agriculture sector, several issues of environmental protection, social security contributions in agriculture, subsidies in the form of expulsion from different taxes for agriculture production for instance, food security and capacity building.

My impression from the observation is that legislative framework has served as a regulatory basis for the further development of institutions, capacity building to some extent, distribution of financial aid yet all this regulatory framework seems to not have been directed by a clear agriculture development oriented vision. One of the laws during the 18 years of democracy relates to The Strategy of Social and Economic Development yet this is a much broader term than agriculture. My impression is that legislative framework comes as a result of sporadic intervention. Agriculture is not really considered as an economic activity, agriculture business law beyond social security contribution is just lacking.

This is related to the fact that the legal form of farms is that of a physical person. They are treated as one person enterprises but with no tax obligations for their “business” in contrast to other sole entrepreneurs, operating thus under a totally free forgotten market economy area for several years...

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<sup>11</sup> All legislative activity is derived from detailed search in the official journals homepage <http://www.qpz.gov.al/>

After 2007 there is a strategic orientation of legislative and institutional framework as we will see below. Legislation is related to the above mentioned fields but mainly through the approval of strategies of development of agriculture, of development of the rural areas, strategies of consumer protection. These strategies are very important to refer to for a short medium and long terms. Laws and CDMs listed below are the most important approved after 2007 where strategies and the framework for their implementation compose the largest part of the list.

CMD [Nr. 639 Dt 14-05-2008](#) “For the structure, functioning and definition of criteria’s of acceptance and evaluation of necessary documentation of certifying bodies”

CMD Nr. 924 Dt. 14.11.07 “For the approval of the Sectorial Strategy of Agriculture and Food 2007-2013”

CMD NR.797, dt 14.11.2007 “ For the approval of cros sectorial strategy for consumer protection and market surveliance for the period 2007-2013”

CDM Nr. 18, dt. 07.01.09 “ For the definition of basic criterias of the sectors that will be supported from the fund of the program for agriculture and rural development”

[LAW Nr.9817](#), dt 22.10.2007 “For agriculture and rural development”

CMD r.45, dt 16.1.2008 “For the approval of the report for the inventory of execution scheems of state subsidies in Albania”

Legislative framework does not entangle directly the issue of entrepreneurship and innovation, also in this phase. There are indirect ways of addressing it through the approval of strategies. Their implementation must result in legislative framework that enhances entrepreneurship or innovation in the following years such as the law of creation of technology transfer centres. What impact does this have with respect to innovation in agriculture? We can understand this by having a closer look at TTC below.

### **3.7.2 Government Orientation -Strategy development**

The core of strategic development are The Strategy of Development of Agriculture 2007-2013 and the Strategy of Rural Development. The law on agriculture and rural development derives from these two strategies and at its core are the national plan and the action plan. The action plan is based on the national plan which is again based on the midterm objectives of the two strategies. This is from where short term actionables are supposed to be derived.

#### *3.8.2.1 Strategy of Agriculture Developmet 2007-2013*

Strategic priorities of the final aproved draft are: a) Increase of finantial support for farms, agricultural busineses annd agroindustry, b) imporvement of agriculture land management, c) iimprovement of marketing of agricultural and agro processed products, d) improvement of knowledge of farmers and

agro-processors, their information and technologies used, e) increase of the quality and security of agricultural and agro-processed products.

These are followed by strategic sectors which are 1) tree fruits, olive and grape production, 2) vegetables production, 3) production of livestock, 4) industrial production of fruits and vegetables, 5) industrial production of grape, 6) industrial production of meat and dairy products.

Strategic aims of the strategy are related to 1) sustainable land management as a basic component of sustainable agriculture development, 2) employment and income increase as well as the quality of life of farmers, 3) economic efficiency increase of the agriculture and agro processing sector in the form of yields and quality increase, 4) higher food safety standards, 5) agriculture marketing improvements.

The strategy level is followed by policy interventions which are investment related and counseling and technical assistance related

Investment related agriculture and agro industry policy include direct payments in the form of grants or credit, for investment in production technology, direct payments in the form of grants or credit for the increase of the inventory of tree fruits, equipment, agriculture mechanics and storage capacities, direct payments in the form of grants for agriculture or agro processing inputs, subsidizing interest rates (credit guarantee) of private bank credit, direct payment or credit for the enhancement and support of local initiative and market infrastructure and production organization oriented investments.

Most of the counseling and technical assistance related policies as mentioned in the policy are below listed:

- Designing rural innovation platforms in a region level
- Improving parallel partnerships (associations or producer groups or units of marketing of the area, local action group etc.)
- Vertical partnership creation (farmers and traders or agro processors that cooperate in common schemes of input and output production and trading)
- Law implementation and monitoring for the decrease and elimination of monopoly syndromes in the input supply
- Simplification of licensing procedures and tax duty of traders with the aim to increase the quantity of traded products and to increase competition in the markets
- Opening open field farmers schools
- Improvement of agricultural skills
- Capacity building for the seed and seedling quality monitoring
- Local experience exchange with regard to production technologies , trade and grouping
- Lobbying enhancement at a regional and national level
- Spreading best agriculture practices and best practices of integrated plant protection
- Market surveys for the identification of niche markets
- Technical and financial assistance for products value adding activities of the farmer
- Sensibilisation campaigns
- Approval and application of agricultural products standards
- Improvement of data collecting, data dissemination, data usage activities and publication of the statistical

information □ Improval of planning, monitoring and evaluation procedures and the publication of their results □ Improvement of Market information systems

Some of the above mentioned strategic priorities, aims and policies are put into action through the Mid Term Action Plan which comes in the form of Law.9178. The law includes the creation of a fund to support the measures taken under the Action plan which on the other hand concentrate in rural development mesures. These include competitiveness enhancement, better land management and life quality improvement institutional building, creation of an accurate database of information, support of producer, traders and processors groups, public services for the agriculture sector, support for training research and education are also part of the plan.

#### **Comments:**

During the last years agriculture has been treated for the first time in a strategic perspective with focus on agricultural development. The strategic vision includes different areas and is transformed in policy and measures and actionbles as we see above. Eventhough improvement has been made still there is a risk of non implementation carried through from previous experience. For instance the Payment Agency creation under the policy frame of insitutional building in Law 9178 was also foreseen in law CMD 276, since 2003. If we see govermental will related to agriculture development for the first time clearly on paper, question marks related to its implementation come in mind. These are related with past experiences and the lack of addressing this risk seriously and directly in the action plan.

#### **3.7.3 Institutional/Organizational Framework**

Organizations that try to foster innovation in the agriculture sector are mainly governmental, central or local but also donors funded organizations. They are mainly technology and research oriented, but not only.

Crops Protection Office.

This office of crop protection takes care of the control of production. This office makes sure that the fitosanitary conditions of products are met. The office certificates are especially used for exports. Even though the unit exists a lot must be done in term of enabling complex laboratory examination of pesticides etc.

Statistical Service.

At the moment this service enables data on prices, production, sales, trade flows, farm structure, crops yields etc. This is enabled by a network of offices around the country part of the Ministry of Agriculture structures. Yet the data is historic, descriptive and not very user friendly. More can be done to turn the information into intelligence and put in the service of the farmers.



Counseling service: The counseling service is at the moment composed from a wide variety of public and private suppliers. The public form is the more spread and organized form around the country. It comes as part of the Ministry of Agriculture structures at central and local level supported also by a network of information centers. There are 245 state employed agriculture specialist at a country level. This form of service is supposed to offer technical assistance, knowledge and information for all the farmers and other operators in the agriculture.

Some of the most important problems that counseling service are facing at the moment are: (i) small number of extensionists ( one extensionist for approximately 2000 farmers) which makes them engage in tasks that are not in the field of their expertise; (ii) lack of sound financial support for the information centers and for the completion of their counseling related activities; (iii) aging of the extensionists iv) lack of usage of information technology v) lack of capacity building at the moment for the m to catch up with best practices. In cooperation with research staff, extension services are supposed to implement research projects in farms as well as many other activities such as demonstration of new technology, trainings with regard of new methods and techniques, fair visits etc. The 120 information centers that are built around the country are an important actor for enabling the contact to farmers as well as qualitative information on the areas they cover.

#### Agricultural research and technology transfer -TTCs:

Till mid 2006 there were 6 research institutes as part of the service provided by the Ministry of Agriculture. Their scope of work was related to agricultural research and the increase of effectiveness of agricultural research. With the CMD No. 515, coming to power out of the restructuring of the 6 institutes 5 Technology Transfer Centers were created operating again under the Ministry of Agriculture respectively in: Fushë Krujë, Vlorë, Shkodër, Lushnjë and Korça. The TTC in Fushe Kruje is operation in the mainly in the field of Zoo-technology, while the area of expertise of TTC in Lushnja are vegetables and potatoes so these two transformed TTC kept the institutes core competencies but were subject of change at a organizations and objective level. Their scope is more technology transfer than research now. It looks like that they are in a early formation phase, underperforming and just learning to profit from spillovers and free riders effect, their linkages to the farms weak because of problematic extension services.

#### Other support organizations:

There are a number of support organizations that offered funding, financing for rural areas and sometimes technical expertise in agriculture. Rural financing in Albania, has a very recent history and were mainly enabled from the contribution of different actors and projects. Here we would mention: The Fund of Financing of the Mountain Rural Areas, the Development Program for the Mountain

Areas, The Project of Assistance for the Agriculture Production (FAO), USAID funded projects such as the Small Business Credit Assistance etc. Their support has been considerable but fragmentary.

While a focus till now has been on access to finance aid, support has shifted towards technical assistance especially to increase the administrative and business oriented skills of the farmers. This is what AAC is trying to accomplish in its 5 years project life with focus of introduction of best production practices, market development and market information and capacity building...

Of course there are also other organizations important for the further development of agriculture such as producer groups, input suppliers, even though their role with respect to innovation in the agriculture sector in overall is lower than it should be.

### **3.8 Summary on the situational analysis of agriculture sector and its impact on innovation in the sector**

Even though agriculture account for 18.5% of the GDP in 2008 and it covers around 73 percent of the domestic consumption (figure 5) with half of the population engaged in agriculture production the sector is challenged by several development problems.

The first challenge is the highly fragemetarised unit the household farm. Farms 1.1 ha big on average are the core unit of agriculture production. No wonder the imported wheat despite transport costs and other trade barriers is highly competitive as compared to the same produced good in the country. There are a lot of implications and limitations that derive from the wide spread existence of this unit such as higher transaction costs for the marketing of the products, limited access to finance, limited voice for legislation and business climate improvement. This unit is better manageable but its potential to grow is very small.

