

STRATEGIC INFORMATION COMMUNICATION TECHNOLOGY FRAMEWORK AND SUSTAINABILITY OF SUCCESSION PLANNING OF KENYAN FAMILY ENTERPRISES

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Abstract: Purpose-Business enterprises all over the world are struggling with the issue of succession planning and sustainability of firms and this state of affairs has paused a threat to the existence of businesses. This is especially true for Africa and Kenya in particular which have experienced numerous corporate collapses several of which have been attributed to succession planning challenges. Scholars are therefore tasked with the question of seeking for sustainable solutions which can be recommended to businesses to help them to have sustainable competitive advantage which will enable them to exist beyond several generations. This research examined the influence of information communication technology strategic framework on sustainability of the succession plans of Kenyan family enterprises.

Design/methodology/approach- Descriptive Survey research design was used in the study because it helps to describe phenomena accurately and systematically. The study used a hypothesized framework to explain its relationship with succession planning sustainability of family enterprises. Questionnaires were used to collect data from 35 family enterprises selected at random across Kenyan counties. The Five-point Likert Scale Questionnaire was administered to enterprise owners who were asked to rank constructs according to their degree of influence on sustainability of succession planning of family enterprises. The questionnaire was piloted by using Cronbach's Alpha was used to pilot the questionnaire and all constructs displayed a significant positive result of over 0.6. The questionnaire was therefore deemed to have been reliable and within the recommended threshold. Data was analysed using ANOVA, Correlation and Multiple Linear Regression Analysis.

Findings- The study added to new knowledge on the influence of strategic information communication technology framework and strategic planning of family enterprises. ICT strategies were found to facilitate easy storage and access to information in the long run. Knowledge management strategies indicated a positive relationship through helping firms to have better knowledge management capacity. Product innovation flexibility strategies were found to influence sustainability of succession planning of family enterprises through offering them platforms to implement, innovate and adopt flexible processes that respond to dynamic changes in market needs.

Research Limitations/implications- Generalization of the research findings may not be possible because of the small sample of participants and also because the research was limited to the Kenyan context. However, the research findings do support the existing knowledge on the strategic Information Communication Technology framework and succession planning of family enterprises.

Practical Implications-Owners of family enterprises would be able to appreciate the role of Strategic ICT framework in influencing the sustainability of succession planning of their family enterprises. The study also added to practical knowledge in the area of Strategic management and the role of ICT in influencing business process. The research also informed policy and guide in sustainability of the implementation of strategic ICT frameworks.

Originality/Value

The proposed Strategic Information communication technology framework was found to influence succession planning of family enterprises positively.

Keywords: ICT strategies, Knowledge Management capability strategies, Product innovation flexibility strategies, Sustainability of family enterprises.

1. INTRODUCTION

The sustainable future of businesses has been very uncertain in the 21st century and businesses have had to continuously transform and reconfigure their capabilities so that they can have long term sustainability (Carayannis, and Grigoroudis, 2014)). Laura, *et al.*, (2022) supported the idea that enterprises needed to transform their processes with the aim of maintaining and improving their operations in order to gain the benefits of long-term survival and sustainability. Family enterprises have demonstrated the ability to adopt to changing market demands and to respond to dynamic market needs because of their structure of ownership and management. Shankar (2019) highlighted that family firms were the oldest forms of representation of governance worldwide but studies on the sustainability of family enterprises have been fairly recent. This is despite family businesses being the oldest form of businesses, their heterogeneous nature, their size, family ownership and their key contribution to the economy of countries all over the world. The sustainability of family enterprises beyond several generations is regarded as a central determinant of enterprise survival as well as performance and profitability (Yu, Lumpkin, Sorenson and Brigham, 2012). All over the world there is evidence of family businesses that have existed beyond the third generation such as Ford Group and Cargil and this has been attributed to high investment in information communication technology (Shankar, 2019). In India 68% of private sector is composed of 15 family firms with Reliance Industries, erstwhile Tata Group and Wipro being among the top 20 family-owned enterprises in the country (Kenyon-Rouvinez and Miguel, 2005).

The success of these family enterprises has been attributed to the fact that these firms add value to shareholders because of long-term investment which cushions them from economic uncertainties (Caspar, Dias, Elstrodt, 2010). Oswald, *et al.*, (2013) postulated that family enterprises had higher chances of survival resulting from family goals, lower agency costs and survivability capital which guards the social emotional wealth which propels managers to make strategic investments. Shanker (2019) highlighted several criticisms on family businesses despite their good performance which include sibling rivalry, role ambiguity, ownership wrangles, lack of skills and non-family employees among others. There has been wide research on succession planning of family enterprises but not much on family enterprise sustainability frameworks that can be implemented by family firms to yield long-term sustainability (Stafford, Danes and Haynes, 2013). Magasi (2021) highlighted the importance of family enterprises to the world economies through their invaluable contribution to the growth of Gross domestic Product (GDP), job creation and the fostering of innovativeness and creativity through entrepreneurship which contributes to government revenues. Family enterprises contribute to 67.5 % of GDP, 65% employment in the private sector and global job growth of 75% in all sectors of world economies (Okoh, *et al.*, (2021). Despite these contributions, studies have indicated that family enterprises have not been existing beyond several generations especially in Kenya due to different factors including low sustainability of succession planning which has caused them to have an averagely low life span.

