

What Causes Finnish Family Farmers Feel Successful? The Role of Resources and Entrepreneurial Characteristics

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This study investigates the influences of resources and entrepreneurial characteristics on perceived success in family farms using the Resource-Based Theory and Entrepreneurial Orientation perspectives. Resources and entrepreneurial orientation are used to identify success perceptions. Confirmatory factor analysis and structural equation modelling were applied to the survey data of 805 Finnish family farmers. Family farmers rate their skills as good, and their abilities of proactiveness and self-realization success as high. The results suggest that both resources and entrepreneurial orientation affect the perceived success of family farmers, although the role of entrepreneurial orientation is relatively small. Co-variability between resources and entrepreneurial orientation is positive, addressing the change towards the same direction. This study promotes the understanding of the family perspective and its role in the successful use of resources and entrepreneurial capabilities in farming and offers a developed construct for family farm business research.

Key words: family farms, entrepreneurship, resource utilization, perceptions, success, Finland

Introduction

Agriculture has been undergoing structural changes for a long time, alongside transformation in technology, economic systems and the sociocultural context. The most common organizational form of agriculture, and thus the farm business worldwide, is family-led farming. A typical farm business includes the farm and the farm family as two cohesive elements (Hansson et al. 2013). Just as family businesses create wealth, employment and economic growth (Astrachan and Shanker 2003), family farms also stand for long term sustainability (Glover and Reay 2015).

Family farmers have been facing rapid changes due to economic, social and environmental factors throughout recent history. This study provides a novel way of studying the characteristics of farming households/families and their attitudes towards their enterprises (Alsos et al. 2014) as well as what kind of entrepreneurs farming families are. Farmers today can be described not only as producers but also as entrepreneurs (Vesala and Vesala 2010, Stenholm and Hytti 2014). Farmers benefit from entrepreneurial and other skills (de Wolf et al. 2007) and resources (Dias et al. 2019a) when choosing and implementing successful strategies. This paper focuses on the extent to which farmers strategically leverage their resources and entrepreneurial spirit to successfully achieve their family-related goals.

Concepts of the family business literature do not always match the concepts of family, for instance, when measuring manager/owner reflections instead of the family. This dissonance clearly indicates a gap in research related to family farming entrepreneurship. The implications on family businesses limit the insights of looking at the topic from a family perspective, thus, preventing understanding the family-business relationship. Moreover, family farming is a unique business type and should be studied with an appropriate research design.

Resources and entrepreneurial orientation are important in farm entrepreneurship (Grande et al. 2011). The purpose of this study is to determine the associations between resources, entrepreneurial orientation and perceived success of the family farm. Positive effects of resources and entrepreneurial orientation on perceived success and between each other are subjected to the null hypothesis of no effects in the empirical data collected from Finland. In the literature, the measurement of such a theoretical model is considered a combination of subjective construct of resource and entrepreneurial orientation variables, and objective dependent outcome variable such as performance. In this study, the relationship between resources, entrepreneurial orientation and subjective perceptions of success of family farmers in Finland are conceptualized at family level. This study challenges the theory by employing subjective perceptions of success in the model, therefore, contributes to the conceptual understanding (Brinkerink et al. 2022). The quantitative data consisting of a high number of observations offer us the opportunity to test the baseline model. This study originally provides an inclusive way of measuring resources containing networks, skills, organizational culture and entrepreneurial orientation. In testing of the model, for example,

an underemphasized phenomenon of entrepreneurial orientation, autonomy, is included additionally and discussed on its significance. Instead of firm performance usually representing as a set of short-term outputs, this study highlights the use of firm success especially in family farm business research where the family farms may have longer-term perceptions about their goals and strategies (Gasson et al. 1988). Furthermore, family success does not have only economic grounds but should also be defined in other means such as emotional (Rovelli et al. 2021) determinants, which this study takes into consideration. In summary, this study follows an original way of constructing resources, entrepreneurial orientation and perceived success specific to family. The Structural Equation Model (SEM) with latent factors from the Confirmatory Factor Analysis (CFA) is used for hypothesis testing. The rationale of the study is to develop the construct of the variables regarding family-related farm resources and entrepreneurial orientation specifically. The novelty of this study compared to earlier research of the field is that the resources and entrepreneurial orientation variables are measured at the family level, not at the level of the individual entrepreneur.

