Effectuation methods in the success of entrepreneurs securing funding in the dtic Black Industrialist Scheme

Research Report

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• ABSTRACT

This study investigates the role of effectuation methods in the success of Black Industrialists securing funding through the Department of Trade, Industry, and Competition (dtic) Black Industrialist Scheme (BIS) in South Africa. The study is situated within the broader discussion on entrepreneurial strategies and economic empowerment in South Africa. Drawing on Sarasvathy's (2001) effectuation theory, the research examines five core principles: Bird in Hand, Affordable Loss, Lemonade, Crazy Quilt, and Pilot-in-the-Plane. It explores how these principles influence the ability of Black Industrialists to navigate the complex funding environment and secure financial resources.

Using a quantitative research design, data was collected from Black Industrialists who have applied for funding under the BIS. The research employs Likert-scale questionnaires to measure the application of effectuation principles and their correlation with successful funding outcomes. The study also considers entrepreneurial experience as a moderating variable, acknowledging its potential impact on decision-making processes and funding success.

The findings indicate that while effectuation principles are valuable in entrepreneurial contexts, their effectiveness is limited within the framework of the BIS. Specifically, the Bird in Hand and Crazy Quilt principles, which emphasize leveraging existing resources and forming strategic partnerships, demonstrate a significant positive correlation with successful funding outcomes. However, entrepreneurial experience did not significantly moderate these relationships, challenging previous assumptions about its role in enhancing effectuation strategies.

This study contributes to both theoretical and practical understanding of effectuation and funding in emerging economies. It suggests that while effectuation offers a useful framework for entrepreneurial decision-making, its practical application must align with institutional funding requirements. The study recommends that policymakers consider more adaptive funding mechanisms to accommodate entrepreneurial flexibility while maintaining accountability. Future research should explore longitudinal effects of effectuation strategies and comparative analyses across diverse funding mechanisms to deepen insights into entrepreneurial success in structured financial environments.

- **DECLARATION**

I **Kegomoditswe Tsholofelo Letsogo** declare that this research report is my own work except as indicated in the references. It is submitted in partial fulfilment of the requirements of the degree of Master of Management in the University of the Witwatersrand, Johannesburg. It has not been submitted before any degree or examination in this or any university.

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Signed at Randburg, Johannesburg, 2188

On the 20th day of February 2025

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- **CHAPTER 1. INTRODUCTION TO STUDY**

1.1. Introduction

The Department of Trade, Industry, and Competition (dtic[1]) in South Africa plays a critical role in promoting economic transformation and development. One of its key initiatives is the support of Black Industrialists, who are crucial for developing inclusive economic growth. In 2015, the dtic established the Black Industrialist Scheme (BIS) whose objective is to enhance the active involvement of black-owned companies in the mainstream economy (Andreoni et al., 2021). The scheme is in alignment with the goals set out in the Industrial Policy Action Plan (IPAP), a strategic framework which aims to promote regional growth through the promotion of export and locally targeted economic activities that would lead to regional growth and development (Zarenda, 2013). This research aims to examine effectuation strategies employed by Black Industrialists (BI) in securing funding from the dtic, using a quantitative research methodology.

1.2. Background

Apartheid, which spanned from 1948 to the early 1990s in South Africa, was a structured framework of racial segregation (Mhlauli et al., 2015). During this period, it marginalized non-white South Africans, preventing them from actively engaging in the economy amongst other atrocities perpetuated. The apartheid laws restricted access to land and other resources which created economic disempowerment among some of its devastating effects.

In its quest for economic redress, transformation and inclusive growth in South Africa following the abolishment of apartheid, the government through the dtic has been actively involved in supporting and funding enterprises owned by Black Industrialists. This initiative aims to empower historically disadvantaged individuals and communities by facilitating their participation in various sectors of the economy (Bosiu et al., 2020). This facilitation occurs in the form of providing enterprises with financial and non-financial resources.

The dtic's criteria for enterprises to qualify for the BIS requires the entrepreneur to have displayed certain entrepreneurial attributes as articulated in the program guidelines (Rawjee, 2020). These requirements include the following;

[1] dtic is abbreviated in small letters in all the Department of Trade, Industry, and Competition's records

- Participation in the launch of a new business, the growth or improvement of an already-existing business, or the purchase of an already-existing business or operation.
- Focus of the entrepreneur toward the productive sectors of the economy that have been identified by the dtic.
- Embark on project that requires a R30 million minimum investment.
- Securing a share of the market for the organization.
- Enhancement of quality and reducing the relative cost and/or raising the standard of the goods offered to customers.
- Demonstration of individual risk indicated by entrepreneur's own financial and/or non-financial support for the company.

The requirements by dtic are based on the spirit of entrepreneurial orientation requiring innovativeness, proactiveness and risk-taking behaviour (Lumpkin & Dess, 1996) & (Covin & Lumpkin, 2011). This suggests that the success of these enterprises in accessing resources and in the case of this study, funding from the BI scheme, is impacted by the strategies and methods employed by Black Industrialists in the establishment and decision making of their ventures. Entrepreneurial orientation provides the overall mindset and characteristics for entrepreneurial behaviour.

Entrepreneurs have various strategies at their disposal which are mostly driven by the context and environment in which they operate. As a result of the country's legacy, Black Industrialists tend to find themselves with uncertainties resulting from transformation challenges, regulatory environment and resource constraints signalled by restricted access to finance, markets and uncertainty (Bosiu et al., 2023). They are thus compelled to explore strategies that enhance success in resource acquisition and sustainability of their enterprises.

Chen et al. (2021) propose that effectuation as a strategy is more beneficial to older firms, high tech industries and, firms in emerging countries. Pacho and Mushi (2021) further posit that effectuation is an ideal strategy for enterprises that operate in environments riddled with uncertainty. South Africa as an emerging economy (Saccone, 2017), presents various uncertainties which filter down to businesses, encompassing black owned enterprises and industrialists (Binge & Boshoff, 2020). This context positions effectuation as a viable strategy for firms in the country.

Sarasvathy (2001a) introduced the concept of effectuation, rooted in entrepreneurship literature, as a decision-making framework that emphasizes using existing resources and constraints to achieve entrepreneurial goals. Effectuation methods, which include means-driven and affordable loss principles, have been shown to be effective in the context of startups and small businesses. This study seeks to evaluate the influence of effectuation methods on Black Industrialists entrepreneurs' success in securing funding from the dtic BIS.

Effectuation methods, characterized by their adaptability and resourcefulness, are particularly relevant to Black Industrialists in South Africa, a group often operating within a context of high uncertainty and institutional constraints. Sarasvathy and Dew (2008). Mintzberg and Westley (2001) suggest that traditional causation strategies, which assume a stable and predictable environment, may not be as effective in such situations. Rather, the effectuation approach, with its emphasis on starting with available means and leveraging contingencies, aligns well with the dynamic and sometimes unpredictable South African market. This is supported by studies that have shown the value of effectuation in uncertain environments, where entrepreneurs must navigate unpredictable business regulations and economic movements, as evidenced in the Tanzanian context (Pacho & Mushi, 2021). The flexibility principle of effectuation, which encourages entrepreneurs to treat unexpected events as opportunities, is particularly relevant for Black Industrialists who may face additional challenges such as raising financial capital, fluctuating market demands and regulatory changes.

Additionally, the effectuation set of means, which includes an entrepreneur's self-efficacy, skills, and networks, has relevance for Black Industrialists who may have limited access to traditional resources (Dew et al., 2009). By focusing on these personal and social capital elements, Black Industrialists can efficiently access resources, even when faced with resource constraints. The principle of affordable loss, another principle of effectuation, supports risk mitigation by focusing on what the entrepreneur can comfortably lose, rather than chasing uncertain high returns, which is particularly relevant for Black Industrialists who must manage investment risks carefully.

Empirical evidence has shown the positive impact of effectuation on new venture performance, suggesting that these methods may help Black Industrialists not only to navigate the challenges of the South African business landscape but also to succeed within it (Pacho & Mushi, 2021).

1.3. Research context

Since inception of the BI scheme in 2015, the dtic has provided financial assistance to more than 1,000 enterprises across various industries (Bosiu et al., 2023). These industries include Automotive, Steel & Metal, Renewables, Chemicals & Plastic, Oil, and Gas, to name a few. The financial assistance is in the form of capital investments, feasibility studies and business development support executed by dtic and its agencies, the Industrial Development Corporation (IDC), the National Empowerment Fund (NEF) and the Export Credit Insurance Corporation Of South Africa (ECIC) (dtic, 2022). The dtic is the principal and convenor of the BI scheme across South Africa.

1.4. Research problem

1.4.1. Current State of Affairs and the Identified Problem

Despite the considerable governmental efforts channelled through initiatives like the dtic's Black Industrialists Scheme (BIS), a significant practical problem persists in that many Black Industrialists in South Africa continue to face substantial challenges in successfully securing this crucial funding (Andreoni et al., 2021). This issue is particularly critical given South Africa's historical economic inequalities and the national imperative to empower black-owned businesses (Makgoba, 2022). The continued inability of eligible Black Industrialists to effectively access and utilize these funding opportunities impedes the scheme's full potential in fostering economic growth and addressing socio-economic disparities (Bosiu et al., 2019).

The persistent struggle for funding access, despite substantial government investment, points to a deeper, systemic issue beyond mere capital availability. This suggests a potential mismatch between funder requirements and the operational realities or entrepreneurial approaches of Black Industrialists. Small and medium enterprises (SMEs) often fail to meet traditional funder requirements, such as proving creditworthiness or presenting collateral, especially during their high-failure infancy stage (Baloyi & Khanyile, 2022). This implies that the problem is not a lack of capital from funders, but rather a challenge linked to demand side readiness and the alignment of funders' requirements with the unique characteristics of these entrepreneurs. The limitations of traditional funding systems, which often benefit well-established older enterprises, create a critical need to understand the alternative mechanisms by which entrepreneurs can bridge this gap (Baloyi & Khanyile, 2022). If conventional requirements create significant barriers, then alternative entrepreneurial decision-making frameworks, such as effectuation, which emphasize leveraging existing resources and strategic partnerships, could offer a viable way to overcome these hurdles. This links the practical problem to the theoretical framework of effectuation, offering a potential avenue for solutions.

1.4.2. The Knowledge Gap: Effectuation and BIS Funding Success

The central research problem at the heart of this study revolves around a knowledge gap concerning the application of effectuation methods by entrepreneurs, specifically Black Industrialists, and how these methods influence their success in obtaining funding from the dtic's Black Industrialists Scheme (BIS) in South Africa. Effectuation methods refer to a set of entrepreneurial decision-making principles that prioritize flexibility, leveraging existing resources, and strategic partnerships to navigate uncertainty and create new market opportunities (Sarasvathy, 2001a).

The absence of empirical investigation into effectuation's role in securing governmental funding for previously disadvantaged groups in emerging economies represents a void in the existing literature. Current research often focuses on general entrepreneurial contexts, leaving a void in understanding these dynamics within specific, targeted empowerment initiatives and represents a two-layered gap that requires attention.

Firstly, in the context of emerging economies that are plagued by economic instability, regulatory uncertainties, and socio-cultural barriers, means that entrepreneurial strategies, including effectuation, may manifest and yield different outcomes compared to developed economies (Kah et al., 2022). Secondly, in the context of the beneficiaries being historically disadvantaged groups, such as Black Industrialists, suggests that their application of effectuation may involve unique resource constraints, networks, and opportunity perceptions shaped by their historical context (Baloyi & Khanyile, 2022). This gap signifies that existing theoretical understanding of effectuation, while strong in general contexts, may not fully explain or predict success within the unique socio-economic and policy environment of the BIS. Accordingly, this study's importance lies in its potential to contribute new theoretical and practical insights by addressing this specific, under-researched crossroads.

1.4.3. Research Gaps to be Addressed

This study further seeks to fill several critical research gaps. Firstly, despite the dtic's efforts, there is a limited understanding in the existing literature regarding the strategies and entrepreneurial approaches that contribute to successful funding applications within the Black Industrialists Scheme (Goga et al., 2019b). This gap is further emphasized by the observation that South Africa, despite not having a shortage of funding instruments, faces challenges in innovative lending tools and entrepreneurs' inability to meet traditional funder requirements, such as proving creditworthiness or presenting collateral (Lewis & Gasealahwe, 2017). The persistent challenges in funding access, despite available capital, indicate a need to understand what could work for Black Industrialists in this specific funding context.

Secondly, there is a knowledge gap concerning the application of effectuation methods by Black Industrialists in the context of seeking funding from the dtic's Black Industrialists Scheme. Specifically, it remains unclear whether and how the adoption of effectuation principles (such as leveraging existing resources, strategic partnerships, and embracing uncertainty) by Black Industrialists influences their ability to secure funding (Bosiu et al., 2023). This highlights an important missing piece in understanding the mechanisms of funding success.

Finally, there is a need for investigation into the intersection of entrepreneurial decision-making frameworks, like effectuation, and the challenges of accessing governmental funding schemes for historically disadvantaged groups in emerging economies like South Africa. Existing research often focuses on general entrepreneurial contexts, leaving a void in understanding these dynamics within specific, targeted empowerment initiatives. This gap emphasizes that the unique socio-economic and policy environment of the BIS for Black Industrialists requires dedicated attention.

These identified gaps suggest that current funding mechanisms and entrepreneurial support may be misaligned with the actual operational realities and decision-making processes of Black Industrialists, especially given the inherent uncertainties of emerging markets (Andreoni et al., 2021).

This misalignment suggests that policymakers and funding institutions could benefit from understanding how successful Black Industrialists actually operate and secure funding, instead of relying solely on conventional methods. This research, therefore, has the potential to inform more effective policy design and support mechanisms that are better tailored to the realities of entrepreneurial endeavours in such contexts as the BIS.

1.5. Research question

To what extent do Black Industrialists' utilization of effectuation methods influence their success in securing funding from the dtic Black Industrialists' scheme?

1.6. Importance of the study

This study adds to the increased understanding of effectuation in the South African context focusing specifically on Black Industrialists as representative firms operating in diverse industries across the country. In preparation for this study, literature searches have indicated far less research of effectuation strategies in South Africa and other African countries compared to what is the case with Europe and the global north.

The importance of this study further extends to offering insights for dtic officials and other government stakeholders tasked with economic transformation on strategies that can enhance the success of Black Industrialists enterprises securing funding for their enterprises.

During one of the regular sittings of the National Council of provinces in 2022, a report was tabled which sought to explore challenges of Black Industrialists (*The dtic Support for Transformation and Black Industrialists.*, 2022). Some of the cited challenges faced by entrepreneurs include difficulty in attaining proof of concept and commercialisation funding whose terms are sufficiently patient to support new businesses. With increased attention to available strategies, policy makers and the dtic may see merit in addressing these kinds of challenges in a more creative way by applying effectuate thinking.

