

**WOOD PROCESSING AND FURNITURE MANUFACTURING  
CHALLENGES ON THE WORLD MARKET  
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**FURNITURE MANUFACTURING CHALLENGES ON  
THE WORLD MARKET: THE BULGARIA'S CASE**

**Prof. D.Sc. Rossitsa  
Chobanova  
Economic research  
institute  
Bulgarian academy of  
sciences  
Bulgaria**

**Assist. Prof. Ph.D..  
Radostina Popova  
University of Forestry  
Bulgaria**

# PROBLEM

- To identify trends and challenges before the innovation policy activities in the furniture manufacturing, resulting from the furniture challenges on the world market for last 10- 15 years

# TOPICS

- 1. State of the art and challenges**
- 2. Factors, affecting the trends in manufacture of the furniture**
- 3. Concluding remarks**

# 1. EU FOREST-BASED INDUSTRIES - CHALLENGES

- growing global competition
- the availability of energy and wood supplies
- the role of the sector in limiting climate change

## 2. MANUFACTURE OF FURNITURE - FRAGMENTED VALUE CHAIN - EU

- The EU furniture sector is predominantly made of SMEs

around 85% being micro enterprises (fewer than 10 employees) and another 12% of companies being small (10 to 49). Medium-sized companies account for 2%.

SMEs in 2010 were responsible for 85% of the employment and 77% of value added of the sector.

# 3. BG MANUFACTURE OF FURNITURE – STATE OF THE ART

- the value of furniture production in 2012 was almost at the same level as ten years before
- 2.6 percentage of average growth rate (2003-2012)
- In 2011, about 21,000 workers were employed in approximately 2,200 firms belonging to the sector
- The number of employees is still decreasing after 2007, when they are 27,352
- Increasing value added: In 2011, the sector's production amounted to more than €240 million with a value added of nearly €100 million, while in 2003 the respective indicators amount respectively – 212 and 45.
- further fragmentation during the last 10 years when the number of enterprises is almost doubled, while the workers in the sector are increased about 10%.

## 4.CONSUMPTION – STILL LOW

- The Bulgarian furniture market is slowly recovering and constantly opening up
- Consumption in Bulgaria in 2012 (154 €million) was still below the pre-crisis level (284€million), while the production has reached it (268 €million)
- Furniture consumption in 2012 is 54% of its volume in 2008 and respective furniture imports - 59%
- For EU28 countries those share are 84% and 93%

## 5. BULGARIAN IMPORT AND EXPORT – WELL INTEGRATED IN EU MARKET

- Ten years ago, furniture exports exceeded furniture imports almost 3 times.
- Similar is situation in 2012 when the ratio is 2 times.
- Market sources for Bulgaria are dominated by foreign, mainly of European origin ones. Share of national production out of total consumption is 25%.
- Share of imports out of total consumption is 75%, which means Bulgaria depends on imports more than EU28 average -47%.
- Bulgaria is well integrated in EU furniture market. Imports from intra-EU countries' share of consumption is 54% (32% for EU 28). Imports from extra-EU countries' share of consumption is 21% (15% for EU 28).
- The furniture export in Bulgaria performs a half of its production in 2003, and is almost the same in 2012.



## 6.

# KEY FACTORS AFFECTING COMPETITIVENESS IN THE FURNITURE INDUSTRY

- the upstream section of the value chain
- the role of raw materials and components
- labour costs
- availability of skilled labour
- availability of investment in technology, R&D, innovation and design
- relevant policies affecting the industry.

## **6.1. UPSTREAM SECTION OF THE VALUE CHAIN -EU**

**In 2011, purchases of goods and services accounted for 73% of the total production value in the EU28 furniture industry.**

## 6.2.COST STRUCTURE OF FURNITURE PRODUCTION - BG

- The country cost structure of furniture production needs to be improved.
- Purchases of goods and services including energy products are 82.1% over total production value while in EU28 they are 73.3%.
- A purchase of energy products is 2.5%, while in EU is 1.4%.
- Personnel costs are 11.4% over the total production value while in EU 28 are 23.8%.
- Wages in Bulgaria are 11.3%, while in EU 28 are 18.7%.
- Social security in the country is very low. It is the lowest one in EU.
- Wages are the lowest in the EU.

