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CONCENTRIC CIRCLES AROUSING THE PROCESSES TOWARDS SUSTAINABLE DEVELOPMENT OF THE ENTERPRISES FROM WOOD PROCESSING INDUSTRY

The transition to market economy and the restructuring of the production and ownership in Bulgaria, as a whole and specifically for the enterprises from forest industry, raised the questions for their adapting to the new conditions and their forthcoming integration to the European market space. In this connection the article discusses the role and significance of the branch territorial formations (clusters), of the base production capacities, of the entrepreneurship incubators, of the R&D centers, as main factors influencing on the increase of the competitiveness of the wood processing and furniture enterprises.

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In the last years the wood processing and furniture production sector endured serious changes in the ownership structure, juridical status and number of enterprises (firms) dealing with production and trade of wood and furniture. The development of the market economy is a reason the production organization to change and form. Today the wood processing and furniture sector already has over 4500 small private subjects, a little more than half of which are acting. The share of SMEs in the structure of the working enterprises is almost 99%. For comparison, in the beginning of the transition to market economy in 1990 the total number of state enterprises from the wood processing and furniture industry was 85, most of them large.

Some questions follow logically – to which direction the change in the ownership, the increased number of enterprises (firms) and their structure led? What is the production volume, its effectiveness and competitiveness in this situation on the domestic and international market?

The general conclusion we can draw out is that, first, in 2000, compared with 1990, the production has decreased in value about 10 times in the wood processing and about 6 times in the production of furniture (see table 1), in case there is a usable resource of wood from the forests for development of the different productions.

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Table 1

Production, Import and Export of the Production of the Wood Processing Industry

	Production		Export		Import	
	1990	2000	1990	2000	1990	2000
	(mill. LV)	(mill. USD)	(mill. LV)	(mill. USD)	(mill. LV)	(mill. USD)
Wood processing (timber without furniture)	1357*	124,7	81*	68,7	33*	21,5
Furniture	553*	91,4	56,4*	48,2		11,9
Total for the wood processing industry and the production of furniture	1910*	216,1	137,4*	116,9		33,4

* In 1990 Bulgarian LV is convertible to USD.

Another characteristic of the transition period is that despite the smaller production volumes in 2000 the export of furniture and production of wood processing has similar values to the reported in 1990. To some extent the same goes for the import too. From the total production of 124.7 million dollars in the sub-branch "Wood Processing" in 2000 is realized export for 68.7 million dollars, of which 37 million dollars are the incomes from production of veneer, plywood, flaggy materials. For the same 2000 production of furniture for 91.4 million dollars is reported, of which the export was 48.2 million dollars including chairs for 25.4 million dollars. This structure of furniture export is not very favorable, having in mind that the production of chairs uses valuable massive wood, mostly beech, which resources in our country are limited and tending to decrease.

In 2000 the import of wood material and wood products was 21.5 million dollars and of furniture – 11.9 million dollars. So with total export of 116.9 million dollars the total import was 33.4 million dollars.

The conclusion we can make is that despite the difficulties accompanying the development of the industry, its production is accepted well on the European market. But the lagging behind in the production, efficiency, quality, material-intensity and energy-intensity of the production is considerable, even compared with the other Eastern European countries. This inevitably influences also the prices of the production for export and for the domestic market as well as its competitiveness.

Which are the main weaknesses and problems in the analyzed transition period in the development of the wood processing and furniture industry? The developed middle-term strategy till 2005 for the German-Bulgarian cooperation with participation of specialists from the National Forest Office, Branch Chamber on Wood Processing and Furniture Industry, Forest University and others, shows the following groups of problematic areas:

1. Material technical base of the enterprises

Old and amortized equipment and technologies, strong need of capital. Insufficient investments in R&D. Insufficient information about donor and credit programs.

2. Management of the material technical base of the enterprises

Weak skills for planning, personnel management, management the investment processes, production and risk, lack of vision and short-term planning horizons.

3. Marketing activity of the enterprises

Lack of professional and systemized marketing in the management of the enterprise. Insufficient maintaining and following of business contacts on domestic and international markets by many of the firms.

4. Production quality

Insufficiently reliable and sustainable quality. Weak knowledge of the technical standards and quality norms (national and international). Insufficient introduction of quality and control management systems (to 2002 less than 10 firms have been certified by ISO 9001). Lack of laboratories for testing the production.

5. Interaction between the firms

The firms declare willingness to cooperate with other producers but in fact they have no concept to form strategic analyses and cooperations. Ineffective horizontal links in the branch. Lack of established territorial formations (clusters).

