SPONSORING ENTREPRENEURSHIP
A QUALITATIVE STUDY ON THE EFFECTIVENESS OF GOVERNMENT FINANCING PROGRAMS IN SPONSORING SME ENTREPRENEURSHIP IN BOTSWANA

Abstract:
The value of entrepreneurship in catalysing economic and social development in developing economies is well-documented. Government SME financing programs in Botswana have helped increase access to capital for entrepreneurs, but high default rates on loans have held down overall performance. By interviewing decision-makers at government agencies providing SME financing programs, a qualitative assessment of the mechanisms used to regulate the screening and monitoring of loan-takers is rendered from an agency theory perspective. It is found that there are methods of raising effectiveness in government financing programs by introducing mechanisms to mitigate the adverse effects of agency costs found in the relationship between lender and borrower. These results provide new areas of research in the study of SME financing programs and help decision-makers recognize some of the available policy options to contribute economic and social improvement.

Keywords: government financing programs, SME entrepreneurship, agency problems, loan repayment

Author: Jesper Bernhardsson (880407-2430)
Tutor: Peter Smekal, Senior lecturer, Uppsala University, Department of Government
Thesis defense: 2 October 2017, 10.15-11.45, Room 6229, Uppsala University
## Contents

1 Introduction ............................................................................................................. 3  
1.1 The study ............................................................................................................ 5  
1.2 Background ......................................................................................................... 5 
1.3 Problem Statement ............................................................................................... 6 
1.4 Purpose .................................................................................................................. 6 
1.5 Delimitations ....................................................................................................... 7 
1.6 Research Question ............................................................................................... 8 

2 Theory ...................................................................................................................... 9 
2.1 Agency theory in brief .......................................................................................... 9 
2.2 Applications of agency theory in SME financing ............................................... 10 
2.3 Research on loan repayment rates in SME financing ......................................... 11 

3 Method .................................................................................................................... 12 
3.1 Hypothesis .......................................................................................................... 12 
3.2 Data collection .................................................................................................... 14 
3.3 Research method .................................................................................................. 15 
3.4 Research object ................................................................................................... 15 
3.5 Interview design .................................................................................................. 16 

4 Data ........................................................................................................................ 17 
4.1 Government financing agencies ........................................................................ 17 
4.2 Interviews with agencies .................................................................................... 18 

5 Analysis .................................................................................................................... 20 
5.1 Summary of findings .......................................................................................... 20 
5.2 Discussion ............................................................................................................ 20 

6 Summary .................................................................................................................. 23 
6.1 Conclusion ............................................................................................................ 23 
6.2 Implications for policy makers ........................................................................... 23 
6.3 Validity ................................................................................................................. 23 
6.4 Reliability ............................................................................................................ 24 
6.5 Limitations ........................................................................................................... 24 
6.6 Transferability ..................................................................................................... 24 
6.7 Suggestions for future research ......................................................................... 24 

7 References ............................................................................................................... 26 
7.1 Journals and conference papers ......................................................................... 26 
7.2 Reports and articles ............................................................................................. 27 
7.3 Interviews ............................................................................................................ 27 

8 Appendix .................................................................................................................. 28
1 Introduction

Small- and medium-sized enterprises (SMEs) play an important role for private sector growth in developing economies. Various researchers have pointed to their promotion as pivotal for alleviating poverty, reducing unemployment and promoting economic growth (Beck, Demirguc-Kunt & Levine, 2005; Knack, 2002; Tambunan, 2008; Wennekers & Thurik, 1999; Acs & Szerb, 2010). In countries where contribution to GDP is tilted heavily towards income from traditional, resource-intensive industries like oil & gas and mining, SMEs can be instrumental in reinvigorating the economy; a point that becomes particularly salient in countries where a large share of national income is drawn from finite resources. SME businesses have the potential to fill the void left behind when such industries meet their inevitable demise.

Botswana is one of the most prosperous countries in Africa and it has built a well-oiled state apparatus on the back of the government revenue from its vast diamond industry. Absent many of the problems of corruption that have stifled economic growth in other resource-rich countries, Botswana has escaped the resource curse and successfully funnelled its wealth back into the economy. According to recent reports, however, revenue from diamond extraction and processing in Botswana - today totalling one third of national GDP - is slowly decreasing, with some observers saying that known reserves in Botswana will start to become deplete in the 2020s (KPMG, 2012, p. 7). In order to lay the foundation for a sustainable economy, Botswana will have to come to terms with its overdependence on diamond industry rents. One way of doing this is by purposefully investing in nascent industries by promoting growth of SMEs – what some would call the lifeblood of the economy.

SME development programs have been in place in Botswana since the 1970s and constitute one of the most promising means of economic diversification (World Bank, 2011). The Botswana Democratic Party - the political party in power since national independence in 1966 - has adopted a three-pronged strategy to prepare the economy for some of the economic challenges facing the country. The strategy includes policies for increased economic diversification, flexible fiscal tools and reinvestment of resource wealth (Meija & Castel, 2012, p.2). The promotion of SME growth in key industries is one of the most instrumental parts of successfully implementing this strategy.

In developing economies, the largest bottleneck for SME growth is often the absence of equitable funding available to SMEs. Financial institutions in the private sector may be too weak, offer non-competitive interest rates or only provide top-down packaged financial services that are unfit for start-ups or smaller enterprises (Acemoglu & Robinson, 2012; World Bank, 2011). In countries where these conditions apply, governments may take measures to promote alternative capital markets and thereby improve access to capital. There are twelve commercial banks in Botswana’s financial sector, but the services mediated through these are often targeted towards larger companies, that often stand better able to service loans at market rates. Alongside these banks there are a few government-owned institutions that provide
companies with access to different forms of debt and equity financing, sometimes through support programs tailored for sponsoring SME growth.

