

This is a peer-reviewed, accepted author manuscript of the following research article: Park, C, McQuaid, R & Mawson, S 2023, 'Key factors influencing the sustained growth of high-tech SMEs in South Korea: the perspectives of founder owner-managers', *International Journal of Entrepreneurial Behaviour and Research*.

## **Key factors influencing the sustained growth of high-tech SMEs in South Korean - the perspectives of founder owner-managers**

### **Abstract**

#### **Purpose**

This paper explores key factors influencing high performing, sustained growth, high-tech small and medium-sized enterprises (SMEs) in South Korea.

#### **Design/methodology/approach**

A qualitative study is adopted to explore seventeen founder owner-managers of high-tech SMEs who sustained consistent employment growth, greater than the industry average, for 7 years. Within the sample, those with higher (10% or over) employment Compound Annual Growth Rates over this period are also compared to those with lower rates.

#### **Findings**

The study suggests that proactive approaches, such as flexible organization, risk management, fast decision making, and international market entry, are seen as important contributing factors to sustained growth. These findings contribute to a better theoretical and empirical understanding of sustained high-tech SME growth, in a country with a strong entrepreneurial and internationally competitive Information Technology sector. Also, collaboration across the SME was perceived as making an important contribution to staff growth, consistent with stewardship theory.

#### **Research limitations/implications**

The sample is based on successful high-tech SMEs, so there are limitations in extrapolating results to other types of firms, sectors or countries.

#### **Practical implications**

Key factors identified in this study can be considered by entrepreneurs seeking to achieve sustainable business. These also provide improved understanding for policy makers into the complexity of factors related to sustained and high growth of technology-based SMEs, which many countries are keen to foster to aid national economic growth.

#### **Originality/value**

The research provides new evidence exploring the diverse perspectives of founder owner-managers, on the sustained growth and failure in South Korean high-tech SMEs, and how these have changed since the inception of their business.

Key words: sustained growth, founder owner-manager, high-tech SMEs, high-growth, collaboration, stewardship

## 1. Introduction

The contribution of high-growth companies to job creation and economic development has been widely recognized (Rannikko *et al.*, 2019). However, a neglected aspect of entrepreneurial growth is how it can be sustained over long time periods and studies are often related specifically to international rather than domestic factors (Hagen and Zucchella, 2014; Paul and Rosado-Serrano, 2019). While SMEs may grow rapidly for a period, sustaining this growth over many years is difficult (Coad *et al.*, 2020). Specifically, high-tech SMEs in the Information Technology (IT) industrial sector need to focus on open innovation, acquiring diverse knowledge and developing a suitable business model for sustainable growth (Yun *et al.*, 2015). Different growth rates of such an SME have also been associated with diverse factors, in particular its size or age (Haltiwanger *et al.*, 2013; Nassar *et al.*, 2014), and technological innovation abilities (Breheny and McQuaid, 2018; Love and Roper, 2015; Reynolds *et al.*, 1994; Smallbone *et al.*, 1995). Other important factors noted to influence the growth of firms include business planning, external funding and partnership with stakeholders (Coad *et al.*, 2014; Hyder and Lussier, 2016; Birch and Medoff, 2018).

Despite diverse studies of firm growth factors, research on factors influencing long-term, sustained growth has been relatively sparse and few have focused on sustained high-growth firms in particular (Hölzl, 2014; Daunfeldt and Halvarsson, 2015). Mogos *et al.* (2015, p.5) state that ‘sustainable growth... is the goal of achieving long-term high growth with low downside’. However, sustainability of high-growth performance is rare (Coad *et al.*, 2020), and many high-growth firms decline after a period of achieving high growth rates (Daunfeldt and Halvarsson, 2015). Despite the positive contribution of growing companies to job creation (Mason *et al.*, 2015), few companies have achieved sustainable growth. In other words, job creation is hard to sustain, thus many government policies tend to focus on fostering new ventures and entrepreneurs to create job opportunities (Michael and Pearce, 2009).

This paper aims to analyze the key factors perceived to influence sustained growth within high-tech Small- and Medium-sized Enterprises (SMEs) in South Korea to identify the major drivers enabling sustainable growth of high-tech SMEs. South Korea is of particular interest as it is a major technology-based economy with a strong, increasing share of the international IT business over recent decades, and also the South Korean government was aimed at fostering 280 thousands of new technology-based Startups every year by 2023 given the essential roles of

job creation in high-tech SMEs (Lee, 2021). A characteristic of many high-tech SMEs has been employment growth with limited or no sales or profit growth due to the early-stage development of products that are not yet fully commercialized (Gilbert *et al.*, 2006). Stam *et al.* (2008) pointed out that employment growth is a measure used to describe the growth of firms in many empirical studies as this is the most comparable indicator. In this paper employment growth is considered a critical measure to indicate sustained growth of high-tech SMEs. All 17 firms in our study grew each year over the period 2010 to 2017 and had a higher employment growth rate than the industrial average, as measured by the Compound Annual Growth Rate (CAGR)<sup>1</sup>. Within this sample, ten SMEs had at least 10% employment CAGR. The choice of 10% CAGR partly reflects both a European Union (2014, p.4) definition of high growth (at least 10% growth over three years and 10 employees at the start, although the OECD uses a higher rate of 20% for ‘gazelles’) and also an ad-hoc distinctive break in the sample.