The second challenge is the production portfolio decisions or forecast with focus on commercialisation. There are some goods that are by default more competitive than others which is the case of fruit and vegetable production. Vegetables show to be competitive when compared to the region in terms of yield and also quantity to some extent (third in the region). The imports of vegetables are also much lower than wheat or even fruits. Fruits yields signal a great potential for the increase of production in the future. Fruits exports signal also possibilities of expansion for the future, especially exotic fruit such as melon and watermelon. Crops on the other hand are doing not well in terms of production or yield. Import quantities are high and account for a large share of the domestic supply. Nevertheless areas harvested with cereals are still high and they account for 37 percent of total agricultural production.

The shift towards high value commodities is another challenge within the given agricultural frame, non-commercial structure characteristics, low investments and low income

The fourth challenge is the link to high value markets for high value products- Creating Market Opportunities. Even though production is high and prices are very competitive when compared to prices of vegetables and fruits in the region exports are almost non existent. Reliable value chains supported by efficient supply chain models to bring the product further are almost non existent. A typical value chain involves the presence of the farmer at the nearest wholesale market or of some little wholesale trader from the village who is assigned the task of selling the products or the small trader collecting the goods at the producers' field. Sometimes farmers have long term relations (social related obligation/social norms) with whole trader lets say in the market of Tirana who find their way to the village to load. Nevertheless the certainty of markets is nonexistent. Seeds outsourcing, producing in request or ordering in advance are very rare and of course there are reasons to it such as the high fragmentarisation of land, lack of linkage to the market or supporting infrastructure that fosters the first movements towards a high valued chain.

Fifth challenge is making domestic and exports sales supply chains more efficient. High transaction costs, lack of supplementary services such as post harvesting handling, storage, cold storage, packaging, specialized transport and access to finance make the outreach even more difficult.

Sixth challenge is the unhealthy environmental setting. Laws related to agriculture are insufficient. They do not cover agriculture in an economic or business perspective. Strategies have just started to be implemented and nobody can guarantee for their success. The state supporting institutes with respect to research, technology transfer, market information, capacity building etc. are very weak. Beyond that the environmental settings with respect to doing business in the agriculture sector do not support entrepreneurship and innovation in agriculture.

Entrepreneurship and innovation do not play a substantial role in the agricultural business environment till now. They are also not a substantial part of the action to implement the strategic vision of agriculture development preceived as enhanced competitiveness, enhanced quality of life, land managment, local initiative. While among the the strategy aims of agriculture development 2007-2013 is the better marketing of agricultural products, economic efficiency of the sector and emplyment approacheas are traditional and in a sense broad, leaving room for under performance to a certain extent. State measures for reaching the above mentioned goals are divided only in finacial and legislative measures. Despite that, innovation is seen as a process related to technology and crop quality improvement research, concentrated in the TTCs, while entrepreneurship in agriculture is not mentioned in the strategy at all. These two concepts so much related to competitiveness and to

dynamic economic development from theory are not only fragmentary placed in the overall strategic and action plan but also not considered at satisfactory levels in the strategy.

The approach to innovation is fragmentary concentrated in top-down technology transfer structures represented by TTCs and extension services very similar to NARS with weak two sided interactions of actors, low performance and many capacity and organizational problems.

There are different ways to go about to increase competitiveness but there are two good reasons why the innovation approach entangling the whole system should and could have been considered. First because similar attempts based on a traditional approach to problem definition and solution with its roots at neoclassical economy (similar problem definition and solutions such as institutional building, fragmentary financial support in competitiveness related areas: marketing, production, technology transfer) have shown not to be the solution till now.

Second because it is important to design a process that entangles all the problems and concentrate on the process not on identifying the problems and their solutions from a static perspective. This has shown to be not very productive in reality, with respect to solutions for agriculture development. A systemic innovation approach can concentrate on the nodes and their interaction at the same time for a more complete and impactful yet stepwise intervention for the sector development.

Entrepreneurship enhancement at farm level could have been the core support of this strategic systemic innovation vision with innovation happening not only as a novelty, at the technological and research level but also in other areas such as marketing of products, economic efficiency, and strategy implementation. This would create space for things to happen differently and successfully.

## **4. Factors of Innovation in Agriculture Firms**

### **4.1 Theoretical Background**

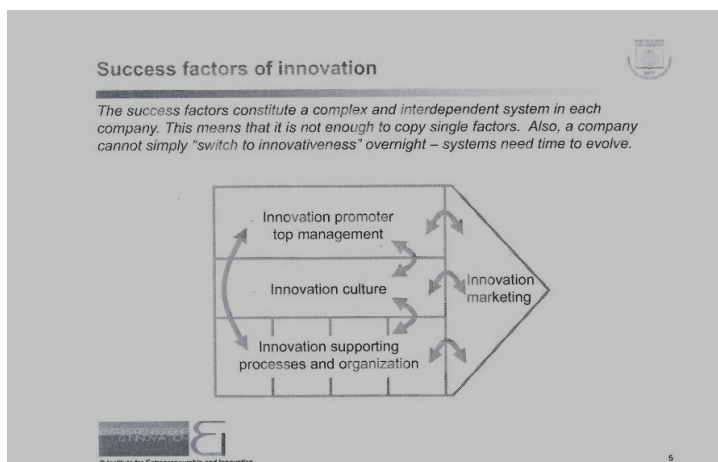
Innovation at a company level is important for the company success which is positively correlated with innovation success. Innovation literature concentrates on the company as the core component where values, processes, action can be enhanced with respect to increasing innovation in the company as a major factor of competitiveness thus increased revenue and success of the company. Nevertheless the smaller the size of the companies the more difficult it becomes to correlate innovation within a company with the company success. Yet, certain processes are like in large companies important as well within SMEs (Franke & Doemoetor, 2005) and the innovation in a company depends from the inner design of processes and activities. There is a platform of several important dimensions for innovation in a company such as the process and organization of innovation, innovation culture or

climate, innovation marketing, the role of top management and strategy as shown in figure 7, the inclusion and correlation of which enables good management of innovation in a company. These dimensions as mentioned by Franke & Doemoetor such as culture of innovation, management of innovation, marketing of innovation, entrepreneurial spirit and skills, organization of innovation, product innovation, and their importance for innovation in a company came about strongly in the MBA Entrepreneurship and Innovation lectures and were elaborated in details by different lecturers throughout the year. Even though these dimensions are sometimes referred to as factors of innovation success I identify them as dimensions subject of investigation with the aim of understanding to which extent they are incorporated in the agriculture firms.

I will use this platform as a basis that will guide my field investigation. I refer to these components in my questionnaire to be able to understand what they mean in an agriculture business unit context. This approach will help me understand how innovation is managed in these companies. Answers about how agricultural companies in Albania innovate and to what extent will be helpful to understand and indentify specific patterns in the process of investigation. I see the patterns of innovation management in agriculture companies as a good start of moving forward with suggestions and discussions on how things can be improved. The findings related to innovation in agriculture businesses will also be correlated with the regulatory framework, its actual state of intervention and level of impact.

On the other hand in the innovation systems perspective with respect to agriculture, many recent papers (Aseno-Oyere, Davis 2009, Clark 2002) quoted the need of inclusion of the micro level in the overall innovation discussion, serving to a deeper understanding of local and specific factors of innovation and for a more participatory process in the framework of innovation systems. The importance of understanding local characteristics of innovation in agriculture at a micro- company level to be able to treat it in a more systemic approach and fit it in a functionalbe innovation system is in this context obvious.

Figure 7: Success factors of innovation



## **4.2 Perceptions about innovation.**

Out of the 16 interviewed and all important actors that I have met in the course of my investigation or as part of my recent work activity which is strongly related to agriculture competitiveness just a few people have a broad perception about the term innovation and the meaning it carries in the modern Schumpeterian perspective who saw innovations as creative destructions, not exogenous but core of the economy, not only technology to conclude with the role of the entrepreneur in identifying these opportunities (Schumpeter cited by Franke, 2008).

Yet perceptions about innovation in overall and also with respect to agriculture were related to the technological change and inventions. The approach was as towards a very noble thing that is not to be transformed and explained through the daily routine of the own perspective. This overall predefined distance to the concept made the gap between daily farming business and the concept per se look even bigger than it was. After interventions and explanations of the term as a process of bringing their own goods successfully to the market through reinvention of the production practice or implementation of a new technology or introduction of a new variety or a new trading channel, most of them would in a sense agree that they have been innovating with their farms to survive or earn better. Yet the concept is by no means seen as an integral part of the process of making a living through their farming activity. Also in other levels of the value chain the lack of familiarity of the notion in relation with the personal way to conduct business was to be observed.

Entrepreneurship was an easier term. Many of the actors some acting as important nodes on the value chains of the specific sectors but also small non commercial farmers, were able to narrate about the entrepreneurial beginnings, dilemmas, luck, achievements and delusions also.

## **4.3 Product Innovation**

Product innovation in the three sectors, greenhouse vegetables, watermelon and apples varied according to the production practice, personal entrepreneurial characteristics of the entrepreneur but also with respect to the company position in the value chain. Despite the case to case differences I was able to track some communalities within respective categories. Incremental innovation as a concept is what would best describe the character of product innovation in Albania. Incremental innovation (Franke, in Innovation Management, 2008) the process during which a product is introduced in the end market, it does not represent a novelty for the market nor in terms of the means used to produce it, but it represent newness to the company (first time to go through the process, first time to come up with this product) was happening in every business oriented farm despite region, size, turnover or kind of product. A lot of tacit knowledge has been incorporated in the process combined with learning by doing especially regarding product planting decision. Most of the farmers I have interviewed have

shifted from lower end products like potatoes, or wheat into horticulture or greenhouse production or exotic fruit production such as watermelon. Production shift decisions were mainly directed from a) the possibility created after the agricultural reform that returned the land to farmers in small pieces together with all other responsibilities related to production such as decisions on inputs selection, crops selection, marketing etc. and also b) by the learning by doing process of the farmers, c) by their agriculture related experience with specific crops but also d) by the level of entrepreneurial mindset. Being left on their own for a rather long series of years, accompanied by a strong inner migration tendency towards urban centers as a response to the challenges agricultural business is facing, most of those who accepted the challenge for different reasons were put in entrepreneurial and innovation positions as a mean of survival.

#### **4.3.1 Company specific findings**

So as Mr. Melsi Begolli explains, whose story reveals the typical farmer's incremental product innovation, he and his family were planting potatoes and other low commodity crops when he decided to make the first investment of horticulture after returning from emigration. He decided to invest right away in the vegetation planting method of orchards, which allowed an intensified usage of the land as compared to previous technology. While he was among the first to implement the shift, now this model of planting that allows around 800 trees planted per hectare is stabilized as the common model around the area of Korca making it the most important region in terms of apple production. There are a few attempts from the clients interviewed in Korca to switch to a newer planting method already. This is related to the introduction of the latest international orchard innovation of planting in densities of around 2,000 trees per hectare, as opposed to the traditional guidelines on optimal densities in Albanian orchards which call for planting around 800 trees per hectare. These farmers have been influenced by a lead progressive farmer/agronomist from Divjaka who left the extension service in the 1990s to cultivate his family orchard and by returning workers from Italy who had experience working as laborers in intensively planted Italian orchards.

