

CHANGES OF INNOVATION BEHAVIOUR IN SLOVAKIAN FORESTRY

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Abstract:

The present study describes the situation in the Slovak forestry sector comparing innovation activity in two different periods (2002 and 2009). The ownership type appeared to be important for the innovation activity of forest holdings. Higher innovation activity was reported by state-owned enterprises, contradicting the hypothesis based on the theory of property rights, according to which the highest entrepreneurial and innovation activity could be observed in private holdings. Instead, innovation correlated positively with the holding size.

The results concerning fostering factors for forest holdings to introduce successful innovations indicate the necessity of cooperation, information exchange and the support of public and EU sources. The main obstacles for adoption and application of innovation are lack of finances, tax load and environmental legislation.

The comparison between the two periods shows that innovation activity has increased from technological innovation to products and services. Wood still remains the main product of forest holdings. In comparison with 2002, in present the importance of bio energy becomes visible.

Key words: innovation, product, service, forestry, product mix, market expectations

JEL Classification: Q23

INTRODUCTION

Forestry sector is often considered as a mature, “low-tech” industry which invests comparatively little into research and development and is mainly an innovation user. However, developments in the sector have led to a widely shared perception that past practice might not necessarily bring future success. Interest by society in recreation or environmental, including biodiversity, protection has grown in the last decades (Rametsteiner et al., 2010). This opens up opportunities for innovations in the forest sector.

Innovation is vital to economic growth and development. Through innovation, new products are introduced to the market, new production processes are developed and introduced, and organizational changes are made. Forestry is an important source of income for forest owners and for employees in rural areas. The future of the people, who make a living in rural areas from forestry, will considerably depend on how individuals and institutions react in view of the changes, how forest owners and managers obtain new knowledge and put it into practice in forestry, and how institutions, especially forest administration, extension services, forest research or other institutions best deal with emerging changes. The restructuring of forestry and the development of wood prices tend to have a negative impact on employment. To compensate for the negative impacts, product and service innovations based on the multifunctional use of forest and the efficient use of the growing stock of wood can provide new opportunities for rural employment (Rametsteiner and Weiss, 2004).

The objective of the presented study is to compare the effects of innovation activity and entrepreneurship behaviour in the Slovak forestry sector in the years 2002 and 2009 with the accent on the successfulness of the innovation, product mix and market expectations of forest owners. The study also seeks to identify fostering and impeding factors to innovation.

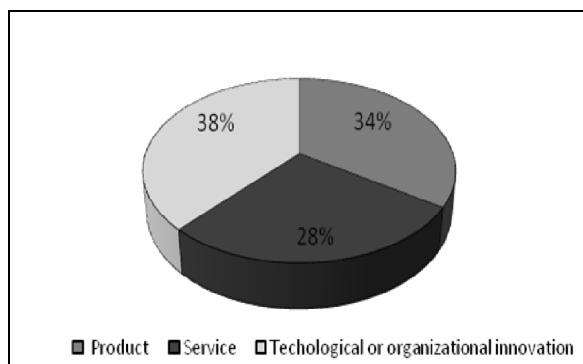


Figure no. 7. Successful innovations in 2002

Round wood remains the most preferred product in both periods regardless of the managed area (figures 6 and 7). In enterprises managing a larger area the product mix shows a greater variety than smaller enterprises. They offer a larger scale of offered products and services.

Small enterprises (less than 500 ha) prefer round wood and rental to other products. Some of them stated that they do not offer any products because they manage the forest for self-consumption (17 in 2002 and 21 in 2009).