Theoretical Background

Family farming is the most common agricultural business type worldwide. Over 90% of agricultural firms are family farms (FAO 2014, Lowder et al. 2021). According to Luke (2021), there are 45 630 agricultural and horticultural enterprises in Finland, 86% of which are run by families. Most family farm definitions revolve around the Sustainable Rural Livelihood framework (Bosc and Sourisseau 2019) according to two main criteria: ownership and self-definition (Casillas et al. 2011). It is also common to define businesses as family businesses when 50% of the ownership and management belongs to at least one family and the governance is organized around keeping control of the business among the members of the same family (Chua et al. 1999). The latter emphasizes the transition of farms to the next generation (Gasson and Errington 1993). These criteria have been used to define family farms in this study, It has been argued in several studies that family farms reflect an uncommon type of entrepreneurship. Pritchard et al. (2007) postulate a new description named farm family entrepreneurs at the center of the global agricultural organizational forms that are undergoing transformation and require family farms to follow a more hybrid type of business structure in order to survive. Furthermore, similar nomenclature has been put forward as the entrepreneurial family (Uhlener et al. 2012). Some organizational characteristics and management style in utilizing, maintaining, and transferring resources have been found to be distinctive to family farms. Family farms use effective management and coordination of resources as a strategy when there is a cluster of opportunities (de Rosa et al. 2019). On a broader level, the management skills of family businesses might sometimes appear to contradict their entrepreneurial behaviors about planning, decision-making, and marketing products (Penrose 1959). Short et al. (2009) found that family businesses use less entrepreneurial language than non-family businesses. There are other reasons behind lower values of entrepreneurial indicators in family businesses, such as less risk-taking behavior and its effect on performance (Naldi et al. 2007). Such differences between family and non-family farms distinguish their strategies and goals. Growth, for example, might not always be the primary goal of family farms even if they seem to have as many of the necessary skills as non-family farms, which is also conceptualized in this study to touch upon the strategic management and entrepreneurship in family farms

In the field of family business research, the resource-based theory (RBT) has been one of the most common frameworks since the early 2000s (Chrisman et al. 2010), when the term family entrepreneurship became an increasingly central part of attraction as an approach where family business and entrepreneurship meet (Randerson et al. 2015). Alonso and Austin (2016) found that the most vital characteristics of family businesses are associated with several attributes of RBT. RBT provides a good base for analyzing family businesses' specific way of employing resources (Rau 2014). The essential perspective of RBT is mentioned first by Penrose (1959), and the theory has been developed since then. Not every resource is considered critical, only those that distinguish the business from the competition (Wernerfelt 1989), and they are those resources and capabilities that have a positive impact on the costs or benefits related with the product (Peteraf and Barney 2003). Barney (1991) developed notions regarding strategic resources and their relationship with competitive advantage of the firm, which can be classified under four attributes: valuable, rare, imperfectly imitable, and non-substitutable. Habbershon and Williams (1999) detailed specific resources and processes in achieving competitive advantages for family businesses. In addition, effective management of specific resources has been found to be crucial for the continuity of the business (Sirmon and Hitt 2003). Therefore, this study uses RBT in the conceptual framework.

Family farms use resources to exploit opportunities and mitigate threats. Those resources might already exist in the family or be acquired from outside. Resources might lead to different competitive advantages according to their

value, rarity, imperfect imitability and non-substitutability (Barney 1991). Just like tangible resources, family farms might have some intangible resources. In order to best use their entrepreneurial skills in decision-making processes (Morgan et al. 2010), i.e., strategic management, it is important to coordinate resources so that each resource or a group of resources would provide an optimal benefit. By doing so, family farms can achieve a competitive advantage and success. It has been argued that efficient and effective resource management also has a positive impact on the successful succession of family farms (Glover 2013). However, richness of resources does not always guarantee advantages for the firm (Armstrong and Shimizu 2007, Mosakowski 2017). The optimal quantities and qualities of resources needed for family farms have been a topic of debate. We take the characteristics of family farms into consideration with the aim of obtaining clearer results. Because some resources of family farms might need special attention regarding such features as availability or functionality, those resources comprise not only assets but also skills (Alsos and Carter 2006). ‘Family resources’ reflecting resources uniquely to family farms are subjected to has effect on perceived success. With these theoretical aspects in mind, the null and alternative hypotheses regarding the resources-perceived success relationship in this study is defined as follows:

H_{0a} : ‘Family resources’ has no effect on family farm’s perceived success

H_{1a} : ‘Family resources’ has effect on family farm’s perceived success

Several frameworks have been used in research on farm entrepreneurship (Alsos et al. 2011) and EO has also been shown to be suitable for family farm business research (Verhees et al. 2011, Veidal and Flaten 2014, Suvanto et al. 2020). EO has been used in various forms and in various research disciplines, which has also further developed this framework. The three most commonly used indicators of EO are innovativeness, pro-activeness, and risk-taking, which were first characterized by Miller (1983). The innovativeness of a firm is its propensity to take part in the creation of new ventures using novel ideas, processes, and experimentation (Lumpkin and Dess 1996). Pro-activeness describes how the firm behaves in the processes that are set by the firm’s vision of what the future requires by introducing new products before competition arises or seeking potentials that might or might not be in the same business line (Venkatraman 1989, Lumpkin and Dess 1996). The risk-taking propensity of the firm addresses the magnitude of the riskiness (Venkatraman 1989) observed in decision-making on the utilization of resources, products, and markets. Besides the common determinants, the flexibility of EO must be noted, and studies might add specific variables into the EO construct depending on their frameworks. Autonomy, for example, has been shown to be an important element of EO (Nordqvist et al. 2008). Autonomy means actions taken by an individual or a team without dependency in order to bring about ideas or visions (Lumpkin and Dess 1996).

