Differences in Innovation Performance between Family and Non-family Owned Manufacturing Small and Medium Enterprises (SMEs) in KwaZulu-Natal

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Abstract

The characteristics of family and non-family owned small and medium enterprises (SMEs) have inherent impact on managerial decisions that are likely to affect firms' innovation performance. Aptly, this study attempts to determine the differences in innovation performance between family and non-family owned businesses. The study was quantitative and used a cross-sectional survey design to collect data from owner-managers of a sample of 308 SMEs. The study found that there was a significant difference in innovation performance between family owned and non-family owned SMEs. Non-family owned firms were found to be more innovative than family owned firms, as they were more likely to make effective decisions with regards to the launch of new products, business processes, positioning in the market as well as the choice of business models. The type of ownership is therefore likely to influence the innovation performance posture of SMEs. The study recommends managers of family owned firms to deliberately encourage and empower family members to adopt an entrepreneurial orientation, in order to enhance innovation performance in their organisations. In addition, when creating data bases, public and private agencies must categorise SMEs as family and non-family owned in order to facilitate future focused analyses.

Keywords: innovation performance, family enterprise, non-family enterprise, and SMEs

Introduction

Small and medium enterprises (SMEs) are critical in the economic development of any region regardless of whether they are family or non-family owned. They have become the focus of economic policies of countries such as South Africa as an effective strategy to address the socio-economic challenges of poverty and unemployment. Family owned firms usually absorb the less advantaged in society such as women and low-income groups into the economic mainstream. Kuratko (2017:37) states that family firms are unique as family members are involved in decision-making and entrepreneurs make decisions that tend to expose their families to difficult emotional experiences. The survival, competitiveness and growth of SMEs require an innovation orientation.

Building research and development (R&D) capacities facilitate the process of transforming ideas into actual products or business processes. The Bureau for Economic Research (2016: 8) posits that the lack of innovation by SMEs is a result of low levels of R&D. Furthermore, Maas, de Coning and Smit (1999: 42) pointed out that innovating firms were likely to grow at a faster pace than traditional businesses due to their entrepreneurial behaviour.

Nieto, Santamaria and Fernandez (2015: 385) indicate that innovation decisions are likely to be linked to the nature of business ownership. Bertrand and Schoar (2006:78) opine that although family owned firms are efficiency based, strong family ties may present difficulties for a founder to dissociate the family from the firm in decision-making, despite the possible harm such a relationship may impose on the business. On this note, innovation priority is likely be the result of the family members' involvement, cooperation and capability (Bertrand & Schoar 2006:79). The firms' approaches to address innovation performance may therefore differ with respect to whether firms are controlled and managed by family members or not.

SMEs, and especially family-owned business have become the focus of many researchers given persistent socio-economic challenges and the potential contributions of these businesses to address these challenges through job creation and innovations (Kuratko 2017: 20). There is, however a lack of publically available statistical information on SMEs in Kwa-Zulu Natal and data are also not disaggregated for family and non-family owned businesses. The lack of disaggregated data is noted as a limitation of this and other comparative studies on innovation performance and family ownership.

Problem Statement

Paradoxically family owned firms are assumed to focus on innovation despite their conservative characteristic (Nieto *et al.* 2015:382), given that their sustainability and growth depend on it. The nature of control and management of both family and non-family owned firms constitutes a ground for innovation decisions which in turn influences their innovation performance. Such innovation decisions relate to the product, process, market position and business paradigm (4 Ps of innovation) of SMEs (Price, Stoica & Boncella 2013:4).

Innovation performance is critical in the competitiveness of any business. The globalised, highly competitive business environment necessitates an insight into how family and non-family small and medium firms operate to sustain entrepreneurial spirit that leads to innovation (Love & Roper 2013:11). The fact that all firms (family and non-family owned) present a opportunity for economic growth and employment in the local context necessitates innovations. The majority of SMEs in South Africa and in KwaZulu Natal (KZN) are family owned (Venter & Farrington 2009:135) and it is therefore important to determine whether family owned SMEs innovate differently to their non-family counterparts.

