Obstacles to Financing Facing Micro, Small, and Medium-Sized Firms in Suriname: A study from a small-state perspective

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OBSTACLES TO FINANCING FACING MICRO, SMALL, AND MEDIUM-SIZED FIRMS IN SURINAME

A study from a small-state perspective

WILLIAM M. M. ORIE

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Obstacles to Financing Facing Micro, Small, and Medium-Sized Firms in Suriname

A study from a small-state perspective

Financieringsobstakels voor micro, kleine en middelgrote bedrijven in Suriname

Een studie vanuit een “small-state” perspectief

Thesis

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William Mohamed Mustafa Orie

born in Paramaribo, Suriname

International
Institute of
Social Studies

Erasmus University Rotterdam

Doctoral Committee

Doctoral dissertation supervisor

Prof. S.M. Murshed

Other members

Dr R. Read, Lancaster University

Prof. D.G. Bailey, University of Birmingham

Dr L. Pellegrini

Co-supervisor

Dr E. Papyrakis

To my family

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Preface

Motivations

The completion of the Ph.D. program at the International Institute of Social Studies – part of Erasmus University Rotterdam – is a milestone in my lifelong learning journey. My motivation in producing a doctorate thesis was threefold. First, on a personal level, my dream was to pursue a Ph.D. program at a renowned international university, as this would enhance my intellectual profile and set a high education bar for my family and fellow researchers. Second, on a professional level, it would capacitate me adequately to add value to policy formulation and implementation at the Central Bank of Suriname – my employer – and beyond. Third, on a societal level, I would be better equipped to carry out rigorous studies and to promote and accelerate research projects.

Various reasons have influenced my decision to research the issue of obstacles to financing faced by micro, small, and medium-sized firms (MSMEs) in Suriname. First, there are indications that such obstacles suppress the growth potential of firms and, subsequently, the economic growth of Suriname. Second, access to credit is not included in the actual policies of the Central Bank of Suriname, whereas, in my view, the bank could play a pivotal role in identifying, assessing, and alleviating access-to-credit obstacles within its mandate as the country's chief monetary and financial authority. Moreover, in general, there is a lack of systematic knowledge building and statistical evidence on this topic at the Central Bank of Suriname. Furthermore, I was also aiming at mastering methods and techniques to execute micro-level studies. Finally, from a scientific point of view, I wanted to contribute to the literature on the obstacles to financing facing MSMEs in small states, given the scant literature and its relevance for Suriname as a small state.

With the benefit of hindsight, I must admit that it would have been better to graduate much earlier in my career. After all, combining a Ph.D. study with an already heavy load of work and family responsibilities is quite demanding – the more so because the workload increased rapidly over time. At the beginning of the Ph.D. program, I was assigned as an advisor to the Executive Board of Directors at the International Monetary Fund (IMF) in 2013. During this period, I was also involved in issues concerning the relationship between Suriname and the

World Bank. After two years at the IMF, I returned to the Central Bank of Suriname and was promoted as Coordinator of its Monetary and Economic Affairs Directorate in August 2015. In March 2019, I was appointed as a Deputy Governor. Even so, reaching the end of the road, I am pleased with the completion of the Ph.D. program.

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- My mother Gairoenniesa, and brothers Firoz and Roshan and their respective families.
- My aunts and uncles for all their support since my childhood – as I grew up between them.
- My wife Sunita, daughter Sheranie, and (step)sons Arvind and Anjay for their moral support and for all the sacrifices they had to make during my Ph.D. journey.

I am thankful to the Almighty Allah for all His blessings.

William M.M. Orie

Paramaribo, November 1, 2020

Acronyms

ADB	Asian Development Bank
AFI	Alliance for Financial Inclusion
AML	Anti-Money Laundering
CARICOM	Caribbean Community
CBvS	Centrale Bank van Suriname
CFT	Combating the Financing of Terrorism
CGS	Credit-Guarantee Scheme
DTF	Distance-To-Frontier
EAC	East African Community
FinTech	Financial Technology
FIRST Initiative	The Financial Sector Reform and Strengthening Initiative
GBS	General Bureau of Statistics
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
LACES	Latin American and Caribbean Enterprise Surveys
MSMEs	Micro, Small, and Medium-Sized Enterprises
NOB	National Development Bank
OECD	Organisation for Economic Co-operation and Development
PROTEqIN	PROductivity, TEchnology, and Innovation
SMEs	Small and Medium-Sized Enterprises

WB	World Bank
WBES	World Bank Enterprise Survey
WEF	World Economic Forum
WEO	World Economic Outlook

Abstract

Obstacles to Financing facing Micro, Small, and Medium-Sized Firms in Suriname

A study from a small-state perspective

This study investigates the extent and nature of the obstacles to financing faced by micro, small, and medium-sized firms (MSMEs) in Suriname, and does so from a small-state perspective. It is motivated by the sheer lack of studies on this topic for Suriname, while there are indications that obstacles to financing suppress the growth of MSMEs. Moreover, despite a rich existing literature on such obstacles with regard to MSMEs, the small-state perspective remains under-researched – as does the issue of potential determinants of obstacles to financing such as ethnicity, religion, and networks. Finally, micro firms have been excluded from the available international surveys on Suriname, while this category of firms actually has the largest share of Suriname's firm population.

Theoretical explanations of access to external finance are centered on information asymmetry and transaction costs from a supply-side perspective. However, I argue that information asymmetry and transaction costs could also hamper access to finance from the demand side of the credit market. Additionally, factors such as ethnicity, religion, networks, gender, and education could inhibit access to finance for MSMEs.

Small developing states have distinctive characteristics rooted in their size or their relatively small markets. These include small scale and capacity constraints, macroeconomic volatility, a thin economic base and limited competition, weak credit-market infrastructure, information opacity, and high costs. These specific characteristics, in turn, affect access to financing for MSMEs.

Based on pooled data from six Caribbean developing small states, including Suriname, I conclude that firms operating in the manufacturing sector, younger firms, women-led firms,

and firms without audited financial statements experience more obstacles to financing than their respective counterparts.

As part of this research, a unique firm-level survey was conducted in Paramaribo, the capital of Suriname and the center of the country's economy. The results indicate that MSMEs mainly use internal financial resources, commercial banks and private capital to finance their working and investment capital. Commercial banks are the most important source of external financing for firms in the country. Around 53 percent of the surveyed firms experienced access to financing as an obstacle to their current operations to some extent.