As important as such support programs have been in promoting SME proliferation in Botswana, their effectiveness has been called into doubt by some observers. Despite successfully providing SMEs with financing, programs have failed to produce a desired degree of longevity in companies and low rates of repayment on loans have cramped the ability of banks to transfer loan amortization into refinancing of new ventures. Access to financing is not as large as compelling a reason for the underperformance of SME programs as in other countries – business failure is what has stopped these programs from reaching their potential. Approximately 80% of small enterprises in Botswana cease trading within five years of start-up according to a report produced by the OECD (2005). Furthermore, one in four in Botswana are without employment (International Monetary Fund, 2014, p.47), which suggests that reviewing how support programs allocate financing resources can have important consequences for Botswana’s future economic performance and social development.
1.1 The study

This essay studies how government institutions provide financial capital to SMEs by examining how agencies select and monitor entrepreneurs partaking in SME financing programs. The analysis is carried out by looking at these two mechanisms from an agency theory perspective. This scope of study synthesizes various veins of the research previously conducted on the subject. The usefulness of providing policy recommendations is underpinned by the political consensus regarding the importance of stimulating long-term economic growth in Botswana through sponsorship of SME growth. In the following paragraphs, conceptual definitions and thesis demarcations are provided to delineate the research question sufficiently to produce results with analytical rigour.

1.2 Background

Government-funded SME financing schemes serve a rare function in the capital markets of developing economies in that they help distribute financial capital to SME entrepreneurs, for whom private market capital is often not available. Despite their importance, surprisingly little research has been carried out on the subject. Arena (2011) says that the absence of research on the market for non-bank debt is glaring in the finance literature despite the importance and unique role that it plays.

The authors of an OECD paper on the economic outlook in African countries write the following about the role of SME programs in Botswana:

“Botswana has long realized the importance of small and medium-sized enterprises (SMEs) in fostering economic growth and creating jobs. This has led to the introduction, over the last two decades, of targeted financial support as well as advisory programs to help the people of Botswana establish their own enterprises. In their initial stage, these programs were set up more in response to specific problems encountered than as the basis of a comprehensive and more focused government policy on SMEs. It is estimated that there are about 56,300 SMEs currently operating in the country, employing 125,000 people, including business owners. In a 1996 study of the role of SMEs in Botswana, these enterprises’ contribution to GDP was estimated at 30-45 per cent, while that of large firms was estimated at 38-48 per cent of GDP. SMEs are believed to account for 15 per cent of formal employment, implying that job creation is one of their most important contributions.”

- OECD. African Economic Outlook (2005, p. 113)

Finmark Trust (2006), a South African non-profit trust promoting integration in the financial market, surveyed 180 small ventures in urban environments in Botswana, and found that “almost three quarters of these businesses were started with personal savings or loans from family and friends. Only 13% were started with loans from commercial banks, and only 9% used money from government small business initiatives.”

Poor availability of data is a commonplace in Botswana, which is reflected by the somewhat dated statistics cited above. Nevertheless, it appears obvious when reading these claims that government debt funding for
SMEs is not only an issue that warrants greater scrutiny in public discourse, but also a larger share of attention in research.

1.3 Problem statement
Examining how screening and monitoring entrepreneurs can improve government organizations’ ability to provide funding for SME entrepreneurs is important because ineffective policies undermine the objectives that SME funding programs are in the first place designed to support. For instance, the Citizen Enterprise Development Authority (CEDA), a major provider of government financing in Botswana, struggles with high loan default rates. Repayments on loans are fundamental to the CEDA business model as the agency operates a revolving credit line. According to one observer, “the revolving nature of the fund is being crippled by customers' failure to service their loans” (Benza, 2007). Indeed, in their annual report, CEDA identifies as one of its major credit risks poor implementation of projects, which leads to lenders struggling with the repayment of their loans (CEDA, 2013, p.46). “In terms of collections from funded projects, [CEDA] achieved a collection rate of 147 million pula against a target of 171 million pula” (Ibid. p.25). This corresponds to a default rate on the lent amount due for payment of about 14% in absolute terms.

While the SME default rate on loans is invariably influenced by external circumstances like financial turmoil in the global economy and – for agricultural industries like dry-crop farming and livestock – droughts and other force majeure circumstances, the high rate does suggest underlying causes that affect loan-takers ability and/or motivation to amortize on loans. Even when acknowledging that entrepreneurs sometimes fail to repay loans due to exogenous factors such as those mentioned, it is likely that blame for many business failures can nonetheless be attributed to endogenous factors. Indeed, some factors that appear exogenous on face value, like absence of market demand for products and services offered, can be moderated on the part of the entrepreneur through market forecasting and contingency planning. In other words, exogenous factors converge with endogenous elements: the ability and motivation of the entrepreneur to achieve success in business can arguably be a measure of entrepreneurial capability rather than external circumstances.

1.4 Purpose
The purpose of this study is to contribute new knowledge on how government development programs can increase the rate of optimal outcomes in lending to SME entrepreneurs by optimizing lending mechanisms. Analysing the screening and monitoring mechanisms that regulate the relationship between government agencies and entrepreneurs helps us understand how current policies can be adjusted to improve the effectiveness of capital invested in SME businesses through government programs.

The intended audience of this report is policy makers of government funding for the SME sector in the respect that they can influence the design of screening and monitoring mechanisms in SME programs. It follows from the purpose of this study to apply an interpretative research paradigm. Findings are
interpreted and evaluated in terms of their plausibility as explanations for the investigated phenomena. The etymological basis employed in the thesis should be understood as an attempt to produce new knowledge by deducing explanations for observations made during data collection. As such, the results provided in the thesis can be challenged by reproducing the study and suggesting other factors as having better explanatory value for understanding how entrepreneurs use (and misuse) government capital in their enterprises.

1.5 Delimitations
The study focuses on public debt financing through government financing programs for entrepreneurs that seek funding for small- to medium-size enterprises. A brief review of definitions is provided below.

1.5.1 Government financing programs
According to Mensah (2004, p. 3), “government official schemes are those introduced by governments either alone or with the support of donor agencies to increase the flow of financing to SMEs.” Only debt-issuing government agency programs that conform to this definition are considered in this thesis, which means that government agencies working with, for instance, networking and mentoring of SME entrepreneurs are outside of the scope of the study.

