

Abstract

Family firms form a considerable global economic pillar and have a long tradition. Due to their restricted ownership structure and extended value structure, they deal with specific managerial challenges. In comparison with their generally owned competitors, family firms tend to be more stable, accountable and trustable. On the other hand, they have to combine private and business life, deal with succession issues and the relative closeness of the top management while resolving nonstandard governance mechanisms. The main objective of this paper is to propose how to create a dynamic model that can further propose viable strategies for the long-term sustainability of family businesses that maximise the stakeholders' utility. To be able to understand the internal dynamics of family businesses, as well as to fully incorporate the changing external environment, an underlying systemic model is required. It is proposed to incorporate several gradually evolving and mutually interlinked stages and to formalise knowledge acquired from the present literature extended with available data. The initial modelling stage, the mind mapping, summarises the key terminology and outlines the basic structure. These findings are subsequently refined through system and causal loop diagrams. The latter allows the formulation, discussion and generalisation of behavioural hypotheses related to the researched sustainability phenomenon. It was found that standard techniques and strategic planning tools do not fully support all the above-mentioned aspects of family businesses. Thus, these specific features, reflecting various aspects of "familiness" were modelled and incorporated into a general framework for strategic planning and management. The proposed paper deals with specific internal matters of family-owned firms. It suggests and justifies a transparent model for their implementation, thus eliminating the major bottlenecks. With this knowledge, the addressed companies can sustainably develop their businesses and keep the quality of their private life on a desirable level.

Keywords: family firms, familiness, family business, internal dynamics, sustainability model

JEL Classification: D21

Introduction

Now is a turbulent time for family businesses. Circumstances are changing and family owners must react. Every tool that can help those who form a considerable global economic pillar, is considered important and welcome. Family businesses are different in many ways in comparison to a generally owned one. They have their own challenges and specifics, such as the never-ending conflict between financial performance and socioemotional wealth (Stafford et al., 1999; Olson et al., 2003; Lucia et al., 2018).

The time of the old leaders has gone. In the past decades, 78% of leaders were male and 22% were female. That is about to change. The new generation that is trained or predicted to become leaders consists of about 50% male and 50% female (Lucia et al., 2018). However, they might have a different approach and different business and family values. Will the whole management change?

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During turbulent times, it is much harder to successfully manage a business (Naujoks, 2010). In difficult times, you can succeed with an excellent knowledge set (Anderson et al., 2018) and an excellent set of managerial tools (Li and Song, 2019). It has long been known that models can help with the sustainability of the business if they are prepared in the right way (Stafford et al., 1999).

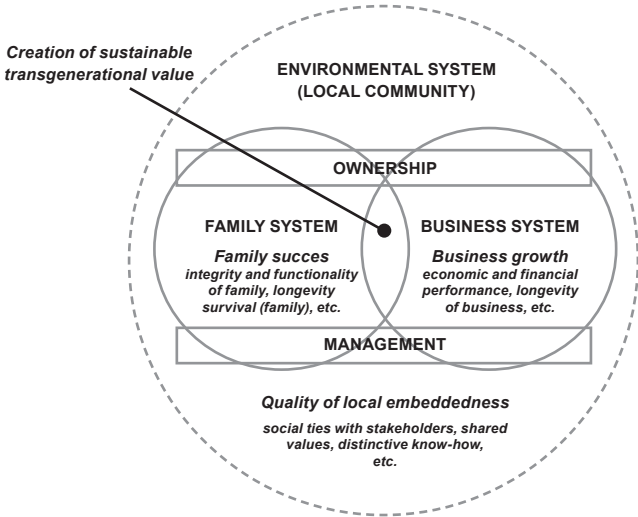
System dynamics models can help us to create a solid strategic plan for the future with respect to their inner connection and dynamic nature. However, what is the right way of creating such a complex model? How can we create a model that can stay focused on business goals and, at the same time, handle many aspects of a family business in the short and long term?

The main objective of this paper is to highlight the structural differences between generally owned and family-owned firms, summarise the state of this field and propose how to create a dynamic model that can further propose viable strategies for the long-term sustainability of family businesses while maximising the stakeholders' utility. In terms of family business sustainability as a main theme, four main branches should be highlighted that have a direct connection with this topic. These are sustainability, family business aspects, modelling and external influence. In the form of a simplified mind map, this can be seen in Figure 11 in the attachments. This paper does not consider external influences.

1. Sustainability of Family Businesses

Sustainability of family businesses is a second branch (Figure 11). Although this topic has a very long history, there is still an ongoing discussion about what is beneficial for the sustainability of family businesses. Many recently published papers strive to identify new aspects, which are crucial for sustainability, such as innovativeness or a risk-taking attitude. Some of them result in the claim that family businesses are very different among themselves so it cannot be easily measured as to whether it is crucially beneficial or not (Chua et al., 2012; Vollero et al., 2019). The goal is to propose a way to create a sustainable value that lasts for generations.

