



Looking beyond timber: Empirical evidence for the diversification of forest enterprises and the profitability of auxiliary activities in Austria



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ABSTRACT

Although a recent rise in timber prices seems to counter the long-term trend of declining profitability of timber production, the development of additional sources of income still constitutes a strategic challenge for forest enterprises. Furthermore, increasing interest of stakeholders in various forestry goods and services requires dealing comprehensively with the potentials of multifunctional forestry. In fact, forest enterprises may be engaged not only in providing a range of forestry-based outputs but also with ventures unrelated to forests. Nevertheless, there is still little empirical evidence concerning the economic significance of diversification. Established economic monitoring schemes traditionally concentrate on timber production. Political interest and forest certification are typically restricted to forest-based activities. In this paper, the empirical evidence regarding auxiliary activities as documented by the Austrian accountancy network of larger forest enterprises is appraised for the first time. A set of economic key figures can be derived for a considerable range of activities. On average, timber production is still dominating by far, other activities contributing in total only to an equivalent of some 2.5% of the timber profits. A range of methodical limitations associated with the data collected so far underpin the necessity to interpret results prudently. Several amendments are identified which could substantially improve the significance of the empirical investigations.

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1. Introduction

While timber prices have been rising recently (Statistics Austria, 2014), over the last decades forest enterprises have been confronted with falling or at least stagnating prices for raw timber, especially when considered in real terms. The resulting decline in net revenues from timber production could only partly be compensated by rationalization, foremost in terms of reducing harvesting costs (Sekot, 2006). As the possibilities to reduce costs and increase productivity are largely exhausted, diversification strategies are considered necessary to sustain or even extend the income generating function of the enterprises. Although the recent recovery of timber prices has mitigated the economic pressure and may tempt to neglect efforts in other operational activities, diversification remains a strategic challenge for forest enterprises. Furthermore, the currently favourable conditions for timber production provide a sound basis for new ventures and investments. In addition rising interest in non-wood goods and forest-related services, from a perspective of innovation and entrepreneurship (Rametsteiner et al., 2005; Weiss, 2011) as well as on a political level (MCPFE, 2003), suggests a more thorough utilization of the multifunctional potential of forest resources. It has to be considered though, that several of the benefits

obtained from forests exhibit the character of public goods. Only a fraction of forest-related goods and services is readily marketable as dependent on specific property rights. Wolfslehner and Vacik (2009) estimate the value of marketed non-timber-forest-products and services (NTFPS) in Austria with 220 million € in 2005 and assert a stagnating value of marketed products but expect an increase in the importance of services. In comparison the corresponding value for the forestry goods output in 2005, comprising essentially timber and firewood production, given by the Economic Accounts for Forestry (Statistics Austria, 2013) amounts to 1.009 million €. To appropriately appraise the potential of non-timber products the development towards marketability has to be kept in mind. This may be achieved along the two dimensions of excludability and rivalry in consumption via transformation and product development respectively (Mantau et al., 2001; Merlo et al., 2000). Mantau et al. (2001) provide individual examples for successfully establishing new business activities based on forest resources.

The Austrian forest accountancy data network (FAN) for forest holdings larger 500 ha (Hyttinen et al., 1997; Sekot, 2008) serves as a starting point for investigating the economics of diversification of forest enterprises. In contrast to its German counterpart, which already encompasses various non-timber products and services (BMELV, 2014), the Austrian FAN is still focused on the economic analysis of timber production. Other operational activities may yet be recorded optionally. Although the documentation of these “auxiliary activities” (AAs) is appraised by individual enterprises, so far no analysis on aggregate

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level has been conducted. The aim of this paper is to explore in detail this hitherto unused potential and examine what inferences can be drawn about the significance of diversification for larger forest enterprises. The research questions to be addressed are:

- i. To what extent are activities aside timber production documented by the Austrian FAN?
- ii. What is their significance for forest enterprises (with regard to diversification)?
- iii. Can an often presumed increase in the importance of these activities be traced by the FAN-data yet?
- iv. In what fields of activity are forest enterprises diversifying?
- v. What adaptations of the FAN should be envisaged in order to better capture the economics of diversified forest enterprises?

The paper is structured as follows: First, a framework for diversification of forest enterprises is developed and the Austrian FAN and its coverage of AAs are described. The main section documents qualitative as well as numerical results in regard to the research questions i. to iv. The final discussion evaluates the empirical findings against the background of the survey design and provides suggestions for methodological improvements, thereby answering research question no. v.

