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## Exploring the link between farmers' entrepreneurial identities and work wellbeing

Janker, Judith

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1 **Title**

2 Exploring the link between farmers' entrepreneurial identities and work wellbeing

3 **Abstract**

4 Pressure on farmers to behave more 'entrepreneurial' is increasing. Psychological and social  
5 science research therefore has examined what characterises farmers identifying as  
6 entrepreneurs. A previous study in Finland suggested that farmers' self-identities may conflict  
7 with the public paradigm describing farmers as entrepreneurs instead of food providers.  
8 Different expectations towards farming may cause identity issues and decrease work  
9 wellbeing. The present study examines the relationship of work wellbeing and  
10 entrepreneurial identification. Utilizing the *Maslach Burnout Inventory* and the theory of  
11 *Entrepreneurial Identity*, the results show that work wellbeing is higher for diversified farmers  
12 and rural business owners than for conventional farmers in Finland. Conventional farmers on  
13 the other hand experience higher rates of loss of personal control and self-efficacy, indicating  
14 that the political strategies for entrepreneurs, diversification and innovativeness, are not  
15 applicable to all farmer groups. Entrepreneurs aim for autonomy and personal control which  
16 generally may be limited in specialised, subsidy-dependent agricultural production systems.  
17 Identity formation processes and how farmers can gain more control over their businesses as  
18 well as the limitations of entrepreneurship in the momentary agricultural policy system,  
19 should be considered in upcoming policy strategies.

20 **Keywords**

21 Entrepreneurial identity; farmers; work wellbeing; personal control; agricultural policy

22 **Introduction**

23 During the last decades, agricultural policies in Europe have frequently emphasised the need  
24 to strengthen their global agricultural market position (Erjavec et al., 2009; Pindado and  
25 Sánchez, 2017; Zschache, 2015). While the main objective of European Union's (EU)

26 common agricultural policy (CAP) remains securing the incomes of farmers, competitiveness  
27 of agriculture is stressed in recent policy documents such as the agricultural policy, CAP  
28 2014-2020 (EU, 2013), and is listed second among the official priorities in EU budgeting  
29 (Pe'er et al., 2019). Knowledge, innovation and digitisation are identified as critical pathways  
30 for farmers to become more 'entrepreneurial' and hence more competitive (EU, 2019a). The  
31 'entrepreneurship' concept experiences increasing importance both on the political agenda  
32 and in agricultural sciences. However, the meaning of entrepreneurship and the concept's  
33 implementation as entrepreneurship policy are interpreted diversely and charged  
34 ideologically, as a Finnish case study showed (Pyysiäinen and Vesala, 2013). Particularly for  
35 farming, conflicting values and ideals are reproduced (Niska et al., 2012). Burton and Wilson  
36 (2006, p. 95f.) reason that these value conflicts origin from policy changes which have  
37 induced new narratives of agriculture: "While the productivist era placed great emphasis on  
38 maximum food production and the predominant role of the countryside as a site for  
39 production of food and fibre, the post-productivist era has been characterised by a reduced  
40 emphasis on food production and an increased emphasis on the countryside as a place of  
41 'consumption' with high environmental sustainability". So while farmers in the past were  
42 expected to accept political power over decisions and receive financial rewards in return,  
43 they should now aim towards becoming environmental stewards and smart business owners  
44 capable of competing in the global food market (Stenholm and Hytti, 2014). Contrarily, a  
45 recent publication shows that farmers remain highly subsidised in Europe. For example, on  
46 average, Finnish farmers' income in 2015 has depended to almost one third on agricultural  
47 subsidies (Niemi and Väre, 2018). As a consequence, contradicting role expectations exist  
48 towards agricultural actors: on the one hand, a more traditional role understanding of farmers  
49 as food and therefore common goods providers who receive payments for this service  
50 (Morgan et al., 2010, Vesala and Vesala, 2010) and on the other hand the smart  
51 entrepreneur who aims at being financially independent and competitive (Bryant and  
52 Garnham, 2014).

53 In parallel to the entrepreneurial research, psychological and sociological studies on  
54 wellbeing and burnout in agriculture (Kallioniemi et al., 2016; Reissig et al., 2019; Saarni et  
55 al., 2008; Truchot and Andela, 2018) show that the perceived unpredictability of agricultural  
56 policy and its financial and bureaucratic constraints as well as fatigue and overtime are major  
57 stressors in farmer's lives. Financial constraints might even be a reason for farmers to leave  
58 the agricultural sector (Peel et al., 2016). Highly important for farmers' wellbeing is also  
59 social recognition, as Källstrom and Ljung (2005) demonstrated in a Swedish study.  
60 However, it is unclear whether the expectations of society are in line with the perceptions  
61 farmers have for qualities of farm life – especially with the paradigms changing in the  
62 agricultural policy debate. In Finland, particularly the media has presented farmers in a  
63 negative light, thus affecting farmers' reputations and causing conflicts with their self-  
64 perceptions (Kallioniemi et al., 2016, Saarni et al., 2008). A potential solution is proposed by  
65 Saarni et al. (2008, p. 102) who argue that “having control over one's job (decision latitude)  
66 decreases stress, especially if the job is highly demanding”. Entrepreneurship is typically  
67 associated with more control over one's business and less dependency on agricultural  
68 subsidies, as entrepreneurs are more active, dynamic and competitive for economic  
69 purposes (Bairwa et al., 2014; Vesala et al., 2007). This implies that stronger entrepreneurial  
70 identities could enhance farmers' wellbeing and equally support societal recognition. The  
71 present research originates from this idea: The aim is to explore how strongly Finnish farmers  
72 identify as entrepreneurs and whether this identity has a positive or negative influence on  
73 their wellbeing. While scientific literature exists on entrepreneurial identity and on wellbeing  
74 in agriculture, none was found that connects both research areas. Exploring this research  
75 gap is therefore the central objective of the study: in particular, the concepts of  
76 entrepreneurial identity (Stryker and Burke, 2000), adapted to agriculture (Vesala et al.,  
77 2007; Vesala and Vesala, 2010), and the Maslach Burnout Inventory (Maslach et al., 1996;  
78 Maslach et al., 2001) are extended by an additional item to become a comprehensive  
79 measure of work wellbeing. This approach is novel and highly relevant as it examines the link  
80 between the policy goal of enhanced competitiveness (entrepreneurship) and the effect of

