




# The role of strategic flexibility and dynamic capabilities on family business performance



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**Background:** Dynamic capabilities is a key strategic tool that family businesses can practice to enhance their business performance. Although family business research in South Africa has advanced over the last 10 years, there are still limited studies uncovering the impact of dynamic capabilities within family businesses.

**Aim:** The aim of this research is to identify the mediating effect of strategic flexibility between the relationship of dynamic capabilities and family business performance.

**Setting:** The study focussed on family businesses located in the Eastern Cape of South Africa.

**Methods:** The study followed a quantitative research approach. Data were collected using the questionnaire from a total of 347 respondents. The Hayes macro mediation model was used as the statistical analytical technique to ascertain the link.

**Results:** The results revealed that strategic flexibility positively mediates the relationship between dynamic capabilities and family business performance. The strategic flexibility mediating relationship between scenario planning and family business performance was the strongest correlation of the five dynamic capabilities tested (environmental scanning, scenario planning, knowledge creation, culture, and formal organisation).

**Conclusion:** Family businesses are urged to develop a dynamic capabilities model that emphasises their strategic flexibility. Specific focus should be placed on scenario planning aligned with strategic flexibility to ensure that businesses can anticipate and prepare for opportunities and threats.

**Contribution:** This study contributes practical recommendations on the development and implementation of a dynamic capability model for family businesses.

**Keywords:** family business; mediation; strategic flexibility; dynamic capabilities; performance; South Africa; scenario planning; competitive advantage.

## Introduction

Family businesses (FB) are globally acknowledged as crucial role players in most economies. For instance, at a global scale, it is estimated that 90% of all jobs have their origin in at least some form of family business structure (Beck, Farrington & Venter 2020). In developing nations like South Africa (SA), this may also be argued as true. According to Beck et al. (2020), SA comprises an estimated 80% of FB where at least 1.1 million businesses categorise themselves as FB. Because of the rapidly changing economic conditions, FB are struggling to maintain their competitive advantage which has resulted in increased levels of business failure (Glyptis et al. 2021). An increased number of FB failing has negative ramifications for the economy because of their large contribution to economic prosperity.

A key factor that separates a family business from a non-family business is the notion of succession where the business power is transferred through succession to the next generation of family members (Garcia et al. 2019). To define a family business, the percentage of the family decision-making control needs to be taken into consideration (Eze et al. 2021; Tien et al. 2019). For this study, a family business is defined as a business that is composed of two or more family members where 50% of its shares are owned by the family or its family members, and there is the direct involvement of the family members in the business's day-to-day operations by either advising, supervising and/or as directors (Janse van Rensburg & Tjano 2020). This definition suggests that at least 50% level of family involvement and ownership is required to categorise a business as a family business.

Although the concept of dynamic capabilities (DC) has received increased attention within the field of strategic management, there is still insufficient reference to the concept within the arena of family business (Glyptis et al. 2021; Semke & Tiberius 2020).

Previous studies on FB performance and DC highlight the influence of DC and the adoption of additional resources to align DC strategies to business models (e.g. Glyptis et al. 2021; Koentjoro & Gunawan 2020; Poole & Munyanyi 2019; Soluk et al., 2021). However, these studies do not adequately focus on explicit DC dimensions that family firms require to succeed. Furthermore, recent studies conducted on FB in SA do not incorporate the DC framework (e.g. Beck et al. 2020; Kupangwa, Farrington & Venter 2023; Janse van Rensburg & Tjano 2020; Urban & Nonkwelo 2020).

This investigation, therefore, acknowledges the lack of research currently surrounding DC and FB as fulfilling this gap would educate FB in enhancing their performance (Abbadly, Akkaya & Sari 2019). The Dynamic Capabilities View (DCV) has become an influential theoretical framework that elucidates how firms can maintain their competitive advantage within uncertain environmental conditions (Mikalef & Gupta 2021). When firms adapt to the changes within the internal and external environments through their DC, they are exercising strategic flexibility. Therefore, DC enables businesses to effectively respond to uncertain environmental changes by employing strategic flexibility (Gerald, Obianuju & Chukwunonso 2020).

This study's objective was to examine the mediation effect of strategic flexibility between DC and family business performance (FBP). There are currently limited research themes in SA that concurrently investigate DC, FBP and strategic flexibility as one study. Thus, indicating the authenticity and significance of this investigation through testing a mediation model (Ragmoun & Alwehabie 2020). To further improve originality, only five prominent DC constructs were taken into consideration entailing environmental scanning, scenario planning, knowledge creation, culture, and the formal organisation. These five DC were selected as they have not received sufficient attention within the DC and FB fields (Koentjoro & Gunawan 2020). A research question was set as follows: *what is the mediating effect of strategic flexibility among the relationship between dynamic capabilities and family business performance?*

## Literature review

### The dynamic capabilities view

The DCV originates from Pisano and Teece's (1994) working paper where they introduced the notion of DC. The concept of DC focusses on firms that are failing to sustain their competitive advantage because of the changes in the environments in which they operate (Teece, Pisano & Shuen 1997). The rapidly changing external environment has resulted in firms experiencing new obstacles surrounding

their resources. Consequently, the DCV suggests that firms can enhance their competitive advantage through the implementation of the three pillars of DC namely sensing, seizing, and reconfiguration of a firm's resources and capabilities (Semke & Tiberius 2020).