Theoretical Underpinning

Family based enterprises are complicated in nature since majority of them are run by family members who have contradicting emotional and interpersonal relations which could be detrimental to the business in the absence of proper organizational succession structures. Application of the ICT strategic framework would solve most of the succession planning challenges faced by family-owned businesses (Utami, Bernardus and Sintha, 2017). Bamel and Bamel (2018) observed that ICT strategic framework facilitates family-owned enterprises to store, process and disseminate information for future use. The study was guided by Resource Based Theory, Agency Theory, Human Capital Theory, Technology Acceptance Model and Systems Theory. Barney (1991) proposed the Resource Based View Model as a tool which

provides organizations with rare, inimitable and irreplaceable resources which assist firms to achieve long-term sustainability and performance. This is achieved through proper adoption and management of a firm's internal resource, processes and the different capabilities to achieve long term competitive advantage. Family enterprises are the strong fabric that holds economies all over the world because they employ above 50 percent of the world's workforce but despite this contribution 41 percent of them have not had any documented succession plans (Andrea and Alfredo, 2019). Family enterprises have also been facing succession related challenges which have threatened their performance as well as their existence in the 21st century (Utami, 2017). One of the major challenges facing family enterprises has been a low integration of strategic ICT frameworks in their operations. This has complicated the sustainability of their succession planning causing the failure, closure or collapse of their firms. Adoption of ICT strategic framework would assist family enterprises in searching, identifying and placing the right workforce in succession positions in the organization in an unforeseen future (Alvani, *et.al.*, 2016).

Information Communication Technology (ICT) Strategy

Felipe *et.al.*, (2020) identified ICT as a key resource in firms which when incorporated displays a positive effect on business performance and sustainability. Hassan and Ogundipe (2017) established an enabling effect of ICT on knowledge management and product innovation which are value-based elements which positively influence the sustainability of businesses. Recent studies have supported the integration of ICT in business processes which allows enterprises to achieve sustainable competitive advantage and sustainability. ICT strategies have been found to enhance the management of information communication networks and store great amounts of information over long periods that extend from generation to generation (Kumar and Stylianou 2014). Gaviria-Marin and Cruz-Cazares (2020) highlighted that family enterprises have increasingly adopted the use of web platforms to get various types of knowledge useful in development of other internal organizational skills and capabilities as well as processes. Felipe *et.al.*, (2020) identified ICT strategies as key enablers of other complex organizational capabilities and strategies which if well incorporated could produce models of profitability and sustainability. Ganbold, Matsui, Rotaru (2020) supported that ICT strategy has a positive impact on business sustainability by citing information systems which provide relevant information to enterprises especially on new product/service combinations. Saenz, Knoppen, Tachizawa (2018) suggested that ICT strategy helps in informal and external management of both information and knowledge. ICT is important because it facilitates communication between company departments with various external stakeholders in light of knowledge acquisition, retention and diffusion in enterprises (Wei, Song and Wang, 2017). The post Covid 19 era has forced family enterprises to be more innovative through technological advances in order to sustain their survival through faster and effective solving of complex problems (Laura, Ramon, Ascension and Laura (2021). Benitez, *et.al.*, (2018)) stated that ICT could help an organization to speed up information dissemination and increase networking between businesses and customers. Laura *et.al.*, (2022) postulate that ICT strategies support data gathering, processing and planning for business and decision making. Raymond, *et.al.*, (2018) supported the use of ICT strategies to get enterprises connected to important networks and to help them offer innovative business solutions as well as quick adaptation to market needs. Carnes and Ireland (2013) highlighted the use of digital artefacts and platforms as enablers of family enterprises sustainability as they help them to become more flexible and to react quickly to changing market requirements. Duran, Kammerlander, Van Essen, & Zellweger (2016) proposed that digital technologies would offer new practices that provided opportunities for entrepreneurs to develop novel business models that are adaptive to environmental, social and economic business conditions.

