GREEN INNOVATION ADOPTION IN SMEs AS NEW REQUIREMENT FOR THE ECONOMIC DEVELOPMENT

DEZVOLTAREA DURABILĂ ÎN CADRUL SOCIETĂȚILOR ÎN NUME COLECTIV DIN AGRICULTURĂ PRIN IDENTIFICAREA ŞI URMĂRIREA COSTURILOR DE MEDIU

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Abstract: *After ecological disasters and progressive degradation of the environment, the society begins to exert pressure increasingly larger both on Governments and on entities, in order to determine a responsible behavior on their part. Knowing that the resources are limited, it is evident that efforts aimed at optimization of SMEs activities should focused on maximizing output for a given value of inputs. Environmental pressures are now considered equally as important as any other pressure, therefore in the last century managers are expected to become more environmentally responsible.*

Key words: *green innovation, SMEs, economic development*

INTRODUCTION

SMEs represent 90 per cent of all enterprises and they activate in a changing economy.

In terms of sustainable development, SME's play a fundamental role in channelling the economy to more sustainable models of production and consumption.

In our opinion, SMEs, category in which we include also micro firms are the most capable to contribute to Europe's economy development "post-crisis" due to their percentage which represents about 95 per cent of all type of enterprises.

Even if they are interacting in a continuous changing environment they lack the capacity to adapt to new situations. The long lasting economic and financial crisis requires a struggle on behalf of SME's to adapt in order

to be efficient and competitive, effort that is not encountered by this type of firms which are not willing or do not have the capacity to invest in research and development for implementing new environmental management systems. A consistent part of SME does not spend money on innovation and they don't allocate any of their revenues on research and development. This situation may take place also because 90% of the small and medium firms cut their investments along with the coming crisis.

We consider that green innovation is a lifeboat for any SME operating and struggling in this long lasting economic crisis, solution which will turn any SME in a sustainable developed enterprise.

MATERIALS AND METHODS

The research method consisted in field research with the sole purpose of identifying the problems local communities are facing in terms of agricultural sustainable development, reviewing opinions and approaches within environmental agriculture development literature, articles and journals.

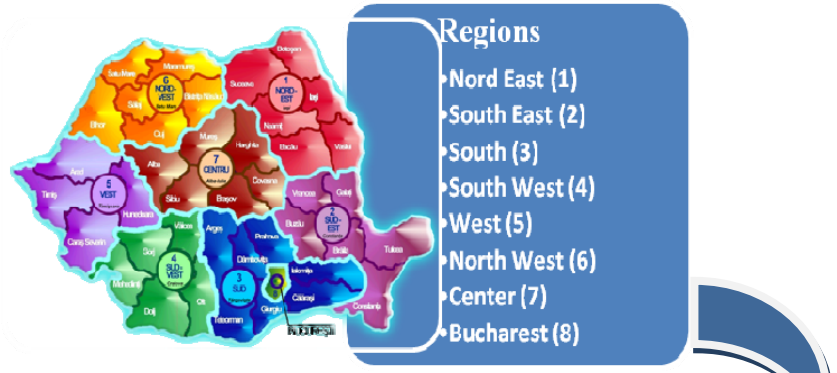
RESULTS AND DISCUTIONS
SME's IN ROMANIA

In Romania the main problem that this type of enterprises is facing is the decrees of internal demand. The global economic and financial crisis affected many of the small and medium company's strategies. More than half of these are expecting to have financial results inferior to the year 2009. National Council of Private SME indicates that the number of those with inferior financial result raised 8,3 times compared with the same period in the last year having direct impact on this year's GDP.

In the last year more than 40.000 SME's where affected by the forfeiter tax and had to close their business Small companies have been paying anything from 500e upwards, irrespective of having nay profit or income in their business. For example, many private foreign owners of Romanian real estate have a company simply as a way of legally owning the land, but have no actual activity. These persons have been forced to pay this annual tax despite have no activity, significantly increasing their annual

running costs. Recording to the Romanian Chamber of Commerce 200.000 SME's closed their business last year do to this forfeiter tax. This represent 30 % of the total of SME's across Romania.

The distributions in regions and numbers of SME's in Romania are detailed in our next figure.



Region	Number of SME's	Cumulated percentage
Nord East (1)	47.275	11,69
South East (2)	53.723	24,97
South (3)	46.468	36,45
South West (4)	36.728	45,53
West (5)	35.204	54,24
North West (6)	55.299	67,91
Center (7)	48.921	80,00
Bucharest (8)	80.908	100,00
Total	404.526	X

Figure no.1. Distribution in regions and numbers of SME's in Roman
Source: The SME White Book 2009

The total number of SME's in Romania is 404.526. In the map presented above it can be seen that Bucharest alone represents approximately 20% of the total of companies listed with a number of 76.355 companies fooled by Cluj with 4.3% with a number of 17.409 companies and Constanta with 4.1 % with 16.637 companies. For example, the region 5 West region contains the Counties of Arad, Caraş-Severin, Hunedoara and Timiş and consists of almost 9 % of the Total SME's in Romania. Our study

reveals that Timis County alone holds 40 % of the total number of SME' in the West region (5). The study also indicates that over 89% of the enterprises in this region have 10 or less employees. An estimated number of 53 % of the companies in the West region have a Income of 5.000 Euro. A number of 39 % of the region's companies activate in the field of commerce.