EO perspective, which has been used in family business research as family EO (Zellweger et al. 2012, Hernández-Linares and López-Fernández 2018, Kallmuenzer et al. 2018), used in this study with the focus of the connection between family farming and entrepreneurship. Family farmers’ perceptions of innovativeness, pro-activeness, risk-taking, and autonomy seem quite inclusive and insightful. ‘Family EO’ reflecting the entrepreneurial orientation uniquely to family farms are subjected to has effect on perceived success. Thus, the relationship between EO and perceived success has been formulated in this study as the null and alternative hypotheses below:

H_{0b} : ‘Family EO’ has no effect on family farm’s perceived success

H_{1b} : ‘Family EO’ has effect on family farm’s perceived success

How family farms utilize their resources and entrepreneurial skills is important. Furthermore, it is crucial to know about their goals and what resources and entrepreneurial capabilities they use to reach them. In addition, it is vital to see how much these factors affect their ability to achieve goals. Analyzing the variability between resources and entrepreneurial orientation, therefore, could give a better understanding of the theoretical framework. In fact, it has been shown that EO and RBT work well together (Grande et al. 2011) so that the testing of the relation between them would be highly informative. ‘Family EO’ and ‘family resources’ uniquely belong to family farms are subjected to have a relation, as built on the following null and alternative hypotheses:

H_{0c} : ‘Family EO’ and ‘family resources’ do not have a relation

H_{1c} : ‘Family EO’ and ‘family resources’ have a relation

Even though the term ‘success’ has been considered to be about growth and profits, it is related to other goals, too (Buttner and Moore 1997). Connections linking the benefits of the entrepreneur to goals not only provide

insights about the relationships between goals and their determinants but also help us gain knowledge about how far they have been achieved. Furthermore, the preferences might affect different prioritizations of critical success factors differently (Lai et al. 2018). In order to sustain long-term success, enterprises would harmonize products and processes using an entrepreneurial mode of management (Teece 2007).

Business success is different from other terms such as business performance (McKenny et al. 2018) or business growth (Walker and Brown 2004, Reijonen and Komppula 2007). The uniqueness of success in family farms is that there is no concrete way to success perceptions using only economic or financial indicators. Objective financial success and financial efficiency do not always reflect the overall perception of the success of family farms (Nanhou 2001). Therefore, this study conceptualizes subjective perceptions of success, as also discussed by Dijkhuizen et al. (2016). Family farmers' impressions of their own success can be more than only objective constructs of success (Manzano-García and Ayala-Calvo 2020, Wach et al. 2020). In general, such subjective success assessments may be correlated to similar goals.

Material and method

The data were collected during March – April 2021 using a national electronic survey. The questionnaire was prepared so that it could be answered using a computer or mobile device. In addition, it included Finnish and Swedish language options. The questionnaire consists of open-ended (text and numeric), selection-based (solo and multi), matrix, and slider-type questions.

Survey links were sent to 20 717 farmers in total. The sample came from the Finnish Food Authority. Respondents were chosen by random sampling, corresponding to 44% of Finnish farmers, and 2 052 of them responded. The response percentage was 10%, which is typical for similar surveys performed in Finland (e.g. Kaila 2019). According to the non-response analysis, even though there were issues such as bad internet connections in some regions, responses were evenly distributed across all regions. The dataset was processed to filter family farmers for further analysis according to their response to the question, 'Which of the following best describes your farm business?' Among those who replied, 'We have a family business where two or more family members are responsible for running the farm', we ran one more filtering phase to eliminate cases which had several missing responses. After validation of the data, 805 observations from family farmers (1) were involved in the analysis for this study. Most of the farmers who responded to the survey were full-time farmers. Most of the farmers' production lines were related to cereal, crops, or milk production (Table 1), and the farms had typically been under the control of the same families for decades.