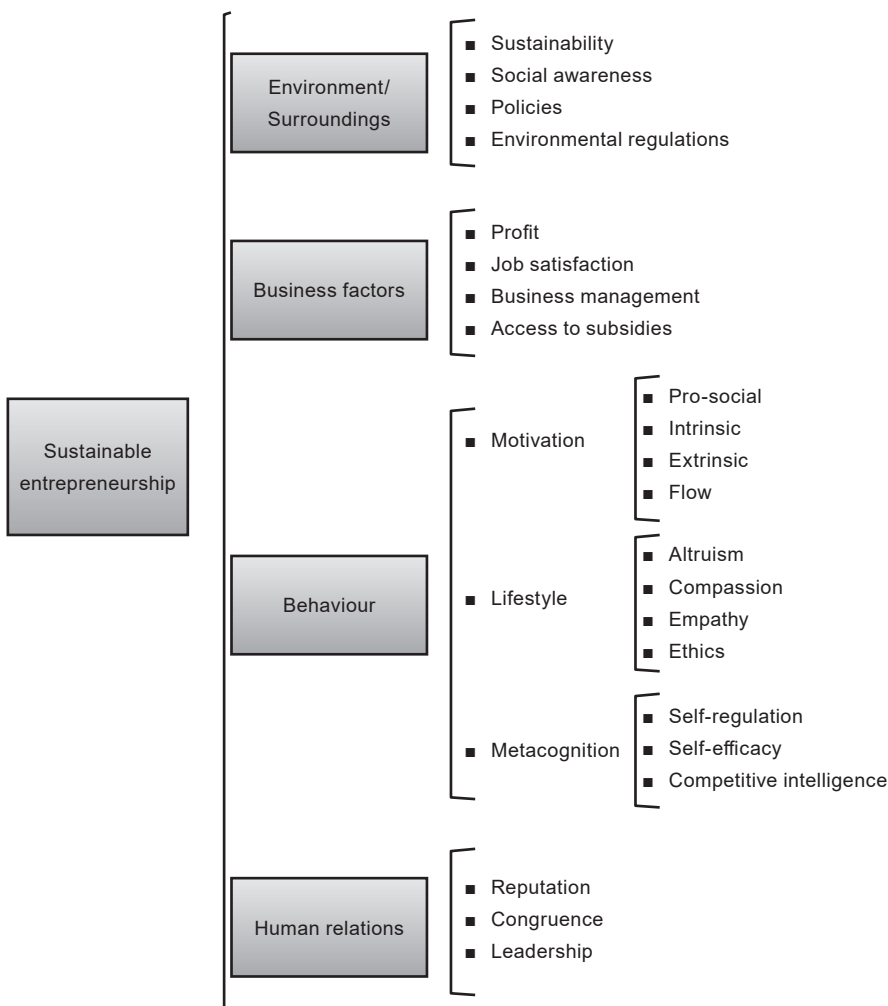
Figure 1 | Sustainability of a family business



Source: Vollero et al. (2019)

Business sustainability has been defined as meeting current needs without compromising the ability of future generations to meet their own needs (WCED, 1987). Sustainability is naturally a question not only for a family business but to all forms of companies. Even this is a current topic which generates new ideas about how to acquire sustainable value. One of the recent and useful papers was written by Tur-Porcar (2018). This paper highlights many useful metrics to measure sustainability. Based on several experts' knowledge, the study presents weighted ranking to each subcriterion including ecological sustainability (Figure 2 and Figure 3). Ecological sustainability itself is also a very popular theme. The link between business and ecological sustainability is now given.

Figure 2 | Factors affecting entrepreneurial sustainability



Source: Tur-Porcar (2018)

Figure 3 | Ranking of subcriteria

Ranking	Subcriterion	Weight
1	Business management	14.81%
2	Leadership	9.16%
3	Ethics	8.06%
4	Competitive intelligence	6.84%
5	Job satisfaction	6.15%
6	Intrinsic motivation	6.13%
7	Profit	5.69%
8	Self-efficacy	5.15%
9	Empathy	4.90%
10	Prosocial behavior	4.15%
11	Access to subsidies	3.60%
12	Flow	3.53%
13	Social awareness	3.15%
14	Congruence	2.97%
15	Altruism	2.80%
16	Extrinsic motivation	2.79%
17	Self-regulation	2.62%
18	Compassion	2.62%
19	Policies	1.82%
20	Reputation	1.47%
21	Environmental regulations	0.98%
22	Sustainability*	0.60%

Source: Author's own processing based on Tur-Porcar (2018)

Note: *Number 22 is ecological sustainability.