Product innovation was also experienced in the form of moving up and down the value chain in the form of vertical integration. This was the case of Mr. Licollari and Mr. Mullai in Korca, Mr. Biti in Divjaka and Mr. Gorrea in Divjaka. So Mr. Biti decided to improve and provide a market space along the years as he saw that products from Divjaka were more and more requested so that farmers would have a wholesales point where to market their products and equal chances rather than having every trader come around the fields. This service provision came at the right moment at the right place bringing benefits to the whole area and to Mr. Biti itself. By doing this he shifted from an input supplier for vegetables production such as seeds, fertilizers and pesticides into a Wholesale Market provider and is lately also involved in post harvest handling practices through his investment in a cold

storage facility, where products such as carrots, cauliflower and broccoli from the region will have the possibility to be stored for higher profit related to market time. Mr. Biti who runs his family business as most of the interviewed has also entered the exporting business and was thinking about extending to producing his own products in the future.

Another very interesting example of a more radical type, is that of Mr. Gorrea of Bruka Company since one of his product innovations was of benefit not only for him but for all the farmers in the area of Divjaka and maybe soon of benefit for all watermelon growers all over Albania.

Mr. Gorrea switched from input supplying to seedling production for different vegetables such as tomatoes, cucumber, paprika, eggplant but also fruits such as melons and watermelons. His switch was related to heavy investment which he shared (in the form of subsidies) with a Dutch development organization acting as a partner, introducing a new node in the vegetables and field fruits value chain. This turned out to be very profitable for the farmers as well. Even though now buying tested seedlings instead of seeds is a more or less common practice for the farmers especially in the area of Lushnja, before doing that they were doing their own R&D variety development in the backyard, which is something very costly if not done properly and most likely. So time spending and risk of throwing away a whole year's production because of bad seed selection were overcome by the provision of seedlings (actually a hand full of providers in the whole country).

This is a case that proves the necessity of the sector specific dependence of R&D from system/state/other unit support. As Clark mentions in his paper on Innovation systems about how technological factors impact differently agricultural production from industrial production "the second difference relates to the failure of market to allocate technological resource optimally in the case of agriculture. Unless the state intervenes there will be underinvestment and everyone will suffer. Thus although the poor farmer has often considerable tacit knowledge about his environment he is in no position to invest in formal R&D to improve production possibilities. This is not only because of cost and scale factors. It has a lot to do also with perceived risk of failure since a mistake can have devastating effects on the livelihood of himself and his family..."



*Box 1: Means induced Innovation in Divjaka*

*Background: Land in Divjaka is very fertile so that it allows the production of watermelons but the seeds provided by the Research Institute Lushnja are very vulnerable to a specific insect. The visit of a foreign specialist is enabled from the Ministry and he is brought right on top of the problem through the assistance of the extensionist of the Ministry covering the area, now working as an outreach specialist with AAC. The specialist suggests an improvement of the watermelon variety through crossing with pumpkins.*

*Implementation: Mr. Gorrea, General Director of Bruka Company sizes the opportunity, becomes receiver of the technological transfer, overtakes the implementation process, and translates it in terms of his products and customers needs: seedlings of watermelons.*

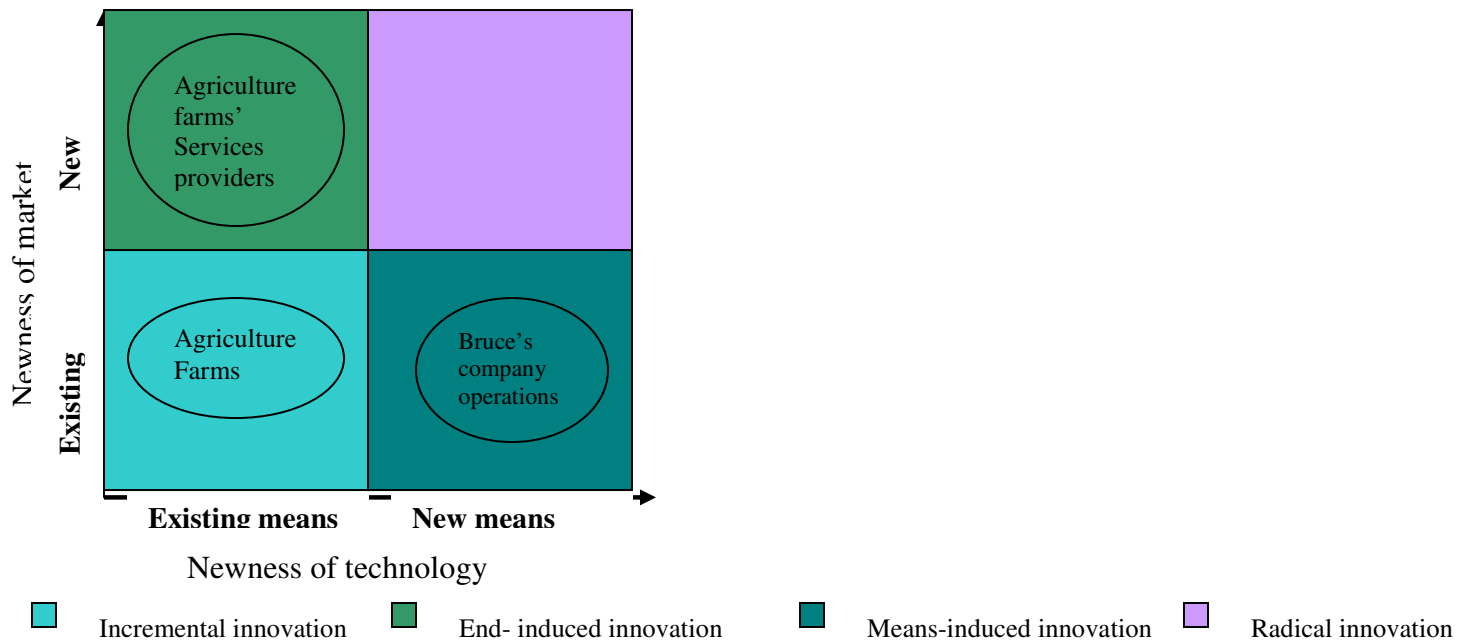
*Outcome: Last year watermelons from the area of Divjaka were 2 weeks earlier in the market, wiping the early season price advantage, combined with lower transport costs and a more favorable position as compared to Xarra, further down south of Albania. This success opened the gate to negotiations with potential importers in the European Union and the introduction of higher value varieties such as the seedless watermelon, based on EU consumer preferences. A large quantity was exported for the first time to a Wall mart subsidy in UK.*

#### **4.3.2 Summary on Product Innovation in Agriculture Businesses**

**Product innovation** constituted an important component of success of the farmers and other actors of the value chain. Even though product innovation comes mainly in an incremental form as a novelty for themselves without introducing something new to new markets such as the case of shifting from low value commodities to horticulture or exotic fruit production, there are also some other forms of innovation that are introduced from the most innovative companies in all aspects. The watermelon seedlings production from Mr. Gorrea represents a means induced innovation for the Albanian market. The other seedlings production and cold storage facilities placement represent end induced innovation, products that created opportunities for new markets with the technological newness being not so high. If this was to be seen all in a global perspective it would be only incremental innovation. So incremental product innovation is the most typical form of innovation accompanying all actors in their agriculture business experience. Yet there are some companies that fall out of the general rule. Within this small cluster, mainly represented from services provider companies, the level of product innovation correlates with the entrepreneurial awareness and implementation such as the successful introduction of new businesses in the value chain the company is operating in.

Entrepreneurship was not rooted in farm practices yet, even though farmers were innovative at a product level. This is maybe the difference between innovation and entrepreneurship and innovation and survival. The figure below is a graphical interpretation of the above discussed fitted in the “new means-new end combination” diagram (Management of innovation, Franke).

Figure 8: Level of innovativeness and positioning of companies in the agriculture sector



## 4.4 Sources of Innovation

Decisions and impressions on sources of innovation vary from one category of the interviewed to the other. I will refer to opinions on sources of innovation from the farmer's category, consolidators and exports category and the post harvesting services (cold stores, wholesale market administration) separately because of the similarity of answers each sub-group carried among them.

### 4.4.1 Category specific findings

For the farmers the best source of innovation for their new variety try outs have been cooperation with seedlings provides which have previously been their inputs and seeds suppliers, providing them with new and better varieties with respect to specific problematic (such as resistant to a certain disease, higher yield etc). They have admitted that extension specialists have been also important in terms of improvement of the production process such as implementation of better irrigation technologies, better dosage of fertilizers and pesticides etc. but it was understandable from their comments that they expected more from this source in these aspects. Another important source of innovation have been also supporting development organizations such as AAC with their technical assistance, demonstrations and also partial grants for the application of new technologies (for example the case of the implementation of inflated Greenhouse in Hysgjokaj as a joint attempt between the AAC project

and the respective farmer who provided labor, inputs while AAC the new technology together with a data gathering point on decisive factors such as humidity and temperature to prove advantages of the new technology and counseling for the implementation) offering thus a more participatory approach of a successful production process innovation.

The relation with private sources of innovation has proved to be more cooperative than the one with the state agency. For instance Mr. Gorrea has his farmers of excellence among the producers group Divjaka with whom he cooperates for his ongoing R&D for the improvement of varieties. The farmers of Divjaka were happy with him because he offered some real solutions to their problems such as the new watermelon seedling that was resistant to the specific disease.

Sources of innovation for seedling providers were different. Their knowledge flow came partly from collaboration with the TTCs of the Ministry and partially from cooperation with providers out of the country. Mr. Mullalli one of the few seedling suppliers of apple orchards in the area Korca for instance testifies a very good cooperation with the Technology Transfer Centers of the Ministry. He was given by them the right to produce and distribute a certain wheat variety that sold very good overall the area of Albania. Even though he was not technically supported by the state agency for the orchards seedlings production he was well informed about the latest technology. A possible source of innovation in the future would become AAC-Project with the technical and financial assistance for a new high density plantation as well as for the introduction of new apple varieties such as Fuji apple.

Other services suppliers were less technology oriented in their choices of sources of innovation. Their innovation inspiration or their entrepreneurial decision came more as an inner decision backed up from the family and friends circle. This is the case of Mr. Biti with the decision to build the cold store near the market of Divjaka, the case of Mr. Licollari with the decision to build the apples cold store in the area of Dvoran. Printed materials and literature are less of an inspiration for this generation.

#### **4.4.2 Summary on findings on sources of innovation**

Sources of innovation were different for each category. The higher the level of innovativeness the greater the need of specialized sources of innovation with respect to agriculture R & D. State support was considered necessary and put into use better especially from the most innovative category: seedling suppliers. Yet representatives of this category were eager to receive and benefit from even more efficient future state representative units (opinions from Mr. Gorrea).

