Dissertationes Forestales 198

Towards service-dominant thinking in the Finnish forestry service market

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Academic Dissertation

To be presented, with the permission of the Faculty and Forestry of the University of Helsinki, for public examination in Sali 5 (3003) of the Main Building, Fabianinkatu 33 – Päärakennus, Helsinki on 28 August 2015 at 12:00 noon.

Title of dissertation: Towards service-dominant thinking in the Finnish forestry service market

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Dissertationes Forestales 198

http://dx.doi.org/10.14214/df.198

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ISSN 1795-7389 (online)
ISBN 978-951-651-485-0 (pdf)

ISSN 2323-9220 (print)
ISBN 978-951-651-486-7 (paperback)

Publishers:
Finnish Society of Forest Science
Natural Research Institute Finland
Faculty of Agriculture and Forestry of the University of Helsinki
School of Forest Sciences of the University of Eastern Finland

Editorial Office:
Finnish Society of Forest Sciences
P.O. Box 18, Fi-01301 Vantaa, Finland
http:www.metla.fi/dissertationes

Mattila, O. 2015. Towards service-dominant thinking in the Finnish forestry service market. Dissertationes Forestales 198. 61 p. Available at: http://dx.doi.org/10.14214/df.198

ABSTRACT

Forests offer various, sometimes contradictory utilities to their owners and all other users on the global societal and ecological levels. In Finland, meeting the industrial requirements for a stable roundwood supply has defined the forestry service market, as it has been widely supported by the forest owners, the industrial buyers, and the national forest policy. Along with the changes among the owners themselves, demand for forestry services has fragmented. Recently, by introducing the new Forest Act, which gives more freedom for forest owners to choose between management practices, Finnish government has triggered a change that aims at the creation of more market-oriented distribution of forestry services.

Based on the concepts of institutional transition at the market level, service-orientation as value-creation logic change, and business model thinking as the unit-level logic, the theoretical objective of the thesis is to define the ongoing renewal of the forestry service market. Using public and private owners as customers and the current forestry service organizations as service providers, the practical aim of this dissertation is to identify potential opportunities and barriers with respect to creating new services in the forestry service market. Methodologically both qualitative interview studies on forestry service organizations (n=22 and n=17) and quantitative multivariate analysis based on survey data with private (n=557) and public (n=139) forest owners are used.

According to the results, there is a growing tension in the market environment accelerated by institutional transition: private forest owners are fragmented into multifaceted groups with various needs, while public owners (such as municipalities) are facing versatile user pressures on their publicly owned forests. Therefore, it seems that the traditional “roundwood supply” approach may no longer match the needs of versatile customer groups. From structural perspective, the established service market dominated by a small number of players is limiting the successful entry of new enterprises. The lack of dynamic middle-sized companies in the Finnish forest sector coupled with difficulties in adopting a more cooperative mind set is proving to be hindrance for renewal of the forestry service market despite the development of information technology, which can facilitate the use of participative methods in forest management and service marketing.

Keywords: Forestry services, service-dominant logic, customer value creation, institutional transition, multi-level perspective on transition, business model

ACKNOWLEDGEMENTS

I would like to thank the following, great persons for all the help and support: Anne “Top 1” Toppinen for all the positive target-oriented continuous guidance; Mikko “7th Dimension” Tervo for analytically deconstructing this world into theoretically feasible pieces; Sami “Sean Bergenheim” Berghäll for support and all the new ideas how to change the world; Pekka Ripatti for fusing the rocket; Anders “Andres Roots” Roos for helping me to survive in the icy wastes of Sweden; Liina “Höyrytyömyyrä” Häyrinen for being such in-depth researcher; and the rest of the members of both Doc Club and Dork Club for all the scientific and non-scientific discussion: Jani “Speedomies” Holopainen; Jaana “Rasva-Jaana” Korhonen; Brent “Pertti” Mathhies; Dalia D’Amato; and Katja Lähtinen. Warm thanks to the pre-examiners Tove E. Boon and Teppo Hujala for reviewing, criticism, and support.

For funding (operand resources), I want to thank Finnish Cultural Foundation (more specifically: Ilmari Kalkkisen rahasto, Kalle ja Dagmar Välimaan rahasto, and Pohjola-yhtiöiden 100-vuotisrahasto). Thanks to the University of Helsinki and the Department of Forest Sciences. For funding our research projects, I want to thank Tekes, and the companies for participating. I would also like to thank all the interviewees for your time and people who answered our surveys, and our graduate students involved in these projects.

I want to thank Hanna-Maija, my family, relatives, and friends for continuous support.

Helsinki, August 2015

Osmo Mattila

LIST OF ORIGINAL ARTICLES

This thesis consists of an introductory review followed by four research papers. The papers in the review are referred to by their Roman numerals. Articles I, II, and III are reprinted with the permission of the publishers while Article IV is the author's version of the manuscript.

I Mattila O., Toppinen A., Tervo M., Berghäll S. (2013). Non-industrial private forestry service markets in a flux: results from a qualitative analysis on Finland. Small Scale Forestry 12 (4): 559-578. http://dx.doi.org/10.1007/s11842-012-9231-1

II Mattila O., Roos A. (2014). Service logics of providers in the forestry services sector: Evidence from Finland and Sweden. Forest Policy and Economics 43: 10–17. http://dx.doi.org/10.1016/j.forpol.2014.03.003

III Häyrinen L., Mattila O., Berghäll S., Toppinen A. (2014). Forest Owners' Socio-demographic Characteristics as Predictors of Customer Value: Evidence from Finland. Small-scale Forestry 14 (1): 19-37. http://dx.doi.org/10.1007/s11842-014-9271-9

IV Mattila O., Häyrinen L., Tervo M., Toppinen A., Berghäll S. (2015). Challenges of municipal greening and multifunctional forest management: the case of Finland. Revised manuscript submitted to Urban Forestry & Urban Greening.

DIVISION OF LABOUR IN CO-AUTHORED ARTICLES

	I	II	III	IV
Conception & design	OM, AT, MT	OM, AR	LH, OM	OM, MT
Planning & implementation	OM, AT, MT	OM, AR	LH	OM, MT
Data collection	OM	OM	LH	OM
Analysis & interpretation	OM, SB	OM	LH, SB	OM, LH, SB, MT
Writing the article	OM, AT, MT, SB	OM, AR	LH, AT, SB, OM	OM, AT, LH, SB
Overall responsibility	OM	OM	LH	OM

OM = Osmo Mattila, AT = Anne Toppinen, MT = Mikko Tervo, SB = Sami Berghäll, LH = Liina Häyrinen, AR = Anders Roos

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1. INTRODUCTION

1.1 Background for research

Forests are globally important ecosystems that offer a wide variety of services to support human well-being, health, livelihoods, and survival and ecosystem services are the benefits people obtain from ecosystems. The concept of ecosystem services became globally known in 2005 when the United Nations published its Millennium Ecosystem Assessment, which was followed by the rapidly growing interest in the concept both in the research and policy communities (Costanza et al. 2014). This classification includes provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling. (MEA 2005.) Wood production has traditionally been the dominating approach to the services that are offered to forest owners. However, wood fiber is just one benefit derived from the forest ecosystem, and not necessarily the only one to be maximized from the forest owners' perspective. Therefore, when analyzing forest derived benefits as a part of a bigger picture, the ecosystem service approach offers a suitable background for the analysis of forestry service markets.

In the European context, the importance of forests is crucial especially for the Nordic countries. In Finland for instance, three fourths of the land area is forested, which represents about 11% of the forest area in Europe (State of… 2012). On the global level, there are various ways to organize forest ownership between private and public owners. In the USA and in European countries such as the Nordic countries, Austria and France a significant proportion of the forests belong to non-industrial private forest (NIPF) owners. There is ample research of NIPF owners and their variable objectives, values, and attitudes related to forest ownership (Kurtz and Lewis 1981; Bliss and Martin 1989; Karppinen 1998; Boon et al. 2004; Wiersum et al. 2005). In Finland, NIPF owners own about 60% of all the forestry land, the Government owns 25%, forest industries own 10%, and municipalities and parishes 5% (Luke 2015). Despite their small coverage, also the municipal forests are important for municipality dwellers. It is estimated that 30% of recreational visits to Finnish forests are to municipally-owned recreational and urban forests (Ovaskainen et al. 2002).

Forests offer various, sometimes contradictory utilities to their owners and other users on the global societal and ecological levels. In the future, it is thought that many forest estates will be inherited by new owners who may have different motivations and objectives compared with the current owners (Hirsch et al. 2007). Previous research indicates that ownership fragmentation, ageing, urbanization, and decreasing dependence on forestry income have been the main trends in the structural change of NIPF owners in several European countries and in the US, this has also proved challenging for maintain industrial timber supply (Haynes 2002; Alig 2003; Schmithüsen and Hirsch 2010). At the same time, global trends like digitalization, changing consumer demands, increasing competition for raw materials, climate change, the transition towards bioeconomy and energy policies (UNECE/FAO 2005; 2011; FTP 2013a;b; Hurmekoski and Hetemäki 2013) put pressures to the diversification and renewal of industrial sectors based on the renewable resources at the global level.

Due to their economic significance, demand for industrial wood and forest products have been the key targets of forest-sector outlook studies and analyses (Hurmekoski and Hetemäki 2013). Even though non-wood goods and services have gained more attention during the past decade (Brown et al. 2007; Näyhä et al. 2015), services offered for forest owners have still focused mostly on refining provisioning ecosystem services and more specifically, timber production for the use of wood, pulp and paper industry. In particular, the understanding of the future potential of services more generally, and how traditional organizations in the forest sector could transform their business models to better benefit from this opening market potential is very limited (Näyhä et al. 2015).

Recently, Hetemäki and Hänninen (2013) have categorized all the forest-based sector services into three groups: 1) forest-related, 2) forestry-related, and 3) industry-related services. According to this categorization, forest-related services are typically understood as “ecosystem services” that forest produce whereas forestry-related services are the ones needed to ensure the provision of these forest-related services (Näyhä et al. 2015). In this dissertation, the focus is on those services that are offered for NIPF and municipal owners in the markets. Therefore, according to the categorization by Hetemäki and Hänninen (2013), the services in this thesis cover only group 2) of forestry-related services. Conceptually, also group 1) of forest-related services is essential as the premises of this research cover the full range of the services offered to NIPF owners.

As Figure 1 shows, forestry services in this research include four categories: 1) forestry operational services, 2) wood trading related services, 3) property administration services,

and 4) information services. Forestry operational services are the operations that have physical influence on tree stands or land. Wood trading services help forest owners to realize the economic value of harvestable wood stock. Property administration services mainly see forests as assets and these services are offered to help customers manage their forests as financial assets. Information services are related to all the other three service categories and they help forest owners to either manage the forests by themselves or to be more competent customers for these services. In a market environment characterized by a large proportion of private ownership and a rather small size of estates (on average 30 ha in Finland), private and public forestry service organizations have evolved over several decades to provide professional help and services to the owners for managing their forests.

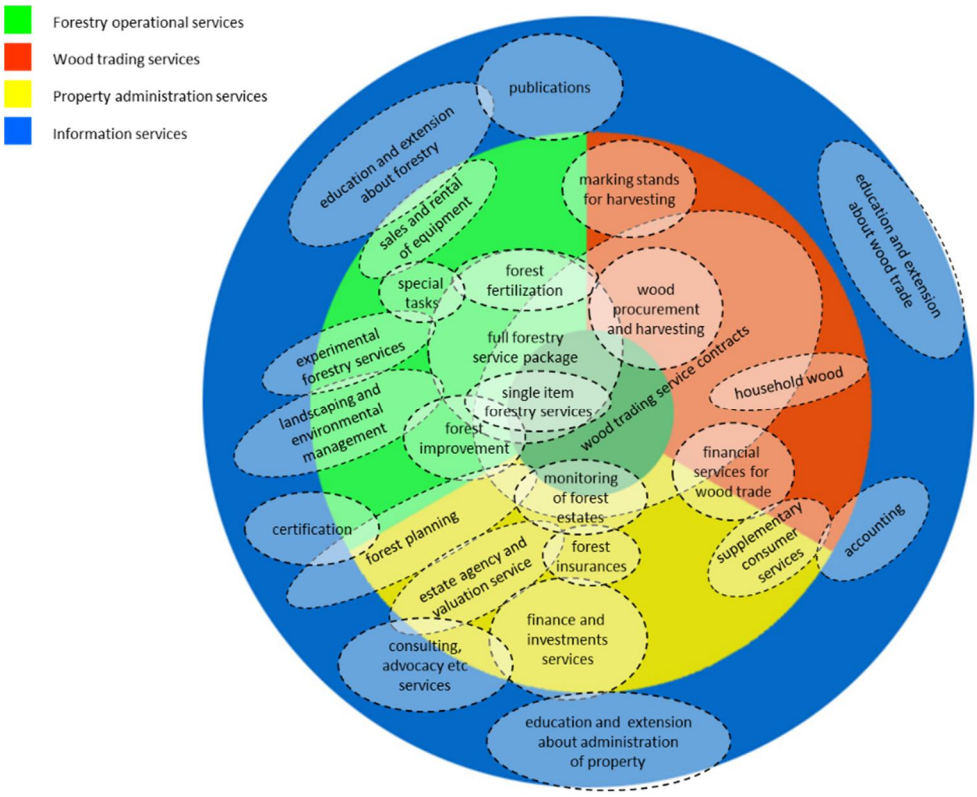

Figure 1. Forestry services in Finnish markets (Adopted from Mattila et al. 2013)

Based on recent development, market level renewal in Finnish forestry services has been rather slow, or at least, there is little evidence pointing out that it had stimulated growth in new types of services or enabled global service delivery. Traditionally, the Finnish forestry service markets have been dominated by a few, established organizations supporting each other's business models (e.g. forest management associations aiming at wood production and industry aiming to buy wood). The symbiotic relationship has maintained the status quo between the dominant players, and not been pushing the organizations to radically review their business models. The slow development has continued even when the institutional and financial base started to change. According to Niskanen (2005), understanding forest owner values and attitudes has not been a central enough goal in forestry service organizations. Also according to a review by Näyhä et al. (2014) the concept, role, business potential, and impacts of services on the forest-based services are ambiguous and the topic has been scarcely studied in the previous service literature. Some related literature from the area of forest planning and decision support services suggests segmentation possibilities based on combining the NIPF owner objectives and the decision making styles (Hujala et al. 2013). General understanding is that the focus of the service development has been more on forestry than the customers of these services.