6. Scientific service

The Branch Chamber on Wood Processing and Furniture Industry has the necessary capacity to provide the desired services together with the necessary quality. The national agencies do not coordinate well their interrelations on horizontal (between each other) as well as on vertical (between them and the firms) level. There is not enough joint work with project and development bases and design institutes, the Forest University and the Forest Institute at BAS. Insufficient financing of their activities. Insufficient applying of the scientific achievements (know-how transfer).

The conclusions we can draw out are that the forest industry has endured significant quantitative changes concerning the introduction of the enterprises in real market economic environment. But the same cannot be said about their quality state – technique, technology, management, cooperative links, scientific service, production competitiveness.

What policy should be followed so that the conducted already quantitative accumulations will lead to quality changes in production for stable and sustainable development of the branch? Which are those concentric circles, with the help of which the realizing of this policy can be possible? What is their role for activating the human potential, material, financial and information resources?

According to us the directions of change concerning the enterprises from the forest industry and connected with them scientific, public and state institutions and offices are as follows:

1. Establishing Base Production Capacities

In the transition period to market economy Bulgaria endures dynamic processes concerning increase of the import of furniture, details and elements for furniture. The quantities of import of improved (glulam, MDF, etc.) in format as well as in details, usually masked and laminated, and of other semi-manufactured wood articles are significant.

This process is accompanied with and is a result of the conducted structural change in the different productions, which led to significant increase of the number of small and medium-sized enterprises on account of the large ones. Those SMEs form the image of the wood processing and furniture industry in Bulgaria. They do not have financial capacity to invest funds in expensive equipment for finish processing of the materials they use, and it is not economically advisably. That is why they buy on the market (in this case mostly from import) ready improved slabs (laminated and masked, veneered with natural veneer, etc.) or details and diversify the assortment and quality of the final production.

In order for our wood processing industry to meet these needs, the policy of the state and the branch chamber has to be directed towards initiatives and support of the desires and intentions of the entrepreneurs to create base enterprises in the branch, which will be technological centers for increasing the degree of processing of the massive wood, of the slab and list materials. Such approach introduces an element of sustainable development of the production of shaped materials of veneer, slabs of fragmented and carded wood, plywood, and at the same time the increased production scale is a premise for using new contemporary technologies, with which the processing and use of less important wood source for their production is possible.

This assumption is directed towards the use and development of the existing nowadays production capacities, coordinated with the regioning of the source and the users. The production technological models of configuring base capacities in Bulgaria will have a multiplied effect on:

- Economic effectiveness in the base enterprises as a result of the increased production scale, increased degree of processing of the wood source and materials for it, opportunities for introducing more perfect technologies and more fully and complex use of the wood source.
- Economic effectiveness in the firms-consumers producing furniture, joinery, wood precast units and other wood articles, which production will be on higher level concerning quality and assortment, their productivity will significantly increase, as well as the opportunities for increase of their production potential based on the provoked by the interaction with the base enterprises technical-technological rearming.
- Effect will be realized also for the traders and end users as a result of additional variation in the structure and increase of the functional and esthetical specifics of the sold and bought goods.
- Strengthening the positions in export of furniture due to increase of competitiveness of the domestic production on the international markets.

2. Forming Territorial Branch Complexes and Cooperative Networks

The national plan for regional development for the period 2000-2006 states that "... The national economy is strongly dependable on its real components and only the market powers cannot insure balanced regional development..." On the other hand this development is connected also with the pre-accession instruments for associating Bulgaria to EU and social-economic coming together.

The objectives of the regional development policy are mainly creation of premises for sustainable and balanced development of the regions, softening the regional differences in employment and incomes of the population and opening the national space and supporting the regional and local development through cross-border cooperation.

The regions for purposeful impact are 77, determined with the plan for regional development. They cover 63% of the national territory and 73.9% of the population in the country. We should note that territorially 24.3% of these regions are covered by the group of underdeveloped rural regions. This group ranges mostly villages and small towns with mostly rural life style and agricultural and forest function. This group includes Stara Planina, Sredna Gora, Rila-Pirin, Rodopi, Sakar-Strandga

mountain regions and West outlying districts. There the main sources of wood concerning forest area, wood stocks, annual use are focused. These are also regions with established main wood processing enterprises for primary mechanical processing of the wood. During the years of transition to market economy many new small and medium-sized enterprises were established in these same regions for wood processing as well as for production of furniture and other wood goods.