The farmer is very distant from direct R&D and state support in terms of technology and best practices transfer. He is put in the loop by provision with the solution that comes out of new technological know how, from the seedling suppliers. These last sometimes act as consolidators for large negotiations and can easily convince them to plant the new varieties by promising to buy the new produce. At least the cycle of transferring technology to the farmer gets closed for now, yet this could have negative

implication in terms of asymmetries of information and knowledge resulting maybe in lower negotiation powers of the farmers in the future. This solution can result as a spoiler of farm-level entrepreneurship in the future.

The other services providers being business oriented take their impulses of innovation directly from the market, trying to understand what is the right new seed of service that can be embraced by the customer.

## **4.5 Marketing of innovation**

The marketing of innovations is an important step to the overall success of innovation. After having made the right choices at a product level agriculture firm need to market the new variety, or new service. Product innovation in companies in the agricultural sector as derived from the sample is mostly incremental and even though means driven sometimes, it has almost always come as a market necessity. Because of these two reasons the level of acceptance of this innovation has been high so specific methods of marketing and their implementation has shown to be not really necessary. Of course decisions on the product choice are to be based on market needs.

If we refer to Christopher Lettl approaches to marketing of innovation, we would say that the common implemented approach of marketing of innovation (when the concept is implemented at all) is the voice of the customer approach where the user involvement in NPD of producer is low and the involvement of user as innovator is also low yet the user's perspective is taken in consideration through traditional means such as market surveys, customer interviews etc. Yet it is difficult to identify a specific methodological approach to marketing of innovation in agriculture that would serve as a benchmark. In fact, models of marketing of innovation as reported in different papers (Kaulio.M.A, 1998) are very industry and technology oriented. While in Table 1 there are represented 7 methods of customer involvement: QFD, User Oriented product development, Concept testing, Beta testing, consumer idealized design, the lead user method and participatory ergonomics and to which field of activity they apply more, non of them is thought to suite well agriculture innovation.

### **4.5.1 Sample categories findings on marketing of innovation**

Findings with respect to marketing of innovation differ with respect to the three categories of the interviewed because they prove different approaches with respect to customer involvement and deployment of the term marketing of innovation per see.

Farmers had existential problems with marketing as perceived in the traditional perspective: promoting products and selling them successfully in the market. They were struggling with the 4Ps of marketing and this not because of the newness of their product. As I have mentioned above farmers were

involved mostly in incremental innovation which meant sometime a change from low value to higher value crops and sometime implementation of a more costly technology like the case of inflated greenhouse. Marketing for them at the moment meant pricing and place (distribution) beyond product. There have been positive developments with respect to marketing of agricultural products as I observed from the interviews but yet they are very primitive and a lot has to be done. For instance farmers used to wait in their respective parcels for whole traders to come and collect their goods. This appeared with lower transport costs but their bargaining power used to be also very low. With the creation and functioning of whole sale markets in the area of Lushnja and Divjaka they were given the possibility to organize and bring their products together or separately to the market which has turned into the negotiation spot. This way of marketing is still inefficient, but the most important message I get from my investigation and adding up to the coir of papers (Spielman 2005, Hall 2007, Hall 2008, Clark 2002,) is that single non commercial farmers that plant and sell to cover their basic family needs, can not do it alone. For a more sufficient marketing first of all they need the close cooperation with other value chain actors, wholesale traders, exporters, consolidators, and second they have to group and revolutionarise the way they do business with the aim to be more innovative and to provide more value in terms of being early in the market, increasing the value of the produce by post harvesting methods such as grading sorting, packaging etc. Become more interesting in the eyes of the customer: in other words, market themselves better. At this point a more customer oriented approach to marketing will be needed. But there has to be a system in place that supports this transition towards more commercial units also in terms of marketing. A system composed with better access to new production methods and technology, better access to financing the change, better access to assistance for marketing and other business administration tools, that enhances entrepreneurship in many levels and also marketing, if the innovation in before hand looks feasible. Again farmers saw the integration of marketing as a very important tool of success they were conscious of missing at the moment.

The second category the cold storage operators and providers of other services did not use much more sophisticated terms than farmers in marketing of innovation. The product innovation has appeared to be the right choice and therefore by offering something that was missing but was necessary (having made their observation homework) they had covered the marketing of their new service de facto. Yet a lot more could have been done and can still be done to increase the popularity of their product in terms of better promotion and with respect to the other 3 P-s. Mr. Licollari in Korca is a typical example of the level of marketing of innovation dilemmas in the services providers' category. He has been successful with the provision the cold store facility in Korca at the moment. What that means under an Albanian perspective is that he was able to sell all apples stored in it while other cold storage operators failed (mainly because of the processing procedure, apples have to be harvested earlier and not to ripe,

temperatures have to be changed with respect to temperatures changing in the outer environment etc). In the mean time he is aware that he must pay more attention to marketing, having had the product process in place. He has decided to create his brand presence, invest more in post harvesting methods and is going to expand in other markets than the traditional one. A better post harvesting practice will enable him to be present with his own logo in the main supermarket chains and AAC is helping him to do that by providing him with the logo concept and a first quantity of boxes (for 50 ton) for products that will be designated for the supermarket. Yet these are attempts of improvement within the traditional perception of marketing. The perception of a specific way of marketing a new product/innovation is lacking here as well. I was not able to trace any activity within this category that would account for knowledge and application of the concept. The user involvement in the NPD process or involvement as innovation was very low as you can see in the figure below. Neither were signs of strategic marketing of innovation visible in this category.

The third category the seedling suppliers sometimes acting also as exporters in the case of Mr. Gorrea of Bruka company and consolidators have a more innovative approach to marketing especially at the early phases of product innovation. The approach is more participatory and customer oriented. His customers are mainly farmers and he involves the most progressive ones in his R&D for variety improvement with respect to local conditions. To enforce this conclusion I am giving here an example. He cooperates with Mr. Vladimir Todi a farmer concentrated in the production of watermelons in the area of Divjaka for instance for the planting and testing of varieties to see how they fit the external environment after the experimenting in the green house. Testing that takes place at the farmer's backyard involves a lot of tacit knowledge and the freedom of further experimenting from the farmer's side. The last ongoing experiment was related to the production of onion in the near costal areas. Mr. Gorrea was betting that if onion proved to be efficiently planted near the costal areas this would be very beneficial and cost effective, reducing transport costs from more remote areas and offering a tremendous yield increase. So this product oriented innovation comes through a collaborative approach and a proactive marketing, since he is preannouncing the new product to be planted in the area in preliminary phases.

It is not the only novelty in terms of marketing of innovation this company is going to bring about. The introduction of personal size watermelon for the export markets of United Kingdom of seedless variety is another success from which the whole area of Divjaka is expected to benefit. In close cooperation with AAC ASDA supermarket chain, the British Subsidiary of Wall mart in UK was initially contacted, with AAC assisting along the whole process such as upon the suitable variety choice, trade logistics etc.,. Impact for the area could be higher gains for all participants (farmers and consolidators), a future stable market for their produce accompanied by a shift towards European

market consumer choices of watermelon varieties. Marketing of innovation was conducted carefully and successfully by assistance of relevant sources (AAC) for processes innovation (in this case marketing) and the right approaches with respect to the specific situation.

#### **4.5.2 Summary on marketing of innovation findings**

Marketing of innovation is opposed to challenges of underdevelopment of agriculture sector in Albania even in more the progressive subsectors. The marketing of products is difficult and is sometimes at not satisfactory levels even with respect to traditional marketing tools, this especially at the farmers' level. In this category where the level of innovativeness is low, the means to market the new products are very simple. Marketing of products as known and applied in traditional business has just started to be explored.

A more sophisticated approach is observed in the services around the agriculture produce category such as exporters, cold storage operators etc. These companies like in the case of Mr. Licollari tend to make good use of traditional marketing means for their new business solutions. Decision making for the new product comes more as a gut feeling combined with low customer involvement in the process of marketing of innovation.

Signs of implementation of the concept of marketing innovation are to be observed only in one or two companies that innovate in a close collaboration process with their customers like the case of Bruka Company above mentioned Mass customization the concept so well defined by Gilmore and Pine, in B2B comes in the form of pre-contracting of production in agriculture, when the customer decides what variety and what size the company is going to produce. Yet is very weak in B2C.

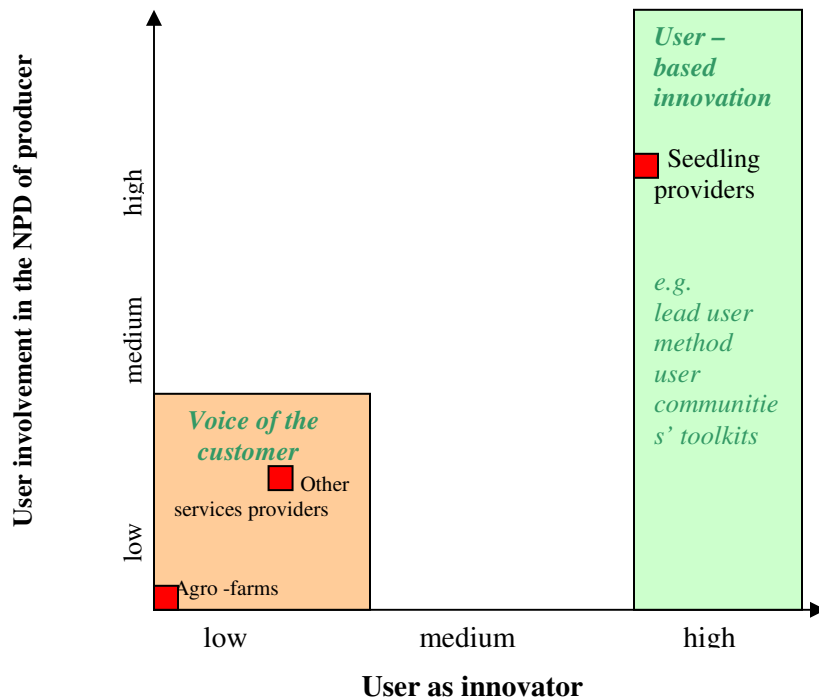
The extent of marketing of innovation is correlated with the level of innovativeness. The higher innovativeness, the more companies tend to use strategic tools, and other tools such as customer involvement that properly fit with marketing of an innovation.

The importance of complementary assets for the appropriation of gains from the innovation (Teece, 1986) becomes evident in the Bruka company case. He has the core technological know how but is able to provide distribution, competitive production of the personal size watermelons, the link to the right market through his distribution strategy, offer post production services such as appropriate packaging etc that normal farmers are not able to provide.

Another issue that came up in this context is the lack of consumer involvement method for the marketing of innovation especially designed for the agriculture sector, which could be subject of further research.

The figure below shows the positioning of agriculture companies with respect to their approach towards marketing of innovation, based on Christopher Lettl marketing of innovation diagram and companies' sample results.