In Finland, the Forest Act was reformed in 2014. For NIFP owners, this change facilitated more freedom to choose between versatile ways to manage their forests (Asikainen et al. 2014). Before these changes, service providers were roughly divided into two: 1) market-driven companies, such as large forest industry companies, forestry service enterprises, independent sawmills, banks and insurance companies, and 2) and partly publicly financed organizations with public liabilities, such as forest management associations (FMAs) and regional forest centres (Mattila et al. 2013). Even though many organizations had large service portfolios, the service offerings related to immediate monetary flows were mainly offered by the private organizations, whereas the services whose profits would be realized in the more distant future (e.g. many information services) were left for the partly publicly financed organizations. One aim for the continuing liberalization process of Finnish forest legislation is to improve the potential for leveraging free access to forest information (e.g. Parviainen and Västilä 2012). As for the restructuring of the public financing base of the forestry service organizations will inevitably affect the whole forestry service sector because the business logics of two significant actors (i.e. the forest centres and FMAs) are forced to change.

One trigger for the reformation of Finnish forestry legislation was a complaint to the European Union about lack of free competition in services markets, which is likely to eventually change the role and financing base of public organizations (see Kasanen 2011). The transition now is towards free competition and a reduced number of actors with specific statuses: the unique automatic membership and tax-like membership fees of FMAs were abolished in 2014 and the regional forest centres have merged and restructured their organization into two separated departments, one targeting business services and the other public services. As a consequence of these changes, no market actor should have a financial edge in contacting NIPF owners as customers for their services. Over time, this may force the institutionalized organizations to change their logics (or business models) on how to operate in the market. Further, the change may enable the better recognition of NIPF owners as providers of dynamic resources rather than representing a compulsory transaction cost of accessing forest resources. According to Hurmekoski and Hetemäki (2013), there have been challenges in capturing structural changes in the forest-based sector or ongoing socio-economic changes overall, so the Finnish case is not totally unique in Europe.

1.2 Aim of research

Based on the concepts of institutional transition on market level, service-orientation as value-creation logic change, and business model thinking as unit-level logic, the theoretical objective of the thesis is to define the ongoing renewal of forestry service market. In the recent service marketing literature, the paradigm shift towards service dominant logic (SDL) has become a topical approach (Lusch and Vargo 2014; Baron et al. 2014). However, this approach has not yet been used widely in analyzing the forestry service markets. Therefore, the theoretical objective is to connect the real market transition to the theoretical ideas developed under SDL, i.e. to better understand what applying service-orientation (considering value creation) and the servitization (adding new services to the current offerings) (Viljakainen and Toivonen 2014) mean in the forestry context. In the summary part of this dissertation, the SDL perspective is enlarged to the institutional level, specifically to include the institutional transition. Further, as one analyses the markets of renewable resources in one sector of the economy, the results might resonate in other sectors dependent on renewable resources.

The research gap between the service offerings of the established organizations and the potential of new customer needs is fulfilled by analyzing the markets in parallel from the perspectives of service supplier (Articles I and II) and service buyer (or customer) (Articles III and IV). Using public and private owners as customers and current forestry service organizations as service providers, the practical aim of this dissertation is to identify potential opportunities and barriers with respect to creating new services in the forestry service markets.

Sub-study research objectives:

The first objective (Article I) is to create a broader understanding about the current state and business perspectives of the forestry service markets covering the whole array of services offered to NIPF owners in Finland. Both market based organizations and partly publicly financed organization are covered. The more specific empirical objective of the first paper is to describe and identify market drivers and underlying challenges in existing and potential service business models based on the concepts of SDL (e.g. Vargo and Lusch 2004; 2008) and dynamic capabilities (e.g. Barney 1991; Teece et al. 1997).

By using SDL as a framework, the theoretical objective of the second paper (Article II) is to examine in more depth the capabilities of the current market actors in adapting and participating in customer value creation processes of new kinds. The practical objective is to comparatively analyze the challenges faced by Finnish and Swedish forestry service organizations when trying to adapt their service offerings to changed needs of NIPF owners. Comparisons between Finland and Sweden are meaningful due to the great similarities between the two neighboring, forest industry dominated countries.

The third paper (Article III) is based on the use of survey data and its objective of was is to build a more in-depth understanding about contemporary profiles in NIPF owner objectives. In addition, the paper explores how information on differentiated owner attributes could be used in developing and marketing forestry related services.

The fourth paper (Article IV) aims to understand how municipal structure and local level economic livelihood are related to multifunctional forest management practices in Finnish municipalities. The second goal is to understand how the multifaceted decision criteria might be complicating or simplifying the tasks given to municipal decision makers.

2. THEORETICAL BACKGROUND

2.1 General

This research tackles the transition of Finnish forestry service markets at various levels. The multi-level perspective (MLP) is used as a framework to understand the transition at the socio-technical landscape level (macro), socio-technical regime level (meso), and at the level of niche-innovations (micro).

In this context, service-dominant logic can be seen as a new paradigm considering value creation per se and as a marketing research paradigm shift it originates outside the current forestry-regime, from the landscape level. As for the concept of business model (Zott et al. 2011), it is actor-level and practice oriented and it has the focus of an individual firm on how to create and capture value. Therefore, for the regime-level actors, a business model defines the fundamental reason for existing. For the niche-level actors, a business model defines the fundamental logic on how to get to the markets. In this research, the role of the business model is to help to understand especially the logic change in the previously partly publicly financed service provider organizations. The resource-based view (RBV, Barney 1991) is connected to the concept of business model. Along with the development of resources towards dynamic capabilities (Teece et al. 1997), it has its connections to the SDL way of thinking about resources (see e.g. Viljakainen and Toivonen 2014).

2.2 Multi-level perspective (MLP) on the service market transition

According to Geels and Schot (2007), when discussing about transitions and system changes different terms such as regime transformation (van de Poel 2003), technological revolutions (Perez 2002), technological transitions (Geels 2002), system innovation (Elzen et al. 2004; Geels 2005), and transition management (Rotmans et al. 2001) have been used. MLP understands transitions as the outcomes of alignments between developments at multiple levels (Geels and Schot 2007). As can be seen in Figure 2, MLP defines transitions at three analytical levels: 1) the sociotechnical landscape level (macro) is exogenous and consists of material infrastructure, political culture and coalitions, social values, worldviews and paradigms, the macro economy, demography and the natural environment; 2) the sociotechnical regime level (meso) relates to dominant practices, rules and shared

assumptions and it guides private action and policy by interests, rules, beliefs and organization; 3) the level of niche-innovations (micro) that is related to individual actors and technologies, and local practices, and where deviations and variations from the status quo can occur (Rotmans et al. 2001; Geels 2011). Thus, each level refers to a heterogeneous configuration of elements where higher levels are more stable than lower levels in terms of number of actors and degrees of alignment between the elements (Geels 2011).

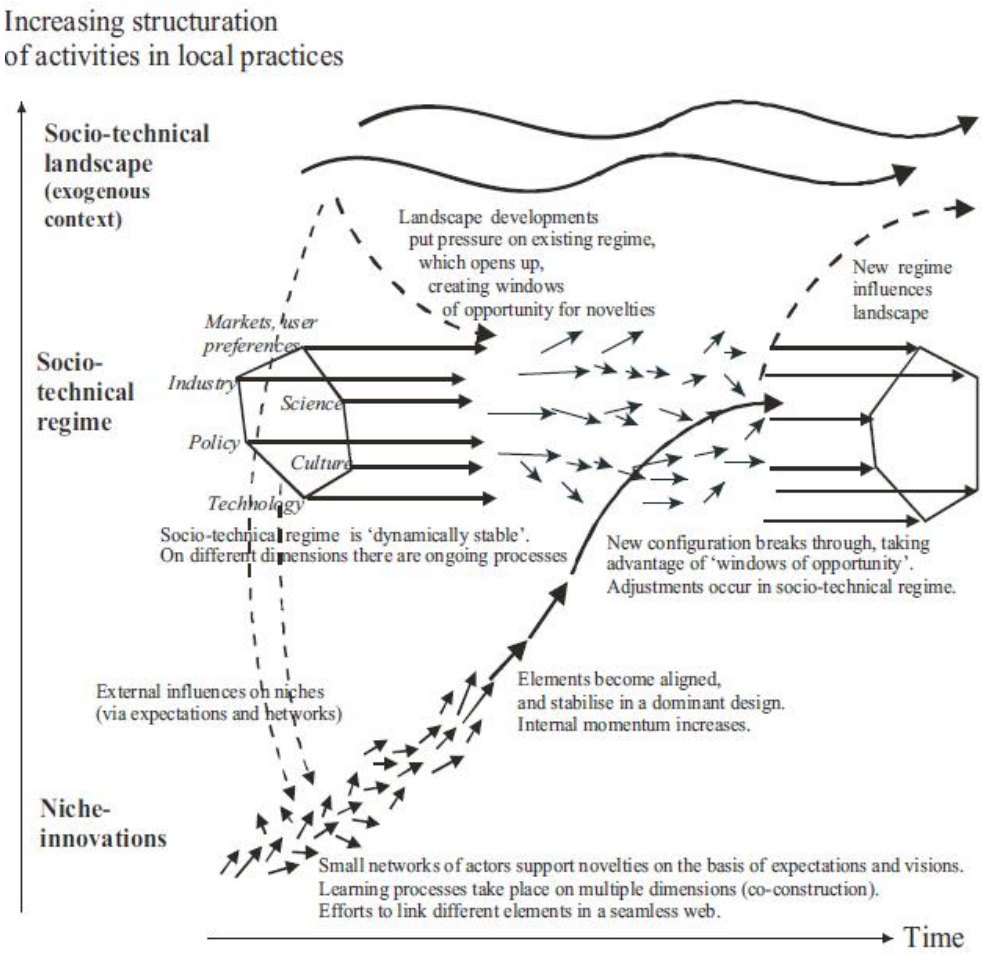

Figure 2. Multi-level perspective on transitions (Source: Gees and Schot 2011)

The socio-technical (meso) regime level of MLP consists of communities that are large and stable (Geels and Schot 2007) and their position is stabilized by regulative, normative, and cognitive rules that are based on institutional theories (see Scott 1995). Institutions are social structures composed of cultural-cognitive, normative, and regulative elements that, together with resources and associated activities, bring stability and meaning to social life (Scott 1995). According to Zucker (1986), once institutions are established, they may persist even though they may be collectively suboptimal. In other words, existing systems are often locked in at multiple dimensions, they are stable and not easy to change, and hence new technologies, services or practices are not easily taken up (Geels 2005). When challenging the existing institutions, new ventures may face many disadvantages compared with incumbent firms due to their newness and smallness (Dean and Meyer 1996). However, existing institutions may also have difficulties in renewing and staying competitive, because according to Chesbrough and Rosenbloom (2002), the filtering process within successful established organizations is likely to preclude the identification of models that differ substantially from the current business model of an organization. Industry dominant logic (see Prahalad and Bettis 1986) is a commonly used concept in conjunction with too strong lock-in and perceived inefficiency to diversify existing business models. In contrast, start-up firms seem to be less constrained in the evaluation of alternative business models. Cooper (2011) argues that the dilemma with respect to mature organizations is that shareholders and executives want a steady stream of profitable and high-profile new products, while management practices and the external environment are steering companies towards smaller, less risky and less ambitious initiatives. Because established organizations usually have few incentives to introduce new business models into the markets, many industry renewals have been triggered by industry newcomers with more radical changes embedded into the present market business models (Markides 2008).

Based on timing (i.e. if the niche-innovations are or are not fully developed) and the nature of interactions (whether they are disruptive or reinforcing), Geels and Schot (2007) have defined four categories for transition pathways. First, zero proposition (P0) is a reproduction process without any external landscape pressures in which a regime remains dynamically stable and will reproduce itself. In this category, niche-innovators have little chance to break through as the regime is dynamically stable. The second transformation path (P1) is defined by moderate, disruptive landscape pressures but niche-innovations have not been sufficiently developed and regime actors tend to respond by modifying the direction of development. Actors, such as societal pressure groups, social movements, scientists, outsider

firms, entrepreneurs, and activists may develop alternative practices or technologies. Third, de-alignment and re-alignment path (P2) can be defined by divergent, large and sudden landscape level changes, which create space for multiple niche-innovations. Fourth, technological substitution (P3) is defined by similar shock-like landscape-level changes as in P2 but with the difference described by niche-level innovators that they have developed sufficiently to break the dominating regime.

In the context of Finnish forestry service markets, the dominating institutions have been strong at the socio-technical regime level. Because of the high stability and large market coverage of these regime-level actors, this thesis focuses mostly on the regime level and interaction with two other levels. The MLP therefore offers a justified framework for analyzing transition in the Finnish forestry service sector and its institutions.

2.3 Service-dominant logic (SDL)

All the world's advanced economies are dominated by services (Ostrom et al. 2010). Research into services has grown along with the increasing role of services in the developed economies, where the significance of service innovations in creating economic growth and wellbeing has been increasingly acknowledged (Coombs and Miles 2000; van Ark et al. 2003; Gallouj, 2002; OECD 2005; den Hertog et al. 2010). Along this shift, the focus of marketing science has moved from tangible goods and activities associated with their delivery to include the exchange of activities (Vargo and Morgan 2005). Furthermore, the ongoing discussion about SDL has been shifting the nucleus of service research in the same direction as SDL research (Kunz and Hogreve 2011). However, this is not to say that service research and marketing research will merge into the same discipline.

One fundamental axiom of SDL, as introduced by Vargo and Lusch (2004), has been the shift from a product-centric view to a customer centric view of value creation. According to the "traditional" view, services have been seen as a way to deliver value from producers to clients (Michel et al. 2008; Korhonen 2014) and has thus been focusing on tangible resources, embedded value, and transactions (Vargo and Lusch 2004). SDL has challenged this view by 10 foundational premises (see Table 1) arguing that service is always co-created in an interaction between a service provider and a customer, and that the beneficiary always defines the value, so that goods, if they are needed, are only distribution methods of value (Vargo and Lusch 2004; 2008). This has also decreased the relative role of operand resources (on

which an operational act is performed to produce an effect) and moved the emphasis to operant resources that produce effects (Vargo and Lusch 2004). Moreover, in SDL all social economic actors are resources integrators (Vargo and Lusch 2008), which means that basically all economic actors are doing the same, co-creating value through resource integration and service provision (Vargo and Lusch 2011).