Bertrand and Schoar (2006:78) found a considerable body of empirical literature that confirms that family firms in most countries underperform relative to non-family firms. Bloom and Van Reenen (2005:27) indicate that family firms in France, Germany, Great Britain and the United States are systematically associated with poor managerial practices that hinder firms from innovating. In the South African context, Venter and Farrington (2009:147) find that rigidity in innovation and resistance to change prevail in family owned firms. Small and medium enterprises in the KZN province find it difficult to compete for market share and innovation appears a possible solution (Manufacturing Indaba KwaZulu-Natal 2016:2).

The majority of previous studies, however, are based on large family organisations. Duran, Kammerlander, van Essen, and Zellweger (2014:43) suggest that a systematic study at firm and the family firm levels is required to assess family firms innovation. It is also evident that research on family-owned businesses in South Africa still requires attention to address the problems and challenges faced by SMEs (Visser & Chiloane-Tsoka 2014:430). The purpose of the study is to investigate whether family and non-family owned SMEs innovate differently.

Aim and Objectives of the study

This study aims to investigate the differences in innovation performance between family and non-family owned SMEs. The supporting objectives of the study are twofold:

1. To determine which category of firms is more innovative between family-owned firms and non-family ones.
2. To suggest the way forward in supporting growth and sustainability of the SMEs sector.

It is envisioned that the results of this study will support policy decisions to enhance the competitiveness and sustainability of SMEs.

Literature Review

This section critically analyses the differences in innovation performance between family and non-family owned small and medium enterprises. The terms ‘enterprise’, ‘firms’, ‘organisation’, ‘business’ and ‘venture’ will be used interchangeably. The focus of this study is on SMEs except where stated otherwise. The literature review provides the necessary background on the characteristics of family and non-family owned firms, and how their uniqueness affects product, processes, market position and paradigm or business models.

Characterising Family and Non-family Owned SMEs

Describing the characteristics of family and non-family owned enterprises should provide insight into innovation decision and performance of these entities. Laforet (2016:384) confirmed that family owned firms were characterised by family control of equity capital and management. In this regard, Mole and Ram (2012:46), as well as Kraus, Pohjola and Koponen (2012:267) described a ‘complex mutual obligation’ in family owned firms where family members were expected to play critical roles in the business. In this context, decision-making in family businesses seems to differ from other businesses and also depends on the current generation in charge of the business (Cruz & Nordqvist 2012:35). The implications of the intergenerational nature of a family business as well as the generation currently in charge could affect

the nature of decisions and the orientation towards innovation. Furthermore, a family owned firm is associated with stability, tradition and family norms in comparison to a non-family one (Shepherd & Patzelt 2018:81). According to Casillas and Moreno (2010:274), family owned SMEs are characterised by a greater family involvement, greater long-term orientation, a greater degree of centralisation, long-term commitment and loyalty, and a stronger alignment of interests between owners and the management. These strengths were likely to have a positive impact on the entrepreneurial orientation of family owned SMEs.

A further illustration of the characteristics of family owned businesses shows that a transfer of leadership in family owned businesses is associated with a transfer of ownership (Vrontis & Thrassou 2013:265). Stokes, Wilson and Mador (2010:210) acknowledge that although family firms share values and have strong family networks, they are also challenged with internal family politics, a characteristic which is not shared by non-family owned businesses.

Innovation Performance

Innovation appears to be key in establishing and managing an enterprise with a for-profit motive. Lowe and Marriott (2007: 70), and Hisrich and Kearney (2014:50) characterise innovation into different forms relating to products and services, methods of production, supplies and markets, and organisational strategies. Dawson and Andriopoulos (2014:73) refer to the forms of innovations as the '4 Ps of innovation' (product, process, position and paradigm). According to Atkinson (2013: 3) researchers have often considered innovation as technological in nature, and only related to the research and development (R&D) agenda of universities, national laboratories, and corporations. Innovation should, however be considered in relation to the product, process, position and paradigm (business model) of an organisation as espoused by Dawson and Andriopoulos (2014). The innovation performance of any firm is likely to be justified by the improvement in products and processes increasing competitiveness (Tuan, Nhan, Giang & Ngoc 2016:417).