Two research questions are addressed: first, *‘from the perspective of founder owner-managers, what factors influence the sustained growth of high-tech SMEs’*; and secondly, *‘how do these factors differ between higher-growth rate firms and others with growth just above the industry average?’* We use the term ‘sustained growth firm’ for those with above industry average growth, and no negative annual growth over the seven years of the study period, in order to reflect long-term growth stages from start-up to maturity.

By analyzing critical factors and distinctive approaches by firms with diverse growth rates, this paper contributes to the sustainable growth literature, and corroborates the necessity of a broad investigation of critical factors. It provides empirical insights into the complexity of growth, based on the retrospective reflections of founder owner-managers of high-tech SMEs since the inception of their businesses and contributes to a better understanding of proactive business strategies for entrepreneurs seeking sustained growth. This also has implications for policymakers responsible for fostering sustainable high-tech SMEs.

The remainder of the paper discusses theoretical background and literature on the internal and external factors affecting SME growth. In section 3 the research methods are set out, followed by the findings and then conclusions.

## **2. Theoretical background**

SME business growth is a dynamic and heterogeneous process involving various complicated processes (Leitch *et al.*, 2010), with most start-ups having limited or no growth (Delmar *et al.*, 2013). Garnsey *et al.* (2006) take a dynamic approach to firm growth, based on Penrose (1995),

and use a typology of five different growth paths. They found that in Cambridge UK, most surviving start-ups exhibited non-linear growth with a variety of setbacks and interruptions, although a small group did exhibit continuous growth paths over 10 years. In terms of technology-based companies, high levels of human resources underpin the survival and growth of companies despite being faced with uncertainty with financing issues (Martinez *et al.*, 2019). In terms of influence and control, most SME founder owner-managers clearly play a principal role and strongly affect the organization's structure and governance. Jensen and Meckling (1976) used agency theory to explain the relationship between the principal, who is an owner, and agents who are bound to the organization. Principals made efforts to reduce business risks and to get better outcomes through the management of agency costs, verifying the role of agents (Eisenhardt, 1989). However, while principal-agency behaviour tends to be centred around individual interests, stewardship behaviour is based on organizational benefits. Stewardship theory can be argued to give greater recognition to the roles of social relations and psychology (Fox and Hamilton, 1994). Davis *et al.* (1997) noted that the relationship between managers and principals is not motivated by individual profits, but that a stewards' motivation is associated with the principal's objectives. Indeed, Hernandez (2008) has asserted that leadership is a significant factor in fostering stewardship behavior. Thus, owner-manager efforts in fostering collaboration between staff members may be more important than in larger organizations.

This study explores growth influences identified by founder owner-managers involved in the SMEs from their start and subsequent development. From the literature, growth factors can be classified into internal factors relevant to organizational elements and external factors related to industrial environments (Lumpkin and Dess, 1966).

### **2.1. Internal factors**

Owner-managers' industry experience is perceived as a positive influential factor in venture success (Lee, 2019) and business founders' practical knowledge is useful for creating business opportunities and stimulating growth (Kor, 2003). Conversely, owner-managers' experience may lead to biases that can impede the introduction of new technology and affect R&D investment decisions (Barker and Mueller, 2002). However, founders' contributions in founder-based firms are perceived as positive influential factors to the internal competitiveness and growth of companies (Wiklund and Shepherd, 2003; Wasserman, 2006). Indeed, CEO leadership affects collaboration, open communication and the promotion of cooperation activities among members (Carmeli *et al.*, 2011). In other words, the role of the CEO in the organization accounts for a wide range of decision-making processes, including managing conflicts among members (Edmondson and Smith, 2006). Of course, employees' experience, motivation and

training are also significant drivers for improving business performance and corporate growth (Littunen and Virtanen, 2006).

Given the relationship between the owner-manager and employees, organizational culture can be considered an influence on business performance. For instance, Schjoedt *et al.* (2013) asserted that organizational membership is necessary for business success and Wolf (2013) found that employee integration affects the organizational changes necessary to achieve sustainable business performance. Similarly, psychological ownership of a company leads to the creation of stewardship behaviors, and vice-versa (Wasserman, 2006), as well as to fostering individual responsibility in the organization (Hernandez, 2012). In particular, a collaborative organizational culture positively affects employees' knowledge sharing in the organization (Ahmed *et al.*, 2016; Brown *et al.*, 2019) and is positively associated with business performance (Wallace and Mello, 2015). Daghfous (2004) suggests that owner-managers' actions, such as communication, culture and rewards, enhance employee performance and help create a collaborative organization. That is, organizational culture influences various aspects such as management, leadership, decision making, and the sustainability of the entrepreneurship process (O'Neill *et al.*, 2009).

Alpenberg and Scarbrough (2020) discuss communication and connection between workers and mention the importance of collaboration to enhance social actions in organizations. This behavior is also related to the leadership in the organization. Employees' innovation behaviors are significantly associated with the leadership style of manager groups in high-tech SMEs and their flexible management is noted to lead to positive explorative employee behavior (Oluwafemi *et al.*, 2019). The owner-manager's strategic approach and the culture in SMEs, including improving the knowledge levels of employees, also significantly affects the sustained growth of sales and profits (Gray, 2006).