Knowledge Management Strategies (KMS)

Knowledge management has been identified as a critical ingredient in this turbulent era of uncertainties in business because it plays a key role in supporting organizations through acquiring, creation, dissemination and effective use of knowledge to create sustainable competitive advantage. Knowledge management can be influenced by environmental changes hence firms need to adopt and realign their knowledge capabilities such as knowledge exploration, retention and exploitation, in order to survive in uncertain times (Martinez-Conesa Soto-Acosta, Carayannis (2017) Su and Daspit (2021) identified elements of knowledge transfer across generations such as moral values, competence values and cognitive heuristics. Botero, *et.al.*, (2015) stated that knowledge acquired and transferred across generations is a strategic resource that enhances competitive advantage and enterprise sustainability. Nguino and Banegil (2016) established the frequent causes of business failure as lack of knowledge transfer and lack of willingness to create, share, transfer and acquire appropriate knowledge from generation to generation. Family enterprises have been challenged from a knowledge sharing perspective due to low value of family values that are passed through generations (Laura, *et.al.*,

(2022). Family enterprises may fail to invest in innovation because of knowledge management barriers which inhibits their profitability and performance and acts as a detriment to sustainable growth (Verbano, Crema, and Venturini, 2015). Kumar and Stylianou (2014) proposed knowledge transfer strategy as a systematic process of disseminating knowledge either between members of a similar generation or from one generation to another. Non family businesses have difficulties in sharing knowledge because they are scared of competition but the same challenge is not experienced in family enterprises because of their stable, personal, long term and trust-based relationships. Bamel and Bamel, (2018) highlighted that selecting a suitable knowledge transfer strategy determines knowledge transfer success. Family-owned enterprises can improve their human resources through adoption of knowledge management strategies which will help them to gain and retain useful knowledge (Berent-Braunn and Uhlancer, 2012).

Product Innovation Flexibility Strategy (PIFS)

Innovation in family enterprises has been studied from the strategic, transactional, relational, exploratory and exploitative perspective. Family enterprises rely on unique resources such as tradition and social capital in pursuing innovation objectives Leppaaho and Ritala (2021) proposed innovation capabilities as critical adaptive capabilities for family enterprises which if well incorporated in organizations can give great gains leading to sustainability. Gregori and Holzmann (2020) supported the idea that digital technologies would offer new practices that provide entrepreneurial opportunities to enable the development of novel business models. George, Lakhani and Puranam (2022) identified the importance of capital technologies to enable parallel growth of socio environmental and financial value which will lead to long term sustainability of enterprises. Innovation and digitalization of family businesses through information technology improves the profitability of firms through a focus on the internal resources and processes as well as capabilities which are of high profitability to enterprises (Shukla and Sushil, 2020). Innovation is a valued key long term influencer of family business long term sustainability although some businesses prefer to control and avoid the risks that accompany it against the gains of its adoption (Caspurin, et al., 2017). Other authors argue that family enterprises are the most innovative because they are more careful in their innovation processes hence more efficient because they have the prime interests of the business by virtue of their high investment (Duran, et al., 2017). The linkage between family enterprises and innovation has not been widely studied and this has caused many family enterprises to avoid this area citing high investment costs without giving a keen interest on the benefits thereof (Jalilvand., et al., 2019).

Kammerlander and Van Essen (2017) established that firms led by future generations were more adaptive to innovation than those led by their original founders. Family involvement in innovation processes has been viewed to directly affect innovation inputs, activities, outputs and outcomes (De Massis and Rondi, 2019). Family enterprises have been forced by the current business environment to appreciate the benefits of innovation and Information technology because their application can support managerial decision making. A firm's internal resources and capabilities can be best described by resource-based theory which states that capabilities lead to sustainable competitive advantage and superior performance (Davis and Simpson, 2017). Innovation has also been pointed out as a key element which propels the production of different combinations of product/services and their effective launch in to markets in response to changing environmental dynamics (Carayannis and Griforoudis, 2014). Shukla (2020) pointed out that flexibility measures allow firms the opportunity to resolve problems in a face of uncertainties. Flexibility in products or services refers to the ability to change the structural/strategic/operational strategies to facilitate creative responses that promote information processing, innovation and ability to respond to uncertainties and fluctuating market situations (Carnes and Ireland, 2013). Innovation flexibility is considered as an important strategic flexibility strategy with various measures such as, human resource flexibility, supply chain flexibility, information systems flexibility and manufacturing flexibility (Martinez-Sanchez et al., 2019). Product innovation flexibility improves the overall business performance because it is linked to corporate strategy making, innovation and business sustainability (Braunscheidel and Suresh, 2009). Product innovation flexibility focuses on the strategies that are adopted by enterprises with the aim of generating rapid changes in production or development of goods and services that conform to customer requirements (Kumar and Singh, 2019). It also refers to the ability of enterprises to generate a wide range of products and services with low switching costs through aligning a firm's products strategies to respond to market needs/demands (Zhang et al., 2003). Product innovation flexibility strategy is oriented towards external environment specifically customers to respond to market needs, update information, gain knowledge of market needs, and increase customer satisfaction, growth and sustainability (Braunscheidel and Suresh, 2009). The Resource Based Theory postulates that intangible internal resources like training can negatively influence the sustainability of family enterprises if they are not strategically placed and utilized (Davis and Simpson,

2017). Internal resources and capabilities refer to human capital competencies acquired through experience and training (Barnell and Barnell, 2018). Magasi, Tonya and Kapanya (2020) studied the effect of internal resources and capabilities on the survival of family-owned manufacturing firms and established successor involvement in business management and training as the key determinants of family business survival. Internal resources and capabilities can lead to superior performance because they are valuable, rare, inimitable and non-substitution. Thus, the strategic direction of competing firms is directed by a firm's internal resources and capabilities which are optimally utilized through product or service innovation flexibility strategies.