81 this policy goal on farmers' realities (wellbeing). The article proceeds as follows: After a short  
82 literature overview on determinants of farmer wellbeing and farmers' entrepreneurial  
83 identities, the article outlines the data and the methodical approach. This study's results on  
84 work wellbeing of farmer entrepreneurs and other types of producers are shown  
85 subsequently, followed by a critical discussion by means of current literature and a  
86 conclusion deriving potential policy implications.

## 87 **Theory**

### 88 Farmer wellbeing

89 Over the last 50 years, many farmers, particularly small farmers, have left agriculture and the  
90 number of small farms is further decreasing (EU, 2019b; Hennis, 2005). Despite high  
91 subsidies for farmers in the European Union, a weighted income gap of approximately 43  
92 per cent compared to employees in non-agricultural professions (including subsidies) still  
93 existed in 2015, according to a recent study (Guth et al., 2020). While agriculture, according  
94 to the EU policy discourse, should move towards more liberalized and competitive structures  
95 (Zschache, 2015), supporting farmers' incomes also remains a major political goal (EU,  
96 2019a), in order to counteract the decreasing number of (small) farmers. In this context, rural  
97 social scientists in Europe have examined life and work satisfaction beyond the simple farm  
98 income. The scope of their research included the satisfaction of people in Germany's rural  
99 areas with their working conditions (Jantsch et al., 2018), the determinants of work and life  
100 quality of farm employees in Italy (Gosetti, 2017), the relation of farmer wellbeing and  
101 political participation in Great Britain (Saxby et al., 2018) and whether farmers' values and  
102 entrepreneurship politics in Finland match or not (Niska et al., 2012). Also, farmers' and  
103 value chain actors' perspectives on local food systems in Finland (Nousiainen et al., 2009),  
104 farming motivations and entrepreneurship in Finland and Norway (Vesala and Peura, 2005,  
105 Vik and McElwee, 2011), farmers' exit motivations and their emotional wellbeing in Finland  
106 (Laitalainen et al., 2008), stresses of farm spouses in Norway (Melberg, 2003), social

107 learning and self-perception of farmers in Sweden (Källstrom and Ljung, 2005), burnout  
108 factors in Swiss agriculture (Reissig et al., 2019) and overall life satisfaction of Swedish dairy  
109 farmers (Röös et al., 2019) have been examined, just to name some recent examples. Rural  
110 studies show that besides financial constraints (Röös et al., 2019; Peel et al., 2016)  
111 particularly changing/increasing national and European agricultural policy requirements and  
112 guidelines tend to be a stress factor for farmers because these are often considered as  
113 external forces farmers cannot influence (Kallioniemi et al., 2016; Laitalainen et al., 2008;  
114 Reissig et al., 2019; Röös et al., 2019). Meeting the requirements, or even actively  
115 participating in voluntary schemes, however, can lead to increased farmer wellbeing,  
116 potentially resulting from higher identification with the chosen measures (Saxby et al., 2018).  
117 A negative image of farming and conflicting self- versus public perceptions on the other hand  
118 create distress for farmers (Källstrom and Ljung, 2005; Laitalainen et al., 2008; Niska et al.,  
119 2012). Although these studies show a variety of factors motivating or hindering farmers'  
120 wellbeing, both in work and private life contexts, they hardly relate wellbeing to  
121 entrepreneurial behaviour or traits of farmers. With the policy discourse promising  
122 (competitive) advantages for entrepreneurial behaviour (EU, 2019a; Pyysiäinen and Vesala,  
123 2013), such as higher incomes and more autonomous work, the present article explores  
124 whether farmers who consider themselves to be more entrepreneurial, actually feel more in  
125 control and therefore feel more satisfied with their work.

#### 126 Farmer identities and entrepreneurship

127 Farmer identities have been examined recently because they represent the precondition for  
128 role-specific behaviour and decision-making, such as entrepreneurial behaviour.  
129 Reciprocally, identities are an expression of socialisation processes and therefore represent  
130 dominant values of specific societal embeddings (Burton, 2004; Stryker, 1968). In more  
131 practical terms, a farmer may identify for example, as environmental steward because he /  
132 she has learned (socialisation) that this is a positively connoted way of farming. In turn, he /  
133 she will behave in a way to fulfil the expectations attributed by oneself and society in order to