## **2.2. External factors**

Additionally, the growth of SMEs is affected by external economic conditions such as legislation and technology changes and macroeconomic factors, such as interest and exchange rates, inflation and unemployment rates (Ipinnaiye *et al.*, 2017). Hansen and Hamilton (2011) suggested that owner-managers of growing firms were more proactive and innovative, international market-oriented, and flexible in response to the business environment compared to non-growth firms. Given the critical position of technology for high-tech SMEs, innovations relevant to new activities are positively associated with exports, productivity, and growth (Love and Roper, 2015). Smallbone *et al.* (1995) pointed out that developing new products and extending the customer base are key elements to longer-term survival and growth. Various social

networks actions affect entrepreneurial action in the early stage, as well as further combinational actions, creation of opportunities, and knowledge articulation (Obstfeld *et al.*, 2020). Hence, business networks make it easier for entrepreneurs to access customers who can act as sources of knowledge for the business and enhance the commercial success of innovation (Radicic and Pugh, 2017).

Regarding innovation, Sussan *et al.* (2017) found in their study of South Korean high-tech SMEs that balanced exploitative and explorative innovation enable longer-term growth, whilst biased exploitative innovation can lead to short-term profit. Further, Jun *et al.* (2021) found that customer-orientation and international expansion tend to be more effective in promoting innovation and performance than R&D orientation strategy across several industries.

R&D actions and commercialization are closely linked with company financing; growth and financial support of SMEs has a positive effect on capital investment, firm performance and employment (Kersten *et al.*, 2017). Thus, we can consider financial support as an underpinning of the growth of SMEs. Finance is particularly important at start-up and growth phases for SMEs, and much enterprise support policy is aimed at stimulating new firms, supporting the survival of firms, and fostering the growth of established firms (Reynolds *et al.*, 1994; Breheny and McQuaid, 2018). In this policy context, entrepreneurs, and in particular high-tech firms, are seen as significant drivers improving weak economic performance as well as a low levels of job creation (Thurik *et al.*, 2013) and are supported at various stages by policies such as subsidies and tariff protection, R&D subsidies, training, finance accessibility, utilization of networks, and developing institutions (Warwick, 2013). Chapman *et al.* (2018) also found that R&D subsidies stimulated companies to collaborate externally, and indirectly affected R&D expenditure in external collaborations. In Korea, despite discontinuities in policy support caused by political changes, the government contributes to R&D subsidy schemes to stimulate the R&D activities of high-tech SMEs (Kang and Park, 2012; Park *et al.*, 2019).

Haltiwanger *et al.* (2013) argued that young firms contributed more to creating jobs than small firms. Likewise, Lawless (2014) in the UK found that younger firms had a more positive correlation with employment growth than the size of the firm. Indeed, Decker *et al.* (2013) argued that start-ups and young firms contribute to job creation, but most start-ups failed within first ten years, and most surviving start-ups still remain small except for a few high-growth firms contributing to job creation (see Glancey and McQuaid, 2000). That is, young firms play an important role in job creation but also suffer job losses within a short time. A few outlying SMEs appear to provide most employment growth.

South Korea has among the highest share of private sector employment in SMEs among the OECD economies - 80% in 2016 (OECD, 2018). In 2017, the average number of people employed by Korean technology-based SMEs was 21.7 people in 2017 compared to 20.8 people in 2016 (South Korean government, 2018, p.5). The ICT industry accounted for over 10% of value added to the national economy in 2015, twice the OECD average (OECD, 2017a). Both ICT manufacturing and other information services accounted for over 8% of value added in 2015. As Jones and Lee (2018) suggest, SMEs in the ICT sector are the mainstream of South Korean SMEs, underpinning manufacturing and parts of ICT services as well as economic growth and job creation.

A range of motivations influence entrepreneurs, such as creating their own career opportunities, reaching a critical life stage, desiring to grow and develop their own talent, or 'push factors' like leaving an unsuitable position that limits their full creativity (Ray and Turpin, 1990), all of which may be influenced by business trends and economic conditions. It is important to consider the founder owner-manager's skills and knowledge (Colombo and Grilli, 2010), as well as their motivations, strategies, and other internal and external factors influencing sustained SME growth. Hence, this research explores founder owner-managers' retrospective accounts of their business' achievements using a qualitative research approach so as to provide new evidence and understanding of factors enabling sustained growth of high-tech SMEs. From the literature, this study developed the research framework (Figure 1).

[Figure1]

### **3. Research Method**

This study focused on founder owner-managers' perspectives on the unique growth patterns their firms had achieved in the past seven years. Creswell (2014, p. 3) noted that qualitative research is a useful approach 'for exploring and understanding the meaning individuals or groups ascribe to a social or human problem' and thus, the qualitative research method is adopted for the evidence-based research (Rauch *et al.*, 2014). From our analysis of the empirical evidence, the findings can support theoretical development related to (sustained) firm growth.