A probit-model estimation reveals that firms in the manufacturing, construction, and trade sectors are more likely to experience such obstacles than those in the services sector. It also confirms that the age of a firm, its legal status, ethnicity (Creole, Indian, Javanese, and Mixed relative to Chinese), religion (Muslim relative to Christian), and participation in networks are significant determinants of obstacles to financing in Paramaribo.

A unique survey was also conducted among Surinamese banks, which shows that banks face the following obstacles in providing credit to MSMEs: macroeconomic instability, stringent regulations, weaknesses in the information, contractual and enforcement framework, bank-specific factors, and MSME-specific factors.

Firms as well as banks deem the following government interventions to have a significant impact on access to finance: the introduction of business-support centers; a credit-registry bureau; a pledge registry for movable and immovable assets; credit-guarantee funds; reform of the collateral framework to allow for movable collateral; and financial education.

This study makes several crucial contributions to the literature on small developing states regarding obstacles to financing faced by MSMEs. It is the first quantitative study on such obstacles in Suriname, and is primarily conducted from a small-state perspective. I also surveyed the demand as well as the supply side of the credit market in order to prevent biased findings. Finally, the study provides new evidence that ethnicity, religion, and networks are determinants of obstacles to financing for MSMEs.

Samenvatting

Financieringsobstakels voor Micro, Kleine en Middelgrote Bedrijven in Suriname

Een studie vanuit een "small-state" perspectief

In deze studie is onderzoek gedaan naar de omvang en aard van financieringsobstakels waarmee micro-, kleine en middelgrote bedrijven (MKM-bedrijven) in Suriname worden geconfronteerd, en wel vanuit een small-state perspectief. De studie is (mede) ingegeven door het ontbreken van studies over dit onderwerp voor Suriname, terwijl er aanwijzingen zijn dat financieringsobstakels de groei van deze categorie bedrijven beperken. Ondanks uitgebreide literatuur over het onderwerp, is het vraagstuk onvoldoende onderzocht vanuit een small-state perspectief, evenals andere determinanten van financieringsobstakels, zoals etniciteit, religie en netwerken. Daarenboven is geen aandacht besteed aan microbedrijven in Suriname in de beschikbare internationale enquêtes over Suriname, terwijl deze categorie bedrijven feitelijk het grootste aandeel heeft in de Surinaamse bedrijvenpopulatie. Deze bedrijven worden in mijn onderzoek wel meegenomen.

Theoretische verklaringen over de toegang tot externe financiering zijn gericht op informatie-asymmetrie en transactiekosten vanuit een aanbodzijdeperspectief. Ik betoog dat informatie-asymmetrie en transactiekosten ook de toegang tot financiering aan de vraagzijde van de kredietmarkt beïnvloeden. Bovendien kunnen factoren, zoals etniciteit, religie, netwerken, gender en opleiding, ook de toegang tot financiering voor MKM-bedrijven belemmeren.

Small states hebben unieke kenmerken die zijn geworteld in hun omvang en hun relatief kleine markten. Deze omvatten kleinschaligheid van de markt en capaciteitsbeperkingen, macro-economische volatiliteit, een smalle economische basis en beperkte concurrentie, zwakke kredietmarktinfrastructuur, ondoorzichtigheid van informatie en hoge kosten. Deze specifieke kenmerken hebben op hun beurt invloed op de toegang tot financiering voor MKM-bedrijven.

Op basis van datapooling van zes kleine Caribische staten, waaronder Suriname, concludeer ik dat bedrijven die actief zijn in de industriële sector, jongere bedrijven, door vrouwen geleide bedrijven en bedrijven zonder gecontroleerde financiële jaarrekeningen, meer financieringsobstakels ervaren dan hun respectievelijke tegenhangers.

In het kader van dit onderzoek is een unieke enquête op bedrijfsniveau uitgevoerd in Paramaribo, de hoofdstad van Suriname en het centrum van de economie van het land. De resultaten geven aan dat MKM-bedrijven voornamelijk interne financiële middelen, commerciële banken en privékapitaal gebruiken om hun werk- en investeringskapitaal te financieren. Commerciële banken zijn de belangrijkste bron van externe financiering voor bedrijven in het land. Ongeveer 53 procent van de ondervraagde bedrijven gaf aan dat de toegang tot financiering tot op zekere hoogte een belemmering is voor hun bedrijfsactiv-iteiten.

Een schatting van een Probitmodel laat zien dat bedrijven in de industriële, constructie- en handelssector meer financieringsobstakels ervaren in vergelijking met bedrijven in de dienstensector. Ook kwam naar voren dat de leeftijd van een bedrijf, de juridische status, etniciteit (Creools, Indisch, Javaans en gemengd in vergelijking met Chinees), religie (Moslims in vergelijking met Christenen) en deelname aan netwerken belangrijke bepalende factoren zijn van financieringsobstakels voor MKM-bedrijven in Paramaribo.

Bij de Surinaamse banken is ook een unieke enquête uitgevoerd, waaruit blijkt dat banken te maken hebben met de volgende obstakels bij het verstrekken van krediet aan MKM-bedrijven: macro-economische instabiliteit, stringente regelgeving, zwaktes in het informatie-, contractueel- en handhavingsraamwerk, bank-specifieke factoren en MKM-bedrijven specifieke factoren.

Zowel MKM-bedrijven als banken achten de volgende overheidsinterventies aanzienlijke invloed te hebben op de toegang tot financiering: de introductie van centra voor bedrijfsondersteuning; kredietregistratiebureau's; pandregister voor roerende en onroerende goederen; kredietgarantiefondsen; hervorming van het onderpand raamwerk om zekerheden op roerende goederen mogelijk te maken; en financiële educatie.

Dit onderzoek levert diverse cruciale bijdragen aan de literatuur over financieringsobstakels voor MKM-bedrijven in small states. Dit is het eerste kwantitatief onderzoek naar financieringsobstakels in Suriname en is voornamelijk uitgevoerd vanuit het perspectief van een small state. Ook is zowel de vraag- als aanbodzijde van de kredietmarkt onderzocht om eenzijdige bevindingen te voorkomen. Ten slotte levert deze studie nieuw bewijs dat etniciteit, religie en netwerken bepalende factoren zijn van financieringsobstakels voor de MKM-bedrijven.

Chapter 1: Introduction

1.1 Problem statement

"Access to capital is important for all firms, but it's particularly vital for startups and young firms, which often lack a sufficient stream of earnings to increase employment and internally finance capital spending" (Janet Yellen, n.d)

"Finance is the life-blood of any firm and no firm, no matter how well managed, can survive without enough funds for working capital, fixed assets investment and employment of skilled workers" (Machirori and Fatoki, 2013, p. 97, paraphrasing Agnew, 2003).

