forests

MDPI

Article

Motives for Sustainability Certification—Private Certified Forest Owners' Perspectives

Anna Thorning [1,*] and Cecilia Mark-Herbert [2]

[1] Department of Economics, Geography, Law and Tourism, Mid Sweden University, 83125 Östersund, Sweden
[2] Department of Forest Economics, Swedish University of Agricultural Sciences, 75007 Uppsala, Sweden; cecilia.mark-herbert@slu.se
* Correspondence: anna.thorning@miun.se

Abstract: Traditional forest-management practices are currently being scrutinised. Forest certification may verify sustainable development practices in primary forest production. However, certification of privately owned forest lands cannot be taken for granted, as it is associated with the demands and challenges of forest management. Despite these challenges, some private owners of forest lands chose to certify their operations. The aim of this study is to explain these motives for certification. A qualitative approach, based on thematic interviews with selected forest owners, offers a context-bound and contemporary understanding. The implications of this research are seen in market development for certified forest resources and policy adaptations to support voluntary certification schemes.

Keywords: forest certification; means end; small private forest owners; standard; sustainable development

Citation: Thorning, A.; Mark-Herbert, C. Motives for Sustainability Certification—Private Certified Forest Owners' Perspectives. *Forests* **2022**, *13*, 790. https://doi.org/10.3390/f13050790

Academic Editors: Hubert Paluš and Richard P. Vlosky

Received: 15 April 2022
Accepted: 11 May 2022
Published: 19 May 2022

1. Introduction

The increased focus on sustainable development points to the need to develop corporate social responsibility (**CSR**). For the forest industry, corporate responsibility means managing resources with environmental, economic and social value dimensions in mind in a circular bioeconomy [1,2]. Managing forestry resources is a shared responsibility for different kinds of forest owners, privately owned industrial or family, and state-owned forest land. In Sweden, a large portion of forest land is owned by small private forest owners, referred to as *family forest owners* or *non-industrial forest owners*. A forestry smallholder in Sweden is defined as owning a maximum of 1000 hectares forest land according to the Swedish Forest Agency [3]. All these forest owner constellations face increased expectations of responsible resource management.

CSR in forestry management manifests in several ways, for example several of the United Nations sustainable development goals (SDGs) can be applied to forests and forestry [4]. However, the certification of forestry management is the most common way to structure the management of a continuous CSR improvement process [5]. It also serves as the grounds for communicating these efforts. A number of Swedish forest owners are involved in one of the two forest certification schemes for smallholders through either the Forest Stewardship Council (FSC) and/or the Program for the Endorsement of Forest Certification (PEFC) [6,7]. They have thereby committed to sustainable development through their certification, and they are responsible to meet certain forest management requirements. Small private forest owners are often included in group certification through their membership in forest owners' associations. The group certification offers advantages in the certification procedures in shared learning and lowered costs. However, group certification does not always require strong intrinsic motives to be certified [8]. As a consequence, sustainable development is often considered to be less prioritised by this category of forest owners [9]. Given the proportion of privately owned forest land and the fact that these

forests may provide services for many stakeholders above and beyond that of providing timber for the forest owner, this forest owner group is very important for the development of sustainable forest-management procedures.

Sustainability worldviews can influence forest management activities [10]. This is the case for community-based forest value alignment that has been proven to be an important factor for forest certification [11]. It points to the fact that small private forest owners may enrol in certification programs due to the fact that they already manage their forest in line with certification requirements [12]. However, environmentally focused policies can have an impact on forest-management behaviour, but they do not alter inherent values and objectives [13].

CSR motives for certification are complex, and the consequences of certification are uncertain [5]. While the expected economic and social benefits are strong motivational factors to adopt to certification programs for protecting biodiversity, intrinsic motives can reduce the importance of financial motives [14]. Forest certification may lead to decreased harvesting due to the environmental and social restrictions associated with the certification. However, forest certification can also lead to increased harvesting [15]. Forest owners with multiple objectives have been found to be less involved in forest certification due to lower financial incentives [16].

If forest-management certification is seen from a neoliberal perspective [17], it is a market-driven mechanism that considers the environmental, social and economic dimensions of value creation that raise the awareness of sustainable forest management [18]. Compliance with certification requirements is seen as a voluntary commitment that goes beyond legal requirements. Voluntary forest conservation is expected to increase among small private forest owners [19]. Policy pressures and market demands therefore lead to small private forest owners experiencing an increased pressure from society to consider sustainable development in their management practices [20].

Scientific studies of the adoption of standards are bound to changes in contexts. These changes in contexts are seen in developments in institutional conditions, as well as in changes in ownership demographics [21]. They point to the need to update our understandings of motives for forestry sustainability certifications. Most studies of forestry certifications are of quantitative nature. Previous qualitative studies focused on in-depth and context-based knowledge of forest owners and certifications have been used to study drivers and barriers for smallholder certification [22], forest owners' interest and perception prior certification [23], and the role of intermediary organisation [24]. These studies have contributed to the identification of a research gap that relates to the demographics of current small forestry owners and their motives to certify their forestry operations. This study focuses on certified small private forest owners' motives and experiences of being certified. The project contributes to a contemporary understanding of motives for corporate responsibility, which, in this case, is a certification that contributes to national goals of sustainable development [25]. By gaining an in-depth understanding of the role of forest certification in small-scale forest management and how it affects forest owners, this can further guide actors developing policies to support forest owners' involvement in and contribution to sustainable development. The aim of this study is to explain forest owners' motives and the objectives for forest certification as part of sustainable development. It focuses on how the experience of certification is aligned with their goals and objectives for forest ownership. Research questions of particular interest relates to motives and perceived influential factors are:

- What are the motives and objectives for forest certification?
- How do forest owners experience the influence of certification on their forest management strategy?

This paper starts with an introduction to forest certification and environmental responsibility. In chapter two, the materials and method used for data collection are described. Chapter three presents the findings of this study followed by the discussion and conclusions in chapters four and five.

Forest Certification and Contribution to Environmental Responsibility

The concept of forest certification was developed through a multi-stakeholder dialogue that was initiated in the early 1990s. Non-governmental organisations (NGOs), local forestry industry actors and global processing and retail companies were concerned about the lack of legal requirements and global coordination in forestry [26]. Forest certification was seen as a solution, a market driven voluntary tool that goes beyond legal requirements. From a forest owner's perspective, the purpose of certification was assumed to be to gain a competitive advantage in line with market development based on customers preferring more sustainable practices [27]. In Sweden, there are two dominating forest certification schemes FSC, founded by NGOs and global companies, as well as PEFC established by forest owners' associations in Europe [15].

Looking at forestry certification in Sweden with a historic perspective, Swedish forest companies with timber processing were early adopters of forest certification, which paved the way for one of the first national standards [13]. However, the adoption of certification programs among primary producers and forestry owners did not follow the same quick adoption of certification schemes. It was not until the forest owners' association started to offer certification to their members, around the year 2000, that the forestry certification was established as a procedure among small private forest owners [15,28]. The format for the certification was that of group certification, managed by forest companies or certification organisations. This meant that the motives for certification for the forest owners were altered; peer pressure, benchmarking and group practices may have lowered the threshold for certification [24].

In previous studies of forest management, the personal characteristics of the owners were assumed to influence their forest management and conservation practices. Variables and characteristics that have shown to have explanatory value for management practices are related to property size [29,30], financial dependence of income from forest management [31] and gender—female forest owners value environmental and social aspects of forest management higher than male forest owners [32]. Male forest owners, on the other hand, are more prone to engage actively in forest management, such as forest certification activities [30,33]. These variables may be interdependent, and they also vary over time, as ownership changes and institutional conditions change.

Interest in forest management planning can influence forest owners towards stewardship or certification programs [29]. Developing a forest-management plan is an important factor that indicates active forest owners [34]. On the other hand, forest certification can also encourage forest owners to become more active when they obtain a forest management plan through the certification process, thereby decreasing conservation values [15]. Active forest owners are more responsive to information regarding voluntary conservation. Therefore, the challenges relate to reaching passive forest owners [35]. Creamer et al. conclude that forest owners who focus on values other than income from production are less aware of forest certification, and further studies are needed to estimate how the forest owner's specific context impacts their understanding of certification [16]. Today, forest certification is well-established in the Swedish forest context, and forest owners with multiple objectives are just as likely to be aware about forest certification. Forest owners that don't experience the financial benefits of forest certification can still be interested in certification due to value alignment [24]. Contributing to environmental responsibility through certification is an important motive [11,36].

Knowledge about forestry can influence forest management strategy [31]. Many small private forest owners are assumed not to have the knowledge required to make an informed decision about forest certification. The knowledge exchange between forest owners and actors involved in the certification process is necessary for understanding the costs and benefits associated with forest certification [23]. The forest owners' association and other intermediary organisations are therefore important actors for enrolling and reaching out to forest owners [24,31]. Personal advice and information from government or forestry

professionals have also proven to be an effective way to promote more sustainable forest practices and policy [13].