Figure 9: Approaches to marketing of innovation in agricultural firms



## 4.6 Business Models in the agriculture sector

According to Morris (2005) the unification of theories of entrepreneurs' business models results in the integration of three levels of decision making in their activity: the foundation level, the proprietary level and the rules level.

I tried to understand, to what extent the integration of these three levels can be found in the agricultural companies business models, how this correlate with their scope of activity, to what extent this concept is integrated and what outcomes it brings in the agriculture companies. I was able to identify companies that account for low integration of the concept in the daily activity and higher extent of integration of the concept and this corresponds with the division by activity in two main categories: agriculture production farms and services providers to agricultural farms.

### 4.6.1 Services providers implementation of the entrepreneurs business model

I believe that **services provision companies** building around the farmers' agricultural production are interesting business models. They come sometime in the form of vertical integration and moving up the value chain like in the case of Mr. Licollari whose experience with horticulture made him understand the importance of time to market of apples and add the cold storage facility to be able to sell its product at a more appropriate time with a better price (the demand is high and supply lower later after the harvesting time so the prices of apple go up since everybody tries to sell after they harvest, normal storage offers a limited storage lifetime to the apple and the market is dominated by



imported apple which tend to be not so competitive in terms of price are the only component of supply during the period April –August).

Mr. Licollari, other services providers as above mentioned and seedling and input suppliers seem to have answered correctly questions of the **foundation level** related to designing a successful entrepreneurs business models such as: *How will the firm create value? For whom will the firm create value? What is the firm's internal source of advantage? How will the firm position itself in the marketplace? How will the firm make money? What are the entrepreneur's time scope and size ambitions?*

While the **“foundation level”** is captured by almost all of service providers around agriculture production more or less, only a few have been able to reach the proprietary level: the creation of unique combinations.

According to Morris, Minet & Allen, 2005, while the foundation level is adequate to capture the essence of a model for many firms, sustainable advantage ultimately depends on the ability of the entrepreneur to apply unique approaches to one or more of the foundation components. Having determined that the firm will sell some combination of goods directly to businesses or sell at high margins and low volumes, the entrepreneur indentifies novel ways to approach such decisions. This is referred to as **“the proprietary level”** of the model, as it entails innovation unique to a particular venture.

While the foundation level is easy to replicate by competitors the proprietary level is not.

The close ties Mr. Gorrea has created with the farmers groups he is currently working for the production of watermelons, his technological competency, the complementary support for the value chain development through personal contributions for the creation of the producer group of Divjaka make him operate already to the proprietary level with respect to internal capability, through the approach through strategic factors and market factors<sup>12</sup>. It would be difficult for competitors to take away his business and it would take them time to design something similar in their respective field (for instance his direct competitor is strongly operating in the tomatoes and cucumbers seedlings supplies).

I was not able to find signs of the third level referred to as **“rules level”** in the paper of Morris. “Once implemented, a model's success can be tied to a basic set of operating rules”. Maybe this is related to the fact that the companies operate in a developing country and the pressure of uncertainty related to the business climate and the regulatory framework. This was definitely pressed in their expectation about regulatory framework and state intervention. A clear idea about the way the country will develop further would give indices and signaling for their possible future long term strategies as well.

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<sup>12</sup> here I am referring to table 3 of The entrepreneurs Business Model, Morris, Shindehutte, Allen, 2005

This would result in a quantification of future results and prospects such as “become the market leader in the region for the production of watermelon seedlings” etc.

#### **4.6.2 Farmers decisions vs. entrepreneur’s business model**

**Farmers’** businesses models on the other hand are conceptually away from any interpretation that can conotate with success. Most of them even though I concentrated in progressive areas and in higher value commodities, are struggling with their low volume non commercial farms. Grouping and other measures such as systemic support to enhance innovative competitive solutions are necessary. Agriculture production farms have to answer the 6 basic questions more carefully in order to become more competitive and add substantial value to their final product. The other decision making levels: the proprietary and rules level were not yet (with respect to this theory) part of the business decisions of agriculture farm businesses.

The lack of this perspective seems not relevant sometimes in the farmer’s eyes. It is true, the relation with a successful consolidator may prove to be successful and ensure sales of their produce for the moment, yet this might have negative effects on their own entrepreneurial exercise and create long lasting dependencies if the negotiations are not preliminary well thought, this in the best case, if the farmer can hold the supplier position without answering the foundation level questions because of other favorable factors. The entrepreneurial spice would add value to a nature blessed competitive product such as fresh agricultural produce....

This is a case worth of an extra effort and support from the system by placing it among strategic priorities. Entrepreneurship enhancement’ implementation can be brought by financial means, as capacity building, as technical assistance and as core part of the innovation system integrating all the above.

To conclude, the level of integration of the entrepreneurial business model correlates positively with the level of innovativeness, marketing of innovation and product innovation in the sample.

#### **4.7 Organization and processes enhancing innovation**

I do not think I can add a lot of content from the practical local experience related to this dimension. Enhancing innovation at an organization level is not yet a recognized opportunity in the agricultural production oriented farms as well as in the other services providers also not. Specific processes that are thought to enhance innovation in a company were also not identifiable in the interviewed companies. Maybe this is related to the fact that most of the interviewed companies were within the range of micro to medium size companies. The organization and the process of innovation are related usually to the entrepreneur vision, aims and will to move along with the new challenge. It starts and

evolves usually at this level and is not supported by any system endogenous or exogenous of the organization where the entrepreneur operates. Yet my assumption is that innovation enhancement processes could be part of tacit knowledge channels and are therefore not so easily identified and explained through explicit methods that can be shared with many. This is maybe one of the reasons of the lack of this component. Another reason can be the existence of a strong culture with respect to content, being part of which makes the most social participants reluctant to change and innovation and the innovative people be still considered lonely wolfs, unable to infrastructure their innovation spirits. As Flynn & Chatman explain in their paper Strong cultures and Innovation “Oxymoron or Opportunity” “ a strong culture can be a powerful form of social control because it provides agreed-upon standards that members may use to assess the appropriateness of their own and others’ actions or believe. But it would be incorrect to assume that strong cohesive organizational cultures induce identical or uniform patterns of thought and behavior among members....cohesion relates to the strength of the group norms rather than their content.

Yet I was able to define used ways of enhancing innovation at a strategic level that fit with theory like in the case of **Blue Oceans’** creation from the Bruka Company, which was able to create new demand for agriculture production without having to take customers from somebody else. This is a process that is related to action of the leadership or one/two persons strategic decisions rather than to a company-wide process.

*Box 2: Defining Bruka Company Blue Ocean<sup>1</sup>*

*“The very language of strategy is deeply imbued with military references “chief executive “officers” in “Headquarters”. Described this way strategy is all about red ocean competition. It is about confronting an opponent and driving him off a battlefield of limited territory. Blue ocean strategy, by contrast is about doing business where there is no competitor. It is about creating new land not dividing up existing land.... Perhaps the most important feature of blue ocean strategy is that it rejects the fundamental tenet of conventional strategy: that a trade-off exists between values and costs...In other words strategy is essentially a choice between differentiation and low cost. But when it comes to creating blue oceans the evidence shows that successful companies pursue differentiation and low costs simultaneously.” (Chan & Mauborgne, 2004)*

*Now back to Bruka Company: This Company also created a blue ocean with the provision of better variety seedlings of watermelons. It entered the market not as a producer, shorting thus the process of production, investment costs on land and other production technology costs, but with a new business model oriented on seedlings production. It cooperated with development agencies to provide funding for the investment of hi-tech greenhouses; it offered a new solution to its customers: better and stronger varieties in the form of seedlings, ensuring thus a healthier and stable production outcome. Then it bought back the production from farmers acting as an agent and found new higher value markets for them in the EU market.*

Organization of innovation in the agriculture sector is experienced at a strategy level with and from the contribution of the entrepreneurial mind of usually the owner of the company. Time will be needed to extend that strategic thinking in a sustainable way throughout the organizational skeleton of such fragile companies. Increasing the level of innovation organization at a firm level can be another strategic aim directing state support at least at a pilot level at the beginning..

## **4.8 Innovation culture and Entrepreneurial Leadership**

I discuss findings related to these two components together because they complement each other in my sample, even though they follow separate courses especially in big companies.

### **4.8.1 Outcomes with respect to innovation culture**

Innovation culture links the concept of culture with the concept of innovation making this last as the core component of the respective culture.

“Culture gives an organization its own unique internal and external identity. The organizational culture gives all organizational members a guideline for their future expected behavior” (Bleicher 1991/Organisation of innovation MBA Handouts).

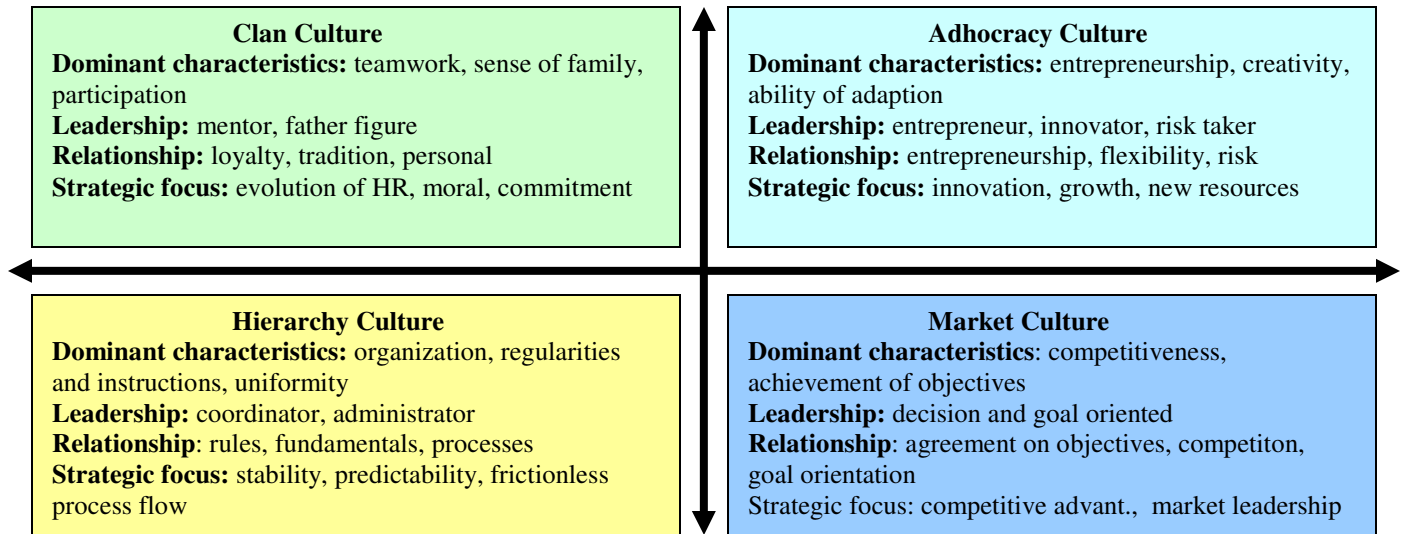
Corporate culture refers to a set of values, beliefs and behavior patterns that form the core identity of an organization (Denison 1984/Organisation of Innovation MBA Handouts).