134 receive recognition (Burton, 2004). Identity is hence a product of individual decision-making  
135 and societal norms and values. For the farmer identity literature, Burton and Wilson's (2006)  
136 study in Britain has been influential. Their research identifies four types of farmer identities:  
137 (1) Traditional farmers, who have a more conservative attitude towards farming, (2)  
138 Agribusiness persons, who focus mainly on profit, (3) Conservationists, who have a more  
139 environmentally conscious life-style and (4) Entrepreneurs, who diversify their incomes with  
140 non-agricultural activities. However, Burton (2004) and Burton and Wilson (2006) agree that  
141 these ideal types do not always correspond to the self-perceptions of farmers, which often  
142 comprise of multiple identities. For self-ascribed identities, they find that only three types  
143 exist: traditional, conservationist and entrepreneur farmer identities. And these do not  
144 necessarily correspond to what society or politics expect from farmers, causing a 'structure-  
145 agency inconsistency' (Burton and Wilson, 2006, p. 111). Naylo and colleagues (2018)  
146 support the discrepancy of self-identity and societal image for livestock farmers in the United  
147 Kingdom. They add that even within one sector, a farmer can have multiple identities and  
148 these can conflict due to diverging societal expectations. Contrarily, matching one's identity  
149 to societal expectations has been identified as determining factor of self-fulfilment in and  
150 beyond agriculture (Källstrom and Ljung, 2005). For the study at hand, this implies that  
151 farmers may identify with one or more identity types, among them entrepreneurship. But  
152 these do not necessarily correspond to societal expectations, although alignment of  
153 expectation and self-identification are important factors for farmer wellbeing.

154 But what does entrepreneurship actually mean? In the economic literature, one central  
155 aspect of entrepreneurial identity is a certain 'freedom' which "provides a great deal of  
156 control" over the entrepreneurs' life (Shepherd, 2018, p. 140). Hence, control and self-  
157 efficiency are often considered as central motivation for entrepreneurial behaviour. Control  
158 and self-efficacy also seem to play a crucial role for farmers' and farm workers' identities, as  
159 a study in New Zealand and Switzerland (Stock and Forney, 2014) affirms: Autonomy was  
160 identified as a core motivation for farming, in both countries and beyond several production

161 systems. Entrepreneurs are further characterised as more risk-taking, innovative, and  
162 growth-oriented (Lumpkin and Dess, 1996; Vesala et al., 2007). There are studies indicating  
163 that farmer entrepreneurs have higher learning capacities (Seuneke et al., 2013), and that  
164 new entrants to the farming sector are more likely to be entrepreneurs (Pindado and  
165 Sánchez, 2017). While not as distinct as for non-entrepreneurs, a sense of belonging also  
166 exists for entrepreneurs, and “is often left unmet, thus ultimately diminishing psychological  
167 health” (Shepherd, 2018, p. 143). This corresponds to the farmer wellbeing literature that  
168 describes that societal recognition is an important factor for wellbeing and that identities can  
169 be strengthened in exchange with non-agricultural persons such as tourists (Brandth and  
170 Haugen, 2011). For the present study this means that motivations like autonomy, control, and  
171 societal affirmation of the identities are important for both, entrepreneurial identification and  
172 farmer wellbeing.

173 While this may imply that entrepreneurial identity and farmer wellbeing could be connected,  
174 Vesala and Rantanen (1999) have argued that it might also be problematic for farmers to  
175 identify as entrepreneurs. Farming, and hence also entrepreneurial farming is embedded in  
176 specific structures manifested since World War II. Farmers often experience disadvantages  
177 in the market, are highly depending on retailers and their demands, and have to adapt to on  
178 changing agricultural policies. These structures (e.g. bureaucracy and regulations) may limit  
179 risk-taking and innovative ideas and therefore may restrict entrepreneurial behaviour  
180 (Martinho 2020). Even more so, the restrictions can conflict with the desire for autonomy or  
181 control and thus impede stronger entrepreneurial identification (Vesala et al., 2007; Vesala  
182 and Vesala, 2010). In order to achieve the major goal of European agriculture policy (EU,  
183 2019a) to support farmers with becoming more entrepreneurial and competitive, research on  
184 the relationship of entrepreneurial identity and work wellbeing is needed. The present study  
185 therefore tests whether there is a (positive) relationship between entrepreneurial identity and  
186 work wellbeing, as indicated by the literature.

## 187 **Methodical approach**



188 The methodical approach consists of two parts: (1) The Maslach burnout inventory is used to  
189 explore how *satisfied different types of farmers* and non-agricultural entrepreneurs are with  
190 their work and (2) to explain differences in regards to *entrepreneurial identity* theory as  
191 adapted to Finnish agriculture by Vesala and Vesala (2010).

## 192 Identity and wellbeing measures

193 The identity framework by Stryker and Burke (2000) serves as the foundation in this  
194 research. It is one of the first approaches to synthesise identity theory both from a  
195 sociological and psychological perspective. On the one hand, the theory describes structural  
196 identity or identity “composed of the meanings that persons attach to the multiple roles they  
197 typically play in highly differentiated contemporary societies” (Stryker and Burke, 2000, p.  
198 285). On the other hand, the framework integrates the cognitive identity of one person, as  
199 emotions demonstrate how well the self-identity matches the structural identity (Stryker and  
200 Burke, 2000). This means that identity consists of self-perception, decision-making  
201 (cognitive) and of one’s understanding of societal expectation according to his/her  
202 socialisation (structural identity). These two identity components can conflict. In this context,  
203 entrepreneurial identity conceptions particularly problematise the pronounced sense of  
204 distinctiveness that overshadows the need for belonging (Shepherd, 2018). This finding  
205 corresponds to the stresses of farmers who aim for autonomy and control (Stock and Forney,  
206 2014; Vesala and Peura, 2005; Vesala and Vesala, 2010) – entrepreneurial characteristics –  
207 but equally identify with tradition and foresight (Burton, 2004) – traditional producer traits,  
208 which are both reproduced by societal discourses. Vesala and Vesala (2010, p. 22) affirm  
209 and refine these findings in their study on identities in Finnish agriculture: They find  
210 conventional farmers who identify more as producers than entrepreneurs (feel less  
211 autonomous and entrepreneurial), whereas diversified farmers tend to identify more as  
212 entrepreneurs than producers; small rural businesses in comparison identify as  
213 entrepreneurs and reject producer identities. However, multiple identities can exist that can  
214 contradict one another and the diverging expectations that may arise within one identity.