2. Materials and Methods

2.1. Means–End Chain Theory

In order to understand small private forest owners' motives to adapt their forest management to a standard, it is assumed that they are aware of why they made the decision to become certified and also what the outcome of this decision has brought. A theory that helps us understand motives and objectives is the "Means–end chain theory"; the laddering technique is commonly the way to collect data when this theory is used [37].

Means–end theory is often applied to understand consumers' sustainable choices [38,39] and has also been used to study the adoption of sustainable agricultural practices [40,41]. People often makes decisions based on how well objects or activities (means) fulfil their inherent values (ends) [42]. Means–end chain theory is useful to understand how the attributes of used products or services are linked to perceived consequences and realised personal values [43]. Relationships are presented in a hierarchical value map [44]. The relationship among attributes, consequences and values can also be considered to be symmetrical instead of asymmetrical; therefore, van Rekom and Wierenga [45] recommend presenting the results as networks.

Reynolds and Olson (2001) suggest a subdivision of attributes into concrete and abstract, consequences into functional and psychological, and values into instrumental and terminal [43]. This study regards consequences as perceived benefits and disadvantages as well as emotions, and values as objectives or goals of the certification.

In this study, means–end theory helps explain motives for forest owners to become certified. The perceived attributes and consequences serve as indicators of forest owners' value fulfilment. The theory helps researchers to further understand why forest owners decide on forest certification. In this paper, forest certification is an activity with certain attributes that results in consequences which in turn can satisfy forest owners' personal values.

2.2. Laddering Interviews

Laddering interviews is an approach to utilise the means–end theory and gain an in-depth understanding [37]. The interviews are conducted with the intent to understand how attributes lead to the fulfilment of inherent values [43]. Laddering techniques differ from soft to hard laddering [46], where soft laddering is flexible and encourages the natural flow of the respondent through open-ended question, similar to in-depth interviews. Hard laddering, on the other hand, is a structured form of questions that impel respondents to construct ladders with more abstraction through, for example, self-administrated questionnaires. This project uses soft laddering, since it is recommended for a sample of approximately 20 respondents [47]. Empirical saturation can be achieved at an earlier stage, and smaller samples have been applied successfully in exploratory studies [48,49], which further supports the use of soft laddering in our project.

Attributes that are revealed are followed with probes about consequences and, later, how personal values are achieved by the presented consequences [44]. The interview therefore focuses on asking questions such as "How does this affect you?" and "Why is this important to you?". Thereby, the interviewer aims at an increased abstraction level in answers and understanding the reasons behind a decision [50].

2.3. Data Collection

The interviews started with an introduction to the study explaining the purpose, method (means–end and laddering) and why the participant had been contacted and asked to participate. This was followed by background questions about forest ownership, such as questions about the size of forest property, if forestry is the main occupation, possible co-ownership and membership in forest owners' association. The participants were also asked to elaborate on their forest ownership objectives. Then, questions related to

certification focusing on laddering were asked. Examples of questions to find attributes and consequences are: "Do you remember your experience of the certification process?", "How come you choose to join this group certificate?" and "Do you believe there is a difference between a certified forest owner and a non-certified forest owner?". Probes later used in relation to answers included: "What does this means for you?", "How does this affect you?" and "Why is this important for you?". The main elicitation technique used was free elicitation [46]. When respondents found it difficult to answer any questions, strategies for further probing, such as situational context: how they act in specific management situations considering the certification; third person: how other forest owner might view a specific problem; and absence of certification, would lead to other decisions; 'how would you have acted if you weren't certified?', was used [44].

Interviews (14) were carried out over the course of three months, December 2021–February 2022, with certified forest owners (Table 1). During the interview process, it became clear that that the participants were a relatively homogenous group, and information-rich interviews that led to empirical saturation could be achieved [48].

Table 1. Interviews carried out with certified forest owners.

Interview No.	Date	Data Collection	Gender	Certification
A	6 December 2021	Telephone	Male	PEFC
B	22 December 2021	Face to Face	Male and female	PEFC
C	7 January 2022	Face to Face	Male	PEFC
D	21 January 2022	Telephone	Male and female	PEFC
E	24 January 2022	Video call	Female	PEFC
F	27 January 2022	Telephone	Male	FSC & PEFC
G	31 January 2022	Video call	Male	FSC & PEFC
H	1 February 2022	Video call	Male	FSC & PEFC
I	3 February 2022	Video call	Male	FSC & PEFC
J	3 February 2022	Video call	Female	FSC & PEFC
K	8 February 2022	Video call	Female	FSC & PEFC
L	9 February 2022	Telephone	Female	FSC & PEFC
M	10 February 2022	Telephone	Female	FSC & PEFC
N	14 February 2022	Video call	Female	FSC & PEFC

Each interview lasted between 40–70 min and was conducted face to face, over the telephone or as video calls depending on the participant's request. The sampling was based on a procedure to find variation among participants in relation to factors such as property size, gender and whether the owners are living on the estate and list forestry as a main income. This can also be described as a sampling for maximum variation that aims at finding participants that reflects different perspectives based on the investigated criteria [51]. Sampling occurred through contacting possible participants from contact lists received from forest owners' associations (Norra Skog and Södra) and permission to advertise in Facebook groups for forest owners (Spillkråkan and Skogens Mångbruk) for the purpose of reaching different categories of forest owners. An introduction email was first sent out informing potential participants about the study and asking for participation in the study. The participants that agreed were asked to sign a consent form informing them about their rights in this study. Permission to record and transcribe the interview was requested, and confidentiality was assured during the data collection, analysis and writing.

2.4. Data Analysis

The recorded interviews were transcribed and imported to NVivo for thematic analysis. The most common way to produce codes of laddering interviews is through content analysis [44]. Due to this study's explorative and qualitative approach, thematic analysis was deemed appropriate to analyse this context-based data [52]. The different themes found were considered to include the same meaning and were coded to specific elements. These elements were related to the means–end chain by deciding if they were an attribute,

consequence or value. The coding process was completed in an iterative manner, where the text was first coded as an element, and then text passages were read through several times for consistency [44]. Codes with similar content and meanings on the same level were merged for a descriptive but manageable number of elements. The taped and transcribed interviews made it possible to understand answers' and ladders' context dependency [46]. The context therefore determines an element assignment as an attribute, consequence or value and is based on the inherent meaning of answers by participants [44].

NVivo was used to find the frequency of the codes related to each respondent, using the tool for Matrix Coding Query. Ladders could then be found for each respondent going through the transcribed interviews using NVivo coding tools for queries and coding stripes. Found ladders were given a value for a direct (1) or an indirect (0,1) relationship in the implication matrix for each respondent. The individual ladders were aggregated in a summarised implication matrix, displaying ladder relationships for all respondents. The ladders demonstrate if a relationship is found between the elements among the whole population of participants. Ladders and relationships that are traced in the interview can occur several times for one participant; this depends on the length of the interview and the use of particular wordings. For that reason, a concept is only counted once in the implication matrix of this project to avoid distortion in the hierarchical value map as suggested by Reynolds and Gutman [44]. Based on the summarised implication matrix (for different groups), hierarchical value maps were constructed. Reynolds and Gutman [44] recommend trying several different cut-off levels to find the most informative and stable value map. A cut-off level of two was chosen, excluding any relationship that was not mentioned by at least two participants. The aim with the chosen cut-off level was to find a descriptive but not to complex value map [53]. Hierarchical value maps for groups of respondents that were considered to be relatively homogenous were constructed [46].

Grunert and Grunert [54] write that laddering either aims at capturing the motives of the participants (motivational view) or at capturing the cognitive structure behind a decision (cognitive structure view) [54]. The cognitive structure view includes presenting different abstraction levels. Therefore, different measures for ensured validity are necessary during data collection and analysing and presenting the results; in Table 2, the measures taken in this study are presented based on Grunert and Grunert [54].

Table 2. Criteria for validity in laddering data collection and analysis.

Criteria for Validity Adapted by Grunert and Grunert [54]	Procedure for Ensuring Validity in this Study
The collected data are a result of the participants cognitive structures and processes and not the researchers.	Open-ended question started the interview that was flexible and followed the participant's lead based on an exploratory approach.
The data collection should only use processes that are familiar and well-known by the participants.	All participants in this study had gone through the certification process and had experience of being a certified forest owner.
Coding should preferably be based on established cognitive structures from previous research and study participants.	The coding is based on themes found in the literature review divided into attributes, consequences and values.
The algorithm for aggregation should be based on relevant theories.	NVivo was used for analysing, finding ladders and describing the data.