1.5.2 Debt financing
Söderblom (2012, p. 15) writes that the major sources of financing most often available to start-ups are insider funding (e.g. family & friends, bootstrapping), equity funding and debt funding. Capital from family and friends is rarely sufficient to finance a new enterprise. Equity funding through, for instance, venture capital, is mostly only offered to high-growth enterprises and is therefore not a viable option for the bulk of SME companies. The most common form of debt financing for SMEs are bank loans. Commercial banks in the private sector offer loans to entrepreneurs, but they often compensate for the risk that loan-takers without sufficing credit histories constitute by taking out above-average fees through collateralizing security at discounted market rates and by charging premium interest rates, disqualifying many small firms in Botswana from commercial banking debt facilities. Public debt, including government program financing - the focus of this study, may come in different forms; alternative methods to pure debt financing being e.g. loan-grants, credit guarantees and subsidies. While there are good reasons to examine other forms of financing as well, this study only considers public debt through government financing.

1.5.3 Small- to Medium-size Enterprises (SMEs)
SME companies are the focal object of the study, and microenterprises as well as large firms are not considered. Entrepreneurs are taken to be individuals or groups of individuals who pursue a business idea without affiliation to other companies.
SMEs are defined according to the Botswana Companies Act, which specifies small enterprises as having:

- No more than 25 employees
- Annual turnover between P60,000 – P1,500,000

And medium enterprises as having:

- No more than 100 employees
- Annual turnover between P1,500,000 – P5,000,000

In addition, only companies registered under the applicable laws of the Botswana Companies Act are within the scope of the study, meaning that no shadow sector companies are considered.

1.6 Research questions

The question investigated in this thesis is how control mechanisms regulating government financing programs can be improved to more effectively support SME entrepreneurship in Botswana. To answer this question, the thesis examines two key questions linked to the lending of funds in government programs, namely:

1) How can government agencies screen candidates to select which SME entrepreneurs to grant funding?

2) How can government agencies monitor SME entrepreneurs’ use of granted funds?

To answer these questions, it is necessary to observe the sets of policies currently adopted by government agencies to regulate lending to SME entrepreneurs. This is achieved by interviewing decision makers at public institutions that provide government financing programs. Upon observing current policies in place, and their anticipated outcomes, a set of recommendations is suggested to improve effectiveness of lending arrangements and to support the strategic imperatives of the government’s economic policy. There are several interesting theoretical points of departure for examining lending arrangement, notably social psychology, utility theory and transaction cost economics, but this thesis will examine the object of study solely from the viewpoint of agency theory, the underpinnings of which is the subject of the next section.
2 Theory

This section provides the reader with an introduction to agency theory, its areas of application for lending arrangement in SME financing programs and its implications for loan repayment rates.

2.1 Agency theory in brief

Contemporary research on SME financing in developing countries is relatively young, but it has quickly appropriated some of the traditional theoretical viewpoints from the fields of research in developing economies. Hoskisson et al. (2000) suggests three traditional theories that guide research on developing economies: institutional theory, transaction cost economics, and the resource-based view. In a more recent literature review, Li, Haiyang and Miller (2006) find that social capital, networking perspectives and the resource-dependence view have played significant roles in shaping today’s research on emerging markets, while also noting that agency theory has been limited in its application on emerging markets (Ibid. p.14). The evident gap in the application of agency theory in emerging markets lends support to the choice of theoretical model used in this essay as a way of breaking new ground.

Agency theory has applications within a broad range of subjects in political science and economics, and can, in short, be described as the dilemma that occurs “when one person or entity is able to make decisions on behalf of, or that impact, another person or entity” (Eisenhardt, 1989). Although the underpinnings of agency costs (arguably the most common topic of study within agency theory) in contractual arrangements are extraordinarily well researched, the ability of public lending institutions to mitigate agency costs in lending remains largely unexplored. The starting point for theorizing on agency costs in contractual arrangements is that lenders (principal) and borrowers (agents) have asymmetric information, different attitudes towards risk and that the behaviour of agents cannot be readily observed without costs to the principal. These circumstance may lead to a number of consequences contrary to the interests of the lending party.

First, in deciding whether to give out a loan or not, lenders face the problem of adverse selection. In a seminal paper, Akerlof (1970) illustrates the meaning of adverse selection, using the market for used cars as an example to drive home his case. The assumption is that buyer of a used car is at an information disadvantage and is unable to distinguish between a high- and a low-quality car, whereas the seller of the same used car has access to all information about the quality of the car. The fear of a rigged trade leads to uncertainty, which encourages means of mitigating this uncertainty through the acquisition of more information. The need to acquire information constitutes an inefficiency and leads to agency costs. In lending arrangement, this same phenomenon translates into a situation where lenders cannot distinguish between “good” and “bad” lenders. To mitigate the effects of adverse selection in such arrangements, the principal can employ screening mechanisms (Rasmusen & Blackwell, 1994).

Second, the interests of the agent and the principal are usually not aligned and seldom does the principal have the ability to fully regulate the behaviour of the agent. Reusing our car example above, we imagine a
situation where a car owner insures his car with an insurance company. The owner of the car is now insulated from some of the downsides of engaging in risky driving, as the insurance company will bear most of the cost if things go badly. In some lending arrangement, this means that a loan-taker may, upon being granted a loan, acquire a level of risk preference that differs markedly from his or her or preference in the same situation but where he or she carries the full burden of potential losses. The risk of opportunistic behaviour described above is known as moral hazard, and is a very real risk in contractual situations. The relationship between agent and principal can be regulated through monitoring mechanisms or alignment of incentives to reduce the potential costs of moral hazard.

2.2 Applications of agency theory in SME financing

A conference paper on financing opportunities for African entrepreneurs reads that demand and supply sides have diametrically different objectives. While the former vie for funding without disclosure, the latter needs assurance of credibility in the form of “business plans, sound financial sustainability, credit ratings and skills that prove [that] the money invested will not be lost” (UNEP, 2007, p.11). Government financing programs that provide funds for SMEs without collateralization or contribution may encourage entrepreneurs to undertake projects with excessive risk. In cases such as this, the "upside" of the project are due both to the entrepreneur and the lender, but the “downside” only to the party who carries the project risk - in other words, the lender. Larger firms that wish to finance investments can share risk and reward by offering stocks (e.g. equity issuance or mezzanine financing) and thereby align incentives, but the range of choices available to smaller firms is usually much more narrow (Ibid. p.38). This means that lenders need to take great care to regulate agreements and deter opportunistic behaviour so as not to run the risk of incurring large and unwanted costs (Ibid.).