Table 1. The Foundational Premises (FP) of Service-Dominant Logic by of Vargo and Lusch (2004; 2008)

FP1	Service is the fundamental basis of exchange.
FP2	Indirect exchange masks the fundamental basis of exchange.
FP3	Goods are distribution mechanisms for service provision.
FP4	Operant resources are the fundamental source of competitive advantage.
FP5	All economies are service economies.
FP6	The customer is always a co-creator of value.
FP7	The enterprise cannot deliver value but only offer value propositions.
FP8	A service-centered view is inherently customer oriented and relational.
FP9	All social and economic actors are resource integrators.
FP10	Value is always uniquely and phenomenologically determined by the beneficiary.

Value creation in SDL has been criticized by for not defining the roles of the service provider and the customer or the nature, scope, and locus of this value co-creation process (e.g. Grönroos and Voima 2013) and for lacking empirical support (e.g. Brown and Patterson 2009). Even though the concept of value is multifaceted and complicated (Ravald and Grönroos 1996; Sánchez-Fernández and Iniesta-Bonillo 2007), it is usually defined to be a trade-off between benefits and sacrifices, moreover being born out of the interaction between a customer and a service provider (Payne and Holt 2001). However, especially the Nordic School of Service Marketing (e.g. Grönroos 2008; Heinonen et al. 2010) criticizes the SDL to be heavily provider-oriented and therefore unable to fully account for customers' value creation process and suggests using a distinct customer-dominant logic (Anker et al. 2015). Recently, the research on value creation has shifted to a more holistic and experiential perspective that recognizes value in the context of customer experiences (Helkkula et al. 2012; Grönroos and Voima 2013).

Despite the criticism, in many cases SDL is shifting the focus of service providers from offering products or services into assisting customers in their value creation process. This means appreciating customers as actors with valuable resources and capabilities, not as targets to "push" goods or services at, as has been the case with the traditional goods-dominant logic (GDL) (Vargo et al. 2008). While in the classic "push" model the focus has been on pushing products or services towards the customer which is reasonable in cases of high demand, modern customers usually have a wider variety of options available to them thus understanding customer value creation processes is interesting and topical especially when supply exceeds demand. Therefore according to the SDL view, it has become more important to understand the customer value creation process than increase the efficiency of the production systems as such. Seeing service as a value-adding concept, not as an add-on, is a key ingredient of building a more solid service culture (Gebauer et al. 2005).

The value offerings arise from redefining clients' problems and creating additional customer value (Matthyssens and Vandenbempt 2008). Instead of focusing on how customers can be engaged in co-creation with a firm, service providers should rather focus on becoming involved in the customers' everyday living (Heinonen et al. 2010) and especially the value creation process. Therefore, understanding value creation on a large scale, including also the features that determine how well a service organization itself fits the customers' value creation processes (Santala and Parvinen 2007), is crucial. The actor-to-actor approach in SDL allows any actor (i.e. not only the customer) to define its own value. Therefore, customers can be seen as frontline testers and innovators (von Hippel 2005). For firms, this

means that they should review their value creation more holistically than as direct cash flows from customers. This also changes the focus from operand resources to operant (organizational processes) (Vargo and Lusch 2004). Even though SDL may be more like a philosophy related to value creation than a straightforward tool for marketing practitioners, the paradigm offers a fundamentally new perspective for the resources and value creation process.

2.4 The concept of a business model

Amit and Zott (2001) define a business model as depicting the design of transaction content, structure, and governance so as to create value through the exploitation of business opportunities. According to Chesbroug (2007) a business model should include the revenue models, structure, activities, processes, customer relationships, and the firm's position within the value network or ecosystem. Further, a business model can be seen as an important locus of innovation and a crucial source (Amit and Zott 2001). The main difference compared with business strategy is that the concept of business model does not factor in competition (Margetta 2002). However, a revolutionary business model may change the rules of competition in a market. While the business model research is only just emerging with no commonly agreed definitions (Nenonen and Storbacka 2010), there seems to be an emerging consensus that the concept provides a holistic view on how firms create value through interactions with their surrounding environment (Zott et al. 2011). Despite the criticism that it is conceptually ambiguous (e.g. Porter 2001), a business models have become as a new unit of analysis not only in the innovation literature (Zott et al. 2011) but also among general practitioners (Berglund and Sandström 2013).

Viljakainen et al. (2013) argue that even though the concept of a business model has a managerial emphasis, the theoretical roots of the business model conceptualization have been missing in many studies (Viljakainen et al. 2013). In particular, systematic applications of SDL in business model design are only beginning (Grönroos 2011). The concept of business model describes the activities performed by a firm to create value with its partners and to appropriate a share of the value created (Zott and Amit 2010). Therefore, it is a firm-centric approach. On the other hand, the service-centered view is inherently consumer-centric (Vargo and Lusch 2004). Even though the SDL and the concept of a business model observe

the value creation from different perspectives and it may therefore be difficult to combine them, understanding both views may help to understand the process.

Dynamic changes to the business model over time must be initiated for a firm to succeed (Teece 2007). Reasons, such as technologies that become obsolete, changing customer demands, and emerging new value propositions, force successful companies to change their logics (Kindström and Kowalkowski 2014). Firms that systematically analyze and adjust their business model elements, in accordance with both internal and external stimuli, are better positioned to succeed with their service innovation activities (Kindström and Kowalkowski 2014). As the concept of the business model is an entity that defines the logic and reasons for existing, it is a central concept for any organization. Even though the objective here was not to go deeper into the business models of forestry service organizations, it is nevertheless crucial to understand the basic elements of the logics behind the focal organization especially in the markets in flux. For the forest companies the renewal of a business model might mean putting its networks and business models into completely new stakeholder groups.

3. METHODOLOGY AND RESULTS

3.1 The context of the study

Even though the forestry service market is basically a service business, it is questionable if service-dominant thinking has been widely adopted in the market (on regional level case results, see Asikainen et al. 2014). For instance, from the vocabulary (e.g. forest management) and actors (e.g. forest management associations) it can be sensed that the focus is still in the operational implementation of forest management practices rather than recognizing owners as customers. Thus, as service-dominant thinking emphasizes value co-creation in actor-to-actor networks and often requires establishing new organizational structures and practices (Korhonen 2014), the gap from raw-wood dominant thinking is wide. However, the ongoing renewal in the organizational structures in Finnish forestry service markets offers an opportunity to renew the market logics.

At the practical level, this research originated in 2011 from the need of a few forestry service organizations to adapt to a forthcoming transition as it was known that Finnish Forest Act, Act of the Forest Management Associations, Act on the Finnish Forest Centres and

Forestry Development Centre Tapio were about to change. Apart from these institutional pressures, the organizations had realized that they should better understand the needs of the fragmented groups of NIPF owners and municipal forest owners. Thus, the institutional flux was seen as an opportunity to widen their customer base by these forestry service organizations.

From the SDL perspective, the forestry service market transition is an interesting case because the fundamental basis for the value creation logic of FMAs and the forest centres (currently the Finnish Forest Centre) are being re-evaluated. As significant players, the changes in these organizations also affect the whole forestry service markets and how other (competing or supplementary) organizations act. As can be seen in Figure 3, drivers such as internationalization and diversification in the pulp and paper businesses of large-scale forest industry companies, fundamental changes in the financing of FMAs and Forest Centre may open possibilities for niche-level actors to network better with larger-scale actors. Further, diversified needs of forest owners and potential of other ecosystem services besides wood production may open the market for organizations capable to see value creation in the market from a new perspective. Thus, these developments might push the existing status quo into actions with unseen outcomes that would affect various sector actors and stakeholders. Further, by understanding forest owners more broadly, other ecosystem services besides traditional wood production become relevant to this research. The hypothesis was an expectation that the service market would be moving from forest management to serving forest owners' needs in a broad sense.

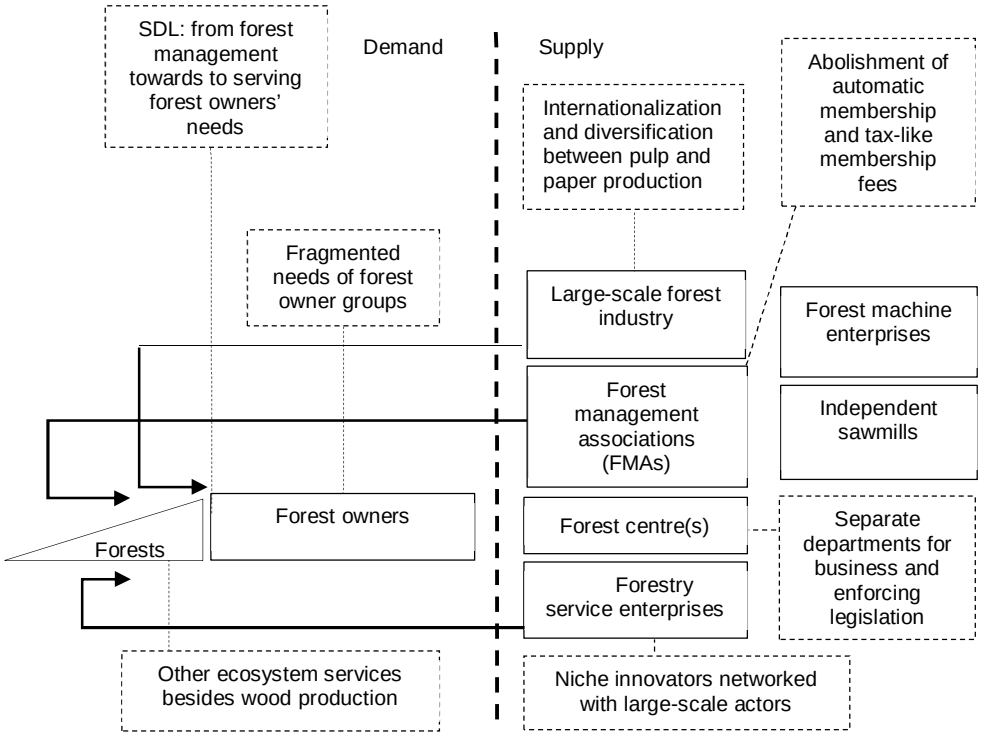

Figure 3. The structure of the forestry service markets in Finland and the main drivers for changes (marked with dashed lines) (Based on Article II)

Because of the previously mentioned new challenges faced by the Finnish forestry service markets, the methodological approach chosen to analyze organizational transition consisted of qualitative interview studies among different service providers (representing market-based and partly publicly financed organizations). A qualitative method is useful for studying a phenomenon that is in the process of evolution and change (Gephart 2004). Maxwell (1996) describes a qualitative method as being suitable for understanding context and meaning, as well as identifying unanticipated phenomena. These characteristics of the method influence the actions taken and thereby assist the development of possible causal explanations. Although the use of qualitative methods can only offer a proportional interpretation of causation, it can increase a researcher's understanding of contemporary phenomena (Saaranen-Kauppinen and Puusniekka 2006).

Even though the objectives of NIPF owners have already in previous researches been found to be diversified (Karppinen et al. 2000, Rämö and Toivonen 2009, Hänninen and Karppinen 2010, Hänninen et al. 2011, Karppinen and Korhonen 2013) there still is a

practical need to understand new types of forest owner needs in more detail. Therefore, a quantitative method was used in analyzing this, more "static" demand side of the forestry service markets and implemented among both private and as much public non-industrial forest owners.

All of the sub-studies were aimed at being empirical contributions to the existing literature. Table 2 summarizes the methods and results of each paper of this thesis. They are discussed in more detail in the next chapter.

Table 2. Summary of methods and results in four articles

Article	**I**	**II**	**III**	**IV**
Method	Qualitative, theory driven thematization	Qualitative, theory driven thematization	Quantitative, descriptive and exploratory factor analysis	Quantitative, descriptive and exploratory factor analysis
Data sources	Personal semi-structured interviews (N=22)	Personal semi-structured interviews (N=17)	Mail survey in 2011-2012 targeted at Finnish NIPF owners (N=557)	Online survey targeted at Finnish municipalities (N=139)
Main results	1) Dominating role of established organizations hinders development. 2) Institutional change may create new opportunities.	1) A lack of dynamic middle-sized companies hinders development of new services. 2) Adopting SDL thinking could help organization to re-evaluate business models from managing forests to managing forest owners as customers	Four dimensions in owner objectives: 1) source of income, 2) recreation and leisure, 3) sense of economic security, and 4) aesthetics and conservation Objectives are valued differently on the basis of background variables such as gender, education, residential area.	1) Municipalities have widely varying organizational practices to make decisions about governing municipal forests. 2) Forest management objectives are a four dimensional construct 3) Pressures towards multiple-use of forests are expected to be growing

3.2 Article I: Non-industrial private forestry service markets in a flux: results from a qualitative analysis on Finland

Because of the objective of gaining a better understanding of the service suppliers' view of the changes in Finnish forestry service markets, a qualitative approach was used in Article I. This was implemented by 22 thematic expert interviews. Thirteen of them were implemented in 2009-2010 and were used for creating an overview of the markets. Nine interviews were implemented in 2011 and concentrated on the networking activities; expected changes in market demand; the question of how services could be developed and the consequent changes in the market environment. The final aim was to analyze the potential for the SDL approach behind currently existing and emerging new services among service providers in order to identify what are the main drivers and barriers behind adopting the service dominant approach. The main objective of these later stage interviews was thus to identify themes for potential new signals to forthcoming changes, in which the possible directions could lead to a better understanding of the presence and potential of service-dominant logic in the service organizations.

In Article I, forestry services were categorized into 1) forestry operational, 2) roundwood trading related, 3) property administration, and 4) information services. According to the results, service supplier organizations differ substantially from each other in terms of size and institutional backgrounds. To simplify, the markets were divided into two: the private sector, which was targeting the selling of services that directly supported wood trade and the public organizations, which were responsible for the services whose profits could only be realized in the more distant future. Large forest industry companies were also among the group that offered services for property administration, such as establishing investment accounts for NIPF owners to invest their roundwood sales income.

At the time of the interviews (in 2010-11), the transition was triggered by institutional reforms towards freer competition. Institutional changes based on legislation concerning governmental and partly publicly financed organizations, changes in demand and emerging novel digital market platforms were seen among the most influential drivers for change. Difficulties in serving different customer groups, high barriers for the entry of new players, low technology orientation and slow adoption and dominantly raw-material centered thinking were seen as hindering change of the markets towards being more customer-focused.

3.3 Article II: Service logics of providers in the forestry services sector: Evidence from Finland and Sweden

Article II aimed at gaining comparative understanding about the forestry service market transition in the context of two countries, Finland and Sweden. Both countries have been facing similar challenges in service providers' inability to adapt their service offerings to new customer groups and their diversified needs. This phase was implemented by using a qualitative research method and altogether 17 thematic expert interviews in Finland and Sweden were done.

