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Leadership Experiences of Organization Open Innovation in Caribbean Small and Medium Enterprises

Helen Merlyne Bhola-Paul
Walden University

Walden University

College of Management and Human Potential

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Helen Merlyne Bhola-Paul

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Dr. John Kitoko, Committee Member, Management Faculty
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Sue Subocz, Ph.D.

Walden University
2022

Abstract

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MPhil., Walden University, 2020

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Dissertation Submitted in Partial Fulfillment

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Abstract

Caribbean Small and Medium Enterprises (SMEs) represent 95% of Caribbean businesses and contribute 40% to the region's GDP; however, they rank lowest at 4% for organization innovation. The general problem addressed in this study was that leaders of SMEs of the Windward Islands in the Caribbean did not have a system in place to lead and promote strategic knowledge sharing to increase open innovation. The purpose of this qualitative multiple case study was to explore the lived experiences of leaders of innovative SMEs in the Windward Islands to manage and lead their organizations to drive organization open innovation in a developing economy context. The dynamic capability was applied as the conceptual framework to understand how leaders sensed strategic information, seized, and transformed information into innovative products and processes. A qualitative research design was used to obtain data from SMEs owners and managers in the Windward Islands, including data obtained from an interview questionnaire, existing literature, and a set of semi-structured interviews from a sample of 15 participants. The key findings indicated that SMEs drive open innovation through flexible leadership styles and a continuous flow of internal and external knowledge sharing. The study may lead to positive social change because it may offer knowledge and best management and leadership practices that all organizations regardless of their sizes could emulate and improve SMEs performance and operations.

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Dedication

I thank God almighty for his unfailing mercies and strength on this rigorous PhD academic journey. I dedicate this dissertation to my late dad, Reverend Hermon Medee Bhola, and my mom, Adina Bhola, whose parenting taught me the value of education and provided the first insight on the practice of management by their leadership in our family business. I thank my oldest sister, Margaret-Ann David, who first planted the seed in me to pursue my PhD and always believed in my academic ability to reach for the highest level of education. To my other siblings whose understanding and prayers supported me on this journey. To my supportive husband, Michael Rachan Paul, and my lovely daughter, Merdinah Renata Paul, for her patience in those moments she needed my attention. Her humor and love provided a source of strength when I was at my weakest point. My prayer is that my daughter will see my academic PhD achievement as the benchmark for her educational pursuit.

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Chapter 1: Introduction to the Study

Open innovation is the purposive flow of information from in-house capabilities to potentially outsourcing to create new ideas, processes, and products (Chesbrough et al., 2006). Open innovation involves the generation of ideas to include stages from invention to commercialization by capturing value from ideas, technology, and joint effort that may be internal or external to the organization (Chesbrough & Brunswicker, 2013; Chesbrough et al., 2006). Inbound open innovation involves soliciting and engaging ideas from an external source to the organization (Chesbrough & Bogers, 2014; Hochleitner et al., 2017). Outbound open innovation involves ideas generated from within the organization to create innovation external to the organization (Bogers et al., 2017; Chesbrough & Bogers, 2014). Open innovation is using external ideas and technology within the organization while making internal unused ideas and technologies available for other businesses (Chesbrough & Bogers, 2014). Open innovation in small and medium enterprises (SMEs) has opened the boundaries for innovation to move from the traditional closed approach to an open approach by using external information to create innovative products and processes (Usman et al., 2018; Vanhaverbeke, 2017). Both inbound and outbound open innovation can generate new ideas, products, and processes within an organization.

Research on open innovation in SMEs and their organizations' performance has focused on developed economies with a lack of attention on developing economies, including their environmental context variables and the role of leadership (Ahn et al., 2015; Hossain, 2015; Slavec Gomezel & Rangus, 2019; Usman et al., 2018). However,

innovative performance of SMEs supports both firm sustenance and economic growth in developing economies. Mohan et al. (2017) and Alleyne et al. (2017) identified barriers to Caribbean SME innovation, and they included a lack of market knowledge and a need for technology. Having a fuller understanding of the factors that drive SMEs' innovative performance is critical to the economic survival and growth of developing economies.

SMEs contribute to developing countries' economic development and job creation (Ayyagari et al., 2014; World Bank, 2019). SMEs represent 90% of businesses and 50% of jobs worldwide, while in the Caribbean SMEs represent 95% of Caribbean businesses and contribute 40% to the region's gross domestic product (McLean & Charles, 2020; World Bank, 2019). SMEs in developing economies including the Caribbean are not engaged in innovation even though they have the potential (Mohan et al., 2017). SMEs ranked lowest at 4% for organization innovation, and some of the islands included in that study were St. Vincent, St. Lucia, Grenada, and St. Kitts (Mohan et al., 2017). SMEs' engagement in organization innovation can increase the firm's innovative performance, increase economic growth, and create more jobs in developing economies.

Leadership in SMEs influences the strategic direction of the organization in many ways. For example, research has found that leadership affects SMEs' performance by (a) developing a trusting organizational culture due to the openness of the leader, (b) establishing relationship-based employee approaches, and (c) creating more dynamic capabilities within an organization (Ahmed et al., 2018; Hernández-Linares et al., 2021; Özer & Tınaztepe, 2014). Furthermore, a CEO's leadership style affects the potential for open innovation; a leader who foster openness may stimulate open innovation in the

organization (Ahn, 2020; Ahn et al., 2017a; Slavec Gomezel & Rangus, 2019). Due to the promise of open innovation and the potential it has in stimulating SMEs and economic growth in developing countries, having a better understanding of SMEs leadership as it impacts the open innovation strategy of an organization can be critical for future economic development, poverty reduction, and job creation.

In this chapter, I provide the background to the study and the research problem, which was founded and developed from the literature. Gaps in previous research on open innovation and leadership in SMEs in developing economies are described, and I address the significance to the field of SME open innovation and leadership, paying attention to both theory and practice. The study's conceptual framework, dynamic capability view framework, is identified based on the relevance to studies on open innovation and leadership in the literature. Additionally, the nature of the study, relevant definitions, assumptions, scope, delimitations, and limitations are also addressed.

Background of the Study

SMEs account for 95% of the Caribbean region's businesses and contribute 40% to their gross domestic product (McLean & Charles, 2020). Crespi et al. (2017) and Mohan et al. (2017) argued that many Caribbean SMEs have the potential for innovation and do not engage in innovation. Companies' investment in process innovation increases both labor productivity and the organization's innovation (Crespi et al., 2017; Wadho & Chaudhry, 2018). Organization innovation may increase the product and process innovation of the organization, while improving the economic development of developing countries.

There is a need to better understand SMEs leadership as it impacts the organization's open innovation strategy, which can be critical for future economic development, reduction in poverty, and job creation in a developing country context. There is abundant research confirming the relationship between leadership and SME performance. Additionally, there is scattered research on the leadership and open innovation relationship with some research focusing on (a) open innovation and firm performance, (b) leadership knowledge and firm performance, (c) leadership style within an organizational context, and (d) the flow of knowledge through outbound and inbound open innovation (Ahn et al., 2015; Chesbrough & Brunswicker, 2013; Hossain, 2015). Furthermore, some organizations engage in open innovation through knowledge flows from affiliations with other organizations, and through knowledge from external sources with the organization's ability to use the external knowledge through its absorptive capacity (Greco et al., 2017; OECD, 2018). Measuring the knowledge flows is critical to organization open innovation at a firm level. Product and process innovation, staff training, technology used by the organization, and the access to finances can measure an organization's innovation (Cirera & Muzi, 2020; Grazzi & Pietrobelli, 2016). Additionally, the Oslo Manual, an international reference for collecting data on open innovation, has defined open innovation and data sources of open innovation (OECD, 2018). Innovation at a firm level can be measured using innovation outputs and knowledge utilization driving the process of organization open innovation.

In developing economies, the role of organization open innovation and leadership impacts performance of SMEs and economic growth for these economies. Leaders of

SMEs influence the strategic transfer of knowledge through their leadership style and the organization's absorptive capacity (Ahmed et al., 2018; Hernández-Linares et al., 2021; Özer & Tınaztepe, 2014). Open innovation, organization culture, and leadership impact the SME performance relationship (Mohan et al., 2017; Morris, 2018; Slavec Gomezel & Rangus, 2019; Srisathan et al., 2020). Leadership can positively affect an organization's innovation and can impact organizational performance (Chen et al., 2019; Kesting et al., 2015; Xiao et al., 2018). Many studies have identified the positive relationship that exists between SME leadership and innovation. Leadership approaches affect the management of organization innovation.

Researchers have use the case study methodology to study leadership in developed Caribbean economies. A case study using a case analysis method has been used to understand the effect of leadership on prosperity. Many factors impact prosperity, including internal factors such as strategic leadership and external factors such as branding and the market (Williams & Ramdani, 2018). Additionally, the sectors most important in generating process and product innovation in a developing country context were manufacturing and the service sectors. Morris (2018) identified the sectors most important for innovation were service and manufacturing based on a multisector study of 40,577 small, medium, and large enterprises. Using a case study methodology helped Morris understand the factors that contribute to prosperous SMEs, with evidence supporting the use of innovation within the service and manufacturing sectors.

Caribbean economies' SMEs lack competitiveness; they have a weak capacity for innovation and a lack of strategic leadership (Acevedo et al., 2013; Hurley, 2018; Minto-

Coy et al., 2018; Williams & Ramdani, 2018). The role of leadership in driving and managing open innovation is needed to understand how leadership drives and manages open innovation and the applicability in developing economies (Mohan et al., 2017; Slavec Gomezel & Rangus, 2019; Usman et al., 2018). The current study addressed how SME leadership drives organization open innovation in developing economies and contributed to the SME leadership and the strategic management literature (see Crespi et al., 2017; Slavec Gomezel & Rangus, 2019; Usman et al., 2018). The results may impact positive social changes through the policy changes at a developing economy level to support open innovation pursuit. Also, knowledge sharing, and strategic leadership may contribute to a firm's open innovation performance, which may influence SMEs' performance positively and contribute to the economic development of developing countries.

Problem Statement

The problem addressed in this qualitative study was the challenges of developing Caribbean economies' SMEs, lack of competitiveness, weak capacity for innovation, and a lack of strategic leadership (Acevedo et al., 2013; Hurley, 2018; Minto-Coy et al., 2018; Williams & Ramdani, 2018). Caribbean SMEs represent 95% of the Caribbean region's businesses and contribute 40% to gross domestic product (McLean & Charles, 2020). SMEs in developing economies ranked lowest at 4% for organization innovation and included: Grenada, Antigua, Barbuda, Dominica, and St. Kitts (Mohan et al., 2017, p. 16). A study on firm-level innovation among Caribbean small, medium, and large businesses indicated that more businesses had the potential for innovation but were not

engaging in innovation (Mohan et al., 2017). In the firm-level innovation study, "the results indicated that businesses in Grenada had 81 potential innovators, St. Vincent had 69 potential innovators, Dominica had 75 potential innovators, and St. Lucia had 80 potential innovators" (Mohan et al., 2017, p. 16).

The general problem was that leaders of SMEs of the Windward Islands in the Caribbean do not have a system to lead and promote strategic knowledge sharing to increase open innovation (see Hurley, 2018; Mohan et al., 2017; Morris, 2018; Slavec Gomezel & Rangus, 2019). The specific problem was that leaders of Caribbean SMEs have not fully understood the contribution of leadership on the firm's leaders' abilities to drive their organization's open innovation (see Ahmed et al., 2018; Crespi et al., 2017; McLean & Charles, 2020; Slavec Gomezel & Rangus, 2019; West & Bogers, 2017). A gap in the leadership and strategic management literature existed regarding how SME leaders' knowledge and ability drive their organization's open innovation in a developing economy context (see Radziwon & Bogers, 2018; Slavec Gomezel & Rangus, 2019; Usman et al., 2018; West & Bogers, 2017).

Purpose of the Study

The purpose of this qualitative study was to explore how SME leaders in the Windward Islands manage and lead their organizations to drive open innovation in the context of developing economies. To address the leadership and strategic management gap in the literature, I used the qualitative research method and a multiple case study design. Data were collected from SMEs in Grenada and St. Lucia, the largest of the Windward Islands, which consisted of four developing economies: Dominica, St. Lucia,

St. Vincent, and Grenada. The data collection for the multiple case study design included four SMEs and 15 semi-structured interviews with SME owners and managers (see Halkias & Neubert, 2020; Stake, 2006; Yin, 2018). The SMEs were those engaged in product or process innovations within the last three years. The concept of open innovation was explored using leaders in the Windward Islands to understand how they managed and led their organizations to drive open innovation in the context of developing economies. The findings may provide valuable insight to improve the performance of SMEs in developing economies (see Radziwon & Bogers, 2018; Slavec-Gomezel, 2019; Usman et al., 2018).

Research Question

The overarching research question was the following: How do SME leaders in the Windward Islands lead and manage their organizations to drive open innovation? I explored how leadership within organizations influences and drives open innovation according to SMEs who engaged in product exportation and had generated process and product innovation within the last three years.

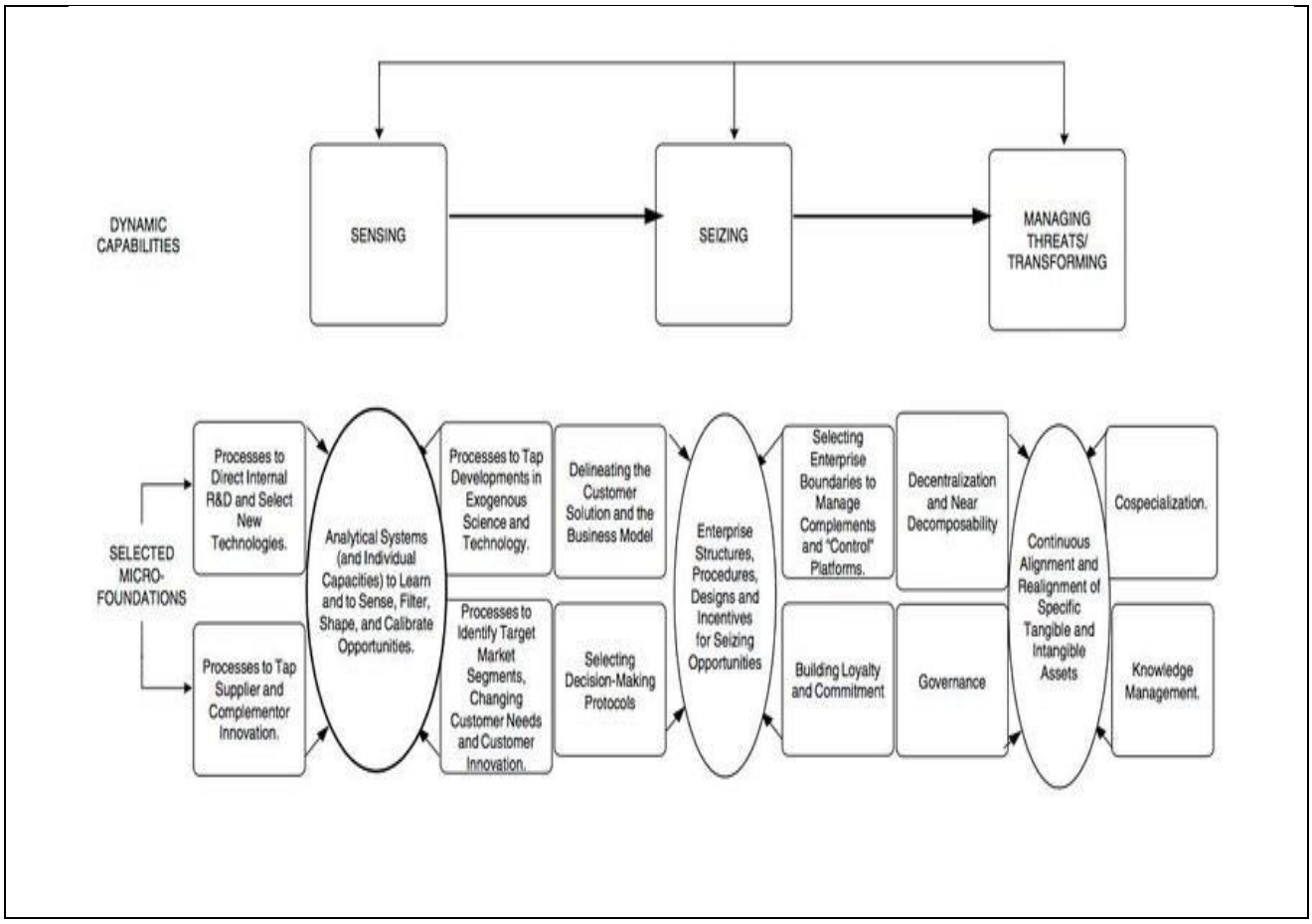
Conceptual Framework

The conceptual framework for this study was the dynamic capability view framework. This framework links the concepts of leadership and open innovation with the dynamic capability view framework associated with an organization's strategic performance (Chen et al., 2019; Donate & Sánchez de Pablo, 2015; Slavec Gomezel & Rangus, 2019; Srisathan et al., 2020). The dynamic capability view framework consists of (a) sensing environmental opportunities and threats; (b) seizing the opportunities; and

(c) maintaining a competitive position through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets (Teece, 2007). Figure 1 depicts the dynamic capability view framework indicating the three stages of sensing, seizing, and managing threats or transformation and the associated organizational activities.

Figure 1

Dynamic Capability View Framework



Note. Adapted from "Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance" by D. J. Teece, 2007, *Strategic Management Journal*, *28*(13), 1319–1350. https://doi.org/10.1002/smj.640

The role of the leader is critical in this framework because sensing involves identifying opportunities; seizing includes designing and refining the business models of the firm, and maintaining competitiveness involves realigning the structure and culture of the firm.

This framework's three organizational and managerial processes are core processes for understanding the dynamic capability view framework.

The dynamic capability view framework is a concept associated with open innovation and is used to assess the firm's knowledge capacity. This framework's three stages represent the dynamic capability of a firm, which can be used to assess the open innovation in SMEs. In a case study on Smith Corona, managers made strategic decisions based on the erroneous judgment of the environment (Danneels, 2010). Fainshmidt et al. (2016) and Ferreira et al. (2020) confirmed that dynamic capability positively influences firm performance and can vary based on the economic context. Sudarmaji et al. (2020) argued that SMEs must explore knowledge and exploit knowledge simultaneously to increase their organization's dynamic capability. A manager's ability to use the elements of dynamic capability can improve the strategic performance of a firm. The heterogeneous nature of organizations and their environment can impact the effect that the dynamic capability framework can have on performance.

The process of the dynamic capability view framework involves the constant flow of information from external sources into the organization and the continuous processing of that strategic information. Hermawati (2020) argued that a firm's dynamic capability is a constant process. Many researchers identified the benefits of sensing, seizing, and reconfiguring as part of the dynamic capability framework within SMEs that engaged in open innovation (Fainshmidt & Frazier, 2017; Ferreira et al., 2020; Grimaldi et al., 2013). SMEs' performance can benefit from the dynamic capability model and the strategic

inflow of knowledge and the resulting innovation in the context of developing economies.

