

## The management of innovation in the context of structural funds

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**Abstract:** *As a decisive factor in the existing economic competition in a world increasingly globalized, a market accessible through digitisation and unprecedented information speed, innovation has become the key objective that makes the difference between “to be” or “not to be” for every economic actor who aims to play a leading role on the market. Innovation has become a concept so widely spread that one cannot conceive the success of a business without this factor, whether we are talking about the innovation of a product, process or service or marketing and organization structure. Innovation has also become a key concept for public institutions that intend to keep up with developments in technology, under the pressure from a society increasingly more connected to technology. The European Union promotes the concept of innovation at the center of the development strategy for the economic sector, thus generating the vision that governs three key tools: Research framework program, the cohesion policy and the framework program for competitiveness and innovation. In the present study we start from the definition of the concept of innovation. We approach the notion of innovative management perspective in the context of accessing European funding programs. Ultimately, the purpose of innovation management is the efficiency of innovative economic activity, i.e. in increasing productivity in balance with the principles of sustainable development. European funding programs stimulate the innovation management in entrepreneurship, public institutions and*

NGOs, whether we are talking about innovation in the economic field, at the level of social services or in the field of public services.

**Keywords:** Innovation Management, Structural funds, Absorption of European funds, Adaptation, Innovation, Research, Entrepreneurship, Innovation Firm, Innovation Processes, Invention Processes, Technological Innovation, productivity, efficiency, sustainable development, green economy, encouraging investments with innovative character.

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### 1. Innovation-theoretical Considerations

From invention patent for a new product or process, production methods and innovative production process and services, the organization of the company, the use of new raw materials, innovative rules and procedures, innovative marketing strategies, creating or accessing new or existing markets up to the new ways of stimulating human resources successfully practiced by corporations, innovation brings "something new", a discovery or an invention; innovation involves talent, vision, and knowledge from different disciplines, interdisciplinary is one of the main features. Innovative management has a direct effect on increasing economic efficiency, level of sales and productivity of a company.

As we find in the communication of the European Commission (COM 638/1995), the notion of innovation involves the renewal and diversification of products, services and markets, the establishment of new methods of production, supply and distribution and the introduction of changes in management, work organization, working conditions and training of personnel. Innovation may be defined as the overall process of technological and commercial creativity, the transfer of

new ideas or new concept all the way to the final stage of a new product, process or service accepted by the market. [1]

The innovation consists in the application of new methods/strategies/process that has the effect of increasing profitability by increasing sales or reduces production costs and overheads. Innovation is determined by international competition, consumer requirements, changes in technology, the legal framework in various areas such as protecting the environment. Innovation becomes one of the essential factors of the current economy. Innovation contributes to the essential business success increasing sustainability by increasing the competitiveness and profitability of an economic entity. Innovation is materialized in the implementation of new ideas, concepts, marketing strategies or procedures in the new products, services, processes that find a real market outlets-leading to commercial success. Innovation is an activity from which it results a product, good or service, new or significantly improved or a new or significantly improved process, a new method of marketing or a new organizational method in business practices, workplace organization or external relations. Innovation is based on the results of new technologies, new combinations of existing technology or utilization of other knowledge obtained on the enterprise.

Innovation of product (good or service) is the introduction of a good or of a service, with new or significantly improved characteristics or its mode of use (this may include significant improvements in terms of technical specifications, components and materials, incorporated software, ease of use, or other functional characteristics). Innovated products may be new to the market or new only for the enterprise. An enterprise can have product innovation even if it is not new to the market, but it is new for the enterprise, as a result of the diversification of products.

Process innovation represents the implementation of a new or significantly improved production or delivery (these may include significant changes in techniques, equipment and/or software), in order to reduce the unit costs of production and distribution, to improve quality, to produce or distribute new or significantly improved products. Also, a company may have a process innovation, even if it is not the first who introduced the process on the market. [2]

Marketing innovation is the implementation of new marketing methods involving significant changes to the design, the packaging of products, resulting in mark and brand, and to be protected they must be registered at the industrial property office.