Since the aim of this study is to explain motives and objectives, it utilises a combination of the motivational and the cognitive structure view. However, because the result aimed at presenting hierarchal value maps, following the procedure for cognitive structure was deemed as most appropriate. Thematic coding and NVivo were used for analysing the data with the main purpose of maintaining the qualitative aspects of the study when aggregating and presenting the data.

3. Results

3.1. Elements

The interviewed forest owners were either PEFC or FSC and PEFC certified, two were not members in forest owners' associations and 12 were members. Six women, six men and two couples participated. Six forest owners had forestry as a primary occupation and eight had other occupations. The group of forest owners participating owned larger forest areas and included more female forest owners than to the general population of Swedish forest owners according to statistics from the Swedish Forest Agency (Table 3) [3].

Table 3. Description of participants in this study compared to Swedish forest owners' statistics [3].

	Study Participants	Swedish Forest Owners
Female and male forest owners' distribution	43% men, 43% women and 14% couples	60% men and 38 % women
Mean age (years)	59	61
Mean forest areal size (hectares)	233	34
Forest owners living close, respectively, within a distance to their forests	64% living close to their forest, and 36% living in distance to forest	68% living close to their forest, and 26% living in distance to forest

The interviewed participants identified a variety of important aspects in relation to forest certification. In total, 29 elements were found, consisting of seven attributes, fourteen consequences and eight values or goals. Goals and objectives that forest certification was considered to contribute to were classified as values, since they required a higher level of abstraction of the participants and could, in some cases, be interpretated as being linked to values that the participant in some cases found it difficult to express.

The number of participants mentioning an element or the frequency of a specific element in the data set indicates the importance of the elements [39]. The frequency among the responses shows that the attributes (element 1–8) mentioned by most participants were rules and regulations (14), with a total frequency of 29 times; voluntary set-asides (13), found 21 times; and price premium (11), a theme that was talked about 22 times (Table 4).

Table 4. Frequency of attributes mentioned in interviews with participants.

Element Number	Attribute	Number of Participants Mentioning the Attribute	Frequency of Attribute among Participants
1	Voluntary set-asides	13	21
2	Forest management plan	7	10
3	Continuous forest cover management	5	8
4	Ecolabel and traceability	7	8
5	Price Premium	11	22
6	Rules and regulations	14	29
7	Auditing	2	2

Consequences (element 8–21) mentioned by all participants were: market demand and competitiveness and environmental considerations, with frequencies of 27 and 29, respectively. The most frequently mentioned consequence was credibility and legitimacy, mentioned 30 times by 13 of the interviewees (Table 5).

Values or objectives (element 22–29) that are important for the participants were knowledgeable and accomplished forest owner, mentioned by 11 participants 28 times, and the pride of being a good forest owner, mentioned by 10 participants 21 times. Eight participants talked about environmental interest as important, resulted in a frequency of 32 times (Table 6).

Table 5. Frequency of consequences mentioned in interviews by participants.

Element Number	Consequence	Number of Participants Mentioning the Consequence	Frequency of Consequence among Participants
8	Financial benefits	12	26
9	Difficult to comply with rules and regulations	6	16
10	Knowledge about forestry certification	8	16
11	Acknowledgment of doing the right thing	6	7
12	Easy to comply with rules and regulation	11	20
13	Market demands and competitiveness	14	27
14	Environmentally consideration	14	29
15	Decreased autonomy	5	11
16	Increased financial cost	5	16
17	Autonomy	4	5
18	Forest management tool	8	13
19	Social consideration	8	12
20	Solidarity with forest owners' association	9	16
21	Credibility and legitimacy	13	30

Table 6. Frequency of values mentioned in interviews with participants.

Element Number	Value	Number of Participants Mentioning the Value	Frequency of Value among Participants
22	Pride of being a good forest owner	10	21
23	Environmental interested and motives	8	32
24	Emotionally connected to forest	3	8
25	Knowledgeable and accomplished forest owner	11	28
26	Long term perspective	8	20
27	Increased self esteem	2	2
28	Forest ownership as a lifestyle	3	5
29	Financial reasons to own forest	2	3

3.2. Hierarchial Value Map

The implication matrix summarises individual ladders that occurred among participants for the purpose of finding relationships between the elements (Appendix A). A hierarchical value map was created to identify the direct and indirect relationships illustrated in the implication matrix (Appendix B). Attributes, consequences and values or objectives are represented by different forms in the map. The legends related to the thicknesses of the arrows representing the strength of the relationships; weak connections were mentioned by two to four participants, medium connections by four to six participants and strong connections by more than six participants are explained in Figure 1 to support Figures 2–5.

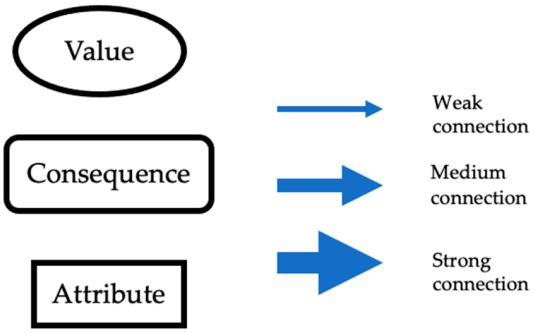

Figure 1. Legends of symbols used in hierarchical value map.

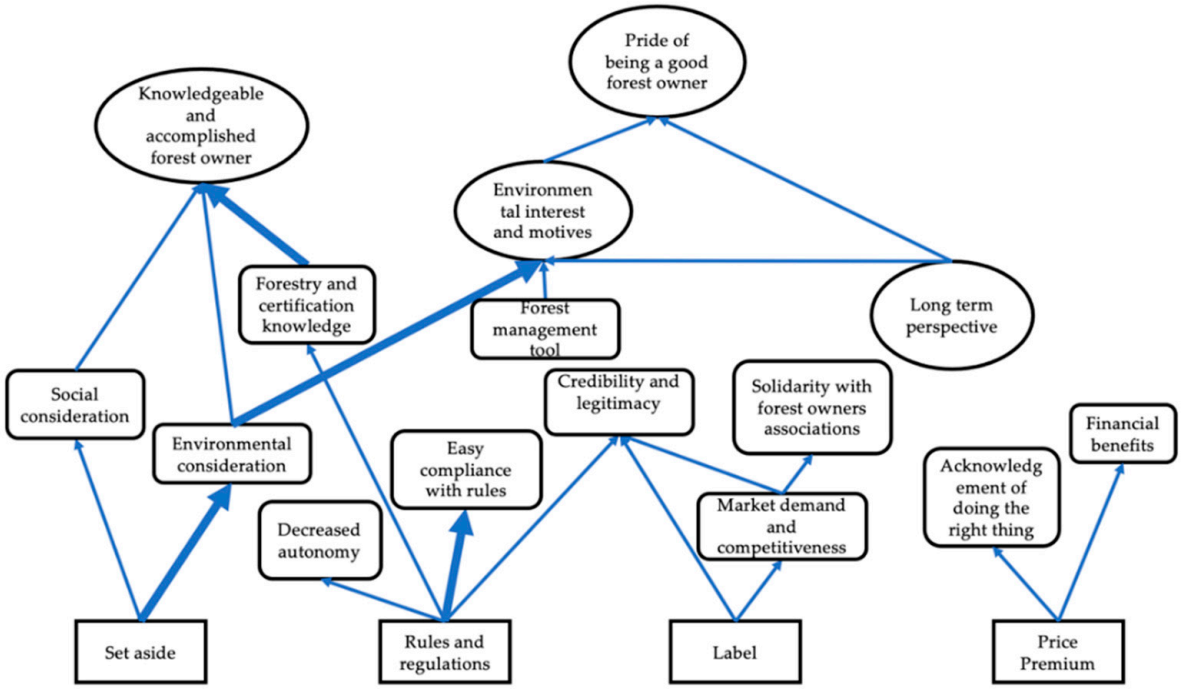

Figure 2. Hierarchical value map for women (N = 6).