In line with both the above quotes, a growing body of literature points towards the merits for private firms of access to external finance. Firms need working capital to sustain production and investment capital to expand it. These types of capital can be financed either by internal sources – that is, from cash flow and retained earnings – or by external sources, banks or otherwise. When firms experience difficulties with access to external finance, this stagnates production, impedes investments (Mankiw, 1986; Hubbard, 1998) and hampers their growth potential (Beck, Demirguc-Kunt, & Levine, 2005; Beck, Demirguc-Kunt, & Peria 2007; Cole & Sokolyk, 2016; Ferrando & Mulier, 2015; and Gómez, 2018). This is especially true for micro, small, and medium-sized enterprises (MSMEs), which contribute significantly to gross domestic product (GDP) and employment in countries worldwide. Hence, this study's focus on MSMEs.

MSMEs represent about 90 percent of businesses and account for more than 50 percent of employment worldwide. By 2030 an estimated 600 million jobs will be needed just to absorb the growing global workforce, which makes the development of such firms a high priority for many governments around the world. Statistics such as these serve especially as a wakeup call for governments in emerging markets and developing countries, where MSMEs report higher obstacles to accessing finance than in the developed world. The International Finance Corporation (IFC) has estimated that MSMEs in developing countries have an unmet financing need of US$ 5.2 trillion every year, equivalent to 1.4 times the current level of global MSME lending (World Bank, n.d.).

Given the aforementioned vital role of MSMEs, both currently and in the future, a thorough investigation into the extent and nature of the financing obstacles facing them will be pivotal in formulating policies aimed at enhancing their access to finance.

The current literature is almost silent on the topic of obstacles to financing viewed from a small-state perspective. Small states suffer – among other things – from diseconomies of scale and macroeconomic volatility, which affect economic outcomes (Read, 2001; International Monetary Fund [IMF], 2013, 2014, 2017). However, while the characteristics of small states and their impact on economic growth are well documented, their influence on access to finance is under-researched. Consequently, findings and policy recommendations emanating from cross-country studies on obstacles to financing may not resonate with the particular circumstances of such states. As Suriname, the focus of this study, is one such small state, we include the impact of the inherent characteristics of small states in our explanation of the finance-related obstacles facing firms in order to fill this gap.

The literature on the obstacles to financing facing MSMEs also departs from the premise that private firms are inherently growth oriented and, furthermore, that the natural path for firms is to graduate from micro, to small, to medium, and finally to large scale. Berner, Gómez, and Knorringa (2008) point to "survival entrepreneurs" within the micro-firms category that are neither growth oriented nor follow this supposedly natural trajectory. Survival entrepreneurs start their businesses not to make a profit but due to a failure to secure wage employment. They focus on increasing their economic security and smoothing their consumption instead of on maximizing profit, and these survival firms operate more or less exclusively in the informal economy. This perspective on micro firms is especially important, as it has consequences for the definition and measurement of financing obstacles as well as for policy prescriptions.

In Suriname, the overwhelming majority of private firms fall into the micro and small categories, and available studies show them facing significant obstacles in accessing external finance. In a study undertaken at the behest of the Surinamese Government, Drum (2012) identified several supply-side and demand-side impediments to credit access experienced by small and medium-sized firms (SMEs) in the country. These financial obstacles were found to be due to a number of factors: a heavy reliance on collateralized borrowing, with real estate constituting almost the only type of collateral accepted by lenders; insufficient sharing of credit information; a bias in commercial bank lending in favor of larger borrowers; and insufficient financial-reporting regulations and practices.

More generally, the World Economic Forum (WEF) (2011–2015) and the World Bank (2010–2015) have reported in their perception-based annual surveys that entrepreneurs cite problems with access to credit as one of the main obstacles to doing business in Suriname. More recently, the World Bank Enterprise Survey (WBES) for 2018 concluded that firms experience difficulties in accessing finance as the most critical such obstacle in the country.

Surprisingly, most – if not all – studies on this topic in Suriname are based on qualitative findings and anecdotal evidence. There is no study covering the determinants of obstacles to financing in the country, and the perspective of small states and micro firms is absent from these analyses. The few studies that have been conducted on obstacles to financing in Suriname have done so either from the demand or from the supply side of the credit market – an approach that could lead to biased findings. By surveying firms as well as banks, we try to overcome such weaknesses. Through triangulation, we aim to better identify the obstacles to financing facing MSMEs in Suriname.

Against a backdrop of the merits for firms of access to funding, the alleged finance-access difficulties in Suriname and the shortcomings of the available studies, we define the central problem of this study as follows: **the extent and nature of obstacles to financing for MSMEs in Suriname.**

In the remainder of this chapter, we explain the objectives of this study and define the relevant obstacles to financing. We then present the theoretical perspectives on such obstacles that will be elaborated further in the next chapter. This is followed by a review of the methodology, relevance, and structure of the study.

1.2 Objectives

The main objective of this study is to explore the extent and nature of obstacles to financing facing MSMEs in Suriname from a small-state perspective and from a firm as well a banking perspective, and to formulate policy recommendations. To address the main objective, we formulate six sub-objectives.

First, we explore the nature of financing obstacles for MSMEs in the literature, from a small-state perspective (Chapters 2 and 3). This approach is necessary, as Suriname – the main focus of the study – is one such small state. Furthermore, small states have peculiar characteristics shaping access to finance by their MSMEs, which are under-researched. Accordingly, the standard policy recommendation for enhancing access to finance for MSMEs – namely, upgrading the operational environment – is too generic: it does not take the peculiarities of small states into account. The literature study will guide the empirical studies, including the setup of questionnaires and models.

Second, we identify the determinants of obstacles to accessing external finance by MSMEs in the Caribbean (Chapter 4). Suriname is a member of the Caribbean Community (CARICOM) and shares many small-state characteristics with its neighbors. CARICOM is a regional economic bloc of 15 Caribbean states, currently in the process of forming a single market; its constituent countries have more or less the same economic structures – small and undiversified – and share historical and cultural backgrounds. This study will provide input for setting up of a model for Suriname.

Third, we estimate the extent of obstacles to external financing encountered by MSMEs in Suriname across firms' characteristics, in order to formulate specific policy recommendations (Chapter 5).

Fourth, we identify the determinants of access to external finance by MSMEs in Suriname based on a unique firm-level survey (Chapter 5).