According to the results, the regulated market structure is the factor that has been hindering development especially in the Finnish markets. Finnish markets are inff flux due to politically triggered institutional change which has shaken the market by reducing the financial base of previously partly publicly financed FMAs. The abolishment of the Finnish system of obligatory, tax-like membership fees in FMAs will probably result in economic pressures on service organizations and move Finnish markets towards the Swedish system of more freedom in competition and recognizing none of the players with a special status. This development may push service providers to build up their service offerings based on more diversified goals in customer value creation rather than unidirectionally maximizing timber harvesting. This might, in some cases, require fundamentally new kinds of approach towards the value-creation of a forest owner.

In addition to structural and inter-organizational challenges, service providers in Finland and Sweden were found to have realized that forest owners are fundamentally grouping into traditional wood producers, and the forest owners who have very different value creation logic when it comes to owning forests (illustrated in Figure 4). The traditional forest owners (1) are familiar with forestry, know their objectives and how to reach them, and usually are also very familiar with the organizations providing the services. Most of the traditional forestry services seem to be targeted to these customers, and it appears easy for them to find a reasonable service provider. Forest owners who are interested in their forests but cannot find a suitable organization (2) search for service providers but fail. Furthermore, these forest owners do not have enough knowledge of the sector or incentives to search for other service providers. The third segment of forest owners (3) is more or less alienated from their forests. They do not feel it important to familiarize themselves with service providers because forestry based on roundwood is not a significant part of their lives or does not significantly

contribute to their income. However, from the viewpoint of market potential and new kinds of business models for services, this is a relevant group. The challenge of current service organizations is either to accept the change in their service demand or to find novel ways to create new business around the changed customer needs. Simultaneously, high barriers to market entry may still prevent the new players from entering the markets.

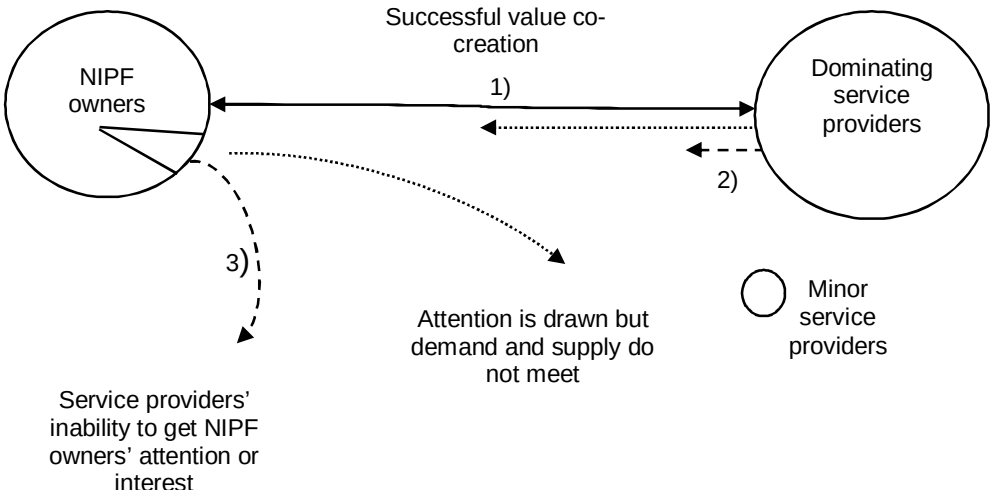

Figure 4. Matching problem in the current forestry service sector. 1) NIPF owners find suitable partners from the markets 2) NIPF owners who are interested in their forests but do not find a suitable partner from the markets 3) NIPF owners who have no interest in traditional forestry and service providers have no tools to make them more interested (source: Article II)

According to the results, small enterprises in particular found the market environment challenging. The lack of empowered and dynamic middle-sized companies and, mistrust between the organizations, the slow adoption of a culture of cooperation, partnership and subcontracting in the sector were listed as factors hindering the development. The small number of middle-sized companies is creating a gap in the markets between small and large actors. Although this gap is being partly filled by partly publicly financed organizations (the forest centres, and FMAs in Finland and forest agencies in Sweden), it became evident that small entrepreneurs consider them less dynamic and less empowered because of their culture of doing all operations in-house instead of cooperating or buying new services from the markets. The culture of copying from competitors (or potential partners) rather than co-creating value was perceived not to be an attractive option for niche-level innovators.

3.4 Article III: Forest Owners' Socio-demographic Characteristics as Predictors of Customer Value: Evidence from Finland

The third paper (Article III) is based on an analysis of mail survey data (N=557) collected in 2011-2012. The objective of the research was to build a more in-depth understanding of NIPF owner objectives, and how information on owner attributes could be more effectively used in developing and marketing forestry services (Questionnaire as Appendix 1).

According to the results of an exploratory factor analysis, a four-dimensional structure of NIPF owner objectives was found to exist. The solution illustrated how a traditional timber sales based monetary value orientation is only one of the four forest ownership motives. According to the results, gender, education level and residential area were the three most important background variables explaining the differences between ownership motives. To simplify the results, Figure 5 shows that female owners are more oriented to aesthetics and nature protection whereas the source of income was the most important factor for male owners; Figure 6 shows that the highest education class was most interested in aesthetics and conservation whereas income was more important for the other educational classes; Figure 7 shows city dwellers interested in aesthetic and conservation whereas people living in the countryside are motivated by forestry incomes.

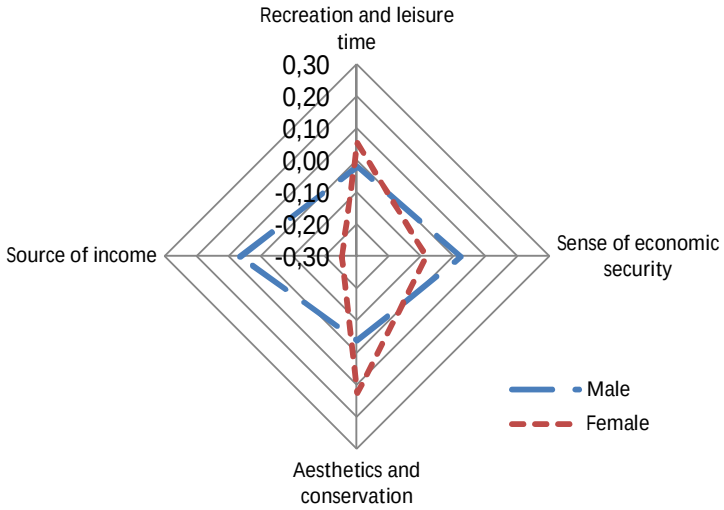

Figure 5. Mean factor scores for four ownership objectives for male and female NIPF owners

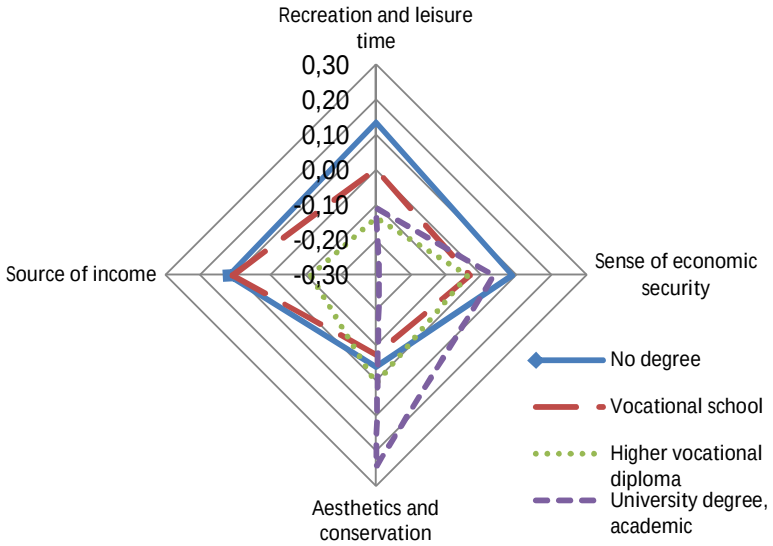

Figure 6. Mean factor scores for four ownership objectives for NIPF owners with different level vocational

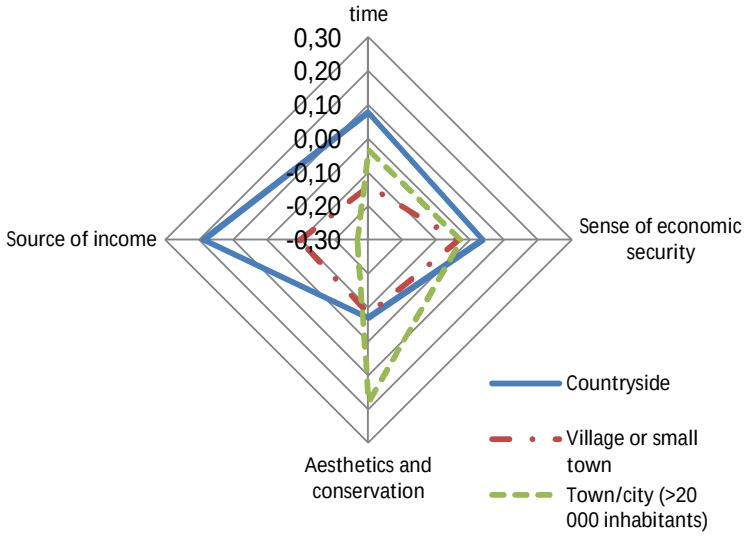

Figure 7. Mean factor scores for four ownership objectives for NIPF owners from different residential areas

The results of sub-study III therefore offer some understanding why currently available service offerings are failing to meet the objectives of some groups of NIPF owners. Certain socio-demographic attributes of forest owners influence the question of whether tangible monetary outcomes are considered primary or secondary to intangible forest ownership objectives. In particular, while aesthetical and conservational values are key forest ownership motivations for the potential customer segments of NIPF owners, these aspects are not yet fully covered by dominant forestry service organizations even to the degree that the forestry service organizations would use the language of the dimensions to raise customer interest. From the perspective of developing new business models, recognizing more diversified customer needs and developing matching service offerings were suggested as actions that could be taken in the conclusions.

3.5 Article IV: Challenges of municipal greening and multifunctional forest management: the case of Finland

The goal of fourth paper (Article IV) was firstly to understand how municipal structure and economic livelihood in the area of municipalities are related to multifunctional forest

management practices in the municipalities. The second goal of fourth paper was to examine if it is possible to classify municipal forestry decision-making criteria into mutually supportive aims. The latter goal thus tried to build a picture of how the new challenges of higher demands put to multifunctional forest management could be met in these public organizations.

Survey data were collected during 2011–12 using a web-based questionnaire sent to all continental municipalities in Finland (Questionnaire in Finnish in Appendix 2). Responses were received from 139 municipalities (response rate of 43%). Based on the survey, there is demand for increasing multifunctional municipal forest management practices. A four-dimensional structure describing decision-making in municipal forest management was linked with a) non-timber production related livelihoods, b) non-consumptive ecosystem services, c) improving the image of the municipality, and d) carbon neutrality goals. However, while there was a significant need for new multifunctional management practices, the municipal organizations face the same challenges of renewal as the other sector operators.

4. DISCUSSION AND CONCLUSIONS

4.1 Contribution of this thesis

This thesis contributes to developing understanding of both the theoretical and empirical levels via the application of SDL to Finnish forestry service markets. Being among the first studies of this service market context, SDL was used as a conceptual background in analyzing opportunities for value co-creation between forest owners and service providers, and how to better understand the persistent challenges that are related to the change in the market dominant logic. According to the results, the “traditional” service markets that help forest owners to grow forest and capitalize their growing stands, function rather well for the majority of owners. The long history of stable and more or less competitive markets of the Finnish forestry services has made business strategies an important aspect. However, the lowered level of market regulation connected to digitalization and fragmented customer needs all support the view that the rules of the competition will be changed. Therefore, the ongoing transition can be expected to emphasize the role of the business models as game changers until the new stabilization phase defined by Rotmans et al. (2001) is reached.

According to the results, for both private and public forest owners, there clearly is potential for new kinds of values to be derived from forests together with forest owners.

Based on the earlier studies of forest ownership objectives, it was evident that Finnish NIPF owners are fragmented in the terms of their objectives (see e.g. Karppinen 1998; Rämö and Toivonen 2009; Hänninen and Karppinen 2010). For instance, the growing numbers of female owners were found to be more likely to engage in health- and tourism-related business activities, whereas men were more often engaged in traditional forestry activities (Umaerus et al. 2013). Similarly, according to Kuuluvainen et al. (2014), female owners were found to sell slightly less timber and they may have "softer" values (Karppinen and Korhonen 2013). Another interesting finding of this thesis is the unexpectedly high importance of aesthetic values and pro-environmental attitudes towards forest conservation rather than timber production in the group of academically educated NIPF owners (sub-study III). This finding is in line with results by Koskela (2011), who found that highly educated forest owners in Finland are more willing to voluntarily protect biodiversity. Hallikainen et al. (2010) have also found a link between highly educated NIPF owners and their pro-conservation values. Even though the heterogeneity of forest owners was known before, it seems that in the marketing strategies of the forestry service organizations this had not been comprehensively adopted.

This research was motivated by a practical originated from a need within an applied service research project in collaboration with a few forestry service organizations that aimed at a better understanding of their customer needs. To simplify, even though the management in these organizations felt their service assortments were comprehensive, it became evident that new customer segments have emerged. These segments mainly consist of owners either born or living in cities, where they have alienated from forests or have multiple objectives instead of only the financial maximization of timber sales income. Thus, combining the changes in the stakeholder needs, new groups of forest owners, changes in customer valuations and changes in the technological basis in the society in general, this study contributes the future of the sector and its service dictated logic.

This research supports the view that e.g. the urbanization, the increasing number of female owners, and increasing level of education are potentially drivers that are fragmenting the forest owners as customers for forestry services. Therefore, it is becoming increasingly important for service organizations to understand the foundation of their customer's values and further, start experimenting with new offerings and new ways of customer engagement.

4.2 Discussion and themes for future research

The strong institutionalized forestry organizations established in Finland at the time of national independence have been able to secure their own competitive position in the market, maybe too well. For capital-intensive pulp and paper manufacturing industry, the goal has been getting inexpensive pulpwood constantly to the mills whereas partly publicly financed FMAs have been willing to secure that there is long-term demand for wood and a need for timber production oriented forest management.