Table 1. Main production line and location of family farms

Variable	Values	Frequency
Main production line	Cereal production	275
	Milk production	170
	Other cattle production	68
	Other animal production	59
	Other crop cultivation	135
	Other (including mixed production and greenhouse)	59
	Open field Horticulture	42
Regions	Southern Finland	369
	Central Finland	182
	Ostrobothnia	161
	Northern Finland	85
	Ahvenanmaa	11

Most of the variables that measured resources were derived from Forsman (2004) and Rantamäki-Lahtinen (2009). Resource variables were buildings, funding opportunities, profitability, business expertise, technology, machinery and equipment, customer relationship management, entrepreneur's networks, expertise and networks of other family members, quality of products/services, and geographical location. In addition, we added a few more concepts such as organizational culture (Zahra et al. 2004) and skills (de Wolf et al. 2007), consisting of production

engineering, financial management, opportunity, strategic planning and implementation, and collaboration/networking. Some other variables were left out of the final analyses either according to the results of previous studies or because of compatibility issues that might occur in the theoretical model due to low reliability scores. Variables of resources were divided into four factors: capital (buildings and technology, machinery and equipment), capability (funding opportunities, profitability, and business expertise), organizational (customer relationship management, entrepreneur’s networks, expertise and networks of other family members, quality of products/services, geographical location, and organizational culture), and skills (production engineering skills, financial management skills, opportunity skills, strategic planning and implementation skills, and collaboration/networking skills).

In order to measure EO, we used innovativeness, proactiveness, risk taking and autonomy variables. The first three are the most common variables in EO; however, autonomy is an important indicator as well. We gathered the measurement items used by Covin and Slevin (1989), Lumpkin and Dess (2001), and Lumpkin et al. (2009). We applied minor modifications to the items in accordance with the theme of family farming. We used the same structure when implementing EO variables into the model.

Items measuring subjective perceptions of success in this study were derived from Reijonen and Komppula (2007). We used a similar method to construct the perceived success items because they reflect the goals of farmers in Finland. Farmers were asked about their perceptions of the best possible financial result, earning an adequate standard of living for themselves and their family, the financial profitability of operations, self-determination in their own work, pride in what they do, personal satisfaction, reputation, use of the latest technology, keeping the farm under family control, passing the business on to the next generation, increase in farm size, and revenue growth. Variables of perceived success were grouped under four factors. The factors were self-realization (self-determination in their own work, pride in what they do, personal satisfaction, and reputation), economic results (the best possible financial result, earning an adequate standard of living for themselves and their families, and financial profitability of operations), growth (use of the latest technology, increase in farm size, and revenue growth), and family control (keeping the farm under family control and passing the business on to the next generation).

In the final step, the application model consisting of the above-mentioned variables was built, as presented in Figure 1. To summarize, success is the dependent variable reflected as four factors (self-realization, economic result, growth, family control) in the model whereas resources (capital, capability, organizational, skills) and EO (innovativeness, proactiveness, risk-taking, autonomy) are independent variables.

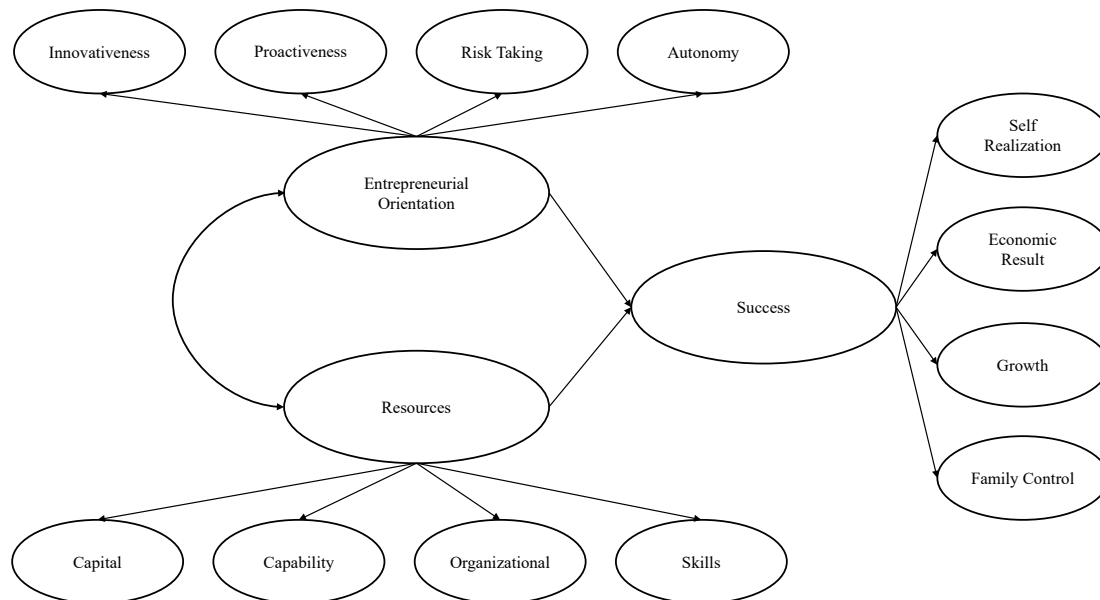


Fig. 1. The model of application used in this study

In total, we included 16 out of 20 questions from resources and skills, 11 out of 15 questions from EO, and 11 out of 12 questions from perceived success in the analysis. Except EO measurement, all the questions were designed with a 5-point Likert scale. Resources were scaled from weak-excellent, as were the skills and perceived success scales, with one additional option ‘I do not know/not in use’. Observations that used this option were excluded