It is difficult to identify a company’s innovation culture in abstract terms yet this can be readable by the company members’ norms. Some of the components of the innovative organization are: shared vision, leadership and the will to innovate, appropriate structure which enables creativity, learning and interaction, creative climate & learning organization, key individuals with roles to facilitate innovation and effective team working.

Seen in the perspective of firms operating in agriculture in Albania I must admit that all companies were far away from these settings in conscious ways. Even though I have used the examples of the most innovative companies a couple of time to show the best Albanian practices with respect to marketing of innovation, product innovation etc. this is in the majority not driven by an innovation culture of the company. Also in the case of Bruka Company with a quite entrepreneurial corporate mindset accounting for a good combination of proactiveness, riskiness, aggressiveness and autonomy to a certain extent the innovation culture as a core value is not yet part of the identity. When referring to the matrix on different kinds of organizational cultures (Deshpande, Farely and Webster 1993 in the Organization of Innovation handouts) as shown below I would position the most progressive Albanian companies between the market culture organization culture and adhocracy culture. Some processes like allowing people in the organization to take risks and experiment with the will to innovate, putting

innovation as the core strategic drive would enable an upward shift towards adhocracy culture. The agricultural farms have implemented more of a clan culture with respective focal father figure and relationships characterized by loyalty, tradition, personal relationships that are enhanced by the family bond of people working in the respective non commercial farm.

Figure 10: Different kinds of companies' organizational cultures



#### 4.8.2 Entrepreneurial mindset

Entrepreneurial mindset is an important feature of many of the most progressive company owners mainly falling in the services providers' category. These people are willing to take risks and accept failure as the price to pay to follow their business ambitions. They testimony characteristics of entrepreneurs such as the will for independence, will to take risks and being always in the search of new opportunities. Maybe this has been enhanced also by the unstable socio-economic conditions of the country, with the lack of stability contributing to an increased adaptability to change of most of the interviewed. Yet the adaptability can be passive or proactive and this last is the real path of the entrepreneur. When asked what upon motivating reasons for innovation Mr. Gorrea and some of the most entrepreneurial company owners admitted during the interviews that taking upon another challenge, was an important motivation beyond profit.

On the other hand farmers seemed to have taken the entrepreneurial path "forced" by the need to survive, facing a strong contesting traditional main stream. As Mr. Melsi one farmer from the area of Korca admitted, his father strongly contested his decision to invest in horticulture instead of the usual low value commodity, but he said he decided he could leave with everyone being against him, because he knew this would bring more profit to the family farm and a better life to his family. Survival entrepreneurship can also be considered as a good first lesson of achievement in the entrepreneurship path, yet an exercise that needs to be repeated under improved conditions and by the help of new techniques. It does not take only the farmers good will and skills adapted for the entrepreneurial path,

a sound environmental setting is also needed and can contribute for the enhancement of this characteristic in the agricultural sector.

## **5. Conclusions**

### **5.1 Macro perspective**

Agriculture production is of relevant importance for the economy of Albania because of its relative weight to the GDP, because it accounts as a source of employment and income for half of the population of Albania, because of its importance as a supplier for the domestic consumption of agricultural products. Its importance and troublesome situation to some extent represented from the low annual turnover of the farms, farms structure, non developed value and supply chains, high land fragmentarisation, is accompanied by higher competitiveness at a production, yield, and trade flows level of some products starting to cluster in some regions, which shows that this sector has considerable potential for development and it requires well thought focus and reform with the aim to increase its competitiveness. The focused approach in most competitive subsectors would be a good start with focused energies on what has more possibility of further development. So the potential that the Albanian Agriculture Sector shows because of its nature, climate and geographical position advantage needs to be supported by well thought incentives and also state intervention under the conditions of a not well functioning market economy and partial market failures, especially with respect to agriculture production marketing. The market economy as known till now has been characterized by the poor access to market, latest technology and the non-intervention of state in “agriculture business”. Yet I must admit that this has had positive externalities also such as the of creation of private service providers upon the value chain of specific agriculture subsectors, which create value by linking production to markets, technology and innovation. Nevertheless the private sector entrepreneurial approach is not enough for a structured and sustainable growth and recovery of the sector.

The legislative, institutional and governmental framework till now has been very sporadic and not simultaneously acting upon the problem. Very broad strategic aims, followed by the lack of institutional support not acting beyond a pipeline traditional top down technological support with very weak interactions of the actors, testimony a bad implementation of traditional systems of agricultural support, which themselves have shown to be problematic and underperforming around the world. On the other hand the legislative framework has been very inconsistent and till 2007 does not have a systematic approach to agriculture; it lacks an overview frame, and accounts for sporadic attempts of improvements with a fund here and a quality measure there.

Only lately a more structured approach has been implemented through the design and approval of national strategies for the development of agriculture and for the rural development. These strategies are supposed to direct institutional legislative and other support measures for the development of agriculture. The strategies include strategic priorities, strategic aims and strategic sectors and these accounts for a more focused approach already while competitiveness of the sector is a sound backbone of the strategy. Policy measures try to approach different problems from technology and best practices transfer, to creating access to markets, to ensuring food safety and hygiene to enabling market information. Yet I put into question especially the implementation of these strategies and the results, for several reasons.

- First because financial support is still seen as the main drive of change accompanied with legislative measures. Competitiveness is not tractable as a criterion of fund distribution, not to mention entrepreneurship and innovation.
- Second because not enough focus is given to innovation and entrepreneurship as a core backbone of competitiveness even though competitiveness is the core issue of the strategy. Capacity enhancement/building with respect to entrepreneurship skills in agriculture is not part of the strategy implementation. The economic and business perspective support is rather seen fragmentary and with interventions at a macro perspective whose reality impact is seriously dependent on their implementation while the entrepreneurial skills of the core unit of agricultural production are left untouched or only indirectly addressed.
- Innovation is seen still as exogenous from the core unit, a novelty to be pumped from the TTC in the form of technological transfer while no incentives are made to make it a result of a more participatory process, as a start.
- Fourth because the state intervention and state support even though decided upon a more participatory approach than before of different interest groups does not have the main actor: the farmer with an active role but as a passive receiver of support at the core of its strategy.
- Fifth, the institutional support with respect to technology transfer is oriented from traditional pipe – line technology transfer systems that have shown to be under performing for the situations of agriculture underdevelopment of developing countries mainly due to the lack of common understanding between knowledge distributor (agriculture research units) and knowledge users (the farmers). The lately introduced TTC are supposed to make farmers familiar with the best practices. Yet there is no system in place that regulates the interaction between these two, making the farmer as the driving force and a core player for the decision of the technologies to be transferred, enabling thus the best fit instead of the best practice.

Concepts of innovation and entrepreneurship known by theory to contribute for the enhancement of successful innovation in a business, so important for the economic environment and therefore for the society, does and not have supportive roots in the institutional, legislative and strategic aims for agriculture development.

## **5.2 The Micro Perspective**

Innovation but especially entrepreneurship is present in the daily business conducted in the agriculture sector. Most promising subsectors were selected with respect to their actual competitiveness and future potential. The sample companies, operating in the horticulture, greenhouse vegetables and watermelon production and/or providing services around agricultural production of these goods have been mostly directing their decisions driven by the survival instinct in a free not well functioning market economy. As the entrepreneurs that seek always new opportunities and are willing to take risks they also very often had to make risky decision with respect to what to produce this year, whether to add the new irrigation technology, decisions related to post harvesting handling or services, decisions to add value through vertical integration up or down the value chain, decisions on marketing etc. Nevertheless as most successful entrepreneurs that act by instinct, also Albanian agriculture farmers and entrepreneurs proved to have not acted so logically with respect to innovation. Actually a lack of popularity of both notions was obvious.

Most of the interviewed companies' core innovative substance came from product innovation. This is where most of them in their entrepreneurial decisions are betting for the innovation success. This becomes highly typical for agricultural farms.

Expanding further on the characteristics and types of innovation I observed a high rate of incremental innovations. Most of new products or new production practices introduced by the interviews had a newness relevance especially to themselves but were neither new to the industry nor to the market. There were examples of market oriented innovations with products or services that were new for the market and also means induced innovations but these were more rare and related to services such as post harvest handling or input supply services. These somehow more radical innovations were the core advantage of the implementing companies usually, innovations that enabled them to establish the new products in the markets by adding value that did not exist before.

Own companies Research & Development Division findings represent a beautiful future possible achievement but are abstract for the reality. Other sources of innovation mentioned were Technology Transfer Centers or Research Centers abroad. The importance of these TTCs becomes more evident



here at least for the transfer of best fits with respect to actual local needs. Companies like Bruka that had a wider possibility of selection among national and foreign technology partners proved to be more aggressive in new technology assimilation with higher innovative products and solutions outcomes.

Marketing as well as marketing of innovation are two areas where again a lot can be done at a micro and macro perspective. Non commercial farmers struggle for the marketing of their produce with primitive means. This is related to the farm structure, its limited resources and its business model. Poor marketing seems to be one of the outcomes of a non reliable business model with very weak proprietary rules and no differentiation from the farmer next door who also “sells cucumbers”.

Capacity building for marketing decisions can be part of tailored technical assistance to introduce an important incorporated feature of entrepreneurs. At an environmental level structures offering better market development and market intelligence options should come to existence and be part of the state intervention for support.

Other services providers have smarter ways to go about also with respect to marketing of innovation. I was able to identify customer involvement in the innovation process and proactive marketing strategies for the acquisition of new markets. The perception created from the observation is that these cases are very rare and are not sector specific. A lot of dialogue, communication and energy would be necessary to transform this into a sector characteristic.

Business models usually have the foundation level that makes the business still run yet especially at the farmers level they lack the proprietary and rules level, so important for the differentiation and firm specific added value and for the sustainability of the success of the model. The proprietary level is established already in the most innovative companies expressed in the form of complementary assets sometimes, sometimes in a form of a unique service that competitors can not copy easily. The rules level is maybe not yet at its formation phase but will become important as more companies evolve from level 1 to 2.

The organization of innovation and processes of innovation is not such a common thing among observed firms. Innovation strategies as part of the innovation process are sometimes surprisingly carefully chosen and are usually a solo contribution of the entrepreneurial mindset of the owner of the company. It requires time and focused attempts to make innovation part of the processes of these companies. This applies to most agricultural related companies. This could be related with the presence of a strong culture with respect to content and uniformity of thinking. As per the innovation culture and entrepreneurial mindset I can say that this last is much more present, sometimes also obligatory as a result of the unstable socio-economic conditions.