A recent paper from Wang a Ho (2017) suggests that perceived sustainability is also very important, especially for customers. This means that the company not only has to achieve inner sustainability but has to present it in a form that customers like and want to see.

2. Specific Aspects of Family Businesses

The differences between family-owned businesses and generally owned businesses have been published many times from a long time ago. One of the most important authors of this topic is Chua (1999). Even in 1999, he and his colleagues presented the idea of sustainability in family businesses. A key claim was made in by Chua et al. (1999) in their paper *Family business behaviour is influenced by both financial and nonfinancial goals*. Many more aspects of family business were later discussed regarding sustainability. For example, whether the situation changes when the main entrepreneur has one or more children (Olson et al., 2003).

The attitude to Corporate Social Performance (CSR) is the next important and current topic regarding total sustainability. However, this is influenced by whether the family business is private or public. Private family businesses were the best among all firms and public family businesses scored worse than non-family owned public companies (Canavati, 2018). Why is this so? With a model that respects the dynamics of relationships between the relevant variables, it could be possible to find out why and in which loops this phenomenon happens because different types of owners have a different approach to CSR. Nevertheless, long-term oriented companies seem to have a better approach to CSR (Faller and zu Knyphausen-Aufseß, 2018). Internal links could point to the best practice, which is particularly helpful for strategic management in the long-term.

Regarding long-term decisions, transgenerational sustainability is essential but has many different tendencies. Some of them are more successful, some of them less (Anglin et al., 2017). Another study confirmed that family business owners' transgenerational succession intention is positively associated with the adoption of eco-certification (Delmas and Gergaud, 2014). This can be taken as evidence of a link between CSR and succession planning. Although this link tends to be not particularly visible, a detailed model could identify this as part of a loop regardless of its length. More has been written about the hidden links with the sustainability theme. There is a recent paper that claims that mindfulness is important for sustainability (Dayan et al., 2019). However, this would still be hard to measure. Nevertheless, if the link would have a deep impact on the total sustainability, it could and should be modelled.

More visible links were investigated some time ago. For example, a paper by important authors on this theme claimed that the human capital of the family members, like skills, abilities, attitudes and values have a positive correlation between the total human capital and the productivity of the company. In the short-term, the contribution of family human and financial capital to business success was greater than social capital, but in the long-term, family social capital contributed more to success perception than human and financial capital combined (Danes et al., 2009). Much more about human capital is presented in a recent study, which also provides a useful literature review about this topic (Sanchez-Ruiz et al., 2019). The influence of social capital is presented by Cabrera Suárez (2015) in relation to family members, their relationships and the creation of business goals and the impact on non-family stakeholders.

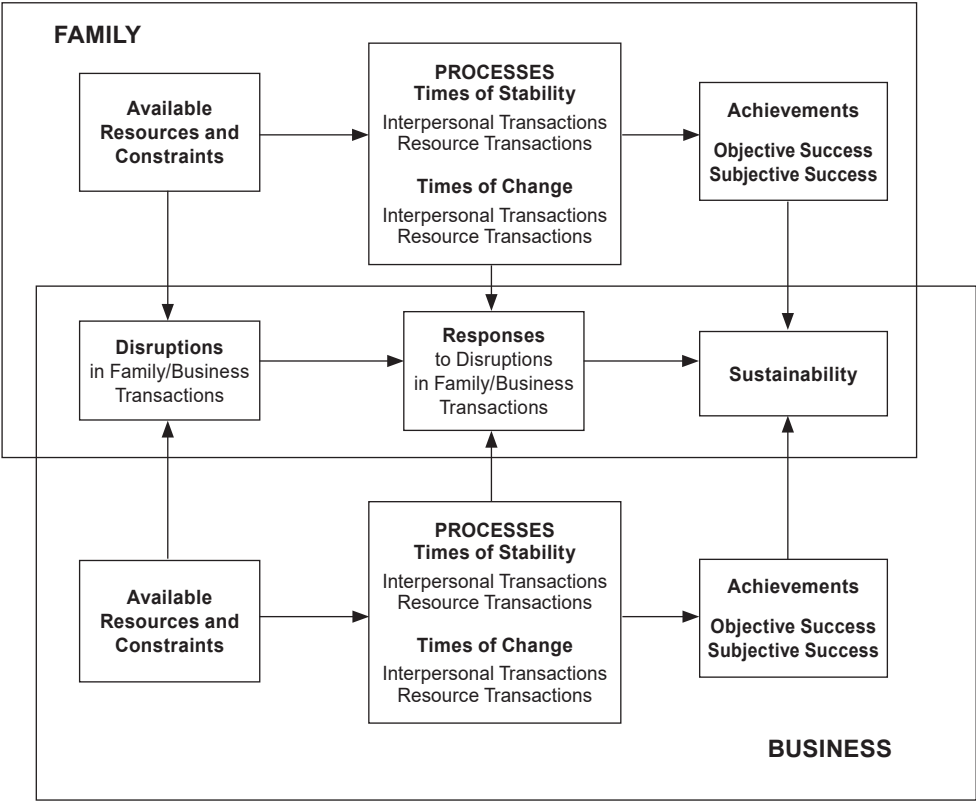
We can summarise this phenomenon of different variables and links among family businesses in a single word – familiness. This is a specific set of values and resources which family firms have while non-family firms do not. It has its pros and cons and it provides different business outcomes (Daspit et al., 2019). These might even be through their different socioemotional wealth (SEW). This term is also very current and has a broad definition. Socioemotional wealth appears to be much more important to family businesses than to generally owned businesses (Cleary et al., 2019).