The research on agency costs in SME financing echoes these verdicts. A brief summary of some of the key findings in this area of research is provided below.

In a cross-sectional analysis, the OECD (2014, p.37) puts forth some of the main issues that overshadow financing for African SMEs. First, asymmetric information poses a more challenging financing problem for SMEs than for larger firms. Due to lack of information, it is difficult for financiers to predict in what way SME entrepreneurs are likely to use funds after they have been received. This suggests that the principal-agent problems are more acute for loan-takers of smaller size.

Wu, Song & Zeng (2008) suggest that the formation of long-term lending relationships is essential for managing SME agency problems. The benefits of implementing mechanisms that seek to reduce agency problems must, however, always be measured against the cost of their implementation. In a study on Chinese ventures, Li & Atuahene-Gima (2001) found, that the costs of political networking with government officials and banks to foster closer relationships attenuated the potential benefits to entrepreneurs due to excessively high opportunity costs. It would seem, therefore, that while building long-
term relationships reduces the risk of agency costs, it does not provide entrepreneurs with enough incentives to engage proactively in their formation.

Kuratko, Hornsby & Naffziger (1999) examine ways of managing the lending risks to sub-prime SME entrepreneurs in developing countries. They suggest that one of the reasons support schemes do not achieve their contemplated results is that government officials often fail to fully comprehend the needs and problems facing small business owners and therefore neglect many opportunities in helping small businesses grow. These findings suggest that government agencies may need to think more broadly about which mechanisms to deploy to improve repayment rates in SME financing programs.

2.3 Research on loan repayment rates in SME financing

The body of research on loan repayments has been concentrated on how microfinance schemes mitigate the risk of repayment delinquency (i.a. Field & Pande, 2008; Mokhtar et al., 2012). Bhatt & Tang (2002, p.13) suggest that “proximity to the lending agency [creates] low transaction costs for accessing loans, and high borrower costs in the event of default also enhance loan repayment performance.”

Others are more sceptical of the value of policies designed to improve access to funding. De Meza (2002), finds that subsidising credit may decrease the repayment rates to lending institutions. This problem is exacerbated when unrealistic optimism on the part of entrepreneurs distorts the ability of lending institutions to identify bad loan-takers and avoid adverse selection in the provision of loans. Dai, Ivanov & Cole (2012) also identify this selection bias, noting that higher levels of entrepreneurial optimism results in correspondingly higher leverage ratios for SMEs and higher risk for the lending party. Indeed, they find that banks are more likely to approve loan applications submitted by entrepreneurs that signal optimism, neither charging an interest premium nor requiring more collateral for the loan. It would seem that not only do lenders find it difficult to identify high-risk borrowers, but they also act wrongly upon information cues that signal risk seeking.

Ghatak (2000) suggest joint-liability contracts as a way of increasing repayment rates when standard instruments for detecting delinquency risk, such as collateral, are not available. Such contracts “induce endogenous peer selection in the formation of groups in such a way that the instrument of joint liability can be used as a screening device to exploit this local information” (Ibid. p.628). In a study on group credit programs in Costa Rica, Wenner (1995) finds that group members’ endogenous screening can reduce delinquency rates. Less than 50% of enrolled groups, however, achieved positive rates of economic return, suggesting that group lending may improve availability of information, but at a cost that outweighs the contemplated benefits.

The next section draws on the theory outlined to conceptualise a framework that serves as the basis for the methodological design of this study.
3 Method

This section outlines the research methodology used to collect and analyse data.

3.1 Hypothesis

As demonstrated in earlier sections, the hypothetical point of departure for this thesis is that government SME financing programs fail to use mechanisms that could improve the effectiveness of financing programs and thereby achieve less than optimal outcomes. The interpretation of the two italicized concepts are addressed below.

One measure of effectiveness for government SME financing programs is inevitably the degree to which they successfully contribute to the objectives of the economic policies that they are designed to support; i.a. economic growth, reduced unemployment and industry diversification. While the contribution of SME funding programs to economic policy is rather elusive to capture, loan repayment rates can serve as a satisfactory approximation. The reason for this is twofold. First, many governmental lending agencies operate revolving lines of credit or closed-circuit funds, which means that amortization on previous loans are required for these institutions to be able to provide new loan-seekers with funding. Second, the ability of loan-takers to repay their loans is directly linked to their degree of business success - if they cannot keep up with their loan repayments, loan-takers will face business failure and foreclosure, i.e. the forces sale of the assets submitted as collateral. Conversely, successful firms put their funds to productive use and benefit society through the growth of industry and increased number of job opportunities. It is, therefore, in the interest of both the lending party and government to keep default rates at a minimum.

Based on the above reasoning, the repayment rate on loans held in the SME portfolios of government financing agencies is a good measure of effectiveness. Effectiveness is measured as the amount of loans repaid in a time period out of the total amount of loans to be repaid in that same time period. In the below model, effectiveness according to this definition can be raised in two ways; first, by reducing the number of type I errors, in which loan-takers that would service their commitments are not granted loans and, second, by reducing type II errors, where loan-takers that do not service their commitments are granted loans. As any observer will realize, implementing policy that seeks to reduce the number of type II errors by restricting access to capital may lead to an increase in the number of type I errors. This means that there is a trade-off element to consider and that policy should not be implemented carelessly. The above relationships are displayed graphically below.
The outcome of lending is clearly linked to the effectiveness of lending agencies to decide which loan-takers to accept. The optimal outcome in the principal-agent relationship is defined from the viewpoint of the principal as an outcome where the objective of the lender is achieved, as illustrated below: an optimal outcome is when a loan is repaid in time and to the full amount of the loan taken inclusive of fees and interest rates charged.