# PROFITABILITY

- the gross operating rate: in 2011 the highest levels were recorded in UK (13.8% and 13.3%), Poland (11.3%), Slovakia (10.4%) and Austria (10%).
- By analyzing the trend over the 2008-2011, period the best performers in terms of growth rate in the EU13 were Estonia, Slovakia, Latvia and Hungary.
- Conversely, almost all EU15 countries recorded declining gross operating rates over the 2008-2011 period, with the exception of Austria, Denmark and Germany.
- In Bulgaria is declining from 13.8% in 2008 to 10.5% in 2011.

## 6.3 AVAILABILITY OF RAW MATERIALS AND COMPONENTS - EU

- The furniture industry is known to be essentially an assembly industry employing various raw materials, most of which use wood or wood panels as an input,
- In the last three decades the share of European furniture manufacturers employing wood-based panels has sharply increased compared to those who use solid wood.
- Two main reasons have been identified: the declining prices of wood-based panels compared to sawn wood and the relative ease with which panels can be assembled. This trend has been further reinforced by the advent of RTA Wood-based panels are produced from primary processing of raw timber.

## 6.4. LABOUR COST AND ENTERING THE EU MARKET

- Being a resource- and labour-intensive industry, the entry barriers to the furniture industry are rather low. This allows new producers from emerging and transition economies to easily enter the European market. In order to retain market shares, price competitiveness is a crucial driver of success. For this reason, since the beginning of the 1990s Western European firms have been restructuring their production process, investing in new plants in low-wage countries or outsourcing part of their activities to those areas.

## 6.5. INVESTMENT IN TECHNOLOGY MACHINERY

- The EU28 furniture sector investments in machinery and equipment account for the largest share of investments - more than half of the total investments are for new machinery and equipment.
- In order to automate the production process furniture firms usually introduce Computer Assisted Manufacturing (CAM) solutions and Computerised Numerical Control (CNC) machines.
- Important investments are made by medium-sized and large enterprises to optimise production.
- German and Italian wood furniture manufacturers are at the forefront in terms of woodworking machinery technology and are considered world leaders.

## 6.5. INVESTMENT IN TECHNOLOGY MACHINERY

- The Bulgaria's gross investments in tangible goods by type in furniture production is not well balanced.
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- The share of investment in machinery and equipment over the total investment in tangible goods is 49% - very low comparatively to the EU 28 is 71 % ( Excl. Greece, France, Ireland and Malta). Source: Eurostat (sbs\_na\_ind\_r2).



## 6.6. R&D, INNOVATION AND DESIGN

- Design
- The globalisation of the furniture industry and the difficulties experienced by Bulgarian firms in competing with the prices of Asian imports have moved the design function to the forefront.
- Bulgarian manufacturers now regard design as the best means of differentiating their products from mass production and of acquiring access to the high-income market segments.

## 6.6. R&D, INNOVATION AND DESIGN

- Innovation in materials and technologies
- Contrary to design, only a small number of Bulgarian firms carry out industrial research activities internally in order to develop new materials or technology for furniture.
- However, an important asset of the Bulgarian furniture industry is that it can work closely with suppliers of new materials and new technologies.
- In particular, innovation in materials is often carried out by firms specializing in surface finishing, while technological innovation is often achieved by component producers.

## 6.6. R&D, INNOVATION AND DESIGN

- nanomaterials and nanotechnology.
- Recently, a joint project by the European Federation of Building and Woodworkers (EFBWW), the European Furniture Manufacturers Federation (UEA) and the European Furniture Industries Federation (EFIC) has mapped current uses and near future perspective on nanomaterials in the European furniture sector.
- The use of manufactured nanomaterials in furniture products is still at an early stage of development since their costs are quite high while the confidence of furniture manufacturers and consumers is still low.
- The majority of nanomaterials applications can be found in the field of coatings, e.g., scratch resistant coatings, anti-graffiti coatings, easy-to-clean and water repellent coatings, UV-protective coatings, and self-cleaning coatings.

## 6.6. R&D, INNOVATION AND DESIGN

- the share of R&D personnel out of the total number of employees in the furniture manufacturing sector in Bulgaria is neglectable, which is a barrier to meet the new challenges.
- Process innovation
  - upgrading and automating the production processes through new engineering solutions.
  - introducing new production methods that allow for energy savings.