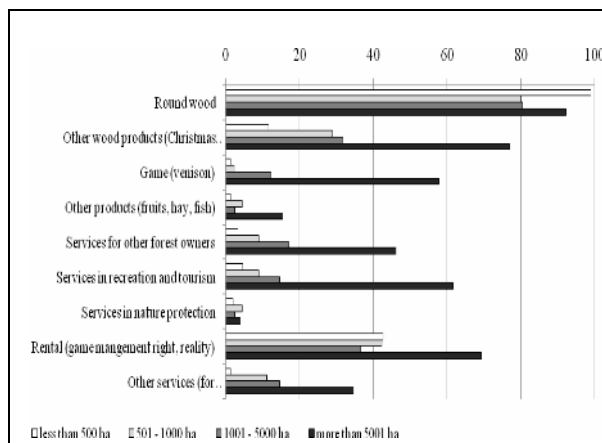


Figure no. 8. Product mix in forest holdings in 2002

In 2009 small and medium sized enterprises are more engaged in innovation and offering new products (figure 8). Other wood product, game, non-wood products and services have a bigger share in the product mix. Recreation and tourism also gained a more important role. The positive shift towards non-wood products offer is a result of adopted strategic documents (such as NFP, RDP) which emphasise sustainable forest management and the importance of the forestry sector in rural development (figure 9).

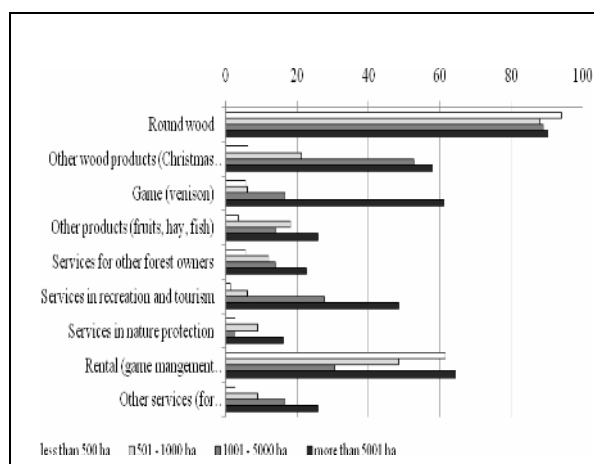


Figure no. 9. Product mix in forest holdings in 2009

Regarding the market expectations of forest owners in 2002 wood and drinking water were considered as the main gains that forests can provide. In long term period recreation, environmental services and carbon sequestration was identified (figure 10).

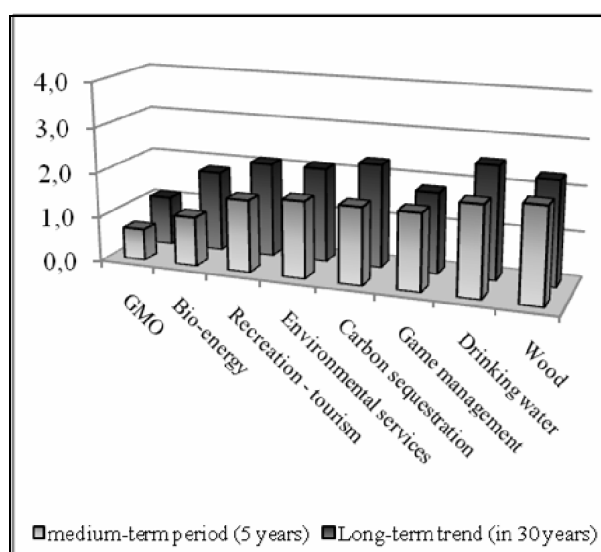


Figure no. 10. Market expectations for forestry in 2002

In the year 2009 (figure 11) bio energy gained a significant role in the market expectations. This is in accordance with the aspirations on the utilization of alternative energy resources. On a global level, the forest biomass resource potentially available for energy is vast. Forests are the main source of energy globally for domestic use & many industries. This opportunity was also recognized by the Slovak forest owners. Wood still remains the main product but other gain a more important role.

Impeding factors in 2002	Impeding factors in 2009
1. Lack of own finances	1. Lack of financial sources
2. Lack of finances from other subjects	2. Tax load
3. High capital costs	3. High investments and operating costs
4. Lack of information about possible new products and services	4. Laws on nature and environmental conservation
5. High operating costs	5. Risk of sales and marketing

National forest programme of the Slovak republic: Increasing long-term competitiveness and priorities strive for increased competitiveness and economic viability of multifunctional forestry by the means of innovating, offering more non-wood forest products, supporting the use of forest biomass to produce energy and cooperation with other forest land owners.

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