<table>
<thead>
<tr>
<th>DECISION</th>
<th>Do not provide loan</th>
<th>Provide loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTCOME</td>
<td>Loan repaid</td>
<td>A - Type I error: Loan is not provided and loan-taker would service their loan according to agreement.</td>
</tr>
<tr>
<td></td>
<td>Loan not repaid</td>
<td>C - Correct decision: Loan is not provided and loan-taker would not service their loan according to agreement.</td>
</tr>
</tbody>
</table>

Figure 1: Model conceptualizing the theoretical outcome of lending on loan repayment rates

The term principal deserves some disambiguation: in the contractual relationship considered, the loan-taker is the agent, and the lender is the principal. Abstracting this relationship, however, we realize that this same relationship is true for agency and government. Looking at this from the theoretical viewpoint of agency theory leaves us with the conclusion that the principal in the relationship between the lending agency and the government is the latter. However, as outlined above, the interests of the agency and the government are taken to be aligned, as loan repayments will inevitably help the government achieve the objectives of economic policy. As for the consequences implied by taking this argument full circle, i.e. that

<table>
<thead>
<tr>
<th>OPTIMAL OUTCOME</th>
<th>Loan is repaid in time and to the full amount of the loan taken inclusive of fees and interest rates charged</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUB-OPTIMAL OUTCOME</td>
<td>Mismanagement or negligence on part of loan-taker leads to default on instalments or full payment of loan amount due</td>
</tr>
</tbody>
</table>

Figure 2: Definition of optimal outcome from point of view of lending agency.

- **A** – Type I error: Loan is not provided and loan-taker would service their loan according to agreement.
- **B** – Correct decision: Loan is provided and loan-taker does service their loan according to agreement.
- **C** – Correct decision: Loan is not provided and loan-taker would not service their loan according to agreement.
- **D** – Type II error: Loan is provided and loan-taker does not service their loan according to agreement.
the government’s principal is the legal citizens of Botswana, we here make the simplifying assumption that there exists no contractual obligation to regulate their relationship.

For convenience, the main research questions are reiterated below:

1) How can government agencies **screen** candidates to select which SME entrepreneurs to grant funding?

2) How can government agencies **monitor** SME entrepreneurs’ use of granted funds?

Taking these questions and the above examination of **optimal outcomes and effectiveness** into account, we can now formulate our hypothesis as follows: suboptimal outcomes in lending occur due to effectiveness issues that can be mitigated by implementing screening and monitoring policies in government SME financing programs.

### 3.2 Data collection

A primary research methodology is chosen for this study and the core of this research consists in the collection of data through interviews. One of the main reasons for this choice is that the thesis seeks to establish inroads into new areas of research on government financing programs for SMEs. To complement primary data collection, both primary (e.g. internal policies and annual reports) and secondary sources (e.g. international reviews, conference papers and articles) are consulted.

#### 3.2.1 Primary sources

Primary sources are of two kinds; interviews and internal documents.

Interviews serve the objective of identifying potential areas of new knowledge well, as they can be designed to fulfill the exploratory ambition of the scope. Particularly helpful in this respect were the probing interviews that were carried out close to the onset of thesis research to identify topics to explore during the interviews with decision-makers at government agencies. Most interviews were conducted with decision makers within the main government financing agencies in Botswana. The number of these interviews is limited as there are only a few agencies in Botswana that issue financing to SME companies.

Internal documents were mostly provided by interviewees and are used to triangulate and validate findings from the interviews. They also serve as a way of evaluating if there were any inconsistencies or contradictions in interviewee responses.

#### 3.2.2 Secondary sources

Where secondary sources are cited they are mainly used either as a way of outlining the context of SME entrepreneurship in Botswana or as interpretative sources to compare and contrast findings from the primary data collection. Such sources mainly encompass digital media; excerpts from digital journals and articles from news media for instance. Secondary sources were also used in preliminary research to create a working hypotheses. Finally, they are also used where data from primary sources lacked in clarity or was
unavailable. Care has been taken not to use sources that could not be traced properly to an independent organization or individual.

3.3 Research method
A phenomenological method is used to refine research questions from the data gathered through interviews and desk research. Emergent themes, such as the misappropriation and misuse of funds were discovered in the early phase of data collection. Working with qualitative data in this way requires a high degree of wariness of the risks of subjectivity bias connected with relying on interviewees’ account of their own experience. The findings produced through preliminary interviews coalesced into the decision to focus on some of the key mechanisms regulating the relationship between lender and loan-taker.

3.4 Research object
The research objects of this thesis are government agencies providing SME financing in Botswana. The three main ones in terms of the scope of funding they provide are the Citizen Entrepreneurial Development Agency (CEDA), the National Development Bank (NDB) and the Botswana Development Corporation (BDC). There are several other agencies that promote and support SME businesses in Botswana, but only agencies that provide debt financing have been interviewed.

<table>
<thead>
<tr>
<th>#</th>
<th>Organisation</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Citizen Enterprise Development Authority (CEDA)</td>
<td>Financing (equity and debt), training and mentoring</td>
</tr>
<tr>
<td>2</td>
<td>National Development Bank (NDB)</td>
<td>Financing (debt)</td>
</tr>
<tr>
<td>3</td>
<td>Botswana Development Corporation (BDC)</td>
<td>Financing (equity and debt)</td>
</tr>
</tbody>
</table>

*Table 1: Government SME financing agencies in Botswana*
3.5 Interview design

An ethical research standard was upheld by safeguarding voluntary participation, informed consent, anonymity and confidentiality in all interviews. Semi-structured interviews were adopted as the best means of allowing both flexibility and rigour in the collection of primary qualitative data. The questions posed to interviewees served multiple purposes. Some questions were asked to acquire information not available through other sources due to lacking documentation and other questions served the purpose of corroborating earlier observations by data triangulation. Open-ended questions were employed to encourage the dialogue to enter into areas of discussion that had not been mapped out by the interviewer.

In all interviews with government financing agency representatives, the interviewee was a decision-maker with a degree of influence over policy formulation. These interviews were conducted in person on the premises of the interviewee. The setup was fixed as an in-depth one-on-one interview format, with at least 1.5 hours spent for each interview, and all interviews were recorded using a digital device. Recorded content was played back and transcribed directly after each interview to avoid inaccurate recall of information and to mitigate the risk of hindsight bias. Afterwards, interviewees were asked to confirm the transcripts and to correct their statements if interpreted incorrectly by the interviewer.