Given that innovation is a universal concept, there should be no difference in its accomplishment between family and non-family owned businesses. The aim of innovation is to serve the customer better and improve firm competitiveness. Kuratko and Morris (2018: 43) reiterated innovation as a critical dimension of an entrepreneurial orientation for both family and non-

family firms. In this context, it is important for owner-managers to realise the impact of innovation performance on the overall organisational performance (Shoham, Gadot, Ruvio & Schwabsky 2012: 226). A business venture with an entrepreneurial owner-manager has the capacity to develop and manage strategies to ensure that it its success and innovations through the various product-market combinations (Mazzarol 2004: 4).

Differences in Innovations Performance between Family and Non-family owned SMEs

Although a study by Gudmundson, Tower, and Hartman (2003:7) recognised that the involvement of family members could strengthen the results of the firm's innovation strategy implementation, Kuratko and Hodgetts (2007:684) noted that managerial decision-making remained one of the challenges confronting owner-managers of family held businesses. In this regard decisions made during family gatherings, through informal communication, and under the influence of family members outside the management context were likely to affect the future innovation decisions of firms (Lowe & Marriott 2007: 155).

According to Casillas & Moreno (2010: 272), family owned SMEs are likely to be slow in making decisions and therefore would struggle to be entrepreneurial. In contrast, Chua, Chrisman, Kellermanns and Wu (2011:472) indicate that the direct or indirect involvement of family members is supposed to enhance the innovation performance of the family owned firms. However, family owned businesses are less democratic and therefore neither proactive/innovative, nore flexible, and would not empower employees (Kraus *et al.* 2012:265). Aptly, it can therefore be hypothesised that there are differences in innovation performance between family and non-family owned SMEs. **Hypothesis 1**, therefore states that, 'There is a statistically significant difference between the mean values of business ownership and innovation performance of SMEs'.

A study of Kraus *et al.* (2012: 265) confirms that family firms are more conservative, less prone to risk-taking, and reluctant to grow, and therefore less entrepreneurial than their non-family owned counterparts. Existing literature acknowledges the lack of innovation in family firms despite the fact that innovation had long is one of the key drivers for organisational success. Casillas and Moreno (2010: 266) found that the number of family members involved in the strategic and operational management of the family firm had

an impact on its innovation output. An increase in family members in the business was likely to reduce the dynamism of a firm's capacity to innovate (Chirico & Bau 2014:220). Laforet (2016:379) discovered that paternalistic and founder culture type of family firms was likely to affect innovation performance negatively. A culture of inward focus of family owned SMEs is likely to impede innovation performance whereas the mainly outward focus culture of non-family SMEs is likely to enhance their innovation performance (Bertrand & Schoar 2006:74). Although the studies referred to were not conclusive that there was a significant difference in innovation performance between family and non-family owned enterprises, they also disagreed on which one was a better performer. In summary, the study hypothesises that, 'There is a greater innovation performance in non-family owned firms than in family owned firms' (**hypothesis 2**).

The study framework (figure 1) shows that both family and non-family owned firms depend on innovation with regards to their product, process, market and business model. The success of achieving IP depends on the business elements such as on the product, process, market position and business paradigm.

Figure 1: Ownership and innovation performance

The next section critically discusses the research design used to investigate the difference in innovation performance between family and non-family firms.

Research Design and Methodology

The study follows a quantitative design. SME data was obtained from the pro-

vincial SME database of the Department of Economic Development and Tourism in KZN. The database contains records of SMEs in the manufacturing sector across the region. The province of KZN constitutes one of the biggest manufacturing clusters of South Africa, only second after Gauteng (EDGE 2013:3).

Sampling and Data Collection

A representative sample of 44 SMEs was drawn from each of the seven largest subsectors of the manufacturing sector including clothing and textiles; paper, printing and allied products; motor vehicle and components; food and beverages; metal fabrication; chemical and petroleum; and rubber and plastics and others (StatsSA 2015), a total of 308 SMEs.

A written questionnaire was used to collect data. The innovation performance of SMEs were measured in terms of new market (1), new product (2), new production methods (3), and new forms of organisation (4). These 4 broad questions represented measures of position, product, process and paradigm innovations. The responses were measured on a 5-point Likert scale ranging from *strongly disagree*, *disagree*, *neutral*, *agree* to *strongly agree*. In this quest, Struwig and Stead (2013:98) stated that scaled-response questions were appropriate to gathering data on attitude, behaviour and perceptions. It seemed preferable to use the Likert-type scale in order to avoid the dichotomy of open-ended and multiple-choice questions.