Fifth, we conduct a qualitative investigation into financing obstacles facing MSMEs in Suriname through a unique bank-level survey (Chapter 6).

Finally, we formulate policy recommendations based on the findings in the literature and those from the firm- and bank-level investigations, taking into account the context of the small state of Suriname (Chapter 7).

1.3 Literature review

1.3.1 Definition of obstacles to financing

Throughout this research, the concept of an obstacle to financing will be used interchangeably with that of an access-to-finance problem. Despite a vibrant research agenda worldwide on access to finance, a unified definition of the phenomenon is still lacking (Kumar & Francisco, 2006; Boucher, Guirkinger, & Trivelli, 2009; Claessens & Sakho, 2013).

The first problem encountered is the absence of consensus on which firms have access to finance. It is tempting to conclude that firms with credit from financial institutions have access to the financial system and, therefore, do not face financing obstacles. However, this is incorrect. While usage relates to the actual consumption of financial services – in this case, being in possession of a loan – access concerns the availability or supply of quality financial services at "reasonable cost," with a focus on whether an investment is constrained or not (Claessens & Sakho, 2013).

However, the operationalization of "quality services" and "reasonable costs" may dictate the measurement of access to finance. Therefore, the category "non-users" should differentiate between voluntary and non-voluntary exclusion. The voluntary-exclusion group may not need or seek external finance because of the availability of internal funding or due to other reasons such as religion. The study of obstacles to financing should, then, be focused on the non-voluntary category. Cole and Sokolyk (2016) refine the distinctions between firms and propose the following categories: non-borrowers, discouraged borrowers, denied borrowers, and successful borrowers. A discouraged borrower is someone who is not willing to apply for a loan because of the fear of rejection, given their prior experience with the refusal of loan applications.

The second problem lies in the dimensions of access to finance. Access to finance is not only about the demand for credit and the successful obtaining of that credit. Claessens (2006) argues that it also has other dimensions, such as the period in which the credit is obtained, the type of credit, the ease with which it is obtained, and repetition of the use of credit. Furthermore, firms obtain various forms of external financing – among them, short-term trade finance, working-capital financing, and investment financing. Each of these forms may bring with it different degrees of financing constraints – for example, a firm might be unconstrained in trade finance but may not be able to obtain investment financing. Therefore, even firms that have obtained funding may face financing obstacles.

Following Beck, Demirguc-Kunt, Laeven, and Maksimovic (2006), we use direct reporting by firms to assess whether they experience access to finance as an obstacle to their growth. In line with Beck et al. (2006), we refer to self-reported, unaudited financing constraints as obstacles to financing.

1.3.2 Theoretical perspectives on obstacles to financing

Information asymmetry and agency problems constitute the prevailing theoretical explanations for obstacles to financing encountered by MSMEs (Han, Fraser, & Storey, 2009; Djankov, McLiesh, & Shleifer, 2007; and Poncet, Steingress, & Vandenbussche, 2010). Market failure based on information asymmetry occurs when information is unevenly distributed among finance providers and recipients of finance, and when risk and uncertainty exist regarding present and future trading conditions (Tucker & Lean, 2001).

The literature mostly addresses the existence of information asymmetry from a supply perspective. Stiglitz and Weiss (1981), for example, note that banks as finance providers have incomplete information regarding the underlying quality of projects and the management of firms. This gives rise to the problem of adverse selection. Consequently, providers can reject good lending prospects while poor prospects are accepted.

However, information asymmetry could hinder the conversion of potential credit demand to effective credit demand by firms with profitable projects. This perspective has received little attention in the literature. In response to information problems, banks often require collateral. This reduces the probability of failure and addresses the moral hazard (Hoff & Stiglitz, 1990). On the other hand, Boucher, Guirkinger, and Trivelli (2009) argue that the increase in demand for collateral from financial institutions results in entrepreneurs bearing high contractual risk. In this scenario, business owners have enough collateral but are not willing to take the risk related to that collateral and, therefore, do not convert their potential demand into effective demand. Apart from the risk side, Berger, Espinosa-Vega, Frame, and Miller (2011), along with Steijvers, Voordeckers, and Vanhoof (2008), also stress the emotional risk related to the use of collateral. Transaction costs related to collateral also hinder the conversion of potential credit demand into effective credit demand (Boucher et al., 2009; De Guia Abiad; 1993; Kavanamur 1994; and Masuko & Marufu, 2003).

Social networks are also considered an essential factor in the concept of an obstacle to financing. Despite its importance, relatively little research has been conducted in this field. In general, social networks transcend institutionalized rules and formal prescriptions and are an efficient alternative to either the market or the hierarchy encountered in economic transactions, as stated by Lew (2013). Lin (1999) recognized four ways in which networks increase access to resources – namely, through information, influence, social credentials, and strengthening identity/recognition.

In developing countries, SMEs get around market failures and the lack of formal institutions by using private governance systems such as ethnically based business networks. Networks help to overcome information asymmetry and weak contract enforcement (Beck & Demirguc-Kunt, 2006).

Empirical studies support the role of networks in facilitating access to finance. For example, Watson (2012) states that the network relationship between firms' managers and a bank contributes to better access to finance. Coleman (1988) finds that networks result in the cost-effective acquisition of information to support decision-making, which would otherwise be costly to obtain. Talavera, Xiong, and Xiong (2012) argue that networks become more relevant in developing and emerging-market countries due to an underdeveloped operating environment, often accompanied by corruption, and because of the lack of human and material resources, poor management, and inefficient judicial systems.

As Suriname is a multi-ethnic and multi-religious society, we will also assess whether ethnicity and religion determine success in accessing finance.

Ethnic networks can facilitate access to finance because of the flow of information and informal enforcement mechanisms, both of which lower transaction costs (Biggs, Raturi, & Srivastava, 2002). However, ethnicity can also be detrimental to access to finance due to discrimination (Howell, 2019).

The literature on religion and access to finance focuses on persons or groups unable or unwilling to access the credit market on religious grounds (Karlan, Osman, & Shammout, 2017; World Bank, 2008). Religion may, for instance, prohibit firms from borrowing at (certain) interest rates or conditions (Karlan et al., 2017). However, as in the case of ethnicity, we argue that religion could also influence access to finance through networks and discrimination.

Despite its Muslim population proportion of 14 percent, Suriname neither had an Islamic bank nor offered Islamic financing products. In December 2017, the first Islamic bank in Suriname (and in Latin America and the Caribbean) was established.