3. Modelling of Sustainability

As mentioned in the previous section, the theme of sustainability of family business companies dates back before the year 2000. One of the most important models was the Sustainable Family Business Model (Stafford et al., 1999). This model, also known as the SFB model (Figure 4), is cited in many recent studies. However, it is not detailed enough and does not fully incorporate dynamic aspects. Therefore, it was remodelled

(Figure 5). For example, Heck et al. (2006) extended this model with a FIRO model to a new form, which follows the inner dynamics. Originally created by Schutz (1958), it respects the inner dynamics of the links. It is even usable in managing a change in family businesses (Danes et al., 2002).

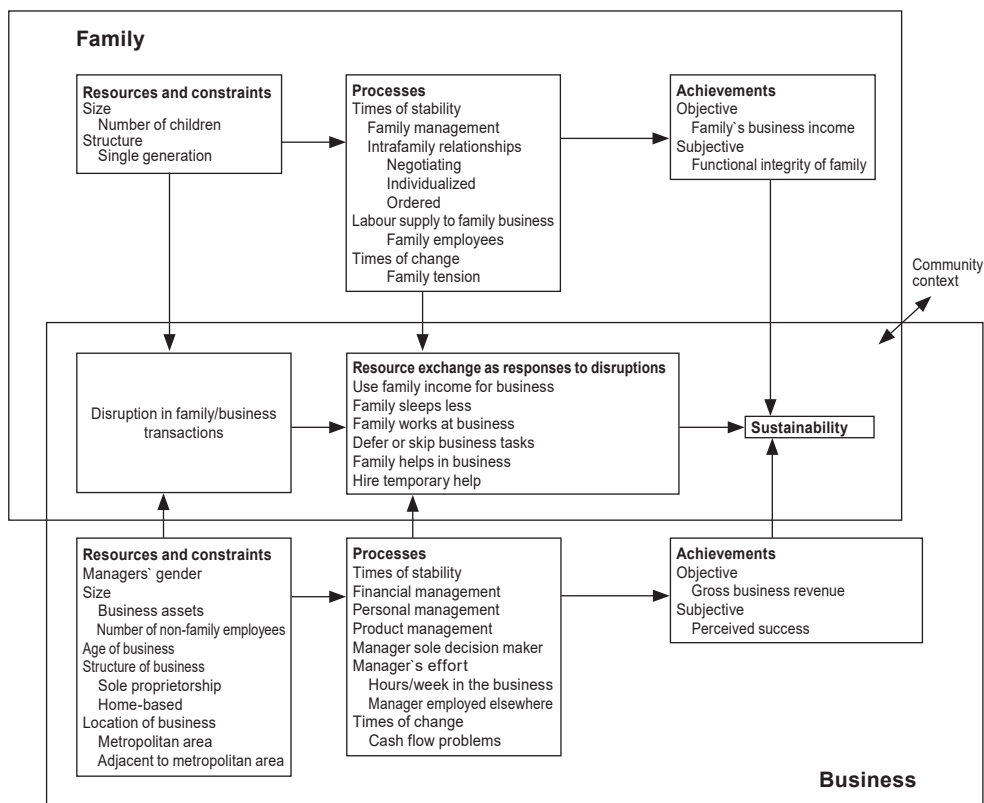
Figure 4 | Sustainable family business model



Source: Stafford et al. (1999)

If it is known that a different set of the strategic logic that drives companies provides a different output in benefits to the financial aspect, family aspect and community aspect, it can be said for sure that the predictive model can help with sustainability in more dimensions. In the long-term, missing a part in the strategy could cause a negative effect on the ventures' sustainability (Reay et al., 2015). However, modelling of family business companies is very difficult. This might be because family ventures differ from each other dramatically. They might vary from each other more than family businesses vary from generally owned businesses (Chua et al., 2012). A recent taxonomy of family businesses could be used because even that is a current topic (Neubaum et al., 2019). Family businesses can even be divided and categorised into multiple inner and extra-parts. In future research, they could be divided into intra-family, intra-firm, extra-family and extra-firm if this happens to be important (Zellweger et al., 2019).