Sensing refers to the firm's ability to identify and assess opportunities and threats in both internal and external environments (Bogers et al. 2019). Here, both strong and weak signals surrounding opportunities and threats must be identified to ensure effective evaluation for current and future scenario planning. The second pillar, seizing, refers to the business models and securing of resources to execute the identified opportunists and threats during the sensing phase (Abbadly et al. 2019). In doing this, actual organisation changes and plans are developed to enhance the firm's performance. Lastly, the third pillar of re-configuration, entails the business evolving, and exploring the identified opportunities. Here, the result should be new and improved goods and services that are in demand that the firms' competitors are not yet offering (Cirjevskis 2019).

When firms implement the three pillars of DC effectively, they will be able to reduce costs, engage in outsourcing and networking, enhance innovation, and engage in effective strategic and financial planning for the business (Ochoa, Sacristan-Navarro & Pelechano-Barahona 2020). Thus, allowing firms to sustain their business performance as they identify opportunities and threats in their operating environments (Abu-Rumman et al. 2021). Abbadly et al. (2019) and Pervan, Curak and Pavic Kramaric (2018) suggested that the three pillars of DC and decision-making are interlinked. Here, the identified opportunities and threats essentially influence effective decision-making to seize the required resources and develop the required business models to exploit the given opportunity (Koentjoro & Gunawan 2020).

### Dynamic capabilities and business performance

Family businesses can achieve superior business performance through the implementation of DC (Abbadly et al. 2019; Glyptis et al. 2021). However, the concept of DC has not been sufficiently investigated within the FB field where research primarily focusses on non-FB (Daspit, Long & Pearson 2019). Although the term DC may not be specifically identified within a business, the constructs are still unknowingly being practised such as conducting environmental scanning (Daspit et al. 2019). Five prominent DC constructs entail environmental scanning, scenario planning, knowledge creation, culture, and formal organisation.

Firstly, the DC construct known as culture in a FB refers to the goals, values and attitudes of the business practices (Krishnan 2020). We argue that FB are characterised as having family relationships where there are higher levels of trust and knowledge sharing compared to non-family firms. Consequently, fostering a strong business culture and ultimately business performance (Soluk et al. 2021). Secondly, the DC of environmental scanning enables firms to identify

and cope with opportunities and threats that their operating environments may present. While the third DC, scenario planning, prepares the firm based on preestablished action plans (Schwarz, Ram & Rohrbeck 2019). Scenario planning ensures firms have plans in place to promptly adapt to opportunities or threats in the future (Alizadeh & Soltanisehat 2019). The DC of scenario planning is also referred to as a firm's competitive radar (Schwarz et al. 2019).

The fourth selected DC, knowledge creation, enables firms to innovate and share new ideas to sustain their competitive advantage (Ode & Ayavoo 2020). Lastly, the formal organisation DC relates to the business models the business practices to ensure survival (Gregurec, Tomičić Furjan & Tomičić-Pupek 2021). Such business models could be the transition to the digital age based on the changes within the environmental landscape. These five DC, therefore, have an imperative role to play within the three DC pillars of sensing, seizing and re-configuration.

### The mediating role of strategic flexibility

When firms respond to environmental changes, they are essentially practising strategic flexibility. Thus, we argue that when firms can adapt to environmental fluctuations, they are essentially fostering their competitive advantage (Pulsiri & Vatananan-Thesenvitz 2021). Strategic flexibility has assisted firms operating within uncertain conditions to modify their business strategies towards improved and quick decision-making to ensure continuous growth and survival (Gerald et al. 2020). Actively practicing strategic flexibility gives firms a competitive advantage over their competitors as the strategy enables businesses to successfully manage economic and political risks that they may be exposed to (Arokodare & Asikhia 2020). Through environmental scanning and scenario planning, strategic flexibility ensures firms can be flexible and competitive (Pulsiri & Vatananan-Thesenvitz 2021).

However, strategic flexibility cannot be successful in isolation, and it is argued that it should be practised adjacent to DC (Gerald et al. 2020). Interlinking strategic flexibility and DC, therefore, offers an opportunity for firms to identify and prepare for opportunities while acting promptly in adapting business strategies and acquiring the necessary resources (Arokodare & Asikhia 2020). Sumiati and Pramono (2019) identified that strategic planning, which entails strategic flexibility, has an important role to play in mediating business performance. Similarly, Nwachukwu and Vu (2020) found that strategic flexibility does enhance business performance through a theoretical lens of DC.

Sumiati and Pramono (2019) conducted a quantitative study entailing strategic flexibility which focussed on managers of small and medium enterprises. Their study indicated that strategic flexibility does contribute towards enhanced business performance. Nwachukwu and Vu (2020) further acknowledged that strategic flexibility enhances a firm's

performance. However, Sumiati and Pramono (2019) and Nwachukwu and Vu (2020) studies focus on small and medium enterprises and do not take DC and family firms into account. A related mediation study executed by Ragmoun and Alwehabie (2020) incorporates DC and FB; however, their focus was on sustainable human resource management and no attention was placed on strategic flexibility.