from the analysis. Construct reliability of the data was checked using Cronbach's alpha coefficient (0.882). We preferred a 7-point end to end scale in EO measurement. We initially conducted Confirmatory Factor Analysis for the measurement model consisting of the factors. Resources, EO and success were second-order reflective latent constructs in the measurement model. Relationships between variables were specified for the structural model and the data were then analyzed through Structural Equation Modelling with Maximum Likelihood Estimation. Structural Equation Modelling is an approach to test the hypothesized model especially consisting of relationships between the unobserved conceptual variables (latent variables) that are not measured directly, instead, reflected as the observed variables (Kline 2005). The structural model that this study employs includes the influence of resources, EO on success. The influences were estimated using regression coefficients, and standardized estimates for a comparison of the parameters. The structural model was evaluated using fit indices (Jöreskog and Sörbom 1986, Bollen 1989, Hu and Bentler 1999). Structural Equation Modelling is applied using R Project software and its *lavaan* package (Rosseel 2012).

Results

The majority of the farmers assessed their own resources, EO and perceived success to be average on the measurement scale. The means and standard deviations of farmers' perceptions of the themes are presented in Appendix. All the resources that are utilized on family farms seem to lead to similar competitive advantages as their counterparts, except skills. Family farmers think that their resources (buildings, funding opportunities, profitability, business expertise, technology, machinery and equipment, customer relationship management, entrepreneur's networks, expertise and networks of other family members, quality of products/services, geographical location, and organizational culture) contribute to a medium level of competitive advantage. This homogeneity, however, changes slightly for EO and perceived success. Family members consider their skills in production engineering, financial management, and collaboration/networking to be above average. The making of changes in products and/or services has increased over the last 5 years, whereas there has not been a high amount of investment during this period. Farming families take moderately proactive actions in dealing with competitors regarding land use of the surrounding area (neighborhood/village), on the market (price, quality, assortment), and in production technologies. However, the mean scores in risk-taking and autonomy are below proactiveness. Family farmers sometimes avoid implementing changes quickly and taking risks, despite the potential of high returns. Likewise, planning and carrying out the work requires guidance from the experienced people in the family, meaning that there is not much room for independent work. Responsibilities for decision making and advantage taking are usually distributed among family members.

Family farmers' subjective assessments about their perceived success differ from one success element to another. Subjective success perceptions in financial results, adequate standard of living for individual and family, profitability of operations, use of the latest technology, generational transfer of the business, increase in farm size, and revenue growth are at medium level. Nevertheless, the results show high scores in self-determination in their own work, pride in what has been done, personal satisfaction, reputation, and keeping the farm under family control. It is noteworthy that farming families do not find themselves as successful in passing the business on to the next generation as in keeping control of the farm in the family.

All standardized indicator loadings on the second order factors are above 0.5 except autonomy, composite reliability scores are above 0.66 except autonomy (0.56), and all AVE scores are above 0.45 except financial (0.44) and organizational (0.30) resources. Table 1 presents the unstandardized and standardized estimates of regression coefficients between perceived success and latent variables of EO and resources. An increase in EO by one unit while keeping resources constant would increase perceived success by 0.083. Besides, an increase in resources by one unit with constant EO would increase perceived success by 0.412. The direction of the relationship is positive for both latent variables. With a comparative effect of the resources and EO on success, standardized estimates indicate that the relationship between EO and perceived success is not relatively strong (0.139), whereas resources have 0.615 standardized coefficient score, which means they have a stronger effect on perceived success. The coefficient scores of the latent variables suggest that family farmers' perception of success is influenced by the resources of their farms. The influence of their entrepreneurial orientation plays a significant but minor role in their perceived success. The variability of EO and resources are not similar, but still positive, as seen in the standardized covariance score being 0.522.

Table 1. Regression coefficients of EO and resources in the structural model

	Estimate	Standardized Est.	Std. Error	p-value
Perceived Success				
EO	0.083	0.139	0.030	0.005
Resources	0.412	0.615	0.049	0.000

EO latent variable has a weak influence on perceived success. Nevertheless, most of the dimensions of EO suit the structural model. The associations of innovativeness, proactiveness, and risk-taking by EO are positive while the autonomy variable is not significant in the model. EO is reflected best in proactiveness and risk taking. In resources, the reflection is realized best on capability and organizational, but all were close equal impact.