Other challenges cited in the same committee relate to limited access to markets and opportunities from lack of long-standing relationships, networks, track-record, and reputation. This study will ideally provide evidence on the need for knowledge transfer and to incorporate related entrepreneurial training in schools and colleges.

1.7. Aims of this research

This research aims to assess the influence of effectuation strategies on the success in securing funding by Black Industrialists from the BI scheme. Through the testing of data, this research further seeks to identify the key effectuation strategies that are most effective in securing dtic funding for BI enterprises.

1.8. Theoretical overview

1.8.1. Effectuation

The focus of this study is on effectuation theory, which was initially proposed by Sarasvathy (2001a) as an alternative to conventional causation-oriented decision-making frameworks within the field of entrepreneurship. Effectuation theory is based on the assertion that entrepreneurs do not engage in the prediction or control of future events. Instead, they exploit available resources and limitations to identify and seize opportunities to achieve their entrepreneurial goals. This theoretical framework is highly relevant in understanding the strategies employed by entrepreneurs, namely Black Industrialists, in the financing of their firms. Historical events have found black entrepreneurs lacking in resourcing and strategies to fund their ventures. The effectuation theory presents a strategic approach that acknowledges past disparities, particularly in resource allocation, and provides a framework for funding firms in unpredictable environments (Pacho & Mushi, 2021).

Chen et al. (2021) contend that the principles of effectuation—leveraging the set of means, embracing flexibility, managing affordable loss, building pre-commitments, and utilizing networks— can provide a strategic approach to managing the complexities of the funding process in an uncertain environment. Considering this, effectuation theory contributes to a deeper understanding of entrepreneurial behavior and would further provide useful guidance for Black Industrialists aiming to take advantage of funding opportunities to support South Africa's industrialization and economic growth.

The dtic BIS comprises entrepreneurs of various entrepreneurship tenure and maturity (Bosiu et al., 2023). The requirements for entrepreneurs to be eligible for the Black Industrialist Scheme include starting a brand-new business, expanding, or enhancing an existing one, or acquiring an already-active business or operation (Rawjee, 2020).

A study by Ruiz-Jiménez et al. (2021) found that effectuation is valuable for the success of both novice and expert entrepreneurs and their ventures, whilst causation strategies were more beneficial for more experienced entrepreneurs. Effectuation is commonly connected with startup ventures however its principles extend beyond initial stages of business development ((Sarasvathy, 2008) and (Read et al., 2009)). South African black industrialists can employ effectuation strategies to navigate challenges and opportunities during the scaling-up process, particularly in securing funding for growth.

Read et al. (2016) encourage the application of effectuation to a variety of business settings, including those that are scaling up and moving into industrialization. When scaling, the bird-in-hand principle continues to apply. Industrialists must reassess their means, which will include the acquired knowledge from the startup phase, a broader network, and possibly, internal generated funds. This is particularly relevant for Black Industrialists who may have faced initial resource constraints due to historical disadvantages; leveraging existing knowledge and expanding networks becomes crucial for growth.

As an enterprise grows, the affordable loss principle becomes a difficult act of balancing and taking bigger risks for higher growth and maintaining a safety net. This principle remains relevant as it ensures that the black industrialists do not strain their businesses financially during expansion, which can be a concern for funders with regards to sustainability and risk management. For Black Industrialists, who might operate with thinner margins or less access to traditional financial buffers, carefully managing affordable loss is crucial to ensure their ventures' long-term viability and to build confidence with potential funders.

For industrialists, the ability to pivot in response to market changes or unforeseen circumstances is an indicator of a company's resilience and long-term potential. This is an encouraging quality for funders who are looking at the industrialisation level, where the stakes are higher, and the impact of contingencies can be more significant. The flexibility associated with effectuation, allowing for adaptation to unexpected events, is particularly valuable for Black Industrialists navigating South Africa's dynamic and sometimes unpredictable economic landscape, where regulatory changes or market shifts can negatively impact operations.

Strategic partnerships are another key element for consideration. As highlighted by Read et al. (2016), collaboration with other entities opens doors to new markets, technologies, and funding opportunities. A continuous focus to build strategic partnerships shows a commitment to growth and the ability to leverage external resources, which strengthens funding prospects. For Black Industrialists, who may have historically limited access to established networks, actively building strategic partnerships is a critical effectual dimension to resolve resource gaps and gain access to crucial capital, expertise, and market channels

Maintaining control becomes even more critical during the scale-up phase. Industrialists must navigate complex environments, and showing funders that they understand the fundamentals of their core business aspects can be decisive in securing large-scale funding.

Through an admission by Sarasvathy (2008) it would be amiss to not lean into the entrepreneur's mindset in this research. The theory of entrepreneurial orientation (Lumpkin & Dess, 1996) and the theory of planned behaviour (Ajzen, 1991) stand in support of the effectuation theory by providing a frame of entrepreneur's mindset as they embark on their chosen strategy of establishing and acquiring resources for their enterprises.

1.8.2. Entrepreneurial experience as precursor to effectuation

Entrepreneurial experience is crucial in determining how entrepreneurs make decisions and how successful they are, especially when it comes to raising capital. In contrast to conventional causality theories, effectuation theory highlights the value of experience in negotiating unpredictable situations and efficiently utilising the resources at hand (Sarasvathy, 2001b). According to Sarasvathy's explanation of effectuation theory, skilled businesspeople are more likely to employ effective logic. This enables entrepreneurs to launch and expand their ventures using their current assets, expertise, and abilities, frequently resulting in creative collaborations and solutions. According to the literature, seasoned businesspeople are better able to manage uncertainty and adjust to shifting conditions because of their wealth of knowledge and experience (Politis, 2005).

Successful entrepreneurs are more likely to use effective tactics that depend on a contingency approach as opposed to a predictive one (Wiltbank et al., 2006). This is due to the fact that their expertise gives them a wider range of skills required for starting and running businesses, allowing them to base choices on possibilities and available resources (Chandler et al., 2011). On the other hand, inexperienced business owners typically use more calculated tactics, frequently guided by predetermined goals (Fisher, 2012).

It's also important to consider how resource management and entrepreneurial experience combine. In order to secure capital and improve firm performance, seasoned entrepreneurs are skilled at assembling resources and establishing strategic relationships (Dew et al., 2009). They are more inclined to enter into partnerships that provide them access to important resources and the opportunity to share risks. Effective resource leveraging is essential to obtaining finance, including under the Black Industrialist Scheme (Sarasvathy, 2001a).

Additionally, the literature emphasises how experience moderates the relationship between effectuation and performance. Skilled businesspeople are more able to take use of effectuation principles, like flexibility and cheap loss, to enhance enterprise success (Wiltbank et al., 2006). This implies that the degree of entrepreneurial expertise can have an impact on how well tactics work to obtain funding and create a successful venture (Chandler et al., 2011). Experience is essential to business success since it improves one's capacity to manage uncertainty, make smart alliances, and use resources. This knowledge is crucial for business owners who are seeking to raise capital through programs such as the Black Industrialist Scheme, where success may be determined by experience (Dew et al., 2011).

1.8.3. Access to funding

Entrepreneurial financing in South Africa takes different forms and is separated between personal funds and external sources Access to funding presents a challenge for black businesses and industrialists in South Africa reflecting the legacy of apartheid and ongoing socioeconomic gaps. This necessitates a reliance on external funding mechanisms which include bank loans, equity funding, and government programs and enterprise development amongst others (Venter & Urban, 2015).

Despite the post-apartheid era's policy initiatives such as Black Economic Empowerment (BEE) aimed at redressing past injustices, many black entrepreneurs still face hurdles in acquiring capital due to factors like limited collateral, insufficient credit history, and a lack of network connections to traditional funding sources (Lewis & Gasealahwe, 2017). This situation is exacerbated by the perception of higher risk by lenders when it comes to financing black-owned businesses, which often results in less favourable borrowing terms or rejection of funding applications (Horne, 2017). The concentration of financial resources and their control within networks that historically excluded black individuals has further exacerbated these challenges, making it difficult for black industrialists to establish themselves and enterprises in capital-intensive industries.

The South African government has implemented various interventions to improve access to finance for black entrepreneurs in response to these challenges. One of the initiatives is the dtic

BIS, launched in 2015, which aims to unlock the potential of black industrialists and promote their participation in the economy through access to finance, markets, skills, and capacity development (Rawjee, 2020). Additionally, development finance institutions like the IDC and NEF play a pivotal role in providing financial and non-financial support to black-owned businesses (Vilakazi & Moore, 2023). Nevertheless, despite these efforts, the gap in funding access persists, indicating a need for more effective implementation of policies and programs that not only address the immediate financial needs of black entrepreneurs but also build the long-term sustainability of their businesses through education, mentorship, and the development of broader funding ecosystems.

- **CHAPTER 2. LITERATURE REVIEW**

2.1 Black Industrialists and the dtic

Bertelsmann-Scott (2017) notes the importance of industrialization in creating sustainable development that further creates employment opportunities and being valuable to a country’s economic growth. In the same study, the author acknowledges the difficulties that are experienced by South African entrepreneurs reaching an industrialist status. This is attributed to the deep rooted historical, economic, and social factors.

The dtic BIS has its historical background in South Africa's apartheid era, when black South Africans were deliberately excluded from significant economic participation. Policies like Black Economic Empowerment (BEE) have attempted to address these inequities in the post-apartheid era (Shava, 2016). The BIS was introduced by the dtic as an initiative to assist black entrepreneurs in the manufacturing sectors after it became apparent that earlier programs had not had a significant impact on achieving significant industrial change (Vilakazi, 2015).

The BIS aims to promote a quantitative and qualitative increase of black industrialists in the South African economy, identified as a key mechanism for economic growth and job creation. The program is structured around facilitating access to capital, markets, skills development, and infrastructure. It also aims to promote inclusive growth through the participation of black industrialists in strategic and targeted industrial sectors (Vilakazi & Moore, 2023).

Development finance institutions (DFIs) in South Africa are responsible for aiding and facilitating the BIS through non-financial assistance to black industrialists. These DFIs include the Industrial Development Corporation (IDC) National Empowerment Fund (NEF) and Export Credit Insurance Corporation (ECIC) (dtic, 2022).

Despite the program's clear objectives, implementation challenges have been identified. Research by Bosiu et al. (2023) highlights constraints such as access to finance, market access, and the regulatory environment as ongoing barriers to the success of the BIS and advocate for several key actions to strengthen the BIS. They urge a coordinated effort to address barriers to entry and expansion, particularly market access challenges. This could involve establishing a dedicated unit within the dtic to develop practical solutions. Additionally, they call for a stronger institutional framework for the BIS and exploring alternative funding sources, potentially including private sector involvement.

Vilakazi and Moore (2023) also identified various areas that need to be addressed to make the scheme more effective. These include the need for effective policymaking, sufficient coordination between the state and private sector, enhancing bureaucratic capacity through education and training, and a lack of noncompliance punitive measures for the transgressors. Additionally, the scholars emphasised the importance of addressing challenges related to corruption, cumbersome regulatory environment, and the need for access to international markets for locally produced items. The scholars emphasize the significance of opportunities for localisation and building small businesses, especially in sectors such as agriculture industries through agro-processing, renewables, and electric car manufacturing. Overall, the scheme's effectiveness can be improved by addressing these key factors and implementing comprehensive strategies to promote economic transformation and inclusive growth.

The BIS represents a significant policy effort to transform the South African industrial sector by empowering black industrialists albeit with some challenges in implementation, impact measurement, and alignment with global economic trends. Continued research and policy evaluation are necessary to ensure the BIS effectively contributes to the inclusive growth and development of South Africa's economy .

2.2 Principles of entrepreneurial effectuation

The effectuation process is presented by Sarasvathy (2001a) as a valuable framework for starting new businesses. In the context of entrepreneurship, effectuation is the process of starting a business by making incremental progress in the direction of an uncertain future rather than aiming for long-term objectives with uncertain results (Sharma et al., 2022).

Sarasvathy argues that individuals often commence their entrepreneurial endeavours with a broad idea, without specific roadmap and prediction of the path to the ultimate outcome. She poses effectuation as an alternative to causation-oriented decision-making which suggests that an entrepreneur's intentional behaviours and approaches directly influence whether their ventures succeed or fail. This effectuation perspective aligns well with the situation of a resource strapped black industrialist embarking on their entrepreneurial pursuits. South Africa's historical factors add to the uncertainty faced by aspiring entrepreneurs. Though Sarasvathy contends that effectuation is not superior to causation, the environment and circumstances of black South African entrepreneurs would suggest that an effectuation process is best suited for the establishment of the enterprise and resource acquisition.

The scholar further refers to the dynamics of e-commerce and the technology ventures, where a market may not exist at all or may only be developing. To engage in undiscovered markets, entrepreneurs must possess a particular degree of comprehension and expertise in business. The BIS criteria for the entrepreneur to launch a new business, improve an existing business, secure, and increase market share, enhance quality of goods offered aligns with this argument by Sarasvathy.

In this seminal paper, Sarasvathy (2001a) introduces a framework for decision-making that encompasses the key elements of effectuation required for the establishment of a business venture. These consist of; a predetermined set of means, the concept of affordable loss, the formation of strategic alliances, using the advantages of contingencies, and the control and management of an uncertain future .

Lingelbach (2022) presents effectuation as an alternative decision-making logic to causation, offering a practical guide to the accumulation and use of resources necessary at various stages of the entrepreneurial process such that;

~ Means at hand compel the entrepreneur to work with what they have, including skills, knowledge, and available capital resources to create something new.

- The affordable loss principle means the entrepreneur reviews the worst-case scenario and strive to keep the failures low.
- Strategic alliances can be leveraged by the entrepreneur to garner support, collaborate with a network of diverse stakeholders, and reduce uncertainty to aid in the growth of the enterprise.
- The entrepreneur’s ability to exploit unexpected events and to pivot as required thus turning these events into opportunities is another effectuation principle proposed by the scholar.

"Control of an unpredictable future" is an approach that emphasizes how proactive and flexible entrepreneurship allows the individual to acknowledge their ability and competence in navigating through the unpredictable and dynamic environment of entrepreneurship. This is achieved by taking action, learning from mistakes, and continuously adjusting their course to reach their objectives in creating their venture and acquiring resources.

An entrepreneur's attitude is crucial because it shapes their effective behaviour, which involves using the qualities they see in themselves as assets, such as their social capital, education, and personal traits. Ultimately, the effectuation theory offers insight into the actions and mindset of entrepreneurs throughout collaborative and iterative decision-making processes.