Nature of the Study

I used a qualitative method with a case study design to study how SME leaders in the Windward Islands manage and lead their organizations through open innovation. This study was conducted using multiple data sources in the context of developing economies in the Windward Islands, while was a real-life setting (see Yin, 2018). The data collection was from St. Lucia and Grenada, the largest of the Windward Islands, which consist of four developing economies: Dominica, St. Lucia, St. Vincent, and Grenada. The SMEs were in existence for a minimum of five years, with 250 or fewer employees for medium enterprises and 50 or fewer for small enterprises (see Berisha & Pula, 2015; Cooper, 2016). The target population was approximately 30 owners and managers representing four SMEs that engaged in product exportation, product innovation, and process innovations. The sample consisted of 15 people who held leadership positions in the capacity of manager or owner in any of these SMEs. I explored how they led and managed their organization to drive open innovation (see Halkias & Neubert, 2020; Stake, 2006; Yin, 2018). The industries represented included agro-processing, pool supplies, and rum processing industries, which are major Windward Island industries (see Cooper, 2016).

Cases were studied using an instrumental approach, which focused on an issue with a multiple case analysis (see Hayes et al., 2015; Stake, 2006; Yin, 2018). The four SMEs represented owners and managers who led their organizations through innovation

outputs (see Hancock & Algozzine, 2017; Stake, 2006). The criterion-based sampling technique used to select organizations focused on exportation and innovation outputs within the last three years, excluding other innovations such as staff training and research and development associated with larger organizations (see Cirera & Muzi, 2020; Morris, 2018; Slavec Gomezel & Rangus, 2019).

A data triangulation approach included data from various data sources including interviews and document analysis (see Halkias & Neubert, 2020; Stake, 2006). SMEs' data were analyzed using a thematic approach based on common themes identified from the literature and compared with the interview transcripts (see Hancock & Algozzine, 2017; Yin, 2018). The multiple case study included a within-case analysis to assess the common themes (see Halkias & Neubert, 2020; Stake, 2006).

Definitions

Leadership: The collaboration between two or more members of a group that often includes the structuring or restructuring of the situation, the perception, and the members' expectations (Bass, 1985).

Open innovation: The purposive inflows and outflows of knowledge to increase internal innovation and external innovation and extend the markets for the external use of innovation respectively (Chesbrough et al., 2006).

SMEs: Small and medium enterprises that employ fewer than 250 people (medium) and fewer than 50 people (small; European Union Law, 2003).

Assumptions

The purpose of this study was to understand how SME leaders drive organization open innovation. Data were collected from semi-structured interviews from owners and managers of SMEs. I assumed that the information provided was accurate and represented the participants' best judgment. I assumed the managers' and owners' decisions were accurate and based on their data collection experiences.

Scope and Delimitations

The qualitative method was an appropriate choice for this study to understand how leaders drive open innovation. I included three SMEs to thematically analyze their approaches using a within-case analysis (see Stake, 2006). Cases should show different perspectives on the problem, process, or event (Halkias & Neubert, 2020; Stake, 2006). Data were collected from St. Lucia and Grenada, the largest of the Windward Islands, which consisted of four developing economies: Dominica, St. Lucia, St. Vincent, and Grenada. The criterion-based sampling technique was used to select organizations engaged in exportation, product, and process innovation outputs within the last three years (see Cirera & Muzi, 2020; Morris, 2018; Slavec Gomezel & Rangus, 2019). The target population was approximately 30 owners and managers representing three SMEs that engaged in open innovation (see Halkias & Neubert, 2020; Stake, 2006; Yin, 2018). The sample consisted of 15 people who held leadership positions in the capacity of manager or owner in any of these SMEs.

Limitations

Limitations of this study were potential participant dropout and the sample not representing the population. These were addressed by inviting more people than the required sample size. Biases on the subject area were addressed with a reflexive journal before, during, and after the data were collected and analyzed. The data collection and analysis guided the answering of the research question. The study transferability was limited based on the small sample of cases, but this limitation was mitigated through the use of a multiple case study including four cases to increase transferability to a larger population.

Issues of dependability were addressed using codes from the data based on the research question and representing the literature on the subject. At the same time, some were codes emerged from the data. Data analysis involved the use of a hierarchical coding structure with the major codes derived from the literature and the emerging codes based on the data analysis software, ATLAS.ti.

Significance of the Study

The findings from this study may contribute to the understanding of how SME leaders in developing countries manage and lead their organizations to drive open innovation. This was an underresearched area in the leadership and strategic management literature with minimal research on SME leaders' ability to drive open innovation in a developing economy context (see Minto-Coy et al., 2018; Usman et al., 2018). SMEs in the Caribbean are a major business sector and depend on innovation to reduce unemployment and improve sustainability (Ayyagari et al., 2014; World Bank, 2019).

The current study may guide future leaders of SMEs in understanding the factors that drive open innovation and the resulting impact on organizational performance. Additionally, leaders in developing economies may understand how to manage their organizations to drive open innovation while understanding the role of the leader in the process (see Slavec Gomezel & Rangus, 2019; Srisathan et al., 2020).

Significance to Practice

The results of this study may be significant to practice because they may explain how to drive open innovation within SMEs in the context of developing economies. The study findings may provide SME owners and managers with knowledge regarding the process of open innovation and the role of leaders in driving open innovation (see Ahmed et al., 2018; Minto-Coy et al., 2018; Slavec Gomezel & Rangus, 2019; Srisathan et al., 2020). SMEs provide employment for the Windward Island economies, and the findings from the current study may contribute to SME sustainability (see Government of Grenada, 2021; Government of St. Lucia, 2021; McLean & Charles, 2020; Williams & Ramdani, 2018). Economic development and a reduction in unemployment may be social benefits from this study on open innovation.

SMEs in developing economies lack strategic leadership and an organizational approach to driving and managing open innovation. The future economic growth of Caribbean developing economies is dependent on a refocus on innovation, strategic leadership, and competitiveness (McLean & Charles, 2020; Minto-Coy et al., 2018; Williams & Ramdani, 2018). Many Caribbean developing economy SMEs have the potential for innovation but do not engage in organization innovation (Mohan et al.,

2017; Yang, 2016). There is a lack of knowledge on open innovation and how leadership drives innovation among SMEs in developing economies (Minto-Coy et al., 2018; Usman et al., 2018). The current study's findings may benefit SMEs and add value to the knowledge on the factors that drive SMEs' open innovation. The knowledge from this research may be of value to owners and provide educators with the understanding to help students studying strategic management and leadership to develop open innovation strategies for their SMEs.

Significance to Theory

This study may be significant to theory because it may offer in-depth qualitative data on the experiences of innovative SME leaders and their approach to driving open innovation in developing economies. Open innovation and understanding the leadership role in driving open innovation may contribute to the performance of SMEs. Researchers identified an empirical relationship between a firm's open innovation and (a) the openness of the leader, (b) the organization culture, and (c) the performance of SMEs (Mohan et al., 2017; Morris, 2018; Slavec Gomezel & Rangus, 2019; Srisathan et al., 2020). Many scholars established a relationship between leaderships styles and organization innovation (Chen et al., 2019; McDowell et al., 2018; Xiao et al., 2018). However, there was a need for more research on how leaders drive and manage open innovation within SMEs in the context of developing countries.

Significance to Social Change

This study has implications for Caribbean islands' economic development because SMEs can provide opportunities for job creation and economic growth.

Developing Caribbean economies depend on SMEs' financial contributions to their economic development and in the provision of jobs. SMEs are a major business sector and contribute to the economic growth of small developing economies (Ahlstrom, 2010; Williams & Ramdani, 2018; Ng & Kee, 2018). The current unemployment rate of 20% in developing economies offered an opportunity for research to improve this situation for Caribbean developing economies (Government of Grenada, 2021; Government of St. Lucia, 2021; McLean & Charles, 2020). The private sector provides an opportunity to reduce unemployment for developing economies. The private sector offers a solution to unemployment by providing 9 out of 10 jobs in developing economies (Ayyagari et al., 2014; World Bank Group, 2013). The role of SMEs is significant in creating employment, stimulating economic activities, and reducing poverty in developing economies while driving positive social change.

Summary and Transition

This chapter provide an overview of the problem identified, an indication of the purpose of the study, the research question, the data analysis, and the limitations of the study. A review of the literature on leadership and the influence on innovation and strategic performance, Caribbean SME innovation, and SME organization open innovation guided this study. In Chapter 2, I review the existing literature on SME leadership and organization innovation and provide a description of the conceptual framework that anchored the study. The aim of this literature review was to illustrate the gap in the strategic and management literature that influenced the research question. The

theories and current research on leadership, strategic performance, Caribbean SME innovation, and SME organization open innovation guided the current study.

Chapter 2: Literature Review

The specific problem addressed was leaders of Caribbean SMEs have not fully understood the contribution of the leader's ability to drive organizations' open innovation in a developing country context (see Ahmed et al., 2018; Crespi et al., 2017; Slavec Gomezel & Rangus, 2019; Usman et al., 2018). The purpose of this qualitative study was to explore how SME leaders in the Windward Islands manage and lead their organizations to drive open innovation in the context of developing economies. SMEs account for 95% of the Caribbean region's businesses and contribute 40% to gross domestic product (McLean & Charles, 2020). A study on firm-level innovation among Caribbean small, medium, and large businesses indicated that there were more businesses with the potential for innovation than those that were engaging in it (Mohan et al., 2017). Investment in innovation has been shown to increase labor productivity and efficiency (Crespi et al., 2017; Wadho & Chaudhry, 2018). The heterogeneous nature of SME open innovation and the context variable of developing economies presented an opportunity to contribute to the strategic and management literature.

Open innovation in SMEs refers to the inbound and outbound flow of purposeful knowledge across organizational boundaries. There is a need to understand the dynamics of organizational leadership regarding open innovation (Ahn et al., 2017; Hossain, 2015; Usman et al., 2018; West & Bogers, 2017). The leadership role in SMEs is critical in driving and managing open innovation in organizations.

This chapter contains several sections. The first section includes the strategy adopted for the literature search. In the second section, I discuss the conceptual

framework for the study. In the third section, I discuss the literature on innovation in Caribbean developing economies. In the fourth section, I discuss the literature on leadership and organization innovation. In the fifth section, I discuss the literature on SME organization innovation. In the sixth section, I discuss the literature on the management of open innovation in SMEs. Finally, I discuss the literature on the drivers of open innovation in SMEs.

Literature Search Strategy

The strategy for the literature review in this study was to search for peer-reviewed journal articles on the study's research concepts and methodology. I searched for articles and seminal works published in 2014 or later that could help to answer the research question. The keywords I used to search scholarly databases were as follows: *leadership*, *SMEs*, *organization innovation*, and *SME open innovation*. I used multidisciplinary databases such as Science Direct Academic Search Complete, Taylor and Francis, and Thoreau accessed through the Walden Library as well as Google Scholar to retrieve seminal peer-reviewed articles on leadership and open innovation, which I read and analyzed. I used Ulrich's database to confirm that journals obtained through Google Scholar were peer reviewed.

My literature search encompassed critical leadership, management, and innovation journal articles published between 2014 and 2021 to ensure that no important current article was left out. Journals reviewed were *Entrepreneurship & Regional Development*, *Journal of Technology Management and Innovation*, *International Journal of Management Reviews*, *Technovation*, *Strategic Management Journal*, *Leadership &*

Organization Development Journal, *Journal of Technology*, *Journal of Innovation and Knowledge*, *Innovation and Management*, *Global Business Review*, *The Leadership Quarterly*, and *Academy of Management Journal*.

The methodology was a qualitative multiple case study, and I found literature on qualitative research methodology in books and edited book chapters. Some of the authorities I consulted on case study methodology were Stake (2006) and Yin (2018). I also reviewed journal articles on the qualitative case study approach (see Halkias & Neubert, 2020; Hancock & Algozzine, 2017; Hayes et al., 2015).

Conceptual Framework

The dynamic capability view framework was the conceptual framework guiding this study. This framework represented a broad view of how organizations can identify strategic information in their internal and external firm environment. The research question was identified based on a review of the leadership, open innovation, and SME performance literature (see Chen et al., 2019; Groves, 2020; Slavec Gomezel & Rangus, 2019; West & Bogers, 2017). Many studies addressed the impact of transformational leadership and transactional leadership on innovation and organizational outcomes (Chen et al., 2019; Kesting et al., 2015; McDowell et al., 2018). Leadership and open innovation impact the strategic position of an organization, with leadership influencing the interaction of people and open innovation influencing the inflow and outflow of information used to generate internal innovation.

The research question was crafted using the dynamic capability view framework. This framework represents how knowledge within organizations can be transformed

while benefitting from innovation outputs (Teece, 2007). This conceptual framework has represented both a deductive approach in empirical studies and an inductive reasoning tool used by many qualitative studies, while providing a holistic approach in the examination of management strategies and organization open innovation (Slavec Gomezel & Rangus, 2019; Srisathan et al., 2020, Vogel & Güttel, 2013). The framework "highlights the facets that an organization can use to assess its open innovation and the leadership role in the process" (Teece, 2007, p. 1319). The dynamic capability view framework informs the management strategies that can be applied in leading and managing organization open innovation. Organizations can use the dynamic capability view framework to inform a continuous process that creates a system of innovations.

The dynamic capability view framework is an iterative process involving three stages: sensing, seizing, and managing threats or transforming products and processes (Teece, 2007). The elements of each of the stages are as follows: (a) Sensing involves the analytical systems embraced by organizations to analyze both the internal and external information from its environment, (b) seizing involves putting structures and systems in place to benefit from the information, and (c) managing threats/transforming involves the process of ensuring that the organization's intangible and tangible assets use knowledge continuously (Teece, 2007). Each element of the framework involves the process of open innovation, which is influenced by organizational leadership (Helfat & Peteraf, 2009; Teece, 2014). Each element of the framework contributes to the organization's strategic ability to use knowledge and the leadership's ability to guide the process.

The dynamic capability framework represents a model that interprets an organization's strategic response to technical, market, and customer changes occurring in the environment. Capability can be operational or dynamic, with operational influencing the ability of the organization to thrive and dynamic referring to a change that is purposeful to create, modify, or extend the resource base of the organization (Helfat & Peteraf, 2009; Teece, 2007; Teece et al., 1997). Eisenhardt and Martin (2007) argued that dynamic capabilities are specific processes that represent best practice. Teece (2007), on the contrary, argued that a dynamic capability gives an organization a competitive advantage and should not be a best practice because the latter is imitable and common to competitors. The framework allows the organization to respond to the dynamic changes in its environment with a systematic strategic response.

An organization's dynamic capabilities drive the entrepreneurial leaders who strategically add value within the organization and among other enterprises and institutions. Kurtmollaiev et al. (2018) argued that organization training increased sensing of strategic information in an organization and seizing through organizational systems directed by leaders. Organization leaders can provide a supportive organizational culture that increases positive behaviors, attitudes, and interpersonal relationships among organization members (Fainshmidt & Frazier, 2017). Ferreira et al. (2020) found that dynamic capability, innovative capacity, and the entrepreneurial orientation of the leader positively impacted the firm's performance. The organization's leader influences the internal organizational culture and dynamic capabilities and can have an impact on the strategic direction and capability of the organization.

A SME's dynamic capability is its strategic response mechanism to the dynamism in the external environment. Karna et al. (2016) and Schilke (2014) found that dynamic capabilities were more relevant in low dynamic environment than in a high dynamic business environment. For example, in a case study of SMEs engaged in open innovation, businesses benefited from the dynamic capability framework in scanning the business environment through sensing, creating organization systems through seizing, and reconfiguring the organizational systems (Grimaldi et al., 2013). Additionally, the utilization of current knowledge and ongoing learning increases a SME's dynamic capabilities (Hermawati, 2020). Sudarmaji et al. (2020) argued that SMEs benefit from the ambidexterity approach of exploring and exploiting knowledge simultaneously. The dynamic capabilities of SMEs and their flexibility are advantageous for increasing their environmental adaptability (Hernandez-Linares et al., 2021; Wang & Wang, 2017). The performance of SMEs in developing countries can benefit from understanding the dynamic capability model with the strategic inflow of knowledge and the resulting innovation.

Literature Review

The objective of this literature review was to understand the existing knowledge relevant to the current study. Open innovation was addressed with a focus on SMEs and organizational factors that drive open innovation and factors that affect the management of open innovation within SMEs. The sections covered in this literature review include the Caribbean and developing economies innovation; SMEs' organization innovation, leadership, and organization innovation; driving factors of open innovation; the

management of open innovation; and open innovation's effect on organizational performances.

Caribbean and Developing Economies Innovation

Caribbean developing economies have experienced slow economic growth in the past decade due to an extensive lack of innovation and productivity in the private sector. Ruprah et al. (2014) and Ruprah and Sierra (2016) found that some of the factors for slow growth in Caribbean economies were a decreasing labor force relative to population, inferior technology, and a lack of innovation at the private sector level, which contributed to a decrease in their total factor production. Management literature established the critical role of innovation regarding economic development in developing economies (Crespi et al., 2017; Garone et al., 2020; Ruprah et al., 2014). The productivity of the private sector and the stimulation of growth is critical for developing economies. Economists considered the private sector as the engine of growth in small, open developed, and developing economies (Ng & Kee, 2018; Williams & Ramdani, 2018), with the private sector innovation impacting the growth and productivity of those economies. Innovation at a firm level can increase the efficiency of firm resources used in the creation of new products and processes.

Many factors have contributed to the Caribbean SMEs' lack of innovation. In a study of 14 Caribbean countries with a sample size of 1,966 respondents, firm-level innovations were assessed among small, medium, and micro enterprises (Crespi et al., 2017). Factors hindering innovation were "a lack of financial resources, a lack of available technologies and new market trends, a lack of flexibility and openness for

business collaborations, organization culture, and a lack of openness and flexibility in creating new products and services" (Mohan et al., 2017, p. 20). The firms surveyed represented many sectors, with the manufacturing industry engaging the most in innovation compared to the service sector. The strategy and innovation of firms impact the productivity level of developing economies (Garone et al. 2020; Williams & Ramdani, 2018). A fuller understanding of the factors that impact SMEs' innovative performance is critical to the economic survival and growth of developing economies. Additionally, strategy, technology, and the leadership of SMEs can influence the ability of firms to engage in open innovation.

SMEs are essential to economic development and are a focal point in the developing economy literature for the contribution made to employment and economic development. SMEs create innovation through value-added products and process improvements (OECD, 2018). Additionally, innovative SMEs drive technological progress while increasing employment opportunities (Chege & Wang, 2020). The management of relationships outside of the organization increases the organization's innovation capabilities. Furthermore, the ability of SMEs to build networks and develop organizational capability and managerial capability increases their innovative ability (Lin & Lin, 2016; Salishu & Julienti, 2019). Nevertheless, SMEs limited resources to innovate constraints many SMEs ability to innovate (Saunila, 2016; Sok et al., 2017). SMEs in developing economies can improve their organization innovation by networking and increasing their organizational capabilities.