The structural equation model of the variables suggests that influences of both resources and EO on perceived success are positive (Fig. 2). In addition, relationships between EO and resources are positive. Therefore, either the H_{0a} or H_{0b} hypothesis can be rejected. And the relationship between resources and EO is significant, which means that H_{0c} can be rejected, too. The structural model provides a good fit as Chi-Square ($\chi^2 = 2304.74$), $\chi^2/d.f.$ (3.355), standardized root mean residual (SRMR = 0.069), root mean square error of approximation (RMSEA = 0.054), and good Comparative Fit Index (CFI) (0.878) and Tucker-Lewis index (TLI = 0.868) have been observed.

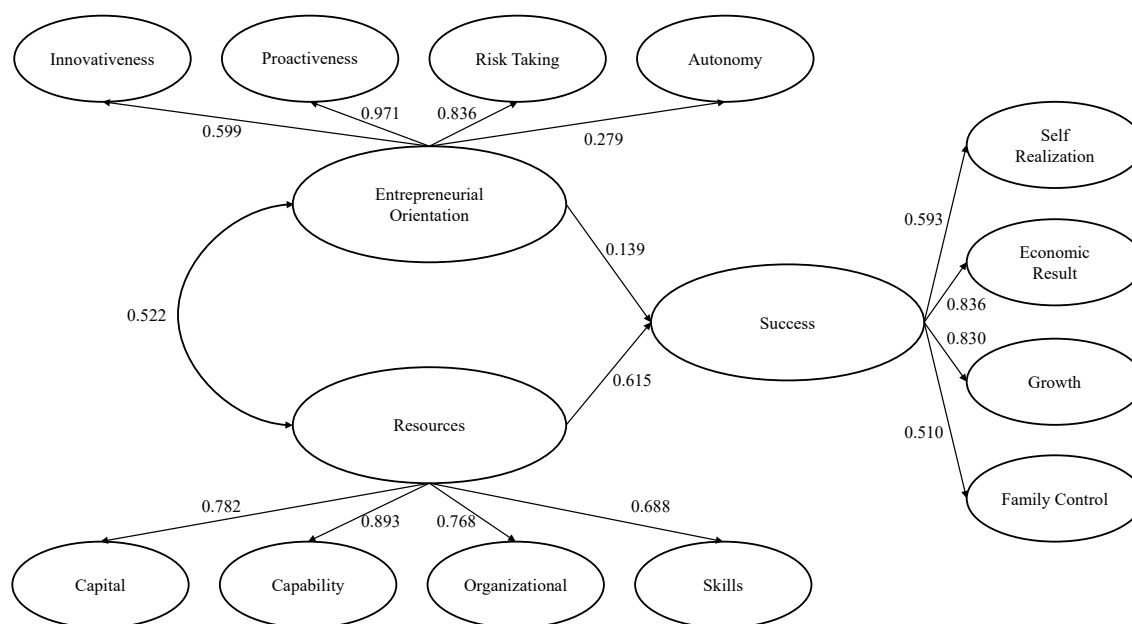


Fig. 2. Structural equation model results

Family farm resources are mostly evaluated by farmers at the same level as their competitors. Farmers are usually innovative in production; however, investments are balanced between current and new products. Farmers also take proactive actions on land and marketing and in production technologies, but they are not always risk takers nor autonomous, since the responsibilities are shared. Success perceptions are mostly average regarding financial, economic, and administrative factors, and even better on the emotional side of successful farming. Succession on the farm is not as good as family control. To sum up the results according to the Structural Equation Model, it can be claimed that resources have a stronger influence on perceived success than EO. Still, both relationships between resources-perceived success and EO-perceived success are positive and significant in addition to the positive covariance between resources and EO.

Discussion and implications

The results suggest that the family farmers assess their resources to be on average equally good as the resources of other farmers. However, there are still differences in resource categories. Family farmers would develop their skills in opportunity recognition and strategic planning further, since the averages of these variables are relatively low in all skills variables. This would be in line with the argument in strategic management literature that firms has been observed to have higher organizational design when the aim is innovating and exploiting opportunities from external sources (Foss et al. 2013), since the level of external-related resources was found to be similar to opportunity skills in this study as well. From family business perspective, an additional relevant question that would emerge based on the interpretation of the results is when and how the family members form teams, since the skills become vital only after the formation, during the determination of roles and strategies of opportunity exploitation (Discua Cruz et al. 2013). Family businesses are considered exploiting fewer opportunities, with the mediating role of top management teams (de Massis et al. 2021), although this would work differently for family farms, as this study indicates. Because family farmers as entrepreneurial teams would be quite different from other kinds of entrepreneurial teams (Kaikkonen 2005), especially in terms of diversification: the motives of families, the family composition, or spousal involvement in production, planning, and decision-making processes might determine whether a strategy is either opportunistic or necessary for survival (Meert et al. 2005, Alsos 2007, Hansson et al. 2013). Therefore, this study suggests further examining the relationships between the family dynamics in the farm management and decision making in case of opportunities.