Numerous initiatives demonstrate the beneficial relationship between effectuation and business performance. Other scholars have shown that effectuation theory is not without drawbacks, including the potential to hinder the formation of profitable ventures. (Chen et al., 2021) suggest overconfidence in stakeholders and the quest for low value projects with the intention of establishing manageable loss thresholds may conflict with the high-risk, high-reward profile of a high-growth entrepreneur. For the BIS, this is countered by the minimum project value of R30 million set by the dtic criteria. The effectuated entrepreneur that Sarasvathy studies is presumed to possess an entrepreneurial comfort with uncertainty.

2.3 Securing Funding for Black Industrialists

Raising funding is a critical factor in determining entrepreneurial success, particularly for Black Industrialists in South Africa. The ability to secure financial capital is often a requirement that determines whether a business can transition from a nascent idea to a fully operational enterprise (Bowmaker-Falconer & Meyer, 2022).

Funding is essential for any entrepreneurial venture and allows access to essential assets, covering operational costs, and a form of protection against risks and uncertainties inherent in the market. Literature consistently emphasizes how crucial capital is for business growth, sustainability, and innovation ((Cassar, 2004); (Cohen & Wirtz, 2022)). For Black Industrialists in South Africa, access to funding presents more than business development but is also a critical element in redressing historical imbalances and promoting economic inclusivity (George et al., 2012).
Black entrepreneurs in South Africa face distinct challenges in securing funding, rooted in a historical context that has left a lasting impact on the availability of collateral, credit histories, and networks (Maduku & Kaseeram, 2021). These challenges are heightened by issues such as stringent lending criteria, the perceived riskiness of new ventures, and a lack of awareness of available funding options (Fatoki, 2014). The dtic BIS was established to mitigate these challenges by providing targeted financial support to black-owned businesses.

Several factors impact the outcome of an entrepreneur’s funding application. These include the entrepreneur's creditworthiness, the viability of the business plan, the potential for job creation, and the alignment with strategic sectors identified by the dtic (Rogerson, 2008).

Effectuation theory challenges the traditional linear model of entrepreneurial ventures. Instead, the theory posits that entrepreneurs often start with their means and gradually work towards their goals, which in the context of funding, suggests a non-linear and adaptive approach to securing financial resources (Sarasvathy, 2001a). Effectual entrepreneurs are likely to leverage personal networks, partnerships, and pre-commitments to reduce the perceived risk of their ventures, thereby increasing their attractiveness to funders (Read et al., 2009).

Empirical studies have examined the relationship between entrepreneurial strategies and funding outcomes. Welter et al. (2017) found that alternative entrepreneurship principles which would include those such as leveraging contingencies and forming partnerships, were positively associated with the ability to secure funding in uncertain environments. Research by Perry et al. (2012) further highlighted the role of flexible and adaptive strategies in navigating a complex funding landscape particularly for novice entrepreneurs.

Securing funding is a complex process that is influenced by numerous factors. For Black Industrialists in South Africa, it represents not only a business necessity but also a means to promote economic empowerment and equity. Literature suggests that effectuation methods may offer an effective approach to improve the chances of securing funding, which this study aims to explore within the dtic BIS. By understanding the nuances of funding acquisition and the strategies that can improve funding outcomes, this research contributes to the broader discourse on entrepreneurship and economic development in post-apartheid South Africa.

2.4 Hypothesised framework

The concepts that are going to be examined arise from the variables identified in the literature review and centre around the five principles of effectuation as independent variables with the securing of funding as the dependent variable.

In the context of this study, the inclusion of a control variable being the number of years being an active entrepreneur is an important consideration. According to (Ruiz-Jiménez et al., 2021), the duration of entrepreneurial experience can significantly impact an individual's decision-making processes, risk tolerance, and strategic approach to resource acquisition. By incorporating the number of years as an active entrepreneur as a control variable, the study aims to account for the potential influence of this factor on the application of effectuation methods and subsequent funding success. This aligns with the need to capture a comprehensive understanding of the entrepreneurial mindset and its evolution over time, as highlighted in the literature.

Ruiz-Jiménez et al. (2021) emphasize the dynamic nature of entrepreneurial decision-making and the evolution of an entrepreneur's strategic orientation over time. The inclusion of the number of years as an active entrepreneur as a control variable acknowledges the potential for experience to shape an individual's approach to effectuation principles and their application in securing funding. This control variable serves to mitigate the confounding effects of entrepreneurial tenure on the relationship between effectuation methods and funding success, allowing for a more nuanced and accurate analysis of the research hypotheses. By considering the impact of entrepreneurial experience, the study aims to provide a more robust and insightful exploration of the factors influencing funding outcomes within the context of the dtic BIS. The scholars posit that entrepreneurs with 6 years or less of experience constitute novice entrepreneurs. By accounting for the potential influence of entrepreneurial experience, the study seeks to enhance the validity and reliability of its findings, contributing to the advancement of knowledge in the field of entrepreneurship and new venture creation.

2.4.1 Hypothesis 1: Bird in Hand Principle and Funding Success

The Bird in Hand principle is based on the idea that entrepreneurs start with their means: who they are, what they know, and whom they know. This principle is central to effectuation theory and suggests that entrepreneurs leverage their existing resources and networks to achieve their goals (Sarasvathy, 2001a). The literature suggests that entrepreneurs who effectively utilise their available means are more likely to attract funding due to the demonstration of resourcefulness and commitment (Covin & Lumpkin, 2011). This principle aligns with the dtic's objectives to support productive and innovative Black Industrialists who can contribute to economic growth and transformation in South Africa (Goga et al., 2019a).

H1: The application of the Bird in Hand principle has a positive influence on the successful securing of funding from the dtic BIS.

2.4.2 Hypothesis 2: Affordable Loss Principle and Funding Success

The Affordable Loss principle encourages entrepreneurs to focus on what they can afford to lose rather than on the potential gains. This principle promotes a risk-averse approach to decision-making, which can be crucial in the context of securing funding (Sarasvathy, 2001a).Entrepreneurs who adopt the Affordable Loss principle may be perceived, through their actions, as more prudent and realistic by funding bodies, which could increase their chances of securing funding (Covin & Lumpkin, 2011). This principle is especially relevant in the South African context, where financial prudence is essential for sustainable business growth and transformation (Goga et al., 2019a).

H2: The application of the Affordable Loss principle positively influences the successful securing of funding from the dtic BIS.

2.4.3 Hypothesis 3: Lemonade Principle and Funding Success

The Lemonade principle emphasizes the ability of entrepreneurs to embrace and leverage unexpected events or setbacks as new opportunities. This adaptability is crucial in the dynamic and often unpredictable process of securing funding. Entrepreneurs who demonstrate an attitude of resilience and the capacity to pivot when faced with challenges may be more likely to secure funding, as they show potential funders their ability to navigate and thrive in uncertain conditions (Ajzen, 1991). This principle resonates with the dtic's support for transformation and inclusivity, as it aligns with the goal of encouraging robust and adaptable Black Industrialists (*The dtic Support for Transformation and Black Industrialists.*, 2022)

H3: The application of the Lemonade principle positively influences the successful securing of funding from the dtic BIS.

2.4.4 Hypothesis 4: Crazy-Quilt Principle and Funding Success

The Crazy-Quilt principle involves forming partnerships and building a network of stakeholders to co-create the future. This approach can be instrumental in securing funding, as it demonstrates the entrepreneur's ability to mobilize and engage with a broader community. The literature indicates that entrepreneurs who actively seek and establish strategic partnerships are more likely to gain access to resources, including funding (Sarasvathy, 2001a). This principle is particularly relevant in the South African context, where collaboration from different stakeholders and transformation are essential to overcoming historical economic barriers (Goga et al., 2019a).

H4: The application of the Crazy-Quilt principle positively influences the successful securing of funding from the dtic BIS.

2.4.5 Hypothesis 5: Pilot-in-the-Plane Principle and Funding Success

The Pilot-in-the-Plane principle maintains that entrepreneurs should focus on elements within their control to shape the venture's trajectory. This is essential in the funding process, where demonstrating control and foresight can be decisive factors. Entrepreneurs who exhibit a strong sense of agency and the ability to steer their ventures may be more successful in securing funding, as they convey confidence and strategic direction to potential funders (Sarasvathy, 2001a). This principle supports the dtic's aim to empower Black Industrialists who can drive economic growth and transformation in South Africa (*The dtic Support for Transformation and Black Industrialists.*, 2022).

H5: The application of the Pilot-in-the-Plane principle positively influences the successful securing of funding from the dtic BIS.

2.4.6 Conceptual Framework

The conceptual framework is thus presented with five constructs as independent variables representing the theory of effectuation with the securing of Black Industrialist funding being the dependent variable. This relationship is controlled by the experience of the individuals in their entrepreneurial activities.

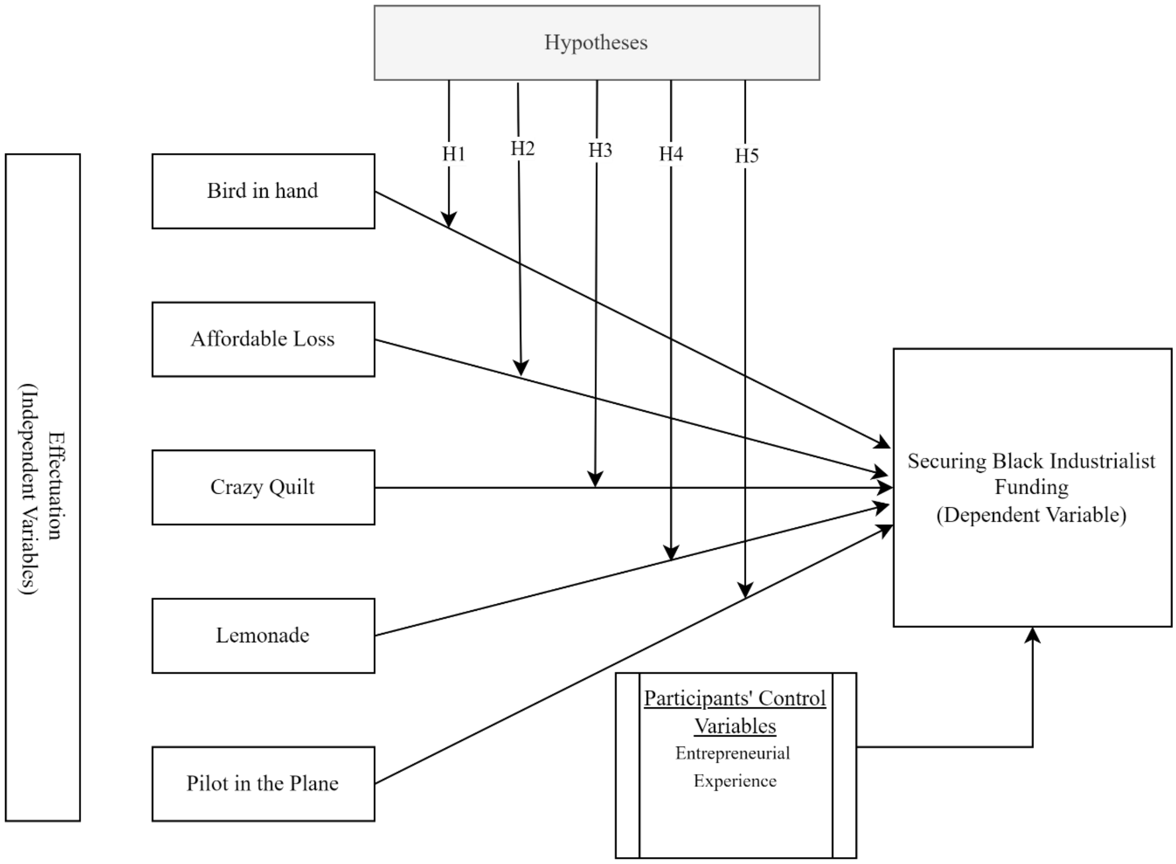

Figure 1 - Conceptual Framework of Hypotheses

- **CHAPTER 3. RESEARCH METHODOLOGY**

A research methodology approach and its recording is essential to the success of a research project (Hofstee, 2006). This chapter plays a crucial role in informing the audience about the processes employed in reaching the study's conclusions, providing a solid foundation upon which they can form their judgments about the conducted work. In this methodology chapter, various sections will detail the techniques employed to address the research question.

3.1.Research approach and paradigm

A research paradigm establishes a unified framework for the alignment of ontology, epistemology, and the design and methods of methodology within a research study (Ugwu et al., 2021). Locating a paradigm guides a study towards informed and appropriate methodologies. Dammak (2015) proposes a similar idea and argues that a positivist paradigm represents a philosophical and methodological framework for comprehending and investigating the world using the scientific method to observe and measure things directly.

The question that this study seeks to answer is: *"To what extent do Black Industrialists' utilization of effectuation methods influence their success in securing funding from the dtic Black Industrialists' scheme?"* In this research, a positivist research paradigm is adopted to investigate the influence of effectuation methods on the success of entrepreneurs in securing funding through the dtic BIS. Positivism is chosen for its emphasis on objectivity, measurability, and the belief in an objective reality that can be systematically observed and studied. A review of various paradigmatic and philosophical worldview revealed that the objectives of this research would be better served by a positivist approach (Creswell & Creswell, 2017). The other approaches reviewed, namely; constructivism, transformative and pragmatism were found less suitable for the purposes of this study.

Sukamolson (2007) promotes a quantitative method for its ability to explain phenomena by collecting numerical data that are analysed using mathematically based methods. It follows that a quantitative research paradigm is suited for this study on the evaluation of effectuation methods used by Black Industrialists' enterprises in securing funding from the dtic. It will provide a structured, objective, and statistical approach to examine the connections among variables, test hypotheses, and draw generalizable and widely applicable conclusions which are essential for addressing the research questions posed in this study. This approach enables the gathering of standardized data from participants to scrutinize effectuation methods and their impact on funding outcomes. It will further be easy to code and analyse statistically.

The approach in this research is a deductive one. Deductive reasoning involves utilizing statistical analysis to establish a link between existing knowledge and theory and the insights that can be gained through research (Soiferman, 2010). In this context, theories related to entrepreneurial effectuation and funding will serve as a foundation for formulating hypotheses. This deductive approach is appropriate as it allows a systematic test of hypotheses that are derived from the effectuation theory thus providing a structured and efficient way to investigate its influence on the success of entrepreneurs securing funding in the dtic BIS.

3.2.Research design

The design of a research project serves as the roadmap for achieving objectives and addressing inquiries. The process of selecting a design can be complicated by the wide range of methods, techniques, procedures, protocols, and sampling plans available (Cooper & Schindler, 2014). The research design is shaped by the research problem addressed in the study, rather than the reverse (De Vaus, 2001).