Organization innovations are restricted to limited technology and inadequate application of research and development. Standard innovation strategies used by developing countries are strategic alliances, process, product, marketing, management innovations, and standardization (Maldonado-Guzman et al. 2019; Salisu & Abu-Bakar, 2019; Zoo et al. 2017). Some SMEs' innovation approaches include no information technology with products created based on affordability. SMEs lack a formal research and development unit, which creates the opportunity for the generation of knowledge from within the firm, the flexibility to change their strategy, and the creation of new products and processes (Aminullah et al., 2018; Barasa et al. 2014; Guo et al., 2017). Additionally, many firms struggle with financial limitations, with an increasing occurrence of products made at a lower cost and done on an as-needed basis, which are then sold cheaply (Tiwari et al., 2017; Zanello et al., 2016). Some researchers have indicated that SMEs in the manufacturing sector's use of information, communication, and technology have increased their innovation, market access, jobs, and performance (Asunka, 2016; Chege & Wang, 2020; Makanyeza & Dzvuke, 2015). Innovation in developing economies is hindered by a lack of information technology and a lack of financial resources to pursue organization innovation.

Caribbean SME Profile

The profile of Caribbean private sector business includes a large percentage of SMEs. SMEs represent 90% of companies worldwide and represent 95% of the Caribbean region's business enterprises (McLean & Charles, 2020; World Bank, 2019). SMEs contribute to developing countries' economic development and job creation

(Ayyagari et al., 2014; World Bank, 2019). SMEs account for 95% of the Caribbean region's businesses and contribute 40% to gross domestic product (McLean & Charles, 2020). Despite this fact, SMEs in developing economies ranked lowest at 4% for innovation and included: Grenada, Antigua, Barbuda, Dominica, and St. Kitts (Mohan et al., 2017). Equally important, a study on firm-level innovation among Caribbean small, medium, and large businesses indicated more companies had the potential for innovation than those that were engaging in innovation (Mohan et al., 2017). In the firm-level innovation study, "the results indicated that businesses in Grenada had 81 potential innovators, St. Vincent had 69 potential innovators, Dominica had 75 potential innovators, and St. Lucia had 80 potential innovators" (Mohan et al., 2017, p. 16). Caribbean SMEs are a major part of the business landscape of developing economies, and there is a critical need to understand innovation at the organizational level.

Leadership and Organization Innovation

Organization innovation is a renewal approach to create something new in the form of product innovation or refine its offerings through process innovation with trial and error impacting the organization's learning (Bessant et al., 2005). Innovation include changes in an organization's position and paradigm using radical or incremental approaches (Baregheh et al., 2009; Bessant & Tidd, 2015; Kesting et al., 2015). Additionally, organizations remain competitive by the creation and renewal of products and processes to outperform their competitors in highly competitive industries (Schumpeter, 1934). Schumpeter's *Theory of economic development* advocates for creating and destroying the created products and processes while changing through

business innovation (1983). In many cases, a firms' leadership continually renews the organization's processes and products to remain competitive while reshaping the organization's strategy.

Leaders can influence followers by their personality, the environmental conditions, and the leadership approach used. Bass (1990) identified leaders as agents of change that affect people while Freud (1920) identified leaders as persons guided by egotism. The trait leadership theory advocates that leader have common traits that can influence followers' changes (Robbins and Judge, 2018). Additionally, Bass (1997) and House and Shamir (1993) identified charismatic leadership and transformational leadership approaches that influenced a leader's commitment to their followers. Common cause theory focused on the social causes of influence similarly the situational leadership theories and procedural justice theories identified the environmental-based factors on a leaders' ability (Gardner, 1995; Robbins & Judge, 2018; Tyler & Lind 1992). For this reason, leaders can influence change by the interaction between the leaders and followers, and the structuring or restructuring of the situation to bring about change. During, the process of change leaders can influence the innovation process within an organization.

Leadership theories most frequently associated with innovation included transformational and transactional leadership. Transformational and transactional leadership have focused on leadership studies focusing on organization innovation and employees' behaviors (Chen et al., 2019; Kesting et al., 2015; McDowell et al., 2018). Incidentally, Burns (1979) argued that transformational leadership was a leadership style that inspired followers to transcend their values to that of the leader's values and goals,

while transactional leadership represented rewards and punishment in exchange for compliance with the leader's request. Additionally, Bass (1985) purported that transformational leadership was a further development of charismatic leadership. The four elements of transformational leadership were emphasized and included "idealized (charismatic) influence, inspirational motivation, intellectual stimulation, and individualized consideration" were the most critical elements (Avolio et al., 1991, p. 22). Furthermore, interaction and encouragement influence innovation and are integral elements of interactive leadership (Kesting et al., 2015). Leaders bring about innovation by their leadership style, which influences the people, the means, effects, and organizational goals.

The entrepreneurial orientation of leaders impacts the organization's ability to pursue innovations. Entrepreneurial orientation comprises innovativeness, risk-taking, pro-activeness, and distinct entrepreneurial postures that can enhance strategic survival (Wales, 2016; Linton & Kask, 2017). Teece (2007) argued that organizations need entrepreneurial leadership to dynamically drive the organization's internal and external changes to maintain a competitive advantage. Further, managers who possessed an entrepreneurial orientation attitude, openness, and positive awareness of customers can impact the organization's open innovation (Ahn et al., 2014; Direction, 2020; Najar & Dhaouadi, 2020). Therefore, the entrepreneurial orientation of leaders influences the openness of the organization to engage in innovation while creating a climate for open innovation.

Leadership and Open Innovation

Leadership drives open innovation through the creativity generated from within the organization which influences the organization's culture. Amabile (1997) argues that a person's intrinsic motivation and an innovation-oriented organization environment increases creativity. Open innovation within organizations can be generated from the creativity of teams and individuals' ideas to problem solutions within the organization (Boly et al., 2014; Obradovic et al., 2021; Wang et al., 2017; Zhang & Jiang, 2015). Collectively there is a positive relationship between the leaders' encouragement and interaction and the increase in employee ideas which supports open innovation (Wang et al., 2017; Zhang & Jiang, 2015). Leaders can support open innovation by the interaction they have with employees within the organization. Additionally, relationship-based approaches to leading employees were positively associated with authentic, democratic, and paternalistic leadership styles. Transformational leadership increased employees' internal motivation, and transactional leadership increased the employee's external motivation to engage in innovation (Ahmed et al., 2018; Kang et al., 2015). Knowing this, managers have the task of bringing about new ways of thinking and changing the organizational culture (Barham et al., 2020). In contrast, Kratzer et al., (2017) found that manufacturing companies engaged more in closed innovation than open innovation because of a lack of a supportive culture and attitude to open innovation. Accordingly, the role of a supportive leadership style increases creativity from within the organization and can drive open innovation at an organizational level.

SMEs' Organization Innovation

Organization innovation is an approach used to create or reform an existing product or process which can positively impact an organization's performance. Innovation is an organization's approach to creating product innovation or refining the delivery of its offerings through process innovation with the input of organizational members, in response to competitors and environmental changes (Bessant et al., 2005; Bessant & Tidd, 2015; Utterback & Abernathy, 1975). Additionally, Knight (1967) argued that innovation is doing something different, and it does not necessarily have to be new. In contrast, Schumpeter (1983) identified the importance of new products replacing old ones through innovation in his creative destruction theory. Furthermore, organization innovation involves searching and making strategic choices, implementing, and gaining value from the innovations (Bessant & Tidd, 2015). Organizational approaches to innovation determine the strategic direction provided by leaders of organizations. Among the organizational factors associated with innovation, managerial capabilities have impacted both the speed and efficiency of the innovation process (Rothwell, 1994; Tidd & Thuriaux-Aleman, 2016). Organizational characteristics and leadership had a more decisive influence on organization innovation than the environment itself (Damanpour et al., 2018: Damanpour & Schneider, 2006; Santoro et al., 2020). The leaders of an organization influence the adoption of innovation by organizations while the innovation process shapes the leader's influence, on the organizational input, and strategic choices.

The innovation capability of an organization influences the continuity of innovation within an organization. Innovation capability is an organization's ability to

provide innovative services and products continuously through the organizational capabilities, capacities, and competencies (Momeni & Balslev Nielsen, 2016; Saunila et al., 2014). Furthermore, Momeni & Balslev Nielsen (2016) argued that innovation capability is the internal knowledge of staff and organizational members. While innovation capability is described as a process involving idea creation and its contribution to process innovation (Saunila, 2019). An organization's innovation capacity includes organizational systems, market competency, technological competency, leadership, and employee creativity (Boly et al., 2014; Saunila, 2017; Saunila & Ukko, 2014). SME's innovation capability includes their internal processes which creates the source of their innovation and can impact their competitive advantage.

Management of Open Innovation in SMEs

Open innovation management in SMEs is needed to understand organizational open innovation but research has focused primarily on technology-based firms, in addition, measuring the open innovation and firm performance relationship using quantitative approaches. Dereli (2015) purported that innovation management involves controlling technology innovation, management innovation, and organization innovation, and all are essential elements to increase global competitiveness for firms and nations. Many studies have focused on technological innovation within high and medium-technology-based firms using a quantitative approach (Cui et al., 2018; Henttonen & Lehtim€aki, 2017; Parida & Örtqvist, 2015). The use of qualitative methods in understanding the management of open innovation is recent and, there is an urgent need to explore the heterogeneous nature of organization open innovation in SMEs in

developing economies (Albats et al., 2020; Crupi et al., 2020; Hermawati, 2020; Usman et al., 2018). To this end, SMEs engaging in high and medium technology systems are dependent on organizational open innovation to increase their competitive advantage. As a result, the implementation of open innovation within SMEs is increasingly crucial for their competitiveness.

Many studies on open innovation occurred using large organizations. In the last decade, its relevance in SMEs has increased due to SMEs organizational flexibility, the effect on firm performances, and the need to remain competitive (Albats et al., 2020; Crupi et al., 2020; Hermawati, 2020; Usman et al., 2018). Equally important, open innovation is the strategic use of internal and external information to include the ideation stage to production to capture value from ideas, technology, and joint effort (Chesbrough & Brunswicker, 2013; Chesbrough et al., 2006). The open innovation concept in large organizations is not transferrable to SMEs' (Brunswicker & Van de Vrande, 2014). Open innovation was first researched in SMEs as a successful strategy utilizing both internal and external knowledge on incremental and radical innovation (Batterink, 2009). The strategic knowledge gained by SMEs was purposive, with the flow of information from within the organization resulting in increased market access (Chesbrough & Bogers, 2014; Van de Vrande et al., 2009). Knowing this, open innovation extends the organizational boundaries for SMEs with opportunities to increase their competitiveness (Vanhaverbeke, 2017). Altogether, the type of open innovation used is based on the flow of knowledge from external of the organization, internal of the organization, or both internal and external sources.

The knowledge creation and the characteristics of the CEO in organizations impact an organization's ability to pursue open innovation. The value of knowledge creation is critical for SMEs, which affects a firm's open innovation and performances (Block et al., 2017; Singh et al., 2019). Additionally, the various leadership styles used to influence the organizational climate in SMEs and their engagement in open innovation (Ahmed et al., 2018; Hoang et al., 2020; Kang et al., 2015). Both the personal networking abilities and the cognitive characteristic of the CEO influences the open innovation of SMEs (Ahn et al., 2017a: Slavec-Gomezel & Rangus, 2019; Zhang et al. 2017). To this end, the leadership style, the organizational climate, and the networking abilities of top managers determine the knowledge generated from within an organization. The leadership's approach to seeking knowledge internal and external of the organization can strategically benefit SMEs.

Open innovation and the flow of knowledge represent the innovation diffusion of the organization. The movement of knowledge that underpins a product or business process can impact the organization's innovation process (OECD, 2018; Teece, 1986). Firms are engaged in knowledge acquisition through knowledge networks internal and external of the organization to increase their strategic position (Grigoriou & Rathaermel, 2017; Phelps et al., 2012). Moreover, the increased absorptive capacity of firms occurs with the use of external knowledge for organization innovation (Presenza et al., 2017). Additionally, leaders' creation of a knowledge-sharing culture supports the internal and external knowledge networks (Nestle et al., 2019). Management support of organizational teams and a knowledge-sharing culture impact tacit knowledge while positively affecting

explicit knowledge in organizations (Florén et al., 2018; Yao et al., 2020). As a result, the knowledge networks support the transfer of strategic information throughout the organization.

Open innovation knowledge flow can be outbound, inbound, or coupling. Outbound open innovation (outward flow of knowledge) is the use of knowledge by an external organization for that organization's innovative purposes while inbound open innovation (inward flow of knowledge) is the acquisition of external knowledge for internal innovations and coupling open innovation representing a combination of both (Chesbrough & Crowther, 2006; OECD, 2018). Outbound open innovation can include licensing out, selling, and open sourcing while inbound open innovation can include knowledge from customers, employees, research and development sources, and other strategic alliances (Glassman et al., 2009; Van de Vrande et al., 2009; Abulrub & Lee, 2012). The choice of outbound, inbound, and coupling open innovation requires an assessment of the organization's strategic need. Open innovation can influence the strategic choice of an organization.

SMEs engage in both inbound open innovation and outbound innovation with common indications through alliances, information technology, and the influence of management competencies. SMEs inbound open innovation entailed enterprise alliances with research centers and private companies, and they were associated with positive firm performances and marketing advantages (Ahn et al., 2015; D'Angelo & Baronceili, 2020; Hochleitner et al., 2017). Park (2018) argued that external search activities improved innovation activities. SMEs engaging in open innovation had an improved innovation

efficiency because of stakeholder engagement and management competencies (Grama-Vigouroux et al., 2019; Wynarczyk et al., 2013). In contrast, some SMEs had challenges selecting appropriate partners and risk information leaks from within the network (Colombo et al., 2012; Zhang & Chen, 2014). Therefore, the use of inbound and outbound open innovation had positive effects on the innovation efficiency of SMEs. Despite this, there was the risk for SMEs to manage their external relationship with partners.

Many SMEs engage in inbound open innovation more than outbound open innovation and coupling. Scholars have presented many approaches to inbound open innovation based on the open innovation literature (Hochleitner et al., 2017; Park, 2018; Yoon et al., 2016). Park (2018) advocated two approaches: searching activities to increase innovation efficiency while collaboration decreased efficiency. Similarly, Hochleitner et al. (2017) advocated two approaches, including pioneers who are first to introduce activities to the market and the imitators' followers, most inbound open innovation centers around the pioneers. Table 1 highlights five (5) clusters identified by Hochleitner et al., (2020) where he argued that there are five clusters of inbound open innovations with the respective inbound open innovation activities (Table 1).

Table 1.

Inbound Open Innovation Clusters

Cluster	Inbound open innovation profile
Closed innovators	Firms that use internal information and internal R&D to carry out their innovation activities
Absorbers of knowledge	Firms that use mainly specialized sources of information to carry out their innovation activities: universities, government, consultants, and associations
Acquirers	Firms characterized by the acquisition of machinery and external knowledge and external sources of information
Co-operators	Firms that seek specialized collaboration with customers, suppliers, consultants, competitors, and, to a lesser extent, with universities and the government
Absorbers of industry knowledge	Firms that use sector-specific information to carry out innovation activities: information from customers, suppliers, trade fairs, competitors, journals, and associations

Note. This table demonstrates the five different clusters representing inbound open innovation arrangements in SMEs. From "Evolution of inbound openness profiles in the innovation practices of small and medium-sized enterprises in Spain and Portugal" by F. Hochleitner, A. Arbussi, & G. Coenders (2020). *International Journal of Entrepreneurship and Innovation Management*, *24*(1), 73–96. https://doi.org/10.1504/IJEIM.2020.105281

Open Innovation and Managerial Competency

SMEs implementation of open innovation was heterogeneous in nature. Accordingly, the literature's categorization of implementation of open innovation were as follows: (a) technology, (b) managerial competencies, and (c) organizational practices (Greco et al., 2016; Greco et al., 2017; Gentile-Ludecke et al., 2020). Organization innovation practices typically involved the use of business models, adaptive innovation approaches to create as needed innovative products, and corporate culture, which all had

a positive influence on the open innovation process (Oliviera et al., 2018, Fainshmidt & Frazier, 2017; Pranciulytė-Bagdžiūnienė & Petraitė, 2019). The managerial competencies relationship with open innovation was positive in firms, and the middle-level leadership positively affected knowledge sharing (Baden-Fuller & Teece, 2020; Lambrechts et al., 2017; Yao et al., 2020). Additionally, West and Bogers (2017) argued that empowering leadership influenced the implementation of open innovation in organizations. Naturally, the value of technology, organization processes, and managerial competency is critical for SME's open innovation.

Managerial competency affects the knowledge sharing ability of organizational members. Managerial competencies involve the decision-making ability, management style, and general approach to people development (Ali et al., 2019; Baden-Fuller & Teece, 2020). In SMEs the individuals within the organization contribute to the organization's innovation through cooperation and knowledge sharing (Sudarmaj et al., 2020). Knowledge sharing is a continuous process within the organization and determines organization's competency for innovation (Ali et al., 2017). Therefore, the ability of managers to recognize the right knowledge and to share that knowledge with the right persons within the organization can determine the effectiveness of the organization's innovation (Crupi et al., 2020; Greco et al., 2017; Hernández-Linares et al., 2021). Altogether, the ability to share knowledge with organizational members when needed and the managerial approach used can stimulate knowledge sharing within the organization.

Organization strategy is determined by the management competency which impacts the sustained competitive advantage of the firm. Top management spends much

of their time involve in strategic decision-making and the implementation of the strategic decisions impacts a firm's performances (Wasike et al., 2016). As a result, in a study of Spanish manufacturing SMEs in diverse sectors, the management capability was the primary distinguishing factor which contributed both to their productivity and sustainability (Garces-Galdeano et al., 2016). Additionally, Hervas-Oliver et al. (2016) argued that management capability influences a firm's success in the market by the high managerial capability coupled with the technology adopted. The ability of the management within an organization to use their knowledge strategically is vital for sustainability, which affects the strategy used and the resulting organization innovation.

Managerial competency enables the sensing of new information and seizing that information through organizational systems. Additionally. continuous learning from the environment through inbound open innovation can contribute to an organization's dynamic responses to environmental changes (Hermawati, 2020; Hernandez-Linares et al., 2020). Heider et al. (2020) argued that value creation is created through sensing and seizing outside opportunities while value capture occurs from the transformation of that external knowledge. Incidentally in a study using German Mittelstand SMEs, operating in similar business environments the information processing within the organization increased their inbound open innovation (Heider et al., 2020). Hence in many cases, management knowledge generation and development create an opportunity for strategic learning and increased organization innovation (Vargas-Hernandez & Mauratella-Bautista, 2017). As a result, the management competencies influence the organization's

use of external knowledge. The organization's open innovation ability increases with sensing, seizing and transformation of the external knowledge.

Open Innovation and Organization Culture

Organization culture can influence the organization's innovation capability by the climate created by management. Organization culture involves the beliefs and assumptions held by organizational members and those represents pre-requisites for organization innovation (Martin de Castro et al., 2013). The importance of organization culture on an organization's open innovation ability in high technology environments firms occurred amongst Malaysian firms (Naqshbandi & Tabche, 2018). Additionally, the impact of an organization cultures on open innovation affected both employees learning and inbound open innovation and had less of an effect on outbound open innovation (Naqshbandi & Tabche, 2018; Nestle et al., 2019; Soto-Acosta et al., 2017). Soto-Acosta et al. (2017) argued that a commitment-based climate encourages employees to act in line with the company's goals. Naturally, the organization's culture can induce organization innovation through the creation of an innovative climate.