Figure 5 | SFB model remodelled



Source: Heck et al. (2006)

4. Methods

To be able to successfully create a dynamic model that can absorb so much information, it must be started from the opposite end – from the long-term strategic goals. The chosen tool was the Balanced Scorecard (BSC) matrix, which operationalises complex business goals. Then it must be extended with the family firms' goals and familiness in general. The last step is to add dynamics to the relationships between the variables.

There is a strong underlying base for this method. BSC is often modified to fit better to a given business. It was also extended many times with strategically important non-market perspectives such as environmental, social and legal aspects (Figge et al., 2002). The evidence of usage of the modified BSC to maintain sustainability (along with CSR) can also be found in the paper from Kang (2015). Familiness was the next to be incorporated into BSC to enhance business sustainability (Craig and Moores, 2005) and was also tested later (Craig and Moores, 2010).

The next immediate step should be to add dynamics (through CLD diagrams) to a modified balanced scorecard extended with familiness to help with the total sustainability of a family business. This step is now undertaken in this paper. As evidence of this step is the example of a paper by Bianchi a Montemaggiore (2008) where BSC

is enhanced with dynamic aspects. Nevertheless, familiness not incorporated in their paper. They present a highly practical usage of this method to create a full management tool with a graphic dashboard. This paper does not aspire to this type of specific usage but more to a scientific base for future research. It is more similar to the paper from Akkermans and Van Oorschot (2005) that provided the background for the above-mentioned paper – the connection of BSC and system dynamics.

There is also evidence that successfully incorporating system dynamics into a Balanced Scorecard enhance the BSC itself (Barnabè, 2011). This topic is still current (Khakbaz Hajiheydari, 2015) in many fields. Outside of business, this method is often used for universities and armies (Da Silva Bastos Sales et al., 2016).

5. Results

The present research is based on an important paper written by Justin Craig and Ken Moores (2005). Their theses might be old but are still highly relevant to this field of research. They stated a Balanced Scorecard matrix extended with family business aspects. Based on their research, a graphic map was formed (Figure 12 – in attachments) from their BSC matrix (Figure 6).

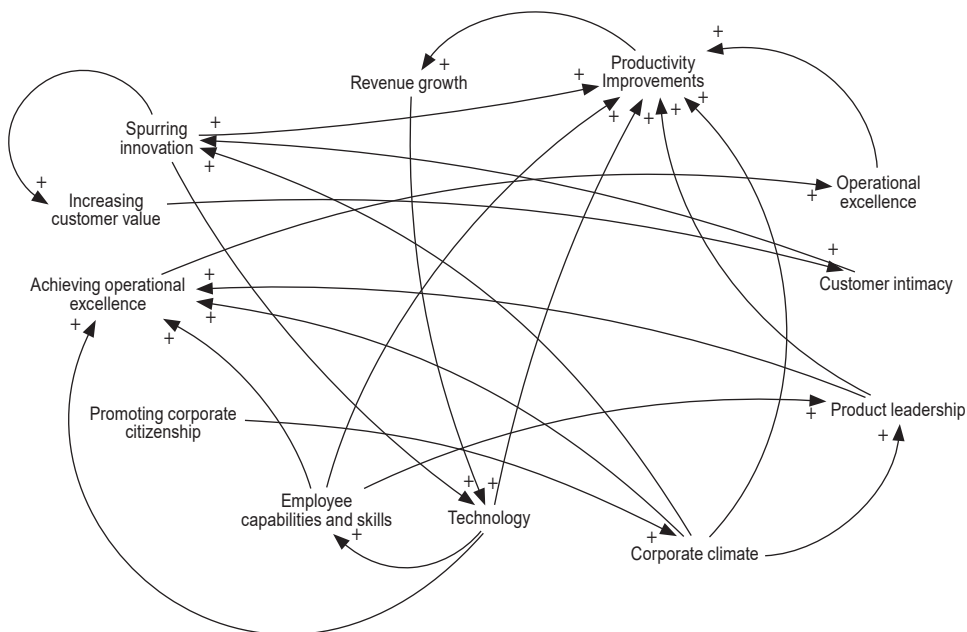
Figure 6 | BSC Perspectives incorporating family influence