215 Clear distinctions between these types of farmers are not possible and they represent  
216 tendencies rather than absolutes. The present study aims to integrate these issues by not  
217 only examining whether diversified farmers and rural business owners identify themselves as  
218 entrepreneurs, but also whether they show entrepreneurial attributes and capacities. Also, a  
219 previous study by Vesala & Vesala (2010) finds that some farmers do identify more strongly  
220 as entrepreneurs than others. We measure self-ascribed identity of farmers with the  
221 statement 'I am an entrepreneur' (**entrepreneurial self-identity**). We further examine  
222 attributes for entrepreneurs found in the literature, such as perceived personal control  
223 (similar to autonomy) and of self-efficacy as the capability to act entrepreneurial  
224 (**entrepreneurial attributes**). "Self-efficacy [thereby] refers to a person's belief in his/her  
225 capability of performing those actions and activities that are needed for achieving the desired  
226 outcomes and goals" (Vesala et al., 2007, p. 52). Personal control refers to the feeling of  
227 being in charge of one's life or business and decision-making, both preconditions of acting  
228 effectively as entrepreneur (Shepherd, 2018). Finally, we also measure the determination to  
229 actually behave entrepreneurial (**entrepreneurial attitude**), which is described as risk-  
230 taking, innovative, and growth-oriented (Lumpkin and Dess, 1996; Vesala et al., 2007).  
231 Integrating the three measures allows us to explore whether farmers feel as entrepreneurs,  
232 whether they feel they are capable to act entrepreneurial, and whether they actually aim at  
233 entrepreneurial behaviour. As a consequence, the study can indicate discrepancies between  
234 self-identity ('I am an entrepreneur'), entrepreneurial capabilities ('I am in control') and  
235 behaviour ('I take risks' etc.), and how these measures relate to work wellbeing.

236 The Maslach Burnout Inventory General Survey (MBI-GS) (Maslach et al., 1996; Maslach et  
237 al., 2001) is used as the measure of **work wellbeing**. Saarni and colleagues (2008) found in  
238 2008 that farmers in Finland had poorer work ability, quality of life, and health-related issues  
239 compared to non-agricultural business owners. Utilizing a burnout measure in combination  
240 with measures of entrepreneurial (self-)identity allows us to test the relation between  
241 entrepreneurial identity and the wellbeing of farmers. A measure on stress and burnout was

242 chosen as a suitable proxy to test work wellbeing of entrepreneurial farmers and businesses,  
 243 with the overall change in working life, and pressure on farmers to be more entrepreneurial.  
 244 The MBI-GS is further one of the most recognised quantitative burnout measures, which  
 245 makes statistical comparison beyond farms and beyond countries possible. Additionally,  
 246 burnout in the MBI-GS is defined as “individual stress experience embedded in a context of  
 247 complex social relationships and (...) involves the person’s conception of both self and  
 248 others” (Maslach et al., 1996, p. 204). The measure is thus in line with the identity theory  
 249 perspective which distinguishes farmers as more or less happy, depending on both their self-  
 250 ascribed identity and external recognition. Although a study on burnout and depression in the  
 251 Finnish farming sector was carried out before (Kallioniemi et al., 2016), the study solely  
 252 focused on dairy farms and did not consider the relation among burnout and entrepreneurial  
 253 identities. In addition to the Maslach survey, work wellbeing is measured with one item, a  
 254 general question asking how satisfied one is with one’s work.  
 255 The questionnaire finally consists of the (1) personal variables gender, marital status,  
 256 education, and the personal variable age. The (2) business variables turnover, net profit,  
 257 debt capital and paid workers represent the second section of the questionnaire.  
 258 Distributions of responses can be found in table 1 below.

259 Table 1. Personal and business variables: Distributions of responses in the main groups

	Conventional farmers (n= 179)	Diversified farmers (n= 273)	Rural business owners (n= 108)
Personal variables			
<b>Gender</b>			
Female	21 (12.4 %)	34 (12.7 %)	30 (27.8 %)
Male	149 (87.6 %)	233 (87.3 %)	78 (72.2 %)
<b>Age</b> (in years) Mean (Std)	54.2 (9.8)	53.6 (10.0)	55.0 (10.6)
<b>Marital status</b>			
0 = Not in a relationship	31 (17.5 %)	32 (11.8 %)	13 (12.0 %)
1 = In a relationship	146 (82.5 %)	239 (88.2 %)	95 (88.0 %)
<b>Basic education</b>			

0 = Elementary school	101 (56.4 %)	153 (56.0 %)	48 (45.3 %)
1 = Middle or high school	78 (43.6 %)	120 (44.0 %)	58 (54.7 %)
<b>Working experience as an entrepreneur</b> (in years) Mean (Std)	25.6 (10.2)	24.8 (10.9)	22.3 (11.4)
<b>Net Profit</b>			
1 = Considerable loss	4 (2.3 %)	7 (2.6 %)	4 (3.8 %)
2 = Minor loss	15 (8.8 %)	15 (5.7 %)	13 (12.4 %)
3 = Plus / minus zero	24 (14.0 %)	20 (7.5 %)	16 (15.2 %)
4 = Positive, but I'm not satisfied	77 (45.0 %)	116 (43.8 %)	30 (28.6 %)
5 = Positive for me	51 (29.8 %)	107 (40.4 %)	42 (40.0 %)
<b>Debt capital</b>			
1 = Firm has no debt	64 (37.4 %)	89 (33.6 %)	60 (57.1 %)
2 = Less debt than 1/3 of turnover	36 (21.1 %)	55 (20.8 %)	24 (22.9 %)
3 = Debt 1/3 - 2/3 of turnover	25 (14.6 %)	64 (24.2 %)	13 (12.4 %)
4 = Debt more than 2/3 of turnover	18 (10.5 %)	21 (7.9 %)	5 (4.8 %)
5 = More debt than turnover	28 (16.4 %)	36 (13.6 %)	3 (2.9 %)
<b>Paid workers</b>			
0 = No paid workers	141 (78.8 %)	182 (66.7 %)	51 (47.2 %)
1 = One or more paid workers	38 (21.2 %)	91 (33.3 %)	57 (52.7 %)
<b>Structure of the clientele</b> (number of customers)			
1 = 1-3 customers	64 (62.1 %)	34 (15.6 %)	5 (5.7 %)
2 = 4-9 customers	44 (31.2 %)	39 (17.9 %)	12 (13.6 %)
3 = 10 or more customers	33 (23.4 %)	145 (66.5 %)	71 (80.7 %)