I believe that companies concentrated in different levels of the value chain have shown very satisfactory levels of entrepreneurship and innovation, and a smart positioning with respect to these

concepts even if unconsciously; with a healthy attitude towards taking risks, differentiating and exploring new possibilities, given the unfavorable underdevelopment stage of the sector. These attempts have shown to be successful most of the time resulting in higher profit and or new markets and a better life for most of the respondents as compared to before innovating and taking risks. One of the problems seem to be the “un-contemporary” stakes of achievement they testify as compared to their homologues in developed countries. Yet entrepreneurship has been a factor of development of the agriculture sector in Albania, given the present conditions and challenges of under development and can drive progress further if accompanied by measures for the increase of market efficiencies.

The system perspective of innovation is not yet part of the reality in the agriculture related businesses. I must admit that the companies are developing in that direction and some are ahead of others. The input supplier, seedling providers and other services providers’ categories have shown a higher level of systemic functionality than agricultural farms. They usually base innovation in the company in two to three columns: product innovation, role of management or entrepreneur in the success of the action and marketing of innovation. Especially, seedling providers were more aggressive in assimilating and spreading new technologies and engaging in innovative and profitable business models. An evolved yet simple systemic approach to innovation as shown in figure 12 including product innovation, marketing of innovation, top management/entrepreneurs role in the innovation process, had better outcomes for the success of innovation and of the company in overall, resulting in higher revenue for higher initial risks of these actors.

The agricultural farms’ main component is product innovation so we can not even speak about a very simple system (systems need at least two components). Simple farms have not yet integrated other factors of innovation such as innovation management, marketing of innovation, organization of innovation, culture of innovation, in their daily activities. They have not embraced a systemic approach of management of innovation and account at the same time for lower investments, lower revenues and still high uncertainty about their future agriculture business. Figure 11 and 12 below show the pattern of innovation management of agricultural related businesses with respect to the innovation management model in a business activity and categorical clustering as derived by the sample.

FIGURE 11\*: Innovation factors and the innovation management process in agricultural farms

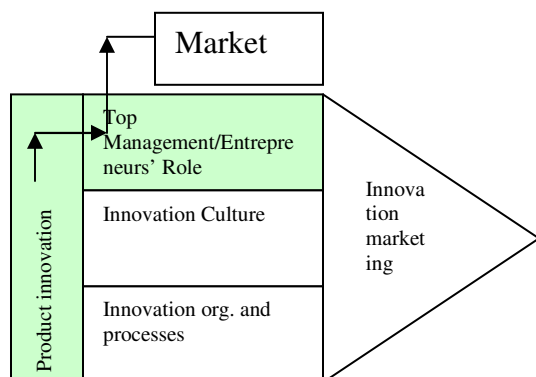
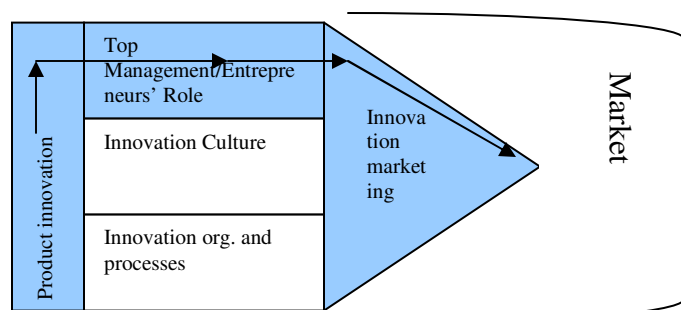


FIGURE 12: Innovation factors and management services providers around agricultural production



\*Even though product innovation is not visually included in the innovation factors model (Franke, Innovation of Management Handouts, 2008) but it is understood, the basic level of innovation in all categories of agricultural related businesses concentrated only or mostly in incremental product innovation made the inclusion of this concept in the model necessary.

Differences among categories of business operating in the agriculture sector with respect to management of innovation are to be observed. Agricultural firms account for incremental innovations and include less factors of innovation in their innovation management path. The role of the entrepreneur is important, but accounts for survival entrepreneurial decision making. Other services providers are more innovative and make more attempts for the innovation success by integration of other components' such as top management role in the innovation process and marketing of innovation.

The identified current situation and identified gaps from an innovation management perspective in the agricultural businesses could be taken in consideration and addressed in the sector strategies, to improve the link between the micro and macro perspective so that the last serves the core unit better and the engine finally starts working.

### 5.3 Future Prospects- Enhancing innovation and entrepreneurship in agriculture at a macro and micro level

Agriculture development in Albania has fair chances of further development and of becoming a crucial sector of the economy. Yet this potential is being developed through fragmentary and not harmonized attempts and a very little interaction between the public and private actors. This brings as to the natural urge of linking sectorial prospects with regulatory and governmental framework and the micro core

units of the private sector. A lot of the discussion for further development must be focused on the agricultural company/farm as a core unit of the sector; its structural and strategic development, for a serious impact at a sector level.

Firms that operate in agriculture, including here agricultural farms and other actors are innovative and entrepreneurial in Albania, given the socio-economic context they are operating in. Yet the sector is underdeveloped and is struggling under the conditions of high competition and other devaluating factors so a lot needs to be done to increase its competitiveness. One approach to improve competitiveness of the sector is through the increase of innovativeness and entrepreneurship at a unit level, which would result in better products, higher revenue, higher profit and further development.

The traditional approach to R&D that has covered innovation in agriculture in many developing countries was that of a top down technological solution through international bodies to NARS (national agriculture research systems, to the farmer). Among the reasons why this technology oriented approach to innovation did not work well as Clark says are: i) research projects are often pursued for scientific interest, ii) within research bodies there are difficulties in establishing structures that can focus on the broad problems faced by the farmer, iii) many NARS are under funded because of macroeconomic constraints, iv) the difficulty of extension services to cope with the demands because of various reasons (lack of adequately trained resources for the operational difficulties of organizing and managing the complexities of new technological packages).

“There is a historic track that shows the importance of agricultural research and technology for innovation in developing countries where countries infrastructures and especially farmers can not afford undertake R&D in their own land and technology, certainly in the sense used by economists (as the means by which resources are transformed into commodities that have value)”. (Clark, 2005)

Yet he follows one of the reasons that impede technologic factors to be as important as in industry in the agriculture sector is “the failure of markets to allocate technological resources optimally in the case of agriculture. Unless the state intervenes there will be underinvestment. The poor farmer is in no position to invest in formal R&D to improve production possibilities. This related to the fact that a mistake can cost him a lot.

Yet innovation in the Schumpeterian perspective that characterizes the modern economic thinking about innovation is related to the technological change brought about by the inventor and appropriated for the market by entrepreneurial agents motivated by different reasons.

Putting all components and concepts above mentioned in the Albanian agriculture challenge context: Innovation at a firm level has its local and sectorial characteristics: proactive and passive entrepreneurial mindset of actors, focus mainly in product incremental innovations with a few exceptions, unexplored opportunities in the areas of marketing of innovation, business model innovation, organization of innovation and entrepreneurial leadership. Entrepreneurship has given its fruits given the socio-economic context especially for more innovative units and entrepreneurs who are acting smart and reading the signs of the market, surrounded by limited resources.

This is what Spielman refers to as Hicksian notion of innovation induced by relative factors of scarcities and incomplete markets (the new institutional economic perspective), rather than the Schumpeterian system where the entrepreneur is a driving force for the society development.

There is a government legislative, regulatory framework that aims agriculture development yet it looks like we are implementing what it did not really work in other developing countries already in the 80s. TTC that are very alike the concept of NARS (National Agriculture Research Systems) and extension services that operate under high coverage density and low human resources capacities. There is a top down approach on improving things for the poor farmer, who is not directly involved in the process. Problems like access to markets, new technologies, market information, and access to finance are the focus of the governmental intervention, with results focusing on more structures, improving structures and services operating under state. Without trying to underestimate what has been done, this exogenous approach without putting the core substance unit at the center of the process for development shows to be an outdated approach which we will not go far beyond results other developing countries were able to achieve now with their NARS and TTCs.

A new approach that addresses both the micro and macro level of efficiency in the agricultural sector is needed. Assistance to the micro unit, at the core of the agriculture sector can and must not be denied. It is understandable as we discuss above that agriculture companies can not do it alone.

Taking in consideration the problems of the core unit and of the environmental settings in Albania, the innovation systems are one approach to be considered in the socio-economic and development context of the country.

This system allows a) the interaction and inclusion of both main stream state and private entities since innovation and entrepreneurship for development in agriculture can not be implemented one without the other, b) lives room for the Schumpeterian view of society evolution as a result of innovations at its core entities and c) represents a new solution derived from theory and past mistakes improvements.

The innovation system should be designed with respect to theory but also with the strategic aim of enhancing the innovation and innovation success at a micro level. This strategic aim can be the driving force of the creation of an innovation system for the agriculture sector and a main performance indicator for its outcome. Because relying on the Schumpeterian view I believe the whole sector can evolve if the core unit evolves and becomes more aggressive in assimilating and implementing new knowledge.

Yet the approach and instruments engaged are very important and must be carefully chosen.

Implementing new innovative approaches like the innovation system at a macro level, a system that has emerged from improvement of system of assistance for the agricultural sector would mean avoiding mistake other countries did and being ready to discover new paths. The system faces the challenge of “best fit” in the local context and the difficulty remains implementing it in the special case of the agriculture sector in Albania.

The challenge would be to address disfunctionalities in the system keeping in mind the importance of the innovation success components at a company level and the innovation systems theory. The micro level of innovativeness and innovation characteristics should be taken in consideration as a starting point, to be followed by action at all components of an innovation system that addresses innovation success at a company level. Component in an innovation system perspective can be better addressed according to Spielman:

- By carefully understanding the agents that take part in the system which could be individuals, firms, public institutions as the operating components of the system, their interactions which include profit transaction to costless exchanges of nonrival knowledge agreements etc and channel the energy towards increased cooperation making it a central attitude and a key behavioral aspect of the agents of the innovation system conditioned by institutions that impede or promote it.
- By carefully understanding institutions that affect the process by which innovations are developed and delivered – laws regulations, conventions, tradition, norms etc that determine how different agents interact with and learn from each other, and how they produce, disseminate and utilize knowledge.
- Making knowledge an important key factor for the IS. Knowledge as scientific/technological knowledge or organizational/managerial knowledge, codified/ explicit or tacit implicit, knowledge through a good or service, or complementary, taking in consideration all the possible sources of knowledge.

- Here I would add: by putting the national innovation system at the service of the systemic firm innovation, so that companies have better access to knowledge and technologies, enhance their entrepreneurial skills, have better access to markets and find better ways to markets, organize and operate in clever and ethical ways while still being competitive and innovative.

A national innovation system can aim to improve all aspects raised in this thesis, level of innovativeness, areas where innovation is weak, entrepreneurship in a broad sense through the inclusion and better interaction of public actors, services providers and innovators by means of strategic development, proper legislation, appropriatory regime, capacity building, new organizational framework and processes.