Interestingly, Eikelenboom and De Jong (2019) conducted a study in the Netherlands and identified that DC does influence performance sustainability in a business. However, these authors further acknowledged that the relationship between DC and sustainability performance requires further attention as there is limited literature on such. Furthermore, Gerald et al. (2020) recognised that flexibility and DC enhance business performance; however, there was no mediation relationship identified within FB.

### Aim and hypotheses

This study sought to investigate the mediating effect of strategic flexibility between DC and FBP. Based on the literature, five hypotheses were established:

- H1:** *Strategic flexibility mediates the relationship between environmental scanning and family business performance.*
- H2:** *Strategic flexibility mediates the relationship between scenario planning and family business performance.*
- H3:** *Strategic flexibility mediates the relationship between knowledge creation and family business performance.*
- H4:** *Strategic flexibility mediates the relationship between culture and family business performance.*
- H5:** *Strategic flexibility mediates the relationship between formal organisation and family business performance.*

### Research methodology

This investigation followed a quantitative methodological logic by employing the correlational research design and multiple regression analyses. The correlational research design was selected as it permits relationships to be statistically measured among the study's variables (Williams et al. 2022). In doing so, the collected data were statistically analysed with the purpose of generalisation to the population of interest (Wiid & Diggines 2021). Correlation research designs are further best suited for multiple regression analysis which was fitting for this study as mediation model was tested (Mukherjee 2019).

### Sample strategy

The sampling strategy was aligned with the research objectives to ensure that a suitable unit of analysis was obtained (Schaffer & Ramasubramanian 2021). The population identified was family-owned businesses, while the sample unit was one family business manager or one family business owner from each family business. Only one family business owner or manager per family business was selected for this study as the focus of the study was to

obtain the outlook from a single perspective instead of multiple units of analysis. Investigating multiple units of analysis was, therefore, beyond the scope of this study.

A specific inclusion criterion was developed to ensure the data were collected from an accurate group of respondents. The inclusion criteria included one family business owner or one family business manager who either owns, co-owns or manages an operating family business in the Eastern Cape. The sample criteria did not discriminate against gender, race, disability or religion, and considered all races and gender of family business owners and managers in the Eastern Cape. The study further took into account the disparate industries and locales in the Eastern Cape. For this study, the individuals that partook in this investigation were referred to as respondents.

The locale of focus for this investigation were the eight district municipalities of the Eastern Cape, which entailed Alfred Nzo District Municipality, Amathole District Municipality, Buffalo City Metropolitan Municipality, Chris Hani District Municipality, Joe Gqabi District Municipality, Nelson Mandela Bay Metropolitan Municipality, OR Tambo District Municipality and Sarah Baartman District Municipality. There are currently few studies that focus on the Eastern Cape and its surrounding eight districts in SA (Beck et al. 2020; Janse van Rensburg & Tjano 2020; Urban & Nonkwelo 2020).

The sampling strategy incorporated the non-probability purposeful sampling where FB were accessed door-to-door at their business premises based on the study's inclusion criteria. This method was selected as there are currently no known family business sampling frames in SA; therefore, a family business database had to be created for this study (Scharrer & Ramasubramanian 2021). To avoid bias of purposeful sampling, the respondents were selected at random within a specific locale. Furthermore, the questionnaire had specific inclusion criteria which entailed the family business being a registered business and the respondent being either a family business manager or owner. The initial sample size was to obtain 377 respondents which was calculated using the Raosoft online calculator. However, because of the shortage of locating additional FB, only 347 questionnaires were obtained.

## Data collection

Before data collection, a pilot study was executed with 20 entrepreneurs to test the research instrument. A pilot study ensures the research instrument is reliable and allows for omissions and weaknesses to arise and be corrected (Tripathi & Rai 2019). Data collection took place over 6 months covering the eight district municipalities of the Eastern Cape. The questionnaire was distributed to FB by physical hard copies and through the distribution of an online survey link created in Survey Monkey. The Survey Monkey survey was a replica of the physical questionnaire to ensure uniformity. The questionnaire took an average of 15 min to complete, while the online survey took an estimated 10 min to complete. In total, only 65 respondents

completed the online survey via email, Facebook, Instagram and WhatsApp; while 288 respondents completed the hard copy questionnaires. This indicates that the respondents needed encouragement to complete the questionnaire in one sitting instead of 'receiving now and answering later' which resulted in the questionnaire being overlooked and never completed.

## Measurement and construct validation

The dependent variable of the study was FBP while the two independent variables were DC and strategic flexibility. We measured FBP with 13 statements, DC with 14 statements, and strategic flexibility with 5 statements. The FBP scale was adopted from Utrilla and Torraleja (2012) which measures a firm's financial and non-financial variables. The DC scale measured the three pillars of DC which included sensing, seizing and transforming, and the associated five DC constructs (environment scanning, scenario planning, knowledge creation, culture and formal organisation). The DC scale was adopted from Kump et al. (2019). The decision-making scale measured the construct entailing strategic flexibility which was taken from Nadkarni and Herrmann's (2010), as seen in Table 1.