Sustainability of Succession Planning of Kenyan Family Enterprises (SFE)

Glyptis, *et.al.*, (2021) described sustainability in family enterprises based on the firm's survival beyond the first generation and based on market share, number of employees, profit and their implementation, generations of ownership and levels of conflicts. In Kenya family enterprises have contributed up to up to 75 percent of Kenya's Gross Domestic Product (GDP) but despite this only 12% can attribute their existence to three generations. Many family enterprises have been found not to exist beyond the second generation due to poor succession planning which is attributed to low uptake of the ICT framework to solve business problems and processes which in turn would lead to a prolonged lifespan and sustainability of enterprises (Mwikali, 2019). Succession planning is one of the drivers of business sustainability and the adoption of ICT strategic framework throughout all the business processes will enhance efficiency, effectiveness and continuity (Kuria, 2018). Maalu, McCormick and Ko'bonyo (2013) observed that succession planning was inevitable in family enterprises hence the strategies used to facilitate succession planning have a great influence on family enterprise sustainability. Family enterprises have therefore to develop adaptive strategies to generate competitive sustainable advantages. Ogutu (2016) observed that Kenyan firms were faced with a possibility of collapse during the sunset years of their founders or after their demise.

Musyoki (2019) postulates that Kenyan family enterprises have been experiencing many succession challenges in the past which have led to either dismal performance or corporate collapses. This is because Kenyan family firms have not been taking a keen interest in adoption of strategic ICT frameworks to aid succession planning. This has resulted to enterprises undertaking spontaneous decisions when the need arises hence causing confusion and panic (Kuria, 2018). Lately the country has witnessed either corporate losses or collapse or grounding of companies which are all attributed to succession planning sustainability. Mugo, David and Lily (2015) stated that only few family enterprises in Kenya had survived beyond the third or fourth generation which was attributed to lack of sustainability of succession plans. Akinyi (2017) established that family businesses were closing down or performing dismally because of succession related challenges attributed to the demise of the founders of the businesses and Kenya is not an exception. Many families' business has not integrated ICT strategic framework as a core ingredient succession planning and this has caused adverse effects on the family members of the founder of the business as well as the business itself (Kuria, 2018). Studies have supported the growth and development of family enterprises but unfortunately their future beyond the founder is an area which has not been given much attention by both business owners as well as researchers especially in developing countries (Nyoni, 2019). Magasi (2016) stated that the collapse of 70% of enterprises before their second generation is attributed to lack of succession planning and as a result factors related to succession planning such as ICT strategic framework have continued to challenge and threaten the existence of family enterprises. Price waterhouse coopers in Kenya (PWC, 2018) carried out a family business survey which indicated that first generation family businesses outperform those run by subsequent generations in performance and this is attributed to the absence of the ICT strategic framework. In the same survey over a half of family business owners reported to having a succession plans in place although only 17% of the respondents reported a robust, formulated and ICT strategic framework. This situation has shown a slow improvement since 2016 hence the study proposed the need to appreciate the ICT strategic framework to improve succession planning performance and sustainability.

2. RESEARCH METHODOLOGY

The study used a descriptive research design because it allows for better accuracy of data in large populations (Murithi, Mwanja, and Mwinzi, 2016). A total sample of 35 family enterprises were selected at random. A pre-tested questionnaire was used to measure the influence of strategic ICT infrastructure on sustainability of the succession planning of Kenyan family enterprises.

Reliability and Validity

Table 1 indicates that all the variables of study were reliable because each had a Cronbach’s Alpha of more than 0.6. Saunders, Lewis & Thornhill (2012) postulate that reliability testing in research is key because it provides evidence that the instrument would give similar results if implemented at a later time.

Table 1: Reliability Results

Variable	Cronbach’s Alpha	No of Items
ICT Capability Strategy	0.705	10
Knowledge Management Strategy (KMS)	0.678	10
Product Innovation Flexibility Strategy (PIFS)	0.662	10

Correlation Results of ICT strategy (ICTS), Knowledge Management strategy (KMS) and Product Innovation Flexibility Strategy (PIFS).

Sekaran and Bougie (2016) supported the use of Correlation to establish the strength, direction and significance of the relationship between study variables using Pearson’s correlation. The results in Table 2 indicate a strong positive significant relationship between ICT strategy and sustainability of family enterprises ($r=0.603, p=0.000$), a fairly strong significant relationship between Knowledge management strategy and sustainability of family enterprises ($r=0.59487, p=0.000$), and a very strong relationship between Product Innovation flexibility Strategy ($r=0.713, p=0.000$) and sustainability of family enterprises.