Letting innovation evolve under the actual natural conditions of a not well functioning market system, exposes the development of agriculture sector to the risk of increased disparities in income distribution with the profit flowing in just some nodes of the system without the inclusion and contribution of all actors missing thus the chance of enabling equal chances to development. A regulatory framework should address and diminish the risk by adopting the right approach for a well distributed, of a competitive character, sustainable agriculture development in Albania.

Of course more research is needed to address the issue of implementation of a national innovation system in Albania and how that could better fit the local needs with respect to better innovation management in business operating units in the agriculture sector .

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## Annex 1

### **Questionnaire for the agro-production businesses** **Focus – Innovation in agriculture**

#### **General data on the company**

Company:

Owner:

Operating since \_\_\_\_\_

What is the main activity of our business? Please explain. Please mention all important activities of the business, if more than one (production, consolidation, sales, etc).

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Which are the your main products (agricultural production or services)

1.                      2.                      3.                      4.

What is your average production quantity for each of the products?

1.                      2.                      3.                      4.

How many full employees are operating near your business?

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How many part times?

What was your average turnover?

Y 2009 \_\_\_\_\_

Y 2008 \_\_\_\_\_

#### **General perceptions**

What is innovation in your opinion in general and how does it translate in your daily business?

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Do you see it work with you or in your business?

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What drives you innovate?

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**Culture \_ Innovation spirit in the company**

Do you think that you were able to install an innovation culture in your company?

Why? Or Why not?

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If yes, is this backed up by any kind of systematic organizative process (such as reward systems, inner regulations also if not written, shared and understood by all in the company )?

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Is innovation an important factor of success for your business? Why?

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**Sources of Innovation**

Which are the institutions with whom you cooperate in order to innovate at a product level? For instance research institutes, foreign companies, ministry, TTCs etc)

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If not why not?

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With whom would you like to cooperate in the future?

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Are there any other sources of innovation or innovation inspiration for you? Friends, relatives, competition, agricultural magazines, elderly, etc.

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### **Innovation as an integral part of business**

What is product innovation in agriculture on your opinion in a global level, with respect to your core activity? (f.e new varieties introduction)

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If you concentrate on innovation in your business at a product level, has there been one during the last year? Can you mention them (incremental or radical to your opinion, starting from planting of a new product up to variety crossing)

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If not this year, when has been the last year of innovation on a product level? What was it?

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Is the process of innovation clearly organized through a process in your unit? In which way? Are there regulations and procedures known to all? For instance if someone has a good idea, proposes a new seed or so... they know informally that the door would be open to propose this to the owner) If you would not undertake this what are your reasons behind your logic?

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Is the process of innovation supported by reward systems or material and or moral rewards?

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How flexible are you in your business model (are you flexible in changing the way your business is organized around, the marketing, production, vertical or horizontal movements around the value chain? Please explain

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Do you think you are innovative with your business model? Why?

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What other forms of innovation beyond product innovation have you implemented in your business activity during the last year or lately? Technology, marketing, organization etc.

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How many of your innovation tentatives have proven to be successful for you?

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Which kinds of innovations were?

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Do you use your innovations for your marketing purposes?How? Why do you or why don't you?

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Are your clients well informed about your innovations? Please explain the logic behind?

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How do you market your innovations? Are they marketed differently form your normal products?

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Have innovations contributed in the increase of revenue in the last 5 years?

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Is innovation part of your long term or short term strategy? Can you give concrete examples to support that?

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**Business Climate – Impact on innovation of companies in agriculture**

Do you expect something at a policy level related to the innovations and the ability to innovate in the future? What?

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What is your opinion on the business climate and innovation in agriculture in the country? How can it be improved?

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Whic hare factors of innovation in agriculture at the moment ? Wich are the levels where agricultre is innovative at the moment?

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Your opinion on future prospects with respect to innovation

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## Annex 2: General Data on Interviewed Companies

	Company	Category	Owner	Year of Foundation	Activity Description	Region
1	Bruka Company	Other services Supplier	Mr. Josif Gorrea	1995	The company was concentrated in the production and provision of seedlings of vegetables such as cucumbers, tomatoes, watermelon etc. Bruka was also acting as a consolidator and exporter of produce from the seedlings he was selling, with export markets being its target for this last activity. The company was involved in technology implementation rather than conducting its own R&D, trying to adapt the best technologies to the local context	Divjaka/Lushnja
2	Biti & Mo Company	Other services Supplier	Mr. Saimir Biti	2005	The company provided a platform where companies could trade their produce in the vicinity of Divjaka, inputs for agricultural production and other services, for the time being. It started its activity by providing measurement and exact quantities to traders, facilitating thus trade of agricultural produce. The success of this transaction was improved and extended to becoming a real whole sale market for the farmers of Divjaka. Biti & Co company has also moved vertically upon the value chain with the provision of other services around the agricultural production such as cold storage facilities, packaging lines etc.	Divjaka/Lushnja
3	Licollari Group	Farmer and other services supplier	Mr. Nicolai	1998	Mr. Licollari started in the services industry with the opening one of the few bar-restaurants in the Dvoran village. His place became soon a meeting point for the village. With the earnings from his primary service he shifted in apple production in his piece of land and after being successful with that as well he decided to build a facility for the storage of the apples where he and other farmers of the area could store their produce too. Beyond that he is increasing his brand awareness and is trying to act as a consolidator for the area of Dvoran, trying to close deals with supermarket chains etc.	Dvoran/Korce

4	Shkelqim Mullalli	Input and seedlings supplier	Mr Shkelqim Mullali	2003	Mr. Mullalli started his activity as a in input supplier for agricultural production of crops and horticulture. Being an agronomist he started appropriating upon his profession with the seedling production of horticulture plants such as apples, cherries etc (the vegetation technique). He is mainly acting as a seedling supplier for the farmers of the area now	Korce
5	Physical Person operating in Agriculture/ No company foundation	Farmer - Horticulture	Mr Melsi Begolli	1999	Mr. Begolli started his agricultural farm after he regained his family land in the 1990s after the system change. He started with the production of low commodity crops such as potatoes and cabbage, as the main production of the family farm, to switch into horticulture after a while. Within this range of production he implemented a high density plant technology for the time. He has remained in horticulture since than but has extended the rage of apple varieties and technologies of production since, in order to better meet the market demand	Velen/Korce
6	Physical Person operating in Agriculture/ No company foundation	Farmer - Horticulture	Mr Bujar Zajmi	1991	Mr. Zajmi has started the agricultural farm with the system change in the 1990s. His horticulture oriented knowledge because of his assignment in the cooperative of the village during state ownership and because with his peace of land he inherited apple trees, he decided to extent the apple production further. He implemented the new plantation system with high density and planted by vegetation and not seeds. Now he has 1.7 ha and an average yearly production of 360 kv out of half of his surface (because part of it is newly planted and it takes a couple of years for apples to start giving fruits). In the recent years he has implemented and experimented with new varieties of apple to better meet the market needs.	Velen/Korce

7	Physical Person operating in Agriculture/ No company foundation	Farmer - Horticulture	Mr. Rami Sulejmani	1991	Mr. Sulejmani inherited land after the land division reform that followed the system change. He started the agricultural farm business in the same year. Even though he inherited apple and plum trees he decided to extent the plantage to around 2 ha and implement a more modern high density plant through the vegetation technique. He tries to have a full apple varieties portfolio of varieties that are requested form the domestic market. Tires to implement the latest irrigation techniques and relies on external sources on how to improve maintainace of the plantage	Dvoran/Korce
8	Physical Person operating in Agriculture/ No company foundation	Farmer - Horticulture	Mr. Ferdinand Hyseni	1991	He accounts for a similar story to Mr. Sulejmani and the other farmers that were concentrated in horticulture.	Dvoran/Korce
9	Physical Person operating in Agriculture/ No company foundation	Farmer- Watermelon mainly	Mr. Vladimir Todi	1991	Mr. Vladimir Todi started his agricultural business in year 1991. He was planting low value commodities such as cabbage and potatoes but than with the provision of the seedlings from Bruka company he switched his main stream production to watermelon production. He has a well thought production portfolio for his x hectares that include watermelon for the hot season and other greeneries for the other season such as carrots, cabbage and lately high value vegetables such as broccoli and cauli flower. He collaborates with the seedling supplier for the varieties testing and enables the best seedlings for himself in this way. He has access to domestic and export market especially for his watermelon	Divjaka/Lushnja
10	Physical Person operating in Agriculture/ No company foundation	Farmer- Watermelon mainly	Mr. Jorgji Kuti	1992	Mr. Jorgji Kuti is also one of the many that has benefited from the new variety of seedlings of watermelon distributed in the area of Divjaka. He started with low crop commodities such as potatoes and cabbage and moved up the value chain of vegetables together with other farmers of the area. He has xx planted hectares of watermelon but his production portfolio includes	Divjaka/Lushnja

					other greeneries such as peppers and carrots that he plants during the cold season. He is mainly selling in the Divjaka market.	
11	Physical Person operating in Agriculture/ No company foundation	Farmer-Greenhouse	Mr. Apostol Mile	1991	Mr. & Ms. Mile started their greenhouse in year 1991. They have been producing cucumbers for the warm season since then. They sell their goods in the market of Lushnja. Have been consistent with the technology usage and commodity selection for the production till now. Their legislative status is physical person and do not have a business profile yet even though they are a profit making farm. This is of course permitted by the state. They have chosen the solution of concentrating in greenhouse production as opposite to field production because, even though the initial costs are higher, the possible profit is also higher.	Goricaj/Lushnje
12	Physical Person operating in Agriculture/ No company foundation	Farmer-Greenhouse	Mr. Andrea Ziu	1991	Similar story to Mr. & Ms Mile	normal green house
13	Physical Person operating in Agriculture/ No company foundation	Farmer-Greenhouse	Mr. Petraq Hila	1991	Similar story to Mr. & Ms Mile	Hysgjokaj/Lushnje
14	Physical Person operating in Agriculture/ No company foundation	Farmer-Greenhouse	Mr. Petraq Duda	1991	Mr. Petraq has concentrated in the production of greenhouse cucumber. The way he has been doing this was by the normal greenhouse technology. Lately with the assistance of AAC he was able to implement a new technology in the form of inflated greenhouse and to get the benefits of early market entry for his products	Hysgjokaj/Lushnje

15	Physical Person operating in Agriculture/ No company foundation	Farmer-Greenhouse	Mr. Anastas Kote	1992	Similar story to Mr. & Ms Mile	Gorican/Lushnje
16	Physical Person operating in Agriculture/ No company foundation	Farmer-Greenhouse	Mr. Ermal Stina	1991	Another inflated greenhouse that was able to introduce its tomatoes earlier in the market this season. Same legislative form and similar way of running the business. An area of farming of around 1 ha. Innovation comes mainly in the form of introduction of new processes for the company that make her more successful or in the form on new products.	Gorican/Lushnje