All items were measured using a five-point Likert scale. The Likert scale ranged from one (strongly agree), two (agree), three (neither agree nor disagree), four (disagree) and five (strongly disagree). The dependent variable measured the family firm's financial and non-financial factors as these constructs contribute towards business performance (Alves & Gama 2020). Financial performance constructs were measured using growth and productivity factors while non-financial performance constructs entailed the measurement of family business success and productivity. The questions were coded numerically to measure and compare the respondents' attitudes within the statistical data analysis (Williams et al. 2022).

The research instrument additionally included 11 items relating to the FB demographic information including gender, age, ethnic group, business industry, business structure, province, years in operation, number of employees,

**TABLE 1:** Measuring instrument.

Variables	Constructs	Underlying sources
Dynamic capabilities	Environmental scanning	Danneels (2008), Jantunen (2005), Kump et al. (2019), Li and Liu (2012), Makkonen et al. (2014), and Wilden et al. (2013).
	Scenario planning	
	Knowledge creation	
	Culture	
	Formal organisation	
Decision-making	Strategic flexibility	Nadkarni and Herrmann (2010)
Family business performance	Financial performance: Growth and profit	Aragón, Barba and Sanz (2003), Carlson, Upton and Seaman (2006), Chand and Katou (2007), Delaney and Huselid (1996), Hassan, Hagen and Daigs (2006), Hernández and Pena (2008), Huselid, Becker and Beatty (2005), Kallenberg and Moody (1994), Molina-Azorin et al. (2009), Piñeiro and García-Pintos (2009), and Rutherford, Kuratko and Holt (2008).
	Non-financial performance: Productivity and family success	

number of family members and annual turnover. Collecting data on the biographical data of the respondents and their business profile allowed us to gain a deeper comprehension of where FB are primarily based within the Eastern Cape, the age and gender groups that are participating in FB, and the industry types. Thus, enhancing our understanding of the sample unit under investigation (Kumar 2019).

Table 2 illustrates a summary of the strength of the correlations between the variables and the constructs. Here, exploratory factor analysis (EFA), confirmatory factor

analysis (CFA), Cronbach alpha, Joreskog rho and average variance extracted (AVE) were utilised to assess the validity and reliability of the constructs within the research instrument. All EFA and CFA items loaded high (i.e.  $\geq 0.49$ ) which indicates the empirical validity of the constructs. Table 2 further indicates that reliability was established. Here, an acceptable level of construct reliability with Cronbach alpha and Joreskog rho values resulted in more than 0.70 for the majority of the constructs. However, scenario planning and knowledge creation had the lowest Cronbach alpha values of 0.524 which was still deemed acceptable.

**TABLE 2:** Exploratory factor analysis, confirmatory factor analysis and internal consistency output.

Factors and respective items	EFA loadings	CFA loadings	Alpha if item deleted
<b>1. Strategic flexibility</b>			
DM_SFLE2: We frequently change our strategies and structures ...	0.569	0.642	0.777
DM_SFLE3: Our strategy emphasises exploiting new ...	0.748	0.793	0.705
DM_SFLE4: Our strategy reflects a high level of flexibility in ...	0.652	0.702	0.746
DM_SFLE5: Our strategy emphasises versatility and ...	0.609	0.702	0.762
<i>Cronbach's Alpha = 0.799; Joreskog rho = 0.803; AVE = 0.507</i>			
<b>2. Family success</b>			
FBP_BP11: There is satisfaction of the family members.	0.719	0.835	0.880
FBP_BP12: There is satisfaction of the family participants.	0.860	0.940	0.808
FBP_BP13: There is satisfaction of the successor.	0.692	0.825	0.883
<i>Cronbach's Alpha = 0.901; Joreskog rho = 0.902; AVE = 0.754</i>			
<b>3. Productivity</b>			
FBP_BP4: Participants are committed to the organisation.	0.583	0.686	0.782
FBP_BP5: Participants are satisfied with the organisation.	0.631	0.765	0.751
FBP_BP6: There has been a reduction in the level of absenteeism.	0.720	0.752	0.743
FBP_BP7: Participants rarely leave the company voluntarily.	0.634	0.650	0.791
<i>Cronbach's alpha = 0.815; Joreskog rho = 0.806; AVE = 0.511</i>			
<b>4. Growth</b>			
FBP_BP1: There has been improvement of the productivity index ...	0.613	0.767	0.789
FBP_BP2: There has been sales growth in the last three years.	0.794	0.760	0.782
FBP_BP3: There has been market share growth in the last three ...	0.757	0.853	0.739
<i>Cronbach's Alpha = 0.823; Joreskog rho = 0.837; AVE = 0.631</i>			
<b>5. Profit</b>			
FBP_BP8: There is economic profitability.	0.648	0.788	0.839
FBP_BP9: There is rate of returns on capital.	0.739	0.888	0.760
FBP_BP10: There is rate of returns on assets.	0.587	0.798	0.835
<i>Cronbach's Alpha = 0.867; Joreskog rho = 0.865; AVE = 0.682</i>			
<b>6. Sensing</b>			
DC_SENS1: Our company knows the best practices in the market.	0.717	0.727	0.799
DC_SENS2: Our company is up to date on the current market ...	0.694	0.756	0.798
DC_SENS3: Our company systematically searches for ...	0.718	0.751	0.791
DC_SENS4: As a company, we know how to access new ...	0.602	0.720	0.806
DC_SENS5: Our company always has an eye on our competitor ...	0.472	0.629	0.832
<i>Cronbach's Alpha = 0.838; Joreskog rho = 0.841; AVE = 0.516</i>			
<b>7. Reconfiguration</b>			
DC_REC1: By defining clear responsibilities, we successfully ...	0.518	0.603	0.794
DC_REC2: Even when unforeseen interruptions occur, change ...	0.465	0.587	0.797
DC_REC3: Decision on planned changes is pursued consistently ...	0.736	0.762	0.741
DC_REC4: In the past, we have demonstrated our strengths in ...	0.593	0.700	0.764
DC_REC5: In our company, change projects can be put into ...	0.665	0.752	0.755
<i>Cronbach's Alpha = 0.808; Joreskog rho = 0.814; AVE = 0.469</i>			
<b>8. Seizing</b>			
DC_SEIZ2: We can recognise what new information can be ...	0.653	0.742	0.655
DC_SEIZ3: Our company is capable of turning new technological ...	0.531	0.683	0.713
DC_SEIZ4: Current information leads to the development of new ...	0.659	0.728	0.662
<i>Cronbach's Alpha = 0.758; Joreskog rho = 0.761; AVE = 0.516</i>			