According to a study, SME entrepreneurs in Romania sustain the idea that the actual crisis is the product of external condition (745) in compartment with the incompetence of the Government (26%). The same entrepreneurs are confident that the Romanian economy will recover after signing the agreement with the IMF (55%). A number of 62% of all SME entrepreneurs consider that the relaxation of crediting will lead to the recovery of the economy.

GREEN INNOVATION IN ROMANIAN AGRICULTURAL SME's

We will present the case of a SME which operates in agriculture, with its goal of producing and distributing chemical fertilizer

In 2010 the firm decided to innovate by greening its production techniques by using recycled row material in the making of its fertilizers

The technological purpose of this innovation and the practice implication witch results along with it is designed to produce fertilizers based on natural compounds.

In our opinion the results of research and development by innovating in the area of chemical fertilizers represents a pioneered combination of mixing of traditional production of chemical fertilizers and re usage of natural raw materials.

In terms of costs, green innovated new and improved products, improves the products proprieties and extends its area of usage, and it costs 20 or 30 % less than the traditional chemical fertilizers. This green impact will also establish the products final price, making it more competitive in this ever-changing market of agricultural products. Green innovated new and improved products decreases energy consumption in comparison with traditional methods and facilitates the usage of accessible local natural raw material, thereby saving on extraction and transport costs.

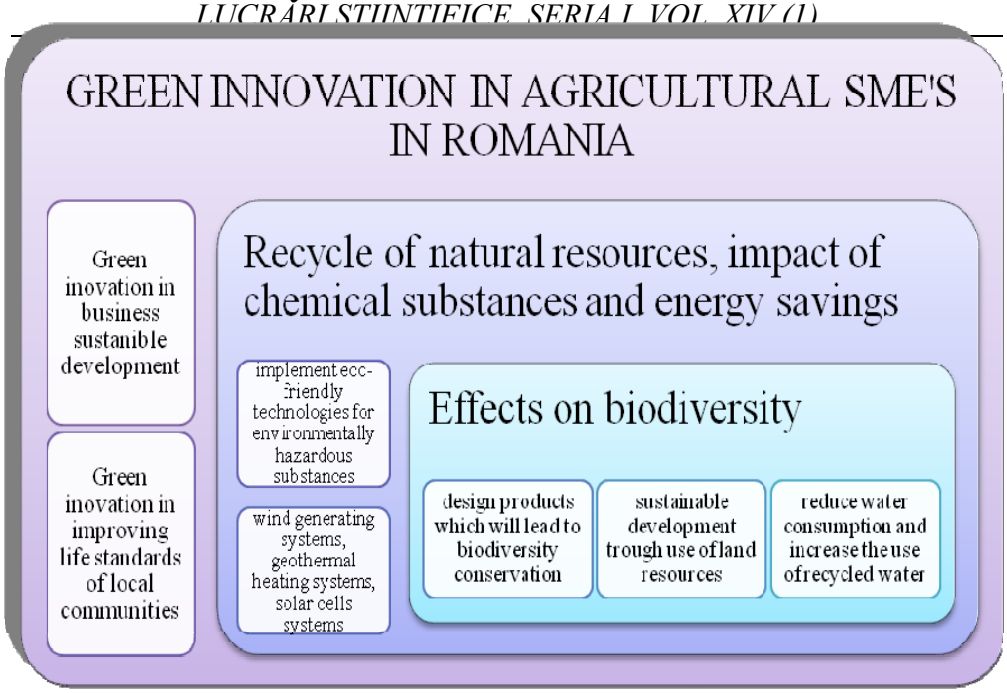


Figure no.2 *Innovating in agricultural small and medium sized enterprises in Romania*
Source: projection made by author

ACKNOWLEDGEMENT

This work was supported by the project "Post-Doctoral Studies in Economics: training program for elite researchers - SPODE" co-funded from the European Social Fund through the Development of Human Resources Operational Programme 2007-2013, contract no. POSDRU/89/1.5/S/61755.

CONCLUSIONS

Since the birth of Agenda 21 in 1992 at the Rio Summit, more and more countries decided to implement those rules in order to become more sustainable. For the purpose of sustainable development, an increasing number of SMEs all over the world are constantly under pressure to develop environmentally responsible and friendly operations, and regard commitment to the natural environment as an important variable within the current competitive scenarios.

Permanent concern of the academic and business environment is to identify effect of the integration problems of conservation and environment protection issues, as:

- practicing environmental management and developing an environmental management systems;
- introducing and developing technologies to prevent pollution.

In the future, SMEs concerns will be related to the development and implementation of green innovation whose purpose will be reflected by quality of human resources, organizational support, governmental support and customer pressure.

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