The difficulties of changing the dominating regime-level can be studied as an analogy of Geels' (2011) description of MLP transition towards sustainability. Firstly, the change in the forestry service market is goal-oriented and triggered by political decisions as the established private actors have only limited incentives or abilities to renew their service offerings. The introduction of more diversified and multi-functional forest management practices does not necessarily increase the amount of timber in the markets nor provide opportunities for traditional forestry employment. This is thus related to the second characteristic mentioned by Geels (2011), which is the lowering price per performance ratio compared with the dominating practices in the markets. Among some groups of forest owners, increasing interest in "softer" forestry practices may indicate that forests are increasingly seen as areas for leisure-time activity rather than sources of income. Therefore, the business logics targeted to serve them should be fundamentally different from that serving "traditional" forest owners who are economic dependent on forestry income. Recent the lively discussion about the new Forest Act, that allows more freedom in forest management decisions, is a good example of the issues associated with profitability and new agents can be seen challenging the concept of the financial profitability of traditional forest management as the operations become more complex. NIPF owners in Finland have shown growing interest in testing alternative forest management practices but there is more skepticism among forestry professionals (see Asikainen et al. 2014). Furthermore, the third characteristic mentioned by Geels (2011), of incumbent firms with a strong position, is also seen in the forestry service markets. For example, the large industrial companies dominating wood trade and the processing industry have been able to prevent the new entrants from penetrating the market.

When analyzing the Finnish forest sector transition over time, it seems that the changes are still at the beginnings. Rotmans et al. (2001) have categorized transitions proceeding in four distinct phases: 1) predevelopment is a phase of dynamic equilibrium where status quo does not visibly change, 2) takeoff is a phase where the process of change gets under way

because the state of the system begins to shift, 3) breakthrough is a phase where visible structural changes take place through an accumulation of socio-cultural, economic, ecological and institutional changes that react to each other, 4) stabilization is a phase where the speed of social change decreases and a new dynamic equilibrium is reached. According to this categorization, Finnish forestry service markets are in the takeoff phase (2), where the shift has clearly started but there is little understanding to where this development will eventually lead.

The instability of the regime-level in Finnish forestry service markets is based on the abolishment of automatic membership and tax-like membership fees in FMAs. This opens possibilities for all organization to more equally compete with their services in the forestry markets. In addition, separating the public and markets service departments of the Finnish Forest Centre (previously forest centres) equalizes the balance of power between different service providers. When the transition process was triggered in the early 2000s, it was with some momentum as regime-level actors recognized the window of opportunity that the destabilization of the status quo would create. This was reflected in organizations updating their marketing materials to attract forest owners with more versatile value-propositions.

It seems quite evident that the dominant forestry service organizations in Finland are struggling to change their service portfolios to meet the changing needs of the customers (Article II). As there are few small and middle-sized companies this development is not supported by innovative new start-ups. Likewise, because the role of the few existing entrepreneurs has mainly been subcontractors in the implementation of the operational work they have not had possibilities to build expertise or develop independent business activities able to disrupt market balance (Article II). Because of the recent history of the industrial timber purchasing cartel in Finland, the forestry service sector is facing challenges to attract innovative entrants. Innovative ideas may come from large corporations or organizations, but often they are suggested and pushed forward by entrepreneurs, or by spin-off companies (Heikkilä and Kuivaniemi 2012). Instead of seeing innovative entrepreneurs as threats, they should be seen and treated like potential partners. According to Moore (1993), innovative businesses cannot evolve in a vacuum but instead in surroundings that attract resources of all sorts, drawing in capital, partners, suppliers, and customers to create a cooperative network. Even though Finnish forestry service markets may not be in the first on the list, global competition throughout digitalization and new business models that are based using, selling, or sharing personal data (e.g. Tun-Mint et al. 2013). The current (since 2014) legislation considering Finnish forestry organizations allows more freedom in competition. Therefore,

forestry service knowledge could be turned into a business opportunity by applying it to foreign markets with similar market structures. Hetemäki et al. (2011) point out that education and training, as well as research and development, should also be recognized as end products with growing demand in international markets. The potential to export information services like forestry education and extension could be an interesting topic to study. Moreover, by developing property administration services to include comprehensive information about forest estates not only from the forestry point of view, but also more broadly (e.g. to include other ecosystem services or based on forest owners' needs) might be beneficial for ensuring to better meet the goals related to the environmental and social sustainability in the Finnish forests.

According to Costanza et al. (2014), probably the most important contribution of the categorization of ecosystem services is that it reframes the relationship between humans and the rest of the nature by offering a frame to include nature on a large scale into human actions. Estimates of aggregate accounting value for ecosystem services in monetary units have started to play a critical role in heightening the awareness and in estimating the overall level of importance of intangible ecosystem services relative to and in combination with other contributors to sustain human well-being (Luisetti et al. 2013). Therefore, especially value arising from forests within a broader concept of forest ecosystem services beyond timber production seems a promising avenue for future development.

Thus it seems that in the future, the forestry service markets will adapt to the mismatch between service needs and offerings one way or another: either by leaving a segment of forest owners to be served by new players or by diversifying their service offerings. On the customer side, while aesthetic values and biodiversity conservation are increasingly important motivations for forest owners, these aspects are not yet fully covered by dominant forestry service organizations (Article III). In addition, according to Mattila et al. (2014), forests also offers a range of meaningful and varying values related e.g. to recreation and leisure-time activity. Therefore, the fragmented ownership can actually be seen as a strength when creating new service business for people of the urbanizing and digitalizing world. However, this new service demand seems not to be easily aligned with traditional service offerings that are marketed on the basis of securing roundwood from the forests, offering only a limited basis to the wider set of forest related benefits. More versatile forest owner values could be considered as a starting point when planning the new service businesses. By connecting the pro-conservation values and the importance of aesthetics of the academic forest owners to the finding by von Hippel et al. (2012) in the context of the finding for

British consumers suggests that a high level of education correlates with the innovativeness of the end user. Therefore, the most interesting group for further research considering radically new forest-based business might be the owners with a high education levels, or people outside the forestry domain. By approaching forest owners as customers who are increasingly seen a source of innovations (von Hippel 2005), the large number of heterogeneous NIPF owners could be seen as a strength.

The institutional liberalization (or at least changing their core funding base) of the service provisioning organizations increases the costs for FOAs to contact the smallest NIPF owners, as the organizations cannot spend financial resources originating from tax-like membership fees for these contact functions. In this context, the question of especially the future of the smallest scale owners becomes interesting. As this group will be the least interesting and probably the costliest for traditional service providers, there is a business opportunity for new service providers that are capable of using new communication channels to reduce the cost of contacts and further, who are able to see forest owners more like operant resources (SDL) or a source of network based dynamic capabilities (RBV). Now that the legislation considering partly publicly financed organizations has stabilized, and the Finnish Forest Centre and FMAs have had some time to adapt to the changes in the financial basis, future research could analyze their business models in more depth. Also more in-depth comparative analysis between markets in Finland and some other forest rich European countries could be a fruitful avenue for future research since current results are not generalizable beyond Finland (except to some degree substudy II for Sweden).

According to Wallin et al. (2013), SDL can be seen more like a philosophy considering value creation or strategic marketing paradigm rather than a practical marketing tool. Therefore, especially when interviewing professionals close to practical forestry management operations, it was rather challenging to get them to dwell deeply on it in discussion on their marketing philosophies. This is consistent with Grönroos and Voima (2013) who have criticized SDL as being unable to offer strong theoretical or managerial implications about the roles and scope of the service provider or the customer. Despite the challenges in connecting SDL philosophy to forestry service market practices in this research, the concept was found helpful in analyzing business models in traditional industries that are heavily product or production oriented, as is the situation of pulp, paper and wood products manufacturing (Toppinen et al. 2013). By seeing Finnish forestry service markets through SDL lenses, it was possible to identify avenues for new value creation derived from forest owner benefits.

The difficulties that forestry service organizations have in understanding new potential customer groups may lie more in their having a different logic and organizational mind-set in terms of value creation. This is also connected to criticism raised by Voima and Grönroos (2013) towards inexplicitly defined concepts of value creation as co-creation in SDL, which includes actions by both the service provider and customer. However, it seems that NIPF owners and other individuals receiving value by enjoying nature do not need traditional forestry services to create value from a range of existing ecosystem services. As Voima and Grönroos (2013) emphasize, the value creation process is not linear nor automatically a consequence of the provider's activities. In case of forest and nature, existence values may be high even without people visiting any forest estates.

4.3 Limitations of this research and conclusions

This thesis focused on the transition towards service-orientation in Finnish forestry service markets with a comparison to Sweden in one of the substudies. Because the focus was on the currently dominating organizations in the market, by using the categorization by Hetemäki and Hänninen (2013) the services that were studied covered mostly forestry-related services did not deal with most of the potential of new forest-related services. Conceptually, also the group of forest-related services is essential as the premises of this research cover a full range of the services offered to NIPF owners. However, their role in this research is limited because to a large extent the dominating service organizations did not recognize these as a part of their service offerings.

The research started from trying to understand the market change from the service provider's point of view by interviewing a limited sample of service organizations in the market. However, while trying to understand the changes in the market-level more general level, it became challenging to create a sharp picture of each organization category. As can be seen in Figure 3, the important information service providers (FMAs and the forest centres) have been forced to change their business models. During the institutional change, FMAs have started to profile themselves slightly more as organizations serving forest owners than only emphasizing forest management. The Finnish Forest Centre seems to have more difficulties in profiling itself as its business unit is basically a new competitor to the established markets of forest management and the wood trade. The public services unit has a better situation and it has potential to become a link between the forest owners and service

provider by further developing the service market place (metsään.fi). However, it seems that the business model of the service is not clear yet and there are potential competitors with more flexible business models. However, the service market place offered by the Finnish Forest Centre became free for forest owners at the beginning of 2015 and now has potential to become large enough also to become interesting to new service providers. If the development of the business model will now actively concentrate on helping service providers to be connected with forest owners, there are possibilities to succeed. For instance, by offering tools for property administration companies such as banks and insurance companies to connect forest inventory information as a part of their service portfolio, it might be possible to activate groups of urbanized, highly educated, and female owners.

Due to the somewhat high sensitivity of the market-related questions to many of our service provider interviewees, it is likely that some of their assessments were rather subjective and even sentimental. A limitation to this research at the actor level was that is rather general and does not go very deep into the business models of the service providers. Moreover, there could have been more interviews per organization because a single interviewee does not necessarily sufficiently well represent the whole organization or group of actors (e.g. large-scale forest industry, FMAs). However, this potential inaccuracy was partially fixed by using the snowball sampling technique and asking about other players in the markets. This helped to create a more multifaceted picture of each actor. Even though the interview data could have been more comprehensive, the data were found to be sufficient from a methodological saturation point of view and thus provided a sufficient basis for a) building a coherent description of forestry service markets and b) for identifying the challenges related to the renewal. In contrast, the approach to the customer side of the markets was quantitative and consisted of both private and municipal owners. Even though the studies were separate and the results are not directly comparable with each other, this approach gave a more comprehensive picture of the forest owners' view of the markets.

Thus, even though the qualitative interviews were only able to give some examples of how the service providers see the market-level transition, interesting examples of a keen business orientation were found. This provides a good basis for discussing the state of these markets from the theoretical perspective of service-dominant logic. On this theoretical level, it is appealing to bind the concepts of ecosystem services and service-dominant logic together and see forest owners as dynamic resources with the ability to refine versatile value-creation potential from forests as described by ecosystem services. The current difficulties that forestry service organizations have in understanding this new potential may lie in the

differences in the way they see value creation especially compared with some of the new groups of forest owners (well-educated, urban, independent of timber sales income).

In categorizing Finnish forestry service market transformation paths on the basis of MLP (Figure 8), it seems evident that the development does not originate from any shock on the landscape level (P2) nor a technical breakthrough substituting the old system (P3). The market is reproducing itself as forest policy is developed inside the regime level mostly by the dominating organizations (P0). However, the regime level in this case is not stable. Under financial realignments, the partly publicly financed organizations are being forced to restructure their business models and the basis for operating in the markets. Moreover, the requirement for allowing more freedom in competition is based on European Union level regulation that is on the landscape level. Further, the original complaint against the dominant players for the lack of competition was drawn up by a single forest owner (e.g. Kasanen 2011), e.g. by a niche-level actor. The demand for increasing freedom of choice for forest owners in their decision-making is also connected with the landscape level expansion and availability of information. MLP definition for transformation path P1 is therefore defined by disruptive landscape pressures and not sufficiently developed niche-innovations connected to regime-level actors modifying the direction of development (Geels and Schot 2007).

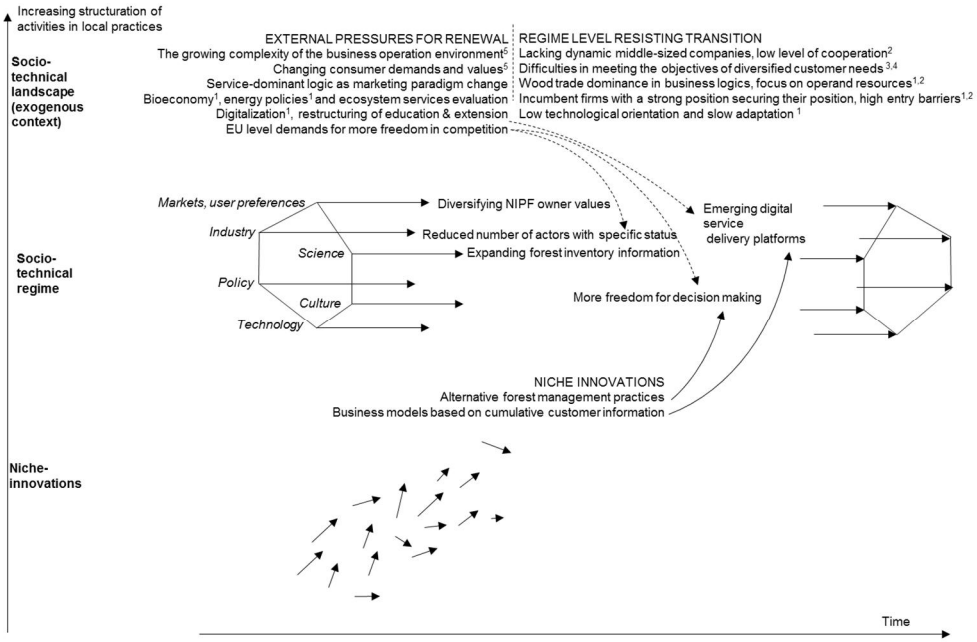

Figure 8. The adaptation of the multi-level perspective to transition in the context of Finnish forestry service markets (adopted from Geels and Schot 2007; [1] Article I; [2] Article II; [3] Article III; [4] Article IV; [5] Näyhä et al. 2015)

In conclusion, Finnish forestry service markets seem to follow the transformation path P1, which means that the eventual change may not be very fundamental nor be quickly taken up. Consequently, the existing regime-level actors are also adapting to the gradual change and are able to maintain their dominating position as long as there are now new players outside the traditional market scope. This interpretation is supported by the finding of Article II that one of the key factors hindering the development - in both Finland and Sweden - is related to the market structure lacking dynamic, regime level actors with a culture of co-operative networking with niche-level actors. This structure results in the dominating regime-level in resisting the external pressures that are not in line with their current business models. However, an external actor able to see the resources such as forest owners in a fundamentally new way may be able to break the dominant regime-level.