Organizational innovation in organizational practice of the firm, in the organization of work and external relations, leading to a reduction of administrative or transactional costs, improve work environment or decrease acquisition costs. In the framework of the principles governing the management of innovation, an important role has the concept of sustainable development in general and, more recently, the concept of green economy. Sustainable development shall designate the

totality of forms and methods of socio-economic development that focuses primarily on ensuring a balance between social, economic and environmental and natural capital. Innovation will play an increasing role in the investigation for ensuring this balance. While initially the sustainable development principle was created to become a solution to the ecological crisis caused by intense industrial exploitation of resources and the continuous degradation of the environment, currently the concept is expanded on the quality of life, economically and socially. At the same time, the concept of green economy consists in improved well-being and social equity, together with the significant reduction of environmental risks and ecological deficit. The transition to a green economy means policies of public and private investment that will shut off the growth of the current consumption of intensive raw materials and energy, boosting incomes and employment through investments that reduce carbon emissions and pollution, increase energy efficiency and efficient use of natural resources.

In the Romanian legislation, law No. 324 on July 8, 2003 for the approval of the Government Ordinance. 57 from year 2002 relating to scientific research and technological development, defines innovation as "the generation, the assimilation and use of research results in the field of economic and social development." The same law defines "product innovation" through the "introduction into the economic circuit of a new product or with some significantly improved features, or to provide new or improved services to the consumer", or a "significant improvement in technologies [...] including improvement of management methods and work organization". Law 324/2003 defines the technology

transfer as “the ensemble of activities with or without a contractual basis, in order to disseminate information, to advise, to transmit knowledge, to acquire machinery and specific equipment for the purpose of introduction into the economic circuit of research results, transformed into commercial products and services”, being the process by which competitive research results end up being used in accordance with the requirements of industrial and commercial activity in social, economic and cultural life; dissemination is defined by transmitting information, experiences and good practices, as well as cooperation in order to promote innovation, to support those who want to create innovative enterprises and to support innovative projects. Absorbing innovation is the capacity of the socioeconomic environment to involve innovation, particularly in enterprises, to use, to turn and to broaden their knowledge about the results of innovation in order to expand the possibility of applying these results into new products, processes or services.

## **2. Innovation management-principles and examples**

The management of innovation was created by Joseph-François Walch and Fernex Romon (2009) [3] as “ensemble led by an undertaking actions and the choices made in order to promote innovation projects, altered after deciding their launch and achieve commercialization of new products and implementing new processes in the enterprise, in order to increase competitiveness.”

Innovative activities that define the innovative management are characterized by their scientific, technological, organizational,

financial and commercial nature which update or are oriented to lead to the implementation of innovations. Depending on the subject of innovation we have four types of innovation: product or service and process innovation, marketing innovation and organizational innovation. The new products are goods or services that differ significantly from those made previously. The first micro-processors or cell phones were examples of products using new technologies. Significant improvements to existing products may occur through changes in material, components or other features that increase performance. Innovation in services may also include how they are supplied-e.g. insurance services to service a product-if it is the case, the customer will not come to the service provider, but the service provider will pick up the product and will deliver the repaired item within 24 hours. Another example of innovation management is Tata Motors, who managed to create a machine with a minimum number of parts and with an incredible affordable price for the poor families from India- the price of 2500 USD was a unique price for a brand new car, performance reached through the implementation of innovation at all levels: from organizational innovation, product innovation, manufacturing process and marketing chains for sale directly to the consumer.

A success story which meets all elements of innovation management is a tomato farm from Belgium, the most modern complex of greenhouses producing tomatoes, Tomaten-Stoffels. The system used in greenhouse warming and nourishing plant is minimalist, with water and a specially designed engine that produces energy and is powered by water, water which is heated and generate carbon dioxide needed to nourish the plants.