Data Analysis

Data were analysed using a statistical package for the social sciences (SPSS) to provide useful information for business and management purposes. Descriptive and Levene's Test for Equality of Variances were used to test the study's hypothesis. According to Wagner (2017:80), the t-test could be used for a given set of data in order to compare the means of all the values for each of the two variables. In the same vein, Flick (2015:177) pointed out that in the t-test; two datasets were compared for their differences. With the t-test, a statistical significance test had to be applied, in which the means and the standard deviations of both datasets were taken into calculations. The innovation performance elements (4Ps) were each tested for reliability (table 3).

Results and Discussion

The results of the T-test are shown in Table 1 and provide the statistics in terms of representation of family and non-family owned businesses. Results depicted that 90 (40.7%) of SMEs in the manufacturing sector were controlled by families and 131 (59.3%) of them were non-family businesses.

Table 1: Descriptive of Family and Non-family owned SMEs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Family business	90	40.7	40.7	40.7
	Non-family business	131	59.3	59.3	100.0
	Total	221	100.0	100.0	

The non-family owned enterprises dominated the sample. The sample was deemed representative as the two categories of ownership were more or less equally represented to serve the purpose of the study. However, this study recommends that SMEs should be categorised in terms of family/non-family ownership in all provincial government data bases. This is important for comparative studies and the design of developmental interventions.

Results shown in Table 2 depict the statistical mean values of family owned and non-family owned firms. The mean value of non-family owned businesses was $M=3.8118$ and of family owned businesses was $M=3.632$.

Table 2 Mean values of family and non-family owned SMEs

SMEs		N	Mean	Std. Deviation	Std. Error Mean
IP	Family business	90	3.6323	.51733	.05453
	Non-family business	131	3.8113	.50882	.04446

A higher mean is observed for non-family firms in comparison to family

counterpart. The study's variables were also tested for reliability and validity and the results are discussed next.

Reliability and Validity

The reliable Cronbach coefficient alpha values validate that most individual items measured the same dimension consistently. To test a measure of how suited the data was for factor analysis, Kaiser-Meyer-Olkin (KMO) test was conducted. The test measured sampling adequacy for each variable in the model and for the complete model. The KMO statistic is a measure of the proportion of variance among variables that might be common variance (Lorenzo-Seva 2013:2). The lower the proportion, the more suited the data is to factor analysis. As shown in Table 3, KMO values was higher than 0.6 for all the constructs and explained variance average of 50% indicating an adequate sample. The higher the percentage of variance a proposed model managed to explain, the more valid the model would be.

Table 3: Reliability Cronbach's alpha test: Innovation Performance

Construct	Number of factors	KMO statistic	Variance explained (%)	Items dropped from the factor	Number of items per construct	Reliability (Cronbach's alpha)
Innovation performance						
IP-Product innovation	1	.846	50.003		8	.846
IP-Process innovation	1	.820	65.059		5	.864
IP-Position innovation	1	.732	54.993		4	.717
IP-Paradigm innovation	1	.754	59.570		4	.763
Overall						.921

Results in Table 3 show a reliability coefficient Cronbach's alpha > .7 for all the sub-construct for innovation performance and an overall reliability

coefficient of (> 0.90). In summary, the results prove that the measurement is structurally sound, acceptable and consequently the study is deemed valid and reliable.

Business Ownership and Innovation Performance of SMEs

Hypothesis 1 stated that there is a statistically significant difference between the mean values of business ownership and innovation performance of SMEs. In this context, to test the hypothesis, an independent t-test is applied as only two groups of mean values are to be compared. However, the independent t-test shows that there is a statistically significant difference between the mean values of business ownership and innovation performance of SMEs. As shown in Table 4, a T-test $t(219) = -2.553$, $p = \alpha = .011 < 0.5$ proved that innovation performance differed with regards to business ownership. Thus, the hypothesis 1 is accepted showing that there is a statistically significant difference between business ownership and innovation.