As pointed out, there are external pressures, such as climate change, the growing complexity of the business operation environment, changing consumer demands and values, service-dominant logic as marketing paradigm change, digitalization, lowering costs of

communication and information delivery, increasing competition for raw materials, bio-economy, energy policies, and end-use of wood, ecosystem services evaluation, and changing consumer demands and values (Figure 8) which might enforce development paths beyond the control of the existing actors. Because the actors in the Finnish market are concentrating on securing their market share rather than building any lively business ecosystem, there have not been many networking partners available for niche-level innovators. This market structure has been hindering the transition and business models based e.g. on cumulative customer information, the restructuring of education and extension, service markets for ecosystem services besides timber production. However, in order to maintain the current position without losing too many forest owners as customers, the dominating regime level has to be able to cope with the external pressures of renewal. Some adaptation has been seen: the rapid technical development in forest inventory information has been developed and adopted by regime-level players. However, it is likely that business models of a totally new kind or logics to serve forest owners will be seen before a new dynamic equilibrium defined by Rotmans et al. (2001) is reached.

REFERENCES

Alig R. J. (2003). U.S. landowner behavior, land use and land cover changes, and climate change mitigation. Silva Fennica 37(4): 511–527.

Amit R., Zott C. (2001). Value creation in e-business. Strategic Management Journal 22(6–7): 493–520. http://dx.doi.org/10.1002/smj.187

Anker T., Sparks L., Moutino L., Grönroos C. (2015). Consumer dominant value creation: A theoretical response to the recent call for a consumer dominant logic of marketing. European Journal of Marketing 49 (3): 532–560. http://dx.doi.org/10.1108/EJM-09-2013-0518

Asikainen A.-R., Hujala T., Kurttila M. (2014). Metsänomistajien näkemyksiä metsänkäsittelyvaihtoehdoista ja metsäammattilaisten palelunkehittämisnäkökulmia – Metsänhoitoyhdistys Päijät-Hämeen tapaustutkimus. Metsätieteen aikakauskirja 3: 149–162. (In Finnish).

Baron S., Warnaby G., Hunter-Jones P. (2014). Service(s) marketing research: developments and directions. International Journal of Management Reviews 16(2): 150–171. http://dx.doi.org/10.1111/ijmr.12014

Barney J. (1991). Firm resources and sustained competitive advantage. Journal of Management 17(1): 99–120. http://dx.doi.org/10.1177/014920639101700108

Berglund H., Sandström C. (2013). Business model innovation from an open systems perspective: structural challenges and managerial solutions. International Journal of Product Development 18(3): 274–285. http://dx.doi.org/10.1504/IJPD.2013.055011

Bliss J., Martin A. (1989). Identifying small-scale forest management motivations with qualitative methods. Forest Science 35(2): 601–622.

Boon T., Meilby H., Thorsen B. (2004). An empirically based typology of private forest owners in Denmark: improving communication between authorities and owners. Scandinavian Journal of Forest Research 19(S4):45–55. http://dx.doi.org/10.1080/14004080410034056

Brown T., Bergsrtöm J., Loomis J. (2007). Defining, valuing, and providing ecosystem goods and services. Natural researches journal 47(2): 329–376.

Brown H., Patterson A. (2009). Harry Potter and the Service-Dominant Logic of Marketing: a cautionary tale. Journal of marketing management 25(5–6): 519–533. http://dx.doi.org/10.1362/026725709X461830

Chesbrough H. (2007). Business model innovation: it's not just about technology anymore. Strategy & Leadership 35(6): 12–17. http://dx.doi.org/10.1108/1087857071083371

Chesbrough H., Rosenbloom R. (2002). The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies. Industrial and Corporate Change 11(3): 529–555. http://dx.doi.org/10.1093/icc/11.3.529

Coombs R., Miles I. (2000). Innovation, measurement and services: the new problematique. In: Metcalfe J.S., Miles, I. (Eds.) Innovation systems in the services economy: measurement and case study analysis. Kluwer Academic, Boston. p. 85–103.

Cooper R. (2011). Perspective: the innovation dilemma: how to innovate when the market is mature. Journal of Product Innovation Management 28(S1): 2–27. http://dx.doi.org/10.1111/j.1540-5885.2011.00858.x

Costanza R., de Groot R., Sutton P., van der Ploeg S., Anderson S., Kubiszewski I., Farber S., Turner R. (2014). Changes in the global value of ecosystem services. Global Environmental Change 26: 152–158. http://dx.doi.org/10.1016/j.gloenvcha.2014.04.002

Dean T.J., Meyer G.D. (1996). Industry environments and new venture formations in US manufacturing: a conceptual and empirical analysis of demand determinants. Journal of Business Venturing 11(2): 107–132. http://dx.doi.org/10.1016/0883-9026(95)00109-3

Den Hertog P., Rubalcaba L. (2010). Policy frameworks for service innovation. A menu approach. In: Gallouj F, Djellal F (eds.) Handbook of innovation and services. Edward Elgar, Cheltenham. p. 621–652.

Elzen B., Geels F.W., Green K. (Eds.) (2004). System Innovation and the Transition to Sustainability: Theory, Evidence and Policy. Edward Elgar, Cheltenham.

FTP (2013a), "Horizons – Vision 2030 for the European Forest-based Sector", Forest-Based Sector Technology Platform, available at: http://www.forestplatform.org/. [Cited 19 Jan 2015].

FTP (2013b) "Strategic Research and Innovation Agenda for 2020", Forest-Based Sector Technology Platform, available at: http://www.forestplatform.org. [Cited 19 Jan 2015].

Gallouj F. (2002). Innovation in the service economy: the new wealth of nations. Edward Elgar, Cheltenham.

Gebauer H., Fleisch E., Friedli T. (2005). Overcoming the Service Paradox in Manufacturing Companies. European management journal 23(1) 14–26. http://dx.doi.org/10.1016/j.emj.2004.12.006

Geels F.W. (2002). Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case study. Research Policy 31: 1257–1274. http://dx.doi.org/10.1016/S0048-7333(02)00062-8

Geels F.W. (2005) Processes and patterns in transitions and system innovations: refining the co-evolutionary multi-level perspective. Technological Forecasting and Social Change 72(6):681–696. http://dx.doi.org/10.1016/j.techfore.2004.08.014

Geels F.W. (2011). The multi-level perspective on sustainability transitions: Responses to seven criticisms. Environmental Innovation and Societal Transitions 1: 24–40. http://dx.doi.org/10.1016/j.eist.2011.02.002

Geels F.W., Schot J.W. (2007). Typology of sociotechnical transition pathways. Research Policy 36: 399–417. http://dx.doi.org/10.1016/j.respol.2007.01.003

Gephart R. (2004). Qualitative Research and the Academy of Management Journal. Academy of Management Journal 47(4): 545–462.

Grönroos C. (2008). Service logic revisited: who creates value? And who co-creates? European Business Review 20(4): 298–314. http://dx.doi.org/10.1108/09555340810886585

Grönroos C. (2011). A service perspective on business relationships: The value creation, interaction and marketing interface. Industrial Marketing Management 40(2): 240–247. http:/dx.doi.org/10.1016/j.indmarman.2010.06.036

Grönroos C., Voima P. (2013). Critical service logic: making sense of value creation and co-creation. Journal of the Academic Marketing Science, 41:133–150. http://dx.doi.org/10.1007/s11747-012-0308-3

Hallikainen V., Hyppönen M., Pernu L., Puoskari J. (2010). Family forest owners' opinions about forest management in northern Finland. Silva Fennica 44(2) :363–384. http://urn.fi/URN:NBN:fi:ELE-1511947

Haynes R.W. (2002). Forest management in the 21st century: changing numbers, changing context. Journal of Forestry 100(2): 38–43.

Heikkilä M., Kuivaniemi L. (2012). Ecosystem under construction: An action research study on entrepreneurship in a business ecosystem. Technology innovation management review 2(6): 18–24.

Heinonen K., Strandvik T., Mickelsson K.-J., Edvardsson B., Sundström E., Andersson P. (2010). A customer-dominant logic of service. Journal of Service Management 21(4): 531–548. http://dx.doi.org/10.1108/09564231011066088

Helkkula A., Kelleher C., Pihlström M. (2012). Characterizing Value as an Experience: Implications for Service Researchers and Managers. Journal of service research 15(1): 59–75.
http://dx.doi.org/10.1177/1094670511426897

Hetemäki L., Niinistö S., Seppälä R., Uusivuori J. (Eds.) (2011), Murroksen jälkeen – Metsien käytön tulevaisuus Suomessa, METLA, Metsämiestensäätiö, Metsäkustannus Oy, Finland. (In Finnish).

Hetemäki L., Hänninen R. (2013). Suomen metsäalan taloudellinen merkitys nyt ja tulevaisuudessa. Kansantaloudellinen aikakauskirja, The Finnish Economic Journal 2013. p. 191–208. (In Finnish).

Hirsch F., Korotkov A., Wilnhammer M. (2007). Private forest ownership in Europe. FAO, Rome, Italy. Unasylva 228(58).

Hujala T., Kurttila M., Karppinen H. (2013). Customer segments among family forest owners: combining ownership objectives and decision-making styles. Small Scale Forestry 12(3): 335–351.
http://dx.doi.org/10.1007/s11842-012-9215-1

Hurmekoski E., Hetemäki L. (2013). Studying the future of the forest sector: Review and implications for long-term outlook studies. Forest Policy and Economics 34: 17–29.
http://dx.doi.org/10.1016/j.forpol.2013.05.005

Hänninen H., Karppinen H. (2010). Yksityismetsänomistajat puntarissa. Julkaisussa: Sevola, Y. (ed). Metsä, talous, yhteiskunta. Katsauksia metsäekonomiseen tutkimukseen. Metlan työraportteja 145: 55–67. (In Finnish).

Häyrinen L., Mattila O., Berghäll S., Toppinen A. (2014). Forest Owners' Socio-demographic Characteristics as Predictors of Customer Value: Evidence from Finland. Small-scale Forestry 14(1): 19–37.
http://dx.doi.org/10.1007/s11842-014-9271-9

Kasanen M. (2011). Private forest owners' management choices in twenty-first century Finland. University of Oulu, Faculty of Humanities, Cultural Antropology. Acta Univ. Ouluensis 8. (In Finnish).
http://urn.fi/urn:isbn:9789514296796

Markides C. (2008). Game-Changing Strategies – How to Create New Market Space in Established Industries by Breaking The Rules. Jossey-Bass, San Francisco, CA.

Karppinen H. (1998). Values and objectives of non-industrial private forest owners in Finland. Silva Fennica 32(1):43–59.

Karppinen H., Hänninen H., Ripatti P. (2000). Suomalainen metsänomistaja 2000. Metsäntutkimuslaitoksen tiedonantoja 852. (In Finnish).

Karppinen H., Korhonen M. (2013). Do forest owners share the public's values? An application of Schwartz's value theory. Silva Fennica 47(1): 1–16. http://dx.doi.org/10.14214/sf.894

Kindström D., Kowalkowski C. (2014). Service innovation in product-centric firms: A multidimensional business model perspective. Journal of Business & Industrial Marketing 29(2): 96–111. http://dx.doi.org/10.1108/JBIM-08-2013-0165

Korhonen H. (2014). Widening the perspective on industrial innovation: a service-dominant-logic approach. Technology Innovation Management Review 4(5): 31–39.

Koskela T. (2011). Vapaaehtoinen metsäluonnon monimuotoisuuden turvaaminen – metsänomistajien näkemyksiä METSO-ohjelmasta. Working papers of the Finnish Forest Research Institute 216. (in Finnish).

Kunz W., Hogreve J. (2011). Toward a deeper understanding of service marketing: the past, the present, and the future. International Journal of Research in Marketing 28(3): 231–247. http://dx.doi.org/10.1016/j.ijresmar.2011.03.002

Kurtz W.B., Lewis B.J. (1981). Decision-making framework for non-industrial private forest owners: an application in the Missouri Ozarks. Journal of Forestry 79(5): 285–288.

Kuuluvainen J., Karppinen H., Hänninen H., Uusivuori J. (2014). Effects of gender and length of land tenure on timber supply in Finland. Journal of Forest Economics 20: 363–379. http://dx.doi.org/10.1016/j.jfe.2014.10.002

Luke (2015). Forest ownership. http://www.metla.fi/metla/finland/finland-forest-owners.htm. [Cited 25 Feb 2015].

Luisetti T., Jackson E., Turner R. (2013). Valuing the European coastal blue carbon storage benefit. Marine Pollution Bulletin 71(1–2): 101–106. http://dx.doi.org/10.1016/j.marpolbul.2013.03.029

Lusch R., Vargo S. (2014). Service-dominant logic: premises, perspectives, possibilities. Cambridge University Press.

Mattila O., Toppinen A., Tervo M., Berghäll S. (2013). Non-industrial Private Forestry Service Markets in a Flux: Results from a Qualitative Analysis on Finland. 15.01.2013. Small-Scale Forestry 12(4): 559–578. http://dx.doi.org/10.1007/s11842-012-9231-1

Matthyssens P., Vandenbempt K. (2008). Moving from basic offering to value-added solutions: Strategies, barriers and alignment. Industrial Marketing Management 37(3): 316–328. http://dx.doi.org/10.1016/j.indmarman.2007.07.008

Mattila O., Roos A. (2014). Service logics of providers in the forestry services sector: Evidence from Finland and Sweden. Forest Policy and Economics 43: 10–17. http://dx.doi.org/10.1016/j.forpol.2014.03.003

Mattila O., Häyrinen L., Berghäll S., Toppinen A. (2014). Paths for new services - important factors in owning forests for Finnish NIPF owners in the context of ecosystem services. Presentation at IUFRO World Congress C-26 (27) Forest Owners and Climate Change Adaptation, Tuesday, October 7th.

Maxwell J.A. (1996). Qualitative Research Design: An Interactive Approach. SAGE Publications, London.

MEA (2005), (Millennium Ecosystem Assessment). Ecosystems and Human Well-being: Synthesis. Island Press, Washington, DC.