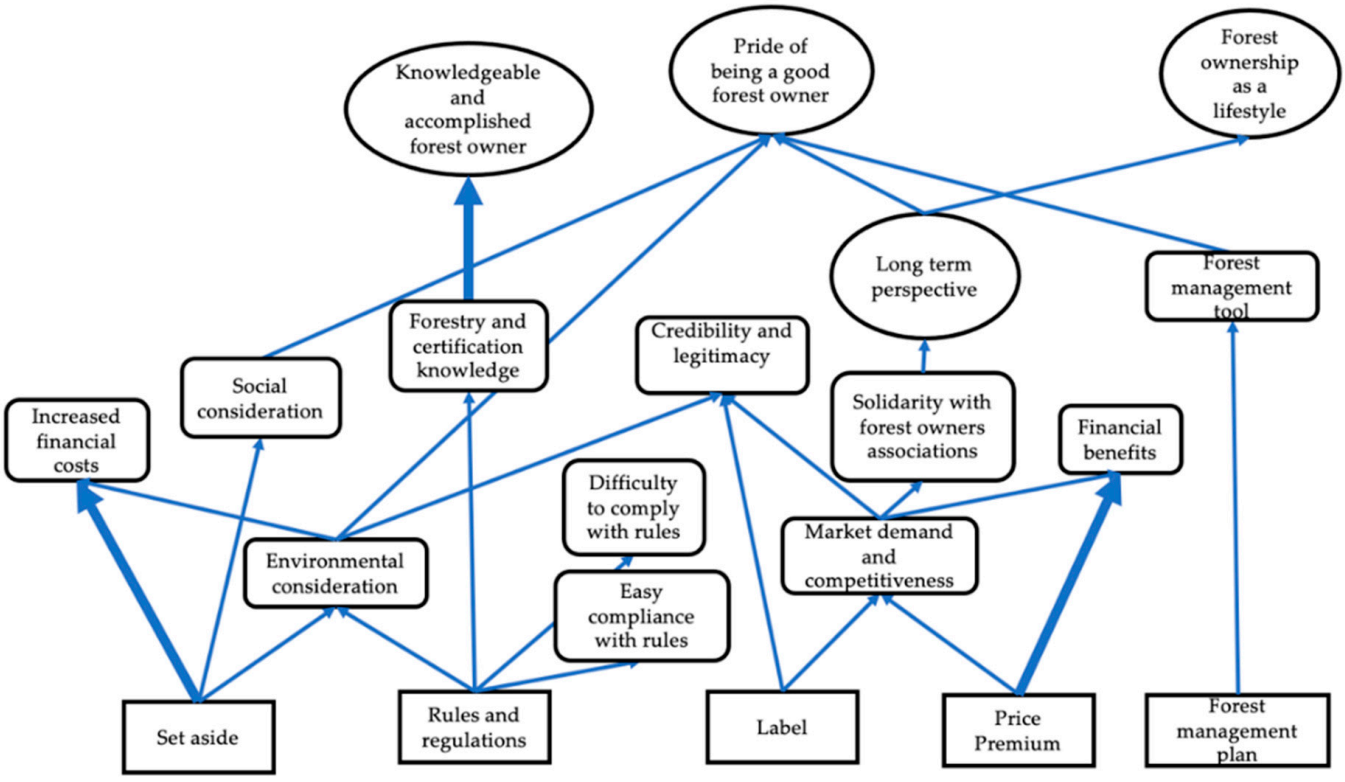

Figure 3. Hierarchical value map for men (N = 6).

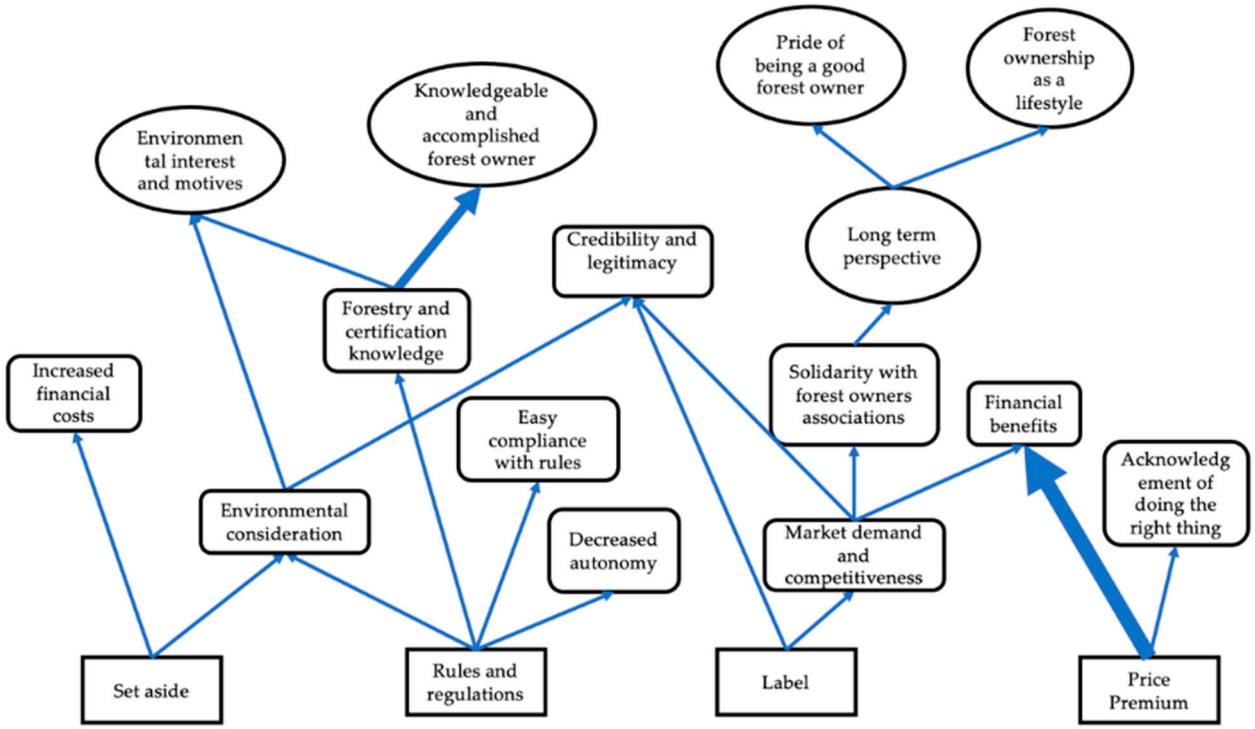

Figure 4. Respondents with forestry as primary occupation and income (N = 6).

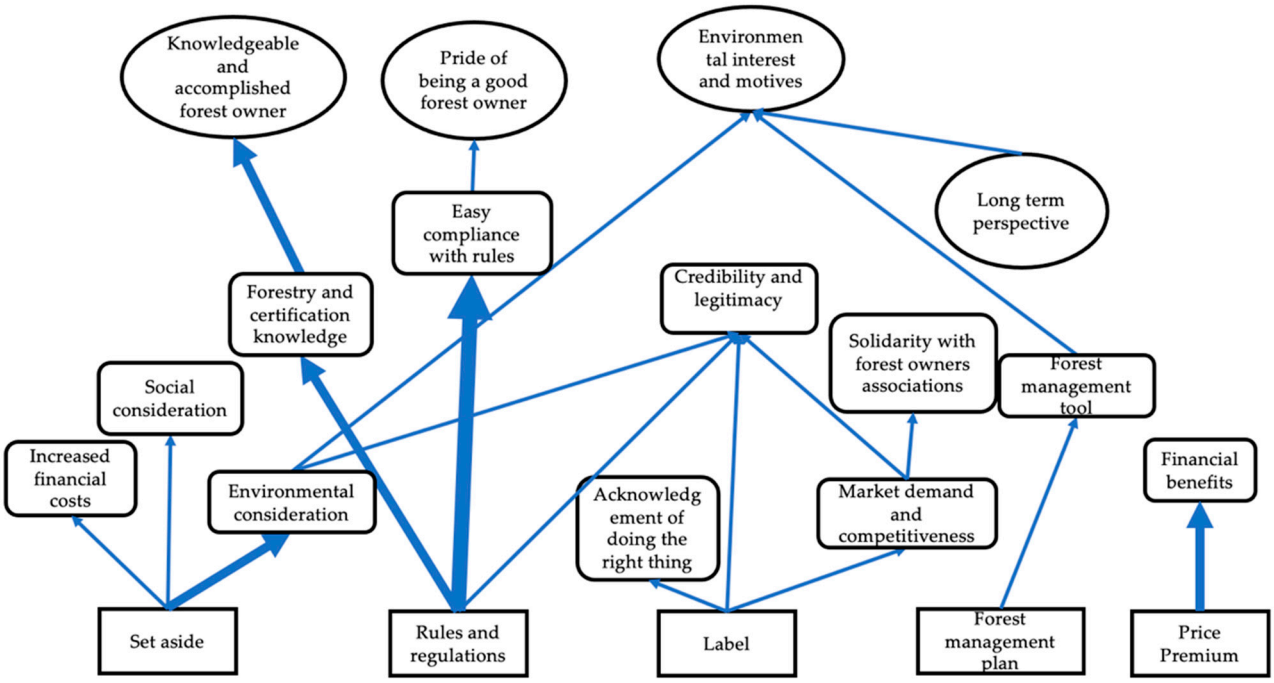

Figure 5. Respondents with other occupations and income than from forestry management (N = 8).