DC, dynamic capabilities; FBP, family business performance; EFA, exploratory factor analysis; CFA, confirmatory factor analysis, AVE, average variance extracted.

Table 2 continues on next page →

**TABLE 2 (Continues...):** Exploratory factor analysis, confirmatory factor analysis and internal consistency output.

Factors and respective items	EFA loadings	CFA loadings	Alpha if item deleted
<b>9. Environmental scanning</b>			
DC_SENS1: Our company knows the best practices in the market.	-	0.754	0.705
DC_SENS2: Our company is up-to-date on the current market ...	-	0.765	0.755
DC_SENS3: Our company systematically searches for ...	-	0.764	0.742
<i>Cronbach's Alpha = 0.806; Joreskog rho = 0.805; AVE = 0.579</i>			
<b>10. Scenario planning</b>			
DC_SENS5: Our company always has an eye on our competitor ...	-	0.606	-
DC_SEIZ4: Current information leads to the development of new ... 0.-659	-	0.594	-
<i>Cronbach's alpha = 0.529; Joreskog rho = 0.529; AVE = 0.360</i>			
<b>11. Knowledge creation</b>			
DC_SENS4: As a company, we know how to access new ...	-	0.613	-
DC_SEIZ2: We can recognise what new information can be ...	-	0.579	-
<i>Cronbach's Alpha = 0.524; Joreskog rho = 0.524; AVE = 0.356</i>			
<b>12. Culture</b>			
DC_REC1: By defining clear responsibilities, we successfully ...	-	0.607	0.624
DC_REC2: Even when unforeseen interruptions occur, change ...	-	0.568	0.570
DC_REC4: In the past, we have demonstrated our strengths in ...	-	0.690	0.451
<i>Cronbach's Alpha = 0.650; Joreskog rho = 0.655; AVE = 0.389</i>			
<b>13. Formal organisation</b>			
DC_SEIZ3: Our company is capable of turning new technological ...	-	0.587	0.639
DC_REC3: Decision on planned changes is pursued consistently ...	-	0.711	0.519
DC_REC5: In our company, change projects can be put into ...	-	0.708	0.504
<i>Cronbach's Alpha = 0.690; Joreskog rho = 0.709; AVE = 0.450</i>			

DC, dynamic capabilities; FBP, family business performance; EFA, exploratory factor analysis; CFA, confirmatory factor analysis, AVE, average variance extracted.

Lastly, the values for AVE for the greater part of the constructs were more than 0.50. However, the AVE for scenario planning, knowledge creation and culture was lower with values ranging from 0.356 to 0.389. These three lower AVE values were still deemed acceptable (George & Mallery 2022).

## Ethical considerations

Ethical clearance was obtained from the University of Fort Hare ethics committee (CHI051SPIK01 and No. REC-270710-028-RA). The study took into account voluntary participation by completing an informed consent form, confidentiality, and anonymity of the respondents by respecting the terms of the *Protection of Personal Information Act* and ensuring no harm to the respondents. The respondents were given pseudonyms and were allowed to stop answering the questionnaire without being penalised (Wiid & Diggins 2021).

## Results

### Descriptive statistics and correlation table

Table 3 provides a summary of the biographical data of the respondents and their business profiles that participated in the investigation. The data analysis revealed that females were the largest responding group and were between the ages of 25–34 years. The research findings further highlighted that the construction industry was the leading participating industry with 49 FB participating and that the OR Tambo District Municipality was the leading district from the Eastern Cape. The ethnicity group entailing Black Africans was the leading group with 203 FB out of the 347 FB that

participated in this study. Furthermore, Table 3 illustrates that 157 FB employed 1–10 employees which indicates that FB within the Eastern Cape preferred smaller businesses and had an annual turnover between R500 000 and R1m.