Analyzing market trends and seeing that the Belgians are looking for cherry tomatoes, the company began to grow 6 different varieties of tomatoes: Juanita, Rivolo, Sunstream, Oranje's Star, Blackberry and Summersun. One of the key concepts of the business is the farm exclusivity of tomato plants, permitted to cultivate the variety of cherry tomato Sunstream, an appreciated tomato in Belgium. Another element of innovation that led to the successful business is the short production chain; the producer is negotiating directly with supermarkets, which allows a good price for the goods sold. The market repositioning of the business to small varieties of tomato market that is more flavorful and tasty is the latest innovation greenhouse with artificial lighting, where no sunlight penetrates and artificial plants are lit for 16 hours a day. The greenhouse is protected with a special foil, and led lighting helps to control production and to obtain uniform size and color for cherry tomatoes. Another innovative element is that tomatoes grow on coconut cubes that are imported from Sri Lanka, where cloves are planted in these cubes that have in their composition ground coconut and nothing else. In the greenhouse there are used bumble bees to make natural pollination of flowers, and fighting insects and fungi is done with the help of their natural enemies, using only organic substances. Thus, the Belgians from Stoffels have obtained very tasty tomatoes which have high demand on the European market. However, the key factor of success is the quality and the method of packaging technology (consisting of several types of packaging, large packaging is included and a very practical small boxes where parents can put for their children some tomato for school. Another type of packaging is very attractive

for the Belgians ' three color national flag ', for having three colors tomato - black, yellow and red, but mostly the vending machine for tomato cherry, inspired by the vending machine with bubble gum, and also trading at packs of 200-250 grams, for which the price reached in some stores the level of 3 euros. Tomatoes Stoffels can be found in all supermarkets in Europe, in the Netherlands, Germany, Scandinavia, Switzerland and even in Dubai. [4]

Another example of successful innovation management is "Local Food" concept in America, the land of the mammoth agricultural companies, where the "Local Food" means to buy food produced by small producers in the vicinity. Local Food systems have appeared with the Locavore concept - a new American English word locavore, which according to the New Oxford American Dictionary (NOAD) 2007 identifies the person who tries to consume preferably food produced within 100 miles (160 kilometers) around the village. The 100-mile seems somewhat arbitrary set, consumer studies showing that locavores add or subtract tens of miles depending on their personal perception of the neighborhood. There are several methods of purchasing food produced locally, like subscription-based, which starts from just a few dollars and can reach several hundred dollars per month, and in return for which the beneficiary periodically receives at home a "basket" of fruits and vegetables. First quality products mean the freshness of a product; it must be guaranteed to be fresher than a product of the same kind offered by united food industry. Location of producer and consumer gains, market value only if the product is transported from the first to the latter in a very short period of time - namely

in the same day; this is in order to exclude any “delay” in stores or hypermarkets. The second quality is health—a “local” product must be guaranteed healthier than a product of the same kind offered by united food industry. Local Food products must represent an alternative to those of great food industries especially in terms of how to obtain clean food, and the locavore will not consume products that use the products of chemistry and petro chemistry or genetic engineering, which are believed to be harmful for health; he prefers food produced as in the Stone Age. The third is the specificity of the local - a “local” product must offer that unique flavor of the place and offers local varieties. So locavores have created a segment of American agriculture with sales of 1.2 billion dollars according to the agricultural census 2007 (2007 Census of Agriculture)-increasing by over 100% in the ten years from 1997 data reported. The locavores interact with local producers primarily through markets. Canteens of schools and companies, in which parents or employees have applied for the use of local products, fresh products with no “chemicals” or genetic enhancements are a successful medium to promote Local Food products. According to the USDA Agricultural Marketing Service in 2009, 2115 schools had programs to supply for their own canteens ‘ local food ’ by purchasing from small and medium-sized farms in the same district or districts in the same State; this means five times as many as in 2005, when there were only 400 and 1000 times as many as in 1997, when there were only 2. Even hypermarkets have understood this new trend and offers local food products. According to the USDA Agricultural Marketing Service in 2009, 10 of the most important chains of hypermarkets in the United

States have stands dedicated to “local food producers”. [5]

### 3 Innovation and structural funds

The European Union promotes the concept of innovation at the Centre of development strategy for the economic sector, thereby bringing the vision of governing financing instruments through which the public policies are implemented. European programs with funding grants support the management innovations for the entrepreneurship and public institutions and NGOs, through various methods, whether we are talking about innovation in the economic field, the level of social services or public services.