There are some organization cultures that induces organization open innovation while others inhibit organization open innovation. In the operationalizing of dynamic capabilities within organizations and its determination of open innovation, organization actions, and employees' experiences contributed most to how an organization's dynamic capability was measured (Laaksonen & Peltoniemi, 2018). Highly integrative cultures encourage inbound open innovation while a hierarchical culture inhibits both inbound and outbound open innovation (Naqshbandi & Tabche, 2018). Equally important, Yao et

al. (2020) argued that a knowledge sharing culture involving management tacit and implicit knowledge across all levels in the organization increases organization innovation capabilities of SMEs. Bogers et al. (2019) argued that external knowledge is worthless if the actors involve are unable to recognize and implement that knowledge within the organization. The organization internally becomes a conduit for knowledge processing and use while the organization's culture becomes the medium for knowledge to be utilized by their members.

Drivers of Open Innovation in SMEs

Innovation in SMEs is a complex task that involves many obstacles, and to successfully achieve open innovation it involves various driving forces. Drivers of open innovation include: (a) cooperation with external entities which includes exporting activities, (b) management of innovation, (c) technology, and (d) human potential which includes competent leadership (Radziwon & Bogers, 2018; Strobel & Kratzer, 2017). Accordingly, exporting SMEs are drivers of organization open innovation by going beyond domestic market borders to compete globally (Love & Roper, 2015). Additionally, the SMEs ability to create external relationships, while integrating technology can capitalize on the open innovation potential. Furthermore, the driving forces of competent leadership within SMEs can positively influence open innovation and the organization's performances.

Open Innovation and Absorptive Capacity

Organizations must develop and recognize the value of external knowledge and the ability to commercialize that knowledge through organization innovation. In their

seminal work on absorptive capacity, Cohen & Levinthal (1990) identified the need for firms to recognize the value of external knowledge and use it for commercial purposes through the absorptive capacity of the organization. To benefit from external knowledge firms must increase their absorptive capacity. The absorptive capacity allows for the use of external knowledge in creating inbound open innovation (Cohen & Levinthal, 1990). In contrast, Henttonen and Lehtim€aki (2017) argued that SMEs use their technology knowledge for commercialization instead of for research to develop their outbound, inbound, and coupling open innovation activities. The adoption of absorptive capacity requires managing external knowledge and the ability to use external knowledge to improve their open innovation.

Leadership can influence an organization's absorptive capacity through the leadership style adopted. An empowering leadership style through an organization learning culture can increase the absorptive capacity (Naqshbandi & Tabche, 2018). Day (2020) argued that leadership should assess the market needs by stepping outside of the organizational boundaries and constraints. The leadership role is directly related to the relationships formed external of the organization (Ahn et al., 2017). Absorptive capacity begins with the leadership of SMEs recognizing key stakeholder relationships. As a result, the leadership can direct the relationship and the open innovation strategy used by the organization.

The organizational strategy and the research and development approach used depends on the organization's absorptive capacity. Limaj and Bernroider (2019) argued that the realized absorptive capacity impact innovation more than the potential absorptive

capacity. While research and development played a critical role in the realized absorptive capacity. Research and development played a dual role in exploitative and explorative innovation (Brinkerink, 2018). Kapetaniou and Lee (2019) provided counter arguments on the value of research and development not being relevant for domestic open innovation but relevant for international open innovation. Furthermore, the ability of firms to use slack resources and strategically position the organization can increase the benefits from absorptive capacity (Chaudhary & Batra, 2018; Wang et al., 2017). In summary, research and development involving external sources can increase organization open innovation via the firm's absorptive capacity.

Networking through external relationships can increase outbound open innovation through SMEs absorptive capacity. SMEs can use external partnerships to engage in open innovation while overcoming their limited financial resources challenge (Mei et al., 2019; Presenza et al., 2017). Additionally, knowledge from science-based actors, learning from knowledge of customers' needs and networking with local firms in international markets, contributes positively to the firm's absorptive capacity (Ali et al., 2020; De Zubielqui et al., 2016; Schweisfurth & Raasch, 2018). Additionally, SMEs networking with both domestic and international partners can increase their absorptive capacity. The absorptive capacity can influence the strategic use of external knowledge to drive open innovation.

Open Innovation and Product Exportation in SMEs

SMEs who engage in exportation of products increases their innovative capacity and their competitive advantage. Slater et al. (2014) argued that radical innovation can increase export behaviors in firms. In contrast, Love & Roper (2016) found process

innovation did not affect export behaviors in firms. SMEs meet their export demand by creating new products, which increases their organization's innovation. Additionally, SMEs creation of products for global markets increases their product innovation, generating an increase in sales and increases their sustainability to engage in innovation while increasing their competitiveness (Tavassoli, 2018). The export ability of SMEs is a positive link to their innovation capability. Exporting creates new markets and demand while improving the financial performances of SMEs.

Technology adoption and the human capital in organizations can influence innovation in SMEs. Based on an extensive quantitative study conducted in twenty-eight (28) EU member states to assess the impact of technology on exporting behavior in SMEs, the results indicated that technology positively affected SMEs exporting behaviors (Radicic & Djalilov, 2019). At the same time, human competencies driven by innovation affected the propensity to engage in product exportation (Mansion & Bausch, 2020). Both human competencies and the ability to engage in export behavior positively influences SMEs innovation and increases the firm's performances.

Stakeholder relationships in SMEs facilitate the engagement in open innovation. Hameed and Naveed (2019) advocated that SMEs can engage in 'coopetition' a term coined to reflect collaboration with their competitors to increase their open innovation capabilities. Furthermore, SMEs limited resources creates an opportunity to extend their partnership relationship while engaging in open innovation. Ahn et al., (2018) purported in a study of manufacturing SMEs that open innovation was a better strategy to closed innovation during an economic downturn. Additionally, the results on firm performances

were favorable to the firms who engage in open innovation and negative to those who engage in closed innovation (Ahn et al., 2018). The innovation capability of SMEs can benefit from positive stakeholder relationships, and the absence of stakeholder relationships can significantly increase the cost of innovation for these SMEs.

Open Innovation in Low Technology and High Technology SMEs

High technology SMEs benefit from open innovation because of their organization's networks. Social media as a marketing platform can positively improve innovation in SMEs (Hassan et al., 2018). Networking involving collaboration, sharing of information, computer and technology capability increase SMEs innovations (Huber et al., 2020; Parida & Örtqvist, 2015; Pustovrh et al., 2017). The generation of ideas to create open innovation opportunities in SMEs can be realized through technology. Technology positively impacted inactive problem solving by identifying customers' behavior towards a product and making the innovation for matching these behaviors (Prabowo et al., 2020). Information technology is a valuable medium for customer complaints and creates marketable products and processes to respond to open innovation,

In low-technology-based firms the lack of access to technology can impact the organization's capability. Scholars have researched how non-technology affects the business environment of SMEs and their firm's performance (Hervas-Oliver et al., 2014; Hervas-Oliver et al., 2016; Moilanen, 2014). SMEs innovate differently based on their knowledge environment and can benefit from both research and development, as well as non-research and development. In a study of German SMEs both non-research and research and development SMEs, were categorized according to "DUI" (doing using

innovation) indicating organizations who created systems using innovation, the groups were: supplier dependent DUI, customer dependent DUI and science and technology innovation (Thoma & Zimmerman, 2019). Non-research and development innovation in SMEs, described as the use of interactive learning approaches, had a comparable strong effect on performances in SMEs (Thoma & Zimmerman, 2020). Altogether, some SMEs use non research and development approaches to innovate, and the use of that approach can benefit SMEs because of the organizational flexibility of SMEs.

Open Innovation and SMEs' Organizational Performance

Open Innovation in SMEs positively impacts organization performance with the mediating factor of leadership style and the firm's absorptive capacity. The engagement in open innovation in SMEs created benefits for both the organization and its partners (Amer et al., 2016; Ho et al., 2016). Bessant & Tidd (2015) argued that SME's lack of competitiveness is due to the failure of recognizing the need for change. A SME must have a system to manage organizational transitions (Bessant & Tidd, 2015). SMEs have benefitted from both outbound and inbound open innovation, while the absorptive capacity is the ability to use external knowledge to increase the innovation ability of the organization (Pilav-Velic et al., 2020; Presenza et al., 2017). Large firms may be early adopters of open innovation, but SMEs tend to benefit the most from open innovation because of the organization's flexibility to adopt to the flow of internal and external knowledge (Jørgensen & Ulhøi, 2010; Love & Roper, 2015). Additionally, the leadership impact within an organization pursuing open innovation influences the firm's performances with the transformation leadership style and openness of the leader

positively associated with open innovation (Slavec-Gomezel, 2019; Srisathan et al., 2020). Open innovation is relevant for SMEs in responding and adapting to changes in the business environment. Open innovation in SMEs is impacted by the leadership's characteristics and the absorptive capacity to benefit from that new knowledge.

Open innovation implementation in SMEs is associated with challenges such as limited budgets for idea exploration and exploitation, networking opportunities, low investment in information technology, and a lack of managerial competency to drive the open innovation processes. Networking challenges were identified as a major impediment (Ho et al., 2016; Hyslop, 2015). The limited resources of SMEs mean the engagement in adaptive innovation and not creative innovation with the latter positively impacting the organization's performances (Lowitt et al., 2010; Hosseini & Narayanan, 2014). Bigliardi and Galati (2018) argued that SMEs must pursue their information technology and knowledge capability to be effective in knowledge exploration and exploitation. The need for managerial competencies to be able to lead the organization during dynamic environments (Baden-Fuller & Teece, 2020; Wynarczyk, 2013; Yao et al., 2020). The challenges encountered by SMEs impact the benefits of open innovation. In summary, SME's challenges can be overcome with further research on the organizational factors that drive open innovation.

Open innovation challenges can be categorized based on internal challenges and external challenges. SMEs tend to be affected by the external challenges relating to a lack of resources and partnerships, while larger organizations are affected by the internal challenges due to lack of organization flexibility to respond to changes (De Marco, 2017;

De Marco et al., 2020). Other challenges include a general lack of human resources and financial resources for research and development to bring about changes (Faranita et al., 2017). SMEs innovation is impacted by the internal and external challenges. Therefore, overcoming these challenges require resources and finding creative innovation approaches.

Open innovation can impact both firm and national economies through product, process innovation, and increased market access for products. A lack of research in developing economies pose a problem for governments understanding their role in driving a national open innovation policy for SMEs (Usman et al., 2018). Factors negatively affecting innovation included unclear roles, and government bureaucracy (Strobel & Kratzer, 2017). Traplov et al. (2019) argued that the adoption rate varies for the various open innovation activities to include collaboration, scanning of the environment for ideas, and selling unused technology and crowdsourcing. In the final analysis, open innovation requires the support of developing economies government to implement the knowledge to create national policies to help SMEs survive and sustain their performances.

Many studies have considered the impact of open innovation on organization performances, there are studies on the role of leadership, some have identified organizational characteristics associated with open innovation, with none exploring the micro-level understanding of open innovation and how leadership drives and manages the process in a developing country context. Additionally, there are geographic limitations to studies completed with many open innovation studies conducted in Asian countries,

Europe, and other developed countries in both high technology, moderate technology industries, and manufacturing SMEs (Pilav-Velic et al., 2020; Oliveira et al., 2019; Yao et al., 2020). Furthermore, methodology commonly used by many studies were quantitative methods, mixed methods, and the use of panel data with fewer studies using an exploratory qualitative case study methodology to understand the heterogeneous context of open innovation (Obradovic et al., 2021; Mohan et al., 2017; Morris, 2018). There are limited studies using a qualitative methodology and many are based in high technology industries within developed economies (Santoro et al., 2020; Zajkowska, 2017). There is a deficiency in the open innovation literature for qualitative studies addressing the heterogeneous context of developing economies SMEs, who are already challenged by limited financial and technological resources as compared to SMEs in developed economies.

Open innovation implementation is heterogeneous and requires understanding the environment and context of the SME utilization of that strategy (Santoro et al., 2018; Slavec-Gomezel & Rangus, 2019). There is a need for contextual meaning, which creates the need for data exploration to understand open innovation from the perspective of managers and their ability to drive their organization's open innovation (Oliveira et al., 2019; Pilav-Velic et al., 2020; Yao et al., 2020). Obradovic et al. (2021) based on a review of the literature, argued that with covid 19 economic impact on organizations, that managerial competencies are even more important to understand how managers adopt open innovation strategies in the manufacturing sector. Areas for further exploration include the organizational issues that connect open innovation and entrepreneurship

(Bogers et al., 2017). Furthermore, case studies adopting the open innovation dynamic framework and the process of open innovation in an organizational context (Oliveira et al., 2019; Slavec-Gomezel & Rangus, 2019). Studies were already completed in developed countries with established collaboration networks and technology systems. More studies are needed based on developing economies and the need to know how best to stimulate open innovation in local SMEs (Bigliardi et al., 2020; Usman et al., 2018). Caribbean innovation plays a critical role in SME performances, with many barriers already identified for firms not engaging in innovation (Mohan et al., 2017). Many of the barriers to innovation identified by Caribbean SMEs were factors synonymous with open innovation in organizations, factors including lack of information technology systems, new market trends, flexibility, and openness to collaborations with other businesses, and research institutions, managerial and organization culture (Mohan et al., 2017, Ruprah & Sierra, 2016). Indeed, having a fuller understanding of the factors that impact SMEs' innovative performance is critical to the economic survival and growth of developing economies. There is a need for more research on open innovation in developing economies to understand their unique environmental context and how leaders drive and manage their organizations to benefit from open innovation.

Summary and Conclusions

Chapter 2 examined the existing resources regarding the key concepts which are: leadership, Caribbean firm innovation, SMEs open innovation, and firm performances and their relationship guided by the conceptual framework of dynamic capability (Fainshmidt & Frazier, 2017; Ferreira et al., 2020; Grimaldi et al., 2013). The studies that

were reviewed considered Caribbean innovation, the relationship between leadership and innovation, the relationship between open innovation and organization performances in SMEs. Open innovation implementation is heterogeneous and requires the understanding of the environment and context of the SMEs' utilization of that strategy (Chesbrough & Bogers, 2014; Santoro et al., 2018; Slavec-Gomezel & Rangus, 2019). The unique nature of the business environment of SMEs and the dynamic nature of open innovation requires research in the context of developing economies.

In a developing economy context, there is a lack of research on open innovation and the role of leaders in driving and managing organizations to increase their open innovation. Using the Caribbean context, innovation plays a critical role in firm performances with many barriers to innovation identified among Caribbean SMEs (Mohan et al., 2017). Many of the barriers identified represented the need for further research on open innovation utilization in the context of Caribbean SMEs (Mohan et al., 2017; Ruprah & Sierra, 2016). There is a need for more qualitative case study research to understand the context of SMEs' open innovation, the influence of leaders, and the organizational context that drives the open innovation process (Obradovic et al., 2021; Santoro et al., 2018; Slavec-Gomezel & Rangus, 2019). This study aims to fill the gap for further research on open innovation in SMEs in developing economies and how leaders drive and manage their organization to benefit from open innovation (Radziwon & Bogers, 2018; Slavec-Gomezel, 2019; Usman et al., 2018). In Chapter 3, I presented the research method and included the role of the researcher, methodology and issues of trustworthiness.

Chapter 3: Research Method

The purpose of this qualitative study was to explore how SME leaders in the Windward Islands manage and lead their organizations to drive open innovation in the context of developing economies. To address the leadership and strategic management gap in the literature, I used the qualitative research method and a multiple case study design. Data came from the Windward Islands, which consist of four developing economies: Dominica, St. Lucia, St. Vincent, and Grenada. The data collection included semi-structured interviews with owners and managers of SMEs that were engaged in product or process innovations or product exportation within the last three years. The concept of open innovation was explored using leaders from the Windward Islands to explain how they manage and lead their organizations to drive open innovation.

Chapter 3 includes a discussion of the research approach and the methodology for conducting the study. I describe my role as the researcher and explain how I mitigated researcher bias. I provide a rationale for the design, with the reasons for adopting the case study method over other qualitative methods for selecting and recruiting participants. I describe the data collection instruments, methods, and data analysis procedures. I explain how I ensured internal and external validity, trustworthiness, dependability, and confirmability. Finally, I discuss the ethical strategies I followed to ensure confidentiality and protection of the participants' identities.

Research Design and Rationale

The concept explored was open innovation applied by leaders of SMEs in developing economies. Leadership involves the collaboration between two or more

members of a group that often includes the structuring or restructuring of the situation and the members' perceptions and expectations (Bass, 1985). In addition, open innovation is the purposive inflow and outflow of knowledge to increase internal innovation and external innovation and extend the markets for the external use of innovation (Chesbrough et al., 2006). The concepts of leadership and open innovation align with the dynamic capability view framework associated with an organization's strategic performances (Chen et al., 2019; Donate & Sánchez de Pablo, 2015; Slavec Gomezel & Rangers, 2019; Srisathan et al., 2020). The dynamic capability view framework is a concept associated with open innovation and assesses the firm's leadership knowledge capacity. The dynamic capability view framework guided the current study of SMEs' open innovation in a developing economy context.

The dynamic capability view framework has three stages: sensing, seizing, and managing threats or transforming products or processes. The elements of each of the stages are as follows: (a) Sensing involves the analytical systems embraced by organizations to analyze both the internal and external information from its environment, (b) seizing involves putting structures and systems in place to benefit from the information, and (c) managing threats/transforming involves the process of ensuring that the organization's intangible and tangible assets use knowledge continuously (Teece, 2007). These stages represent a firm's dynamic capability, which can assess the open innovation in SMEs. However, in a developing economy context, there is a lack of research on open innovation and the role of leaders in driving and managing organizations to increase their open innovation (Santoro et al., 2018; Slavec-Gomezel,

2019; Usman et al., 2018). I sought to fill the gap in research on open innovation in SMEs in developing economies and how leaders drive and manage their organizations to increase open innovation.

In qualitative inquiry, researchers illuminate meaning, study how things work, capture stories, show how systems function, understand context, identify unanticipated consequences, and make case comparisons (Patton, 2015). There are multiple approaches to qualitative inquiry. These include ethnography, narrative inquiry, phenomenology, grounded theory, and case study with variations in approaches to the five significant forms of inquiry (Creswell & Poth, 2018). Ethnography is used to document the lived experiences and the cultural perspectives of the research participants (Fusch et al., 2018). Ethnography was not relevant to the current study because there was no cultural perspective to be understood through someone's lived experience. Narrative inquiry is the story of a lived experience used to understand a social phenomenon (Hold, 2017; Rooney et al., 2016). The narrative inquiry was inappropriate because there was no need to understand a social phenomenon through a lived experience. Phenomenology is an inquiry that is used to understand the structure and essence of a lived experience of a phenomenon for a person or group (Korstjens & Moser, 2017). Phenomenology was not appropriate because a lived experience was not the focus of the current study. Grounded theory is a systematic approach through comparative analysis based on fieldwork to explain what has been observed (Ali-Ismaili & Goran Orimi, 2021). Grounded theory was not relevant because there was no need to develop a theory based on the research question. The multiple case study approach includes various data sources to investigate a

contemporary phenomenon in a real-life context (Halkias & Neubert, 2020; Stake, 2006; Yin, 2018). Therefore, a multiple case study was the most appropriate approach to understand the concept of open innovation in SMEs using unique cases and emerging themes to demonstrate the occurrence within a real-life context of developing economies.