2. Material and methods

2.1. Theoretical framework of diversification in forestry

The term diversification—from the Latin words “diversus” and “facio”, roughly translated as “to make different”—generally refers to the widening of ones activities or assets. It commonly denotes a product-market strategy (Ansoff, 1957) and the composition of assets in portfolio theory (Markowitz, 1952), respectively. Beinhofer (2009) provides an overview of the application of the latter in the context of forest management and outlines the different levels of diversification for forest enterprises (Fig. 1): The enterprise itself can be one of the several assets in a larger portfolio; within it may be diversified in different businesses, which themselves may comprise different product lines (e.g. tree species or timber assortments for wood production, game species for hunting, etc.). Knoke et al. (2012) propose to additionally take into account ecological, spatial and temporal dimensions.

Concerning the significance of diversification at the level of strategic management, i.e. as a strategy for operational growth (Ansoff, 1957; Penrose, 1959), the peculiarities of forestry have to be taken into account. Forest resources hold the potential for providing a range of outputs in terms of goods and services. However, several of these outputs

are not readily marketable. Joint production of private and/or public goods is based on a highly complex ecological system and is characterized by complementary, indifferent as well as competing relationships which are not in all cases well understood. The low rate of natural growth implies extremely long time horizons for implementing intended structural developments of the forest. The normative framework is determined by considerable restrictions of property rights on behalf of the forest owner and often influenced by other than purely economic interests such as e.g. tradition and pride. Furthermore, opportunities for diversification vary considerably from enterprise to enterprise, depending on the specific ecological, economic and social conditions.

So far there is little research into diversification of forest enterprises. In contrast, farm diversification is discussed from a variety of perspectives in the agricultural-economic literature, addressing in detail e.g. questions of typology and determinants of diversification (Barbieri and Mahoney, 2009; Meert et al., 2005) as well as the role it plays concerning the resilience of farms (Darnhofer, 2014). The investigation of the extent of operational activities is meant to serve as steppingstone for developing similar theoretic approaches as regards the diversification of larger forest enterprises.

As Hyttinen et al. (1997) adequately note, there is no clearly defined frame for potential activities of forest enterprises. Opportunities for diversification typically comprise the domain of marketable non-wood (e.g. (FAO, 1999)) or non-timber forest products and services but are not necessarily restricted to these. Compared to sector statistics (Sekot, 2007) and the political discussion on sustainable multiple use forestry (MCPFE, 2003), which both focus on forests as a resource, the analysis of the FAN has a wider scope. A basic classification may differentiate between (material) products and services. Furthermore, outputs of traditional timber related forestry, other outputs from forests and finally non-forest outputs could be distinguished. The appropriateness of any classification ultimately depends on the focus of the respective research. As regards the actual analysis it has to be considered, that the framework is largely predetermined by the accountancy scheme.

2.2. The Austrian forest accountancy data network

The Austrian forest accountancy data network of forest enterprises with productive forest area of more than 500 ha is one of the two respective networks in Austria, the other being the farm-forest network for forest holdings managing between 5 and 200 ha (Sekot, 2001). It has a long tradition as a source of information about the profitability of forestry and its origin dates back to the late 1950s. While originally the main purpose was to provide information for public administration

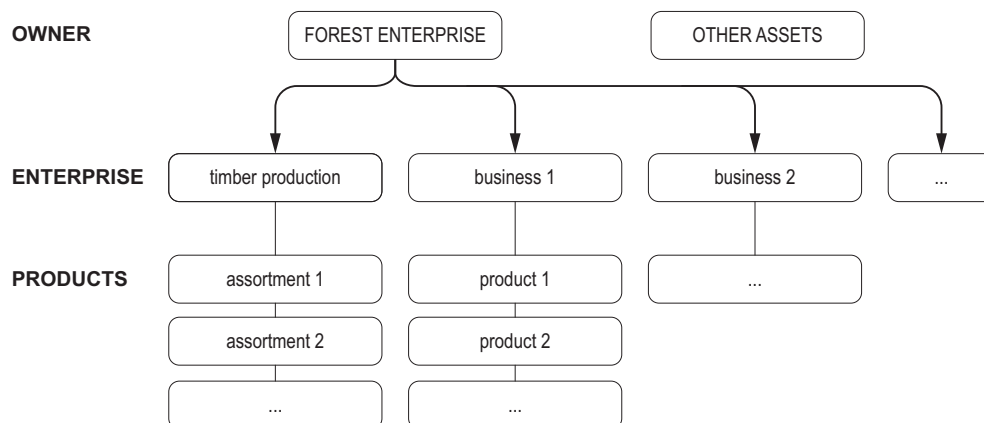


Fig. 1. Levels of diversification in forest enterprises (based upon Beinhofer, 2009).

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