Table 2: Correlation Matrix of ICTS, KMS, PIFS and SFE

		ICTS	KMS	PIFS	SFE
ICTS	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	35			
KMS	Pearson Correlation	.347**	1		
	Sig. (2-tailed)	.000			
	N	35	35		
PIFS	Pearson Correlation	.612**	.448**	1	
	Sig. (2-tailed)	.000	.000		
	N	35	35	35	
SFE	Pearson Correlation	.603**	.594**	.713**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	35	35	35	35

** Correlation is significant at the 0.01 level (2-tailed).

Multiple Linear Regression Results

To establish the relationship between the independent variables and the dependent variable, multiple regression analysis was used in Table 3. The results indicate that R which is the correlation coefficient which explains the relationship between the dependent and independent variables had a value of (0.863). This therefore indicates a strong positive relationship between the dependent and the independent variables. R² which is the coefficient of determination was used to explain the extent to which changes in the sustainability of family enterprises which could be explained by changes in the dependent variable. From the results, the independent variables explain 74.7% of the change in family business sustainability as shown by R². This implies that 25.3% of sustainability of succession planning is influenced by other factors which have not been captured in this study.

Table 3: Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.863 ^a	.747	.712	1.31396	1.990

a. Dependent Variable: SFE

b. Predictors: (Constant), ICTS, KMS,PIFS.

Analysis of Variance (ANOVA)

The ANOVA test in Table 4 was used to test the over all model fit. The F test count was 22.137 with a significance level of 0.000 which is <0.05 implying that ICT strategies, Knowledge management strategies and Product innovation flexibility strategies simultaneously affect the sustainability of strategic planning of family enterprises. From the results, the model was significant thereby predicting the influence of strategic ICT framework on the sustainability of succession planning of family enterprises. The p-value of 0.000 was less than the critical value of 0.05 implying that all the independent variables are significant in explaining the variation in the dependent variable which is the sustainability of succession planning of family enterprises.

Table 4: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	152.889	3	38.222	22.137	.000 ^b
	Residual	51.795	32	1.726		
	Total	204.687	35			

a. Dependent Variable: SFE

b. Predictors: (Constant), ICTS, KMS, PIFS.

Multiple Regression Analysis Results

From Table 5, One unit change in ICT strategy would lead to 0.254 increase in sustainability of family enterprises while a one unit change in knowledge management strategy would lead to 0.316 change in sustainability of family enterprises. One unit change in product innovation flexibility strategy would lead to 0.973 increase in sustainability of succession planning of family enterprises. The results indicate that there is a positive significant relationship between ICT strategies, knowledge management strategies, product innovation flexibility strategies and sustainability of succession planning of family enterprises. At 5% level of significance, all the variables had a significance of <0.05. Hence concluding that all the measures of the independent variables were statistically significant.

Table 5: Multiple Regression Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sign.
		B	Std. Error	Beta		
1	(Constant)	3.777	2.839	-	1.330	0.193
	ICTS	0.254	0.043	0.561	5.823	0.000
	KMS	0.316	0.063	0.478	4.963	0.000
	PIFS	0.973	0.233	0.979	42.774	0.000

a. Dependent Variable : SFE

3. DISCUSSIONS AND CONCLUSIONS

The paper examined the relationship between Strategic ICT framework and the Sustainability of Family enterprises. Previous research had supported the low uptake of Strategic ICT framework despite its positive contribution to the sustainability of family enterprises (Felipe *et. al*, 2020). However, this study established that over the last decade, there has been marked progress in the uptake of strategic ICT frameworks. The results from the study indicate that ICT strategies, Knowledge Management Strategies as well as Product Innovation flexibility strategies had a significant positive influence on the sustainability of family enterprises in Kenya. Rini *et.al.*, (2015) supported this finding by proposing that

family enterprises should take advantage of ICT strategies, Knowledge Management Strategies as well as Product Innovation flexibility strategies. The research established that the strategic ICT framework facilitates overall communication both internally and externally with various stakeholders as well as interest groups thus giving an opportunity for collaboration, knowledge acquisition and organizational learning. Family enterprises that had adopted the ICT framework variables were found to have experienced milestones in knowledge and information acquisition and storage production processes and flexibility in overall organizational functions. With reference to the fundamental role of family enterprises to the overall economy, the adoption of the variables in the strategic ICT infrastructure would go a long way in improving the sustainability of family enterprises. Oswald *et.al.*, (2013) highlighted poor governance of family enterprises as a deterrent to their long-term sustainability. Shankar (2019) highlighted the importance of governance in safeguarding the future of businesses through prevention of mistakes and potential conflicts. Brenes, Madrigal and Requena (2011) supported the governance of family businesses for sustained benefits such as lower cost of capital, better performance, investor trust, false Statement of stakeholders and improved performance.