The case study paradigm and methodological approach guided the study. Hancock and Algozzine (2017) stated that in a case study, the researcher applies a constructivist paradigm and recognizes the social construction of meaning through the collaboration between the researcher and the participant. The framework of social constructivism holds that there are multiple realities constructed through the lived experience (Creswell & Creswell, 2018). The methodological approach was inductive and deductive, guided by the literature and the emergence of themes from the data (see Creswell & Creswell, 2018; Yin, 2018). Case study design can involve single or multiple cases. Cases can be instrumental or intrinsic; the former focuses on an issue, and the latter focuses on a case (Halkias & Neubert, 2020; Stake, 2006; Yin, 2018). Stake (2006) argued that a preference for a multiple case study design exists when the interest is beyond the case, which is instrumental, compared to when the interest is in the case itself, which is intrinsic. The multiple case study is preferred to a single case study unless a justification suggests that a single case study is more appropriate. In the current study, there was no rationale for the existence of a critical case, an extreme case, or a representative or typical case that would have justified the selection of a single case study using an intrinsic case study design.

The case study approach affords a concentration of the data collected by understanding the experiences of individuals or a phenomenon. However, Creswell and Creswell (2018) argued that the criteria used to measure a quality case study are whether there is a clear identification of the case and an understanding of the research issue. A case study represents a holistic inquiry that addresses a phenomenon's natural setting and environment (Hancock & Algozzine, 2017; Yin, 2018). Open innovation implementation is heterogeneous and requires the understanding of the environment and the natural setting of SME utilization of that strategy (Chesbrough & Bogers, 2014; Santoro et al., 2018; Slavec-Gomezel & Rangus, 2019). A multiple case study design was appropriate to understand the context of open innovation in the environment of developing economies.

The overarching research question was the following: How do SME leaders in the Windward Islands lead and manage their organizations to drive open innovation? I sought to understand how leaders within organizations influence and drive open innovation. The evidence of this innovation was SMEs engaging in product exportation and generating process and product innovation within the last three years.

Role of the Researcher

In qualitative research, the researcher and the research participants become part of the research process. The relationship between the researcher and the research participants is interconnected as the researcher seeks to understand the social context and experiences of the research participants (Haines, 2017). The nature of the case study requires extensive observation and time in the field to capture the context and actions of the research participants (Korstjens & Moser, 2017; Stake, 2006). The researcher's

relationship involves an inside qualitative perspective engaging participants in their business environments and observing their processes (Ross, 2017). The role of the researcher is an integral part of the research process.

The researcher's engagement in the research process involves keeping a reflective journal to note biases and thoughts that can inhibit the data collection process. The researcher is an instrument in the data collection and analysis process and must be honest and authentic with themselves and keep a journal that reflects on any biases and reflections (Janesick, 2015; Tracy, 2013). The constructivist nature of qualitative research reflects a researcher's intent to create rich and in-depth knowledge through social interactions (Kim, 2014). The researcher aims to keep biases and historical experiences with the research concept documented during the research process. The researcher uses a reflexive journal to avoid negatively influencing the process of data collection and interpretation.

The low innovation among SMEs generated a keen interest in the research topic. As a former manager in a SME for 11 years, an interest developed to understand how businesses remain competitive and sustain jobs. Working for a SME with low financial performance and routine practices made the interest in innovation develop further into a research topic. My interest in the research topic was developed further by my family business experiences in a SME engaged in limited innovation processes. Conducting an extensive literature review to develop the research question helped me understand the concept of open innovation in SMEs. The literature indicated a clear gap in the strategic and leadership management literature. My inquiry into the inconsistencies in innovation

among SMEs in developing economies was motivated by the need to help young entrepreneurs and management students learn the strategies to engage in open innovation. Tracy (2013) argued that critical self-examination offers context for qualitative research. My collective experiences and intuition on open innovation inspired an interest in the research topic.

The skill of a qualitative researcher contributes to the quality of the study. The qualitative training of the researcher facilitated observation, interviewing, and taking field notes. The researcher's area of weakness was in the use of the responsive interviewing technique to gain rich, in-depth data from participants (see Rubin & Rubin, 2012). To guard against biases, I invited the interview participants to check the report findings during the data collection and analysis period. I respected the need for internal and external validity by using a debriefer to steer the study in an objective direction and conducted member checking to ensure accuracy of interpretations (see Janesick, 2015; Rubin & Rubin, 2012). Weaknesses in the responsive interviewing technique were worked on while protecting the integrity of the data through member checking and the use of a debriefer.

Methodology

The method most appropriate to achieve the purpose of the study was qualitative. I used a case study design to study the current practices of how SME leaders in the Windward Islands manage and lead their organizations through open innovation. The study was situated in developing economies to investigate the concept of open innovation in a real-life setting using multiple data sources (see Yin, 2018). The data collected came

from the Windward Islands, which consist of four developing economies: Dominica, St. Lucia, St. Vincent, and Grenada. SMEs that were engaging in innovation within the last three years were included (see Berisha & Pula, 2015; Cooper, 2016). I recruited an across-industry sample including agro-processing, pool supplies, and rum processing industries, which are major Windward Island industries.

A multiple case study sample size varies based on the requirements to achieve an in-depth investigation. Stake (2006) recommended using three to five cases, while Patton (2015) argued that five to 10 participants are sufficient for a qualitative study because larger samples do not allow for an in-depth investigation of the phenomenon of interest. Cases were studied using an instrumental approach focusing on an issue with multiple case analyses (see Hayes et al., 2015; Stake, 2006; Yin, 2018). The three SME enterprises represented owners and managers who had led their organizations through innovation outputs (see Hancock & Algozzine, 2017; Stake, 2006). The criterion-based sampling technique was used to select organizations engaged in exportation and innovation outputs within the last three years, excluding other innovations such as staff training and research and development, which are associated with larger organizations (see Cirera & Muzi, 2016; Morris, 2018; Slavec Gomezel & Rangus, 2019). I used criterion-based sampling and the recommended four cases to investigate the concept of open innovation in SMEs.

Data saturation in qualitative research has been a debatable issue with many scholars presenting different approaches to achieving data saturation. Fusch and Ness (2016) argued that data saturation should be both rich and dense representing the quality of the data, the quantity of the data, and the ability to duplicate the study. Guest et al.

(2020) argued that there is a lack of a consistent metrics to measure data saturation and supported the use of a metric. Many scholars argued that data saturation in qualitative research should be based on heterogenous factors unique to each methodological approach (Guest et al., 2020; Malterud et al., 2016; Mason, 2010). Based on the literature, case study data saturation using interviews requires 20 to 36 interviews (Mason, 2010; Williams & Ramdani, 2018). Based on the heterogenous nature of open innovation and the exploratory nature of the current study, data saturation was based on the nature of this study, which involved purposeful sampling guided by the dynamic capability framework as the theoretical lens, semi-structured interviews, and data triangulation (Fusch & Ness, 2016; Malterud et al., 2016). The variety of external data sources, the semi-structured interviews conducted with all participants, and the specific knowledge and experience of the managers and leaders were used to identify the themes through simultaneous data analysis indicating the absence of new themes and, therefore, data saturation. Qualitative data saturation requires the need for data quality, data quantity, and the ability for the study to be duplicated based on the methodology.

Data saturation for case studies is relevant to achieve a maximum amount of rich data. Burkholder et al. (2016) argued that cases selected for multiple case studies can be between three to four and must represent the phenomenon of interest that will provide data to answer the research question. Data will come from cases representing organizations currently engaging in innovation to understand how they drive and manage the process of open innovation. The cases were based on purposive sampling to illuminate the phenomenon of open innovation (Burkholder et al., 2016; Stake, 2006).

Many of the cases would be selected based on SMEs who have engaged in innovation within the last three years, and interviews will come from managers and leaders who drive the innovation process within the organization. Data sources will include semi-structured interviews from leaders within the organizations, to provide rich data on each case to understand the concept of open innovation (Burkholder et al., 2016; Korstjens & Moser, 2017). Data saturation for case studies is not based on several cases but is determined based on the point that new data does not add new meaning to the concept studied (Korstjens & Moser, 2017). The data saturation will occur with the illumination of open innovation within SMEs from the data sources. Altogether, the exploration of various documents, and the interviewing data within SMEs will determine the saturation point.

The quality of the data collection and analysis varies based on the data sources and the analysis methods. A data triangulation approach utilizes various data sources, including interviews and document analysis (Stake, 2006). SMEs' data was analyzed using a thematic approach based on common themes identified from the literature and compared with the interview transcript (Hancock & Algozzine, 2017; Yin, 2018). At the same time, the multiple case study data analysis will use a within-case analysis to assess the common themes (Stake, 2006). Altogether the triangulation approach will add validity and trustworthiness to the information collected.

Participant Selection Logic

In a multiple case study research, the unit of analysis can differ based on the sample selection criteria. In case studies, the unit of analysis can be individuals, groups,

or organizations (Stake, 2006; Yin, 2018). Additionally, in qualitative case study research, a case is considered a unit of analysis. In this study, a case was each SME that had met the sample selection criteria. As determined by the literature, the sampling strategy is purposeful sampling (Burkholder et al., 2016; Stake, 2006).

The research questions and the selection method for the cases influence the sampling strategies. The purposeful sampling will select critical cases needed to understand the concept of open innovation (Patton, 2015). Robinson (2014) purports that the inclusion and exclusion delineate the parameters for the sample universe and that the inclusion must specify the criteria for cases. The sample universe criterion is set by the sample that meets the research question criteria for the study, while the exclusion is the samples excluded based on not meeting the criterion for the sample universe. The sampling was purposeful sampling focusing on critical case sampling to identify SMEs who engage in innovation within the last three years. The samples would meet the inclusion and exclusion criteria of two hundred and fifty or fewer employees.

The Windward islands differ based on gross domestic product and population. The samples were chosen from St. Lucia and Grenada, representing the Windward Island's largest economies both in population and gross domestic product per capita (World Bank, 2021). The current gross domestic product for these islands is: "St. Lucia US1.865 billion, Grenada US 1.211 billion, St. Vincent US$8.24 million, and Dominica US$5.7 million" (World Bank, 2021, p.1). SMEs included two rum processors, one agro-processor, and a pool supplier in Grenada and St. Lucia. The proposed population was approximately thirty owners, and managers representing four SMEs whose organization

presently engaged in innovation. The sample size consisted of fifteen persons that currently hold leadership positions either in the capacity of a manager, supervisor, or an owner in any of these SMEs to examine the issue of organization open innovation (Stake, 2006; Yin, 2018). Participants' contacts for the study were via email and a telephone conversation to follow up the email sent. The use of purposeful sampling using leaders within the SMEs will explore the concept of open innovation to understand the role of leaders in driving that concept within their organizations.

Instrumentation

Information obtained during an interview depends on question structure and the relationship between the researcher and the participant. The quality can be largely dependent on the interviewer's technique (Patton, 2015). The interview style can be a responsive interview approach that establishes a trusting relationship between the interviewer and the interviewee (Rubin & Rubin, 2012). Patton (2015) argues that interviews involve informal conversation interviews, the interview guide, and the standard open-ended interview. McIntosh & Morse (2015) purports that the literature should guide the interview protocol on the topic and the research questions for the study. The literature guided the interview protocol for this case study in understanding the phenomenon of open innovation in SMEs in the context of developing economies.

Semi-structured interview design allows participants to disclose information freely, unlike structured interviews, limiting the flow of information and unstructured interviews; the information obtained across participants is not uniform for analysis purposes (McIntosh and Morse, 2016). Semi-structured interviews allow participants to

freely respond to these open-ended questions as they wish while providing more content to explore the concept. The researcher probed these interview responses further and all questions asked of participants were the same to enhanced systematic data analysis. The development of the semi-structured interview protocol was guided by the literature review based on the following considerations (a) revelations regarding the factors that drive open innovation from existing studies on SMEs open innovation, (b) how SMEs leaders manage open innovation based on the existing SMEs leadership and open innovation studies, (c) ensuring that every interview question is aligned with the problem statement, purpose of the study, and research questions, and (d) The Oslo manual guidelines for collecting data on open innovation. The Oslo Manual is the international reference guide to collecting data on open innovation and identifies the necessary data that constitutes organization open innovation (OECD, 2018). The Interview Protocol is listed in Appendix A.

This study utilized other forms of data including document analysis, and the reflexive journal. The use of document analysis provided rich data on each case to understand the concept of open innovation (Burkholder et al., 2016; Korstjens & Moser, 2017). The strategic leadership and innovation of firms impact the productivity level of developing economies (Garone et al. 2020; Williams & Ramdani, 2018). A fuller understanding of the factors that impact SMEs' innovative performance is critical to developing economies' economic survival and growth.

To comply with the requirements for approval by the Institutional Review Board (IRB), the data collection instrument was validated. The instrument consisting of the

proposed interview questions be sent to the Committee Chair to seek a review by a subject expert from Walden Faculty. The feedback from the subject experts will allow for the refinement of the interview questions to ensure that they are relevant and easily understood (Rubin & Rubin, 2012; Stake, 2006). The research question influenced the interview questions. The research question: How do SMEs' leaders in the Windward Islands lead and manage their organizations to drive open innovation? The research question seeks to understand how leaders within organizations influence and drive open innovation. The evidence of this innovation was using SMEs engaging in product exportation and who have generated process and product innovation within the last three years.

The response to the first interview question: Describe how your organization creates process design? This question determines whether this organization engages in process innovation. Open innovation involves generating ideas to include invention to commercialization by strategically capturing value from ideas, technology, and joint effort, which may be internal or external to the organization (Chesbrough & Brunswicker, 2013; Chesbrough et al., 2006). Companies' high investment in the process of innovation has increased both labor productivity and the organization's innovation (Crespi et al., 2017; Wadho & Chaudhry, 2018). An organization's engagement in process innovation increases knowledge in designing the improvements in process innovation.

The response to the second interview question: Describe how your organization improves the attractiveness (aesthetics) or ease of use (functionality) of goods or services? This question assesses whether the organization engages in product innovation. Open innovation in SMEs has opened the boundaries for innovation to move from the

traditional closed approach to an open approach by using external information to create innovative products and processes (Usman et al., 2018). Both inbound and outbound open innovation can generate new ideas and products within an organization.

The response to the third interview question: Describe what technology activities you engage in to create new products or processes? This question assesses the access and use of any form of technology and research and development by the SMEs to engage in open innovation. Innovation at a firm level can be measured using investment in technology and research and development. (Maldonado-Guzman et al. 2019; Salisu & Abu-Bakar, 2018; Zoo et al. 2017). Some SMEs' innovation approaches include no information technology with products created based on affordability. Incidentally, some researchers have indicated that SMEs in the manufacturing sector' use of information, communication, and technology have increased their innovation, market access, jobs, and performances (Asunka, 2016; Chege & Wang, 2020; Makanyeza & Dzvuke, 2015). Altogether, the use of technology increases the company's access to knowledge and improves its open innovation.

The response to the fourth interview question: Describe how you use strategic information from customers to improve products and processes within the organization? This question assesses the use of information. The strategic leadership and innovation of firms impact the productivity level of developing economies (Garone et al. 2020; Williams & Ramdani, 2018). A fuller understanding of the factors that impact SMEs' innovative performance is critical to developing economies' economic survival and growth.

The response to the fifth interview question: Describe how you use your relationships with suppliers or other external agents to collaborate and improve your products and processes? This question aims to understand the relationships between SMEs stakeholder collaboration and the engagement in open innovation to improve their products and processes. Stakeholder relationships in SMEs facilitate the engagement in open innovation. Hameed and Naveed (2019) advocated that SMEs can engage in 'coopetition' a term coined to reflect collaboration with their competitors to increase their open innovation capabilities. Furthermore, SMEs' limited resources create an opportunity to extend their partnership relationship while engaging in open innovation. In a study of manufacturing SMEs, Ahn et al. (2018) purported that open innovation was a better strategy than closed innovation during an economic downturn. SMEs' limited resources create opportunities to collaborate and increase the information access to engage in open innovation.

The response to the sixth interview question: Describe your leadership approach in your organization? This question aims to understand the leadership style used by managers and leaders to impact an organization's open innovation. Open innovation within organizations can generate teams' and individuals' ideas to problems and solutions (Ambile, 1997; Boly et al., 2014; Obradovic et al., 2021; Wang et al., 2017). Leaders can support open innovation by the interaction they have with employees within the organization.

The response to the seventh interview question: How do you get your employees to resolve problems? This question aims to understand the access to opportunities given

to employees to take part in problem-solving. Collectively there is a positive relationship between the leaders' encouragement and interaction and the increase in employee ideas which supports open innovation (Wang et al., 2017; Zhang & Jiang, 2015). The collective input of employees to generate ideas for problems increase the information generated from within the organization.

The response to the eighth interview question: Describe how you would get employees to share ideas on new products or processes and how you encourage creativity within your organization? Research has found that leadership affects SMEs' performances by (a) developing a trusting organizational culture due to the openness of the leader, (b) establishing relationship-based employee approaches, and (c) creating more dynamic capabilities within an organization (Ahmed et al., 2018; Hernández-Linares et al., 2021; Özer &Tınaztepe, 2014). Additionally, the impact of an organization's culture on open innovation affected both employees learning and inbound open innovation and had less of an effect on outbound open innovation (Naqshbandi & Tabche, 2018; Soto-Acosta et al., 2017). Soto-Acosta et al. (2017) argued that a commitment-based climate encourages employees to act in line with the company's goals. A leader that fosters openness may stimulate innovation in the organization (Slavec Gomezel & Rangus, 2019; Ahn et al., 2017a). Naturally, the organization's culture can induce organization innovation through the creation of an innovative climate. Furthermore, a CEO's leadership style affects the potential for open innovation with the organization:

To ensure completeness and integrity of the interview data, a digital audio recorder will record all interviews with the SME owners and managers. During each interview session, the researcher would make handwritten field notes regarding the interviewee's attitudes, emotions, and body language to provide more insight into the interviewee's responses to the interview questions. At the end of each interview, the researcher will transcribe the audio recordings and send the transcript to the interviewee to solicit feedback regarding any discrepancies in the transcribed content of the interview sessions. All participants' identities were distinctly identified using a numerical classification system to maintain the confidentiality of the participants (Patton, 2015). The secure storage of the audio recording of each interview, the transcripts, and the researcher's handwritten field notes will allow for easy retrieval during data analysis and interpretations.

