SPECIFIC INNOVATION APPROACHES IN GARMENT MANUFACTURING COMPANIES

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REZUMAT.Lucrarea se bazează pe un studiu de caz și are drept scop valorificarea expertizei în materie de inovare, acumulată de autori în proiectul POSDRU „Formare profesională bazată pe cunoștințe, utilizând metode inovatoare de organizare a muncii în sectorul textil din sudul Munteniei". Efortul de a identifica nevoile de inovare a fost bazat examinarea mediilor interne și externe ale celor 20 de companii implicate în proiect, diferențiate în funcție de mărime, dotarea cu echipamente, forma de proprietate, gradul de specializare, nivelurile de calificare a angajaților etc. Astfel, a fost posibilă adaptarea programelor de formare profesională pentru întreprinderi şi grupuri-țintă de elevi (53) în cadrul celor 500 de proiecte individuale inovatoare dezvoltate în cadrul proiectului POSDRU. În acest context, în scopul de a exista un climat de „simpatie" în favoarea proiectelor inovatoare, este necesar să se definească obiectivele specifice punctuale, legate de caracteristicile specifice ale companiei.

Cuvinte chele: inovare, fabricarea textilelor, societăți mici şi mijlocii.

ABSTRACT. The current paper is based on a case study, and aims at capitalizing the expertise in terms of innovation, the authors accumulated with the POSDRU project “Knowledge based professional training, utilizing innovating work organization methods on the textiles sector in the South Muntenia”. The endeavour of identifying the need for innovation was based upon a scan of the internal and external environments of the 20 companies involved in the project, differentiated by size, equipment endowment, form of ownership, degree of specialization , employees qualification levels etc. In this context it was possible to customize training programs for businesses, target groups of students (53), and the respective content of the 500 individual innovative projects developed under the POSDRU project. In this context, in order to have a "sympathy" climate in favour of innovative projects, it is necessary to define specific point objectives, connected to the particular characteristics of the company.

Keywords: innovation, process, garments manufacture, small and medium businesses.

1. PAPER’S OPORTUNITY

Stimulating innovation is vital for value increase, for long-term competitiveness and for allowing the access of Romanian companies on international markets. The sustainment of innovative capacity is needed at company level, by using assistance, consultancy and support activities to allow access to financing and create the conditions for development.

The current paper is based on a case study, and aims at capitalizing the expertise in terms of innovation, the authors accumulated with the POSDRU project, “Knowledge based professional training, utilizing innovating work organization methods on the apparel sector in the South Muntenia”. The project was launched in 2009, declared *„An European of creativity and innovation”* through Decision nr.1350/16.12.2008 of the European Parliament and Council.

1.1. The study object

The mentioned project took place in partnership with the business environment. Twenty small and middle-sized apparel companies participated, with private capital, local and foreign (Table 1). In this context, the theme of this paper considers specific aspects of innovation for this category of companies.

Innovation through creating something new or rearranging something old in a new way is the headstone and the key to future economic competition and durable, sustainable profit levels of a company in which knowledge plays an important role.

Scientific, technical, technological, organizational and managerial innovation represents the keys to survival and success in the new economy based on knowledge.

The culture of innovation, based on change and knowledge, is based on thinking flexibility, creativity, and professional competence.

The economy of the project includes training programs and punctual process innovation projects, at a work system level in small and middle-sized companies from the apparel sector.

This paper’s objective is the identification of specific aspects regarding innovation from the perspective of implementation at company levels in the production sector of apparel.

Table 1. **Types of companies studied**

Company type	Nr. of employees	Nr. of companies	Production domain
Microenterprise	7	1	Low complexity products – subcontracting
Small enterprise	10 - 49	7	Direct and subcontracted orders, special and fashion products for women
Medium enterprise	50 - 100	8	Direct orders, special products
	101 -249	5	Direct orders and fashion products for women Direct orders, apparel products Direct orders – Shirt production for men
Total		***20***	

The purpose of the paper is defining the necessary condition for developing a stimulating and sustaining environment for the innovation and identification of specific implementation instruments in these companies, an essential factor for increasing their competition potential.

1.2. Creative innovation in small and middle-sized apparel companies

In the industrial environment, regardless of the profile, constant innovation will place the company one step ahead of its competitors. The competitive advantages of textile apparel sector are found by concentrating attention on quality and design, innovation and technology and products with high added value. Innovation, as a successful exploitation of new ideas, by including new technology, organizational methods and their practical implementation is the headstone and the key of competition in the future economy and the durable and sustainable profit level of a company, in which knowledge plays an important role. A relationship exists between the dimension of the companies and their innovation capacity.