### Testing for mediating effects

A simple mediation to determine the mediating effect of strategic flexibility on the relationship between the DC constructs of environmental scanning, scenario planning, knowledge creation, culture, and formal organisation and FBP was performed. The Hayes process macro was used to test the mediating effect of strategic flexibility on the five DC constructs and FBP. Firstly, the results indicated that DC (environmental scanning, scenario planning, knowledge creation, culture, and formal organisation) had a direct significant effect on strategic flexibility, as seen in Table 4. Secondly, when controlling for the mediator variable (strategic flexibility), the results revealed that the five DC constructs (environmental scanning, scenario planning, knowledge creation, culture, and formal organisation) were significant predictors of FBP.

Based on the direct significant effect of the DC constructs (environmental scanning, scenario planning, knowledge creation, culture, and formal organisation) on FBP, the mediating effect of strategic flexibility was then tested. The mediating effect of strategic flexibility on the relationship between DC constructs (environmental scanning, scenario planning, knowledge creation, culture, and formal organisation) and FBP was then tested by assessing the indirect effect using a percentile bootstrap estimation approach with 20 000 samples. The results revealed that strategic flexibility

**TABLE 3:** Descriptive statistics of the respondents and business profiles.

Variable	Levels	df	F	Valid %
<b>Gender</b>	Male	2	155	44.7
	Female		186	53.6
	Prefer not to identify		6	1.7
<b>Age (years)</b>	18–24	5	17	4.9
	25–34		158	45.5
	35–44		98	28.2
	45–54		55	15.9
	55–64		18	5.2
	Over 65		1	0.3
<b>Ethnicity</b>	Black African	3	203	58.5
	Coloured		51	14.7
	Indian/Asian		20	5.8
	White		73	21.0
<b>Ownership</b>	Owner	2	117	33.7
	Co-owner		102	29.4
	Manager		128	36.9
<b>Structure</b>	Sole Proprietorship (1 owner)	3	76	21.9
	Closed Corporation (1–10 owners)		83	23.9
	Partnership (2–20 owners)		130	37.5
	Private Company (1–50 owners)		58	16.7
<b>Family members</b>	0–2	3	148	42.7
	3–5		130	37.5
	6–9		56	16.1
	More than 10		13	3.7
<b>Industry category</b>	Manufacturing		26	7.5
	Electrical		27	7.8
	Gas and water		29	8.4
	Construction		49	14.1
	Wholesale & retail trade		44	12.7
	Hotels and restaurants		32	9.2
	Transport, storage and communication		24	6.9
	Financial, real estate and business services		25	7.2
	General government services		2	0.6
	Personal services (Beauty)		25	7.2
	Medical services		4	1.2
	Other		45	13.0
	<b>District</b>	Alfred Nzo District Municipality	7	7
Amathole District Municipality			40	13.5
Buffalo City Metropolitan Municipality			66	22.3
Chris Hani District Municipality			31	10.5
Joe Gqabi District Municipality			1	.3
Nelson Mandela Bay Metropolitan Municipality			36	12.2
OR Tambo District Municipality			111	37.5
Sarah Baartman District Municipality			4	1.4
<b>Operating years</b>	Below 1	6	30	8.6
	1–5		91	26.2
	6–10		114	32.9
	11–16		62	17.9
	17–22		30	8.6
	23–30		9	2.6
	More than 31		11	3.2
<b>Employees</b>	1–10	5	157	45.2
	11–20		103	29.7
	21–30		58	16.7
	31–40		17	4.9
	41–50		7	2.0
	More than 51		5	1.4

df, degree of freedom.

Table 3 continues →

**TABLE 3 (Continues...):** Descriptive statistics of the respondents and business profiles.

Variable	Levels	df	F	Valid %
<b>Annual turnover</b>	Less than R500 000	7	89	25.6
	R500 000–R1m		95	27.4
	R1m–R2m		54	15.6
	R2m–R4m		66	19.0
	R4m–R6m		19	5.5
	R6m–R8m		8	2.3
	R8m – R10m		4	1.2
	More than 10m		12	3.5

df, degrees of freedom.

does have a positive mediating effect between the said DC (environmental scanning, scenario planning, knowledge creation, culture, and formal organisation) and FBP. Table 5 illustrates a summary of the mediation analysis.

The results concluded that strategic flexibility had the highest mediating effect between scenario planning and FBP with a statistically significant value of ( $\beta = 0.159$ , 95% CI [0.097, 0.228]). In contrast, the lowest strategic flexibility indirect effect was between knowledge creation and FBP with a value of ( $\beta = 0.138$ , 95% CI [0.083, 0.197]). The findings suggest that FB will experience enhanced business performance when incorporating the five DC with an additional focus on their strategic flexibility. With increased attention to scenario planning. By focussing on strategic flexibility in addition to the firm's DC, FB will be able to respond promptly to the changes in the internal and external environments by modifying or creating new strategic plans for the company.

## Discussion

The aim of this study was to investigate the mediation effect of strategic flexibility between five DC constructs (entailing environmental scanning, scenario planning, knowledge creation, culture, and formal organisation) and FBP. Based on the results, we thereby contribute theoretically, methodologically and practically to the FB field. Family businesses are advised to implement a DC model including environmental scanning, scenario planning, knowledge creation, culture, and the formal organisation, aligned with a strategic flexibility strategy. Developing these two adjacent business models would result in enhanced decision-making whereby FB would be able to prepare and respond efficiently to change within their operating environments.