In-depth semi-structured interviews were conducted with 17 founder owner-managers of South Korean high-tech SMEs to gather rich data on differing owner-manager perspectives

on sustained growth over the past seven years. First, the study investigated key factors perceived to influence the firms' sustained growth by exploring the owner-managers' key motivations for starting and growing the business and their business strategies to achieve organizational goals. Second, the reasons for the differences in growth rates between firms within the sample were analyzed, specifically the differences between higher-growth rates firms (over 10% CAGR) and those with lower growth rates.

### **3.1. Sampling and data collection**

High-tech firms tend to concentrate on developing products without increasing annual revenue in the early years of the company, thus there is a lack of evidence related to rapid revenue growth patterns in SMEs (Gilbert *et al.*, 2006). Also, growth patterns of SMEs differ by various growth stages and ages, with previous studies identifying long-term growth and start-ups perform differently (Shepherd and Wiklund, 2009). Therefore, this paper defines sustained growth SMEs as employment growth over each year of the study period, 2010 and 2017, with a Compound Annual Growth Rate over the average for the relevant industry, see: (Hong *et al.*, 2016; Côté and Rosa, 2017). Korean technology-based firms are largely relying on entrepreneurs' decision making at the beginning of the business, thus entrepreneurs' characteristics are a key factor in achieving long-lasting, successful Start-ups and SMEs (Ahn and Kim, 2019). Hence specific research on founder owner-managers is essential to establish which growth factors strongly influence elements to persistent growth. In consequence, owner-managers and companies investigated have followed primary characteristics: the current CEO is the founder owner-manager of the ICT or electronics manufacturing industry; and the company has the attribute of seven-year period of CAGR employment growth greater than the industrial average, reflecting long-term growth stages from start-up to maturity (e.g., Shepherd and Wiklund, 2009; Pickernell *et al.*, 2013; Bianchini *et al.*, 2017).

Each criterion was used to identify firms for inclusion in this study using both the database of high-tech SMEs supported by the South Korean government as well as an independent database on registered companies in South Korea<sup>2</sup>. Founders of firms identified were approached using the publicly available contact details (telephone and email). Given the criteria and geographical accessibility to businesses, 30 founder-owner-managers operating businesses in the Seoul Metropolitan area of South Korea, in high-tech industries related to Informational Communication Technology (ICT) were recruited at the beginning of 2018; 17 participants initially accepted to take part in this research. One member of the research team is a native

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Korean speaker and visited in South Korea to hold in-depth, semi-structured face-to-face interviews with participants between April and May in 2018. This resulted in a sample of 17 organizations with their founder owner-managers participating in interviews (Table 1).

### [Table1]

Interview questions were classified according to four main issues: factors influencing growth; organizational culture and management style; growth and business networking; perceptions of external environmental factors and policy support. The Appendix shows a summary of interview questions. Interviews took an average of fifty minutes and all followed the same overarching structure. All were recorded with permission and transcribed; transcripts were 4,500 words on average and anonymized using reference numbers (e.g., Owner-manager 1, and 2) to avoid identification. It is recognized that the sample may exhibit survivor bias (McGrath, 1999), that is those who did not meet the criteria were not interviewed but could hypothetically have made useful contributions. Yet many participants did reflect on historical cases of failure, thus allowing for the exploration of growth juxtaposed with the very real possibility of failure.,

### **3.2. Thematic analysis of interview data**

Once interview data were collected, they were subjected to thematic analysis with data analyzed and interpreted through a few themes via an iterative process, including coding (Braun and Clarke, 2006). Initial codes, such as teamwork and communication, which have been discussed in previous studies (e.g., Carmeli *et al.*, 2011; Alpenberg and Scarbrough, 2020), elicited the theme 'collaboration'. This procedure consisted of four stages: transcription of interview data; confirmation and familiarization with the interview; selecting, focusing on, simplifying, abstracting and transforming; and coding and interpreting. First transcripts and notes were translated from Korean (by the native speaker author) into English. As well as linguistic translation, a degree of cultural translation was also needed to properly express South Korean business culture and concepts into English and to enable them to be judged in relation to relevant concepts from the English-language academic literature. A process of iterative examination of the transcripts followed. Themes were developed inductively via identification of repetitions, transitions, similarities and differentiations and categorizing (Ryan and Bernard, 2003). After an initial coding of transcripts, these codes were merged into similar categories. Categorized themes were examined and refined as common themes, and, thus, the number of categories was reduced (see Figure 2).

### [Figure 2]

These themes were analyzed by employment growth rates in order to identify elements aligned to different growth rate (see Table 2 below) as the second step. Therefore, to reflect the research questions, the findings are in two sections: factors enabling sustained growth of the whole sample; and distinct approaches of those with relatively high rates of employment growth. Ethics approval for the research was given by the researchers' institutional Ethics Committee.

#### **4. Findings**

The findings are presented in two parts: the first section explores research question one concerning factors influencing the sustained growth of high-tech SMEs. The second section considers question two on the influences related specifically to those with at least 10% CAGR employment growth. The results indicate that the entrepreneurs in these exceptional growth companies emphasized their proactive approaches, such as flexibility and risk management, compared to those in companies with lower employment growth.

#### **[Figure 3]**

##### **4.1. Determinants of the sustained growth of high-tech SMEs**

The narrative interview transcripts on how owner-managers achieved successful business growth compared with competitors form the basis this section.