260 For (3) work wellbeing, the MBI-GS (Maslach et al. 1996) integrates the three dimensions  
261 exhaustion, cynicism and lowered professional esteem. For the MBI1 Exhaustion, five  
262 statements could be answered on a 7-point-scale (never / few times a year / once in a month  
263 / few times in a month / once a week / few times a week / daily). The Cronbach's Alpha for  
264 the MBI1 Exhaustion was .92. The MBI2 Cynicism contained of 5 statements, with equal  
265 response scale and a Cronbach's Alpha of .84. The MBI3 Lowered professional self-esteem  
266 consisted of 6 statements, with a Cronbach's Alpha of .87). The items on lowered  
267 professional self-esteem were inverted in the measurement. The MBI Tot represents the total  
268 score of the burnout syndrome. For the MBI-GS, cynicism is expected to correlate positively

269 with exhaustion and negatively with professional self-esteem. A question on work wellbeing  
270 was added to the MBI to also measure the overall contentment of farmers – ‘How satisfied  
271 you are with your work?’ – which the respondents could answer on 5-point scale (1 – not at  
272 all satisfied, 2 – somewhat dissatisfied, 3 – neither satisfied nor dissatisfied, 4 – fairly  
273 satisfied, 5 – very satisfied).

274 For the (4) measure of entrepreneurial identity, one question was provided: ‘How do you  
275 define yourself? - How relevant the following thoughts are to you’ with the answer provided ‘I  
276 am an entrepreneur’, and a rating scale from 1-5 (1 – not relevant at all, 2 – relevant to some  
277 extent, 3 – don’t know, 4 – quite relevant, 5 – very relevant). Because the distribution of  
278 responses was skewed (only small minority had chosen to answer options 1, 2 or 3; see also  
279 figure 3), the scale was later reduced into a 3-point scale (1 – not relevant at all / relevant to  
280 some extent / don’t know, 2 – quite relevant, 3 – very relevant) by combining the options 1-3  
281 into one.

282 The (5) measure of entrepreneurial attributes contained 8 statements on self-efficacy and 4  
283 statements on personal control. The attributes were raised with the question ‘How well do  
284 these (statements) describe you?’. A Likert type scale from 1 to 5 was provided (1 – totally  
285 disagree, 2 – partially disagree, 3 – neither disagree nor agree; 4 – partially agree, 5 – totally  
286 agree). Personal control was measured with four statements: ‘I am able to affect the success  
287 of my firm through decisions concerning products and through production’, ‘My personal  
288 chances to influence the success of my business are practically rather low’ (inverted), ‘I am  
289 able to affect the success of my firm through marketing and customer connections’, and ‘To a  
290 great extent I can personally control the success of my firm’. The Cronbach’s alpha for the  
291 sum-variable of personal control was 0.725.

292 Self-efficacy was measured with eight statements. Following Drnovsek et al (2010), the  
293 valence dimension of self-efficacy beliefs was taken into account so that some of the items  
294 measured positive expectations. The statements were ‘My skills are quite sufficient for

295 working as an entrepreneur', 'I am more competent than an average entrepreneur', 'My  
296 character is not of entrepreneurial type' (inverted), 'My personal characteristics suit well for  
297 entrepreneurship', 'I will succeed as an entrepreneur', 'Not even major setbacks can make  
298 me give up my entrepreneurship', 'I believe that my success in the future will outrun  
299 entrepreneurs on average', and 'My success as an entrepreneur is uncertain' (inverted). A  
300 sum-variable of self-efficacy was formed with the Cronbach's alpha .826.

301 It should be mentioned that the questions about self-efficacy and personal control were  
302 situation-specific and concerned explicitly the work context. This is relevant because the  
303 study aims to explore how the respondents estimated their entrepreneurial capabilities and  
304 motivations and not their beliefs of life in general.

305 The statements measuring (6) entrepreneurial attitude focused on the work context as well.  
306 The measure of entrepreneurial attitude consisted of 12 statements about risk-taking,  
307 growth-orientation and innovativeness (with a Likert scale). 'I am more cautious with risk-  
308 taking compared to other entrepreneurs that I know' (inverted), 'I do not avoid taking risks', 'I  
309 take risks only when compelled to do so' (inverted), 'I do not believe in success without risk-  
310 taking', 'Increasing the turnover of my firm is a self-evident goal for me', 'Compared to other  
311 entrepreneurs whom I know, I am more reluctant in expanding my business' (inverted), 'I  
312 prefer not to hire employees in my firm' (inverted), 'I am trying to expand my business  
313 activities', 'I aim for constant renewal in my business activities', 'I enjoy developing new  
314 products and marketing ideas', 'If needed, I will make major changes in my business', and 'I  
315 prefer to keep doing things the way I am familiar with' (inverted). The Cronbach's alpha for  
316 the sum variable of entrepreneurial attitude was .836.