Procedures for Recruitment, Participation, and Data Collection

The location for the study is in the Windward Islands, using two of the largest islands for data collection. Grenada and St. Lucia were the two islands because they have the largest population and gross domestic product (World Bank, 2021). The SMEs in the Windward Islands account for 95% of the Caribbean region's businesses and contribute 40% to gross domestic product (McLean & Charles, 2020). SMEs would include rum processors, an agro-processor, and a pool supplier in Grenada and St. Lucia. SMEs will include those with two hundred and fifty or fewer employees and in existence for a minimum of five years (Berisha & Pula, 2015; Cooper, 2016). The industries represented

were an across-industry sample to include the agro-processing, pool supplies and rum processing industries, which are major Windward Island industries.

In the Windward Islands, there is no comprehensive database listing SMEs within these islands. The SMEs selected were based on those engaging in innovation and innovation related activities to include product exportation and met the criteria of two hundred and fifty or fewer employees. Accordingly, exporting SMEs are drivers of organization open innovation by going beyond domestic market borders to compete globally (Love & Roper, 2015). The cases selected were based on purposive sampling with a specific criterion of SMEs engaged in product exportation, product, or process innovation within the last three years and had two hundred and fifty or fewer employees (Halkias & Neubert, 2020; Stake, 2006). Case studies for multiple case study research are not selected based on a number, but those representing the phenomenon studied, in this case, SMEs engaging in product or process innovation within the last three years (Stake, 2006; Yin, 2018). Altogether, in the Windward islands, both SMEs engaging in product and process innovation within the last three years and product exportation, were the specific criterion.

The case studies were the primary data collection approach, including interviews and document analysis from the SMEs to investigate the concept of SME's organization open innovation. The case study approach will investigate the contemporary phenomenon with a real-life context, using multiple data sources (Halkias & Neubert, 2020; Stake, 2006; Yin, 2018). The story of each SME was presented chronologically and based on common themes using a within-case analysis. Rubin & Rubin (2012) purports that

interviewees can come through a personal connection to the interviewer, social networks, and making unexpected contacts. The interview protocol elicits information from the interviewee during the interview process (Halkias & Neubert, 2020). Interviewer abided by the IRB standards for conducting interviews, including the correct wording for the consent letter to participants (Walden University, 2017). The consent letter requires the approval of both IRB and the participants before proceeding with the data collection process (see Appendix B).

The process of obtaining data will start with an internet search to identify SMEs engaging in innovation. I will then obtain the email addresses of the managers and owners using a social media platform then email the managers and owners in St. Lucia and Grenada to introduce myself and the purpose of my study with information about the University that I represent. SMEs' owners and managers were invited to an interview at a time convenient to each participant via Zoom and each participant will have the interview questions and consent form one week before the scheduled date of the interview.

Any participant wanting to exit the interview would be free to do so at any point when I am interviewing the St. Lucian and Grenadian leaders. Over fourteen days, I will arrange all the interviews for each of the fifteen to twenty participants. Data were recorded using a digital recorder during the interview processes. I will facilitate spending two weeks, so I can arrange any follow-up interviews if it is needed. The overall fieldwork should take three months in total. Before providing the information, each person will have an opportunity to read and return the Consent form as required by the IRB of Walden University (see Appendix B). Additionally, note-taking will occur

simultaneously to get the critical points as they are shared (Rubin & Rubin, 2012). The interview will involve a recorder with permission sought first from each participant before use.

Data Analysis Plan

The qualitative data analysis process included the use of a thematic analysis to attribute meaning to the data. This study seeks to understand how leaders within organizations influence and drive open innovation. The evidence of this innovation was using SMEs who engaged in product exportation and have generated process and product innovation within the last three years.

This research study used a qualitative form of inquiry with a multiple case study approach. Patton (2015), purports that a case study should focus first on capturing the uniqueness of each case with construction of smaller units of analysis; the sources of data should be multiple to include an interview, observations, and document analysis. The case study approach will investigate the contemporary phenomenon with a real-life context, using multiple data sources (Stake, 2006; Yin, 2018). The case study will utilize primary data such as interviews, and document analysis on SMEs to investigate the phenomenon of open innovation. Data collection were via audioconference, email, and online. The use of multiple sources of data added to the richness and thickness in the data collected.

The codes from the data on the research questions will represent the literature on the subject area, while some were codes emerging from the data. The coding was a hierarchical coding structure with the significant codes from the literature and the sub-

codes representing a concept constructed in a separate program that will guide the coding using ATLAS.ti. The emerging codes were constructed based on recurring themes in the data (Stake, 2006; Yin, 2018). The data was looked at many times using the ATLAS.ti to code the themes and then develop a list of codes based on the interviews in reference to the literature review analysis. Some of the codes will include SMEs leadership, SME, Open innovation, inbound open innovation, outbound open innovation, product exportation. Patterns in the data were observed and memos written on the side of the documents, casual relationships were observed as the data is analyzed. Related themes with any sequence in events in the data guided the answering of the research questions.

The reflective journal was part of the data analyzes with notes. Biases on the various areas will involve note taking and reflections before starting to analyze the data. The data guiding the answering of the research question will avoid any biases brought to the analysis. A peer debriefer was part of the team while I go through the analysis stage to obtain honest and critical feedback on the analysis made and its representation of the data. Patton (2015) purported investigator triangulation, theory triangulation, methodological triangulation, and data triangulation. The data triangulation will involve a variety of data sources in a study. The investigator triangulation will include the researcher, the peer debriefer, and member checking with the interviewee to ensure accuracy in the transcribed information.

Issues of Trustworthiness

Trustworthiness is another aspect that impacts the quality of research. Trustworthiness will occur through employing sound tape recordings from the interviews,

transcribing the data in its purest form, and accurate coding based on themes obtained from the literature review. The data saturation will guide the emergent themes (Stake, 2006; Yin, 2018). Another element of trustworthiness is the researcher's reflexivity notes which can be determined by clearly disclosing any personal bias during the presentation of the findings. A potential bias was the intolerance of poor organizational leadership in SMEs and the need to erase those biases before beginning the interviewing of participants.

Credibility

Credibility can be measured using ethical and substantive validation. Substantive and ethical validations will occur during the research planning. According to Creswell and Creswell (2018) an ethical validation entails questioning moral assumptions and the representation of diverse voices (Korstjens & Moser, 2017). Additionally, substantive validation entails understanding how SME leaders and managers drive and manage organization open innovation through self-reflection, time spent in the field, triangulation of the data, and knowledge of the literature review issues.

Credibility involves ensuring that the case study reflects reality with an accurate account of the situation. Credibility will entail thick, rich descriptions of the data, member reflections, and triangulation of the data (Tracy, 2010). A thick description was obtained from the interview process during the responsive interview (Rubin & Rubin, 2012). The data emerging from the protocol questions was expanded by engaging the participants using "How" and "What" to explain concepts and ideas they present. The triangulation was based on a detailed thematic analysis to ensure that the study correctly

represents the phenomenon of SME's organization open innovation. Multivocality will involve using multiple cases with various interviews possible at a minimum of twenty persons in total to ensure the data is rich and there is theoretical saturation in the data obtained. The member check includes reviewing the transcription with the participants after the data is collected to ensure the story represents what they shared.

Transferability

Transferability and external validity provide assurances that readers can establish a relationship between the study and other similar studies in the literature (Patton, 2015; Baillie, 2015; Korstjens & Moser, 2017). Lincoln and Guba (1985) advocated that research can focus on different realities and that it guides the researcher's truth. To ensure the data attains transferability and external validity, included were the following: (a) detailed and transparent description of all the strategies adopted in the process of recruiting participants, (b) interactions with participants, (c) data collection, (d) data recording, and (e) data analysis.

Dependability

Dependability allows for the researcher's approach if used by another researcher to obtain the same results. Dependability includes data transparency, which will entail the level of detail obtained through the fieldwork (Baillie, 2015; Korstjens & Moser, 2017). Using an expert in Caribbean SMEs as my mentor and my debriefer will help stay objective with the data analysis. A data triangulation approach utilizes various data sources, including interviews, and document analysis (Halkias & Neubert, 2020; Stake, 2006). SMEs' data were analyzed using a thematic approach based on common themes

identified from the literature and compared with the interview transcript (Hancock & Algozzine, 2017; Yin, 2018). The multiple case study analysis will use a within-case analysis to assess the common themes (Halkias & Neubert, 2020; Stake, 2006). Altogether the data, a debriefer, my mentor, and data triangulation will ensure the dependability of the research conducted.

Confirmability

Confirmability is the use of a qualitative study method based on interpretation using other people's realities. The data should be a clear reflection of information and free from the researcher's biases. The case study approach will guide the process throughout the data collection and analysis (Halkias & Neubert, 2020; Stake, 2006; Yin, 2018). The case story of each SME leaders' approach to driving and managing their organization's open innovation were told chronologically and presented for commonalities with a within-case analysis common with case study analysis (Baxter & Jack, 2008). Altogether, confirmability of the data was maintained throughout the data analysis process while keeping the data free from researchers' biases.

Ethical Procedures

The approved IRB consent forms indicated to participants the choice to be a part of the study or not. The purpose of the study was communicated to the managers and owners of the SMEs. Several weeks were spent collecting data, with the researcher checking with the participants to verify the information they provided to avoid misinterpretation.

The ethical issues of participants' information shared through the research process were kept confidential. Participants through the consent forms were informed about a confidentiality statement regarding the information obtained and its intended use, which were for the study purpose only. Another form of assurance for participants were member checking with the participants to ensure data was accurate and represented the interpretation of data provided during the interview.

Summary

In chapter 3, I describe the research approach and the appropriate methodology adopted for the study. I provide justifications for the choice of qualitative approach for the conduct of this research. The study involved investigating the concept of open innovation in SMEs in developing economies, research to date not done. I provide a detailed description of the multiple-case study methodology in this chapter that will guide the study and provide the rationale for choosing the case study design over other qualitative methodologies like narrative inquiry, ethnography, phenomenology, and grounded theory. I provide justification for adopting a multiple case study strategy over a single-case study strategy in line with the study's purpose, research questions, and contextual nature. I describe the linkage between the semi-structured interview questions and the research questions.

The disclosure of participants' selection rationale, instrumentation, the procedures for the recruitment of participants, and the techniques for data collection and data analysis. I describe the steps to ensure the research study's trustworthiness, credibility, dependability, confirmability, and transferability. As the research study involved

interactions with human elements, I provide steps on dealing with ethical challenges inherent in the study. Chapter 4 includes the results derived from the analysis of the research data. A description of the sample, the data collection results, the data analysis applied to the data, and the findings, presenting the codes, interview questions and the resulting themes emerging from the research study.

Chapter 4: Results

The purpose of this qualitative study was to explore how SME leaders in the Windward Islands managed and led their organizations to drive open innovation in the context of developing economies. Leaders of Caribbean SMEs have not fully understood how the leadership of an organization drives open innovation in a developing country context (Ahmed et al., 2018; Crespi et al., 2017; Slavec Gomezel & Rangus, 2019; Usman et al., 2018). There was limited research on how leaders of SMEs in developing countries lead and manage their organizations to drive open innovation. Open innovation implementation is heterogeneous and requires an understanding of the environment and context of SME utilization of that strategy (Santoro et al., 2018; Slavec Gomezel & Rangus, 2019). There is a need for contextual meaning, which creates the need for data exploration to understand open innovation from the managers' perspective and their ability to drive their organization's open innovation (Oliveira et al., 2019; Pilav-Velic et al., 2020; Yao et al., 2020). In the current study, the owners and managers of SMEs shared their lived experiences on how they led and managed their organizations to drive open innovation within developing economies.

One research question guided this study: How do SME leaders in the Windward Islands lead and manage their organizations to drive open innovation? I sought to understand how leaders within organizations influence and drive open innovation. To address the leadership and strategic management gap in the literature, I used the qualitative research method and a multiple case study design. Data came from the Windward Islands, which consisted of four developing economies: Dominica, St. Lucia,

St. Vincent, and Grenada. The participants were chosen from St. Lucia and Grenada, representing Windward Island's largest economies in population and gross domestic product per capita (see World Bank, 2021). The SMEs were engaged in product or process innovations or product exportation within the last three years. In addition, SMEs with 250 or fewer employees had existed for a minimum of five years (see Berisha & Pula, 2015; Cooper, 2016). The industries represented were an across-industry sample, including the agro-processing, rum processing industries, and pool suppliers, which are major Windward Island industries.

The interviews took place using the Zoom video conferencing platform. The coding structure was hierarchical with a priori codes and subcodes from the literature, while emerging codes came from ATLAS.ti. The emerging codes were constructed based on recurring themes in the data (see Stake, 2006; Yin, 2018). Analysis occurred using a multiple case study approach with results based on two methods: thematic analysis and within-case analysis to understand the concept of open innovation. As recommended by Yin (2018), the thematic analysis based on the data collection and data accuracy of the study's multiple sources included (a) the semi-structured interview protocol (see Appendix A), (b) reflexive field notes, (c) member checking, and (d) peer debriefing. The multiple sources of data and the hierarchical coding structure contributed to the in-depth analysis.

In this chapter, I explain the research setting and describe the research participants including their demographic information. Next, I describe the procedures for data collection and data analysis. Also, I provide a summary of the codes identified from raw

data based on the within-case analysis of responses from each participant for the interview questions and describe the themes that emerged from the categorization of the codes. Finally, I provide a justification for the trustworthiness of the study.

Research Setting

The research sample included 15 knowledgeable and experienced leaders with an average of 10 years of work experience leading a SME as either the CEO/owner or a manager. I recruited participants using the social media platform LinkedIn as a member of that network. As a member of the social media site, I recruited qualified participants based on their leadership role in their organization and ensured the organization met the criterion of 250 or fewer employees (see Berisha & Pula, 2015; Cooper, 2016). After selecting potential members for the study, I sent each participant an invitation email to their designated inbox on the social media platform. I sent interview scheduling emails with the letter of consent via Walden University's student email, which I used for subsequent communications. I collected data via semi-structured interviews with CEOs/owners and managers for the multiple case study. Robinson (2014) argued that the inclusion and exclusion criteria delineate the parameters for the sample and that the researcher must specify the criteria for cases. The current participants met the inclusion criteria for SMEs of 250 or fewer employees. Additionally, the purposeful sampling focused on critical case sampling to identify SMEs who had engaged in innovation within the last three years.

The response rate was 15 out of the identified 22 candidates who agreed to participate, resulting in a sample size within the desired recruitment range for a

qualitative case study. For a multiple case analysis, Stake (2006) recommended using three to five cases, while Patton (2015) argued that five to 10 participants are sufficient for a qualitative study because larger samples do not allow for an in-depth investigation of the phenomenon of interest. Every participant in the current study responded via Walden University's email, giving their informed consent by sending the consent form to my email address. Each interview took place using the Zoom meeting platform and was recorded within the application and via the Otter.ai app. Additionally, all participants received the interview protocol 1 week before their scheduled interview time. Participants had an opportunity to ask any questions before I started the interview. Participants received their transcript to review four days after the interview. Participants checked the transcript and confirmed the accuracy of all the transcripts via Walden University's email.

Demographics

This qualitative exploratory multiple case study revealed the shared experiences of how leaders within SMEs in developing economies led and managed to drive organization open innovation. The recruitment technique led to a heterogeneous sample of leaders within SMEs (see Table 2). The alphabetical pseudonym for organizations was indicated by the letters A to J, the alphanumeric pseudonyms indicated participants (e.g., ABC 1 to HIJ 8), and the two-letter alphabetical pseudonym after the participant's number indicated small enterprises (SE) and medium enterprises (ME).

Table 2.

Demographics of Participants

Participant	Years of experience	Leadership position	Job title	Industry
ABC 1-SE	38	CEO	Owner of ABC	Rum processing
ABC 2-SE	4	Manager	Sales manager	Rum processing
ABC 3-SE	18	Manager	Production manager	Rum processing
ABC E-SE	14	CEO	Owner of ABC-E	Pool supplies
EFG 1-ME	41	CEO	Owner of EFG	Agro-processing
EFG 2-ME	4	Director	Junior owner	Agro-processing
EFG 3-ME	14	Manager	Human resource manager	Agro-processing
HIJ 1-ME	37	CEO	CEO of HIJ	Rum processing
HIJ 2-ME	3	Manager	Info. tech. manager	Rum processing
HIJ 3-ME	3	Manager	Distillery manager	Rum processing
HIJ 4-ME	33	Manager	Production manager	Rum processing
HIJ 5-ME	16	Manager	Quality assur. manager	Rum processing
HIJ 6-ME	18	Manager	Human resource manager	Rum processing
HIJ 7-ME	5	Manager	Warehouse manager	Rum processing
HIJ 8-ME	15	Manager	Marketing manager	Rum processing

Included in the demographic profile was the participants' number of years of experience as a leader in the SME. The job titles indicated the leadership role played by each participant, and the industry represented the criterion sampling technique of selecting industries that contributed to the economic development of these developing economies. There were two small enterprises and two medium enterprises; the two small enterprises were from Grenada, and the two medium enterprises were from St. Lucia. The samples were chosen from St. Lucia and Grenada, representing Windward Island's largest economies both in population and gross domestic product per capita (see World Bank, 2021). Additional demographic information collected included the number of

employees, the years the organizations were in existence, and the product and process innovations participants engaged in within the last three years. The SMEs created new products, exported products, and improved their processes within the last three years. All of the organizations met the criteria of SMEs with 250 or fewer employees and had existed for a minimum of five years (see Berisha & Pula, 2015; Cooper, 2016). The small pool supply enterprises had 15 employees; the small rum processing company had 19 employees. The medium agro-processing enterprise had 100 employees, and the medium rum processing enterprise had 123 employees. All the organizations were in existence for a minimum of five years with the rum processing medium enterprise established in 1972, the agro-processing medium enterprise established in 1981, the pool supply small enterprise established in 2000, and the rum processing small enterprise established in 1966. To address the research question for this study, all the SMEs met the inclusion criteria for this study.

Data Collection

I conducted the data collection for this multiple case study in Grenada and St. Lucia using Zoom to access participants in both Grenada and St. Lucia. Data collection began on February 28th, 2022, after receiving my IRB approval number 01-11-22-0361750, and concluded May 7th, 2022, when the final transcript was approved from the last participant, HIJ 8-ME. I used criterion-based sampling to select the cases for the data collection. The organizations selected met the criterion-based sampling technique of organizations engaged in product exportation, product innovation, and process innovation outputs within the last three years (see Cirera & Muzi, 2020; Morris, 2018; Slavec

Gomezel & Rangus, 2019). The organizations selected for the cases provided an in-depth understanding of how leaders led and managed their organizations to drive open innovation. I collected data from three sources: (a) semi-structured interviews (see Appendix A), (b) document reviews including the literature, and (c) researcher reflexive notes.

Review of Interview Protocol

The interview protocol consisted of eight main interview questions, which were reviewed by my committee chair, my second committee member, and a professor of management. Recommendations shared by the professor of management were minor and included changes to one of the main questions. Further feedback came from the Walden IRB with corrections made to the requirements for participants to confirm their participation via email with the words "I consent." The modification included removing the requirement for "I consent" because it was implied via a return email.