Together with the sewing industry, information technologies, food industry and tourism the wood processing and furniture industry are identified by the government of Bulgaria as most suitable areas for creating cluster formations. The reason is that the image of these economic sectors is formed mainly by SMEs, for which the area of development providing them biggest advantages is the cluster structure. The branch territory production structures (clusters) are formations of working closely geographically enterprises, which productions belong to the same branch. As a result of the interactions between the branch enterprises higher effectiveness is achieved based on deepening the specialization, increase of technological potential, opportunities for increase of the adapting, development of innovation and increase of the competitiveness.

Characteristics of the development of the branch industrial potential in the mountain regions of the country are:

- The main sources of wood concerning forest area, wood stocks, annual use are focused in the mountain regions.
- Main wood processing enterprises are situated in Stara Planina, Rodopi and Rila-Pirin mountain regions. Low transportability of wood source and high transport costs are reasons why the enterprises for primary processing of the wood are established exactly in these regions, sources for wood. The impact of these factors is also a reason for their low mobility.
- Enterprises for wood-based end-production – furniture, joinery, wood precast units – are situated in the big consumers centers. The reasons for the bigger mobility of the end-production capacities in the big consumers centers are increased transportability of the used materials after the primary processing of the round wood, more certain realization of the production, presence of qualified labor force.
- Acquired wood resource from the mountain regions of West outlying districts, Sredna Gora and Sakar-Strandga in its main part is transported and processed in enterprises for primary processing in the valley areas. The reasons lie in the weakly developed industrial potential and settlement network in these regions, poor forest resources and migration processes observed there.
- Due to the clear differentiation in territorial position of the wood processing enterprises and the enterprises producing furniture, joinery, etc. (the first are in the mountain regions, and the second are in the big towns and consumer centers) there are no clear technological or cooperation links between them. The middle part of Stara Planina region is an exception to a certain extent.

The conclusion is that the enterprises, despite being open to suppliers and markets, are an autonomous closed system, in which each one of them solves the problems alone.

Despite this situation, we should note that one of the first created branch clusters in Bulgaria belongs to the forest industry and is established in 1999 in Razlog. It unites about 30 small enterprises, each of them participating with production of

details or elements for the final article. Organizational work on establishing similar territorial production complexes in Velingrad and Troian run now.

3. Following Innovation Policy through Entrepreneurship Incubators

These are the so-called centers for “incubating entrepreneurship”. Their role is based on common economic interests to join for creating opportunities for development of the different production entities, for increase of their potential and competitiveness. The joining can be based on the use of some of the following indications:

- classic business incubators (joining enterprises with different products);
- industrial zones – focusing enterprises with common interests;
- zones for export processing of resources and materials;
- scientific (technological) parks;
- territorial production complexes and cooperative networks;
- virtual business incubators which offer services in cyber space.

Especially useful are those business incubators which give real support on developing a business plan, drawing the market segments in consumers groups, establishing distribution channels and competitive advantages, methods of management and administration, etc.

With the help of the firms incubators transfers of know-how are made, especially in the small and medium-sized innovative enterprises. They support and limit the risks accompanying any economic organization in the search and provision of new solutions for access to technological know-how and information, capitals, accompanying services and infrastructure, etc.

The analysis shows that most dynamic development happens in those regions, where the so-called industrial or innovation clusters are formed – complex of enterprises (industrial companies, research centers, scientific institutions), organs of state governance, unions, public organizations, etc. – based on territorial concentration of network of specialized suppliers, main producers and consumers, connected with technological chains. The cluster structures ease the access to capitals since the geographic concentration of firms has big attracting power to the investors and joint ventures.

The significance of forming and strengthening the regional innovation clusters can be noticed also by the attitude of the USA government on this matter. They place them among the most important national priorities. The report of the National Council of Competitiveness in 2001 states: “... In the era when the national borders become less important with the global movement of capitals, technologies and talent, the innovation engine become local as never before”.

What is the situation in Bulgaria? Do entrepreneurship incubators exist and are there premises for them?

In certain regions the country has already a newly formed and revealed industrial potential. These are regions as the conglomerates Haskovo, Asenovgrad, Plovdiv; Lovech, Troyan, Teteven; Stara Zagora, Nova Zagora, Kazanluk; Varna, Bourgas, Sliven; Sofia, etc. Quantitative changes occurred, which in some economic entities are solved in technical-technological way too. But there are no quality changes, subdued to a common course towards interaction between the different economic entities, towards leading centers, concentrating the role of conductor, coordinator

and multiplier of the power of science, innovation, infrastructure, etc. This is exactly the direction in which the work must be done, so that the innovation processes for technical-technological rearming of the different productions, increase of economic potential by regions in the country are activated for homogenizing the economic environment and its integration to the European environment.