## 7. INNOVATION PERFORMANCE OF FURNITURE ENTERPRISES IN BULGARIA: RESULTS OF SURVEYS

- 2006-2008 - the innovative performance of furniture enterprises is below the average in EU.
- The main economic factor that reflects this performance is the **financing of the innovative activities**. Its level is behind the EU average - just 1.48% of the turnover of furniture enterprises in the EU, which average one is 2.21%.
- The main economic indicator that characterizes the result of innovation activities - the share of turnover and the market for new furniture, also is lower than that of the EU average.
- It is noteworthy that new furniture is better realized by firms with higher innovation intensity. The average European level of the index in 2008 was 13.3% according to Eurostat and the country is more twice behind.

# THE MAIN TYPES OF INNOVATION ACTIVITIES OF FURNITURE ENTERPRISES IN 2008-2010

- 1) The predominant product innovations are with low level of novelty - the use of new materials in the production (which are mostly new to the company and the Bulgarian market - lightweight melamine faced chipboard, MDF - matte and glossy, solid wood with special effects, veneer and plywood polycarbonate plates with natural botanical elements, hinges from leading European and world producers etc.)
- 2) Organizational and managerial innovations are second in importance - embedded systems for quality management (ISO 9001), followed by training of personnel.
- 3) Process Innovation - on the third place. Costs are made for the purchase of new machinery and equipment - mostly circular, edging machines and membrane presses. Next - a new automation of production processes is done.
- 4) The lowest results are in terms of marketing innovations, where leaders are the new promotion techniques and new market channels, and changes in the brand.

# THE MAIN TYPES OF INNOVATION ACTIVITIES OF FURNITURE ENTERPRISES FOR PERIOD 2010-2012

- The results of the study of the innovations of 11 leading furniture enterprises participating in the Verified Bulgarian Furniture of BBCWFI (the total number of member companies is 13) for the period 2010-2012 can be summarized in the following:
  - • More than half of the surveyed enterprises have realized new products during the period;
  - • 30 % of enterprises bring 5 to 10 new products, one third of which are new to the market;
  - • 18% of enterprises have a registered patent, slightly below the average score for industrial SMEs in Bulgaria by 20%;
  - • None of the companies has registered industrial design or trademark, and other forms of protection of intellectual property;
  - • Half of the innovative enterprises develop the software and machines needed for their production;

# THE MAIN TYPES OF INNOVATION ACTIVITIES OF FURNITURE ENTERPRISES FOR PERIOD 2010-2012

- Enterprises with the highest innovative performance work actively on projects related to the improvement of competitiveness, human resource development, energy efficiency and safety;
- • Innovative enterprises have implemented more innovative activities as part of a public contract for the supply of goods and services to public sector organizations;
- • The purpose of product innovation furniture enterprises are increased market share and profits;
- • Managers state the high cost of registration and lack of staff to deal with R & D, furniture makers, as barriers to the registration of patents.



# INNOVATION ACTIVITIES OF FURNITURE ENTERPRISES IN BULGARIA - CONCLUSIONS 2010-2012

- innovation performance of furniture enterprises in Bulgaria is below the EU average.
- By increasing the number of employees in the furniture enterprises, their innovation activity increases.

## 8. CONCLUDING REMARKS

- The forest-based industries are currently facing several challenges. Among them are growing global competition, the availability of energy and wood supplies, and the role of the sector in limiting climate change.
- All segments of the value chain, including the furniture sector are affected by the access to sustainably-sourced raw materials, the cost and complications of harvesting wood in the EU, price increases driven by competing demand (e.g., from the bio-energy sector), comparatively higher energy costs in the EU and a more complex and demanding policy environment.
- Some of these challenges have also an impact on consumption patterns. Against this background, the degree of information available to the final customers becomes of relevance.

# THANK YOU!

## Questions for discussion:

- What kind of policy is needed to overcome the fragmentation in the sector?
- Is it possible a smart specialisation strategy in forestry manufacturing?
- Contact:
- [Rossitsa.chobanova@gmail.com](mailto:Rossitsa.chobanova@gmail.com)