Selection of Participants

In Grenada and St. Lucia, there were no comprehensive and reliable databases on SMEs. I made phone calls to each SME to ascertain whether they had engaged in innovation and to determine the number of employees within the organization. I made numerous searches on the organization's website to decide on their recent innovation activities. LinkedIn provided the names of the different managers and their email addresses. Direct emails were sent to each participant, and a telephone phone call was made to follow up and to book an interview appointment. The number of employees in the organization was ascertained once the telephone contact was made with the

organization. I sent interview scheduling emails with the letter of consent via Walden University's student email, which I used for subsequent communications.

I asked each participant for their preference in the time for the scheduled Zoom meeting for the interview. I collected data based on the semi-structured interview protocol (see Appendix A). The interview requests went to 22 participants, but some could not accommodate the time based on other organizational commitments and the relevance of the questions to their area of employment. The average interview duration was 45 minutes. The longest interview lasted 50 minutes, and the shortest was 35 minutes. I stored the recorded interview audio files in my personal password-protected computer. Three participants had busy schedules, so I rescheduled their interviews. Another challenge was the infrequent response to emails sent and the cost required to make follow-up telephone calls to St. Lucia.

During the interviews, journaling and active listening skills helped me document critical information and ask follow-up questions. I transcribed recorded interviews using the otter.ai app and reviewed each transcript carefully. Many times, the transcription software made errors based on the accent of the participant. All participants were given an opportunity to ask questions after the purpose of the study was shared with them and before the start of the interview. At the end of the interview, participants were told about the confidentiality of the information shared and that a transcript would be sent for their review and approval. One participant responded with a few grammatical corrections. This data collection process conformed to the initially proposed data collection procedures described in Chapter 3 without any deviations. I transferred the transcripts to ATLAS.ti

data analysis software, which was more cost-effective compared to NVivo, and I achieved detailed reports based on the hierarchical and emerging codes from the data.

Reflective Field Notes

I reflected on my observations and interactions. Observations begun from participants' initial contact to participate until their agreement to be in the study. My reflections were recorded in my reflexive field notes. I reflected on my observations and recorded my reflections in the field notes. During the interviews and audio transcription of data, I observed and reflected on the interviewee's nonverbal cues in responding to the questions, their tone, and their word emphasis. My reflections were all recorded in the field notes.

Transcript Review

I completed the transcription of the audio-recorded interview for each participant using Otter.ai app, I sent the transcript to the participant for review and comments. I sent the transcripts by email to all participants. One participant identified some written errors that were corrected and sent back for further review. Participants indicated their acceptance of the transcript with a return email to my Walden University email address.

Data Analysis

The data analysis identified a common understanding of how leaders of SMEs lead and manage their organization to drive innovation in the Windward Islands while adding to the strategic and management literature from a developing economy perspective. Data revealed the experiences of owners and managers of SMEs in two developing countries. Participants from four SMEs included 15 owners and managers.

The four SMEs represented two SMEs each from St. Lucia and Grenada in the Windward Islands. A criterion sampling technique facilitated an in-depth analysis of the concept of open innovation in a developing economy context. A hierarchical coding structure using codes from the literature allowed for a deductive analysis of the data.

The six-step thematic analysis proposed by Braun and Clarke (2019) helped analyze the data in this study thematically. The Zoom platform allowed for accurately recording the interview data from the 15 interviewees, and each interview was transcribed using otter.ai. Each transcript was emailed to participants to verify the content and context of the information captured with adherence to the qualitative validity process of member checking. The first step of the data analysis process was familiarizing myself with the collected data and the reflexivity notes taken during the interview. Braun and Clarke (2019) found that the first approach knew the data and editing errors from the transcription software's interpretation. This in-depth process required replaying the audio to ensure the context and meaning were correct. Secondly, the ATLAS.ti. data analysis software required coding the transcript of the data following the hierarchical coding structure created from the literature review process. Short phrases from the transcripts were coded based on semantic and latent coding (Braun & Clarke, 2019). Based on the semi-structured interview, different codes emerged, as summarized in Table 3. Codes included words and phrases that all 15 participants similarly expressed when answering the interview questions.

Table 3.

Emergent Themes From Coded Interview Data

Coded category	Theme	Interview question
Use of consultants, Stakeholders-competitor/customer monitoring. Relationship with customers/competitors.	Theme #1: Absorptive capacity and the use of external knowledge	Describe how you use strategic information from customers to improve products and processes within the organization? Describe how you use your relationships with suppliers or other external agents to collaborate to improve your products and processes?
Hi-tech SMEs, Low-tech SMEs, Improvement in systems, Product innovation, Product exportation, Product improvements and R&D.	Theme #2: Approaches to product and process innovation	Describe how your organization creates process design? Describe how your organization improves the attractiveness (aesthetics) or ease of use (functionality) of goods or services? Describe what technology activities you engage in to create new products or processes?
Autocratic, Democratic, Visionary, Transformational, Transactional.	Theme #3: Flexible leadership styles within SMEs	Describe your leadership approach within your organization?
Team's knowledge, Managerial experiences, and knowledge, Employee knowledge sharing, Conflict avoidance, Supportive conflict resolution. dynamic capability framework: sensing information, seizing information, and transformation/managing threats	Theme #4: Knowledge sharing within SMEs	How do you get your employees to resolve problems? Describe how you would get employees to share ideas on new products or processes and how you encourage creativity within your organization?

The third approach was the iterative process of generating themes from the created codes and codes from the literature. Several codes combined to form a single theme as indicated in Table 3. Four themes representing SME's approach to leading and managing their organization to drive open innovation emerged from the data as follows: (a) Theme #1 absorptive capacity and the use of external knowledge, (b) Theme #2 approaches to product and process innovation, (c) Theme #3 Flexible leadership styles within SMEs, and (d) Theme #4 knowledge sharing within SMEs. The identification of all the four themes was contingent upon the contributions from all the 15 participants to the coded categories, which meant that every participant contributed to the data that led to each emergent theme. Altogether, the four themes represented the grouping of the codes associated with the data.

The fourth approach involved reviewing the codes and grouping them into themes. This step entailed reviewing themes and confirming whether they were representations of the data and that any major theme came from the contributions of all the participants interview data. To achieve this, I examined data and compared them to the themes identified and confirmed the importance. The reviewing and examination ensured that the themes adequately reflected the collected interview data. I ensured that the need for changes were made. However, the themes appeared to represent the main insights shared by all the participants regarding the common understandings of how managers lead and manage SMEs to drive open innovation. Additionally, the use of a debriefer helped steer in an objective direction when the data was analyzed to ensure accuracy, internal validity and provided feedback (Janesick, 2015; Rubin & Rubin,

2012). The fifth step was defining and naming themes. The process of defining themes occurred to formulate the exact meaning of each theme and to determine how they reflected the comprehension of collected data. The process of naming themes involved creating an easily understandable and succinct name for each theme. Given that the purpose of the study was to reveal an understanding of how leaders manage their organization to drive open innovation, the emergent themes were those ideas that were present across the dataset in all cases.

Any potential discrepant cases, to include missing information on some questions, were given consideration throughout the coding and thematic analysis process. The discrepant cases reflected variations in how organizations used external information to engage in innovation, small enterprises used external information less within their organizations. Finally, the last step involved writing up the obtained results and iteratively examining themes in response to the research questions.

Evidence of Trustworthiness

Credibility

The qualitative research approach used was consistent with a multiple case study approach. The credibility was enhanced with adherence to Walden University's IRB requirements on the data collection procedures. The adoption and adherence to the multiple case study data analysis provided an appropriate strategy for collection and analysis of data. The multiple case study analysis used a within-case analysis to assess the common themes (Halkias & Neubert, 2020; Stake, 2006). The purposeful and criterion selection of participants was based on the literature. SMEs' data were analyzed

using a thematic approach based on common themes identified from the literature and compared with the interview transcript (Hancock & Algozzine, 2017; Yin, 2018). The SMEs leaders used were managers and owners who were experienced and knowledgeable on innovation within their organization. The use of member checking enhanced confidence in the study findings with participants confirming the accuracy in the data collected. The data triangulation approach utilized included the semi-structured interview, reflexive report, and analysis of transcript guided by the literature on SMEs (Halkias & Neubert, 2020; Stake, 2006). Purposeful sampling, data triangulation, member checking, and the multiple case study methodology enhanced the credibility of this study.

Transferability

Transferability is transmitting meaningful contexts of a phenomenon that is useful to a different group for appropriate judgment. Transferability and external validity provided assurances that readers can establish a relationship between the study and other similar studies in the literature (Patton, 2015; Baillie, 2015; Korstjens & Moser, 2017). The use of rich data from participants indicated the authenticity and trustworthiness of the research data, procedure, and results. Details about the sample size, inclusion, exclusion criteria, the research steps, and findings provided other researchers with useful information to evaluate and possibly apply the research approach to future studies and populations.

Dependability

Dependability allows for the researcher's approach if used by another researcher to obtain the same results. Dependability includes data transparency, which will entail the level of detail obtained through the fieldwork (Baillie, 2015; Korstjens & Moser, 2017). Each participant had the same opportunity to answer all the questions with equal opportunity to understand the nature of the study and decide whether they wanted to participate. Questions answered represented the perspective of the managers and owners. Some participants answered all the questions, while others did not answer based on the relevance to their area of responsibility. Dependability came from aligning the data collection process with interview protocol and established research methodology. Every step and criterion for selecting participants was transparent, verifiable, and duplicable, making it very easy for replication by future researchers. Listing dates and times in all audio files, transcripts, reflexive notes, and other research documents will enable an audit trail in the future. Altogether, the data collection, storage, and analysis process complied with executed data congruent with qualitative research.

Confirmability

The process of confirmability involves the confirming of data with the participants to ensure accuracy and veracity of the information. The case study approach guided the process throughout the data collection and analysis (Halkias & Neubert, 2020; Stake, 2006; Yin, 2018). Each participant received an email with the transcript to confirm the contents based on the semi-structured interview. Participants provided feedback using the Walden University email. Participants took an average of two weeks to review the

transcript and confirm the contents via a return email. Confirmability occurred with a documented and comprehensive research process to established audit trails of the research process. Participants' accounts were noted through verbatim quotes in the findings to enhance confirmability. Both the documented research process and confirmation of the data collected ensured confirmability.

Study Results

The qualitative multiple case study provided an in-depth understanding of how leaders of SMEs in the Windward Island lead and manage their organization to drive open innovation. The owners and managers of SMEs shared their lived experiences within the context of developing economies. The conceptual framework guiding this study was the dynamic capability framework. This framework represents how knowledge within organizations transforms while benefitting from innovation outputs (Teece, 2007). Styles of leadership associated with innovation in the literature included transformation and transactional leadership. The leadership styles of transformational leadership style and transactional leadership style had a direct relationship to innovation and organizational outcomes (Chen et al., 2019; Kesting et al., 2015; McDowell et al., 2018). Both the leadership styles and the conceptual framework guided this study.

The current section includes an in-depth description of the results, which are the four themes identified in the data, The Four themes representing SMEs' approach to leading and managing their organization to drive open innovation emerged from the data as follows: (a) Theme #1 absorptive capacity and the use of external knowledge, (b)

Theme #2 approaches to product and process innovation, (c) Theme #3 Flexible leadership styles within SMEs, and (d) Theme #4 knowledge sharing within SMEs.

Table 4.

Themes and Issues

Theme	Issue
Theme #1 absorptive capacity and the use of external knowledge	Reliance on consultant knowledge to innovate, align with competitors to improve and market products, monitoring customers' complaints, providing private labeling to customers.
Theme #2 approaches to product and process innovation	Reliance on improved technology, reliance on new equipment and minimal technology, manually operated systems, informal research and development approaches, new labeling, and rebranding to innovate products.
Theme #3 Flexible leadership styles within SMEs	Leadership styles based on situation moving from democratic to autocratic, other styles were transactional, transformational, visionary, democratic, and autocratic
Theme #4 knowledge sharing within SMEs	Managers knowledge and experience drives strategic ideas, problem solving using teams, a knowledge sharing culture, positive conflict resolution, employee knowledge sharing, and managers avoidance view on conflict.

Theme 1: Absorptive Capacity and the Use of External Knowledge

This theme showed that SME leaders depended on external sources of information from consultants to engage in open innovation, they engaged in collaboration with competitors to market their products and monitored customers' complaints and feedback to improve their products. SMEs monitored the activities of competitors through systematic observations and recording. Stakeholder relationships in SMEs

facilitated the engagement in open innovation. Hameed and Naveed (2019) advocated that SMEs engage in ‘coopetition’ a term coined to reflect collaboration with their competitors to increase their open innovation capabilities. Furthermore, SMEs’ limited resources created an opportunity to extend their partnership relationship while engaging in open innovation. Some organizations engaged in open innovation through knowledge flows from affiliations with other organizations, knowledge from external sources with the organization’s ability to use the external knowledge through its absorptive capacity (Greco et al., 2017; OECD, 2018). SMEs reliance on external knowledge was evident through collaborations and consultations with external organizations and personnel. These observations were evident during the interview response. For example, Participant ABC-3-SE “there’s a lot of openness and consultants in terms of when we have been met with a challenge, or we wish for improvement”. Participant EFG-3-ME further stated, “we’re open to those contract packaging and private labeling as well”. Monitoring of competitors’ products was an ongoing activity by SMEs as indicated by participant HIJ-1-ME “So they may notice the competitor product is suddenly selling, they may notice one of our products is not moving, they may notice somebody changed the label and anything they observe, that could be of interest to us, they have to fill in the form and submit it”. The participant HIJ-1-ME further stated that customer’s complaint was constantly monitored. For example, “but it was only by the customer coming back with a complaint on the sediments that we were able to respond and make that improvement”. Collaboration with competitors involved bottling and marketing of competitors’ products which benefitted SME’s production system. For example, participant ABC-1-SE

indicated “And we decided to get more involved in and invest in new equipment. We also one of the things that we do is we do a lot of private labeling and private bottling. So more recently, we were actually you know, doing the bottling for Company AB”. Participant ABC-1-SE further stated “we see that as an opportunity for us to take up some of that private bottling. Because what that does it just give you an ability to, work”. Participant ABC-1-SE collaboration with a competitor was through distribution and promotion of their products for example, “we actually going to be doing the distribution locally for them as well”. Monitoring of external sources of information was common to all SMEs.

Theme 2: Approaches to Product and Process Innovation

This theme showed that SMEs engaged in product and process innovation. SMEs engagement in product and process innovation involves using technology, new equipment, and research and development on a small scale. Open innovation in SMEs has opened the boundaries for innovation to move from the traditional closed approach to an open approach by using external information to create innovative products and processes (Usman et al., 2018). Companies’ high investment in innovation has increased labor productivity and the organization’s innovation (Crespi et al., 2017; Wadho & Chaudhry, 2018). Process innovation and product innovation were evident in all four SMEs. For example, participant ABC-3-SE “the process, the traditional ways, because of our industry, as we like to say it is a 16th century mentality and history, there are a lot of processes that have been adapted and tailored and maintained throughout the process”. A participant EFG-3-ME further stated “collectively with the management and our CEO,

who is the main chemists behind the company, we all see where missing gaps in the market is". In addition, participant ABC-2-SE indicated "within a day, we have over 1000 bottles, which is run through the machine, it is really innovative, because of the fact that it took out a lot of the processes that we usually had to do manually". Product and process innovation occurred through manager's expertise informing new products, new equipment and improving traditional production processes.

Open innovation involves generating ideas to include the invention of products to commercialization by strategically capturing value from ideas, technology, and joint effort, which may be internal or external to the organization (Chesbrough & Brunswicker, 2013; Chesbrough et al., 2006). Innovation at a firm level can be measured using investment in technology and research and development. (Maldonado-Guzman et al. 2019; Salisu & Abu-Bakar, 2018; Zoo et al. 2017). SMEs reliance on technology both low levels and high levels were evident. Low levels of technology involved the use of computers to communicate and equipment with some level of automation while high levels of technology included the automation of production processes, the use of technology to monitor performances and generate constant reports. Small enterprises were engaged in low technology as compared to the medium enterprises who engaged in higher levels of technology. These observations were evident during the interview responses. For example, Participant HIJ-1-ME, "I find the technology part, probably, it's more about meeting a requirement a need, or always aiming to read, improve efficiencies and reduce costs as much as" possible". Participant HIJ-4-ME "So, we do use technology quite a bit, and had been doing so even before COVID". Small enterprise used less

technology in their processes as indicated by participant ABC-3-SE “For example, the blending tanks, the pumps are mechanical and there is technology for that, but the filling and measuring units for the metric work is all done by hand”. Additionally, reports used monitor and track product performances. Participant HIJ-3-ME indicated “And that gives you what you call a trend analysis, and that trend analysis gives you a lot of information on where and how you can improve or if you need to change your processes”. research and development occurred in some organizations as was indicated by participant HIJ-8-ME “How do we entice consumers to buy our products? We do a lot of research online to see the new innovative ways for promotions and advertising materials”. SMEs have various approaches to researching and improving their products and processes.

Theme 3: Flexible Leadership Styles Within SMEs

This theme indicated that innovative SMEs engaged in different approaches to leadership. Many leaders indicated a preference for one leadership style, others alluded to using another style based on the situation. Transformational leadership increased employees’ internal motivation, and transactional leadership increased the employee’s external motivation to engage in innovation (Ahmed et al., 2018; Kang et al., 2015). Burns (1979) argued that transformational leadership was a leadership style that inspired followers to transcend their values to that of the leader’s values and goals, while transactional leadership represented rewards and punishment in exchange for compliance with the leader’s request. It was evident that one leader spoke about mentoring which indicated a transformational leadership style, for example, participant HIJ-1-ME indicated “then there is another approach I use, which is like a mentoring approach, you come there

you do a one on one with the person and you ask them how what's the issue, then you listen to the answers". The democratic leadership style was a dominate leadership style in both small and medium enterprises, as was indicated by participant HIJ-4-ME "I prefer to have a scenario where there's more participation of the whole team, in what is happening in the department". Another participant ABC-3-SE "I always like the democratic leadership style because you as a democratic it's a collective view of opinions and feedback". Another leadership style observed was visionary leadership as was evident with participant ABC-1-SE "two years away from retirement and yeah, so I'm trying to pass on, you know, to develop systems that, you know, so the company could continue". The autocratic leadership style was observed for example, EFG-3-ME "autocratic, meaning at the executive level, you have myself, Mr. EFG-1-ME and Mr. EFG-2-ME senior who makes unilaterally decisions amongst ourselves". Another participant HIJ-3-ME used an autocratic style based on the situation, "when you have an emergency. well, you have to go to the more what they call it autocratic style, where you actually have to dictate to everyone what direction they need to go". Many SME leaders used more than one style of leadership and altered between a preferred style, and a style for a crisis. The styles of leadership within innovative SMEs are indicated in Table 5.

Table 5.