This study employs a positivist quantitative research design to systematically investigate the influence of effectuation methods on the success of entrepreneurs in securing funding within the dtic BIS. The quantitative approach allows for the collection and analysis of numerical data to identify patterns and associations.

The research was conducted within the context of the dtic BIS, focusing on entrepreneurs participating in the program. The selected setting provided a specific and relevant environment to examine the application of effectuation methods and their influence on funding success in a targeted industrial context. There are three types of research design namely; descriptive, correlational, and experimental research design (Stangor & Walinga, 2019).

This study takes on a correlational research design approach which examines the relationships between variables without manipulating them. It helps identify patterns and associations but does not establish causation (Curtis et al., 2016). In this study, the questionnaire serves as a data collection tool to measure the extent to which entrepreneurs employ effectuation principles and to capture the corresponding funding outcomes. By employing a correlational design, the research can statistically analyse the relationships between these variables.

Table 1 below outlines the overarching research process, beginning with the research question that guides this study: 'To what extent do Black Industrialists' utilization of effectuation methods influence their success in securing funding from the dtic Black Industrialists' scheme?' This question is central to the investigation and dictates the subsequent methodological choices. The sampling strategy detailed in the table involved selecting 43 entrepreneurs using convenience sampling from a publicly available database of 300 dtic-showcased entrepreneurs. This approach, while acknowledged to potentially introduce bias, provided feasible access to a relevant population, as further elaborated in the next section.

Research question	What is the influence of effectuation methods on the success of entrepreneurs securing funding in the dtic Black Industrialists' Scheme?
Research paradigm	Positivist research paradigm as the study aims to objectively examine the influence of effectuation methods on funding success, using quantitative methods and effectuation and other supporting sub-theories in the field.
Sampling	The study samples from 43 entrepreneurs out of the total population. selected through convenience sampling from publicly available dtic handbooks that showcases 300 entrepreneurs. This approach offers accessibility to readily available data however it is acknowledged that the sample may not be fully representative of the entire population of dtic funded Black Industrialists.
Data collection	Data was collected through a structured questionnaire designed to measure the utilization of effectuation principles among the selected entrepreneurs.
Variables	Independent Variable: Effectuation methods employed by entrepreneurs. Dependent Variable: Success in securing funding in the dtic BI scheme. Control Variable: Entrepreneurial experience
Data analysis	Quantitative data analysis was performed using SPSS software. Descriptive statistics was used to characterize the sample, while inferential statistics, by way of correlation analysis and regression analysis, examined the extent of the influence of effectuation methods on funding success. SPSS provides platform for conducting statistical analyses, enhancing the efficiency and accuracy of the study.
Ethical considerations	Informed consent was procured from participants through a request for "permission to proceed" in the survey and undertaking to maintain confidentiality and anonymity. Approval from Wits University ethics committee was sought in line with ethical guidelines
Limitations	Constraints have been identified in accessing the full population thus a database formed from dtic reporting available online is being used as the research population.
Validity and reliability	Survey instruments were pre-tested prior to dissemination to participants. Consistency in data collection and analysis procedures was adhered to.
Reporting	Findings are presented in this comprehensive research report, including statistical results, insights, and recommendations.

Table 1: - Research process

This research design adopts a positivist and correlational approach, emphasizing systematic analysis and statistical investigation of the influence of effectuation methods on success in securing funding. The use of simple random sampling ensures a representative sample from the reduced population, and SPSS facilitated efficient and comprehensive data analysis.

3.3.Population and sampling

The dtic has been instrumental in supporting economic development through its Black Industrialists' Scheme providing financial assistance to over 1000 enterprises since its inception in 2015 (dtic, 2022).

Obtaining permissions for comprehensive data access from the dtic became a complex process involving confidentiality concerns and legal considerations. Due to these challenges, an alternative strategy was imperative to ensure the research could proceed effectively while still adhering to ethical standards of data use and respect for the privacy and security of the individuals involved (Rivers & Lewis, 2014).

The dtic regularly showcases funded enterprises on publicly available platforms. The online reports served as a valuable and accessible source, allowing for the compilation of a database containing details on approximately 300 funded entrepreneurs. These details include the Black Industrialist’s name, business name, contract details, nature of their enterprise and industry classification. This constitutes a convenience sampling frame which, while not random, can still be extremely useful for the purposes of this study (Cooper & Schindler, 2014). The literature proposes this to be valuable in the exploratory phases of research or when access to the full population is constrained by practical limitations.

There remains a potential for sample bias and for which Cooper and Schindler (2014) suggest that it be addressed by randomizing the population before sampling and changing the random start several times in the sampling process. While Lincoln and Guba (1988) concept of trustworthiness in non-random sampling is primarily targeted at qualitative studies, it can be applied to this research to generate its credibility, transferability, dependability, and confirmability.

This chapter explores the considerations surrounding the population and justifies the shift to a sample of 43 entrepreneurs using convenience sampling, emphasizing the diversity across geographical regions and industries within the dtic BIS. The population for this study encompasses entrepreneurs who have received financial assistance through the dtic BIS. This subset is considered representative of the broader population, making it a pragmatic choice for a comprehensive analysis of the influence of effectuation methods on funding success. Non-recipients of dtic BIS funding are excluded from the study as the study aims to examine the relationship between effectuation methods and funding success within this specific scheme.

The selected sample of 43 entrepreneurs is diverse with the entrepreneurs operating in various industries that have participated in the BI scheme, offering insights into the application of effectuation methods across diverse sectors. The eligibility criteria for the sample are that the respondents have to be; listed in the dtic BIS profiles, in receipt of dtic BIS funding and have a diversity in the industries and location to ensure wide-ranging analysis across different sectors and regions.

To ensure the representativeness of the sample, convenience sampling was used. The list of survey respondents was sourced from a publicly available handbook for entrepreneurs funded by the dtic. This method facilitated the selection of participants who were readily accessible and willing to participate. While this approach may introduce some degree of selection bias, it provides a practical means of gathering data from a specific, relevant population. The convenience sampling technique allows for efficient data collection, offering valuable insights that can contribute to the understanding of the broader black industrialist population (Alvi, 2016).

Ethical considerations are critical in the sampling process (Dattalo, 2010). Obtaining informed consent from the sampled entrepreneurs was crucial, ensuring transparency regarding the study's purpose, data usage, and confidentiality measures. This ethical undertaking was accounted for in the research instrument.

3.4.Research instrument

The research instrument plays a pivotal role in capturing the essence of the study, exploring the intricate link between effectuation methods and the success of entrepreneurs securing funding within the dtic BIS. This chapter provides a comprehensive overview of the designed questionnaire, detailing its structure, themes, and the integration of Likert Scale questions.

The questionnaire (Appendix 2) is designed to align with the research objective of examining the influence of effectuation methods on funding success. It is inspired by the principles of effectuation proposed by Sarasvathy (2001a) and adapts Likert Scale questions to measure participants' responses quantitatively. The design aimed to achieve clarity, relevance, and reliability, aiming to capture nuanced insights into entrepreneurs' decision-making processes and their subsequent funding outcomes.

A key aspect of the research is the inclusion of entrepreneurial experience as a moderating variable. This variable is important in understanding how prior entrepreneurial experience influences the relationship between effectuation methods and funding success. By incorporating questions that assess the level and nature of entrepreneurial experience, the study aims to provide a more comprehensive analysis of how experience impacts decision-making and funding outcomes. This moderating variable will allow the research to differentiate between novice and experienced entrepreneurs, thereby offering deeper insights into the varying effectiveness of effectuation methods based on experience levels.

Likert Scale questions provide a structured and standardized format for participants to express their opinions or experiences. The questionnaire employs a 5-point Likert Scale, mostly with questions ranging from strongly disagree to strongly agree. This allows for deeper insights into participants' perceptions regarding the effectiveness of specific effectuation principles and their correlation with funding success.

The questionnaire is organized into themes corresponding to the hypotheses derived from existing literature. Each theme focuses on a specific aspect of effectuation, ranging from affordable loss to leveraging contingencies. Questions within each theme explore the participants' utilization of these principles in their entrepreneurial endeavours and seek to uncover patterns that correlate with funding outcomes (Sarasvathy, 2001).

Table 2 provides a detailed breakdown of the constructs measured by the research instrument The "Bird-in-Hand" construct underscores the utilization of existing resources like personal networks and skills, with questions assessing participants' preferences for leveraging these resources for funding. This construct is supported by the work of Sarasvathy (2001) and Lumpkin & Dess (1996). "Affordable Loss" focuses on comfort with risk-taking and willingness to commit resources, as measured by participants' agreement with statements on these topics. This aligns with Sarasvathy (2001) and Covin and Lumpkin (2011). The "Crazy-Quilt" construct investigates networking strategies and engagement with diverse stakeholders in the pursuit of funding, thus referencing Sarasvathy (2001) and Goga, Bosiu, & Bell (2019). "Lemonade" explores adaptability to unexpected situations and turning setbacks into opportunities, drawing from Sarasvathy (2001) and (Ajzen, 1991). The "Pilot-in-the-Plane" construct examines the entrepreneur's proactive role in shaping venture direction, including control and decision-making autonomy. This construct is informed by Sarasvathy (2001) and The dtic Support for Transformation and Black Industrialists (2022). Finally, "Securing of Funding" is the dependent variable, measuring success in funding applications, access to financial resources, and funding acquisition outcomes, with questions about whether received funding matched aims and the effectiveness of strategies employed. This dependent variable is supported by Goga, Bosiu, & Bell (2019) and The dtic Support for Transformation and Black Industrialists (2022).

Construct (Effectuation Principle)	**Dimensions of the Construct**	**Theme of questions**	**Literature Source**
Bird-in-Hand	Utilization of existing resources (personal networks, skills) Resourcefulness Commitment to venture	Participants rate their preferences for utilizing existing resources, such as personal networks and skills, to secure funding.	Sarasvathy (2001); Lumpkin & Dess (1996)
Affordable Loss	Comfort level with risk-taking Willingness to commit resources Cautious risk management	Participants rate their agreement with statements assessing their comfort level with taking risks and willingness to commit resources when	Sarasvathy (2001); Covin & Lumpkin (2011)

		pursuing funding opportunities.	
Crazy-Quilt	Networking strategies Engagement with stakeholders Strategic partnerships	Participants are asked about their networking strategies and the extent to which they engage with diverse stakeholders in the pursuit of funding	Sarasvathy (2001); Goga, Bosiu, & Bell (2019)
Lemonade	Adaptability to unexpected situations Agility in the face of challenges Turning setbacks into opportunities	Participants' adaptability and ability to turn unexpected situations into opportunities, assessing their agility in the face of challenges is explored.	Sarasvathy (2001); (Ajzen, 1991)
Pilot-in-the-Plane	Proactive role in shaping venture direction Decision-making autonomy Influence over venture trajectory	Questions focus on the entrepreneur's proactive role in shaping the direction of their venture. Participants are asked about their level of control, decision-making autonomy, and the extent to which they perceive themselves as actively influencing their venture's trajectory.	Sarasvathy (2001); The dtic Support for Transformation and Black Industrialists (2022)

Securing of Funding (Dependent Variable)	Success in funding applications Access to financial resources Funding acquisition outcomes	Participants are asked if the funding they received matched what they had aimed for. Participants are also asked how well they believe the strategies they employed o worked in securing funding	Goga, Bosiu, & Bell (2019); The dtic Support for Transformation and Black Industrialists (2022)

Table 2: - Constructs & source

Entrepreneurial experience has been identified as a fundamental moderating variable for this study. It is hypothesized that the relationship between effectuation methods and funding success may vary depending on the level of entrepreneurial experience of the entrepreneur. (Batterton & Hale, 2017).

The research instrument, in the form of a structured questionnaire, serves as a powerful tool for uncovering the intricate dynamics between effectuation methods and the success of entrepreneurs securing funding. By incorporating Likert Scale questions and aligning with established principles, the instrument aimed to provide detailed and reliable data for a solid analysis. The inclusion of moderating variables further enhances the potential for comprehensive insights in the final study.

3.5.Data collection

Primary data was collected from Black Industrialists whose information was obtained from online databases of enterprises profiled by the dtic. The survey questions are related to the stated hypotheses and in line with effectuation methods and funding outcomes. Secondary data was collected from publicly accessible dtic reports and records to supplement survey responses and to provide context for the study. the dtic periodically showcases and publishes reports that contain background information on the BIS together with profiles of funded entities.

A pilot test was be conducted with a small group of participants to refine the questionnaire. This phase focused on identifying and addressing any potential ambiguities or challenges in question wording, ensuring the clarity and reliability of the instrument. The survey was administered electronically, leveraging online platforms to ensure efficient data collection. Participants received clear instructions and a link to the survey, emphasizing the voluntary nature of participation and confidentiality measures.

3.6.Data analysis

The research employs a structured questionnaire, with effectuation principles as independent variables, funding outcomes as the dependent variable and entrepreneurial experience as a control variable. Descriptive statistics are used to provide a comprehensive overview of the collected data. This includes summarizing participants' demographic characteristics, key variables related to effectuation principles, and the distribution of funding outcomes . Descriptive analyses set the foundation for a more detailed understanding of the study sample.

Regression analysis is employed to explore the influence of the independent variables (effectuation principles) on the dependent variable (funding outcomes). This analysis aims to identify significant associations, providing insights into the impact of effectuation methods on entrepreneurs' success in securing funding (Creswell & Creswell, 2017). To further enhance the analysis, moderation analysis will be considered. Potential moderating variables, such as entrepreneurs' gender or industry-specific factors may be explored to understand their influence on the relationship between effectuation methods and funding outcomes. This would contribute to a more comprehensive interpretation of the findings.
Data analysis is to be conducted using advanced statistical software, ensuring accuracy and efficiency in processing the collected data. SPSS, a statistical software will be used to execute regression analyses and explore moderation effects.

3.7.Validity and reliability of research

To enhance the reliability of the study, the data collection instrument will undergo pre-testing, and internal consistency checks will be conducted. Validity will be ensured with established measures for effectuation methods and funding success, aligning with existing literature.

- Internal Validity - (Creswell & Creswell, 2017) outline various types of threats to a research project's internal validity together with the mitigants. This study's internal validity is addressed through the careful design of the questionnaire. The instrument's structure and clarity aim to minimize ambiguity and enhance the accuracy of participants' responses. Additionally, the pilot study is anticipated to assist in identifying potential sources of confusion or misinterpretation, contributing to the internal validity of the research.