In sum, we will assess the obstacles to financing faced by MSMEs from the demand as well as the supply side of the credit market. We will augment the standard determinants of financial obstacles with a consideration of ethnicity, religion, and networks.

1.4. Methodology

This study has two theoretical and three empirical chapters. Both theoretical chapters are based on a literature study: the first one (Chapter 2) explains in detail the fundamental problem with credit markets; the second (Chapter 3) delves into the specific factors in small states that influence obstacles to financing.

In the first empirical chapter (Chapter 4), which assesses the obstacles to financing encountered by MSMEs in the Caribbean, we use data from the 2010 World Bank Enterprise Survey database for the Caribbean and Latin America. We carry out a robustness check on the findings by estimating the same model using the 2013 Inter-American Development Bank (IDB) PROductivity, TEchnology, and INnovation Survey (PROTEqIN) database for the same Caribbean countries. We use an ordered probit model to assess the determinants of obstacles to financing in the Caribbean.

The World Bank used a stratified random sampling method to select its sample. The objective of the WBES was to obtain enterprises' views on the state of the private sector as well as to help in building a panel of enterprise data that would make it possible to track changes in the business environment over time. Such a database enables impact assessments of policy reforms. Through face-to-face interviews with firms in the manufacturing and services sectors, the survey assesses constraints on private-sector growth. It creates statistically significant business-environment indicators that are comparable across countries. Questionnaire topics include firm characteristics, gender participation, access to finance, annual sales, costs of inputs/labor, workforce composition, bribery, licensing, infrastructure, trade, crime, competition, land and permits, taxation, informality, business–government relations, innovation and technology, and performance measures (World Bank, 2010).

The PROTEqIN survey was conducted in Barbados, Belize, Jamaica, Guyana, Suriname, Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, the Bahamas, and Trinidad and Tobago. Its objective was to provide feedback from enterprises that had participated in the previous round of surveys in 2011 and to capture additional information on firm performance; finance; the gender of ownership and management; the use of product-development programs; and issues related to management style, innovation, and crime (Inter-American Development Bank [IDB], 2014).

For the second empirical chapter (Chapter 5), in which we assess the financing obstacles for MSMEs in Suriname, we collect primary data through a unique firm-level survey along the lines of the 2010 WBES, which was conducted in the country between August and November 2011, and the 2013 IDB PROTEqIN. However, we augment both with the kind of specific country characteristics that were overlooked in those surveys, such as those relating to micro firms, ethnicity, religion, and networks. A sample was drawn from the enterprise database of the General Bureau of Statistics covering firms in Paramaribo, the capital city of Suriname. A stratified random-sampling method was used to select the sample. This method is preferable to simple random sampling (as used in World Bank, 2011) for the following reasons:

- It gives unbiased estimates for segments of the population as well as the whole population.
- It avoids concentrating firms within one or two industries/sizes/locations, thereby obtaining more precise estimates (i.e., lower standard errors, other things being equal, and smaller margins of error).
- It reduces the cost per observation by stratifying population elements into convenient groupings.

We use a probit model to assess the determinants of obstacles to financing faced by firms in Suriname.

The third empirical chapter (Chapter 6), which presents the banks' views on obstacles to financing encountered by MSMEs in Suriname, is based on primary data collected through a unique bank-level survey.

1.5. Relevance

This study has scientific, policy, and social relevance.

Scientific relevance

The study contributes to the scant literature on small states with regard to the obstacles to financing faced by MSMEs. Furthermore, it contributes to the MSME literature by assessing those determinants of obstacles to financing that have been overlooked – or, at least, remained less explored – such as ethnicity, religion, and networks.

Policy Relevance

This research comprises the first systematic empirical study in Suriname on the obstacles to financing facing MSMEs. Both the Government and the Central Bank of Suriname have placed improved access to finance high on their respective agendas. The findings of this study could be used as inputs by the Surinamese authorities to design policies aimed at enhancing access to external finance by MSMEs. The standard policy "recipe" for enhancing access to finance is an upgrading of the operating environment; however, this seems too generic and does not take into account the inherent characteristics of small states. By explicitly incorporating the small-state perspective into this study, we aim to reach policy solutions that resonate within the context of the small state.

Social relevance

The ultimate goal of this study is to contribute to enhanced access to external finance by MSMEs in Suriname and, in doing so, to broaden the opportunities for firms there. Those market segments that are currently inadequately served by financing institutions will benefit from improved access to external finance, with positive effects on production, employment, and income.

1.6 Structure

Following this Introduction, in Chapter 2 we focus on theoretical and empirical discussions on obstacles to finance faced by MSMEs in general, and in Suriname in particular. The characteristics of firms and the financing market of the country are also described, which allows for the adaption of theoretical explanations for their use in the Surinamese context. Finally, we identify in Chapter 2 the determinants of access to external finance in the literature, augmented by other potential determinants, and present the building blocks of a probit model to be used in the quantitative empirical chapters.

In Chapter 3, we focus on the issue of obstacles to financing specifically in the context of a small state, as Suriname is one such state.

In Chapter 4, we conduct an initial empirical investigation of obstacles to financing facing SMEs in the Caribbean, based on secondary data collected within the 2010 World Bank Enterprise Survey Initiative for the Caribbean and Latin America. We assess the determinants of obstacles to financing in the Caribbean using an ordered probit model. We repeat the assessment of these determinants by estimating the same model using the 2013 IDB PROTEqIN survey dataset.

In Chapter 5, we present a quantitative analysis of obstacles to financing facing firms in Suriname based on a unique firm-level survey undertaken in the country.

In Chapter 6, we present a qualitative analysis based on a unique bank-level survey conducted in Suriname.

Chapter 7 concludes and presents policy recommendations based on the findings of this study.

Chapter 7: Conclusions, recommendations, key contributions, and suggestions for further research

7.1 Introduction

In this chapter, we summarize the main findings of our study on obstacles to financing facing micro, small, and medium-sized firms (MSMEs) in Suriname in a small-state context. We also highlight the key contributions of this study to the literature, present recommendations based on the findings, and conclude with suggestions for further research.

Despite extensive literature on obstacles to financing, the small-state perspective on this issue is under-researched. This may lead to biases in the findings, while at the same time policy recommendations may not resonate well in a small-state context. As Suriname is one such small state, the focus on this particular context is a natural choice. Furthermore, studies on obstacles to MSME financing tend to be conducted either from the demand or from the supply side of the credit market, which may also lead to biased findings; by surveying the firms as well as the banks involved, we avoid this risk. In enterprise surveys on Suriname, micro firms are routinely excluded, while this category actually constitutes the overwhelming majority of the country's firm population; the findings and recommendations resulting from those studies might thus not be fully applicable to firms in Suriname. Finally, in studies on MSMEs, the common practice is to assume that all firms are growth oriented; however, the subcategory "survival firms" – within the category micro firms – are not growth oriented, and have a different focus entirely. This category might require other policy interventions compared with formal-sector growth-oriented firms.