The hierarchical value maps (Figures 2–5) that were generated aimed at capturing important demographic aspects of contemporary small forestry owners and, thereby, their reasons to join a certification scheme. The literature review revealed that important aspects related to certification were gender [32,33] and whether forestry was a primary occupation, as well as property size [29,31]. Hierarchical value maps were therefore created for these groups: women and men, respectively, forestry as a primary income and other occupation

(Sections 3.2.1–3.2.4). The two interviewed couples were for simplicity reason excluded from the hierarchal value maps for men and women.

3.2.1. Certified Female Forest Owners

For the group of women participating (N = 6) in this study, price premiums led to financial benefits and were seen as an acknowledgement of doing the right thing as a forest owner (Figure 2).

Being certified was something you did as a member of a forest owners' association due to market demand and competitiveness. Forest certification was also viewed to increased credibility and legitimacy for forest owner as a group:

> *"The symbolic value of demonstrating environmental consideration while also producing timber."* (Participant M)

The female respondents did not view the forest management plan as a strict tool that they had to follow, instead some of them had other planned activities for increased environmental or social consideration. Certification was therefore seen as a forest management tool to achieve fulfilment of environmental interest and motives. This was a goal and value also linked to a long-term perspective and pride of being a good forest owner.

> *"To have guidelines for managing the forest closer to nature . . . . It feels good to know that there are some areas that I care about that are protected. So, it helps to, a motivation, for conserving areas that are special to me."* (Participant N)

> *"But with certification then they (the entrepreneurs) must be certified as well and then you don't have to discuss those aspects like not driving across streams or if a deciduous tree should be left. So, I believe it is a support in forest management."* (Participant L)

Being a knowledgeable and accomplished forest owner was related to environmental and social considerations and knowledge about forestry and certification. This, in turn, could be achieved by understanding of the certification rules and regulations. Female participants found it somewhat easy to comply with the rules and regulation of forest certification. However, some participants described how it decreased autonomy and restricted some of their plans for sustainability activities:

> *"It is not only about following the management plan according to environmental consideration then you also have to consider timber production activities and that is not always easy if you have other ideas."* (Participant J)

Interviewed female certified forest owners express environmental interest as part of their understanding of what it means to be a good forest owner.

3.2.2. Certified Male Forest Owners

For the group of men (N = 6) participating, set-asides were viewed to result in environmental and social consideration but also increased costs (Figure 3).

Men participating in this study differed in their views on how easy or difficult it was to follow certification rules and regulations. Men that perceived the rules as complicated and difficult questioned if the end result contributed to environmental consideration and increased biodiversity:

> *"The latest changes mean a decrease in timber production without any environmental benefits."* (Participant F)

Some men participating experienced increased forest and certification knowledge that led to the goal of being an accomplished forest owner:

> *"As a certified forest owner, I have an increased understanding of the certification standard and its benefits . . . . I appreciate the associations business model that focus on certification."* (Participant C)

Credibility and legitimacy were viewed as an important market aspect and dependent on forest owners taking environmental consideration and being certified and able to sell

certified timber. For men, price premiums result in financial benefits directly and indirectly through market demand and competitiveness, and being certified is a result of market demands and showing solidarity for the forest owners' association:

> *"It is for the whole forest sectors sake and in the association, we own the industry so then it is beneficial that our organisation and products has a good label."* (Participant F)

Moreover, the importance of having a long-term perspective as a forest owner resulted in the pride of being a good forest owner and forest ownership as part of a lifestyle:

> *"I believe it is a quality-stamp that can let you rise above the rest . . . . For self-esteem! But it doesn't work without carrots, meaning money. I am not so naïve I believe that you can live on feelings, but it makes you feel good."* (Participant G)

Male participants saw the importance of a forest-management plan as a tool for forest management and part of the pride of being a good forest owner as being related to being the steward of a well-managed forest. The pride of being a good forest owner also comes from taking environmental and social consideration and having a long-term perspective. These elements are important aspects when forest ownership is seen as part of a lifestyle and identity.

3.2.3. Certified Forest Owners with Forestry as a Primary Occupation and Income

Hierarchical value maps were created for forestry owners where forestry was their primary occupation and an important source of income (N = 6) and those forest owners that that had other occupations and incomes (N = 8). Forest owners with forestry as their main occupation owned forest property between 110–600 hectares with a mean value of 354 hectares, five of them also combined forestry with agricultural practices.

Although certification rules and regulations were considered relatively easy to follow by this group, they were also considered to lead to decreased autonomy (Figure 4).

Set-asides imply increased financial costs, since areas are not available for timber production. The strongest link was between the price premiums and financial benefits and could be considered to somewhat make up for a loss of timber production. Price premiums received for forest certification were seen as an acknowledgement of doing the right thing:

> *"That these aspects of forest ownership are now valued!"* (Participants B)

It is important to be a knowledgeable and accomplished forest owner. Environmental interest and motives are important and achieved through forestry and certification knowledge and environmental consideration. Increased forestry certification and knowledge thereby links knowledgeable and accomplished forest owners to finding environmental interest and motives as important.

Forest certification can contribute to credibility and legitimacy through environmental consideration, label and traceability, and market demand and competitiveness. Being certified is also a part of being a member in a forest owners' association and showing solidarity with the association:

> *"It is part of the development in society, that you need to have paper traceability of what you do and how it has been done."* (Participants D)

Solidarity with forest owners' associations is related to a having a long-term perspective; this is important when forest ownership is seen as a lifestyle and results in the pride of being a good forest owner.

3.2.4. Certified Forest Owners with Other Occupation and Income

Forest owners with other occupations and incomes owned forest property of sizes between 25–237 hectares, with a mean value of 143 hectares, thereby having smaller properties to those that had forestry as a primary occupation. Five of the forest owners in this group did not live in close proximity to their forest holdings (Figure 5).

Forest management planning through certification was, for this group, an important forest management tool that was utilised to achieve their objectives for environmental interest and motives:

> *"It became clearer and easier to point out any (environmental and social) consideration."* (Participant K)

A central concept for this group also related to the value of a long-term perspective and a result of environmental considerations through set-asides:

> *"I must think about that the forest I own is the natural environment for animals and plants and if I do a clear-cut how will this affects them . . . . So, there is not only financial aspects of forest ownership, especially for a small forest owner."* (Participant E)

Set-asides also tend to be associated with social consideration and increased financial costs through the loss of timber production. However, this group found it relatively easy to comply with rules and regulations in many cases, since their forest management and practices were already aligned with many of the standard rules, confirmed by the certification process, related to the pride of being a good forest owner:

> *"I might have done these set-asides anyway, so it is a bonus to receive a price premium . . . . It was just a feeling that I had, that it was the right thing to do."* (Participant H)

Rules and regulations also provide the forest owners with increased forestry and certification knowledge as part of the goal of being a knowledgeable and accomplished forest owner.

Figure 5 shows how certification is a tool for the acknowledgement of being a responsible forest owner and important for credibility and legitimacy in the forest sector. Moreover, the current market demands involve forest owners to show solidarity with forest owners' associations in market development.

4. Discussion

The aim of this study was to explain the motives and reasons for forest certification by further understanding forest owners' objectives to forest certification and how they experience the effect on their forest management strategy. Means–end theory and laddering interviews were helpful for gaining in-depth context-based knowledge about forest owners' views regarding forest certification. The interview showed that the participating certified forest owners aspire to be educated and responsible forest owners and certification can help with the fulfilment of several goals and objectives related to that aspect of being a good forest owner. Forest certification is, therefore, seen as means to increase knowledge about sustainable forest practices and to verify sustainability commitments, which support findings by Paluš et al. [55].

The means–end theory and laddering method meant going from a qualitative approach with in-depth interviews to a quantitative presentation of the findings with the aim to create a visual for a presentable overview of the data analysis. This also means that the significance of some of the qualitative aspects, such as nuances and context, were diminished. To reduce the loss of qualitative characteristics, a qualitative analytic tool was used, and complementary quotes were presented in the findings.

The use of different channels for sampling was completed with the aim to find participants with different motives to enrol in forest certification. As it turned out, the majority of participants were members of forest owners' associations and had often been encouraged to become certified through their membership. However, the difference in the sampling procedure when contacting forest owners directly from a contact list and advertising in forest owners' networks was that the forest owners themselves took initiative for the interview provided in the study, with participants from groups with different interest in and willingness to talk about forest certification. This also contributed to the aim of finding participants with different perspectives.

The participants owned considerably larger forest areas than the mean Swedish forest area size, which can be explained partly by the fact that forest owners with smaller holdings might not always see the benefits of forest certification and a forest management plan.