4. R&D Activity (Scientific Service)

For the increase of the economic potential of a certain country significant is the attitude, which it has towards the research studies, developments and introductions, the place which the policy of scientific service of different activities in part and as a whole occupies. Japan is an example for achieved results from such approach. As a result of its long-lasting science-technology policy in the last two decades of the 20th century Japan encountered significant results, revealed in increase of GDP per capita and achieving of levels of about 80% compared with the values of the same index for USA. This policy is conducted mainly in a few directions towards:

- increasing the role of the state in the development of the national science-technology potential of the country based on expansion of the financial base for research and development; stimulating the fundamental science;
- expanding and improving the cooperation of the main sectors of the science – production, academic and state; improvement of the training of research staff;
- activating the regions and local administration for strengthening their role in insuring the science-technical progress of the country, increasing the effectiveness of the science-technical information;
- activating the development of international contacts in science-technical area together with internationalization of the Japanese science;
- in order to achieve results in realizing the state policy in this period the increased scientific expenses of GDP must also be noted. At the end of 20th century they reached about 3%.

The policy of USA is not different than the one of Japan. At the forum “Science and Technology Form 21st Century” in 1997 president Clinton stated: “... we enter the century of technology, information and global competition, where the leading technologies have always been the core of competitive advantage of USA” (...). Exactly the achievements, which the country realized in the 90s of the 20th century are due to the technological changes in the society as a result of the innovations. The technological changes concern areas as trade (internet), bank and finances, biotechnologies, robotisation, etc.

The executors of programs of R&D activity in USA have a free use of state production equipment and scientific laboratories, concessions for purchase of necessary resources and materials, concessions on corporate profits, advance payments on the orders, pre-preparation of science-technical and production staff and specialists in foreign companies, research centers or universities, etc.

Stimulating the technological development of the enterprises for increase of their competitiveness and vitality is a long lasting policy for the EU countries as well. For this purpose global and specific for each country programs at research, production, political level are developed. The main directions in which the government policies run are support of the new technologies firms, of renewing the technological

potential in traditional for the country branches, of the firms in their management skills, marketing, information service, employees qualification, etc.

What is the situation of the scientific service of enterprises and firms from wood processing and furniture industry in our country today? We have to note that the connections between the economic organizations, which in the past had its own R&D departments and offices, with central research organizations, institutes, colleges, higher schools and centers is broken, with few exceptions, due to their physical liquidation. This is the reason why the economic organizations and the state will draw their attention to the existing scientific potential from the branch institutes and scientific departments, Forest University, Forest Institute at BAS, etc. These organizations could successfully participate in solving many scientific, technical, technological, project-constructing, organizational and information service issues at branch, regional and national level in the area of forest industry, for the needs of each enterprise and for the interaction between them in regional and international plan.

Of course, the development of the activity of these centers should be carried out with the help of the state, which should face the problems of the science and R&D activity through the relevant form and ways of financing and support. On the other hand, the firms and enterprises from the production should realize the necessity of technical-technological rearming of their material base in order to survive and have sustainable development.

Conclusion

The technical-technological rearming and increase of the scale of different production capacities, producing shaped materials, slabs, veneer, plywood, furniture, etc. in the branch, aiming increasing the degree of processing the wood resource in them and turning them into base enterprises, will give opportunity to increase the total level of production in wood processing and furniture industry and also increase their competitiveness based on links with other enterprises from the branch and development of production and technological specialization.

The specific sources of wood in Stara Planina, Sredna Gora, Rila-Pirin, Rodopi, Sakar-Strandga mountain regions and West outlying districts, in which the main production capacities for primary wood processing are concentrated. In the years of transition to market economy the existing small and medium-sized enterprises were restructured and new ones were established. They can become natural economic environment for establishing branch territorial formations (clusters) with which the industrial branch potential will increase.

Another opportunity, adding to the branch formations for increase of the innovative ability of different enterprises from the sector, is their participation in future entrepreneurship incubators in regions with developed industrial potential. This form of integrating organizations definitely has an attractive power for gathering investors and establishing innovative climate through which SMEs get access to capital, technological know-how, scientific technological information, etc.

For the total development of the branch is necessary to note also the role of the state, the Branch Chamber and the scientific organizations for recovering the broken link between the production and the science and scientific service, which certainly will contribute to the increasing of the science-technical branch potential, financing and stimulating the research, project-constructing and R&D activity,

forming innovative, flexible and competitive production systems, their integrating to the European economic space.

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