The results indicate that family farmers behave innovatively in creating new products and services, although their investments are not always allocated to the development of those new products and services. As suggested by Le Breton-Miller and Miller (2006), family businesses might concentrate on long-term investments that would contribute to a good reputation. In our study as well, the uniqueness of having a family farm business addresses following a specific innovative strategy, but not necessarily investing in it over the short term.

Family farmers consider themselves good at being proactive in land use, on the market, and adopting production technology before others. Farms in Europe have been considered less proactive than other sectors (Pindado and Sánchez 2017), especially the established compared to new ones. Nevertheless, our study argues that family farmers in Finland, which most of their farms were established long ago, perceive highly proactive.

Family farmers have lower average regarding taking risks and autonomous actions compared to their innovativeness and pro-activeness perceptions. This study suggests analyzing the levels of risk-taking more thoroughly. An extreme level of risk-taking propensity might not be the most desirable attribute (Madsen 2007, Veidal and Flaten 2014), especially in the agricultural sector, where taking risks does not guarantee high returns. What the optimal level of risk-taking is for farmers, and specifically for family farmers would be insightful to study. This study contributes to the literature also about autonomy in the family in that the outcome of the measurement may change depending on where the related questions are directed, and how the objects/subjects of the questions are formed.

The analysis of the study indicates that family farmers have favorable perceptions of success. Emotional determinants of perceived success were found to be positive. In this study, we name them the 'self-realization' factor. Socio-emotional factors prevent a perfect connection between control and transfer, especially from the perspective of innovation opportunities during the succession phase in family businesses (Hauck and Prügl 2015). This study indicates that even though the family farmers consider themselves successful in keeping the farm under family control, they do not find themselves equally successful in passing the farm on to the next generation. Therefore, the relationship between the emotional and succession related perceived success would be insightful to study further.

This study contributes to the literature with testing of the influence of resources and entrepreneurial orientation on Finnish farmers' perceived success, and indicates that both resources and EO have positive impacts on perceived success. The hypotheses assuming the non-existence of influence of resources and EO on perceived success are rejected. The results of this study support the importance of resources in family farming, and diversity of the resources in family farms. Resources are vital for the success perceptions of family farms. Because of the mixed nature of the families' behavior in using resources to achieve success, the set of resources can be diverse too. Even the need for existing resources themselves can change over time (Olthaar et al. 2019), subject to the needs of changing household sizes and family compositions (Alsos et al. 2014), which also affect decision-making. Regarding the importance of EO, it must still be noted that the effect of EO on perceived success is quite low albeit it is still significant. Besides, the null hypothesis of non-existent relation between resources and EO is rejected. Co-variability between resources and EO is positive, as this study annotates regarding the possibility

of EO being integrable with RBT in the literature (Alvarez and Busenitz 2001). The dimension that EO reflects the most is proactiveness, whereas what it reflects the least (to the point of non-significance) is autonomy. The importance of innovativeness, as mentioned in this study, embodies the need for special attention to self-realization, as also expressed by Walder et al. (2019). This study contributes to the literature with a further adjustment in the measurement of autonomy. However, there might be several other meanings to the perceptions that the farmers have about autonomy, depending on the scales or constructs of the questions (George and Marino 2011, Kallmuenzer and Peters 2017). We argue that the autonomy variable is sensitive to the characteristics of the data and requires further development in the context of farm enterprises.

The theoretical perspective applied in this study agrees that EO and family business could be useful to synthesize projection about family firms (Hernández-Linares and López-Fernández 2018) in agriculture. Indeed, it is challenging to reach a deep understanding of family farm behaviors since there is a high degree of heterogeneity in the results in the research area (Suess-Reyes and Fuetsch 2016), as we also faced in the process of research. This study suggests that the influences of resources and EO would probably not be the same with other concepts of in the literature, for example, performance (Nordqvist et al. 2008, Rauch et al. 2009, Lumpkin et al. 2010, Grande et al. 2011, Dias et al. 2021), new venture creation (Pindado and Sánchez 2017) or growth (Niemelä and Häkkinen 2014, Stenholm et al. 2016). A promising approach might be to compare the effects of EO on family farm perceived success with different subjective and objective indicators of success. This study analyzes subjective success perceptions of family farmers; therefore, further studies may give insights on how entrepreneurial characteristics of family farmers change in comparison to various concepts of success.

Conclusions and suggestions for future research

This study investigated the effects of EO and resources on the subjective success perceptions of family farmers. Its purpose was to determine the influence of EO and resources on perceived success and the relationship between EO and resources. It was found that, despite the similarities, there are original results caused by the uniqueness of family farms as family businesses.