The main instrument of EU funding for research and innovation, as well as the most comprehensive program of the European Union for research and innovation is Horizon 2020. The funding program allocated 80 billion for putting into practice “top new” discoveries -i.e. innovations- made by European laboratories. Horizon 2020 program guarantees that the investment in research is an investment of huge importance, placing it in the center of the Europe 2020 strategy for sustainable economic growth, and favorable inclusion. Combining research and innovation, contribute to the 2020 objectives, putting emphasis on scientific excellence, leadership position in the industry and societal challenges, in order to ensure Europe’s ability to produce world-class scientists, to remove the barriers to innovation and facilitate the collaboration of the public and private sectors for the provision of innovative solutions. Besides the private

investments that will attract the program, it will provide the necessary start-up capital and stimulate technological progress and discoveries, facilitating the transposition of innovative ideas into products and services. Horizon 2020 is aimed at increasing international cooperation in the field of research; it is providing researchers from third countries funding opportunities and participation in the program.

In Romania, the program regarding structural funds which deals with research and innovation is the Operational Program Competitiveness 2014-2020. POC started in December 2014 and for research, development and innovation are available 1.58 billion euros. Through this program are financed clusters of innovation, the newly established innovative enterprises, but also startups and spin-offs of innovative enterprises. The main areas funded are: bio economy, information and communications technology, energy, environment and climate change, eco-Nanotechnologies and advanced materials. The Operational Program for Competitiveness (POC) supports investment designed to meet the needs and challenges related to the low level of economic competitiveness, particularly with regard to the insufficient support for research, development and innovation. Investments devoted to the strengthening of research, technological development and innovation continue those objectives begun through Operational Program for Increasing Economic Competitiveness 2007-2013. However, the new program aims to stimulate the private sector more in the direction of research and innovation, through partnerships between public and private actors in research and technology transfer and internationalization of the Romanian research

projects. [6] The role of research and innovation can be found in various documents recently approved politically (reform of the CAP, Horizon 2020). Rural development policies are specific instruments and measures to stimulate investment through the transfer of research results and innovation. Innovative projects implemented in European space constitute examples of good practice which should be put into value and multiplied. The PNDR programs conducted by the Ministry of agriculture and rural development in recent years, the funding for intensive and successfully implemented projects have changed, in part, the situation of the rural areas in the case of Romania, where the transition from intensive agriculture, during the Communist period, to the period of the past 25 years put the Romanian village in position to recover considerable delays. The revitalization and repopulation of villages have also the need for innovative elements, as local development. Whether in major cities the concept of brand image, product or promotion of a business are already realities without which no economy can operate, in villages there was still sufficient focus on the role that the realization of a brand and its promotion on the market has in the economic development of an area. Thus, another innovative element are the brands and product brands, created and promoted as unitary elements, leading to an unprecedented development of an area, especially with the help of European funds. [7]

The national programme for rural development is one of the programs that stimulate funding recipients to apply for innovative projects, by increasing funding and the score for those who apply within producer groups or for those that implement

innovative investment Partnership for specific innovation (PEI). Thus, by Measure 16-2014-2020 Cooperation shall assist to facilitate cooperation between the actors involved in rural development, to help overcome their problems and ease typical socio-economic nature related difficulties aiming to business development and provision of services in rural areas. The main objectives are: the marketing of foodstuffs obtained locally, through short supply chains and local markets must become an important component of the agro-food sector from Romania; strengthening and diversifying local food chains from Romania, to be able to respond to consumer preferences and to achieve better market integration of small producers; identify new ways to market a greater volume of products and attracting new groups of users; the development of links between the agro-food and sightseeing with local food supplies. The measure also includes cooperation between farmers, processors, traders, restaurants, retail establishment for accommodation in rural space, as well as partnerships with NGOs, schools in rural areas, public authorities, etc. This measure involves the selection of brokers to innovate through the extent of advisory services, will then launch a session for submission of project ideas and requests for expression of interest (CEI) for financing projects within the sub measures 10.0 and 10.0, and then the partnership (GB) submit detailed project to be evaluated by the managing authority and the paying Agency. Sub-measure 16.1-support for the establishment and functioning of the operational groups, to develop pilot projects, new products, practices and technologies in the sectors of agriculture, food and forestry include: Encouraging innovation,