Intermediary organisations are important for the enrolment in forest certification programs, as they build social capital and provide services and certification support at low costs. These organisations also act as spokespersons for forest owners in standard-setting programs reported by Boakye-Danquah and Reed [24]. This is can also be said to be true for forest owners' associations in this study. Forest owners here expressed solidarity toward the forest owners' associations as an answer to market demand and maintained legitimacy and credibility. The role of forest owners' associations to support organisation for forest owners has been very clear historically for generations of forest owners that live off the incomes from their forests. However, as more forest owners have income from other sources and may not live near the forest they own, it becomes more difficult for forest owners' associations to reach these forest owners [56]. The combination of joining a group certificate through a forest owners' association and thereby creating the sense of belonging and togetherness was attractive to forest owners. Forest certification can confirm that a person, as a forest owner, is a good caretaker and steward of their forest. This can fulfil goals and values that provide a sense of belonging and increased self-esteem and that that person as a forest owner belongs to a group with shared responsibility for a nature-based resource.

Previous research by Umaerus et al. [32] has shown differences between how women and men perceive environmental and social values; women are more prone to incorporating multiple objectives in their forest management. In this study, environmental interest and motives are shown as more central for women. Men participating in this study had environmental interest and output-oriented motives with their forest certification. In terms of finding relationships, women had a clearer cognitive path to how forest certification could fulfil environmental goals and values. Both groups of participating female and male forest owners connected financial benefits with receiving a price premium for being certified and therefore might have financial reasons for being certified, which supports findings by Lidestav and Berg Lejon [34]. This study also points to the fact that the interviewed women did not see any connection between set-asides and expectations of increased financial cost. Their intrinsic motive might therefore lead to more positive views towards forest certification requirements. Contrary to previous studies by Polome and Rabotyagov and Lin [14,57], this study shows that receiving a price premium was associated with 'doing the right thing'. That means that the intrinsic motives do not necessary reduce the importance of the financial benefits from the certification of male or female forest owners.

The sense of being a good forest owner and taking pride in that was important for many interviewed forest owners. However, what responsibility involves and the view of what being a 'good forest owner' is differs among forest owners [17]. This is also the case for the interviewed forest owners in this study. For female forest owners, being a good forest owner is related to satisfying environmental interests and motives and having a long-term perspective on forest ownership. Forest certification can function as a forest management tool that helps with the fulfilment of environmental interests. For men, a good forest owner is the result of considering environmental and social aspects, having a long-term perspective and a well-managed forest achieved through a forest management plan and not directly related to forest certification. Forest certification might not necessarily lead to increased forest harvesting among female respondents' based on the fact that they had other expectations regarding their forest management than following the required forest management plan. On the other hand, forest certification can confirm the status of being an active and knowledgeable male forest owner, as suggested by Lidestav and Berg Lejon [33].

For forest owners that had forestry as their primary occupation, taking pride in being a capable forest owner was important; this understanding comes from a long-term perspective, inheriting and passing the forest on to future generations aspects that increases likelihood for viewing forest certification as important [30]. Thus, it can be important to

be involved in a forest owners' association, sharing a common view on what it means to be a forest owner today. For this group, a forest-management plan as a tool for forest management was not mentioned as important and is therefore missing in the hierarchical value map. This indicates that the objective of this group is being self-sufficient and knowledgeable forest owners as part of having forest ownership as a lifestyle.

For the group with other occupations and incomes, a good forest owner takes pride in managing the forest in a way that makes it easy to comply with the rules and regulations of the certification standard. Here, forest certification is an acknowledgement of doing the right thing and points to value alignment by committing to sustainable development [11]. However, easy compliance with rules and regulations can also be a result that this group of forest owners feels that they buy as service of forest certification provided by timber procurers and certification organisations.

There is a delicate balance between being part of a voluntary organisation, a forest owner organisation, and being told what to do, as in the case of a certification procedure. Forest certification may decrease the autonomy of the forest owner, which is necessary for validating consideration measures taken, thereby positioning small forest ownership in society [58]. This is where a forest owners' association may play an important role, as a team coach where experiences are shared, and support is offered.

5. Conclusions

This paper resulted in findings that showed the cognitive structure of certified forest owners through laddering aiming at finding attributes, consequences and values. In many cases, values are represented by their motivations as goals and objectives, due to the fact that intrinsic values were in some cases difficult to encourage the participant to elaborate on. Objectives of forest certification are connected to objectives with the choice of forest management strategy and therefore well suited to the aim of the study.

Being a certified forest owner is a formal acknowledgment of sustainable development and a demonstration of the motives of being a responsible forest owner. Key contributions from the empirical findings in this study relate to further understandings of the motives for certification:

- Taking pride in being a forest owner is important to forest owners, and this study shows that forest certification can be a part of that. Being proud of how the forest is managed means different things to different forest owners. For the interviewed women, the motives were associated with an internal understanding of doing environmental good. The interviewed men, on the other hand, were motivated by the external confirmation of being professional in environmental management. As forest owner group characteristics shift towards more heterogeneity, they raise the need to understand the different kinds of needs and support measures for taking pride in forest management.
- Different groups of forest owners have different motives for and experiences of forest certification. If forest certification is regarded as a service offered to forest owners, there might be the need to differentiate between that offering and the type of service that needs to be included. For interviewed forest owners that have the forest as a primary income, the notion of a certification can be more of an infringement on their management choices. For forest owners that are less dependent on the forest for their livelihood, certification rules may serve as sustainable forestry management guidance.
- Independent of motives for forest certification price premiums is, today, in many cases, an expected benefit of becoming certified. This price premium is also an acknowledgement of and recognition for 'doing the right thing'.

The implications of this study relate to the greater understanding of what forest owners want to achieve when becoming certified and what they need in that process. Many forest owners want to be knowledgeable and responsible forest owners; therefore, they need to have enough information about certification to be able make the right decisions. During the interviews, it was also clear that they wished for a better understanding of how they

contribute to sustainable development. It is hard to see the connection between the effects in society at a national level and the actions taken at a local level. In short, the importance is attributed to the outcomes of certification. These needs point to the importance for organisations involved in forest certification to be more visible and informative.

The motives for forest certification as well as the objectives of forest ownership depend on factors related to the forest owner, such as gender and occupation. Forest owners as a group are becoming more heterogenic and will have varied ideas about their forest owner identity [59]. The new types of forest owners might not value forest certification for its contribution to forestry income. Rather, the role of forest certification will depend on how it is viewed in relation to sustainable development.

Many of the participants were glad to talk about forestry and forest certification, and the interview often touched upon the subject of sustainable development in forestry and the current debate about society's view on forestry and how this affects small private forest owners. There seems to be confusion concerning how to act responsibly as a forest owner.

Sincere interest in the subject matter in this project, and also for future research concerning effects at the business, local, national and international levels of the effects of certification, was expressed by the interviewees. Furthermore, the results of this study point to the fact that the reasons behind forest certification might vary between members and non-members of forest owners' associations. Therefore, it would be interesting to further investigate and compare these two groups.

Author Contributions: Conceptualisation, A.T. and C.M.-H.; methodology, A.T. and C.M.-H.; software, A.T.; validation, A.T.; formal analysis, A.T. and C.M.-H.; investigation, A.T.; resources, A.T. and C.M.-H.; data curation, A.T. writing–original draft preparation, A.T. and C.M.-H.; writing–review and editing, A.T. and C.M.-H.; visualisation, A.T. and C.M.-H.; supervision, C.M.-H.; project administration, A.T.; funding acquisition, A.T. and C.M.-H. All authors have read and agreed to the published version of the manuscript.

Funding: This project was carried out as a part of a PhD program at the Forest as a Resource Industrial Research College (FORIC) at Mid Sweden University. Funding has been obtained from The Knowledge Foundation, the Brattås Research Foundation, and the Norra Skogs Research Foundation.

Institutional Review Board Statement: Not applicable for studies not involving humans or animals.

Informed Consent Statement: Informed consent has been attained for each interview in the project as part of a verbal agreement at start of each interview. Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Not applicable.

Acknowledgments: The authors want to thank the funding agencies, The Knowledge Foundation, the Brattås Research Foundation and the Norra Skogs Research Foundation for funding this study. We would also like to express our gratitude to the respondents in the project for sharing their valuable time and understanding. In addition, thanks to the forest owner networks Spillkråkan and Skogens Mångbruk for the possibility to advertise for participants on their Facebook pages and to the staff of the forest owners' associations, Norra Skog and Södra Skogsägarna, for the contact list of forest owners. And, last but not least, thank you to the editor and reviewers for their constructive feedback in the publication process.

Conflicts of Interest: The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

Appendix A

Table A1. Summarised implication matrix for all participants in this study.