BSC Perspective	Business	Familiness
Financial	Revenue growth Productivity improvements	Prepare for retiring generation Constant reinvention to keep future generations interested in joining the business
Customer	Operational excellence Customer intimacy Product leadership	Awareness of the family name Use of family in marketing initiatives Quality that reflects family brand image
Internal Processes	Spurring innovation Increasing customer value Achieving operational excellence Promoting corporate citizenship	Investment in technology that will benefit future generations Professional work practices that will attract best family and non-family employees Philanthropic activities
Learning and growth	Employee capabilities and skills Technology Corporate climate	Creating career paths for family members Making involvement in the business a privilege Encouraging and providing seed funding for new ventures presented by family members

Source: Craig and Moores (2005)

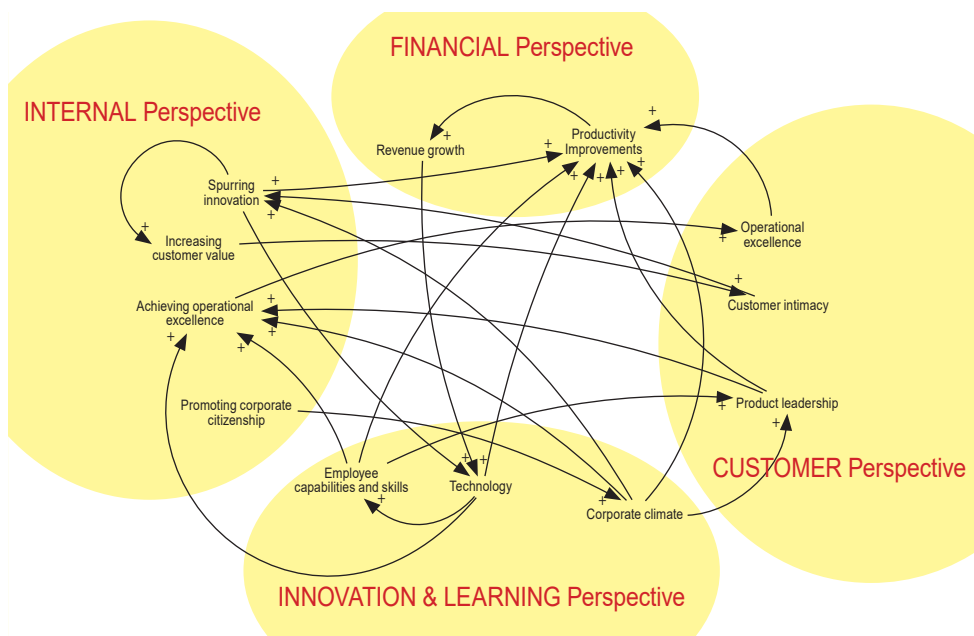
After this, CLD diagram was created showing the structure of a non-family business, based on the mentioned BSC matrix (Figure 7 and Figure 8).

Figure 7 | BSC Perspectives in CLD



Source: Author's own processing

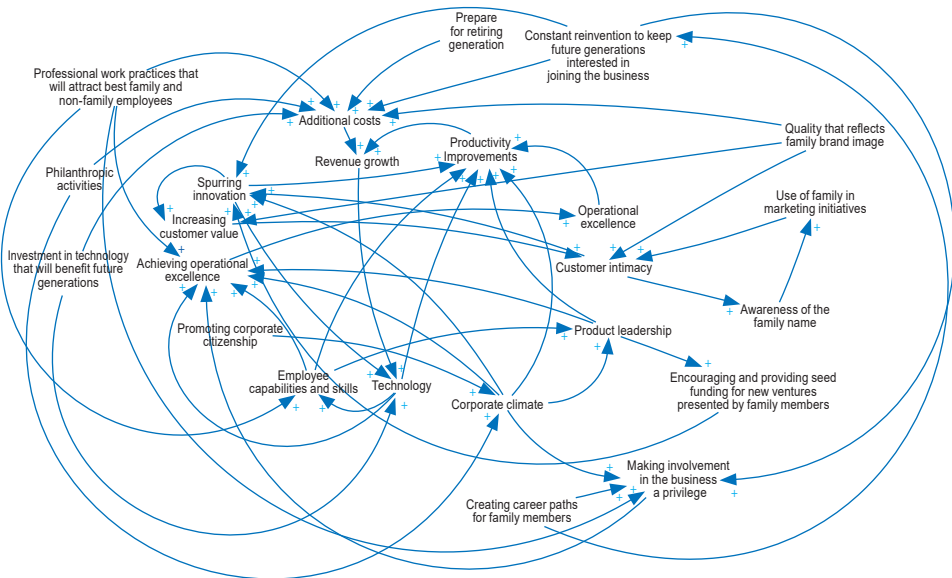
Figure 8 | BSC Perspectives in CLD with highlighted perspectives