Hypothesis 2 stated that there is a greater innovation performance in non-family owned firms than family owned firms. Results in Tables 2 and 4 proved that innovation performance score was significantly higher for non-family run businesses ($M=3.8118$) than for family run businesses ($M=3.6323$), and a T-test $t(219) = -2.553$, $p=.011$. To this note, this study found that there was a slight, but significant improvement in innovation performance in non-family firms than in their family owned counterpart. Thus, hypothesis 2 is accepted. Innovation performance shows a more positive trend in non-family enterprises than family owned ones.

The results in Tables 2 and 4 indicate the innovation success of SMEs is associated with who controls the firm. Based on these findings, family and non-family firms seem to have different priorities and apply different approaches to innovation performance. This study corroborates Casillas and Moreno (2010:272)'s findings that family owned SMEs were likely to be slower in decision-making and therefore would not be entrepreneurial. The conservative nature of a family-owned enterprise is likely to justify the difference in innovation performance between the two types of SMEs. Innovation decisions are related to family dynamics that may impede the

process of innovation in family-owned enterprises. As stated by Ali, Sun, and Ali (2017:16), decision-making was positively linked with organisational innovation. Decisions such as investment in research and development, rewarding employees, changing the production methods, selecting business strategies, the structure and the configuration of the business are influenced by family members and are likely to affect SMEs' innovation performance.

Table 4: Independent Samples Test: SME ownership and Innovation Performance

	Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference
	F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
IP Equal variances assumed	.066	.798	-2.553	219	.011	-.17907	.07014	-.31730	-.04083
Equal variances not assumed			-2.545	189.354	.012	-.17907	.07036	-.31785	-.04028

Significant at $\alpha = 0.05$

The findings of this study also corroborate Chua *et al.* (2011:472) who indicate that though family members' participation is supposed to enhance innovation performance, the family owned firms remain less democratic, proactive, and flexible, and do not empower employees the same as non-family counterparts. This study supports the argument that specific factors linked to a family-owned enterprise, especially in the context of Africa, present challenges that may not facilitate innovation. While previous studies disagreed on the difference in innovation performance based on business ownership, collectivist cultural norms demand joint decision-making, which tend to impede innovation. This is the case in South Africa, where black communities (Indian, Coloured and African) are characterised by a collectivist cultural posture (Taruwanga 2011:61) that is counter innovation.

However, it appears that the level of contribution and commitment to innovation might be significant if family members possess knowledge and skills required in different areas of the firm where they are placed. In this context, the dependency of business owners on a few knowledgeable family members as the only source of knowledge may create inertia in the effort for the firms to innovate. Knowledge should come from other sources than family members only, especially as owner-managers and employees have a differential and structural role to play in supporting, facilitating and promoting entrepreneurial actions and innovation in firms (Hornsby, Kuratko, Shepherd, & Bott 2009:238). Arguably, it appears difficult to separate family and business decisions to improve innovation performance of family owned enterprises. Family members are likely to influence the family firm if they are equipped with the necessary skills and knowledge to support the functioning of the business.

The findings are consistent with Kraus *et al.* (2012:265) who reiterate that family firms remain more conservative, less risk taking, or reluctant to grow. Their conservative nature makes them less entrepreneurial and consequently less innovative than their non-family counterparts. This Resistance to change in family owned enterprises is likely to hinder the speed of decision-making. Existing literature criticizes the lack of innovation in family firms. Kuratko and Hodgetts (2007:684) for example, point out that managerial decision-making is one of the greatest challenges confronting owners and entrepreneurs in family-held businesses. In order to sustain a family owned business the management structure as well as the reward system for family and non-family members are important considerations. Visser & Chiloane-Tsoka (2014:429) emphasise 'human resource management issues that continually surface in family businesses as striking a balance between nepotism and meritocracy, and managing privilege'. I line with findings from Duran, Kammerlander, van Essen and Zellweger (2014:43) in terms of input-output relationship, it was found that family firms invest less in innovation projects than non-family firms do (this does not imply that family firms are less innovative than non-family firms). This enforces the argument that family firms are likely to be risk averse due to their conservative nature stemming from the involvement and ties of the family members in the business. In this regard, the structure as a means in which tasks and people are organised to achieve organisational goals (Kaplan 2005:41), is likely to influence the innovation posture of SMEs.