	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	V22	V23	V24	V25	V26	V27	V28	V29	Total
A1			1		1		8	1	4	1		3		1	1.2	1.3	1.1	1.1	0.1				24.8
A2			2				1				3					0.1		0.3					6.4
A3		1							1			1.1				1		1					5.1
A4	1	1		2		5							1	6									16
A5	10			3		2								1									16
A6		2.4	6.1		8.1	1	3	3.1	1			0.1		3.1	1	1		0.7	0.1				30.7
A7			1															0.1					1.1
C8																	1					1	2
C9								1	1													0.1	2.1
C10														1		2		9.2				1	13.2
C11																							
C12														1	2	1							4
C13	2			1									4	4					1		0.1		12.1
C14				1		1		1	2				1	4	2.1	5.1		2	1.1				20.3
C15																							
C16													1									1	2
C17																1	1			1	1		4
C18			1				1								2	2		1					7
C19								1							2			2	1				6
C.20																	1		2				3
C21													1							0.1			1.1
V22																	1			1			2
V23															2	1			1				4
V24																			1				1
V25										1					1	1							3
V26															2	2	1				2		7
V27																							
V28																							
V29																							
Total	13	4.4	11.1	7	9.1	9	13	7.1	9	2	3	4.2	8	21.1	15.3	18.5	6.1	17.4	7.3	2.1	3.1	3.1	193.3

Appendix B

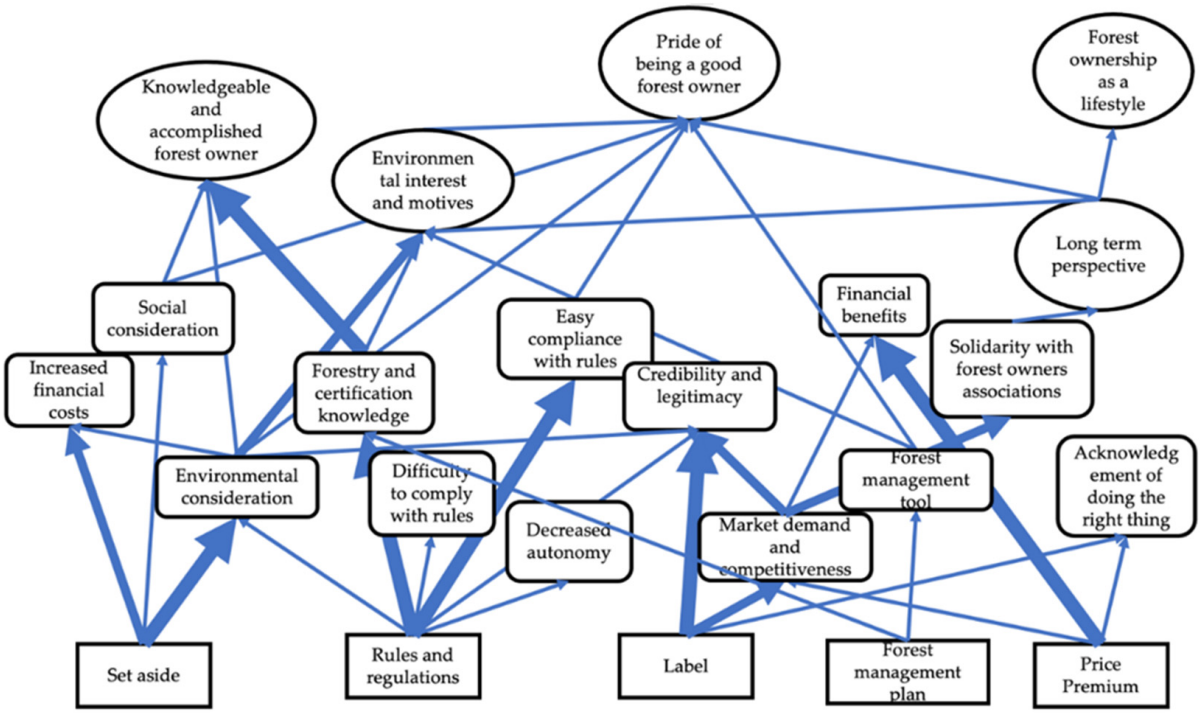

Figure A1. Hierarchical value map for all participants (N = 14).

References

1. Vidal, N.; Kozak, R. The recent evolution of corporate responsibility practices in the forestry sector. *Int. For. Rev.* **2008**, *10*, 1–13. [CrossRef]
2. D'Amato, D.; Veijonaho, S.; Toppinen, A. Towards sustainability? Forest-based circular bioeconomy business models in Finnish SMEs. *For. Policy Econ.* **2020**, *110*, 101848. [CrossRef]
3. The Swedish Forest Agency. Property and Ownership Structure in Forestry 2020. 2020. Available online: https://www.skogsstyrelsen.se/globalassets/statistik/statistiska-meddelanden/jo1405-statistiska-meddelanden-fastighets--och-agarstruktur-i-skogsbruk-2020-uppdaterad20211013.pdf (accessed on 14 November 2021).
4. Baumgartner, R.J. Sustainable Development Goals and the Forest Sector—A Complex Relationship. *Forests* **2019**, *10*, 152. [CrossRef]
5. Tröster, R.; Hiete, M. Success of voluntary sustainability certification schemes—A comprehensive review. *J. Clean. Prod.* **2018**, *196*, 1034–1043. [CrossRef]
6. FSC. FSC-Certifierad Areal per Certifikatstyp. 21 June 2017. 2021. Available online: https://se.fsc.org/preview.fsc-certifierad-areal-per-certifikatstyp-2017.a-1074.pdf (accessed on 14 November 2021).
7. PEFC. Statisitiksammanställning 202. 14 Septermber 2020. 2021. Available online: https://cdn.pefc.org/pefc.se/media/2021-02/986bef01-340b-4825-96eb-3b7d65641d58/a19042eb-c1d6-5e76-911a-60260abcf50f.pdf (accessed on 14 November 2021).
8. Toppinen, A.; Mikkilä, M.; Tuppura, A.; de Vries, G. Sustainability as a Driver in Forestry-Related Services. In *Services in Family Forestry*; Springer: Cham, Switzerland, 2019; pp. 289–306.
9. Lähtinen, K.; Toppinen, A.; Mikkilä, M.; Toivio, M.; Suur-Uski, O. Corporate responsibility reporting in promoting social license to operate in forestry and sawmilling industries. *Forestry* **2016**, *89*, 525–541. [CrossRef]
10. Ambrose-Oji, B.; Atkinson, M.; Petrokofsky, G.; Hemery, G. Do Environmental Worldviews and Distrust Influence Action for Adaptation to Environmental Change Among Small-Scale Woodland Managers? *Small-Scale For.* **2020**, *19*, 159–185. [CrossRef]
11. Crow, S.; Danks, C. Why Certify? Motivations, Outcomes and the Importance of Facilitating Organizations in Certification of Community-Based Forestry Initiatives. *Small-Scale For.* **2010**, *9*, 195–211. [CrossRef]
12. Bensel, T. Promoting Certified Sustainable Forestry on Private Woodlots in North-western Pennsylvania: Challenges and opportunities. *Local Environ.* **2001**, *6*, 257–278. [CrossRef]
13. Hysing, E.; Olsson, J. Sustainability through Good Advice? Assessing the Governance of Swedish Forest Biodiversity. *Environ. Politics* **2005**, *14*, 510–526. [CrossRef]
14. Polomé, P. Private forest owners motivations for adopting biodiversity-related protection programs. *J. Environ. Manag.* **2016**, *183*, 212–219. [CrossRef]