Source: Author's own processing

The links between variables are not given as a fact. They have been set according to expectations, experience and a previous literature review. However, much more research is needed and planned. As only positive links can be seen between the variables, it is certain that this structural depiction of the managerial scheme of non-family owned business is rather simplified although it emerged from company goals. After adding familiness into this scheme (Figure 9), a much more complex situation for family-owned businesses can be seen. The scheme was derived in the same way from the company goals stated in the BSC matrix. It can, therefore, be said that according to this structure, family-owned companies have much more complex interlinks and are different from generally owned businesses. Even this insight into the complex relationship is very simplified and has outcomes that are hard to measure against generally owned business values (Chua et al., 1999; Zellweger et al., 2013). However, they can be very important for business sustainability. There is still an ongoing discussion about what is beneficial for sustainability (Vollero et al., 2019).

Figure 9 | BSC Perspectives incorporating family influence in CLD

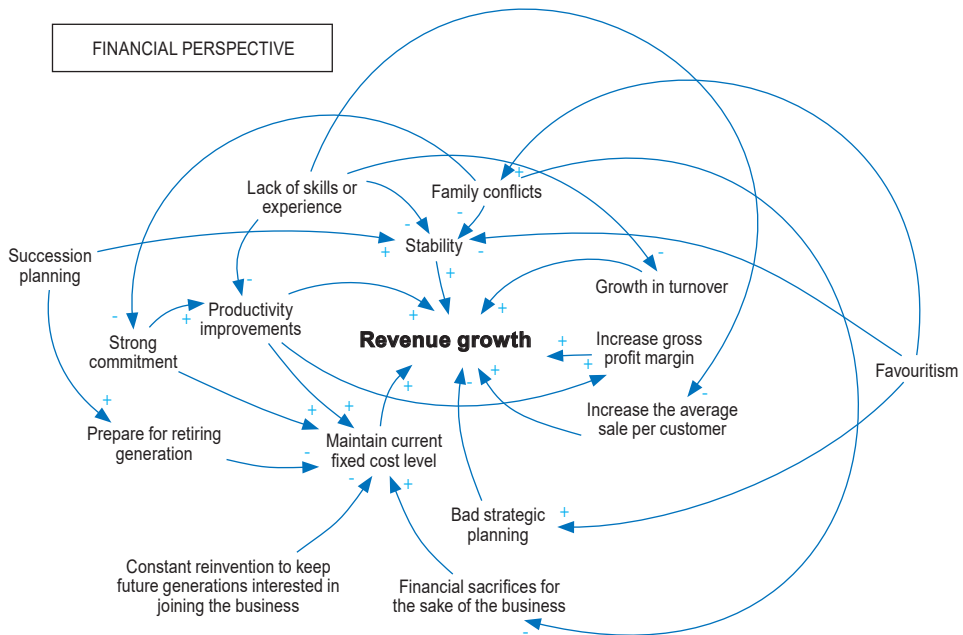


Source: Author's own processing

Familiness appears to be connected with additional costs. That supports our hypothesis that in the short term, family-owned businesses lag behind their generally owned competitors. However, in the long-term, family-owned businesses are perceived as more stable (Danes et al., 2009; Daspit et al., 2019; Lee, 2019).

Many more family aspects can be added – Figure 9 only includes those highlighted in Craig and Moores (2005) study. When adding more family and business aspects the scheme became too complicated, therefore now, only the financial part of the whole strategic scheme is presented (Figure 10).

Figure 10 | BSC Financial perspective incorporating enhanced family influence



Source: Author's own processing

Discussion

A business should be driven by measurable metrics, which can be incorporated into a Balanced Scorecard. As shown in the article, these metrics form a Balanced Scorecard, which when enhanced by family aspects could be linked to a CLD diagram that forms the core of a dynamic model. Many different financial and non-financial metrics emerge in family businesses. Lee's paper (2019) deals with measurable metrics ROA to measure performance. However, in Chua's paper (2018), many other interesting metrics are presented to measure the overall performance of family businesses. Performance and sustainability have many metrics, which can be used but makes the modelling itself very complex. Finding the right set of metrics that will provide a detailed insight, but not too complicated, might be the next step in this field.

This paper showed that with an extension of the BSC matrix and its CLD graphs that the strategic structure of a generally owned business is much less complex than a family-owned one. The article used the previous knowledge of family business, sustainability determinants and dynamics modelling to enhance the knowledge of dynamics in family businesses in a way that has not been undertaken to date. The first step was to implement dynamics into relationships between the variables in family businesses. Based on a literature review, links have been added to the variables. In this paper, eminent and tested BSC was used, to begin with, and to prove this concept.