If the large companies can afford developing large research projects – radical innovation, small and middle sized companies have the advantage of flexibility, being able to develop efficient, continuous programs for incremental innovation.

Between the relevant arguments that sustain the opportunity of the theme developed in this paper, we notice:

- the significant weight of small and middle sized companies in the structure of the apparel sector in the country;
- small companies bring flexibility, teamwork and creativity,
- small and middle-sized companies have the benefit of a better adaptation capacity for surviving and developing on the market,
- *at the level of apparel technological lines, 40% of the productivity increase is due to using automated equipment and 60% due to innovation in the process of implementation [1].*

The position of the apparel producer on the last bearing of finite products in textile industry requires a direct contact with the final client, individual consumer and fashion market, which is continuously reinventing itself.

Competition pressure and the continuous change of demands and client expectations forces enterprises to permanently look for innovative creative solutions which can guarantee them a good market position.

Creativity and innovation, as solutions for development and efficiency, condition one another. The two activities require the same conditions to develop in an enterprise. Creativity always implies bringing a new element to the equation and it's the starting point of innovation.

2. STUDY METHODOLOGY

The study is based on applied research, regarding innovation in apparel industry. The basis for documenting it includes analysis and interpretation of how the activities of the project take place, regarding innovation from a small and middle-sized company perspective.

The steps for the work methodology include:

- making sure priorities regarding the innovation activity for the studied company level are obvious;
- identifying different innovative approaches, related to the company specific;
- explaining and arguing the chosen innovation solutions;
- comparative evaluation of the perception at different company levels;
- symmetrical presentation of the instruments and resources for innovation in small/medium-sized apparel companies.

Considering the results of the analysis as well as the availability of the studies companies, the paper limits itself at approaching the aspects of technological process innovation. Process innovation refers to internal aspects of the enterprise and has the sole purpose of improving the internal performances of the company.

In a time marked by global recession, innovation depends on the management style and the means to value and plan internal resources, changes in fabrication processes, perfecting the existent methods, valuing the gained experience, teaching the employees to value and exploit opportunities (Figure 1).

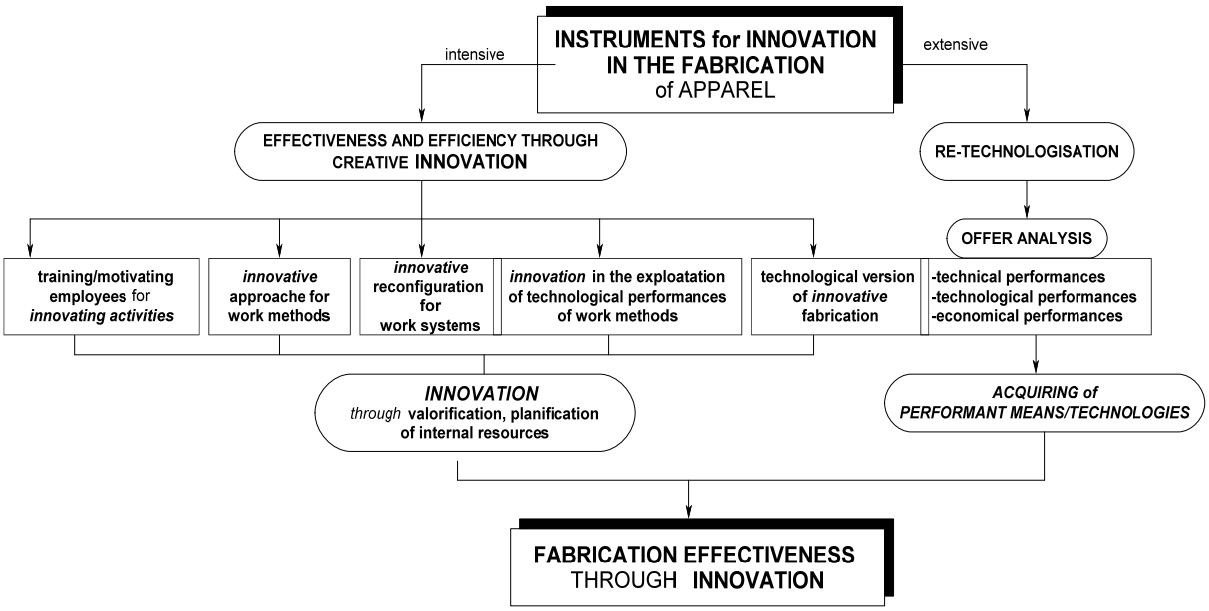

Fig. 1. Basic schematic of technological innovation in apparel companies.