Practical implications

The research contributed to the provision of new evidence on the influence of Strategic ICT framework on the sustainability of family enterprises. It was concluded that the strategic ICT framework had a significant positive influence on sustainability of family enterprises. The study established a significant positive relationship between ICT strategies, Knowledge management strategies, Product innovation strategies and the sustainability of succession planning of family enterprises. This is because all the variables were found to enhance innovation flexibility as well as knowledge management and transfer capabilities which are critical to the current dynamic business world. It was established that the Strategic ICT framework can add value to enterprises and it was recommended that firms should consider its adoption into their processes. The study proposed the uptake of the strategic ICT infrastructure to help organizations to beat competition and the changing business demands which would lead to better succession planning and sustainability. The study has also provided implications to the proprietors of family enterprises by offering the model that would provide solutions to governance challenges that have been an impediment to enterprise sustainability. The research has implications to policy makers by encouraging them to come up with favourable policies that would make it easy for family enterprises to adopt the proposed framework. The research proposes the Strategic ICT infrastructure because it has a significant positive effect on sustainability of succession planning. Therefore, organizations should adopt the strategic ICT framework constructs into their businesses to reap the benefits of sustainability over many generations. The study advanced the literature on strategic ICT infrastructure and succession planning especially in a Kenyan context. The study proposed future research to establish the effect of other strategic ICT framework variables on sustainability of succession planning of family enterprises.

REFERENCES

- [1] Akinyi, J. (2017). Effects of Succession Planning Practices on Organizational Performance: A Case of Sony Sugar Company in Migori County. Kenya: *Unpublished Thesis*, Kisii University.
- [2] Alvani, SM, Souteh, R.G, Jandaghi, G.R, & Inalou, A.B. (2016). Presenting a succession management model based on organizations capabilities in knowledge based organizations, *Mediterranean Journal of Social Sciences*, 7(2), 199. doi:10.5901/mjss.2016.v7nws2pp199.
- [3] Andrea C & Alfredo (2019). Global Family Business Survey, the impact of 1) Firm resources and sustained competitive advantage. *Journal of Management* 17(1), :99–120
- [4] Bamel UK, Bamel N (2018) Organizational resources, KM process capability and strategic flexibility: A dynamic resource-capability perspective. *Journal of Knowledge Management*, 22:1555–1572
- [5] Barney J (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17:99–120
- [6] Benitez-Amado J, Walczuch RM (2012) Information technology, the organizational capability of proactive corporate environmental strategy and firm performance: a resource-based analysis. *European Journal of Information Systems* 21:664–679
- [7] Berent-Braun, M.M. & Uhlaner, L.M. (2012) Family governance practices and teambuilding: paradox of the enterprising family. *Small Business Economics*, 38(1), 103-119. DOI:10.1007/s11187-010-9269-4

- [8] Botero, I. C., Cruz, C., De Massis, A., & Nordqvist, M. (2015). Family business research in the European context. *European Journal of International Management*, 9(2),139-159.
- [9] Brenes, E.R., Madrigal, K. & Requena, B. (2011) Corporate governance and family business performance. *Journal of Business Research*, 64(3), 280-285.
- [10] Braunscheidel MJ, Suresh NC (2009) The organizational antecedents of a firm's supply chain agility for risk mitigation and response. *J Oper Manage* 27:119–140
- [11] Carayannis, E., Grigoroudis, E. (2014), "Linking innovation, productivity, and competitiveness: Implications for policy and practice", *Journal of Technology Transfer*, 39(2), 199-218.
- [12] Carnes, C. M., & Ireland, R. D. (2013). Familiness and innovation: Resource bundling as the missing link. *Entrepreneurship Theory and Practice*, 37(6), 1399–1419.
- [13] Caspar, C., Dias, A.K. & Elstrodt, H.P. (2010) The five attributes of enduring family businesses. *McKinsey Quarterly*, 1, 1-10.
- [14] Casprini, E., De Massis, A., Di Minin, A., Frattini, F., & Piccaluga, A. (2017). How family firms execute open innovation strategies: *The Loccioni case*. *Journal of Knowledge Management*, 21(6), 1459–1485.
- [15] Chirico, F. & Bau, M. (2014) Is the family an "asset" or "liability" for firm performance? The moderating role of environmental dynamism. *Journal of Small Business Management*, 52(2), 210-225. DOI: 10.1111/jsbm.12095 Chirico,
- [16] Cruz, C., Justo, R. & De Castro, J.O. (2010) Does family employment enhance MSEs performance? Integrating socioemotional wealth and family embeddedness perspectives. *Journal of Business Venturing*, 27(1), 62-76. DOI: 10.1016/j.jbusvent.2010.07.002
- [17] Davis, P and Simpson, E., (2017). Resource-Based Theory, Competition and Staff differentiation in Africa. Lavelaging Employees as a source of sustained competitive advantage. *American Journal of Management*, 17(1) 2017 19-33.
- [18] De Massis, A., Frattini, F., Kotlar, J., Petruzzelli, A. M., & Wright, M. (2016). Innovation through tradition: Lessons from innovative family businesses and directions for future research. *Academy of Management Perspectives*, 30(1), 93–116.
- [19] Duran, P., Kammerlander, N., Van Essen, M., & Zellweger, T. (2016). Doing more with less: Innovation input and output in family firms. *Academy of Management Journal*, 59(4), 1224–1264.
- [20] Felipe CM, Leidner DE, Roldán JL, Leal-Rodríguez AL (2020) Impact of IS capabilities on firm performance: the roles of organizational agility and industry technology intensity. *Decision Science* 51:575–619.
- [21] Ganbold O, Matsui Y, Rotaru K (2020) Effect of information technology-enabled supply chain integration on firm's operational performance. *Journal of Entrepreneurship Information Management*, 34:948–989
- [22] Gaviria-Marin M, Cruz-Cázares C (2020) Ranking web as indicator of knowledge diffusion: an application for SMEs. *Acad Rev Latinoam Adm* 33:219–240
- [23] George, G., Lakhani, K. R., & Puranam, P. (2020). What has changed? The impact of Covid pandemic on the technology and innovation management research agenda. *Journal of Management Studies*, 57(8), 1754.
- [24] Glyptis, L., Hadjielias, E., Christofi, M., Kvasova, O., & Vrontis, D. (2021). Dynamic familiness capabilities and family business growth: A longitudinal perspective framed within management accounting. *Journal of Business Research*, 127, 346–363.
- [25] Gregori, P., & Holzmann, P. (2020). Digital sustainable entrepreneurship: A business model perspective on embedding digital technologies for social and environmental value creation. *Journal of Cleaner Production*, 272, 122817.
- [26] Hassan, H., & Ogundipe, A. A. (2017). *ICT Adoption by Micro and Small Scale Enterprises in Nigeria: A Case Study of the Federal Capital Territory, Abuja*.