- External Validity - this refers to the extent to which research findings can be applied to settings other than the specific context of the study (Creswell & Creswell, 2017). The utilization of the simple random sampling method, together with the inclusion of a wide range of industries and areas in the population, enhances the external validity. The study's findings can be reasonably extrapolated to the wider population of businesses participating in the dtic Black Industrialists' initiative.
- Content Validity - Questions were derived from well-established effectuation principles proposed by (Sarasvathy, 2001a), ensuring alignment with the study's objectives. Furthermore, a pilot test involving a small group of participants will be conducted.
- Construct validity - Construct validity focuses on the accuracy of measurements in representing the underlying constructs of interest (Hair Jr. et al., 2019). The questionnaire is designed based on established principles of effectuation, ensuring that each item aligns with the theoretical framework.

The integrity of this research is based on careful evaluation of validity and reliability. This study seeks to improve the internal and external validity of measurements by systematically constructing the questionnaire, running a pilot study, and utilizing statistical indicators, while also ensuring measurement reliability.

3.8.Limitations of the study

Quantitative research frequently employs a focused approach, concentrating on a limited number of causal factors at once, akin to using a narrow-angle lens. Researchers in quantitative studies aim to control and maintain consistency in factors that are not under investigation. (Antwi & Hamza, 2015).

In the context of investigating the impact of effectuation methods on the success of entrepreneurs in securing funding within the dtic BIS, a potential limitation for the study could be the narrow focus this specific program. By concentrating solely on the dtic BIS, the findings may not be easily generalized to broader entrepreneurial contexts and other funding programs. The study's limited scope might restrict the applicability of its conclusions to a more diverse range of entrepreneurial initiatives, thus limiting the overall external validity of the research.

The findings may be specific to the South African context and the dtic's programs, limiting their applicability to other regions or types of government support initiatives. While the study aims to establish the influence of effectuation methods on funding outcomes, it may not definitively establish causality. Other unobserved factors could influence these outcomes.

The success or failure of Black Industrialists' enterprises funding plans can be influenced by external factors, such as changes in the economic environment, policy shifts, or global events. These factors may not be fully accounted for in the study. The study's cross-sectional design captures a snapshot of the enterprises at a particular point in time. It may not account for changes, developments, or long-term trends in these enterprises over time. The parliamentary monitoring group noted that some of the BI beneficiaries' enterprises may not be in existence any longer which add an additional dimension to the eventual success of these enterprises.

3.9.Ethical considerations

All research projects must adhere to ethical standards in order to ensure the protection, respect, and well-being of participants. (Hasan et al., 2021)This study strictly adhered to ethical guidelines established by Wits University, and formal ethical approval was sought and obtained from the ethics committee prior to data collection (Ethical Protocol Number: WBS/EN428589/976)Informed consent is central to the data collection process (Yusof et al., 2022). Prior to participating in the survey, each entrepreneur was presented with a clear statement outlining the study's purpose, the voluntary nature of their participation, their right to withdraw at any time without penalty, and the estimated time commitment required. Participants were required to actively indicate their understanding and consent to proceed with the survey, ensuring their full awareness and willingness to contribute. To safeguard the confidentiality and anonymity of all participants, no personally identifiable information was collected. Responses were collected for analysis and reporting, ensuring that individual contributions and input could not be traced back to specific entrepreneurs. All collected data is stored securely on a password-protected computer, accessible only by the research team. Furthermore, the research is designed to ensure impartiality with no harm, whether physical, psychological, or reputational, will be inflicted on the participants. The insights gained from this study are intended to contribute positively to the understanding of effectuation methods and funding success within the dtic Black Industrialists' scheme, ultimately benefiting future entrepreneurs and policymakers. Transparency in reporting all findings, irrespective of their alignment with initial hypotheses, will be maintained throughout the dissemination of this research.

- **CHAPTER 4. FINDINGS AND DATA ANALYSIS**

4.1 Introduction

This chapter presents the findings and data analysis, serving as the basis for interpreting the results of the study. Through a combination of descriptive statistics and inferential analyses, the chapter provides a comprehensive overview of the data, highlighting significant trends and anomalies. By systematically presenting the findings, this chapter not only validates the hypotheses but also provides a robust framework for discussion, setting the stage for the subsequent chapter on conclusions and recommendations.

4.2 Data screening

A total of 49 responses were received. Of these, 6 responses were incomplete and thus, were excluded from the sample. This left the study with a sample of 43 respondents.

4.3 Sample Characteristics / Demographic

4.3.1 Gender

Majority of the respondents (72%) were male, while females represented 28% of the respondents. This highlighted a gender disparity among entrepreneurs who accessed the dtic Black Industrialist Scheme.

4.3.2 Province

Regarding the geographic location of company headquarters, the majority of respondents (67%) were based in Gauteng, reflecting the province's role as a key economic hub in South Africa. Other provinces were represented to a much smaller extent, with KwaZulu-Natal contributing 14% of respondents, the Free State 7%, and Mpumalanga, Northern Cape, and Northwest each accounting for 2% or less. There were none from the Eastern Cape and Limpopo. This concentration in Gauteng suggests that the dtic Black Industrialist Scheme might be more heavily accessed or have a stronger presence in this economic center.

4.3.3 Experience in entrepreneurial activities

Respondents reported varying levels of entrepreneurial experience. Most respondents (60%) had been involved in entrepreneurial activities for more than 10 years, indicating a high level of experience among those accessing the program. A smaller proportion, 21%, reported experience ranging from 4 to 6 years, while only 7% had less than 3 years of experience. This suggests that the dtic Black Industrialist Scheme is predominantly accessed by seasoned entrepreneurs.

4.3.4 Type of funding received

The types of funding received varied among participants. The most common funding type (26%) was a combination of the dtic cost-sharing grant and funding from the Industrial Development Corporation (IDC), followed by National Empowerment Fund (NEF) funding alone (21%), and the dtic cost-sharing grant alone (19%). Smaller proportions received funding exclusively from the IDC (16%) or NEF (5%), while 14% accessed other types of funding not specified in the study.

4.3.5 Industry

Respondents represented a diverse range of industries. The most frequently mentioned sectors included Chemicals and Plastics (12%) this was followed by Agriculture And Agro-Processing, Electrical Equipment, Renewable Energy, Oil And Gas, Tourism & Hospitality Services which were 7% apiece. The rest of the sectors are presented in Table 1. This broad representation highlights the scheme's reach across various economic sectors in South Africa.

4.3.6 Amount of funding secured

The amount of funding secured through the dtic Black Industrialist Scheme varied significantly. A substantial proportion of participants (28%) secured funding between R1 million and R5 million, while 19% obtained funding exceeding R50 million. Additionally, 21% secured amounts ranging from R20 million to R50 million, and 12% received between R10 million and R20 million. Smaller amounts, such as less than R1 million, were reported by 16% of respondents, highlighting the scheme's focus on medium- to large-scale projects.

Variable	Option	Frequency	Percent
Gender	Male	31	72%
	Female	12	28%
Province where headquarters of your company located	Free State	3	7%
	Gauteng	29	67%
	KwaZulu-Natal	6	14%
	Limpopo	1	2%
	Mpumalanga	2	5%
	Northern Cape	1	2%

	North West	1	2%
Number of years you have been actively involved in entrepreneurial activities	Less than 1 year	1	2%
	1-3 years	2	5%
	4-6 years	9	21%
	7-10 years	5	12%
	More than 10 years	26	60%
Type of funding received through the Black Industrialist program	the dtic COST-SHARING GRANT	8	19%
	the dtic COST-SHARING GRANT AND IDC FUNDING	11	26%
	the dtic COST-SHARING GRANT AND NEF FUNDING	2	5%
	IDC FUNDING	7	16%
	NEF FUNDING	9	21%
	Other	6	14%
Industry	Chemicals And Plastics	5	12%
	Agriculture And Agro-Processing	3	7%
	Electrical Equipment	3	7%
	Renewable Energy, Oil And Gas	3	7%
	Tourism & Hospitality Services	3	7%
	Creative Industry	2	5%
	Forestry And Wood Products	2	5%
	Liquid Fuel Retail	2	5%
	Property, Construction And Building Materials	2	5%
	Steel And Metal Fabrication And Engineering	2	5%
	Automotive	1	2%
	Finance	1	2%
	Green Economy	1	2%

	Healthcare	1	2%
	ICT	1	2%
	Machinery & Equipment	1	2%
	Mining	1	2%
	Retail	1	2%
	Transport And Logistics Services	1	2%
	Other	4	9%
	Not indicated	3	7%
Amount of funding successfully secured through the dtic's Black Industrialist Scheme	Less than R1 million	7	16%
	R1 million - R5 million	12	28%
	R5 million - R10 million	2	5%
	R10 million - R20 million	5	12%
	R20 million - R50 million	9	21%
	More than R50 million	8	19%
Total		43	100%

Table 3: Sample Characteristics

4.4 Validity

Exploratory factor analysis with Principal Axis Factoring extraction method and a Promax rotation was conducted to assess construct validity. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity were evaluated to determine the suitability of the data for exploratory factor analysis. The KMO value was 0.534, which is above the minimum acceptable threshold of 0.50, indicating that the sample is adequate for factor analysis despite being on the lower end of acceptability. Bartlett's Test of Sphericity yielded a significant result ($\chi^2 = 309.856$, df = 136, $p < 0.001$), confirming that the correlation matrix is not an identity matrix and that sufficient correlations exist among the variables. These results indicated that the data was suitable for exploratory factor analysis.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.534
Bartlett's Test of Sphericity	Approx. Chi-Square	309.856
	df	136
	Sig.	.000

Table 4: KMO and Bartlett's Test

The Total Variance Explained results indicated that six factors were retained based on the eigenvalue criterion (eigenvalues > 1), collectively explaining 73.854% of the total variance in the initial items. This shows that the retained factors had a strong representation of the dataset's variability. The results are presented in Table 3.

Total Variance Explained							
Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.970	23.352	23.352	3.631	21.361	21.361	3.200
2	2.642	15.539	38.891	2.300	13.529	34.890	2.282
3	2.107	12.395	51.286	1.836	10.798	45.688	1.810
4	1.545	9.088	60.374	1.164	6.847	52.535	1.662
5	1.248	7.343	67.717	.922	5.424	57.958	1.716
6	1.043	6.137	73.854	.610	3.591	61.549	1.793
7	.829	4.874	78.728				
8	.746	4.391	83.119				
9	.594	3.493	86.612				
10	.531	3.122	89.733				
11	.494	2.907	92.641				
12	.363	2.134	94.774				
13	.298	1.751	96.526				
14	.228	1.338	97.864				
15	.174	1.026	98.890				
16	.103	.608	99.498				
17	.085	.502	100.000				
Extraction Method: Principal Axis Factoring.							
a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Table 5: Total Variance Explained

The pattern matrix provided insights into how the measured items loaded onto the extracted factors after rotation. The results were derived using Principal Axis Factoring and the Promax rotation method. Six distinct factors emerged, and the items demonstrated strong loadings on their respective factors, suggesting a clear and interpretable factor structure and validity of the constructs. The retained factors were Lemonade - Adaptability and Flexibility, Effectuation Strategy Effectiveness, Outcome Satisfaction, Affordable loss and managing potential losses, Bird in hand, and Pilot in the plane - Planning and execution. Th items within each construct deviated a bit from what had been hypothesised.

Table 6: Pattern Matrix

	Pattern Matrix[a]						
Construct		Factor					
		1	2	3	4	5	6
Lemonade - Adaptability and Flexibility	LEM5 - How much did you value being flexible and ready to change when facing unexpected problems in getting funding?	.945					
	LEM2 - You saw problems as chances to rethink and come up with new ideas for getting funding	.782					
	CRQ1 - You involved a variety of people and organizations when looking for funding	.719					
	CRQ3 - You were open to trying different and unconventional ways to get funding	.569					
	AFL3 - How much did you learn from things not going as planned and adjust your funding strategy?	.513					
	LEM1 - How often did you change your funding plans when things didn't go as expected?	.457					
Effectuation Strategy Effectiveness	EFFECT1 - Do you think using these strategies helped you get more funding?		.872				
	EFFECT2 - How well do you think these strategies worked in reaching your funding goals?		.673				
Outcome Satisfaction	EFFECT3 - How happy are you with the results of using these strategies to get funding?			.860			

	EFFECT4 - The amount of funding you received matches what you originally aimed for			.585			
	PIL4 - Did you feel empowered to take charge and push your funding plans forward?			.524			
Affordable loss and managing potential losses	LEM4 - You actively looked for and used new opportunities that came up while seeking funding				.874		
	AFL4 - You saw potential losses in getting funding as something you could manage and accept				.783		
Bird in hand	BIH2 - You focused on using your current skills and abilities to get funding					.889	
	BIH1 - Before seeking funding, you considered the skills and resources you already have					.692	
Pilot in the plane - Planning and execution	PIL5 - It was important for you to be the main driver of your funding plans instead of relying on others						.604
	BIH4 - How important was it for you to come up with practical and doable solutions early on in your funding plans?						.533
	Extraction Method: Principal Axis Factoring. Rotation Method: Promax with Kaiser Normalization.						
	a. Rotation converged in 6 iterations.						

Table 7: Pattern Matrix

4.5 Reliability

The reliability of the scale was conducted using Cronbach's Alpha. The results presented in Table 5 show that there was good reliability for Lemonade - Adaptability and Flexibility (6 items, α = 0.807) and Effectuation Strategy Effectiveness (2 items, α = 0.868). Affordable Loss and Managing Potential Losses (2 items, α = 0.791) and Bird in Hand (2 items, α = 0.709) also exhibited acceptable reliability. Outcome Satisfaction (3 items, α = 0.659) shows moderate reliability, slightly below the ideal threshold of 0.7 but still acceptable for exploratory research, with potential for item refinement in future studies. On the other hand, Pilot in the Plane - Planning and Execution (2 items, α = 0.563) demonstrates poor reliability, suggesting that the items may require further refinement or re-evaluation in future. All the reliability scores were accepted as they are for this study because they were all still above 0.5, and for which, if below, reliability level becomes unacceptable.

Since all factors had acceptable reliability level, a composite scale was computed for each construct by taking an average of the items within each construct. A score close to one indicated agreement with the scale construct while a score close to 5 indicated disagreement as the rating used was ranging from 1 string agree to 5 strongly disagree.