Identifying the need for innovation in the project is based on scanning the internal and external environment of the twenty partner companies in the project, which differ in size, facilities, property shape, specialization level, employee qualification level etc.

In this context, it was possible to organize teaching programs on companies, target audience (53) as well as the content of the 500 industrial innovation projects elaborate during the project .

While elaborating innovation projects, Japanese philosophy was adopted, which suggests gradual innovation, with small steps, continuous, minimum risk, which does not exclude individual or group innovative solutions, modernization of the fabrication phases. It was considered that to innovate means „*to do something in a different and better way than in the present"[3]*. In agreement with the European Commission, [1] during this project the following were considered innovative activities:

- designing and implementing new work methods;
- introducing management changes, organizing work, configuring work systems and conditions,
- instructing personnel.

3. RESULTS AND INTERPRETATION

For the result interpretation of POSDRU project activities, through the prism of paper theme, the fundamentals were:

- analysis of the establishment of the training program theme;
- criteria for constituting target groups of trainees for each company;
- evaluating the course of training programs;
- analysis of the theme and content of innovation projects for each trainee;
- analysis of the elaboration and implementation of innovation projects.

A sustainable, proactive innovation politics requires the systematic coordination of the activities of all deciders and executers. To ensure the sustainability of innovative actions, the system has to be prepared to act as a whole.

Considering that, trainees from all categories of employees participated in the training programs, in study groups, and the theme of the innovation projects covered the entire technological flux in the company.

Using thematic enquiries, particularized on employee categories (executants, work formation chiefs, personnel from middle and upper management), the content of training programs was defined in the sphere of process innovation.

The accent was put on the low-efficiency work intensity, practiced in most of the twenty companies studied and the low income, factors that do no lead to motivation and efficiency.

The theme of the project and its content were established by consulting each trainee, using systematic analysis of their workplace. Innovation solutions were proposed and implementation methods, as well as their feasibility, were defined under the coordination of the consultant trainer. Evaluating the innovative solutions was done using maximum efficiency and minimum risk criteria.

Particularizing the theme of individual innovation projects, on specific subjects from the workplace, highlighted the creative capabilities of employees and the competition spirit. The possibility of quantifying through time data, productivity and earnings, of the

proposed solutions stimulated the interest for innovation and contributed to improving work motivation.

During the training, elaboration and implementation of the innovation project activities, different perception, attitude and involvement were highlighted. From the influence factors regarding attitude and approach of innovation at company level, the following were asserted:

- the qualification and establishment level of employees;
- the structural-organizational shape, with accent on vertical or horizontal;
- transparency and consciousness of the correlation between work done and income obtained;
- the companies specialisation degree:
  - on domains (garments for children, women, casual garments for young people) etc.;
  - on products (men's shirt production);
  - on types (protection equipment, uniforms, interior articles);
  - no specialisation;
- production sales:
  - through contracts with distributing customers;
  - through contracts with other bigger companies;
  - through shops with direct sale to the final customer(the wearer);
- facilities level:
  - universal, classic;
  - specialised with automated elements;
- facilities distribution
  - uniform along the entire fabrication flux;
  - differentiated on stages of the fabrication flux.

The diversity of the companies from the group conditions the diversity of the approach methods for process innovation.

Most of these companies face difficulties regarding respecting dates of delivery. Although it's priority number one, frequently for most (95%) of them it's a „girl morgana" for which expenses and efforts are made but which effect efficiency in a negative way (extending the work program, extra hours in weekends etc.).

However, causes that determine that, resources and innovative solutions are particularized.

The success of innovation will be strictly dependent on finding the adequate approaches, considering the resources and conditions specific to the company.

A large number of these companies have a low number of facilities in the cutting department, having classic cutting systems. Because of that, they face a series of specific problems:

- difficulties in balancing cutting and confection sections;
- quality problems, such as lack of precision on the dimensional parameters and shape of the cut benches;
- high volume of fixes, marks and recuts.

From the innovative solutions in this case, we mention:

- measures to assure the quality of cut benches, specific for each stage of the process;
- embracing adequate versions regarding the correlation of work programs for the cutting and confection sections;
- endowing with performance cutting equipment, if the financial power allows it and the production capacity can assure a reasonable degree of load for the utilities;
- instituting a system to manage the lack of quality and quantity balance for cutting and confection sections.