##### **4.1.1. Owner-managers' competence and employees' contributions**

Owner-managers are observed to rely largely on their own personal experience, knowledge, and intention to grow at the beginning of the business (e.g., Kor, 2003). The findings endorse this view (see Annex for an overview of themes). Owner-managers specifically discussed their prior experience (e.g., setting up their current or earlier businesses) and elaborated on how this experience had a direct effect on their ambitions for, and actions to achieve, business growth. As one owner-manager (OM13) stated:

*'...I had expertise related to my current business, customers would listen to my opinions, and I seized the chance to promote my [new business] proposal to customers.'* (Owner-manager OM13)

Many owner-managers had a strong intention to grow from the beginning of their business, which they suggested is an important entrepreneurial attitude motivating their creative

ideas and business decisions. Owner-managers also highlighted the importance of sharing long-term business visions with employees to encourage employee motivation and appropriate contributions to the organization.

Owner-managers generally pointed to the critical role that employees play in supporting the achievement of sustained growth, with the discussion often centering on the use of management practices to encourage employee efficacy and contribution (e.g., financial rewards, making time to communicate with employees, operation of training programs and education). Many participants pointed out the importance of employee performance, believing employees' personalities were a resource for the firm's growth (owner-managers OM1, OM5, OM8, OM11, OM12, OM13, OM14, OM15, OM16, and OM17).

*'We annually conduct fifty hours of education for employees...The company is also supporting employees who want to study more at university. I believe employees' education is very important to improving our business quality.'*  
(Owner-manager OM5)

Owner-managers attempted to understand employees' individual characteristics and managed them with various management skills to enhance business performance. Overall, there appeared to be no significant difference between owner-managers as to the importance of employee performance.

#### **4.1.2. Collaboration and R&D**

All owner-managers felt that they struggled with a lack of human capital when compared to larger firms and thus spent time and energy trying to rectify this perceived weakness by actively encouraging collaboration and communication between organizational members. They noted that this would help achieve not only internal competitive advantages but also allow their firm to respond to the external business environment, business opportunities and larger competitors (OM3, OM4, OM7, OM10, OM11, OM12, OM14, and OM17). Good communication was a critical factor in influencing collaboration between employees for many interviewees (OM1, OM2, OM6, OM12, OM13, OM15, and OM16). As owner-manager OM14 explained:

*'...I think making consensus between the company and employees is important to the business and I operate group workshops to encourage communication and collaboration between members.'* (Owner-manager OM14)

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The overarching sentiment was that the more employees communicated, the more they understood what they had to do and how they could contribute to the growth of the firm. For example, owner-manager OM12 made space and a time to meet employees:

*'We periodically share our core business values with employees. We have the time to communicate with each other, and I attempt to introduce our changes and systematize organic communication.'* (Owner-manager OM12)

Overall collaboration and communication were perceived by many owner-managers as the key element enabling employee retention and their emotional contribution to the company, and hence achievement of organizational competitiveness.

Owner-managers of high-tech SMEs did not focus primarily on either financing or technology, but rather considered them simultaneously in order to respond to the external business environment. All participants highlighted the importance of continuous R&D investment, and they strongly argued that the development of R&D capabilities through training employees and collaboration with business partners is an essential factor to achieve sustained growth. The R&D subsidy schemes<sup>3</sup> also contributed to the development of new products by reducing a business' financial risks during the pre-revenue development process. For example, Owner-manager OM9 could only continue the development of new products during the early stages of the business thanks to government R&D subsidies:

*'At the beginning of the company, we didn't have sufficient profits and annual revenue... but we had to develop a new product to survive, as well as to grow. Government R&D subsidy schemes strongly supported our R&D activities...'* (Owner-manager OM9)

A majority of the owner-managers observed that the R&D subsidy was critical in preparing the business for future growth (OM 2, OM3, OM4, OM6, OM9, OM10, OM13, OM14, OM15, and OM16).

On the other hand, many owner-managers articulated the challenges of engaging with such subsidies, noting that government policy implementation was generally too complex and stringent for them to completely abide by the rules (OM1, OM2, OM5, OM6, OM7, OM8, OM9, OM12, OM13, OM14, OM16, and OM17). Nevertheless, most owner-managers agreed on the critical role of R&D subsidies for product development and subsequently competitive market offerings in their high-tech businesses. There were no significant differences between samples.

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Overall, owner-managers focused on factors such as employee performance, collaboration, and R&D. On the other hand, each owner-manager experienced different growth patterns. We now consider why some firms exhibited higher growth rates across the study period.

#### **4.2. What influences higher sustained growth rates?**

By analyzing the data, we identified three elements related to employment growth rates (Table 3): organizational management, customer base extension, and business strategy. In each theme, there were similarities as well as some variations between those with different growth rates. For higher-growth rate SMEs (10% and over), owner-managers commonly placed emphasis on having a flexible organization, fast decision-making, international market entry, and risk management, as critical factors enabling sustained growth.

### **[Table 2]**

#### **4.2.1 Organizational management**

Owner-managers commented on various reorganization experiences and attempted to improve organizational performance. Findings showed that owner-managers of companies with growth rates under 10% operated their organization with several divisions divided by specific functions, but owner-managers of higher-growth rates firms (10% and over) managed their organization in more flexible ways. For example, owner-manager OM15 created a task force team to respond to new business demands of customers, and owner-manager OM16 adjusted their organizational structure, by the age band of employees, so as to more explicitly communicate with customers of a similar age. Owner-manager OM10 achieved rapid growth through active acquisition-based private investor capital, whilst owner-manager OM3 divided his company into a sales company and a manufacturing company to respond to the clients' demands.