It is impossible to fully discount the effect of the interviewer’s personal biases on interviewee responses as these may leave their marks on the data despite the best efforts of the interviewer. To the extent possible, however, the effects of such biases were mitigated by awareness of these risks and the omission of fallacious devices such as leading questions and restricted answer questions.

To review the question sheets used in the interviews, the reader can consult item I in the appendix.
4 Data

4.1 Government financing agencies
There are three main government financing agencies in Botswana: the Citizen Entrepreneurial Development Agency, the National Development Bank and the Botswana Development Corporation, who act together to complement the lending of commercial banks with government funds.

4.1.1 Citizen Entrepreneurial Development Agency (CEDA)
The Citizen Entrepreneurial Development Agency was established by the Government of the Republic of Botswana to offer citizens both financial and technical support in developing their businesses. The organisation supports the development of SMEs as well as large-scale companies and development is holistically set up to promote viable and sustainable citizen-owned business enterprises.

In their financing activities, CEDA offers funding for capital expenditure, stock and/or working capital in new and existing business ventures. It also offers training and mentoring for new and seasoned entrepreneurs and business advisory services to entrepreneurs in various skills. CEDA has successfully overcome some of the challenges of providing better access to capital for SMEs in Botswana; some notable success stories are found within the services industry, and in the transport and information technology sub-sectors (OECD, 2005, p. 114). However, the business failure rate is relatively high, and repayment rates are therefore much lower than desired.

4.1.2 National Development Bank (NDB)
The NDB is mandated by the government of Botswana and was founded in 1963 to provide financing to SMEs and large companies. The organisation also has responsibility to facilitate economic development and diversification in Botswana. NDB is facing problems with non-performing loans in the portfolio; a matter that has constituted a major challenge for the bank in recent years (NDB, 2017). The organisation provides loans to commercially viable projects within a range of different industries.

4.1.3 Botswana Development Corporation (BDC)
The BDC was established in 1970 and is one of the government’s primary development financing institutions, offering loans, equity and guarantees to business ventures (BDC, 2017). The organisation was formed to promote and facilitate development in industrial, commercial, and agricultural enterprises as part of the government’s framework for economic development. Some of the most important projects that the BDC finances are found within the agribusiness, infrastructure development, services and property sectors.

4.1.4 Others
There are many other organisations that support the growth of SMEs, like the Local Enterprise Authority, the National Youth Council and the Women’s Affairs Department. However, most of these organisations
are not leveraged to provide capital to SMEs through targeted programs on a large scale and are therefore not considered in the thesis.

4.2 Interviews with agencies

The three main agencies mentioned above are similar in the respect that their authority is subordinated to the government of Botswana and that they seek to promote national economic policy through their SME financing program activities. Yet, they differ in some important respects, for instance in targeting different industries or sectors, and in charging different rates to loan-takers.

Upon examining used screening criteria in loan-taker selection; financial data, location, distribution, background and skill-set of loan-takers, market opportunities and competition were the top factors in terms of times mentioned in interviews. In one interview, perceived honesty was highlighted as an important information cue: “you can look at the credit ratings of annual reports, which serve as a measure of past performance, but you cannot really access information that the person applying for a loan doesn’t want to disclose – therefore you need to use your judgment and trust a lot at face value.”

Rules about collateralization and project contribution were found to differ between organisations. At NDB, loans have to be collateralized by at least 100% in order to be granted. Due to the fact that asset values might be uncertain, especially for property in locations outside of the capital, collateralization exceeding 100% is sometimes charged to compensate for implied risk. Contribution from the loan-taker is usually required for agencies to provide capital – one of the figures mentioned was 15% of the total project budget. These two factors demonstrate how agencies can increase loan-taker commitment and bind him or her closer to a project. At CEDA, rules about collateralization and contribution are less strict and it is possible to finance a project with much less upfront commitment from the loan-taker.

Loan structures were found to differ markedly depending on the project that required funding. Comparing a horticulture project with tomatoes that are grown 3-4 times a year with dry-land crop production like maize that is only grown and harvested once every year shows that cash flows will be generated at different times during the year. Loans can be paid off using stop orders, i.e. arrangements that allow a bank to withdraw funds from a loan-taker’s account for loan repayment, that coincide with the cash flows generated from sales of produce. Similarly, planned loan-taker investments can receive funding as and when payments are required by withholding disbursement of funds until the due date of a transaction.

Many firms were found to struggle with completing their payments. The number of companies completing their payment constitutes a “low percentage” observed one person – “a good 30% are underperforming on their repayments, which is way below the national benchmarks required by the national regulators.” Mismanagement of funds was suggested as a reason for some of the underperforming loans.
Risk-seeking behaviour increases when loans are provided from government-owned institutions. “Loan-takers accept riskier projects because they feel that the downsides of a failed project is less difficult to deal with than if the project would have been financed with capital from a private institution.” Government agencies being less effective at collecting payments than private institutions was also suggested as a reason for this behaviour.

In a preliminary interview, the misappropriation of funds was discussed as a problem that might be ascribed to the perception of entitlement to government resources. This suggestion was corroborated in two out of three interview, where unaided responses indicated that perceived entitlement is indeed an important reason why some loan-takers fail to repay loans to government agencies. In one interview it was observed that “there is a perception that you are less obliged to comply with legal requirements of state-owned enterprise versus those of private-owned enterprises. For instance, if a loan-taker has financial commitments to both a private and a public institution, they would most likely service their loan with the private institution first.”

The above summary of key statements from the interviews highlights four areas of concern for government financing agencies when lending to SME entrepreneurs, namely; misappropriation, risk-seeking, mismanagement and misuse of funds. In the next section, this input is used to create a conceptual model that outlines some of the implications of these findings when put into the context of agency theory.
5 Analysis

5.1 Summary of findings
The below figure illustrates the main endogenous factors identified through the interviews that affect government financing agencies’ ability to operate an SME financing program effectively. As can be seen, the ability of the loan-taker to repay is affected by exogenous factors, whose effect is of limited interest in this study, and endogenous factors, which are in turn affected by moral hazard and adverse selection, the key agency costs in the contractual relationship between lender and loan-taker. According to Yunus (1999), the main characteristics that determine the ability of a loan-taker to repay a loan are character (inherent factors in the loan-taker that determine how a loan-taker handles debt obligations, like honesty and background), capacity (financial ability and future expected revenue stream) and capital (actual ability to pay through liquid means). Together, these provide the basis upon which lenders make decisions about the suitability of the candidate for a loan. To the right in the below model are the mechanisms identified as appropriate to mitigate the effect of agency costs on the repayment rate loans made to SME entrepreneurs, with the solid lines indicating which endogenous factor that a mechanism is expected to influence.