As shown in the simplified graphic form of the literature review (Figure 11), there are four methods of incorporation to create a dynamic model that can further propose

viable strategies for the long-term sustainability of family businesses. Each method has the potential to enhance this field of study. The first method is to explore the main features of a sustainable business. The second is to identify all family aspects and their links, which helps to achieve total sustainability. The third step is to summarise the previous steps and create a complex dynamic modified Balanced Scorecard, which in the next step can be converted into a dynamic CLD scheme as this paper has shown. After the programming part, a new and highly sophisticated managerial tool can be created.

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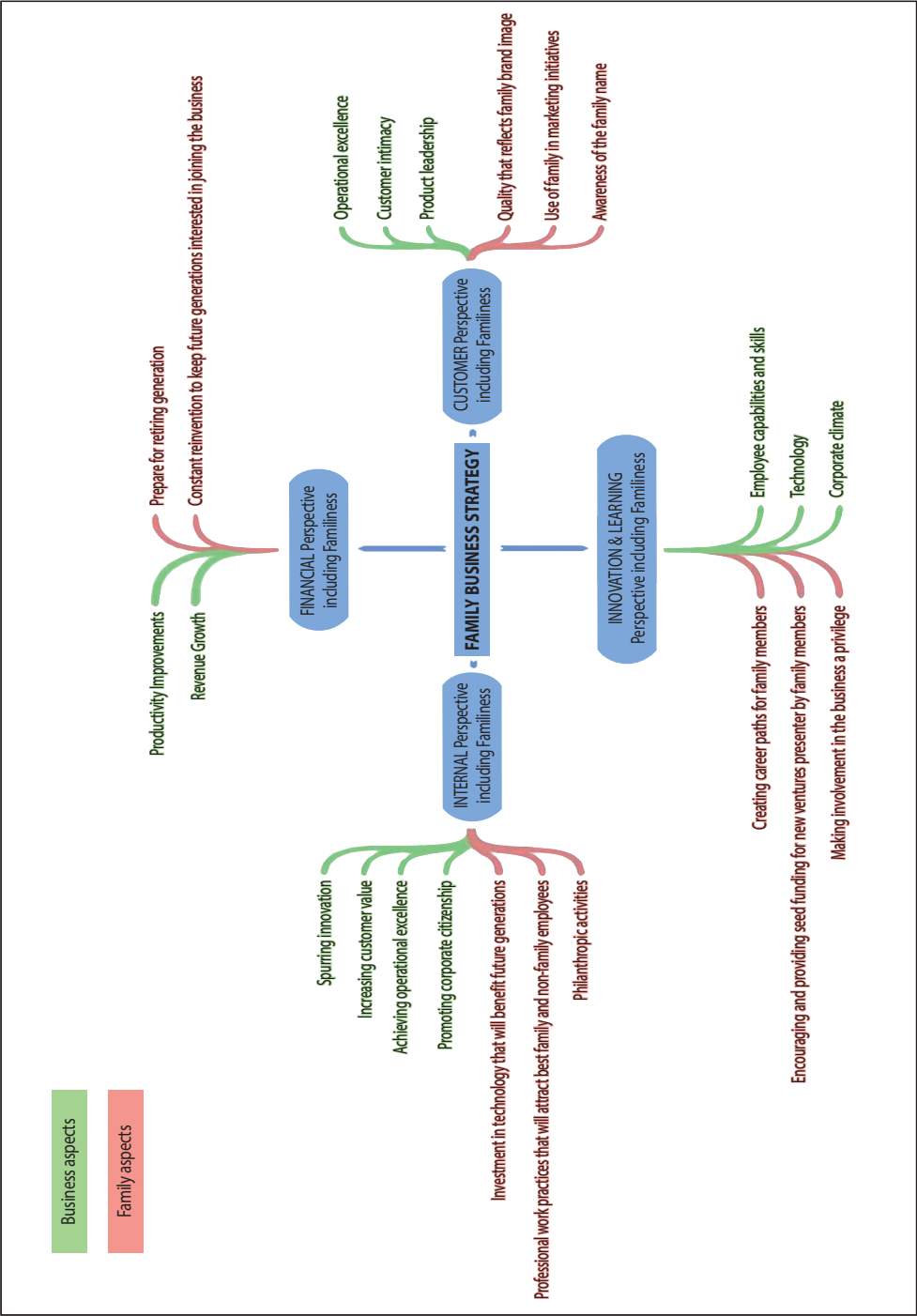
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Figure 11 | Literature review – main papers (simplified for the graphic)



Figure 12 | BSC perspectives incorporating family influence (Graphical form)



Source: Author's own processing based on Craig and Moores, 2005