*'... I reorganized divisions to improve organizational performance, in particular, I made a team of young-aged employees, and a team leader of this team is also a young man. I expect cohesive collaboration between them...'*  
(Owner-manager OM15, growth rate 13.62 per cent)

Conversely, owner-manager OM17 with a growth rate of below 10% considered that employees have to concentrate on improving their distinct expertise and thus he operates divisions in the way of encouraging internal competition between them. Owner-manager OM5 and OM6 of companies with growth rates below 10% also focused on organizations divided by products.

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Overall, owner-managers of companies with a growth rate of 10% and over were managing their organizations with a high level of flexibility compared to others those with lower growth rates. The findings confirmed one interesting point which three companies, 7+ years and with over 100 employees, had growth rates under 3% and their owner-managers were managing the organization focused on functional management, including multiple layers and diverse divisions. Although the sample size is quite small, this finding is important as the evidence suggests the necessity of additional research into owner-managers' management of changes by the age and size of organizations.

### 4.2.2 Customer base extension

Owner-managers thought that understanding customers' needs is the fundamental issue of business, and thus they prioritized the gathering of market information and industry trends in order to ascertain market demand as well as the likely receptiveness of markets to new offerings. The literature notes the importance of timing for successful product/service launches based on knowledge gathering from customers (Radicic and Pugh, 2017) and this issue was raised by several owner-managers. For example, Owner-manager OM1 attempted to read international market trends through frequent business trips across the globe. Owner-manager OM16 commented that timing is essential in business growth. If a company introduces a product in the market too early, customers may not realize the necessity of this product to their business or lives. On the other hand, if a new product is introduced too late, customers may end up using other alternatives. As owner-manager OM1 elaborated:

*'When I travel in many countries, I feel the past and the present of the industry because underdeveloped countries reflect the pattern of developed countries in their industry. It looks like time travel. I anticipate the future of our business from business trips in the USA.'* (Owner-manager OM1)

In addition to timing, owner-managers raised the concept of trust. Linked to the concept of trust, several owner-managers identified that trustworthiness (and reputation) in national and international markets can be strengthened by evidence of firm longevity and sustained performance. A number noted that they took part in domestic and international exhibitions to demonstrate their business continuity to potential clients, so as to act as a key differentiator from other less established organizations (OM5, OM6, OM9, OM11, and OM14). In particular, most higher-growth owner-managers were more willingly to enter international markets compared to owner-managers of lower-growth firms.

The findings show the importance of market analysis and customer demands for sustained growth. Although all the owner-managers recognized the importance of customer base extension, they used different approaches to respond to the market. Companies with employment growth rate of 10% and over used mainly international business-oriented strategies, whilst those with a growth rate of under 10% often focused on maintaining an established domestic market.

#### **4.2.3 Business strategy and risk**

Owner-managers of higher-growth companies were willing to undertake business risks, and they tended to prefer fast-decision making compared to lower growth companies (OM1, OM2, OM4, OM9, OM10, and OM15). For example, Owner-manager OM10 had twice decided on Merger and Acquisition (M&A) with external investors, finally achieving great success in growing ten-fold in seven years. He said;

*'... if I did not make decisions quickly, I could not grow my business.. If I didn't persuade investors to get external funding, I was not able to achieve this successful business growth in seven years... (Owner-manager OM 10)*

Owner-manager OM15 pointed out that considerations of the worst-case scenario in developing new business ideas was the most important approach in preparing for potential risks and challenges to sustained growth for the company. Whereas owner-managers of companies with a growth rate of below 10% thought maintaining established products was the driver of creating a new business opportunity; their companies also exhibited multi-layered decision-making processes, thus causing comparatively slower decision-making (OM5, OM6, OM12, OM16, and OM17). Risk attitudes varied over time, with owner-manager OM16 suggesting that risk-taking was a primary driver when he found the company, but afterwards he re-organized the company to operate effectively with established products rather than taking risks to create new businesses.

Given the fast changes of the ICT industrial sector, timing in business is a critical factor (e.g., Radicic and Pugh, 2017). We can thus consider that a focus on the speed of decision-making and risk-taking may lead to differences in growth rates between companies`.

## **5. Discussion**

Within this sample of firms, we found that smaller and younger companies showed higher growth. This was consistent with previous studies (e.g.: Decker *et al.*, 2014; Nassar *et al.*,

2014), although our findings also identified a considerable diversity of high growth performance across different ages and sizes. This exploratory research allowed us to increase understanding of the research questions: ‘from the perspective of owner-managers, what factors influence the sustained growth of high-tech SMEs’ and secondly, ‘how do these factors differ between higher-growth rate firms and others with growth just above the industry average?’