cooperation and development of the knowledge base in rural areas; Consolidating the links between agriculture, food and forestry production, on the one hand, and research and innovation, on the other hand, including for the purpose of a better environmental managers and an improved environmental performance; Improving primary producers through a better integration in the agro-food chain through quality schemes, of increasing the value added of agricultural products, promoting local markets within short supply circuits, groups and organisations of producers and of inter-professional organisations. Axis support for the funding of cooperation 16.4 horizontal and vertical between actors in the supply chain has the overall objective of promoting cooperation between local actors, with the aim of selling fruit and fruit products through short wool. Type of support is eligible reimbursement or advance payment, provision of bank guarantees or equivalent, corresponding to the percentage of 100% of the advance. Beneficiaries will be given Support for partnerships consisting of at least one partner from categories farmers; Microenterprises and small enterprises; Non-governmental organizations; Local councils; School units, recreational, health and nutrition, and at least one farmer or group of manufacturers or a cooperative that operates in the agricultural sector. The share of non-refundable support is 100% of total eligible expenditure, which ensures an increased interest of potential beneficiaries of the financing for this axis.

Regional operational program 2014-2020 particularly encourages projects that propose innovative investment character. Thus, in the applicant's Guide-special conditions



for accessing funds 2.1. Microenterprises -annex 4- technical and financial assessment, the criterion concerning the innovative character of the proposed investment brings additional score and hence better selection opportunities for innovative projects detrimental to those classics. In this sense, projects tend to be innovative in several ways through innovation, diversification of product; service and process receive additional points, as opposed to those who propose just diversifying the products as a result of realization of the investment, receiving only 1 point. We find a similar situation in the case of projects financed through POR financing facility 2.2 AXIS-Supporting the creation and expansion of production capacities and development of advanced service, where applicant's Guide-special conditions for accessing funds-annex 4-key technical and financial assessment, the criterion concerning the innovative character of the proposed investment brings additional score and hence better selection opportunities for innovative projects detrimental to those classics. In this sense, projects tend to be innovative both through product or service innovation and process additional receive 6 points, as opposed to the classic ones which do not receive any points. An additional measure of this axis of innovative financing for investment promotion is the degree of different financing categories of expenditure type marks, patents, 90% certification unredeemable compared with tangible investments, whose level of funding is between 50% and 70% depending on the region and type of undertaking. Another axis of funding that promotes competitiveness through innovation is POR AXIS 2.1.B, Incubators and accelerators, business incubators for competencies relating to research and development, creating

and supporting innovative enterprises, international cooperation and consulting services for intellectual property rights constitute a criterion for assessing dotted with 20 points in the techno-economic assessment, which makes the only innovative incubators to have a real chance at funding. [8]

#### 4. Conclusions

The managers in Romania are responsible to make the transition as quick as possible from "classic" management to innovative management. This responsibility is not only related to their own company, institution or NGO but also towards Romania. This is because the European programs with funding grants have a vital importance for the Romanian economy. And among the demands laid down by the European Union for granting the funds, we find the principles that define the management of innovation. The European Union places the need to promote innovation at the heart of its strategy for economic development, realizing that in an unprecedented economic competition, innovation is a mandatory condition for survival. The future will belong to companies that will know how to combine product or service innovation, process innovation, marketing innovation and organizational innovation in such a way as to be able to position themselves on a position superior to the competition. Thus, Romanian companies have a real chance to become competitive through innovation management with the help of the structural funds. Their goal is to take advantage of this opportunity through creative ideas and valuable concepts that will lead to successful access to the European and global market.

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