- [27] Jalilvand, M. R., Vosta, L. N., Khalilakbar, R., Pool, J. K., & Tabaeian, R. A. (2019). The effects of internal marketing and entrepreneurial orientation on innovation in family businesses. *Journal of the Knowledge Economy*, 10, 1064–1079
- [28] Jones, O., Ghobadian, A., O'Regan, R. & Antcliff, V. (2013) dynamic capabilities in a sixth-generation family firm: Entrepreneurship and the bibby line. *Business History*, 55(6), 910-941. DOI:
- [29] Kammerlander, N. & van Essen, M. (2017). Family firms are more innovative than other companies. Harvard Business Review, online.
- [30] Kenyon-Rouvinez, D & Miguel A.G. (2005). *The Importance of Family and Business Governance*, DOI: 10.1057/9780230287730_4
- [31] Kumar P, Singh AP (2019) Flexibility in service operations: review, synthesis and research agenda. *Benchmarking*, 27:2108–2129
- [32] Kumar RL, Stylianou AC (2014) A process model for analysing and managing flexibility in information systems. *Eur J Inf Syst* 23:151–184
- [33] Kuria, M.J. (2018). Succession Planning and performance of small and medium family-owned businesses in Kiambu county, Kenya. *Unpublished thesis*, University of Nairobi. erepository.uonbi.ac.ke.
- [34] Laura Zapatu-Cantu, Ramon Sanguino, Ascension Borroso, Laura Mcola-Garrita (2022). Family Business Adapting a New Digital-Based Economy: Opportunities and Challenges for Future Research, *Journal of knowledge Academy*.
- [35] Leppäaho, T., & Ritala, P. (2021). Surviving the coronavirus pandemic and beyond: Unlocking family firms' innovation potential across crises. *Journal of Family Business Strategy*, 100440.
- [36] Maalu, McCormick and K'obonyo, (2013). Succession Strategy and Performance of small and medium family businesses in Nairobi, Kenya. *International Journal of Education and research*, 1(6), 1-22.
- [37] Magasi, C. (2016). Factors influencing business succession planning among SMEs in Tanzania, *European Journal of business and Management*, 8(3), 126- 135.
- [38] Magasi, C. (2021). Management succession planning and family-owned manufacturing businesses survival: The moderating role of firm's background variables. *International journal of research in business and social science* 10(8), 12-24
- [39] Magasi, Tonya and Kapaya (2020). The effect of succession planning on the survival of family - owned manufacturing firms in Dar es salaam region, Tanzania 10.26437/ajar.01.04.2020.06
- [40] Marina, L., & Mojca, D. (2016). Knowledge transfer in family businesses and its effects on the innovativeness of the next family generation. *Knowledge Management Research & Practice*, 14(2), 213-224.
- [41] Martinez-Conesa I, Soto-Acosta P, Carayannis EG (2017) On the path towards open innovation: assess-ing the role of knowledge management capability and environmental dynamism in SMEs. *Journal of Knowledge Management* 21:553–570
- [42] Mugo, M., David, M. & Lily (2015). The effect of Succession Planning on Corporate growth strategy among local family businesses in the manufacturing sector in Nairobi County, Kenya. *European Journal of Business and Management*, 7(6), 201
- [43] Murithi T., Mwanja, M., & Mwinzi, J. (2016). The Influence of Financial Resources on the integration of the National Goals of Education Authors. *International Journal of Education and Research*, 4(9) 51-62.
- [44] Musyoki, A., (2019). Challenges Affecting Effective Implementation of *Succession Management Strategy* in the Civil Service of Kenya. Unpublished thesis, University of Nairobi. erepository.uonbi.ac.ke
- [45] Mwikali, A (2018) Family business succession planning, entrepreneurial orientation and firm performance between small and medium enterprises. A critical literature reviews. *International Journal of economics, Business and Management Research*, 2(4), 496-510.
- [46] Nguino, R., & Bañegil, T. (2016). An empirical study about knowledge transfer, entrepreneurial orientation and performance in family firms. *European Journal of International Management*, 10(5), 534–557