Power dynamics in family firms should also be considered. According to Maier and Zenovia (2011:972) there are several reasons innovation is more difficult to implement in an existing organisation, such as resources linked to organisational size, hierarchy, tolerance of failure/mistake, reward for success, perception of change, and internal competition. The influence of these variables is likely to differ in the two categories of SMEs under study and likely to affect innovation performance differently. The 'complex mutual obligation' in family owned firms is associated with the critical roles they play in the firm and the focus on stability, tradition and family norms (Kraus *et al.* 2012:267, Mole & Ram 2012:46, and Shepherd & Patzelt 2018:81). The findings reiterate that a family owned firm's management process may not be adaptable or easy to accommodate changes when necessary and may possibly lead to strategic inertia. It is not surprising therefore that, the study finds that family businesses are likely to be less innovative.

Conclusion and Managerial Implications

The study reaffirmed the difference in innovation performance between family and non-family owned firms to achieve the objective. Non-family SMEs showed higher innovation performance in comparison with family-owned SMEs. A family firm is unique in that the internal family relations shape the business model. The uniqueness of family firms may be justified by their management structure. The literature review acknowledged differences in innovation performance between family and non-family firms, but provided contrasting findings about which group shows high innovation performance. Thus, any decision, such as investment in Research and Development is first a family decision before it is a business decision. This is in line with the findings of Casillas and Moreno (2010:266) that, although the involvement of members of the owner's family helps to strengthen the results of the firm's innovation strategy, the greatest abhorrence of risk-taking arises in family-owned firms and may affect its innovation performance in comparison to non-family firms. Family owned SMEs might rather opt for sustainability than innovation to ensure reliable and regular income for the family (Weismeier-Sammer 2011:129). In this instance, family owned SMEs become survivalist oriented rather than innovation oriented.

Furthermore, Laforet (2016:379) states that paternalistic and founder culture type family firms might undermine the efforts to reach high innovation

performance. The innovation performance profile of family owned SMEs necessitates restructuring and an innovative culture to adapt to innovation requirements. Although, owners and their family members may contribute to innovation activities in their firms, entrepreneurial capability may be enhanced by the members outside the family cycle who might bring new organisational dynamics that produce innovation and growth (Lewis 2011:430).

Implications for SMEs Innovation Management Practices and Further Research

Ownership is likely to play a critical role in the decision-making and the innovation decisions of the firm. Family owned firms must therefore deliberately encourage and empower family members to innovate in order to enhance performance in their organisations. Innovation should be part of the ‘conversations’ within the family businesses. It is these ‘conversations’ that is likely to affect the dynamism in decision-making with regards to innovative initiatives or projects within the family setup. Training of family members outside the family setting (to try infuse the outside with the inside) may also help the internal business dynamics to be more entrepreneurial, therefore, more innovative.

Family-owned firms need to prioritise knowledge and skills transfer inside and outside the family compass in order to support innovation projects and processes within the firm. The study further recommends that family firms take a strategic position toward innovation in the decision-making process. On this same note, Neneh and Zyl (2012:118), indicate that both large firms and small and medium enterprises (SMEs) should constantly emphasise good business practices in order to increase performance. In contrast to family culture, entrepreneurial culture should drive the entity. Stokes *et al.* (2010:210) indicate that though family firms share values and strong family network to deal with economic challenges, they are unlikely to overcome internal family politics that may not be experienced in non-family owned firms. Lastly, the study reiterates the need for public and private agencies to create databases and publish statistical information of SMEs categorising them as family and non-family owned in order to facilitate future analysis. Although family interests should be protected, rational innovative decisions are required to rejuvenate these firms. This implies innovative mindsets concerning new products and the processes used to produce and commercialise them.

This study did not consider generational levels and succession process in the family to justify innovation performance of family SMEs. The focus was on SMEs in the manufacturing sector. Large family organisations or organisation in different business sectors may reach different conclusions in terms of the research objectives. The geographical area of study was KZN in South Africa and so the results of this study may not be generalised to other geographical areas, and do not apply to large businesses or non-manufacturing sectors. Comparative studies focusing on different regions and sectors could also be more insightful. Different research path qualifying the findings of this study might further enlighten the stakeholders of various business sectors. Further study are proposed involving different family generations and succession arrangements.

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Family and Non-family Owned Manufacturing SMEs

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