![Diagram](Figure_3)

Figure 3: Conceptual model outlining how loan-taker ability to pay is affected by agency costs and how these can be reduced by screening and monitoring mechanisms – also see item II in the appendix

5.2 Discussion
Sharing information between government agencies, other public sector organisations, commercial lenders and credit registries could help lenders make more informed choices based on critical information about loan-takers. This appears to be one of the most effective means at the disposal of agencies to reduce the number of “bad” customers provided with loans through screening. In other words, to the extent that the quality and scope of available information is sufficient, information sharing can help reduce the number of type II errors made by an agency. The flip-side of this argument is that as soon as a loan-taker
misbehaves, they can become black-listed and their access to other forms of financing can become exhausted. An important outcome of black-listing is that it does not only help exclude “bad” customers from capital markets, but is also regulates the behaviour in the capital markets by discouraging moral hazard; for fear of being blacklisted, fewer loan-takers might knowingly default on their loans. This effect is support by Behr & Sonneckalb (2012), who found that loans granted after the introduction of a credit registry among Albanian banks were 3% less likely to become problematic customers, implying that the main deterrent for defaulting consisted in loan-takers’ concerns about restricted access to credit facilities in the event of default. It is therefore important not only to share and provide access to information databases, but also to communicate the consequences of failing to keep commitments to lenders.

Despite the difficulty that some loan-takers may face in providing sufficient collateral to be granted loans, there appears to be no measures in place to facilitate group-lending schemes. Such schemes have been shown to serve as both an effective screening and monitoring mechanisms and their absence is therefore intriguing. Group-lending contracts screen candidates through in-group peer selection, and payment is enforced through collective pressure to adhere to terms. In theory, it should go a long way to help agencies that are suffering from low repayment rates due to endogenous factors to improve performance. In practice, however, there are some practical considerations that will drive up the costs of implementation for loans requiring full collateralization. While it would likely be possible to use different assets to contribute the required collateral, the evaluation of multiple assets that would nonetheless be required could create inefficiencies and drive up transaction costs, which means that the benefits of in-group screening would have to be compared to the costs of implementation.

Sequential disbursement of loan amounts is an effective measure to regulate the level of risk taken when granting a loan-taker a loan. It reduces the risk of disloyal behaviour on the part of the loan-taker by portioning the payout of the loan amount according to when it is needed, for instance to coincide with when a contractor needs to paid or when bills fall due. If loan-takers have a lot of free cash available, there is a risk that they spend it on things that are not within the business plan of the investment or project that they are pursuing. This method of sequencing can also be applied to facilitate repayments, by for instance asking crop producing loan-takers to amortize on their loans after income has accrued from the sale of harvested produce – this is likely the point in time when a loan-taker will lack qualified excuses to postpone payments on taken loans.

One of the most important monitoring mechanisms at the disposal of agencies is performing in-person site visits. First of all, this creates a high-touch relationship that will serve to build interpersonal trust and reduce the risk of misunderstanding in communication. It also allows the lender to see with his or her own eyes to what ends investments have been put. The drawback of site visits is that administrative and operational work quickly adds up, which makes it a costly exercise, and visits are unlikely to be made but for the larger of the SME loans held in the portfolio or for the loan-takers that are severely underperforming, by which time it might no longer function as a proactive monitoring mechanism.
One additional benefit that site visits bring, however, is allowing the lender to learn about the loan taker's needs, which can help agencies identify how to support loan-takers more effectively. Kuratko, Hornsby & Naffziger (1999) suggest that government officials often fail to fully comprehend the needs and problems of small business owners and they may therefore neglect opportunities in helping small businesses grow. By witnessing on the ground how things are, lenders can engage, when within the scope of their business, in supportive activities like training and mentoring. This may help improve the skill set of the loan-taker and allow him or her to identify for themselves the risks and opportunities attached to a business venture. The thing to consider at all times is how to weigh the benefits of implementing a control mechanism against the related costs. There will nearly always be an associated trade-off relationship and an apt decision rule will need to be found based on contemplation and calculation of expected economic gains and losses.
6 Summary

6.1 Conclusion
There are methods of raising effectiveness in government financing programs by introducing mechanisms to mitigate the adverse effects of agency costs on the relationship between lender and loan-taker. Some of these mechanisms are already operationalised at some of the interviewed agencies—the extent to which they are effective, however, differs much between them. Reinforcing the mechanisms already in place and introducing complementary ones should help reduce type II errors in decision-making and to make more effective government financing agencies’ ability to claim back payment on outstanding loans.

6.2 Implications for policy makers
The practical recommendations here outlined are intended to guide new policy creation and are drawn up after analysis of mechanisms both present and absent. To operate financing programs more effectively, government financing agencies may strive to reduce agency costs by considering for implementation as appropriately the screening and monitoring mechanisms listed below.

6.2.1 Screening mechanisms
- Co-opt organizational databases to share data about loan-takers, lowering cost to access information and thereby improving the ability of agencies to screen candidates more effectively.
- Use black-listing to exclude “bad” loan-taker from the market.

6.2.2 Monitoring mechanisms
- Introduce shared responsibility of collateral and contribution through group-lending schemes to improve monitoring of loan-takers through mutual vigilance of loan-takers.
- Disburse loan amount only as and when the need to pay for investments arise and use stop orders through restricted credit accounts to mitigate risk of misuse of funds.
- Perform site visits to loan-takers’ facilities and stop payments if it cannot be ascertained that funds are being used appropriately.

6.3 Validity
The purpose of the thesis is well-aligned with the research questions and the evidence provided in the descriptive part of the thesis is not redundant: they provide a basis for analysing collected data. The theoretical framework and the research problem were selected prior to data collection. For these reasons, the internal validity of the thesis is deemed satisfactory.