Michel S., Brown S., Gallan A. (2008). Service-logic innovations: How to innovate customers, not products. California management review, 50(3): 49–65. http://dx.doi.org/10.2307/41166445

Moore J. (1993). Predators and Prey: A New Ecology of Competition. Harvard business review, May-June, Reprint 93309.

Nenonen S., Storbacka K. (2010). Business model design: conceptualizing net worked value co-creation. International Journal of Quality and Service Sciences 2(1): 43–59. http://dx.doi.org/10.1108/17566691011026595

Niskanen A. (2005). Forest sector entrepreneurship in Europe – Summary of country studies of COST Action E30. Silva Carelica 52.

Näyhä A., Pelli P., Hetemäki L. (2015). Services in the forest-based sector – unexplored futures. Foresight 17(4): 378-398. http://dx.doi.org/10.1108/FS-08-2013-0034

OECD (2005). Enhancing the performance of the services sector. OECD Publishing, Paris.

Ostrom A., Bitner M., Brown S., Burkhard K., Goul M., Smith-Daniels V., Demirkan H., Rabinovich E. (2010). Moving Forward and Making a Difference: Research Priorities for the Science of Service. Journal of Service Research 13(1): 4–36. http://dx.doi.org/10.1177/1094670509357611

Ovaskainen V., Horne P., Pouta P., Sievänen T. (2002). Luonnon virkistyskäytön taloudelliset vaikutukset. Metsätieteen aikakauskirja 1/2002: 59–65 (In Finnish).

Parviainen J., Västilä S. (2012). Legal framework and legislation. In: Parviainen J., Västilä S. (eds.) State of Finland's forests 2012 based on the criteria and indicators of sustainable forest management. Updated html version of 'State of Finnish Forests 2011', Publications of the Ministry of Agriculture and Forestry 5a, Ministry of Agriculture and Forestry & Finnish Forest Research Institute. http://www.metla.fi/metinfo/sustainability/SF-2-legal-framework.htm. [Cited 2 Feb 2015].

Perez C. (2002). Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages. Edward Elgar, Cheltenham.

Porter M.E. (2001). Strategy and the internet, Harvard Business Review 79(3): 62–79.

Prahalad C., Bettis R. (1986). The dominant logic: A new linkage between diversity and performance. Strategic Management Journal 7(6): 485–501. http://dx.doi.org/10.1002/smj.4250070602

Ravald A., Grönroos C. (1996). The value concept and relationship marketing. European Journal of Marketing 30(2): 19–30.

Rotmans J., Kemp R., van Asselt M. (2001). More evolution than revolution: transition management in public policy. Foresight 3(1):15–31. http://dx.doi.org/10.1108/14636680110803003

Rämö A.K., Toivonen R. (2009). Uusien metsänomistajien asenteet, motiivit ja aikomukset metsiin ja metsänomistukseen liittyvissä asioissa. Pellervon taloudellisen tutkimuslaitoksen raportteja 216. (In Finnish)

Saaranen-Kauppinen A., Puusniekka A. (2006). KvaliMOTV – menetelmäopetuksen tietovaranto, pdf-verkkojulkaisu. Tampere. Yhteiskuntatieteellinen tietoarkisto, Tampere. Available: http://www.fsd.uta.fi/menetelmaopetus/ (In Finnish). [Cited 2 Feb 2015].

Santala M., Parvinen P. (2007). From strategic fit to customer fit. Management decision 45(3): 582–601. http://dx.doi.org/10.1108/00251740710745133

Scott W. (1995). Institutions and Organizations. Ideas, Interests and Identities. Sage. http://dx.doi.org/10.3917/mana.172.0136

Schmithüsen F., Hirsch F. (2010). Private forest ownership in Europe. Geneva timber and forest study papers 26. Geneva: United Nations.

State of Finland's Forests (2012): Finnish Forests in European context demonstrated with selected indicators. http://www.metla.fi/metinfo/sustainability/finnish.htm. [Cited 12 Jan 2015].

Teece D., Pisano G., Shuen A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal 18(7): 509–533.

Teece D. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal 28: 1319–1350. http://dx.doi.org/10.1002/smj.640

Toppinen A., Wan M., Lähtinen K. (2013). Strategic orientations in global forest industry. Book Chapter 17 in Hansen, E. et al. (Ed.): Global Forest Industry: Trends, Management and Sustainability. Taylor & Francis Ltd.

Tun-Mint J., Burns L., King N. (2013). The effect of behavioral tracking practices on consumer' shopping evaluiation and repurchase intention toward trusted online retailers. Computers in human behavior 29: 901–909. http://dx.doi.org/10.1016/j.chb.2012.12.021

Umaerus P., Lidestav G., Eriksson L., Nordin M. (2013). Gendered business activities in family farm forestry: from round wood delivery to health service. Scandinavian Journal of Forest Research 28(6): 596–600. http://dx.doi.org/10.1080/02827581.2013.793385

UNECE/FAO (2005). European Forest Sector Outlook Study (EFSOS) 1960-2000-2020. http://www.fao.org/docrep/008/ae428e/ae428e00.htm. [Cited 19 Jan 2015].

UNECE/FAO (2011), European Forest Sector Outlook Study (EFSOS II), UNECE Timber Committee - FAO European Forestry Commission http://www.unece.org/efsos2.html. [Cited 19 Jan 2015].

van Ark B., Broersma L., den Hertog P. (2003). Service innovation, performance and policy: a review. Research series 6, Ministry of Economic Affairs, The Hague.

van de Poel I. (2003). The transformation of technological regimes. Research Policy 32: 49–68. http://dx.doi.org/10.1016/S0048-7333(01)00195-0

Vargo S., Maglio P., Akaka M. (2008). On value and value co-creation: A service systems and service logic perspective. European management journal 26: 145–152. http://dx.doi.org/10.1016/j.emj.2008.04.003

Vargo S., Morgan F. (2005). Services in society and academic thought: An historical analysis. Journal of macromarketing 25(1): 42–53. http://dx.doi.org/10.1177/0276146705275294

Vargo S., Lusch R. (2004). Evolving to a New Dominant Logic for Marketing. Journal of Marketing 68: 1–17. http://dx.doi.org/10.1509/jmkg.68.1.1.24036

Vargo S., Lusch R. (2008). Service-dominant logic: continuing the evolution. Journal of the Academy of Marketing Science 36(1): 1–10. http://dx.doi.org/10.1007/s11747-007-0069-6

Vargo S., Lusch R. (2011). It's all B2B…and beyond: toward a system perspective of the market. Industrial Marketing Management 40(2): 181–187. http://dx.doi.org/10.1016/j.indmarman.2010.06.026

Viljakainen A., Toivonen M. (2014). The futures of magazine publishing: Servitization and co-creation of customer value. Futures 64: 19–28. http://dx.doi.org/10.1016/j.futures.2014.10.004

von Hippel E. (2005). Democratizing Innovation. Massachusetts Institute of Technology, Cambridge, Massachusetts. p. 63. http://web.mit.edu/evhippel/www/books.htm. [Cited 15 Dec 2014].

von Hippel E., de Jong J., Flowers S. (2012). Comparing Business and Household Sector Innovation in Consumer Products: Findings from a Representative Study in the United Kingdom. Management Science 58(9): 1669–1681. http://dx.doi.org/10.1007/s11842-005-0001-1

Wallin A., Koskela-Huotari K., Rönkä S. (2013). Three complementary perspectives in service science: service-dominant logic, systems thinking, and service design. In: Isomursu M., Toivonen M. Kokkala M., Pussinen P. (eds.) Highlights in service research, VTT Research Highlights 6.

Wiersum K., Elands B., Hoogstra M. (2005). Small-scale forest ownership across Europe: characteristics and future potential. Small-scale Forest Economics, Management and Policy 4(1): 1–19. http://dx.doi.org/10.1007/s11842-005-0001-1

Zott C., Amit R. (2010). Business Model Design: An Activity System Perspective. Long Range Planning 43: 216–226. http://dx.doi.org/10.1016/j.lrp.2009.07.004

Zott C., Amit R., Massa L. (2011). The business model: recent developments and future research. Journal of Management 37(4): 1019–1042. http://dx.doi.org/10.1177/0149206311406265

Appendix 1

Forest ownership objectives

(1) My forest is part of my leisure time or residential environment (residential environment)
(2) My forest offers me opportunities for picking berries and mushrooms (berry and mushroom picking)
(3) Forest owning offers me possibilities for hunting (hunting)
(4) My forest offers me opportunities for outdoor recreation (e.g. walking, jogging, hiking) (outdoor recreation)
(5) My forest offers me opportunities for performing silvicultural work (providing functional exercise at the same time) (forest work)
(6) My forest offers me regular income for consumption (regular sales income for consumption)
(7) My forest is a financial asset for me for major purchases (house, car, agricultural buildings, and machinery) (funding of large investments)
(8) My forest offers me labor income (labor income and employment)
(9) I gain household timber from my forest (household timber)
(10) My forest offers me an opportunity for maintaining and treasuring biodiversity (diverse flora and fauna) (biodiversity)
(11) My forest offers me aesthetic experiences (aesthetic value)
(12) My forest is an object of nature conservation for me (nature conservation)
(13) My forest property improves my credit rating (credibility)
(14) My forest offers economic security for my old age (security for old age)
(15) My forest offers security against exceptional situations (security against exceptional situations)
(16) My forest property is an asset for hedging against inflation (security against inflation)
(17) My forest comprises a bequest for my heirs (inheritance)
(18) Forestland ownership has intrinsic value for me (e.g. family estate) (inherent value)
(19) My forest is a site for enjoying silence and meditation (solitude and meditation)
(20) Through my forest I am connected to my native region (connection to native locality)
(21) My forest is an investment object for me (investment)
(22) Summer cottage and recreational building price level rises raises the value of my forests

Importance scale: 1 = I don’t know, 2 = not important at all, 3 = not very important, 4 = quite important, 5 = very important

Appendix 2

Kunnan metsät

1. Kunnan nimi _____

Seuraavassa metsät jaetaan karkeasti neljään eri käyttömuotoon, eli talousmetsiin, virkistysmetsiin, taajamametsiin (kaaava-alueet) sekä suojelualueisiin. Voitte antaa vastaukset joko hehtaareina tai prosentteina.

2. Mikä on kunnan omistamien metsien jakauma (suurin piirtein) käyttömuodon mukaan?

	hehtaaria	prosenttia
Talousmetsät	_____	_____
Virkistysmetsät	_____	_____
Taajamametsät	_____	_____
Suojelualueet	_____	_____

Kunnan metsien pinta-ala (ha) _____

3. Millaisia muutostarpeita kuntanne omistamien metsien käyttömuotoihin kohdistuu

	vähentää runsaasti (1)	vähentää hieman (2)	pitää ennallaan (3)	lisätä hieman (4)	lisätä runsaasti (5)
Talousmetsien osuutta kunnan metsistä tulisi…	○	○	○	○	○
Talousmetsien osuutta kunnan metsistä tulisi…	○	○	○	○	○
Talousmetsien osuutta kunnan metsistä tulisi…	○	○	○	○	○
Suojelualueiden osuutta kunnan metsistä tulisi…	○	○	○	○	○

Kunnan alueen kaikki metsät ja niiden käyttö

4. Mitkä seuraavista väitteistä pitävät paikkansa koskien kunnan alueella olevien metsien taloudellista hyödyntämistä *metsänomistajista riippumatta:*

	ei lainkaan (1)	jonkin verran (2)	melko paljon (3)	merkit-tävästi (4)	en osaa sanoa
Kunnassa on metsäteollisuutta	○	○	○	○	○
Kunnassa on matkailullisesti vetovoimaisia suojelualueita	○	○	○	○	○
Kunta hyödyntää paikallista bioenergiaa	○	○	○	○	○
Kunnassa on aktiivisia luontomatkailuyrityksiä	○	○	○	○	○
Kunnassa on metsien sieniä, marjoja, jäkälää tai muita metsän antimia ammattimaisesti hankkivia yrityksiä	○	○	○	○	○
Kunnassa on vapaa-ajan mökkien vuokrausta	○	○	○	○	○
Alueen metsäteollisuus työllistää paikallista väestöä	○	○	○	○	○
Alueen metsien ei-puuntuotannollisia hyötyjä käyttävät yritykset työllistävät paikallisväestöä	○	○	○	○	○
Kunnassa on kiinnostusta lisätä puunjalostukseen perustuvaa yritystoimintaa	○	○	○	○	○
Kunnassa on kiinnostusta lisätä muuhun metsienkäyttöön kuin puunjalostukseen perustuvaa yritystoimintaa	○	○	○	○	○

5. Onko kunnan alueella olevien eri metsäalueiden (siis omistajasta riippumatta) taloudellista tai kulttuurimerkitystä koskaan tutkittu kunnan tai muun tahon toimesta seuraavista yksittäisistä näkökulmista? (merkitkää kaikki tiedossanne olevat)

□ On arvioitu matkailun kannalta arvokkaat metsät
□ On arvioitu virkistyksen kannalta arvokkaat metsät
□ On arvioitu maiseman kannalta arvokkaat metsät
□ On arvioitu luonnon monimuotoisuuden kannalta arvokkaat metsät
□ On arvioitu pohjavesien kannalta arvokkaat metsät
□ On arvioitu metsäkanalinturiistan kannalta arvokkaat metsät
□ On arvioitu metsien (ja/tai soiden) käyttömuotojen merkitys kunnan hiilitaseeseen
□ On arvioitu ilmastonmuutoksen tulevat vaikutukset kunnan metsiin
□ On arvioitu metsien potentiaali bioenergian lähteenä
□ On arvioitu koulujen ja muiden oppilaitosten kannalta tärkeät opetusmetsät
□ Ei ole arvioitu mitään yllä olevista
□ En tiedä, onko yllä olevan kaltaisia arvioita tehty
□ Edellä olevia seikkoja ei ole mielestäni arvioitu kunnassa tarpeeksi
□ Edellä olevia seikkoja ei mielestäni ole tarpeen arvioida
□ Arvioitu jokin muu metsien arvo...
□ … mikä? *(tarkennus muuhun arvoon)* _____

6. Onko kysymyksen 5 tyyppisen selvityksen ostamiselle tarvetta?

○ Kunnalla on tarvetta hankkia selvityksiä metsienkäytön monipuolistamisesta ja selvitykset voidaan rahoittaa itse
○ Kunnalla on tarvetta hankkia selvityksiä metsienkäytön monipuolistamisesta, mutta niitä ei voida toteuttaa ilman valtiontukea
○ Kunnalla ei ole tarvetta ostaa selvitystä metsienkäytön monipuolistamisesta, koska se voidaan toteuttaa itse
○ Kunnalla ei ole tarvetta selvittää metsienkäytön monipuolistamista