	N of Items	Cronbach's Alpha
Lemonade - Adaptability and Flexibility	6	.807
Effectuation Strategy Effectiveness	2	.868
Outcome Satisfaction	3	.659
Affordable loss and managing potential losses	2	.791
Bird in hand	2	.709
Pilot in the plane - Planning and execution	2	.563

Table 8: Reliability of scale

4.6 Hypothesis testing

4.6.1 Correlation

Descriptive Statistics for Constructs

The means and standard deviations of the constructs provide insights into the respondents' general agreement with the principles. Lower mean scores suggest stronger agreement (scores closer to 1 indicate "Strongly Agree"). Bird in Hand (Mean = 1.21, SD = 0.638) and Pilot in the Plane - Planning and Execution (Mean = 1.28, SD = 0.398) showed the strongest agreement, suggesting that entrepreneurs highly prioritize leveraging existing resources and taking control of their funding plans. Conversely, Affordable Loss and Managing Potential Losses (Mean = 2.91, SD = 1.329) had the weakest agreement, reflected by a higher mean, indicating that while entrepreneurs may acknowledge managing potential losses, it is not as strongly embraced as other principles. Lemonade - Adaptability and Flexibility (Mean = 2.01, SD = 0.825) and Outcome Satisfaction (Mean = 2.16, SD = 0.892) showed moderate agreement, while Effectuation Strategy Effectiveness (Mean = 2.45, SD = 1.045) was also in the moderate range.

The Pearson correlation analysis revealed several significant relationships among the constructs. Pilot in the Plane - Planning and Execution was positively and significantly correlated with Effectuation Strategy Effectiveness (r = 0.404, $p < 0.01$). This suggests that entrepreneurs who strongly prioritize their role in planning and execution tend to perceive greater effectiveness in their overall effectuation strategies when securing funding from the dtic Black Industrialist Scheme. Additionally, Outcome Satisfaction was positively correlated with Effectuation Strategy Effectiveness (r = 0.323, $p < 0.05$), indicating that satisfaction with the funding outcomes was associated with the perceived success of the effectuation strategies employed. Other correlations were generally weak or non-significant, suggesting that while some effectuation principles show interconnections, their direct relationships with each other are not consistently strong.

Table 9: Descriptive Statistics and Pearson Correlation

	Descriptive Statistics		**Pearson Correlation**					
Construct	**Mean**	**SD**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**
1.Lemonade - Adaptability and Flexibility	2.01	.825	1					
2.Effectuation Strategy Effectiveness	2.45	1.045	.242	1				
3.Affordable loss and managing potential losses	2.91	1.329	.037	.220	1			
4.Bird in hand	1.21	.638	.204	.006	.276	1		
5.Pilot in the plane - Planning and execution	1.28	.398	.150	.404**	.073	-.189	1	
6.Outcome Satisfaction	2.16	.892	.063	.323*	.016	-.033	.216	1

Table 10: Descriptive Statistics and Pearson Correlation

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

*. Correlation is significant at the 0.05 level (2-tailed).

4.6.2 Regression

4.6.2.1 Assumptions Diagnostics

4.6.2.1.1 Test for Linearity

Pearson correlation analysis revealed that the correlation of Outcome Satisfaction, the dependent variable to the independent variables were all non-zero. This shows that there was evidence of linearity. Thus, the linearity assumption was met.

4.6.2.1.2 **Test for Normality**

The second regression assumption is that the residuals are normally distributed. This was assessed using the Normal PP plot presented in Figure 1. The residuals are very close to the diagonal line, which suggests that the residuals either followed a normal distribution or they at least approached normality. This implies that the normality of residuals assumption was also met.

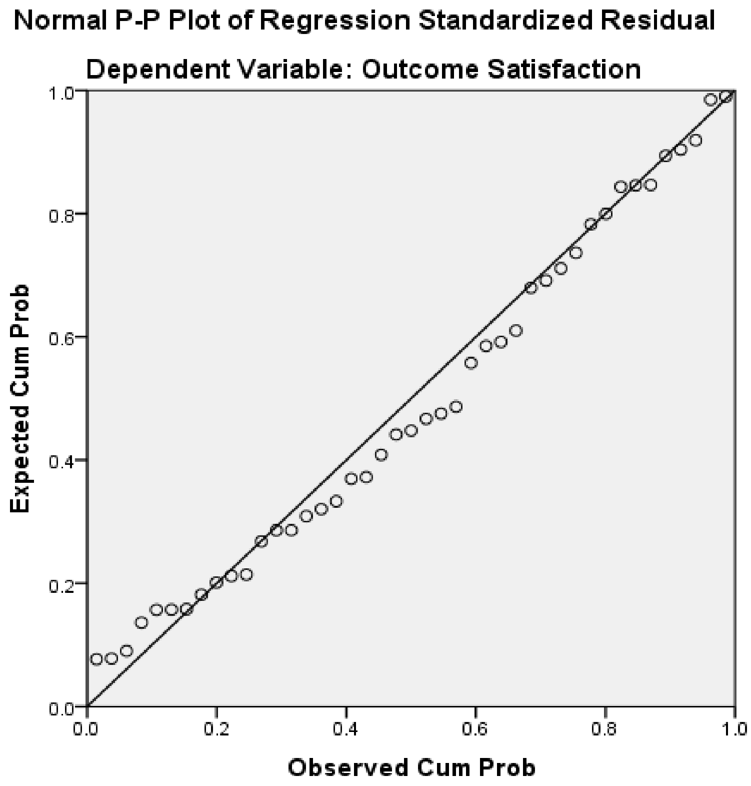

Figure 2: Normal PP Plot of standardised regression residuals

4.6.2.1.3 **Test for no Multicollinearity**

The third assumption is that there is no Multicollinearity. This was assessed by checking the variance inflation factors (VIF) values for all independent variables presented in Table 9. It can be noted that all values were below 10, a value beyond which there should be concern that there may exist
‘multicollinearity. This further indicates that the no Multicollinearity assumption was also met.

4.6.2.1.4 **Equality of variance of error terms (Homoscedastic)**

The fourth assumption is that there is Homoscedastic. This was assessed by using a scatter plot of regression standardised Predicted values against the regression standardised residuals presented in Figure 2. The scatter plot showed values scattered around the zero line without any pattern. This implies that the equality of variance of error terms was also met.

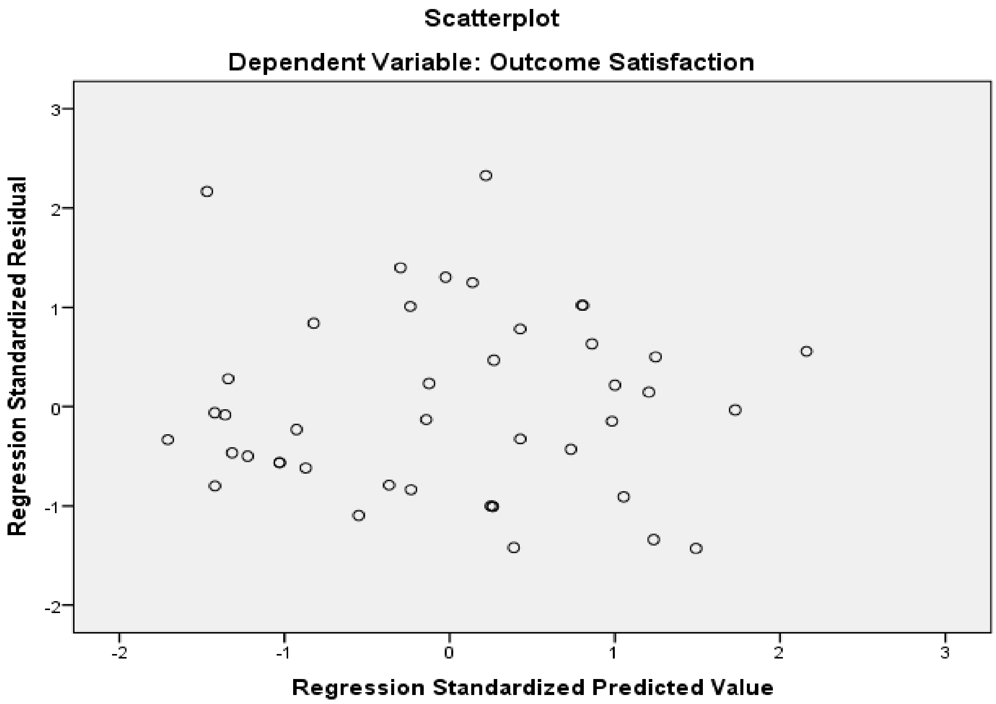

Figure 3: Scatter plot of residuals

4.6.2.1.5 **Independent errors**

The fifty assumptions in no particular order is that the error terms were independent. This was assessed Durbin Watson test. The results presented in Table 7 showered a Durbin-Watson value of 2.473. This value is closer to 2, indicating that the errors were mostly independent.

The regression assumption diagnostics indicated that all the five regression assumptions were met. Thus, the regression results were reliable.

4.6.2.2 Regression Results

The model summary presented in Table 7 showed two regression models predicting Outcome Satisfaction. In Model 1, with Entrepreneurial Experience as the control variable, had an R-square value is 0.001, indicating that Entrepreneurial Experience explains almost no variance in Outcome Satisfaction. The F-change value of 0.034 (with p = 0.854) suggests that the model is not statistically significant. In Model 2, additional predictors, including Bird in Hand, Pilot in the Plane - Planning and Execution, Affordable Loss and Managing Potential Losses, Lemonade - Adaptability and Flexibility, and Effectuation Strategy Effectiveness, were added. The R-square increased to 0.120, indicating a slight improvement in the explanation of variance in Outcome Satisfaction. The F-change value of 0.978 (p = 0.444) shows that the inclusion of additional predictors does not significantly improve the model's predictive power. This indicates that both models demonstrated a weak predictive power for Outcome Satisfaction, and the inclusion of additional variables did not significantly improve model fit.

Model Summary[c]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.029[a]	.001	-.024	.90241	.001	.034	1	41	.854	
2	.347[b]	.120	-.026	.90362	.120	.978	5	36	.444	2.473
a. Predictors: (Constant), Entrepreneurial Experience										
b. Predictors: (Constant), Entrepreneurial Experience, Bird in hand, Pilot in the plane - Planning and execution, Affordable loss and managing potential losses, Lemonade - Adaptability and Flexibility, Effectuation Strategy Effectiveness										
c. Dependent Variable: Outcome Satisfaction										

Table 11: Model Summary

In both models, the overall fit is poor, as indicated by the high p-values (> 0.05), suggesting that neither Entrepreneurial Experience, the control variable only or the combination of predictors in Model 2 provide a statistically significant explanation for Outcome Satisfaction.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.028	1	.028	.034	.854[b]
	Residual	33.388	41	.814		
	Total	33.416	42			
2	Regression	4.021	6	.670	.821	.561[c]
	Residual	29.395	36	.817		

	Total	33.416	42			
a. Dependent Variable: Outcome Satisfaction						
b. Predictors: (Constant), Entrepreneurial_Experience						
c. Predictors: (Constant), Entrepreneurial_Experience, Bird in hand, Pilot in the plane - Planning and execution, Affordable loss and managing potential losses, Lemonade - Adaptability and Flexibility, Effectuation Strategy Effectiveness						

Table 12: ANOVA

The coefficients presented in table 9 showed that the control variable was not significant in predicting Outcome Satisfaction. The result for the other variable is presented per each hypothesis in the next section.

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.036	.698		2.916	.006		
	Entrepreneurial Experience	.021	.111	.029	.185	.854	1.000	1.000
2	(Constant)	1.626	.875		1.858	.071		
	Entrepreneurial Experience	-.048	.122	-.068	-.394	.696	.825	1.212
	Lemonade - Adaptability and Flexibility	-.001	.190	-.001	-.008	.994	.789	1.268
	Effectuation Strategy Effectiveness	.267	.155	.313	1.726	.093	.741	1.349
	Affordable loss and managing potential losses	-.040	.113	-.060	-.355	.725	.867	1.153
	Bird in hand	.002	.240	.001	.008	.993	.826	1.211

	Pilot in the plane - Planning and execution	.230	.394	.103	.583	.563	.789	1.268
a. Dependent Variable: Outcome Satisfaction								

Table 13: Coefficients[a]

4.6.2.2.1 Findings related to Hypothesis 1 (H1):

The application of the Bird in Hand principle has a positive influence on the successful securing of funding from the dtic BIS.

The results presented in Table 9 show that the application of the Bird in Hand principle (β = 0.001, t-value = 0.008, p-value = 0.993) does not significantly influence the successful securing of funding from the dtic BIS. The result was not significant because the p-value (0.993) was > 0.05. This suggests that the Bird in Hand principle has no statistically significant impact on the funding outcome, and therefore, Hypothesis 1 (H1) was not supported by the data.

4.6.2.2.2 Findings related to Hypothesis 2 (H2):

The application of the **Affordable Loss principle** positively influences the successful securing of funding from the dtic BIS.

Similarly, the Affordable Loss principle (β = -0.060, t-value = -0.355, p-value = 0.725) also does not demonstrate a significant relationship with the successful securing of funding. The result was not significant because the p-value (0.725) was > 0.05. As a result, Hypothesis 2 (H2) is not supported, and the data does not provide evidence that the Affordable Loss principle positively influences the outcome.

4.6.2.2.3 Results for Hypothesis 3 (H3):

The application of the **Lemonade principle** positively influences the successful securing of funding from the dtic BIS.

The Lemonade principle (β = -0.001, t-value = -0.008, p-value = 0.994) also failed to show a significant impact. The coefficient for this variable is -0.001, which is close to zero, and a p-value of 0.994, indicating no statistical significance. Therefore, Hypothesis 3 (H3) was not supported, and the data does not suggest that the Lemonade principle positively influences the successful securing of funding.

4.6.2.2.4 Results for Hypothesis 4 (H4):

The application of the **Effectuation Strategy Effectiveness** positively influences the successful securing of funding from the dtic BIS.

In contrast, the Effectuation Strategy Effectiveness principle (β = 0313, t-value = 1.726, p-value = 0.093) showed a marginally significant positive relationship with the funding outcome. The coefficient for this variable is 0.267, which is positive, and the p-value is 0.093. Although this value is above the conventional 0.05 significance level, it suggests a weak but positive influence. There is no sufficient evidence of Effectuation Strategy Effectiveness influencing the successful securing of funding from the dtic BIS at 5% significance level since the p-value was greater than 0.05 but there is evidence at 10% significance level since the p-value (0.093) was less than 0.01. Therefore, Hypothesis 4 (H4) is marginally supported by the data, indicating that Effectuation Strategy Effectiveness might play a role in securing funding, though further investigation in future studies would be needed.

Coefficients[b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.036	.698		2.916	.006		
	Entrepreneurial Experience	.021	.111	.029	.185	.854	1.000	1.000
2	(Constant)	1.626	.875		1.858	.071		
	Entrepreneurial Experience	-.048	.122	-.068	-.394	.696	.825	1.212
	Pilot in the plane - Planning and execution	.230	.394	.103	.583	.563	.789	1.268

a. Dependent Variable: Outcome Satisfaction

4.6.2.3 Results pertaining to Hypothesis 5 (H5):

The application of the Pilot-in-the-Plane principle positively influences the successful securing of funding from the dtic BIS.