The problem statement "the nature and extent of obstacles to financing in Suriname" led to the formulation of our study's main objective. In order to reach this main objective, we formulate six sub-objectives. The findings on the objective, as well as recommendations on each relevant sub-objective – specified for firms, banks, government, and the central-bank level – are presented below.

7.2 Conclusions and recommendations

Below, we present the main findings per sub-objective of the study.

Main findings on Sub-objective 1: the nature of obstacles to financing facing MSMEs in the literature, from a small-state perspective.

Based on the theoretical chapter (Chapter 2) and the chapter on small states (Chapter 3), we conclude that the primary explanations for the obstacles to financing facing MSMEs are:

- Information asymmetry
  This is compounded by weaknesses in the operating environment of small developing states, such as:
    - weak information and contractual frameworks; and
    - the existence of many MSMEs, which are characterized by informational opacity.
- High costs per unit of credit for small credit amounts.
  These costs are related to the screening and monitoring of credit contracts. This is especially true for micro and small firms.
  Given the weaknesses in the operating environment, banks – as well as firms – restore mechanisms to overcome the risks related to information asymmetry by:
    - relationship lending;
    - networking;
    - introducing partial guarantee funds; or
    - Fintech solutions (to lower the costs per unit of credit).

- The main policy recommendation from the standard literature for enhancing access to finance is to build up the informational and contractual framework in order to decrease information asymmetry and related risks so that banks can make informed credit decisions. While credit infrastructure is vital for the long-term development of the credit market, due to specific circumstances in small developing states this alone might not produce the expected spur in credit for at least three reasons. First, small developing states lack capacity – thus, enhancing the operating environment might take time. Second, small developing states are characterized by the presence of many micro and small firms, which are inherently informationally opaque and mostly lack the type of collateral required by banks. Third, for commercial banks, high cost per unit of credit is an obstacle in lending to micro and small firms. Therefore, following the mainstream policy recommendations alone might not render the needed spur to credit growth. Government intervention in terms of providing partial guarantee schemes is essential for banks to be able to share the risks and costs, which makes it feasible for them to extend credit to micro and small firms.

- However, these findings and recommendations are only relevant for MSMEs in the formal sector. Those in the informal sector should be first incorporated into in the formal sector by means of financial inclusion before information asymmetry and cost consideration come into play, in order for banks to be able to assess credit proposals for those firms. Financial inclusion is generally defined as the availability and equality of opportunities to access financial services by individuals and businesses, including banking, loan, equity, and insurance products. Furthermore, a distinction should be made between growth-oriented and survival firms, as the second category of enterprises might use more finance from informal sources.

Main findings on Sub-objective 2: the determinants of access to external finance by SMEs in the Caribbean.

In Chapter 4, we estimated ordered probit and ordered logistic models using pooled data of six Caribbean states from the 2010 World Bank Latin American and Caribbean Enterprise Surveys (LACES) and repeated the estimation of the models using the 2014 PROductivity, TEchnology, and INnovation (PROTEqIN) survey jointly implemented by the Inter-American Development Bank (IDB), Compete for the Caribbean, and the World Bank (WB). We found that firms operating in the manufacturing sector, younger firms, women-led firms, and firms without audited financial statements experience more obstacles to financing than their respective counterparts.

Our model estimations based on the World Bank Enterprise Survey (WBES) database indicate that firms located in Belize experience a greater number of severe obstacles to financing than those in Suriname, while Guyanese firms experience fewer severe obstacles than their Surinamese counterparts. When using the PROTEqIN database, we find that firms in Belize, Jamaica, and Trinidad and Tobago experience a greater number of severe obstacles to financing than do their equivalents located in Suriname.

Main findings on Sub-objective 3: the extent of access to external financing by MSMEs in Suriname, across firms' characteristics.

In Chapter 5, we analyzed a unique firm-level survey on Paramaribo, the Surinamese capital. We found that firms in Paramaribo predominantly use internal financial resources, commercial banks, and private capital to finance their working capital and fixed assets. Commercial banks are the most important source of external financing for firms in the country. Around 53 percent of the surveyed firms experienced access to financing as an obstacle to their current operations to some extent. Firms thought that government intervention in the following areas could have substantial to significant impact on access to financing:

- The introduction of business-support centers.
- The introduction of a credit-registry bureau.
- The introduction of a pledge registry for movable and immovable assets.
- Credit-guarantee funds.
- Reform of the collateral framework to allow for movable collateral.
- Financial education.

Main findings on Sub-objective 4: the determinants of access to external financing by MSMEs in Suriname based on a unique firm-level survey.

In Chapter 5, we assessed the determinants of obstacles to financing in Suriname based on data from a unique firm-level survey using a probit model. The probit-model estimations reveal that firms in the manufacturing, construction, and trade sectors are more likely to experience obstacles to financing than those in the services sector. They also confirm that the age of a firm, its legal status, ethnicity (Creole, Indian, Javanese, and Mixed relative to Chinese), religion (Muslim relative to Christian), and networks are significant determinants of obstacles to financing in Paramaribo.

Main findings on Sub-objective 5: a qualitative investigation of obstacles to financing facing MSMEs in Suriname through a unique bank-level survey.

In Chapter 6, we analyzed a unique bank-level survey. The main findings are as follows:

- There is no uniformity among banks in Suriname on the subject of defining MSMEs. Credit amount and number of employees are the most commonly used criteria.
- The main reasons given by banks for their rejecting credit proposals are:
    - a lack of adequate collateral;
    - a lack of financial statements;
    - project feasibility;
    - the financial condition of the borrower;
    - a lack of MSME management capacity; and
    - the lack of a business plan.
- Banks points towards various obstacles to lending to MSMEs – viz.:
    - Macroeconomic (economy-wide) factors: high interest rates, exchange-rate risk, macroeconomic instability, and negative economic growth.
    - Regulations: domestic regulations, such as the credit-classification criteria used by the Central Bank of Suriname, anti-money laundering (AML) regulations, and reserve requirements.
    - The legal and contract-enforcement environment: collateral law (lack of movable collateral registers) and judicial efficiency (lengthy judicial processes).
    - Bank-specific factors: difficulties with appropriate information-technology tools and designing product-matching segment needs – furthermore, lack of sector analysis, bank size, and limited coverage (especially in the hinterland).
    - MSME-specific factors: the poor quality – or, in many cases, the complete absence – of financial statements and a lack of acceptable collateral are the most significant obstacles. Furthermore, the low level of managerial qualities,

an inability to manage risks, the central role of one person (especially in single-person firms), the informality encountered in MSMEs, and the difficulty in executing collateral in cases of default are also restrictive factors.