<u>Päätöksenteko kunnan metsien käytöstä</u>

7. Mikä taho kunnassa tekee budjettiraamin mukaisesti metsäasioihin liittyvät päätökset vuositasolla?

□ Kunnanhallitus
□ Kunnanvaltuusto
□ Tekninen lautakunta
□ Tekninen johtaja
□ Kunnan puutarhuri
□ Muu asian hoitoon valittu ryhmä
□ Ulkopuolinen asiantuntija
□ Muu taho...
…mikä? *(tarkennus muuhun tahoon)* _____

8. Onko kunnan talousmetsille asetettu tuottovaatimusta?

○ kyllä
○ ei

9. Onko kunnan virkistysmetsille asetettu tuottovaatimusta?

○ kyllä
○ ei

10. Miten seuraavat väittämät pitävät paikkansa kuntanne metsien käyttöä ja päätöksentekoa koskien?

	täysin eri mieltä (1)	joksee nkin eri mieltä (2)	en osaa sanoa (3)	joksee nkin samaa meiltä (4)	täysin samaa mieltä (5)	täysin eri mieltä (1)
Puunmyynti on kunnan taloudelle merkittävä vuotuinen tulonlähde	○	○	○	○	○	○
Metsänhoidosta päättävillä on riittävästi aikaa metsäasioiden käsittelyyn	○	○	○	○	○	○
Metsäsuunnitelmat ovat noudattaneet kaavamerkintöjä ja metsille asetettuja muita tavoitteita	○	○	○	○	○	○
Hakkuut ovat noudattaneet kaavamerkintöjä ja metsille asetettuja muita tavoitteita	○	○	○	○	○	○
Puunmyynti on kunnan taloudelle merkittävä vuotuinen tulonlähde	○	○	○	○	○	○

11. Mitkä seuraavista väittämistä pitävät paikkansa koskien *kunnan omien metsien* käyttöä bioenergian lähteenä:

- □ Kunnassani pyritään lisäämään bioenergian käyttöä omista metsistä sekä myymään energiapuuta muutenkin, mutta ei kantoja
- □ Kunnassani pyritään lisäämään bioenergian käyttöä omista metsistä sekä myymään energiapuuta muutenkin, myös kantoja nostetaan ja myydään
- □ Mielestäni kantojen nosto ja myynti energiaksi on niin tärkeää, että sitä pitäisi tehdä, vaikka se vaikuttaisi merkittävästi seuraavan puusukupolven kasvuun tai maisemaan
- □ Kuntani tuottaa osan tarvitsemastaan lämmöstä/sähköstä paikallisessa biovoimalaitoksessa
- □ Kunnassani *on jo / on tulossa strategia*, jolla pyritään hiilipäästöjen suhteen neutraaliksi, ts. kunnan luomat hiili(dioksidi)päästöt kompensoidaan hiiltä sitovilla tai fossiilisia polttoaineita säästävillä toimilla
- □ Kunnassani *pitäisi* mielestäni olla strategia, jolla pyritään hiilipäästöjen suhteen neutraaliksi, ts. kunnan luomat hiili(dioksidi)päästöt kompensoidaan

12. Metsäasioista päätetään hakkuiden osalta
- ○ vuosittain
- ○ 3 vuoden jaksoissa
- ○ 5 vuoden jaksoissa
- ○ muulla perusteella, millä? _____

13. Metsäasioista päätetään istutus- ja taimikonhoitotöiden osalta
- ○ vuosittain
- ○ 3 vuoden jaksoissa
- ○ 5 vuoden jaksoissa
- ○ muulla perusteella, millä? _____

14. Millä perusteella päätökset kunnan metsien käytöstä tehdään nykymallissa?
Vastatkaa myös, millaisin perustein päätökset mielestänne tulisi tehdä.

	Päätöksentekoperusteet nykymallissa				Näitä seikkoja tulisi mielestäni käyttää päätöksentekoperusteina			
	ei valinta-peruste (1)	vaikuttaa valintaan vähän (2)	vaikuttaa valintaan jonkin verran (3)	hyvin tärkeä valinta-peruste (4)	ei valinta-peruste (1)	vaikuttaa valintaan vähän (2)	vaikuttaa valintaan jonkin verran (3)	hyvin tärkeä valinta-peruste (4)
Puunmyyntitulojen maksimoiminen	○	○	○	○	○	○	○	○
Metsien kokonaistaloudellinen arvo (mm. matkailumerkitys)	○	○	○	○	○	○	○	○
Hakkuiden virkistys- ja maisemavaikutukset	○	○	○	○	○	○	○	○
Metsien hoitovalintojen vaikutus kunnan hiilitaseeseen	○	○	○	○	○	○	○	○
Metsien monipuolinen hoito tonttien ja asemakaavojen arvon (ja siten kunnan houkuttelevuuden) lisäämiseksi	○	○	○	○	○	○	○	○

Metsien monipuolinen hoito kunnan yleisen imagon parantamiseksi	○	○	○	○	○	○	○	○
Metsien riistantuottoarvot	○	○	○	○	○	○	○	○
Metsien (luonto)matkailutulot	○	○	○	○	○	○	○	○
Metsien ei-puutuotteiden tehokas kaupallinen hyödyntäminen (marjat, sienet, jäkälät, yrtit, jne)	○	○	○	○	○	○	○	○
Metsien ilman- ja vedenpuhdistusvaikutukset	○	○	○	○	○	○	○	○
Metsien käyttö asukkaiden henkisen hyvinvoinnin ja terveyden lisääjänä ("terveysmetsät")	○	○	○	○	○	○	○	○
Metsien hiilensidontavaikutukset osana hiilineutraaliuden saavuttamista kunnassa	○	○	○	○	○	○	○	○
Metsien elinympäristöjen, lajiston ja geneettisen monimuotoisuuden huomioiminen	○	○	○	○	○	○	○	○
Metsien käyttö lasten ja nuorten opetuspaikkana ja kokemusten lähteenä	○	○	○	○	○	○	○	○
Metsien monipuolinen käyttö kulttuuritapahtumiin	○	○	○	○	○	○	○	○
Muu peruste...	○	○	○	○	○	○	○	○

…mikä? *tarkennus muuhun perusteeseen)* _____

15. Jos kysymyksessä 14 mainittuja asioita otettaisiin kunnan metsissä paremmin huomioon
- ○ Hoitaisimme asian itse
- ○ Teettäisimme lisäselvitykset mieluiten nykyisellä metsiemme palveluntarjoajalla
- ○ Teettäisimme lisäselvitykset erillisellä konsultilla
- ○ Haluaisimme kaikki metsien käyttöön liittyvät palvelut samalta palveluntarjoajalta yhtenä pakettina

(Avohakkuuksi lasketaan seuraavassa kaikentyyppiset päätehakkuut, joissa poistetaan kaikki tai lähes kaikki puut – siis myös sellaiset, joissa jätetään joitakin säästö- tai siemenpuita)

16. Mikä seuraavista väittämistä kuvaa parhaiten suhtautumistanne avohakkuisiin kunnan metsissä?
- ○ Avohakkuut ovat sopiva käsittelytapa kunnan talous- ja virkistysmetsissä.
- ○ Avohakkuut ovat sopiva käsittelytapa kunnan talousmetsissä, mutta virkistysmetsissä niitä tulisi välttää.
- ○ Avohakkuita pitäisi välttää kaikissa kunnan metsissä, mutta vaihtoehtojen pitäisi säilyttää puunmyyntitulojen taso
- ○ Avohakkuita pitäisi välttää kaikissa kunnan metsissä, vaikka puunmyyntitulot alenisivat
- ○ En halua ottaa kantaa avohakkuisiin

17. Kun kunnan metsiä käsitellään, mitkä seuraavista väittämistä kuvaavat parhaiten asukaspalautetta?
- □ Avohakkuut aiheutavat toisinaan kritiikkiä, mutta yleensä ne hyväksytään
- □ Huomautuksia tulee lähinnä taajamametsien liian ”rajusta” hoidosta
- □ Huomautuksia tulee lähinnä taajamametsien hoitamatta jättämisestä
- □ Tarmokas vähemmistö valittaa useimmista hakkuista
- □ Valituksia ei tule keskimäärin paljon, mutta niiden käsittelyyn menee paljon tai melko paljon työaikaa
- □ Valituksia ei juuri tule eivätkä ne ole ongelma oikeastaan koskaan

<u>Metsäpalveluorganisaation valintaperusteet</u>
18. Kun tarvitaan metsänhoitoa tai –suunnittelua, kunta pyytää tarjouksen tavallisesti seuraavilta tahoilta (rastita kaikki, joilta yleensä pyydetään tarjous):

- □ metsänhoitoyhdistykseltä
- □ metsäkeskukselta
- □ metsäyhtiön metsänhoito-osastolta tai -tytäryhtiöltä
- □ yksityisiltä metsäpalveluyrittäjiltä
- □ yleensä teemme työt itse
- □ yleensä emme pyydä tarjouksia, vaan meillä on pitkäaikainen sopimus...

…kenen kanssa ja kuinka pitkäaikainen sopimuksenne on?

_____

19. Maksaako kuntanne metsänhoitomaksua
- ○ kyllä
- ○ ei

20. Jos kuntanne maksaa metsänhoitomaksua, mitä palveluita maksu kattaa ilman, että joudutaan maksamaan lisämaksuja?

21. Millä perusteilla kunnassanne päätetään, miltä taholta metsän suunnitteluun, hoitoon ja hakkuisiin liittyvät palvelut hankitaan nykymallissa? Vastatkaa myös, miten valintaperusteiden tulisi mielestänne olla.

	Päätöksentekoperusteet nykymallissa				Näitä seikkoja tulisi mielestäni käyttää päätöksentekoperusteina			
	ei valinta-perust e (1)	vaikutt aa valinta an vähän (2)	vaikutt aa valinta an jonkin verran (3)	hyvin tärkeä valint a-perust e (4)	ei valint a-perust e (1)	vaikutt aa valinta an vähän (2)	vaikutt aa valinta an jonkin verran (3)	hyvin tärkeä valint a-perust e (4)
Tarjoajan työkokemus	○	○	○	○	○	○	○	○
Tarjoajan paikallisuus	○	○	○	○	○	○	○	○
Vakiintunut asiakassuhde	○	○	○	○	○	○	○	○
Tarjoajan edullinen hinta	○	○	○	○	○	○	○	○
Tarjoajaa koskevat suositukset	○	○	○	○	○	○	○	○
Tarjoajan mahdollisuus visualisoida hakkuut tietokonegrafiikalla	○	○	○	○	○	○	○	○
Tarjoajan osaaminen erilaisten vaihoehtojen vertailuun	○	○	○	○	○	○	○	○

Tarjoajan mahdollisuus hoitaa myös asukaspalaute, tiedottaminen ja suunnitelman esittelytilaisuudet	○	○	○	○	○	○	○	○
Tarjoajan mahdollisuudet avustaa kilpailutuksessa	○	○	○	○	○	○	○	○
Tarjoajan monipuolinen palveluvalikoima	○	○	○	○	○	○	○	○
Ajansäästö hankkimalla kaikki palvelut samalta toimittajalta	○	○	○	○	○	○	○	○
Muu peruste…	○	○	○	○	○	○	○	○

…mikä? *(tarkennus muuhun perusteeseen)* _____

22. Millaista metsienkäytön kehitys- tai lisäämispotentiaalia on mielestänne kunnan kaikissa metsissä (siis metsänomistajasta riippumatta)?

	ei lainkaan (1)	jonkin verran (2)	melko paljon (3)	merkittävästi (4)	en osaa sanoa
Matkailu	○	○	○	○	○
Virkistys	○	○	○	○	○
Yleinen maisemanhoito	○	○	○	○	○
Metsien monipuolisempi hoito tonttien ja asemakaavojen arvon lisäämiseksi	○	○	○	○	○
Luonnon monimuotoisuus	○	○	○	○	○
Riistanhoito	○	○	○	○	○
Metsien ei-puutuotteiden tehokkaampi kaupallinen hyödyntäminen (marjat, sienet, jäkälät, yrtit, jne.)	○	○	○	○	○
Panostetaan enemmän metsien käyttöön asukkaiden henkisen hyvinvoinnin ja terveyden lisääjänä (terveysmetsät)	○	○	○	○	○
Metsien käyttö lasten ja nuorten opetuspaikkana ja kokemusten lähteenä	○	○	○	○	○
Metsien pohja- ja pintavesien laatua parantava vaikutus	○	○	○	○	○
Metsien käytön muuttaminen ilmastonmuutoksen hillitsemiseksi ja kunnan hiilitaseen parantamiseksi	○	○	○	○	○
Metsien monipuolisempi käyttö kulttuuritapahtumiin	○	○	○	○	○
Muu peruste...	○	○	○	○	○

…mikä *(tarkennus muuhun perusteeseen)* _____

23. Olisitteko kiinnostunut pidemmän aikavälin ympäristön- ja luonnonhoidon strategiasta, missä pyrittäisiin kehittämään kysymyksessä 22 mainittuja käyttömuotoja?

○ 20 vuodelle
○ 30 vuodelle
○ 40 vuodelle
○ Kunnalla on jo pidemmän aikavälin strategia käytössään, mutta se ei huomioi yllä mainittuja seikkoja
○ En näe pidemmän aikavälin suunnittelun tuovan mitään hyötyä.

Vapaa sana

Tässä voitte kertoa vapaasti mielipiteitänne liittyen esimerkiksi kunnan tarpeisiin metsäneuvonnan, -suunnittelun tai hoitotoimien saralla. Kertokaa myös ideoistanne ja tarpeistanne liittyen kunnan metsien monipuolisempaan hyödyntämiseen tai täsmentäkää vastaustanne johonkin yllä olevaan kysymykseen. Vastaukset käsitellään luottamuksellisesti.

Vapaa sana on tärkeä, koska siinä voi tuoda esille mielestänne merkittäviä asioita, joita kyselyssä ei ehkä käsitellä lainkaan, tai käsitellään mielestänne puutteellisesti.

Vapaa sana:

Kiitos vastauksistanne!

Tietojen luovutus

Valitsemalla alla olevan ruudun voitte halutessanne antaa kuntakohtaiset vastauksenne Innofor Oy:n käyttöön. Näin helpotatte metsäpalveluiden kehittämistyötä konkreettisesti. Innofor Oy käsittelee tietoja luottamuksellisesti.

□ Kuntakohtaiset vastaukseni saa luovuttaa Innofor Oy:n käyttöön