15. Johansson, J.; Lidestav, G. Can voluntary standards regulate forestry?—Assessing the environmental impacts of forest certification in Sweden. *For. Policy Econ.* **2011**, *13*, 191–198. [CrossRef]
16. Creamer, S.F.; Blatner, K.A.; Butler, B.J. Certification of family forests: What influences owners' awareness and participation? *J. For. Econ.* **2012**, *18*, 131–144. [CrossRef]
17. Uggla, Y. Negotiating responsible forestry: Forest owners' understanding of responsibility for multiple forest values. *Environ. Sociol.* **2017**, *4*, 358–369. [CrossRef]
18. Rametsteiner, E.; Simula, M. Forest certification—An instrument to promote sustainable forest management? *J. Environ. Manag.* **2003**, *67*, 87–98. [CrossRef]
19. Karppinen, H.; Dhubháin, N.; Butler, B.J. *Family Forest Owners' Changing Values and Other Service-Demand Drivers*; Springer: Cham, Switzerland, 2019; pp. 83–102.
20. Cashore, B.; Egan, E.; Auld, G.; Newsom, D. Revising Theories of Nonstate Market-Driven (NSMD) Governance: Lessons from the Finnish Forest Certification Experience. *Glob. Environ. Politics* **2007**, *7*, 1–44. [CrossRef]
21. Keskitalo, E.C.H.; Lidestav, G.; Karppinen, H.; Zivojinovic, I. Is There a New European Forest Owner? The Institutional Context. In *Globalisation and Change in Forest Ownership and Forest Use: Natural Resource Management in Transition*; Palgrave Macmillian: London, UK, 2017; pp. 17–56.
22. Wyatt, S.; Bourgoin, L. Certifying Small-Scale Private Forests in Eastern Canada: What Does It Take to Make It Happen? *Soc. Nat. Resour.* **2010**, *23*, 790–800. [CrossRef]
23. Leahy, J.E.; Kilgore, M.A.; Hibbard, C.M.; Donnay, J.S. Family Forest Landowners' Interest in and Perceptions of Forest Certification: Focus Group Findings from Minnesota. *North. J. Appl. For.* **2008**, *25*, 73–81. [CrossRef]
24. Boakye-Danquah, J.; Reed, M.G. The participation of non-industrial private forest owners in forest certification programs: The role and effectiveness of intermediary organisations. *For. Policy Econ.* **2019**, *100*, 154–163. [CrossRef]
25. Swedish Environmental Protection Agency. Miljömålen Årlig uppföljning av Sveriges Nationella Miljömål 2021—Med Fokus på Statliga Insatser. 2021. Available online: https://www.naturvardsverket.se/978-91-620-6968-1 (accessed on 14 November 2021).
26. Overdevest, C. Comparing forest certification schemes: The case of ratcheting standards in the forest sector. *Socio-Econ. Rev.* **2009**, *8*, 47–76. [CrossRef]
27. Cashore, B.; Auld, G.; Newsom, D. Forest certification (eco-labeling) programs and their policy-making authority: Explaining divergence among North American and European case studies. *For. Policy Econ.* **2003**, *5*, 225–247. [CrossRef]
28. Berg Lejon, S.; Lidestav, G. Skogscertifiering—Vem, hur och varför? In *FaktaSkog—Rön från Sveriges Lantbruksuniversitet*; Fakulteten för Skogsvetenskap: Umeå, Sweden, 2009.
29. Kilgore, M.A.; Snyder, S.A.; Schertz, J.; Taff, S.J. What does it take to get family forest owners to enroll in a forest stewardship-type program? *For. Policy Econ.* **2008**, *10*, 507–514. [CrossRef]
30. Tian, N.; Pelkki, M. Nonindustrial private forest landowner perspectives on forest certification: A look at awareness and barriers. *For. Policy Econ.* **2021**, *131*, 102552. [CrossRef]
31. Eggers, J.; Lämås, T.; Lind, T.; Öhman, K. Factors Influencing the Choice of Management Strategy among Small-Scale Private Forest Owners in Sweden. *Forests* **2014**, *5*, 1695–1716. [CrossRef]
32. Umaerus, P.; Nordin, M.H.; Lidestav, G. Do female forest owners think and act "greener"? *For. Policy Econ.* **2019**, *99*, 52–58. [CrossRef]
33. Lidestav, G.; Lejon, S.B. Harvesting and silvicultural activities in Swedish family forestry—Behavior changes from a gender perspective. *Scand. J. For. Res.* **2013**, *28*, 136–142. [CrossRef]
34. Lidestav, G.; Lejon, S.B. Forest Certification as an Instrument for Improved Forest Management within Small-scale Forestry. *Small-Scale For.* **2011**, *10*, 401–418. [CrossRef]
35. Korhonen, K.; Hujala, T.; Kurttila, M. Diffusion of voluntary protection among family forest owners: Decision process and success factors. *For. Policy Econ.* **2013**, *26*, 82–90. [CrossRef]
36. Mercker, D.C.; Hodges, D.G. Forest certification and nonindustrial private forest landowners: Who will consider certifying and why? *J. Ext.* **2007**, *45*, 1–11.
37. Wansink, B. Using laddering to understand and leverage a brand's equity. *Qual. Mark. Res. Int. J.* **2003**, *6*, 111–118. [CrossRef]
38. de Ferran, F.; Grunert, K.G. French fair trade coffee buyers' purchasing motives: An exploratory study using means-end chains analysis. *Food Qual. Prefer.* **2007**, *18*, 218–229. [CrossRef]
39. Jeng, M.-Y.; Yeh, T.-M. The effect of consumer values on the brand position of green restaurants by means-end chain and laddering interviews. *Serv. Bus.* **2015**, *10*, 223–238. [CrossRef]
40. Ngigi, M.W.; Müller, U.; Birner, R. Farmers' intrinsic values for adopting climate-smart practices in Kenya: Empirical evidence from a means-end chain analysis. *Clim. Dev.* **2018**, *10*, 614–624. [CrossRef]
41. Tey, Y.S.; Arsil, P.; Brindal, M.; Shamsudin, M.N.; Radam, A.; Hadi, A.H.I.A.; Rajendran, N.; Lim, C.D. A Means-End Chain Approach to Explaining the Adoption of Good Agricultural Practices Certification Schemes: The Case of Malaysian Vegetable Farmers. *J. Agric. Environ. Ethics* **2015**, *28*, 977–990. [CrossRef]
42. Gutman, J. A Means-End Chain Model Based on Consumer Categorization Processes. *J. Mark.* **1982**, *46*, 60–72. [CrossRef]
43. Reynolds, T.J.; Olson, J.C. (Eds.) *Understanding Consumer Decision Making: The Means-End Approach to Marketing and Advertising Strategy*; Lawrence Erlbaum: Mahwah, NJ, USA, 2001.
44. Reynolds, T.J.; Gutman, J. Laddering Theory, Method, Analysis, and Interpretation. *J. Advert. Res.* **1988**, *28*, 11–31.

45. van Rekom, J.; Wierenga, B. On the hierarchical nature of means–end relationships in laddering data. *J. Bus. Res.* **2007**, *60*, 401–410. [CrossRef]
46. Grunert, K.G.; Grunert, S.G.; Sørensen, E. Means-End Chain and Laddering: An Inventory of Problems and an Agenda for Research. Centre for Market Surveillence, Research and Strategy for the Food Sector. The Aahus School of Business. 1995. Available online: https://pure.au.dk/ws/files/32299631/wp34.pdf (accessed on 14 November 2021).
47. Reynolds, T.J.; Dethloff, C.; Westberg, S.J. Advancment in Laddering. In *Understanding Consumer Decision Making—The Means-end Approach to Marketing and Advertising Strategy*; Reynolds, T.J., Olson, J.C., Eds.; Lawrence Erlbaum Associates: Mahwah, NJ, USA, 2001; pp. 91–118.
48. Pike, S. Destination positioning opportunities using personal values: Elicited through the Repertory Test with Laddering Analysis. *Tour. Manag.* **2012**, *33*, 100–107. [CrossRef]
49. Schaefers, T. Exploring carsharing usage motives: A hierarchical means-end chain analysis. *Transp. Res. Part A Policy Pract.* **2013**, *47*, 69–77. [CrossRef]
50. Wansink, B. *Laddering and Prototyping: Effective Techniques for Generating Key Marketing Insights*; University of Illinois, Urbana-Champaign: Champaign, IL, USA, 2000.
51. Creswell, J.W.; Poth, C.N. *Qualitative Inquiry & Research Design: Choosing among Five Approaches*, 4th ed.; Sage: Thousand Oaks, CA, USA, 2018.
52. Vaismoradi, M.; Turunen, H.; Bondas, T. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nurs. Health Sci.* **2013**, *15*, 398–405. [CrossRef]
53. Borgardt, E. Means-End Chain theory: A critical review of literature. *Pr. Nauk. Uniw. Ekon. We Wrocławiu* **2020**, *64*, 141–160. [CrossRef]
54. Grunert, K.G.; Grunert, S.G. Measuring subjective meaning structures by the laddering method: Theoretical considerations and methodologicla problems. *Int. J. Res. Mark.* **1995**, *12*, 209–225. [CrossRef]
55. Paluš, H.; Parobek, J.; Šulek, R.; Lichý, J.; Šálka, J. Understanding sustainable forest management certification in Slovakia: Forest Owners' perception of expectations, benefits and problems. *Sustainability* **2018**, *10*, 2470. [CrossRef]
56. Kronholm, T. How are Swedish Forest Owners' Associations Adapting to the Needs of Cuurent and Future Members in Their Organizations? *Small-Scale For.* **2016**, *15*, 413–432. [CrossRef]
57. Rabotyagov, S.S.; Lin, S. Small forest landowner preferences for working forest conservation contract attributes: A case of Washington State, USA. *J. For. Econ.* **2013**, *19*, 307–330. [CrossRef]
58. Halalisan, A.F.; Abrudan, I.V.; Popa, B. Forest Management Certification in Romania: Motivations and Perceptions. *Forests* **2018**, *9*, 425. [CrossRef]
59. Keskitalo, E.C.H. (Ed.) Conclusions: New Forest Owners Under Globalised, Rural-Urban Relations. In *Globalisation and Change in Forest Ownership and Forest Use: Natural Resource Management in Transition. Palgrave Macmillan*; Palgrave Macmillian: London, UK, 2017; pp. 303–313.