### 317 Data acquisition and analysis

318 The data in the study originates from a Finland-wide follow-up study called "Muuttuva  
319 maaseutuyrittäjyys" ("Changing rural entrepreneurship"), which was conducted in the years  
320 2001, 2006 and 2012. The 2012 questionnaire was sent by postal mail to all who answered

321 the survey in year 2006 (n= 805). An additional sample (n= 2967) was drawn from the  
 322 Business Register of the Statistics Finland (rural businesses) and the Farm Register from the  
 323 Information Centre of the Ministry of Agriculture and Forestry (conventional and diversified  
 324 farms). In total, 3772 questionnaires were sent in 2012, from which 892 (23.9 per cent) were  
 325 returned. The return percentage was much higher in the follow-up group (55.9 per cent) than  
 326 in the additional sample (15.1 per cent). The analysis of loss revealed no significant bias  
 327 caused by the loss (BLINDED FOR PEER REVIEW). The distribution of participants,  
 328 according to the three types of respondents described above (Vesala and Vesala, 2010)  
 329 was: conventional farmers focusing on primary agricultural production ('conventional  
 330 farmers') represented 31 per cent, diversified farmers who operated a business besides the  
 331 agricultural production ('diversified farmers') 34 per cent and, and rural non-agricultural  
 332 small-scale business owners ('rural business owners') approximately 35 per cent. The  
 333 categorization is not based on the groups' connections with entrepreneurial identification,  
 334 attributes or attitudes, which we will test accordingly. The information on the personal and  
 335 business variables is presented in Table 1. Only Finnish speaking respondents were  
 336 included.

337 Table 2. Samples: Follow-up group (answered in 2006) & additional sample (2012). The numbers of  
 338 respondents in this study is presented in the column 'all'

	<b>All</b>	<b>Follow-up sample</b>		<b>Additional sample</b>		<b>Total</b>	
<b>Main group</b>	n	n	%	n	%	n	%
<b>Conventional farmers</b>	179	271	33.7	893	30.1	1164	30.9
<b>Diversified farmers</b>	273	399	49.6	887	29.9	1286	34.1
<b>Rural business owners</b>	108	135	16.8	1187	40.0	1322	35.0
<b>Total</b>	560	805	100.0	2967	100.0	3772	100.0

339 The questionnaire consisted of one part on work wellbeing, one part on entrepreneurship,  
 340 variables related to the demographics of the entrepreneur and a part on the business  
 341 variables, as described in the section before.

342 In order to explore the group differences in work wellbeing, initial analyses were conducted:  
343 In the analysis, group differences in each variable were detected and tested. Then  
344 correlations between variables with statistically significant group differences were analysed.  
345 Finally, regression analyses were conducted, where each measure of work wellbeing was  
346 included as dependent variable, and all entrepreneurship and farm business variables, which  
347 either had significant group differences or significant correlations to work wellbeing, were  
348 included as independent variables. The detailed regression analyses can be found in Table  
349 8. The analyses were conducted by using IBM SPSS Statistics Version 26.

## 350 **Results**

351 The results section first introduces the characteristics and distributions of the respondent  
352 groups before presenting their satisfaction level at work. The results on the three measures  
353 of entrepreneurship, and eventually the correlations of work wellbeing with the  
354 entrepreneurial measures, are shown.

### 355 Personal and business variables

356 Among the personal variables, only one statistically significant difference between the groups  
357 appeared: The proportion of men was higher in conventional (87 per cent) and diversified  
358 farmer (88 per cent) groups than in the rural business owner group (72 per cent) (Chi square:  
359 15.65,  $p < .001$ ). Related to the business variables, the most notable difference between the  
360 three groups was found in the structure of the clientele. While most of the rural business  
361 owners and diversified farmers (80 per cent) had more than ten customers, the situation was  
362 almost opposite in the conventional farmer group. Almost half of the conventional farmers  
363 had only one to three customers, and only less than one fourth (23 per cent) had more than  
364 ten customers, implying that conventional farmers may have less or less diversified  
365 distribution options, such as processors and retail. Also, paid workers were less common in  
366 the conventional farmer group and more debt capital existed for diversified and conventional



367 farmer groups, indicating a higher investment need or a lower refinancing potential in  
 368 agriculture (Table 3).

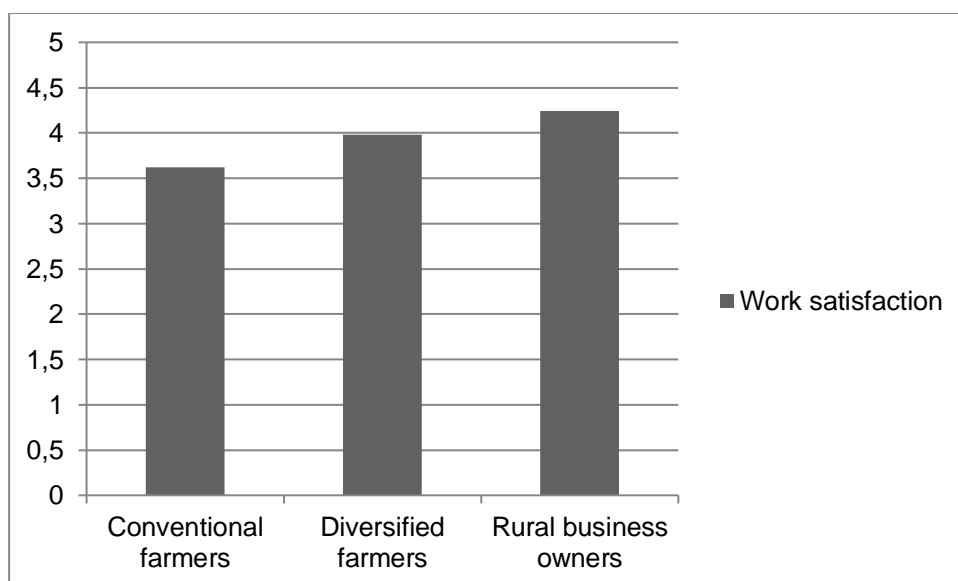
369 Table 3. Group differences in variables related to the business. Means, standard deviations and  
 370 results of one-way anova presented