However, the creative innovation activity requires the particularization to the company specific, choose a solution and an implementation method for it.

For sustaining those mentioned above, the following examples constitute valid arguments:

1) For example, in microenterprises and small companies, which work on subcontracts, with a fluctuating lowly qualified personnel, minimum technical facilities and an empirical normalization of work, it's obvious that the activity develops with an accent on work intensity with high efforts for quality assurance. In this context, the preoccupations for innovation are erratic, punctual, at the particular initiative of some of the workers who look for empirical solutions to simplify their work. In most of the cases, these solutions are not efficient and only relate with a specific routine of the worker. On this basis, establishing quality and respecting delivery dates are essential problems with which these firms confront.

Obviously, in this case, the priority for innovation has to aim at the simplification and unification of work methods, method training and realistic normalization of work.

2) Firms based on the structure of old workmanship cooperation (25%) having pluri-qualified work force, capable of obtaining quality, usually target contracting and subcontracting of complex fashion products, with a large amount of manual labour.

The universal facilities, without technological equipment, old, routined work force, minimum technological design, medium conservative management, non-transparent salaries are factors that diminish the efficiency of these companies. First priority for these companies would be increasing efficiency by simplifying technology, facilitating machines with gadgets and organizing a training program for medium management, to teach them technological and workplace design, work normalization and production scheduling. A favourable resource of the innovative attitude with considerable implications on efficiency is the flattened work organizational structure, cooperative spirit, with similarities to the „teamwork" concept. Thus, a transparent salary system on such a structure is an efficient instrument for stimulating innovation.

3) Companies specialized on the product (men shirt), facilitated with specialized automated equipment in the confection section, with a technological flux structured on group, with classic equipment in the cutting section, with qualified work force, have a low economic efficiency and confront with difficulties in respecting delivery dates.

Causes for the difficulties mentioned above are:

- low quality of the cuts, which influences:
  - increase in recuts, fixes, marks, additional technological phases;
  - degree of equipment usage in the confection section;
- scarce work methods, determine an increase in operation time, due to:
  - scarce configuration of the work place;
  - absence of a unitary work method;
  - absence of method trainers;
- absence of a realistic normalization of work generates;
  - difficulties in balancing technological lines;
  - deficiency regarding the perception of correlation between work done and earned income.

Priority for innovation in this company would be training in the domain of normalization and work methods for the middle management and balancing the facilities in the cutting, confection and finishing departments. Group structure of the technological lines is a favourable factor for implementing an innovative system for „teamwork"

4) For companies specialized in products for interior design, where large scale details are used, the priority for innovation programs would be the adequate reconfiguration of work places, which would allow a decrease in the volume of work object handling and effort, resulting in positive effects for the execution time.

For the stimulation and efficiency of innovation for small and middle-sized companies, transforming the enterprise based on workforce to an enterprise based on knowledge and creativity and using the advantages of advanced technology becomes necessary.

For measuring, analysing and evaluation innovation in small and middle-sized companies, with availability for incremental innovation, the most relevant indicators are considered to be the effect and impact on the company efficiency.

4. CONCLUSIONS

The final purpose of innovation is to ensure competitive, economical increase and long term development, as well as work satisfaction.

To sustain the viability of the process innovation concept and the constant need for innovation, people with expertise in the domain and stimulant factors for involving them in innovative activities are required.

No company can develop without creating conditions to use the handiest resource, which is insufficiently use, the human mind.

The capacity companies have to be innovative depends in a large way on their employees, their competences and knowledge.

Training programs with adequate theme and solving individual innovation projects result in:

- knowledge increase;
- obtaining the ability to innovate in the production practice,
- generates operational efficiency and flexibility.

The experience of the POSDRU project demonstrated that an innovation project can succeed if the new knowledge is assimilated in the specific company conditions.

Each innovation has to be considered a project itself and has to be treated as an investment.

The success of innovation activities relies on the necessity of prediction and conscious assumption of calculable risks, of changes and their placement in a value vector for change and development strategies.

Avoiding patterned approaches is imposed, because they block creativity and they can generate difficulties in the practical transposal of the designed solutions, in the perception of benefits and reticence to implementing innovation projects. Efficient, creative work generates satisfaction, not mechanical work.

In this context, for installing a „sympathy" climate favourable to innovative project, it is necessary to:

- define specific punctual objectives, related to the characteristics of the company;
- use a sustainable, proactive innovation politics;
- evaluate the impact of the results;
- popularise the success cases.

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