    - The nature of the lending technology: risk management, high entry costs, the nature of products, difficulty in standardizing products and procedures, difficulty in attaining scale economies, and the limited payment options for clients are obstacles.
    - Competition in the MSME segment: the presence of niche players and specific funds.
    - A lack of adequate demand: "lack of sufficient demand" and "demand from customers that are not creditworthy" were cited as obstacles; the latter refers to firms lacking adequate acceptable collateral.
- Networks are useful in facilitating information on the availability, terms, and conditions of credit products – and, through this channel, access to finance. Only a few networks, such as relationships with accountants, affect credit decisions and credit conditions (for instance, collateral and interest rates).
- According to the banks, the government could increase the appeal of MSME lending by:
    - speeding up legal proceedings and adopting a mediation institute;
    - adopting a credit-registration bureau;
    - enhancing credit-guarantee funds;
    - offering tax incentives;
    - offering subsidies;
    - facilitating free coaching of MSMEs; and
    - enhancing access to real estate.

Sub-objective 6: to formulate policy recommendations based on the findings in the literature and those from the firm-level and the bank-level investigations.

Recommendations for firms

- Firms should improve the quality of their financial information.
- The management of firms could be strengthened.

- While the operating environment is weak, firms are encouraged to engage in networking in order to gain access to the credit market.

Recommendations for banks

- Given the weak operating environment, banks should restore relationship lending in order to cater to MSMEs. Also, networks could be explored to bridge the information gap.
- Risk management, including the capacity for credit appraisal and monitoring, should be strengthened.
- Given the importance of soft information in economies with weak information and contractual frameworks, banks could adopt hierarchical structures conducive to the utilization of such information in the lending process.
- Banks could use Fintech solutions in order to cater to MSMEs that otherwise would be underserved.

Recommendations for the government

We recommend that the Surinamese Government adopts a two-tier approach: to build up the operating environment and to provide partial guarantee funds.

1. Operating environment
    - Ensure macroeconomic stability.
      Macroeconomic instability is an important source of the obstacles to financing faced by MSMEs. Sound fiscal policies and manageable debt levels are imperative in this regard. The government should create fiscal "space" in order to support MSME financing through various policy interventions, including partial guarantee funds (see point 2, below).
    - Build up the information and contractual framework, by:
        - enhancing judicial efficiency;
        - adopting a Credit Bureau Act and instituting a credit bureau; and
        - adopting a collateral law in order to allow for movable assets to be used as collateral, as well as factoring.
    - Set up an institutional framework for Fintech companies.

A spur to growth in Fintech companies requires appropriate rules and regulations, which should aim at protecting consumers at the same time.

- Establish a program on financial education.
  The need for financial education has resonated clearly throughout the surveys. We recommend that the government conducts a baseline study to find out the particular needs of the various market segments, and designs a national financial-education policy accordingly. Special attention should be paid to those enterprises facing a relatively larger number of obstacles, such as Chinese and women-led firms.
- Instigate government support centers for MSMEs.
  Government support centers could be set up in close collaboration with the business associations, to reflect the needs of firms. In this case, special attention should also be paid to those firms experiencing a relatively larger number of obstacles to financing.
- Financial inclusion.

  Given that the overwhelming majority of the firm population in Suriname falls into the categories "micro" and "small," including survival firms, we recommend that the government adopts a national financial-inclusion program. The first step in this regard could be a study on the extent of informality and underlying motives to operate in the informal sector. So long as these firms are not channeled into the formal sector, no amount of building information and contractual frameworks to reduce information asymmetry will yield the expected results. Information asymmetry and its associated risks can only be addressed when firms are able to submit credit proposals to financial institutions, such as banks.

- Develop the legal infrastructure to stimulate alternative MSME financing.
  Factoring and leasing are two propagated instruments in a weak operating environment (AFI, 2019). Leasing of machinery and equipment is a complementary source of investment finance; it focuses on a firms' cash-flow-generating capacity instead of on its credit history or its capacity to pledge collateral. Factoring involves the selling of creditworthy account receivables at a

discount rate to specialized institutions in order to receive immediate funds; it represents an alternative source of working capital.

2. Partial guarantee funds

   We recommend that the government adopts an explicit policy of enhancing access to financing for MSMEs, with partial guarantee funds as an integral instrument in this approach. We further suggest that the government leaves credit appraisal and monitoring to the commercial banks.

Recommendations for the central bank

1. When designing monetary and supervisory policies, strike an appropriate balance between those policies on the one hand and access to finance on the other. In line with Claessens (2006), we suggest considering national welfare in supervisory policies.
2. Establish a system of financial education, in collaboration with the government.
3. Enhance credit-market infrastructure, in collaboration with the government.
4. Set up a database for credit proposals rejected by banks.
5. Adopt a consistent definition for MSMEs and, for policy purposes, demand data from banks for each segment.
6. Assess credit-market conditions regularly, from the demand as well as the supply side of the market.

7.3 Key contributions to the literature

Our study makes a number of key contributions to the literature on small developing states about obstacles to financing faced by MSMEs. First, it is the first systematic study on such obstacles in Suriname to be primarily conducted from a small-state perspective. Second, the demand as well as the supply side of the credit market have been surveyed in order to prevent biased findings. Third, determinants overlooked or under-researched in the existing literature have been tested in the context of a small state: ethnicity, religion, and networks. Finally, the study has established that a firm's age and its participation in networks seem to have non-linear relationships with obstacles to financing, which intensify with increasing age and networking until a certain point and decrease thereafter.

Our findings have implications for the empirical literature on determinants of obstacles to financing and for policies aimed at enhancing access to finance. Our results suggest the inclusion of ethnicity and religion as determinants of such obstacles in studies focusing on multi-ethnicity and multi-religious societies – and the same applies to the issue of networks.