	<b>Conventional farmers</b> (n = 179)	<b>Diversified farmers</b> (n = 273)	<b>Rural business owners</b> (n = 108)	<b>F (p&lt;)</b>
<b>Turnover (1000 €)</b>	263 (1180.8)	203 (359.5)	360 (804.1)	1.31
<b>Net profit</b>	3.94 (0.94)	4.23 (0.90)	4.09 (0.98)	5.08 **
<b>Debt capital</b>	2.30 (1.36)	2.36 (1.36)	1.71 (1.00)	10.04 ***
<b>Paid workers</b>	0.22 (0.42)	0.34 (0.47)	0.53 (0.50)	15.20 ***
<b>Structure of clientele</b>	1.78 (0.80)	2.50 (0.73)	2.75 (0.57)	60.47 ***

\*) p<.05; \*\*) p<.01; \*\*\*) p<.001

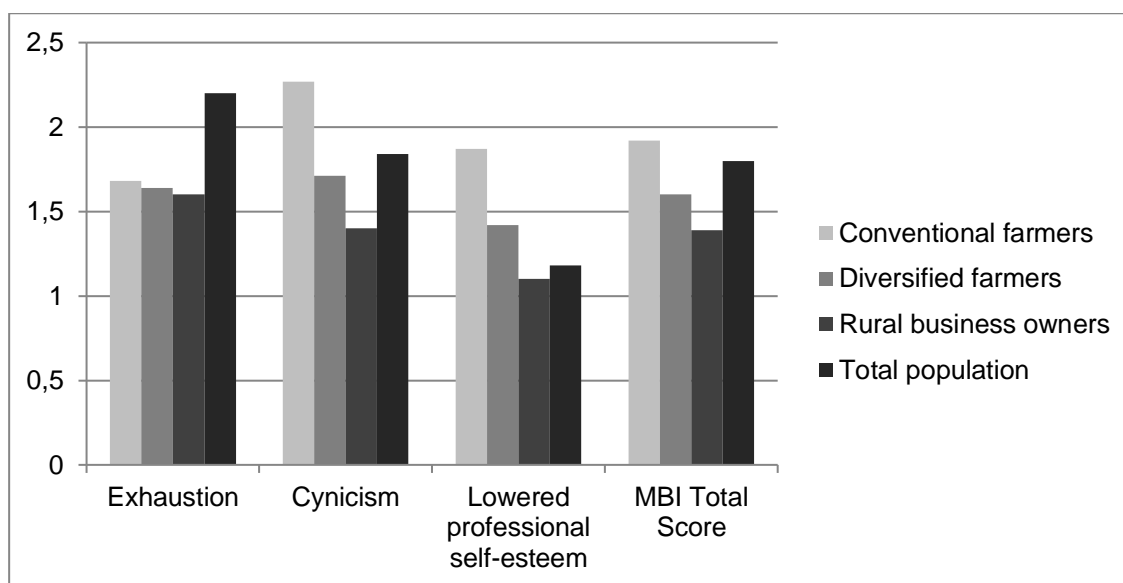
371 Work wellbeing

372 Overall, work satisfaction in the sample was rather positive, with all three groups being more  
 373 content than discontent. However, there were differences between farmers and rural  
 374 businesses, with farmers being less satisfied (3,6 and 3,9 of 5) with their work, particularly  
 375 conventional farmers: Only 16 per cent of conventional farmers were very satisfied with their  
 376 work whereas for rural businesses outside of agriculture more than one third (37 per cent)  
 377 ranked their work satisfaction 5 out of 5 (Figure 1).



378  
 379 Figure 1. Group means in satisfaction to work

380 The group differences were statistically significant. Corresponding to this finding,  
 381 conventional farmers had the highest scores in overall burnout symptoms, and beyond all  
 382 three burnout categories ( $F= 10.89, p<.001$ ). Compared to the Finnish working age  
 383 population at large (Kalimo et al. 2006), only exhaustion was lower for the three examined  
 384 groups, and relatively similar between the three groups (Figure 2).



385  
 386 Figure 2. Group means in burnout scores

387 However, there were no statistically significant differences between the groups ( $F=0.17, ns.$ ).  
 388 Cynicism was higher for farmers, for conventional farmers in particular, and professional self-  
 389 esteem was much lower, with statistical significances of  $F=16.36, p<.001$  for cynicism, and  
 390  $F=19.45, p<.001$  for lowered self-esteem. Comparing the three respondent groups, the  
 391 conventional farmers seemed to have the least confidence in their professional life and were  
 392 most cynic about it, whereas all three groups were exhausted to a similar extent (Table 4).