### **5.1. Factors influencing sustained growth high-tech SMEs**

The findings suggest that self-perceived **owner-manager competence** and the critical role of employees, or **employee contributions**, act as primary influences on sustaining growth, triggering various strategies and actions in the company (Figure 2). Owner-managers sought to effectively use the company’s internal human capital to respond to external business environmental changes. They highlighted the importance of training employees and actively sought the various perspectives of senior staff when making decisions. These findings are consistent with studies discussing the importance of utilizing the owner-managers’ industry experience (Lee, 2019), business founders’ practical knowledge (Kor, 2003), and employees’ experience (Littunen and Virtanen, 2006).

Many owner-managers focused considerably on how to motivate and reward employees, including forms of communication to encourage participation and foster good relationships. They introduced and developed various management skills to increase voluntary employee contributions. Communication, sharing knowledge, training programs, and group activities were used to motivate emotional contributions from employees (e.g., Daghfous, 2004; Gray, 2006; Oluwafemi *et al.*, 2019). All owner-managers in this study asserted the importance of a positive relationship with employees, including shared visions and business strategies with their employees. These efforts affected employees’ psychological ownership (e.g., Fox and Hamilton, 1994; Davis *et al.*, 1997; Wasserman, 2006; Hernandez, 2008), even though the owner-managers’ position is technically that of a principal (e.g., Jensen and Meckling, 1976). In consequence, owner-managers elicited a strong commitment to the growth from employees. This research illustrates how psychological ownership by employees, and their psychological contract with the firm, is associated with stewardship behavior (Wasserman, 2006) and influences business performance and growth. Further studies are also required through a broad investigation of both groups.

Intra-organizational collaboration and R&D actions were presented as essential components in achieving competitive advantages and enabling sustained growth of sample companies across all the firms in this research. This strongly supports studies on the importance of collaboration within organizations (Daghfous, 2004; Alpenberg and Scarbrough, 2020) and

R&D activities (Love and Roper, 2018; Park *et al.*, 2019). Owner-managers believed an essential role of communication was to improve collaboration between firm members and that it also supported employees' skills development, in turn supporting technological competitiveness and enabling effective internal development and application of R&D.

All of the owner-managers used government R&D subsidy schemes to improve R&D capabilities and acknowledged that they were crucial to the firms' higher sustained growth. In return their company achievements supported the public policy purpose of R&D subsidy schemes in stimulating R&D actions (Kang and Park, 2012) and reflected the benefit of government support at various stages of the development of the organization (Warwick, 2013). Chapman *et al.* (2018) also argued that collaboration between experienced companies supported by R&D subsidies magnified the indirect impacts such as R&D expenditure, but the centrality of their role was rarely identified. This raises the need for further studies on the contributions of R&D subsidy schemes to SME growth.

## 5.2. Factors differentiating employment growth between SMEs

The findings suggest that business stability was provided by functional management, strength in the domestic market, and established products, but exceptional sustained growth was more associated with proactive responses to issues, such as flexible organization, international market entry, flexible, risk-taking, and fast decision-making, to the various business environments.

With the intention of improving organizational performance, owner-managers continued developing and reorganizing their organizational structure. The findings suggest that **flexible organizational performance** positively affects the growth of companies compared to functional organizational structures, supporting work by Oluwafemi *et al.* (2019). Three relatively large organizations' owner-managers in this sample applied very structured and bureaucratic organizations in their companies and their growth rates were relatively low. This suggests a potential impact of bureaucratic organizational structure and the size of company. However, it is not possible to generalize the impact of size to the bureaucratic organization and another relatively large company's owner-manager often reorganized his company to respond to the external business environments but achieved a high growth rate. This finding suggests the necessity of exploring flexible organizational structures in declining or steady-state companies, regardless of company size.

The importance of international markets is consistent with the owner-managers of higher-growth companies seeking **international market entry** as a stage of business expansion and growth in the international customer base (Hansen and Hamilton, 2011; Hagen and Zucchella, 2014). In contrast, owner-managers of relatively low growth companies focused

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more on the domestic market and used established customer networks to extend domestic customer base (e.g., Smallbone *et al.*, 1995).

Owner-managers of higher growth companies appeared to use **rapid decision making and proactive risk management** to enhance competitive advantages, while relatively low growth companies highlighted the maintenance established businesses (e.g., Love and Roper, 2015). On this basis, entrepreneurs experiencing lower growth or declining should consider reorganizing decision-making processes and focusing on proactive strategies. These elements may not be suitable for all organizations but would be worth considering for many companies which are experiencing difficulties in decision-making between staff members.

## 6. Conclusions and future research

This paper identified a number of key factors that owner-managers considered as enabling the sustained growth of high-tech SMEs (i.e. they grew at rates above the industry average and showed continuous growth over 7 years). These included: owner-manager competence and employee contributions, collaboration, R&D actions, organizational structure, customer base, and business strategy to changes on the external environment. For faster growth firms in the sample (with an employment growth CAGR of 10% or over) greater emphasis was also placed on having a flexible organization, fast decision-making, international market entry, and risk management, as critical factors enabling sustained growth.