The Pilot-in-the-Plane principle (β = 0103, t-value = 0.583, p-value = 0.563) does not demonstrate a significant effect on securing funding. The coefficient for this principle was 0.230, but the p-value was 0.563, indicating no statistical significance. As a result, Hypothesis 5 (H5) was not supported by the data, suggesting that the Pilot-in-the-Plane principle does not significantly influence the funding outcome.

4.7 Conclusion

This chapter explored and analysed the extent to which Black Industrialists' utilization of effectuation methods influences their success in securing funding from the dtic Black Industrialists' scheme. Despite the comprehensive analysis, none of the hypotheses were supported, indicating that the effectuation principles did not significantly impact the funding outcomes.

The analysis revealed that the Bird in Hand principle, which emphasizes leveraging existing resources, showed no significant influence on funding success (β = 0.001, p-value = 0.993). Similarly, the Affordable Loss principle, which involves managing potential losses, also did not demonstrate a significant relationship with securing funding (β = -0.060, p-value = 0.725). The Lemonade principle, focusing on adaptability and flexibility, failed to show a significant impact as well (β = -0.001, p-value = 0.994).

Interestingly, the Effectuation Strategy Effectiveness principle showed a marginally significant positive relationship with funding outcomes (β = 0.313, p-value = 0.093), suggesting a weak influence at a 10% significance level. This indicates that while the effectuation strategies might play a role, their impact is not strong enough to be conclusive at the conventional 5% significance level.

The Pilot-in-the-Plane principle, which emphasizes taking control and planning, did not significantly influence funding success (β = 0.103, p-value = 0.563). This suggests that the principle of being the main driver in planning and execution does not necessarily translate to successful funding outcomes.

The analysis also considered Entrepreneurial Experience as moderating variable and which was used as a control variable. However, it did not significantly predict Outcome Satisfaction, as indicated by the R-square value of 0.001 in Model 1. The inclusion of additional predictors in Model 2 slightly improved the explanation of variance in Outcome Satisfaction, but the overall fit remained poor, with high p-values indicating a lack of statistical significance.

While the effectuation methods were hypothesized to influence funding success, the data did not support these hypotheses. The constructs, although theoretically sound, did not translate into significant predictors in the context of the dtic Black Industrialists' scheme. Future research could explore other potential moderating variables or refine the constructs to better capture the nuances of effectuation in this specific funding context.

● CHAPTER 5. IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSION

5.1. Profiles of the Black Industrialists

The demographic profile of the Black Industrialists participating in the dtic Black Industrialist Scheme provides crucial insights into South Africa's entrepreneurial landscape. The majority of respondents were male (72%), suggesting a gender disparity that may require targeted initiatives to encourage female participation in industrial entrepreneurship (Bosiu et al., 2023). Additionally, most companies were headquartered in Gauteng, reflecting the province's economic dominance and emphasizing the need for regional development programs to support entrepreneurs in underrepresented areas (Goga et al., 2019b).

The high level of entrepreneurial experience among the Black Industrialists in the scheme aligns with findings by Ruiz-Jiménez et al. (2021), which indicate that seasoned entrepreneurs often prefer causation strategies over effectuation methods. This suggests that while effectuation strategies may play a role in early-stage entrepreneurship, experienced entrepreneurs may find structured planning and formalized financial management more effective for securing institutional funding (Read et al., 2016).

Moreover, funding access remains a challenge for black entrepreneurs due to structural barriers, including limited collateral, constrained credit history, and exclusion from traditional financial networks (Lewis & Gasealahwe, 2017). The dtic Black Industrialist Scheme seeks to mitigate these barriers by providing both financial and non-financial support (Bosiu et al., 2020), yet gaps persist in its effectiveness, particularly for entrepreneurs without prior funding experience.

Black Industrialists operate in diverse industries, with the most common sectors including Chemicals and Plastics (12%), Agriculture and Agro-Processing (7%), and Renewable Energy (7%). The variation in funding success across these sectors highlights the importance of industry-specific funding criteria and policy interventions to ensure equitable resource allocation (Vilakazi & Moore, 2023).

Funding secured through the dtic BIS also varies significantly, with 28% of respondents securing between R1 million and R5 million, while 19% obtained over R50 million. The ability to secure larger amounts may be linked to factors such as prior business success, existing partnerships, and access to complementary funding sources like the Industrial Development Corporation (IDC) and the National Empowerment Fund (NEF) (dtic, 2022)).

The profile of Black Industrialists reveals structural inequalities that persist in access to funding, particularly for new entrepreneurs and those operating outside economic hubs like Gauteng. While effectuation strategies emphasize adaptability and leveraging existing resources, their practical application in structured funding environments remains complex.

5.2.Hypotheses Discussion

This study tested several hypotheses concerning the application of effectuation principles and their influence on securing funding from the dtic Black Industrialist Scheme. Despite comprehensive analysis, none of the hypotheses were supported, indicating that effectuation principles did not significantly impact funding outcomes.

Bird in Hand Principle: This principle, which emphasizes leveraging existing resources, showed no significant influence on funding success ($\beta = 0.001$, p-value = 0.993). This may be due to the dtic scheme's structured funding process, which prioritizes predefined eligibility criteria over entrepreneurial flexibility (Sarasvathy, 2001; Read et al., 2016).

Affordable Loss Principle: Managing potential losses also did not demonstrate a significant relationship with securing funding ($\beta = -0.060$, p-value = 0.725). Given that funding institutions often prioritize risk mitigation over entrepreneurial risk-taking (Dew et al., 2009), this finding aligns with previous research suggesting that affordable loss strategies are more effective in informal or highly uncertain markets (Perry et al., 2012).

Lemonade Principle: The adaptability and flexibility promoted by this principle failed to significantly impact funding success. The dtic scheme's rigid criteria may inhibit the benefits of flexible and adaptive strategies, which tend to be more effective in unstructured or rapidly changing environments (Pacho & Mushi, 2021).

Crazy-Quilt Principle: The principle of forming partnerships and leveraging networks did not significantly influence funding outcomes. While literature suggests that strategic networking enhances entrepreneurial success (Covin & Lumpkin, 2011), its limited effect here may reflect the formalized nature of funding application processes (George et al., 2012).

Pilot-in-the-Plane Principle: This principle, emphasizing taking control and shaping outcomes, was also statistically insignificant ($\beta = 0.103$, p-value = 0.563). This suggests that strategic foresight alone is insufficient when applying for structured funding, where compliance with predefined criteria holds greater importance (Lingelbach, 2022).

The marginal significance of the Effectuation Strategy Effectiveness principle ($\beta = 0.313$, p-value = 0.093) suggests that some effectuation-based approaches may be relevant, albeit weakly, in structured funding environments. Future research should investigate contextual factors that may moderate these relationships.

The study utilized a deductive research approach, which is appropriate for testing pre-established hypotheses derived from existing theories (Soiferman, 2010). The use of a positivist paradigm ensured objectivity and reproducibility (Creswell & Creswell, 2017) (Creswell & Creswell, 2017). A correlational research design was applied to examine relationships between effectuation principles and funding success without direct manipulation of variables (Curtis et al., 2016).

This study extends effectuation theory by examining its application in a structured funding environment within a developing economy. Unlike existing research, which predominantly explores effectuation in informal or nascent entrepreneurial settings (Sarasvathy, 2001; Read et al., 2016), this study highlights its limitations when applied within formalized financial structures.

The research methodology aligned with quantitative methods, allowing statistical generalization (Sukamolson, 2007). The study applied regression analysis to assess the significance of effectuation principles on funding success, ensuring robust inferential results (Hair et al., 2019). Furthermore, validity and reliability were established through internal consistency tests and construct validity assessments, enhancing the credibility of the findings (Antwi & Hamza, 2015).

These methodological choices strengthen the robustness of the study while highlighting key limitations, such as the cross-sectional nature of the research and potential self-reporting bias.

5.3.Theoretical and Practical Contribution

This study extends effectuation theory by examining its application in structured funding environments within a developing economy. While effectuation principles are traditionally explored in informal and nascent entrepreneurial settings ((Sarasvathy, 2001a); (Read et al., 2016), this research highlights their limitations in highly structured government-backed financing programs. Key theoretical contributions include:

- *Contextualizing Effectuation in Structured Funding*: The findings suggest that effectuation strategies may be less effective in environments with predefined funding criteria, reinforcing the need for strategic alignment between entrepreneurial approaches and institutional requirements (Perry et al., 2012).
- *Expanding Effectuation Research in Developing Economies*: By focusing on South African Black Industrialists, this study broadens the empirical scope of effectuation theory beyond Western economies, addressing the gap in research on entrepreneurial decision-making in resource-constrained environments (Goga et al., 2019b).
- *Entrepreneurial Experience and Funding Success*: The study finds that experience does not significantly moderate the effectiveness of effectuation strategies in structured funding contexts. This challenges prior assumptions that entrepreneurial expertise enhances adaptability and success (Ruiz-Jiménez et al., 2021)l

The findings further have several practical implications for policymakers, funders, and Black Industrialists:

- *Refining Entrepreneurial Training*: Given the limited applicability of effectuation principles in structured funding settings, training programs could integrate elements of strategic planning, financial forecasting, and compliance with institutional requirements (Lewis & Gasealahwe, 2017).
- *Policy Adjustments for Greater Inclusivity*: Policymakers should consider making funding criteria more flexible to accommodate entrepreneurial adaptability, particularly for early-stage ventures that may not meet rigid financial prerequisites (Vilakazi & Moore, 2023).
- *Enhancing Network-Based Financing Models*: While the Crazy-Quilt principle did not significantly impact funding outcomes, the role of strategic partnerships remains crucial. Government and private sector collaborations could facilitate alternative financing mechanisms such as equity investments and blended financing models (Lingelbach, 2022).

- *Longitudinal Tracking of Black Industrialists*: Future iterations of the dtic Black Industrialist Scheme should incorporate continuous assessment mechanisms to evaluate how funded businesses evolve and whether effectuation strategies gain relevance over time (Pacho & Mushi, 2021).

5.4.Limitations of the Study

While this study provides valuable insights into the role of effectuation strategies in securing funding for Black Industrialists, several limitations have been noted.

The study has limitations in generalizability and cross-sectional nature. Its cross-sectional nature prevents an assessment of how effectuation strategies influence funding success over an extended period. Self-reported data may introduce response bias, and future research could benefit from triangulation methods. The study does not account for external factors like macroeconomic conditions or global market changes. A larger and more diverse sample could enhance the robustness of findings. Additionally, the correlational approach limits the ability to infer causality between effectuation principles and funding success. Future research could incorporate these factors for a more comprehensive understanding.

5.5.Suggestions for Future Research

Future research could focus on conducting qualitative studies to gain deeper insights into how entrepreneurs, specifically Black Industrialists in Africa, perceive and apply effectuation principles in their entrepreneurial activities. This could involve interviews or case studies that explore the lived experiences of entrepreneurs, providing a deeper understanding of the contextual factors influencing effectuation strategies. Additionally, longitudinal studies could be beneficial in examining how the application of effectuation principles evolves over time and its long-term impact on funding success. Such studies could provide a more comprehensive understanding of the dynamic nature of entrepreneurial strategies in developing economies.

5.6.Conclusion

This study provides valuable insights into the characteristics and funding outcomes of entrepreneurs in the dtic Black Industrialist Scheme. The findings highlight the limited effectiveness of effectuation strategies within structured funding environments, where rigid eligibility criteria and institutional processes dominate decision-making (Read et al., 2016; Sarasvathy, 2001a). This suggests that while effectuation remains a valuable entrepreneurial framework, its practical application must be adapted to align with institutional funding requirements (Dew et al., 2009).

The research contributes to both theory and practice by demonstrating that entrepreneurial experience does not significantly moderate the success of effectuation strategies in structured funding environments, contradicting previous assumptions that experience enhances adaptability and resource acquisition (Ruiz-Jiménez et al., 2021). This highlights the need for further exploration of how entrepreneurial training programs and mentorship initiatives can bridge the gap between effectual decision-making and compliance with structured funding requirements (Vilakazi & Moore, 2023).

Practically, the study underscores the necessity of refining funding policies to accommodate entrepreneurial flexibility while maintaining accountability in financial resource allocation. Policymakers should consider more adaptive funding mechanisms that recognize the dynamic nature of entrepreneurial ventures, particularly in developing economies where uncertainty remains a major challenge (Pacho & Mushi, 2021).

Future research should expand upon these findings by incorporating longitudinal studies that examine the evolving impact of effectuation strategies on funding success over time. Additionally, comparative studies across different funding mechanisms—such as venture capital, angel investment, and government grants—could provide a broader understanding of how entrepreneurs can strategically navigate various financial landscapes (Lewis & Gasealahwe, 2017).

By addressing these considerations, future studies can refine the understanding of effectuation theory in structured financial ecosystems and provide more targeted recommendations for improving funding access and entrepreneurial success in developing economies.

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7. APPENDICES

7.1.Appendix 1 – Consistency Matrix

Title: Effectuation methods in the success of entrepreneurs accessing funding in the dtic Black Industrialist Scheme (BIS) (A quantitative study)
Problem Statement: There is a knowledge gap on how application of effectuation methods' improves entrepreneurs' success and ability to obtain funding from the dtic BIS.