These findings are in line with Gerald et al. (2020) who suggested that flexibility and DC are linked and both constructs contribute towards increased business performance. Although Gerald et al. (2020) acknowledges such, their study did not execute a mediation model, whereas this study did. Therefore, this study provides a unique methodological contribution through a mediation analysis between DC, strategic flexibility and family business.

Nwachukwu and Vu (2020) and Sumiati and Pramono (2019) both investigated strategic flexibility; however, there was no

**TABLE 4:** Mediating effect of strategic flexibility on the relationship between environmental scanning, scenario planning, knowledge creation, culture, and formal organisation and family business performance.

Effects	Unstandardised beta coefficients		Significance of beta coefficients		95% CI	
	Beta	SE	t	p	LLCI	ULCI
<b>Environmental Scanning</b>						
<b>Direct Effect(s)</b>						
ES (X) → SFX (M)	0.311	0.0488	6.543	< 0.0001	0.218	0.405
SFX (M) → FBP (Y)	0.360	0.0470	7.997	< 0.0001	0.268	0.452
ES (X) → FBP (Y)	0.174	0.0440	3.964	< 0.0001	0.088	0.261
Total Effect(s) of X on Y	0.287	0.0450	6.389	< 0.0001	0.198	0.325
Indirect Effect(s) of X on Y	0.127	0.0280	-	-	0.074	0.185
<b>Scenario Planning</b>						
<b>Direct Effect(s)</b>						
SP (X) → SFX (M)	0.386	0.0450	8.646	< 0.0001	0.298	0.474
SFX (M) → FBP (Y)	0.354	0.0490	7.188	< 0.0001	0.257	0.450
SP (X) → FBP (Y)	0.148	0.0450	3.291	0.001	0.060	0.237
Total Effect(s) of X on Y	0.285	0.0440	6.514	< 0.0001	0.199	0.371
Indirect Effect(s) of X on Y	0.159	0.0330	-	-	0.097	0.228
<b>Knowledge Creation</b>						
<b>Direct Effect(s)</b>						
KC (X) → SFX (M)	0.393	0.0500	7.855	< 0.0001	0.295	0.492
SFX (M) → FBP (Y)	0.332	0.0480	6.981	< 0.0001	0.239	0.426
KC (X) → FBP (Y)	0.233	0.0480	4.840	< 0.0001	0.138	0.327
Total Effect(s) of X on Y	0.363	0.0470	7.693	< 0.0001	0.270	0.456
Indirect Effect(s) of X on Y	0.138	0.0290	-	-	0.083	0.197
<b>Culture</b>						
<b>Direct Effect(s)</b>						
CL (X) → SFX (M)	0.417	0.0490	8.553	< 0.00010	0.321	0.513
SFX (M) → FBP (Y)	0.321	0.0480	6.671	< 0.0001	0.226	0.416
CL (X) → FBP (Y)	0.240	0.0480	5.004	< 0.000	0.146	0.335
Total Effect(s) of X on Y	0.374	0.0460	8.085	< 0.0001	0.283	0.465
Indirect Effect(s) of X on Y	0.143	0.0330	-	-	0.082	0.211
<b>Formal Organisation</b>						
<b>Direct Effect(s)</b>						
FO (X) → SFX (M)	0.460	0.0460	9.983	< 0.0001	0.369	0.550
SFX (M) → FBP (Y)	0.310	0.0500	6.229	< 0.00010	0.212	0.408
FO (X) → FBP (Y)	0.229	0.0480	4.727	< 0.0001	0.134	0.324
Total Effect(s) of X on Y	0.372	0.0450	8.273	< 0.0001	0.283	0.460
Indirect Effect(s) of X on Y	0.156	0.0330	-	-	0.094	0.223

Note: Significant effect at Alpha = 0.05. Number of bootstrap samples for percentile bootstrap confidence intervals: 20 000.

X, Predictor/Independent variable; ES, Environmental scanning; SE, standard error; SP, Scenario planning; KC, Knowledge creation; CL, Culture; and FO, Formal organisation; Y, Outcome/Dependent variable; FBP, Family business performance; M, Mediator variable; SFX, Strategic flexibility; CI, confidence interval; LLCI, Lower limit confidence interval; ULCI, Upper limit confidence interval.

**TABLE 5:** A Summary of the mediation analysis results.

Description	Test statistic	95% CI	Decision
H1 Strategic flexibility does not significantly mediate the relationship between environmental scanning and family business performance.	$\beta = 0.127$	0.074 0.185	Not supported
H2 Strategic flexibility does not significantly mediate the relationship between scenario planning and family business performance.	$\beta = 0.159$	0.097 0.228	Not supported
H3 Strategic flexibility does not significantly mediate the relationship between knowledge creation and family business performance.	$\beta = 0.138$	0.083 0.197	Not supported
H4 Strategic flexibility does not significantly mediate the relationship between culture and family business performance.	$\beta = 0.143$	0.283 0.465	Not supported
H5 Strategic flexibility does not significantly mediate the relationship between formal organisation and family business performance.	$\beta = 0.156$	0.094 0.223	Not supported

95% CI, 95% confidence interval.

focus on DC. Thus, indicating a theoretical contribution of this study by concurrently investigating the relationship between strategic flexibility, DC and FBP. This study, therefore, responds to the call for an enhanced body of knowledge for the family business domain (Rovelli et al. 2021) by increasing our understanding of FB and DC, and contributing new insights to the field through a unique mediation analysis. This investigation further contributes to the knowledge gap that

purely focusses on South African FB as the following studies that focus on DC and business performance do not take FB in the African context into account; Eikelenboom and De Jong (2019), Gerald et al. (2020), Nwachukwu and Vu (2020), and Sumiati and Pramono (2019). Here, a theoretical contribution is made by focussing on five unique DC by further illustrating that the DC entailing scenario planning produced the highest mediating influence between FBP and strategic flexibility in



South African FB. This is a unique finding that has not been sufficiently evaluated previously.

The research findings further revealed that women between the ages of 25 and 34 were the largest participating respondents. This finding contributes to new insights for the family business field since Akhmedova et al. (2020) argued that the female gender group is underrepresented in top management levels within FB. The data analysis of the respondent's business profile revealed that the majority of the FB were operating within the construction industry which further indicates that the female gender group are starting to operate at top management levels within primarily male-dominant industries. Consequently, this study highlights an important theoretical contribution.

### Implications and recommendations

The findings of this study resulted in implications for both FB and non-FB to improve business performance. Based on the research findings, FB are, therefore, recommended to develop a DC strategy that purely focusses on the firm's identification and enhancement of DC (Beck et al. 2020). To ensure the DC strategy is implemented and monitored effectively, the firm must appoint an individual or team to purely focus on these constructs. The DC strategy should be continuously evaluated through monthly key performance indicators (KPIs). Developing and comparing monthly KPIs of the changes in the firm's DC would allow the firm to respond promptly to new opportunities and combat environmental threats that may arise.

Adjacent to the DC strategy, FB are advised to develop a decision-making team. The decision-making team should include the business owners, top management, shareholders, and the appointed DC individual or team leader. The purpose of this team would be to discuss and mitigate the DC constructs which may be positively or negatively impacting the firm (Janse van Rensburg & Tjano 2020). Based on the size of the FB, the decision-making team should meet regularly such as monthly or bi-monthly. A DC KPI mobile application should be developed to allow immediate access and review by the decision-making members. The KPI application would allow impromptu meetings to be arranged to discuss immediate threats or opportunities identified. This would ensure strategic flexibility is being practised to improve business performance 'now' instead of 'later'.

To further ensure that the DC and strategic flexibility concepts are being practised in FB, the government should incorporate these concepts within support initiatives (Abbadly et al. 2019). Here, policymakers are urged to develop workshops on DC and strategic flexibility to assist FB and non-FB in becoming aware of the constructs and how to include the strategy into their business. These government-offered workshops should be executed by a DC and FB subject matter expert to ensure quality training and education are delivered to the business landscape of SA. These workshops could be outsourced to the universities in SA that focus on FB and DC.

### Limitations and future research avenues

This study encountered several limitations. Firstly, the questionnaire was deemed lengthy which resulted in missing data from the respondents. Here, a handful of questions were overlooked by the respondents because of their speedy manner of completing the questionnaire. Future research should ensure the review of the completed questionnaire in front of the respondents to avoid skipped questions. Secondly, obtaining a FB database within the Eastern Cape was challenging. We had to create a FB database to obtain the necessary results for this study. This was executed by approaching various businesses within the districts of the Eastern Cape.

Thirdly, this study focussed on a single sample unit such as a FB manager or FB owner instead of multiple perspectives from one FB. This was because of the timeframe of the study; however, future research should include multiple perspectives from each FB to broaden the DC and strategic flexibility views. Although limitations existed, the study proved to be significant and resulted in the identification of future research avenues. This study purely focussed on FB within the EC through a quantitative context; therefore, a future research avenue entails a replica study on a national or international scale. A replica study would consequently validate this study's research findings. A second future research avenue is a replica of this study through a qualitative research approach. This would allow for opinions and experiences of the FB to be obtained instead of only a statistical comprehension.

### Conclusion

This quantitative investigation had the purpose to determine the mediation effect of strategic flexibility between DC and FBP. The hypothesis was accepted where the results revealed that firstly, a relationship does exist between DC (environmental scanning, scenario planning, knowledge creation, culture, and formal organisation) and FBP. Secondly, the results indicated that strategic flexibility positively mediates the relationship between DC and FBP. Family firms are, therefore, encouraged to actively engage in the above-mentioned DC and strategic flexibility concepts to foster business performance, especially in uncertain economic conditions.

These research results are unique to the FB domain and have contributed to the existing body of knowledge. In comparison to existing literature, new insights have been established which has resulted in future research avenues for academics to pursue. Because of FB contributing to 90% of jobs globally, academics are urged to actively grow the body of knowledge to evolve the family business landscape. In turn, FB would be able to continuously implement new recommendations to ensure improved performance and long-term success.

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## Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

## Authors' contributions

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## Data availability

The data of this study are readily available on request from the first author, A.P.P.B. The data are not publicly available as it contains information that could affect the privacy of the research participants.

## Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors, and the publisher.

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