393 Table 4. Burnout and work wellbeing in study groups: group differences. Means and standard  
 394 deviations and results of the one-way anova presented ( $F$ -value,  $p<$ )

	Conventional farmers	Diversified farmers	Rural business owners	F ( $p<$ )	Total population (Kalimo et al. 2006)
<b>Exhaustion</b>	1.68 (1.31)	1.64 (1.21)	1.60 (1.18)	0.17	2.20 (1.44)

<b>Lowered professional self-esteem</b>	1.87 (1.22)	1.42 (1.01)	1.10 (0.80)	19.45 ***	1.18 (1.13)
<b>Cynicism</b>	2.27 (1.52)	1.71 (1.27)	1.40 (1.08)	16.36 ***	1.84 (1.40)
<b>MBI Total score</b>	1.92 (1.06)	1.60 (0.94)	1.39 (0.85)	10.89 ***	1.80 (1.03)
<b>Satisfaction to work</b>	3.62 (0.92)	3.98 (0.79)	4.24 (0.69)	20.19 ***	-

\*) p<.05; \*\*) p<.01; \*\*\*) p<.001

395 According to these results, burnout seems more common among conventional farmers than  
396 for diversified farmers and rural businesses. Validity of the burnout measurement was  
397 supported by the MBI subscales which showed positive and statistically significant  
398 correlations to each other and to the total score. Also, all MBI scales correlated negatively  
399 and statistically significant to the satisfaction to work (Table 5). This means that higher  
400 burnout risk (MBI Total Score) relates to lower work satisfaction.

401 Table 5. Correlations between MBI scores and work wellbeing.

	<b>Lowered professional self-esteem</b>	<b>Cynicism</b>	<b>MBI Total score</b>	<b>Satisfaction to work</b>
<b>Exhaustion</b>	.652 ***	.233 **	.855 ***	-.432 **
<b>Lowered professional self-esteem</b>		.381 **	.874 **	-.571 **
<b>Cynicism</b>			.610 *	-.503 **
<b>MBI Total score</b>				-.625 **

\*) p<.05; \*\*) p<.01; \*\*\*) p<.001

#### 402 Entrepreneurial identity

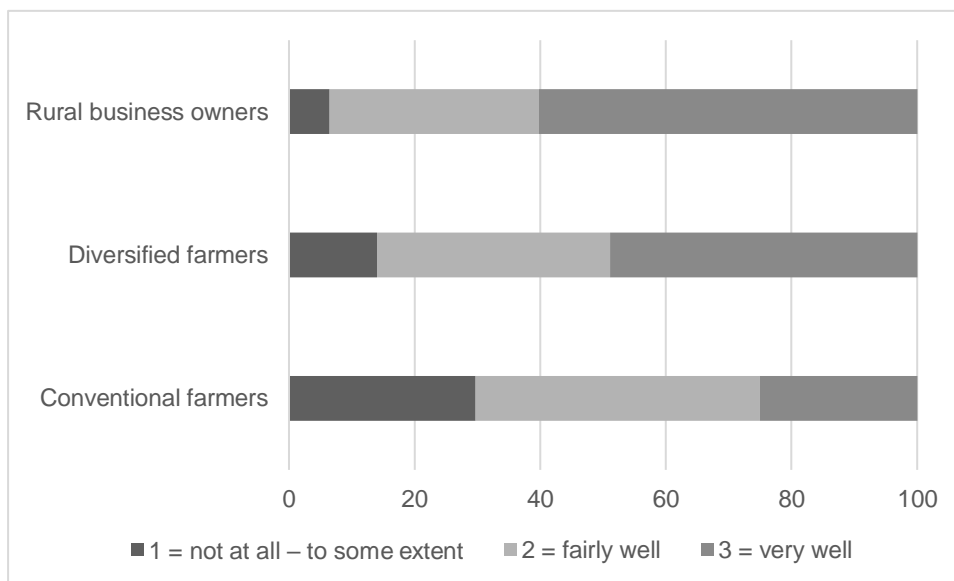
403 With conventional farmers being the least satisfied group and having the highest burnout  
404 risk, the relation with farmers' perceived entrepreneurial identity was examined. To begin  
405 with, this study's results show that group differences existed for the self-identity as  
406 entrepreneurs, that entrepreneurial capabilities differed between the groups and that the  
407 groups had entrepreneurial attitudes to a different extent (Table 6):

408 Table 6. Group differences in entrepreneurial identity. Means and standard deviations & results of the  
409 one-way anova presented (F-value, p<)

	<b>Conventional farmers</b> (n=179)	<b>Diversified farmers</b> (n=273)	<b>Rural business owners</b> (n=108)	F (p<)
<b>Entrepreneurial self-identity</b>	1.95 (0.74)	2.35 (0.71)	2.54 (0.62)	27.19 ***
<b>Entrepreneurial attitude</b>	2.83 (0.67)	3.06 (0.51)	3.09 (0.59)	10.76 ***
<b>Self-efficacy</b>	3.48 (0.81)	3.77 (0.61)	3.82 (0.58)	12.24 ***
<b>Personal control</b>	3.34 (0.89)	3.83 (0.77)	4.09 (0.62)	35.93 ***

\*) p<.05; \*\*) p<.01; \*\*\*) p<.001

410 As presented in the scholarly literature, conventional farmers identified less as entrepreneurs  
411 compared to diversified farmers and rural businesses (means of 1.95 compared to 2.35 and  
412 2.54, respectively). The majority of the respondents in all three main groups identified  
413 themselves as entrepreneurs by answering either "Quite relevant" or "Very relevant".  
414 However, there were respondents in each group (notably also among rural business owners)  
415 who did not identify themselves as entrepreneur or who were uncertain about whether they  
416 should define themselves as entrepreneurs (see figure 3). This demonstrates that self-  
417 identification as entrepreneur is indeed a psychological variable of its own and cannot be  
418 simply reduced to firm or farm ownership, which should be kept in mind for the result  
419 interpretation.



420 Figure 3. Self-Identity – 'How well do the following describe you: I am an entrepreneur' (in %)

421

Entrepreneurial attitude, self-efficacy and pe