Furthermore, our findings suggest that the main policy recommendation for enhancing access to financing for MSMEs will not yield the expected results in terms of a spur in credit growth and an impact on production and poverty alleviation. Government intervention, except for that undertaken to enhance the operating environment, should entail the provision of partial guarantee funds in order to provide commercial banks with the required level of risk comfort to embark on large-scale MSME financing. Given the prevalence of micro firms, especially in small developing states, governments should attempt to formalize these firms before they are permitted to use banking products.

7.4 Suggestions for further research

Our study has several limitations, which should be taken into account when interpreting the results. Furthermore, these limitations suggest a need for further research regarding the determinants of obstacles to MSME financing in the Caribbean as well as in Suriname. We summarize the limitations per empirical chapter next.

Limitations: Chapter 4

The WBES and PROTEqIN databases referred to in Chapter 4 have several limitations.

First, the WBES as well as the PROTEqIN database excludes micro firms, while this category of firms constitutes a large part of the firms' population in the Caribbean. Furthermore, in the category micro firms, a distinction has to be made between profit-oriented and "survival" firms, as pointed out by Berner et al. (2008), as both categories of firms have different motives, which in turn have implications for any policy design aimed at improving access to finance. Second, the agriculture sector is excluded, while this sector might experience specific obstacles to financing, in addition to those of the other sectors. Third, ethnicity, religion, and networks are not included in the surveys, while these are potential determinants of obstacles to firms' financing (see also Chapter 5) – especially in a small-state context. Fourth, the surveys were mainly executed in the capital cities of the countries, whereas the results for particular sectors, for instance, might differ from district to district and the narrow focus might induce a bias in the surveys. The findings of the surveys are thus not likely to be representative of the whole country in each case.

Limitations: Chapter 5

The survey used in Chapter 5 has various limitations.

First, the survey is conducted in Paramaribo, the capital city of Suriname, which is the center of the country's economic activities. However, limiting focus to Paramaribo potentially induces biases. The sectoral and ethnic composition of Paramaribo differs from the other districts of Suriname, and the country's agriculture and mining sectors are automatically excluded from the survey. We suggest conducting a similar study for the total firm population of Suriname. Specific sectors that are not present in Paramaribo – mining and agriculture among them – could be included. In the hinterland of Suriname especially, we expect major difficulties in accessing finance as banks are often absent in such sparsely populated areas due to a lack of economic feasibility. More importantly, in the hinterland, land rights are collectively owned, further complicating the use of land as collateral due to the low tradability of these lands. As real estate is the prime source of collateral for banks, access to finance could be challenging in the hinterland. Furthermore, the districts outside of Paramaribo vary in terms of ethnicity and sector. For instance, the western district of Nickerie is dominated by the cultivation of rice by East Indians, whereas the country's hinterland is focused on the mining of gold by the Maroon ethnic group.

Second, given significant share of micro firms in the firm population, we suggest a separate study on micro firms, in which explicitly a distinction is explicitly made between growth-oriented and survival firms, in line with Berner et al. (2008). Also, firms without a fixed location where they carry out their economic activities should be included.

Third, we suggest a study to explore in greater depth the channels through which ethnicity and religion influence obstacles to financing. In the current study, our focus was on assessing whether these factors were significant determinants and providing possible causes. A follow-up study could explore whether certain ethnic and religious groups facing more obstacles to financing do so because of discrimination or a lack of resources (that is, assets that could be used as collateral, initial levels of wealth, and network resources).

Fourth, we suggest using volume of sales, instead of numbers of workers, to classify firms into micro, small, and medium-sized categories. In our study, firms did not provide sufficient information to allow us to use this criterion to classify them.

Fifth, we suggest measuring years of schooling on a continuous scale rather than classified into different ordered categories (see, for example, Ogubazghi & Muturi, 2014).

Limitations: Chapter 6

In the study referred to in Chapter 6, the focus is on the banks for two reasons: first, research shows that banks are the main source of external financing worldwide (Beck et al., 2010); second, banks dominate the Surinamese financial system. However, this focus gives rise to selection bias. In any follow-up study, other financial institutions – such as credit unions – should also be included. Despite their low share of the financial system in Suriname (1 percent of the system's assets), credit unions may be better equipped than other institutions to cater to the financing needs of micro firms. Furthermore, providers of informal finance such as friends and family and trade credit may be included as well, given their importance as sources of finance (see also Chapter 5).

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About the Author

William Mohamed Mustafa Orie is a proud Surinamese national, born in 1970. He has been a central banker since his graduation in 1997 from the Economics Faculty of the Anton de Kom University of Suriname. In 2007, he obtained his second master's degree, in Public Administration with specialization in Governance, from the Lim A Po Institute for Social Studies in collaboration with the International Institute of Social Studies (ISS), The Hague. He is currently finalizing the Ph.D. trajectory at the ISS-Erasmus University Rotterdam, having submitted his dissertation.

William has had a vibrant career so far. Having begun as a staff member of the Monetary and Economic Affairs Directorate at the Central Bank of Suriname in 1997, he had by March 2019 risen to the position of Deputy Governor Monetary and Economic Affairs at the Bank. In between, he served as the Bank's Coordinator Monetary and Economic Affairs (September 2015–February 2019), and Coordinator of the Public Relations Department (2015–2017); was honored to be Suriname's advisor on the Executive Board of Directors of the International Monetary Fund, and Government-Provided advisor on the Executive Board of Directors of the World Bank (September 2013–September 2015); and was Government-Provided Advisor on the Executive Board of Directors of the IMF (January–July 2012). Prior to this, he served as Advisor to the Governor of the Central Bank from January 2012 to September 2013.

William has a passion for directly applicable research, analytical and strategic thinking, policy formulation, and knowledge transfer. He is aware of the capacity constraints of Suriname, as a small developing state, and is determined to contribute to capacity building in order to aid the development of his home country.

His professional interests range from monetary and exchange-rate policy to foreign-exchange-market policy and access-to-finance policy for micro, small and medium-sized firms. Having undergone a rigorous Ph.D. trajectory has enhanced his ability to contribute to policy debate and policymaking. William beliefs in and motivates people to maximize their potential, and to remain true to their dreams as long as these continue to be meaningful and positive.

He is a passionate lecturer, and enjoys transferring knowledge and witnessing his students' progress. From 1995 to 2013, he was a part-time lecturer at various institutions, such as HAVO, Inholland Suriname, and Anton de Kom University of Suriname. In this capacity, he taught the foundations of economics, international economics, and international political economics.

In his leisure time, William enjoys playing draughts – and twice became National Champion (in 2008 and 2009) and Open Champion of Suriname in 2005. Currently, he holds the international recognized title, Maître Federation (FM), from the World Draughts Federation.