Due to the relatively few interviews that were sampled over the course of data collection, it was necessary to validate responses by triangulating results with data available from alternative sources. This validation process was performed by looking at secondary data collected from independent sources. Ideally, stricter control measures would have been applied, for instance by fixing interview questions to reduce interviewer bias. This would have made it possible to identify and analyse commonalities and inconsistencies in
interview data and thereby infer explanations with greater confidence. Taken as a whole, however, measures have been taken to corroborate information with multiple sources and external validity is therefore satisfactory.

6.4 Reliability

The results presented in the thesis are reliable. All sources have been documented and data can easily be recovered from listed sources to repeat the study. The primary research methodology resulted in long interview transcripts that were too bulky to append, but the interview questionnaires can be found in item 1 in the appendix. Section 3 accounts in detail for the methodological preparation and process of the interview. While data interpretation is necessarily subjective, effort has been made to reduce the impact of interviewer biases.

6.5 Limitations

For the sake of brevity and clarity, some aspects that are highly relevant to the topic have not been explored in full detail. For instance, one of the government agencies studied do not only provide financing, but also training and mentoring. The gains to business acumen and financial literacy that these activities may provide, can very well improve the capacity of loan-takers to repay loans. As such, they can impact the conceptual model and the effect of these should ideally have been isolated in the analysis.

While interviewee responses have been triangulated with secondary sources where possible to validate findings, there is still an inherent risk in conducting only single interviews at the organizations examined in this thesis. The data collected may inaccurately describe reality as individuals might be biased by personal opinion and/or fail to recall past events accurately. Seeking a higher degree of inter-subjectivity by introducing the viewpoint of others within the organisations examined would have benefited the quality of the data collected by creating room for further analysis.

6.6 Transferability

The findings in this thesis should be considered within the broader scope of the study; the implications for policy creation should have applicability within markets that share characteristics with Botswana. This means that other developing economies that seek to support economic objectives by funding SMEs with capital may also find value in considering the policies outlined. The author can identify no reason for suggesting that the recommendations in the thesis are not transferrable to domains belonging to the group defined above.

6.7 Suggestions for future research

This thesis highlights some interesting inroads into future areas of research. One of the topics that ended up outside the scope of inquiry was considering how implementation of new policies are evaluated from a transaction cost economics point of view. This is a relevant theoretical lens to apply as the cost of policy implementation needs to be measured against the benefits that these policies are likely to produce.
Further research is also advised to complement the findings from the research conducted on screening and monitoring mechanisms with quantitative analysis. This is important in order to assess the expected impact of implementation on the rate of non-payments in government financing programs for SMEs.

Based on the surprising absence among the group of interviewees of any formalized strategy for group lending schemes in joint-effort projects, like farming collectives or investments in fixed assets with positive externalities for a wider community or group of people, another area for future research is to investigate if joint-liability contracts can have a positive impact on SME repayment rates in Botswana.
7 References

7.1 Journals and conference papers


7.2 Reports and articles


7.3 Interviews

BDC, Anonymous. Interview date [13-02-2015]

CEDA, Anonymous. Interview date [05-02-2015]

NDB, Anonymous. Interview date [08-02-2015]

University of Botswana, Gaofetoge, G., Lecturer. Interview date [21-01-2015]
8 Appendix

8.1 Item 1: Question sheet: interviews government financing agency representatives

1) What is your role in your organization?

2) Explain how your organization is related to state apparatus.

3) Explain in which ways your organization supports SME entrepreneurs.

4) Which kind of entrepreneurs do you consider for loans?
   a. Do you allow both first-time and serial entrepreneurs access to loan facilities?
   b. Which are the most important factors when you evaluate loan applicants?

5) How do you operate financial support programs within your organization?

6) What kind of debt and equity arrangements do your programs provide?
   a. Do you offer group-lending schemes?
   b. Do you offer venture capital?

7) What kind of financial model do you operate for these programs?

8) What are you loan terms for your standard loans to SMEs?
   a. Interest rates?
   b. Maximum payback period?
   c. Maximum loan amount?
   d. Collateralization?
   e. Investment contribution?

9) How much does your annual loans amount to for these programs?
   a. How is your loan portfolio structured?
   b. How many loan applications do you have on average every year?
   c. Out of these, how many are successful in acquiring a loan?
   d. As a percentage, how many firms are able to complete their payment plans on time?
   e. Do you offer moratorium periods and/or loan write-downs?

10) Do you supplement financial support with any other service (e.g., training, mentoring)?

11) What are your formal screening criteria of loan-takers (e.g., age, experience, credit history, industry knowledge)?
   a. Which are the most important criteria?

12) Who is involved in the process of selecting who received financing?

13) How would you phrase the challenges you face in selecting loan-takers that will succeed in servicing their commitments?

14) Do you think that the potential benefits of introducing more control mechanisms would outweigh their costs?

15) What kind of monitoring mechanisms do you have for regulating lender behaviour?

16) Can you tell about the restrictions on spending that are tied to loans?

17) How do you intervene when you see that an entrepreneur will not be able to complete future payments?

18) What are the main reasons for failure to repay loans according to agreement?
   a. Do you have any actions plans for reducing the frequency of loan delinquency?

19) What are the consequences for entrepreneurs who fail to service their loan repayments?

20) Do you share customer information with other financial agencies or institutions?
8.2 Item 2: Conceptual model outlining how loan-takers’ ability to pay is affected by agency costs and how these can be reduced by screening and monitoring mechanisms.

**Observation**

- **Misappropriation**
- **Risk-seeking**
- **Mismanagement**
- **Misuse of funds**

**Mechanisms**

- **Information sharing/registry**
- **Black-listing**
- **Group-lending**
- **Sequenced disbursement**
- **Site visits**
- **Co-opt/align interests**
- **Training/mentoring**

**Endogenous Factors**

- **Character**
- **Capacity**
- **Capital**

**Exogenous Factors**

- **Economy**
- **Finance**
- **Weather**

**Agency Costs**

- **Moral hazard**
- **Adverse selection**