- [47] Nyoni, T (2019). Factors affecting succession planning in small and medium enterprises (SMEs) In Zimbabwe: A case of Harare. *Munich Personal RePEc Archive*, 21(26), 1-14.
- [48] Ogutu, C. (2016). Succession Planning and Management in Kenya. A case study of Quantity Surveying Firms. *Unpublished thesis*, University of Nairobi.
- [49] Okoh, E.E., Worlu, R.E., Oyewunmi, O.A., & Falola, H.O. (2021). The moderating effect of succession planning on inheritance culture and business survival of selected family-owned schools in South-West, Nigeria. *Academy of Entrepreneurship Journal (AEJ)*, 27(4), 1-17.
- [50] Oswald, J., Abby, G., Nicholas, O., & Valerie, A. (2013). Dynamic capabilities in a sixth-generation family firm: *Entrepreneurship and the Bibby Line, Business History*, 55(6), 910-941.
- [51] Raymond L, St-Pierre J (2010) Strategic Capabilities for Product Innovation in SMEs. *International Journal of Entrepreneurship Innovation*, 11:209–220.
- [52] Rini, s., Hartoyo., Heny K. D., & bustanul A. (2015). The effects of ICT adoption on marketing capabilities and business performance of Indonesian SMEs in the fashion industry, *Journal of business and management research (jbrmr)*, (1), 100-115.
- [53] Saunders, M., Lewis, P. and Thornhill, A. (2012) *Research Methods for Business Students*. Pearson Education Ltd., Harlow.
- [54] Sekaran, U. and Bougie, R. (2016) *Research Methods for Business: A Skill-Building Approach*. 7th Edition, Wiley & Sons, West Sussex.
- [55] Sáenz MJ, Knoppen D, Tachizawa EM (2018) Building manufacturing flexibility with strategic suppliers and contingent effect of product dynamism on customer satisfaction. *Journal of Purchasing and Supply Management*, 24:238–246
- [56] Shanker S. (2019). A conceptual model of family firm sustainability. The research agenda. *The business and management Review*, 10(2)-204- 216.
- [57] Shukla (2020) Evaluating the practices of flexibility maturity for the software product and service organizations. *Int J Inf Manage* 50:71–89
- [58] Stafford, K., Danes, S.M. & Haynes, G.W. (2013) Long-term family firm survival and growth considering owning family adaptive capacity and federal disaster assistance receipt. *Journal of Family Business Strategy*, 4(2), 188-200. DOI: /10.1016/j.jfbs.2013.06.002
- [59] Su, E., & Dasptit, J. (2021). Knowledge management in family firms: A systematic review, integrated insights and future research opportunities. *Journal of Knowledge Management*.
- [60] Utami, C.W (2017). The role of personality system succession pattern in family business in Indonesia, *scholars Journal of Economics, Business and Management*, 4(12), 870-879
- [61] Utami, W.C., Bernardus, D., & Sintha, G. (2017). The Pattern Analysis of Family Business Succession. A study of Medium Scale Family Business in Indonesia. *European Research Studies Journal*, 20(2), 461-474.
- [62] Verbano, C., Crema, M., & Venturini, K. (2015). The identification and characterization of open innovation profiles in Italian small and medium-sized enterprises. *Journal of Small Business Management*, 53(4), 1052–1075.
- [63] Wei Z, Song X, Wang D (2017) Manufacturing flexibility, business model design, and firm performance. *International Journal of Production Economics* 193:87–97
- [64] Yu, A., Lumpkin, G.T., Sorenson, R.L. & Brigham, K.H. (2012) The landscape of family business outcomes: A summary and numerical taxonomy of dependent variables. *Family Business Review*, 25(1), 33-57. DOI: 10.1177/0894486511430329.
- [65] Zhang Q, Vonderembse MA, Lim JS (2003) Manufacturing flexibility: defining and analyzing relationships among competence, capability, and customer satisfaction. *J Operations Management* 21:173–191