Sub-Objectives	Literature Review	Research Questions	Hypotheses	Variables	Source of data	Type of data	Analysis
To examine the influence of **using** effectuation methods **(Bird in Hand Principle)** on the success of entrepreneurs **securing funding** in the dtic Black Industrialists' scheme (BIS)	Sarasvathy, S. D. (2001). Covin, J. G., & Lumpkin, G. T. (2011). (Ajzen, 1991). Pacho, F. (2022).	To what extent do Black Industrialists' **utilization** of effectuation methods **(Bird in hand principle) influence** their success in **securing funding** in the dtic BIS?	H1: Effectuation methods **(Bird in hand)** have a positive influence on the successful **securing of funding** from the dtic BIS	IV1 Means **(Bird in hand principle)**	Likert Scale Q 1-3 Means **(Bird in hand)**	Ordinal data from Likert scale	SPSS Descriptive statistics Correlation Analysis Regression Analysis
To examine the influence of **using** effectuation methods **(Affordable loss Principle)** on the	Sarasvathy, S. D. (2001). Covin, J. G., & Lumpkin, G. T. (2011). (Ajzen, 1991) Pacho, F. (2022).	To what extent do Black Industrialists' **utilization** of effectuation methods **(Affordable loss Principle) influence**	H2: Effectuation methods **(Affordable loss)** have a positive influence on the successful **securing of**	IV2 **Affordable loss**	Likert Scale Q 4-6 **Affordable loss**	Ordinal data from Likert scale	SPSS Descriptive statistics Correlation Analysis

Sub-Objectives	Literature Review	Research Questions	Hypotheses	Variables	Source of data	Type of data	Analysis
success of entrepreneurs **securing funding** in the dtic Black Industrialists' scheme (BIS)		their success in **securing funding** in the dtic BIS?	**funding** from the dtic BIS				Regression Analysis
To examine the influence of **using** effectuation methods **(Strategic Partnerships)** on the success of entrepreneurs **securing funding** in the dtic Black Industrialists' scheme (BIS)	Sarasvathy, S. D. (2001). Covin, J. G., & Lumpkin, G. T. (2011). (Ajzen, 1991). Pacho, F. (2022).	To what extent do Black Industrialists' **utilization** of effectuation methods **(Strategic partnerships)** **influence** their success in **securing funding** in the dtic BIS?	H3: Effectuation methods **(Strategic Partnerships)** have a positive influence on the successful **securing of funding** from the dtic BIS	IV3 **Strategic Partnerships**	Likert Scale Q 7-9 **Strategic Partnerships**	Ordinal data from Likert scale	SPSS Descriptive statistics Correlation Analysis Regression Analysis
To examine the influence of **using** effectuation methods **(Exploitation of Contingencies)** on the success of entrepreneurs	Sarasvathy, S. D. (2001). Covin, J. G., & Lumpkin, G. T. (2011). Ajzen, I. (1991). Pacho, F. (2022).	To what extent do Black Industrialists' **utilization** of effectuation methods **(Exploitation of Contingencies)** **influence** their success	H4: Effectuation methods **(Exploitation of Contingencies)** have a positive influence on the successful **securing of funding** from the dtic BIS	IV4 **Exploitation of Contingencies**	Likert Scale Questionnaire Q 10-12 **Exploitation of Contingencies**	Ordinal data from Likert scale	SPSS Descriptive statistics Correlation Analysis Regression Analysis

Sub-Objectives	Literature Review	Research Questions	Hypotheses	Variables	Source of data	Type of data	Analysis
securing funding in the dtic Black Industrialists' scheme (BIS)		in **securing funding** in the dtic BIS?					
To examine the influence of **using** effectuation methods **(Control of an Unpredictable future)** on the success of entrepreneurs **securing funding** in the dtic Black Industrialists' scheme (BIS)	Sarasvathy, S. D. (2001). Covin, J. G., & Lumpkin, G. T. (2011). (Ajzen, 1991). Pacho, F. (2022).	To what extent do Black Industrialists' **utilization** of effectuation methods **(Control of an Unpredictable future) influence** their success in **securing funding** in the dtic BIS?	H5: Effectuation methods **(Control of an Unpredictable future)** have a positive influence on the successful **securing of funding** from the dtic BIS	IV5 **Control of an Unpredictable future**	Likert Scale Questionnaire Q 13-15 **Control of an Unpredictable future**	Ordinal data from Likert scale	SPSS Descriptive statistics Correlation Analysis Regression Analysis
Success in **securing funding** from the dtic Black Industrialists' scheme (BIS) by enterprises that **utilized**	Black Industrialist Programme - The Department of Trade Industry and Competition. (2019, March 7). Black Industrialists Scheme (BIS) - The Department of	How does **utilization** of effectuation methods increase the likelihood of **securing funding** for the enterprises in the Black Industrialist Scheme?	The **utilization** of the **principles of effectuation** positively correlates with the success of the enterprises to **secure funding**	DV1 **Securing Funding** from dtic's BI Scheme by enterprises **utilizing**	Likert Scale Questionnaire Q 16-24 **Securing funding** from the BI Scheme	Ordinal data from Likert scale	SPSS Descriptive statistics Correlation Analysis Regression Analysis

Sub-Objectives	Literature Review	Research Questions	Hypotheses	Variables	Source of data	Type of data	Analysis
effectuation principles	Trade Industry and Competition. (2023, July 26).		through the dtic Black Industrialists' scheme.	**effectual methods**			

7.2. **Appendix 2 – Research Instrument**

Black Industrialist Effectuation Instrument

Survey Flow

Block: Introduction and Consent (1 Question)
Standard: Demographics (4 Questions)
Standard: Level of funding (1 Question)
Standard: Bird in Hand (Using the means that you have) (5 Questions)
Standard: Affordable Loss (Taking Affordable Risks) (5 Questions)
Standard: Crazy Quilt (Strategic Alliances) (5 Questions)
Standard: Lemonade (Learning from Setbacks) (5 Questions)
Standard: Pilot in the Plane (Control of an Unpredictable future) (5 Questions)
Standard: Effectiveness of Your Strategies (4 Questions)

Page Break

Start of Block: Introduction and Consent

Intro1 Dear Valued Participant,

My name is Kegomoditswe Letsogo, a student at the University of the Witwatersrand Business School reading for a Master of Management in Entrepreneurship and New Venture Creation. I am contacting you to invite you to take part in my research project, which will investigate the strategies Black Industrialist (BI) Enterprises employ to obtain funding from the Department of Trade, Industry, and Competition (dtic).

The objective of this research is to gain insights into the entrepreneurial decision-making processes Black Industrialists use during the application and successful securing of dtic's BI funding. Effectuation, the theory underpinning this study, refers to the dynamic and creative approaches entrepreneurs employ to navigate uncertainties, create opportunities, and secure funding for the establishment of their enterprises.

The performance or current state of your company is not examined in this study. It is entirely focused on the methods and strategies applied in the funding application and approval procedure by the Black Industrialist Scheme. There are demographic questions in the questionnaire that will be analysed. Your answers remain strictly anonymous.

Please note the following : Your participation is entirely voluntary, and you have the right to withdraw at any point without providing a reason. The information provided in the questionnaire will be treated with strict confidentiality, and your responses will be anonymized in the final analysis. The questionnaire is designed to take no more than 20 minutes to complete.
Your contribution to this research is highly valued, and your willingness to share your experiences will enhance our understanding of the unique challenges and successes within the Black Industrialist community. By completing and submitting the questionnaire, you are indicating your voluntary consent to participate in this study.

Should you have any questions or concerns about your participation or the study itself, please feel free to contact me or my supervisor on the details listed below:
428589@students.wits.ac.za
boris.urban@wits.ac.za

By clicking 'Continue', you indicate your willingness to participate.

☐ Continue (1)

End of Block: Introduction and Consent

Start of Block: Demographics

Dem1 Gender

- ◯ Male (1)
- ◯ Female (2)
- ◯ Non-binary / third gender (3)
- ◯ Prefer not to say (4)

Dem2 In which province is the headquarters of your company located?

- ◯ Eastern Cape (1)
- ◯ Free State (10)
- ◯ Gauteng (11)
- ◯ KwaZulu-Natal (12)
- ◯ Limpopo (13)
- ◯ Mpumalanga (14)
- ◯ Northern Cape (15)
- ◯ North West (16)
- ◯ Western Cape (17)

Dem3 Please indicate the number of years you have been actively involved in entrepreneurial activities

- ◯ Less than 1 year (1)
- ◯ 1-3 years (4)
- ◯ 4-6 years (5)
- ◯ 7-10 years (6)
- ◯ More than 10 years (7)

Dem4 Which type of funding did your enterprise receive through the Black Industrialist program?

- ○ the dtic COST-SHARING GRANT (1)
- ○ the dtic COST-SHARING GRANT AND ECIC (4)
- ○ the dtic COST-SHARING GRANT AND IDC FUNDING (5)
- ○ the dtic COST-SHARING GRANT AND NEF FUNDING (6)
- ○ ECIC - ENTERPRISE DEVELOPMENT (7)
- ○ IDC FUNDING (8)
- ○ NEF FUNDING (9)
- ○ Other (10)

End of Block: Demographics

Start of Block: Level of funding

Fund1 1. What range best represents the amount of funding you successfully secured through the dtic's Black Industrialist Scheme?

- ○ Less than R1 million (1)
- ○ R1 million - R5 million (2)
- ○ R5 million - R10 million (3)
- ○ R10 million - R20 million (4)
- ○ R20 million - R50 million (5)
- ○ More than R50 million (6)

End of Block: Level of funding

Start of Block: Bird in Hand (Using the means that you have)

BIH1

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
Before seeking funding, you considered the skills and resources you already have (1)	○	○	○	○	○

BIH2

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You focused on using your current skills and abilities to get funding (1)	○	○	○	○	○

BIH3

	Extremely confident (1)	Somewhat confident (2)	Neutral (3)	Somewhat not confident (4)	Not confident (5)
How confident were you in using what you already had to convince investors and get funding? (1)	○	○	○	○	○

BIH4

	Extremely important (1)	Very important (2)	Moderately important (3)	Slightly important (4)	Not at all important (5)
How important was it for you to come up with practical and doable solutions early on in your funding plans? (1)	o	o	o	o	o

BIH5

	Extremely confident (1)	Somewhat confident (2)	Neutral (3)	Somewhat not confident (4)	Not confident (5)
How confident were you in using your own assets to convince investors and secure funding? (1)	o	o	o	o	o

End of Block: Bird in Hand (Using the means that you have)

Start of Block: Affordable Loss (Taking Affordable Risks)

AFL1

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You were willing to take risks when seeking funding (1)	o	o	o	o	o

AFL2

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You set a limit on how much time and effort you were willing to spend on getting funding (1)	○	○	○	○	○

AFL3

	A Lot (1)	Much (2)	Moderately (3)	Little (4)	Very Little (5)
How much did you learn from things not going as planned and adjust your funding strategy? (1)	○	○	○	○	○

AFL4

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
You saw potential losses in getting funding as something you could manage and accept (1)	○	○	○	○	○

AFL5

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You were comfortable to change your approach based on feedback and unexpected changes (1)	○	○	○	○	○

End of Block: Affordable Loss (Taking Affordable Risks)

Start of Block: Crazy Quilt (Strategic Alliances)

CRQ1

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You involved a variety of people and organizations when looking for funding (1)	○	○	○	○	○

CRQ2

	Always (1)	Most of the time (2)	Occasionally (3)	Sometimes (4)	Never (5)
How much did you try to partner with different groups during your funding journey? (1)	○	○	○	○	○

CRQ3

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You were open to trying different and unconventional ways to get funding (1)	○	○	○	○	○

CRQ4

	Significantly (1)	Moderately (2)	Somewhat (3)	Slightly (4)	Not at all (5)
To what extent did you use your network to improve your funding plans? (1)	○	○	○	○	○

CRQ5

	Not at all important (1)	Slightly important (2)	Moderately important (3)	Very important (4)	Extremely important (5)
How important was it for you to build and keep relationships with important people in your industry? (1)	○	○	○	○	○

End of Block: Crazy Quilt (Strategic Alliances)

Start of Block: Lemonade (Learning from Setbacks)

LEM1

	Frequently (1)	Often (2)	Occasionally (3)	Rarely (4)	Very Rarely (5)
How often did you change your funding plans when things didn't go as expected? (1)	○	○	○	○	○

LEM2

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You saw problems as chances to rethink and come up with new ideas for getting funding (1)	○	○	○	○	○

LEM3

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You were comfortable with changing your funding plan based on new information and changes in the market (1)	○	○	○	○	○

LEM4

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
You actively looked for and used new opportunities that came up while seeking funding (1)	○	○	○	○	○

LEM5

	A Lot (1)	Much (2)	Moderately (3)	Little (4)	Very Little (5)
How much did you value being flexible and ready to change when facing unexpected problems in getting funding? (1)	○	○	○	○	○

End of Block: Lemonade (Learning from Setbacks)

Start of Block: Pilot in the Plane (Control of an Unpredictable future)

PIL1

	No Control (1)	Limited Control (2)	Some Control (3)	Substantial Control (4)	Full Control (5)
How much control did you feel you had over getting funding? (1)	○	○	○	○	○

PIL2

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
You actively shaped and influenced your funding plans instead of just reacting to what was happening (1)	○	○	○	○	○

PIL3

	Extremely confident (1)	Somewhat confident (2)	Neutral (3)	Somewhat not confident (4)	Not confident (5)
How confident were you in leading and making decisions that affected your success in getting funding? (1)	○	○	○	○	○

PIL4

	Always (1)	Most of the time (2)	Sometimes (3)	Occasionally (4)	Never (5)
Did you feel empowered to take charge and push your funding plans forward? (1)	○	○	○	○	○

PIL5

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
It was important for you to be the main driver of your funding plans instead of relying on others (1)	○	○	○	○	○

End of Block: Pilot in the Plane (Control of an Unpredictable future)

Start of Block: Effectiveness of Your Strategies

EFFECT1

	Not at all (1)	Slightly (2)	Moderately (3)	Significantly (4)	A lot (5)
Do you think using these strategies helped you get more funding? (1)	○	○	○	○	○

EFFECT2

	Not effective at all (1)	Slightly effective (2)	Moderately effective (3)	Very effective (4)	Extremely effective (5)
How well do you think these strategies worked in reaching your funding goals? (1)	○	○	○	○	○

EFFECT3

	Extremely satisfied (1)	Somewhat satisfied (2)	Neither satisfied nor dissatisfied (3)	Somewhat dissatisfied (4)	Extremely dissatisfied (5)
How happy are you with the results of using these strategies to get funding? (1)	○	○	○	○	○

EFFECT4

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
The amount of funding you received matches what you originally aimed for (1)	○	○	○	○	○

End of Block: Effectiveness of Your Strategies

7.3. Appendix 3 – Certificate of Competence in Research Ethics

CERTIFICATE OF COMPETENCE IN RESEARCH ETHICS

Name: **Kegomoditswe Letsogo**

Student No: 428589

Date of Certification: 23 January 2024- 22 January 2027 (This certificate is valid for a period of three years)

TRAINED BY:

PROF. JASPER KNIGHT

(RESEARCH ETHICS)

SIGNATURE:

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

ISSUED BY:

DR. ROBIN DRENNAN
(DIRECTOR: RESEARCH OFFICE)

SIGNATURE:

This certificate is confirmation of successful completion of a training course in Research Ethics for Non-Medical human research, based upon achieving a minimum level of competence in different assessment tasks.

7.4. Appendix 4 – Ethics Clearance Certificate

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

Wits Business School Ethics Committee
Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/EN428589/976
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below).

Project title	Effectuation methods in the success of entrepreneurs securing funding in DTIC Black Industrialist Scheme
Investigator / Researcher	Mrs Kegomoditswe Tsholofelo Letsogo
Nature of Project	MM in Entrepr & New Venture Creation
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed confidentialty.
Issue Date of Certificate	23/07/2024
Expiry date	Date of submission of the project / research report
Chairperson	Dr Ayanda Magida ☎ +27 11 717 3953 ✉ ayanda.magida@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethi Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research an guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Signature   Date: