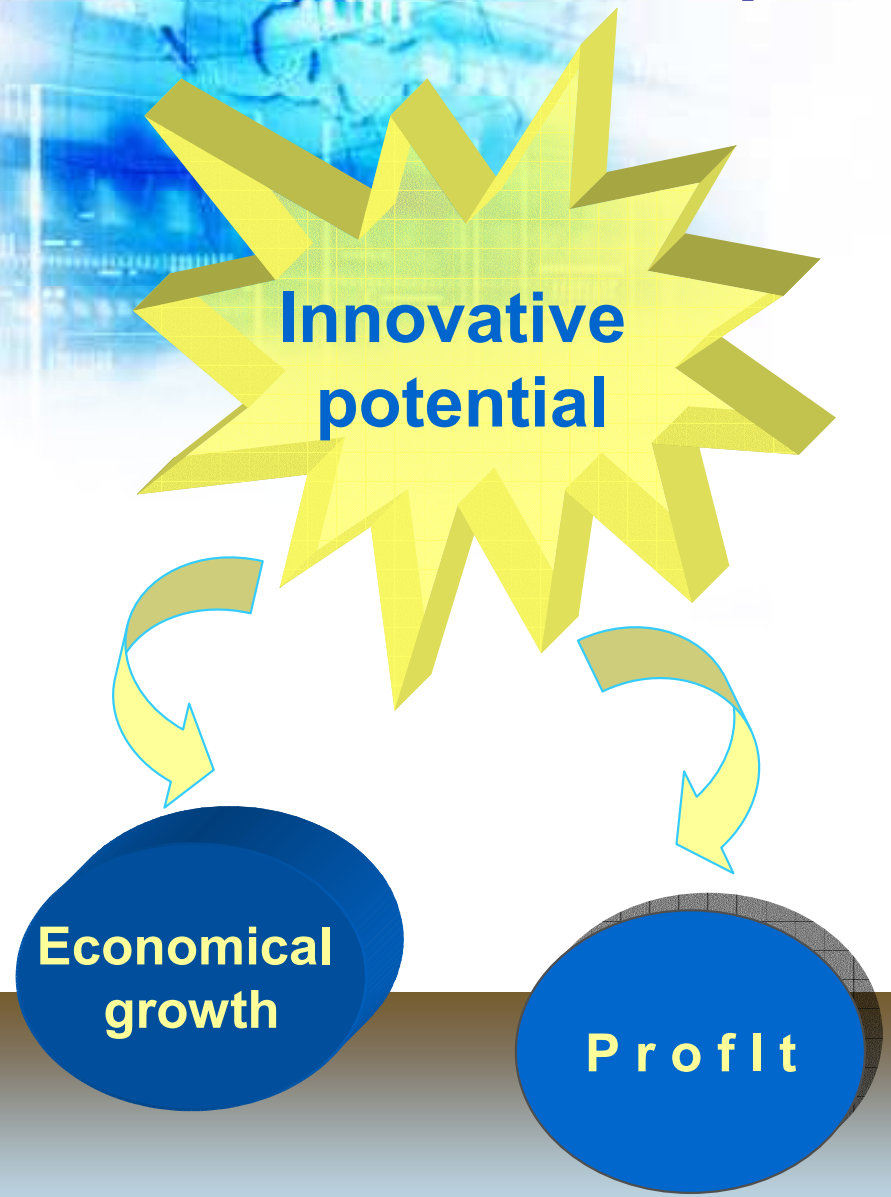
KNOWLEDGE MANAGEMENT AND INNOVATIVE BEHAVIOUR OF SME

Assoc. Prof. Dr. Dipl. Eng. **Snezhanka Ovcharova**
Varna Free University ,
BULGARIA

KNOWLEDGE MANAGEMENT AND INNOVATIVE BEHAVIOUR OF SME

1. Introduction
2. Review of Innovative Behavior and Competitiveness of Bulgarian SME
3. Indexes for Innovative Behaviour Determination of The Firms
4. Knowledge Management and Innovative Behaviour of SME
5. Factors influencing the knowledge processes
6. Conclusions

Innovative Behavior and Competitiveness of Bulgarian SME



This is firm's **potential ability to generate:**

- **new ideas,**
- **products and services,**
- **technologies**
- **and to create new values,**

a manifestation of which are the concrete business processes, passing under the influence of owners (managers)' interest and effective management of human resources.

The innovative potential content of manufacturing firms is determined as an aggregate, together with its components and namely:

- scientific-technical potential;
- personnel potential,
- financial-economical potential and
- production-technological potential.

Difficulties for Innovative Behavior Bulgarian SME

Managers difficult assess the potential and competitive advantages of the separate components needed for a success innovation creating.

Very often they underestimate or overestimate one or other part of the common complex.

All parts of the common (aggregate) potential are closely interconnect.

The effective realization of this potential depends on the condition of each its part and so on their interconnection. Namely the balance of all parts of the common potential is a basic condition for its full realization.

Innovative Behavior of Bulgarian SME

- **National Statistical Institute** - *part of innovative firms is only **11.4%** of the total number of functioning enterprises*.
- Type of realized innovations in Bulgaria:
  - ✦ **product** innovations **- 44.2%**
  - ✦ **process** innovations **- 8.9%.**
- The world research of **McKinsey**:
  - **product** innovations - **54%,**
  - innovations in **services - 37%** ,
  - **in processes - 37%,**
  - innovating of **business models - 28%.**

Innovative Behavior of Bulgarian SME

- The part of Bulgarian enterprises accomplishing research activity and working in the field of ***computer technologies, architecture and engineering sciences*** are **30.1%** of the total number of innovating enterprises or **3.4%** of the total number of enterprises.
- *This proves the need of active policy for development stimulating of innovative sections, which to stay a generator of new products and technologies for the industry.*

- Investigation by **Eurobarometer**, to order of European committee (EC)- Bulgaria is one of the countries with largest part of population:
  - **accepting the innovations with unwillingness - 28% or**
  - **pointblank reject them - 20%.**

National Strategy of SME

- Encouragement of the pre-project researches and applied investigations and their commercialization;
- Improvement of innovative culture of entrepreneurs;
- Improvement of infrastructure for spreading of innovations;
- Supporting of starting high technological enterprises;
- Encouragement of quality management standards and standards of environment adoption (including integrated systems of management) and supporting of adoption and certifying of Environment Management and Auditing Scheme (EMAS) as well as the process of ecological marking award;
- Improvement of enterprises' energy effectiveness;
- Supporting of production technological renovation;
- Supporting of nano-technologies adoption in manufacturing;
- Using of cluster unions as a basis of innovative potential development of SME and for encouragement of entrepreneurship.

Indexes for Innovative potential

- Research activity. Design and technological sections.
- Scientific-technical accumulations and innovations, including patents and know-how.
- Competency and qualification of managers, specialists and workers.
- Process technology (new methods and technologies, level of production processes automation).
- Opportunity of innovations financing with own resources.
- Opportunity of innovations financing by means of external resources.
- Technical resources (specialized, universal and laboratory equipment).
- Innovative production. Quality management system.
- Areas and work places. Communications and transport.
- Row materials, materials, fuels and energy, completing elements.

Indexes for Innovative potential of BG Firms

Up to 10 people (mostly 15)	*Lowest potential*	They have not differentiated sections for research activity and they are lacking of scientific-technical accumulations, they gain difficult access to financing from external sources.
50 - 100 people		The assessment of innovative firms' potential is not essentially distinguished from this one of 1group they have not research activity, implementing in differentiated sections, they do not possess know-how and do not adopt top technologies in manufacturing of their products.
Up 100 people	*Highest potential*	They possess in most cases sections for research activity, scientific-technical accumulations, intellectual and financial opportunities.

Knowledge Management and Innovative Behaviour of SME

Infrastructure of the knowledge management

1) Human resources ;
2) Technology;
3) **Knowledge processes**
   - *Knowledge Generation/acquisition ;*
   - *Knowledge Storage and Improvement;*
   - *Knowledge Transfer ;*
   - *Knowledge Application ;*
   - *Knowledge Protection*.

Knowledge Management and Innovative Behaviour of SME

Knowledge Generation/Acquisition

A difficult decision, which managers have to make, is how to strike the balance between the invention of new knowledge and the repeated use of already existing knowledge. To this end the term „***intellectual flexibility"*** is used, with its four sub-multitudes:

- **invention,** study of unsystematic and non-diffuse knowledge;
- **imitation and reuse;**
- **adaptation and reuse;**
- **storage and application.**

The selection criteria have to be based on how the products quality, services, processes, the development time and cost, competitiveness and the market launching time are influenced

Knowledge Management and Innovative Behaviour of SME

Knowledge creation

Knowledge creation is a chaotic and unsystematic process, and it can be hardly controlled and planned. Motivation, inspiration and occasion play an important role in new knowledge formation. Success in knowledge creation is something based on the convergence of the world reality and the structure of thinking of an individual. Since invention is a full-of-probabilities event, managers have to favour the conditions for trials and errors.

Radical innovations may be obtained by series of experiments. By way of consecutive steps these iterative processes focalize until “a successful product” is obtained.

Knowledge Management and Innovative Behaviour of SME

The reception and aqcuisition of knowledge

Since knowledge creation is an exceptionally difficult activity, most of the companies choose the easier way – to **obtain** knowledge from other sources and to acquire it according to their own needs. That keeps the companies out of risks and saves a lot of resources .

The reception and aqcuisition of knowledge is a structuralized process. The role of the corporative managers in this case is to systemize, keep and catalogue knowledge. The part of knowledge, which the company uses is standard and needs just some modification. Another part needs considerable reconfiguration .

Processes of storage and improvement of knowledge

An organization is a distributed system of knowledge, which includes clusters or components of knowledge. If these clusters are not revised from time to time and are not modified, they remain passive. That is why a basic managers' task is to constantly revise and enrich these clusters of knowledge in the organization. The **revision** of the assets of knowledge is particularly important for companies working in a dynamic technological and global competition environment .

If the aim is **knowledge improvement** and not a radical invention, the process of knowledge creation may start by a structuralized process: generation of ideas, selection, choice, development, testing and commercialization. This multi-phase process is based mainly on analysis.

When knowledge is not used or access to it is inexistent, it may be easily forgotten. At the same time **protection** of knowledge critical for the organization has to be ensured.

According to the object of activity and financial opportunities, the knowledge development processes manifest in a different way:

- In companies producing relatively **standard production,** satisfying common needs, the knowledge is encoded and stored in a database providing access to every person in organization for multiple usage;
- in other organizations that provide mainly **individually** tailored **solutions** for unique problems, the knowledge is shared mostly through face to face contact.

Research company	creating, dissemination, revision and knowledge improvement
Lawyers office	creating, revision and knowledge improvement
Financial firm	creating and acquisition of knowledge on equal basis

Strategic development alternatives for the BG SME in the field of innovation introduction:

- To develop an investment programme for creation of own innovations – products, services, means of production, etc.;
- To invest in buying innovation decisions from other companies –know-how, equipment etc.;
- To seek for effective forms of firm development by means of cooperation (subcontracting) with bigger and more powerful companies creating innovations and sharing them with partner on the base of certain condition.

Factors influencing the knowledge processes

- Manager's style;
- Info–and-communication technologies;
- Organizational communications;
- Organizational structure;
- Corporative culture.

Conclusion

1. In Bulgaria still is missing the entrepreneur approach towards the innovations and in practice there are used imitation schemes for acquiring of applied or old innovative decisions, which leads to "overtaking development".
2. In order to provide the country for considerable break in scientific-technical development. It is necessary two side actions – both from the state and the entrepreneurs. More detailed this reveals in:

- An active government politics with concrete practical activities – from one hand more financial mechanisms for entrepreneurs' stimulation to invest in scientific-applied researches, modern management technologies in synchronization with politics of the private business development.
- It is also necessary to challenge their active attitude towards the human resources potential increasing in their own enterprises.

Conclusion

- SME' managers participation in development of regional innovative strategies with purpose more objective and exact development criteria formulation for one or another branch in the region. From the other hand – to create and develop Technological centers, incubators and other similar structures for business needs servicing, as they themselves be able to integrate into European scientific space and to take advantage of the world scientific achievements.
- It is required that entrepreneurs to be more strategic oriented and perceptive toward new management concepts. The author research ascertain interest in a lot of firms to knowledge management. This approach gives an appropriate organizational infrastructure and processes for activation of all components developing innovative behavior of SME, through coordinated interaction of human resources, technology and knowledge processes.

- **Thank you!**