The study illustrates entrepreneurial behaviors, as well as owner-managers' strong intentions to grow through following specific strategies. Thus, by analyzing critical factors and distinctive approaches by firms with diverse growth rates, this study contributes to the sustainable growth literature, and corroborates the necessity of a broad investigation of critical factors. Sustained growth of high-tech SMEs is rare and those high-tech SMEs need to constructively incorporate innovation and change (e.g., Coad *et al.*, 2020; Yun *et al.*, 2015). The results help indicate how these owner-managers achieved continuous and relatively high CAGR employment growth compared to others in the markets. In particular, this study is the first focusing on founder owner-managers of high-tech SMEs in South Korea. Although many studies have investigated SME owner-managers, those involving founders have been less well represented. This study of founders supports the important role of SME business owner behavioral and personality, as well as other, factors in achieving sustained growth of high-tech SMEs since the inception of their businesses.

From investigating various perspectives of these founder owner-managers, this paper suggests two main theoretical areas for development: attributes of founders' leadership in higher performing companies; and the impact of relationships between owner-managers and employees on the growth of companies. Founder owner-managers in this study acted as the organization's CEO, and their strategies reflected their personal experiences and expertise. They attempted to make a wide range of connections with employees, and their leadership strongly affected collaboration and communication between all employees (e.g., Carmeli *et al.*, 2011). They also dealt with complicated internal relationships between employees based on an understanding of previous strategies and actions in their companies (e.g., Edmondson and Smith, 2006). Therefore, this study suggests that the role of leadership in SME growth may vary according to the leaders' personal expertise and characteristics. At the same time, the results provide a better understanding of how SME founders motivate employees to improve their contribution to the organization. Founder owner-managers focused on fostering a more collectivistic organizational culture enabling increased stewardship of employees, based on employees' psychological ownership, and enhancing organizational performance (e.g., O'Neill *et al.*, 2009; Hernandez, 2012). The result broadly elicits the potential benefits of engaging stewardship behavior with employees, given the strong evidence of employee contributions to sustained growth in these organizations. Employee activities to improve business performance were also connected to fostering collaboration (e.g., Ahmed *et al.*, 2016; Wallace and Mello, 2015; Brown *et al.*, 2019). Hence, greater consideration of the relationship between members' stewardship and the long-term growth of SMEs is needed.

This study also suggests practical implications for entrepreneurs and policymakers. Whilst many governments have focused on high-growth firms underpinning job creation and the large numbers of high-tech start-ups in recent decades, only a few of these firms have achieved sustained business growth (e.g., Coad *et al.*, 2020; Daunfeldt and Halvarsson, 2015). Indeed, many studies overlook how much entrepreneurs want to grow their business. This study provided evidence on founder owner-managers' enormous efforts to survive and grow through exploring their retrospective reflection and experiences, and suggests factors useful in improving business competitiveness of high-tech SMEs. Entrepreneurs need to consider proactive approaches to their businesses, while policymakers should focus on supporting sustainable businesses, balancing between firm creation and firm growth. Policymakers also need to consider flexibility in R&D subsidy schemes because owner-managers perceived that too stringent contracts for such schemes impeded R&D and firm performance. They considered government

policy to be useful in expanding their technological abilities, as well as developing new products, thus, policymakers should consider greater policy flexibility to improve policy efficacy underpinning job creation, which is a priority of many governments (e.g., Michael and Pearce, 2009). Beyond the impacts of SME size and age on growth (e.g., Haltiwanger, *et al.*, 2013), these findings also contribute to distinguishing those factors influencing growth rates regardless of age and size of companies, and suggest not only the necessity of enhancing R&D and collaboration in high-tech companies but also how critical factors may be considered at different growth steps (e.g. Love and Roper, 2015).

The research illustrates the nuanced, multi-faceted nature of sustained growth and the need for further in-depth studies. It does have some limitations including the specific nature of the industrial sector chosen. Although recent industrial trends tend to focus on high-tech businesses and innovation which contribute considerably to the national economy, we suggest that some similar factors may apply to other key industrial sectors such as retail, travel, and transport. Nevertheless, the paper explores and contributes to a better understanding of the factors supporting the sustained employment growth of high-tech SMEs in South Korea and the findings suggest there is no 'one size fits all'. Thus, greater investigation using diverse perspectives is required to uncover a range of essential factors that owner-managers and policy practitioners should consider in different circumstances. Further research is also needed to establish comparators across a broad range of industrial sectors across different countries, together with the role, views and perspectives of a range of stakeholders in growing SMEs.

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<sup>1</sup> Compound Annual Growth Rate (CAGR) (The consecutive annual growth rate between two different years.) =

$$\left( \sqrt[n]{\frac{\text{value} \in \text{the present}}{\text{value} \in \text{the past}}} - 1 \right) \times 100. \quad n: \text{number of years.}$$

<sup>2</sup> The South Korean government issues a technology innovation certificate for high-tech SMEs (<https://www.innobiz.net>) and labor statistics are supported by the South Korean government (<http://laborstat.moel.go.kr>). The independent business database (called by KISVALUE) is operated by the NICE (National Information and Credit Evaluation) group, and this database supplies reliable credit information and business information on every company, and many public institutes (<https://kisvalue.com>).

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<sup>3</sup> The South Korean government set its R&D budget for SMEs at US\$1,287million (₩1.4trillion) in 2020 ([www.mss.go.kr](http://www.mss.go.kr)). The amount of South Korean government support for R&D was ranked as the highest rate as a share of GDP in OECD countries in 2016 (OECD 2017a). These subsidy schemes explicitly encourage both internal and collaborative research.