Research on family farm entrepreneurship has recently been developed with deeper integration of theoretical concepts. This study contributes to literature by investigating the concepts empirically from the family perspective. A quantitative approach was applied to family resources, EO, and perceived success. Instead of constructing the questions as directed to managers of businesses, we asked how they think as family members.

The main results of this study show that both resources and EO have a positive impact on perceived success. The strength of the relationships varies; family resources have stronger effect on perceived success than EO. Entrepreneurial actions are mostly led by the proactiveness of family farmers. However, autonomy among family members does not play a significant role in decision-making. Family farmers think that the effects of their capital, capability, and organizational resources in competition are around the same level and they have good skills. Also, general perception about success is moderate, especially with an interesting point that emotional success perception in farming is highly achieved by family members. Family farmers can perhaps diversify their entrepreneurial actions at the managerial level, for example by not only relying on the potential outcomes of their resources but also practicing innovativeness and risk-taking. In order to provide that kind of environment for family farmers, we think that a stable agricultural market and efficient support policies steering the stakeholders towards it are prerequisites that policy makers would take into consideration.

This study is not without limitations. The research data were collected in Finland where from micro and small enterprises are considered to be competitive and innovative (Soininen et al. 2012), however, the results of this study might not be parallel with the business literature and should not be generalized in a global sense. Besides the fact that the sample represents Finnish farms well, it must be noted that the distribution of responses draws attention to relatively large farms in terms of arable land. In addition to the data, there was no control variable in the analysis. Conceptually, as mentioned in the family business and management-related literature, the characteristics, behaviors, and structures of families vary with several social and cultural factors (Clark 2009). In addition, relationships between resources, EO and perceived success can be studied using a different framework according to the concept of family farming, for example, environmental impacts and importance of caring environment and animals in family farms' perceived success and decision making. Therefore, further studies that are done in other regions or with different variable constructs would be useful (Dias et al. 2019b, Olthaar et al. 2019), as would different contexts (Fitz-Koch et al. 2018). Thus, results should not be generalized to other sectors in which family

businesses operate. Nevertheless, this study would like to stimulate further research to provide insights beyond econometric results, perhaps by adding socioeconomic constructs of data from other countries and other rural sectors. Also, it might be useful to gain insights from further research into the comparison of full-time and part-time farms, family and non-family farms and how the differences are distributed on resources and EO.

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Appendix

Descriptive statistics of resources, entrepreneurial orientation and success

Variables	Mean	SD
Resources		
R1 – Buildings	2.96	1.06
R2 – Funding opportunities	3.38	1.02
R3 – Profitability	3.15	0.93
R4 – Business expertise	3.50	0.86
R5 – Technology, machinery and equipment	2.97	1.06
R6 – Customer Relationship Management	3.52	0.79
R7 – Entrepreneur's networks	3.34	0.94
R8 – Expertise and networks of other family members	3.38	0.92
R9 – Quality of the products/services	3.55	0.75
R10 – Geographical location	3.20	0.93
R11 – Organizational culture	3.42	0.79
R12 – Production engineering skills	3.72	0.65
R13 – Financial management skills	3.67	0.72
R14 – Opportunity skills	3.44	0.80
R15 – Strategic planning and implementation skills	3.45	0.78

R16 – Collaboration/networking skills	3.46	0.84
Entrepreneurial Orientation		
<i>Innovativeness</i>		
I1 – Products and/or services	3.43	1.79
I2 – Investments	3.02	1.53
<i>Proactiveness</i>		
P1 - In the land use of the surrounding area (neighborhood / village)	4.01	1.33
P2 - On the market (price. quality. assortment)	3.99	1.35
P3 – In production technology	3.96	1.33
<i>Risk taking</i>		
Ri1 – Risks	3.49	1.45
Ri2 – Implementing changes	3.17	1.33
Ri3 – Uncertainty	3.33	1.37
<i>Autonomy</i>		
A1 – Planning and carrying out the shared work	3.29	1.49
A2 – Decision making method for the best result	3.22	1.65
A3 – Taking advantage of business opportunities	3.55	1.75
Success		
S1 – Best possible financial result	2.99	0.92
S2 – Earning an adequate standard of living for yourself and your family	3.19	1.08
S3 – Financial profitability of operations	3.10	0.99
S4 – Self-determination in own work	3.93	0.91
S5 – Pride in what you do	3.78	0.99
S6 – Personal satisfaction	3.58	0.98
S7 - Reputation	3.60	0.99
S8 – Use of the latest technology	2.66	1.02
S9 – Keeping the farm under family control	4.00	1.15
S10 – Transferring the business onto the next generation	3.21	1.30
S11 – Increase in farm size	2.80	1.33
S12 – Revenue growth	2.89	1.20