Styles of Leadership Within Innovative SMEs

	Medium enterprises	Small enterprises
Transactional	3	1
Transformational	1	3
Democratic	6	2
Autocratic	3	1
Visionary	1	5

Theme 4: Knowledge Sharing Within SMEs

This theme showed that SME leaders engaged in knowledge sharing from within the organization, creating a knowledge-sharing organization culture. Knowledge sharing involved employee sharing ideas, management sharing ideas through managerial competency, and teams sharing ideas. In SMEs, the individuals contribute to the organization's innovation through cooperation and knowledge sharing (Sudarmaj et al., 2020). Knowledge sharing was a continuous process within the organization and determined the organization's competency for innovation (Ali et al., 2017). One leader spoke about strategic meetings that involved planning for one year. Participant HIJ-1-ME indicated "I was in France last year, October, where we did the planning for this year, all our marketing for this year, what our strategy was going to be, what new products we're going to start looking at developing and that's how we do everything". "Additionally, always somebody somewhere have the resources yes, which is amazing, I mean, first time in my working life, suddenly, we have so many resources, on our hands". Participant HIJ-1-ME further stated "So while we don't have a formal research department everybody's on board, in terms of gaining information or gathering information, which

comes to management, and assists us in making decisions" Participant ABC-3-SE alluded to "we do have information that was handed down from since the birth of ABC to ensure that we're following a specific procedure as it relates to making blends, because we currently blend our rums". Another participant HIJ-8-ME indicated "So, we certainly drive our information and do our own research to put the company at the forefront in anyway and in any form". Participant EFG-3-ME indicated the importance of staff inclusion in idea generation for new products. Evidence of idea-sharing included, "So yeah, example like if we were coming up with a new product, the first set of internal customers would be our staff of course. So, when the batch is created, after sampling it, we pass it around, we probably do a little get together". Altogether, SMEs engaged in a constant internal system of idea-sharing within their organizations.

Dynamic Capability Framework

The SMEs engaged in the activities of the dynamic capability framework. SMEs demonstrated evidence of sensing purposeful information from internal and external sources within the organization, seizing information, and conversion into improved products and processes while managing threats. All four themes addressed the stages of the dynamic capability framework. The four themes were (a) Theme #1 absorptive capacity and the use of external knowledge addressed the sensing and seizing of purposeful knowledge from external of the organization, (b) Theme #2 approaches to product and process innovation addressed the transformation of knowledge and management of threats, (c) Theme #3 Flexible leadership styles within SMEs indicated leadership styles that drive and supported organization knowledge sharing and

transformation, and (d) Theme #4 knowledge sharing within SMEs represented the sensing and seizing of purposeful knowledge within the organization. For example: The elements of each of the stages are as follows: (a) sensing involved analytical systems by organizations to analyze both the internal and external information from its environment. For example, one participant HIJ-8-ME stated "Obviously, we do a lot of research online, and we talk to other people in the industry, to give us an idea of what's happening out there throughout the Caribbean". Another participant HIJ-3-ME, indicated "monthly meetings are held where we talk to staff and then try to see, listen to the ideas that they have for different issues". Another participant ABC-2-SE shared that "most times, the salesmen would do a good job, and the merchandisers as well, they would provide information that we need from all outlets". Participant HIJ-1-ME indicated "So while we don't have a formal research department everybody's on board, in terms of gaining information or gathering information, which comes to management, and assists us in making decisions", (b) seizing involves putting systems in place to benefit from the purposeful knowledge. For example, HIJ-1-ME indicated "we respond, we have a responsibility to respond and that's what allows us to stay ahead in the markets". Participant EFG-1-ME indicated "At least every two to three years we try to come up with something new". While another participant ABC-E-SE indicated that "technology may not be available now, but I know it's coming out, I can plan for it and stuff like that", and (c) managing threats/transforming involves the transformation of the organization's assets using knowledge continuously (Teece, 2007a). Participant HIJ-8-ME shared how information is transformed within the organization "depends on what the

product is, and who it targets and then we plan exactly what time frame and what time of the year should we launch the product". Participant ABC-E-SE indicated how the organization responds to competitive threats "I'm not worried about competition, it is there, and they could if they wish can do exactly as I have done, you know, go out there, get educated, learn about the different equipment, etc. So, you know, I'm always on my toes with that". Each element of the framework involved the process of strategic knowledge, which influenced organizational leadership (Helfat & Peteraf, 2009; Teece, 2014). The dynamic capability framework represents a model that interprets an organization strategic response to technical, market, and customer changes occurring in the environment. Teece (2007), purported that a dynamic capability gives an organization a competitive advantage and should not be a best practice because the latter is imitable and common to competitors. Accordingly, the framework allowed the SMEs to respond to the dynamic changes in their environment with a systematic strategic response (see Figure 1).

Summary

The research sample included 15 knowledgeable and experienced leaders managing SMEs in developing countries who provided data for this qualitative multiple case study. Represented in this sample were leaders from four companies across two windward island territories within the Caribbean. Four themes emerged from the data. These four themes emerged from the data to answer the main research question of this study. There is a common practice and understanding among SMEs in how they lead and manage open innovation in a developing economy context which is: (a) using absorptive

capacity by external knowledge, (b) product and process innovation, (c) flexible leadership styles within SMEs, and (d) knowledge sharing within the organization. Chapter 4 began with the reiteration of the purpose statement and research questions foundational to this study. Central to this chapter were the descriptions of the research setting, sample demographics, data collection, and data analysis, with a discussion of the evidence of trustworthiness. The focus of the chapter was on the report of the results and findings from the data. In this chapter, I explained in detail the data collection and analysis process, the results, and how the themes that emerged from the data represented answers to the research question. Data collection representing the lived experiences of 15 innovative SME leaders in two developing economies led to the generation of the themes and patterns discussed in Chapter 5. The analysis of the textual data, derived from the transcriptions of the interviews via otter.ai, using ATLAS.ti data analysis software that, helped to organize, code data and led to the identification of four major themes guided by the conceptual framework dynamic capability framework.

Chapter 5 included the discussion and interpretations of the findings. Addressed in the chapter are the limitations of the research and recommendations based on the results of the study. The research study implications and the final research conclusions completed the chapter.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative exploratory multiple case study was to understand how leaders of SMEs in developing economies in the Caribbean managed and led their organizations to drive open innovation. Open innovation involved purposeful internal and external knowledge of SMEs to increase their organizational performance. The qualitative method with a multiple case study design was appropriate because the goal of the study was to answer the research question based on the experiences and meaning from participants' real-life in-depth perspectives. The use of four case studies enabled an in-depth exploration of experiences through semi-structured interviews, which led to a deeper understanding from good descriptions and richness of data. The participants shared their experiences and provided insights into their use of purposeful external knowledge and internal knowledge and how their flexible leadership styles and an idea-sharing organization culture generated product and process innovation within the context of developing economies. The participants shared the sources of external knowledge through consultants, customer feedback, and competitor collaborations. The internal sources of knowledge were from employee idea sharing, managerial experiences and knowledge, knowledge from teams to create products, streamlined processes, and flexible leadership styles. Purposeful external and internal knowledge of the organization combined with leadership contributed to the product and process innovations within developing economies' SMEs.

Interpretation of Findings

This qualitative exploratory multiple case study led to the understanding of how SME leaders manage and lead their organizations to drive open innovation from the perspectives of developing economies. Four themes emerged from analysis of the data obtained from 15 interviews: (a) open innovation managed through flexible leadership styles, (b) the purposeful flow of external knowledge from outside the boundaries of the organization, (c) the purposeful flow of knowledge from within the organization, and (d) the creation of product and process innovation. The results echoed the arguments of Damanpour et al. (2018) and Santoro et al. (2020) on how organizational characteristics and leadership impact organization innovation, with the decisive influence on organization innovation more than the environment itself. The emerging themes and the literature confirmed that organizational factors can have a major impact on organization open innovation in SMEs.

SMEs in developing economies engaged in product and process innovation by their investment in low technology and high technology, improvement in their organization's production systems (e.g., investment in new equipment), product innovation including rebranding of products, and creation of new products using both radical and incremental innovation. Crespi et al. (2017) and Wadho and Chaudhry (2018) argued that companies' high investment in the process of innovation had increased both labor productivity and the organization's innovation. According to the literature, open innovation involves generating ideas, including invention to commercialization, by strategically capturing value from ideas, technology, and joint effort, which may be

internal or external to the organization (Chesbrough & Brunswicker, 2013; Chesbrough et al., 2006). According to the current findings, there was no evidence of SMEs engaging in commercialization to drive open innovation in developing economies. However, findings confirmed that SMEs' engagement in open innovation in developing economies included the themes identified.

Current findings aligned with the dynamic capability framework on the flow of strategic internal and external organization knowledge on the sensing, seizing, and transforming and management of threats. The dynamic capability framework sensing stage focuses on the use of technology, research and development, market segmentation, and science and technology to analyze systems to learn, shape, and calibrate opportunities (Teece, 2007). Current SMEs did not have access to science and technology with some SMEs having simple mechanical processes and others having complex computerized systems. The interviewed leaders of SMEs all used strategic external knowledge to increase their absorptive capacity and their organization's innovation activities. Presenza et al. (2017) argued that an increased absorptive capacity of firms occurred with the use of external knowledge for organization innovation. According to the dynamic capability framework, seizing activities entail the enterprises' structure, design, and incentives for seizing opportunities; the resulting activities included delineating the customer's solution, identifying decision-making protocols, selecting the enterprise solution, and building loyalty and commitment (Teece, 2007). In the current study, SMEs' seizing activities included increasing their marketability by offering private labeling to companies interested in using the SMEs' products but with the other company's private label. One

participant shared that it was important to explore private labeling to increase their market access.

Based on the dynamic capability framework, transforming/managing threats entails the continuous alignment and realignment of tangible and intangible assets; the resulting activities included knowledge management, governance, and decentralization (Teece, 2007). Current findings indicated that SMEs' limited resources created an opportunity to extend their partnership relationship while engaging in open innovation. Hameed and Naveed (2019) advocated that SMEs can engage in 'coopetition', a term coined to reflect collaboration with their competitors to increase their open innovation capabilities. Current SMEs collaborated with competitors to package their products and market their products. In addition, they managed threats with systems that monitored both the internal quality of their products and the external complaints and feedback from customers. The findings confirmed that SME leaders and the entire organization engaged in activities of sensing, seizing, and transforming knowledge and managing threats based on the dynamic capability framework.

The leadership literature indicated the leadership style conducive for SMEs engaging in open innovation. According to the literature, there was a need to understand the dynamics of organizational leadership regarding open innovation (Ahn et al., 2017; Hossain, 2015; Usman et al., 2018; West & Bogers, 2017). The leadership role in SMEs is critical in driving and managing open innovation in organizations. Current findings indicated flexible leadership styles of innovative SMEs, which included democratic, autocratic, transformational, transactional, and visionary. A democratic leadership style

involves inviting suggestions and ideas from peers before taking a decision (Le & Nham, 2022). The autocratic leadership style refers to a leader whose performance is based on productivity (Bhatti et al., 2012). In the current study, many interviewed participants preferred the style of democratic leadership to facilitate communication and idea sharing with employees. In contrast, the autocratic leadership style was used by some leaders in emergencies or crises when employees needed to comply with information. The literature on innovative SME leadership identified the transformation and transactional leadership styles common to innovative SMEs. Transformational and transactional leaders have been the focus of leadership studies based on organization innovation and employees' behaviors (Chen et al., 2019; Kesting et al., 2015; McDowell et al., 2018). Malik et al., (2020) confirmed that transformational leadership positively impacts SMEs' sustainability more than transactional leadership. Generally, the literature provided empirical support that no perfect leadership style exists. Leaders should account for concurrent situations related to enterprises and use a flexible leadership style (Le & Nham, 2022). The current findings confirmed the need for a flexible leadership style in innovative SMEs in developing economies.

Open innovation knowledge flow can be outbound, inbound, or coupling. Outbound open innovation (outward flow of knowledge) is the use of knowledge by an external organization for that organization's innovative purposes, inbound open innovation (inward flow of knowledge) is the acquisition of external knowledge for internal innovations, and coupling open innovation represents a combination of both (Chesbrough & Crowther, 2006; OECD, 2018). In the current study, many SMEs

engaged in inbound open innovation rather than outbound open innovation and coupling. The choice of outbound, inbound, and coupling open innovation requires an assessment of the organization's strategic need. Scholars have presented many approaches to inbound open innovation based on the open innovation literature (Hochleitner et al., 2017; Park, 2018; Yoon et al., 2016). Hochleitner et al. (2020) argued that SMEs inbound open innovation can be clustered into five profiles (see Table 1). Current findings indicated that SMEs in developing economies engaged in two inbound open innovation profiles: (a) acquirers and (b) co-operators. Acquirers are an openness profile characterized by acquiring machinery, external knowledge, and external sources of information (Hochleitner et al., 2020). Some SMEs indicated the acquisition of production equipment and support from external knowledge, including associations that provided industry knowledge on the Caribbean and international market trends. Co-operators are firms that seek specialized collaboration with customers, suppliers, consultants, competitors, and to a lesser extent universities and the government (Hochleitner et al., 2020). In the current study, findings indicated some SMEs use consultants' knowledge to improve their products and processes. The constant monitoring of customers' complaints and feedback was evident in all SMEs. There were SMEs who collaborated with competitors to increase their market access. Findings indicated that SMEs in developing economies engaged in inbound open innovation and did not engage in outbound open innovation and coupling open innovation.

Limitations of the Study

The scope of the study included 15 participants from four Caribbean SME organizations. Data were collected from semi-structured interviews due to the advantage of flexibility during the interview process. The research had some barriers with the option of engaging potential participants online and accessing their contacts through a social media professional platform. Some of the professional members did not respond to the study's email invitation, and others were reluctant to accept research invitations because of privacy and possible security concerns. These barriers delayed the recruitment of participants and the collection of data. Social media as a means for recruitment may have introduced some level of sampling bias, which was avoided because SMEs were based on purposive sampling with criteria of SMEs engaged in product exportation, product innovation, or process innovation within the last three years and had 250 or fewer employees.

Another limitation was that most of the interview participants shared their responses to knowledge sharing and conflict resolution surrounding the individual participant's role within the organization. The responses were individual interpretations of experiences, and personal bias could have influenced the study's outcome. The answers to the research question involved a common understanding from participants' experiences; thus, the results of the study were derived from a common understanding and not based on a participant's interpretation.

The interviews occurred using audio conferencing tools and were conducted using Zoom. During the interviews, my setting was private and quiet, conducive to a

confidential and professional research environment. I could not control each participant's environment during the interview sessions. During the interview sessions, managers had to speak from offices, some from their vehicles, and others from their production plants. One participant had to have his interview rescheduled twice due to family emergency and busy work schedule. The interview occurred on another day. These events were potential limitations to the thoroughness and depth of the data collected. It is unlikely that the interruptions that occurred impacted the trustworthiness of the findings.

Recommendations

Recommendations for Further Research

My research provided insights into how leaders of Caribbean SMEs in developing economies managed and led their organizations to drive open innovation. Findings from this research indicated the implications of the dynamic capability framework and the use of purposeful knowledge flow through sensing activities, seizing opportunities, transformation, and managing threats (see Teece, 2007). Furthermore, findings showed that Caribbean SME leaders do not follow a specific leadership style. Additionally, Caribbean SMEs in developing economies drive open innovation through external sources of knowledge, internal knowledge sharing, and engagement in product and process innovation. Furthermore, Caribbean SMEs engaged in inbound open innovation using the Hochleitner et al. (2020) five profiles (see Table 1). The findings indicated that SMEs in developing economies engaged in two inbound open innovation profiles: (a) acquirers and (b) co-operators. Acquirers constituted an openness profile characterized by the acquisition of machinery and external sources of information (Hochleitner et al.,

2020). Additionally, co-operators were firms seeking specialized collaboration with customers, suppliers, consultants, competitors, and to a lesser extent universities and the government (Hochleitner et al., 2020). The current study was exploratory, and the findings provided opportunities for quantitative validation in future research.

Methodological Recommendations: Quantitative Validations

The conceptual framework used in this study was the dynamic capability framework, which comprised the sensing of purposeful knowledge, the seizing of opportunities, and the transformation of knowledge while managing threats (see Teece 2007). Findings from my study indicated that SMEs engaged in both external and internal knowledge with the transformation of external knowledge using inbound open innovation. Although these findings are consistent with the literature, SMEs' use of external knowledge varied between consultants, customer monitoring systems, and collaboration with competitors. There is the need to use a larger population of SME leaders to examine the extent of their dependence on one form of external knowledge or other forms and the resulting impact on SMEs' organization open innovation.

Findings confirmed the impact of SME leadership on the innovation activities of Caribbean developing economies. Transformational and transactional leaders have been the focus of leadership studies based on organization innovation and the impact on employees' behaviors (Chen et al., 2019; Kesting et al., 2015; McDowell et al., 2018). Additionally, the literature provided empirical support that SMEs do not use only one leadership style, and leaders should embrace a flexible leadership style (Le & Nham, 2022). Current findings indicated flexible leadership styles of Caribbean innovative

SMEs, which included democratic, autocratic, transformational, transactional, and visionary. Although this finding is consistent with the literature on SMEs' open innovation in a Caribbean developing economy context, there is a need to use a larger population of SME owners and managers to examine the extent of their dependence on one form of leadership style and the resulting impact on SMEs' organization open innovation.

Findings from my study indicated that the SMEs engaged in inbound open innovation. Hochleitner et al. (2020) advocated that SMEs inbound open innovation can be clustered into five profiles see Table 1. While this finding is consistent with the literature on SMEs engagement in inbound open innovation the interviewed SME owner-managers leaned more towards two profiles acquirers and co-operators. The findings indicated that SMEs in developing economies engaged in two inbound open innovation profiles: (a) Acquirers and (b) Co-operators. While the use of two profiles is used in Caribbean developing economies SMEs, there is a need to use a larger population of SMEs to examine the extent of the relevance of other profiles identified by the literature and the resulting impact on SMEs' organization open innovation.

Implications

In my study, I have explored how SME leaders in the Windward Islands manage and lead their organizations to drive open innovation in the context of developing economies. Prior to my study there was a quantitative study on firm-level innovation among Caribbean small, medium, and large businesses which indicated that there were more businesses with the potential for innovation than were engaging in it (Mohan et al.,

2017). The leadership and strategic management literature did not address how SMEs' leader's knowledge and ability drive their organization's open innovation in a developing economy context (Radziwon & Bogers, 2018; Slavec Gomezel & Rangus, 2019; West & Bogers, 2017; Usman et al., 2018). Organization open innovation and the leaders of SMEs' ability to drive the process in a developing economy was never explored. Specifically, my study was intended to answer the research question: How do SMEs' leaders in the Windward Islands lead and manage their organizations to drive open innovation? The outcome from my study have revealed that (a) SMEs' leaders drive open innovation through a systematic flow of external knowledge into the organization, (b) Internal knowledge sharing within the organization, (c) Use of flexible leadership styles, and (d) Different approaches to product and process innovation. These findings have implications for positive social change at the individual level and organizational level, as well as theoretical, methodological, and managerial implications.

Positive Social Change

Caribbean developing economies currently have high levels of unemployment, Caribbean SMEs have low organization innovation, and is part of the largest business sector. Many Caribbean SMEs have the potential for innovation but do not engage in organization innovation (Mohan et al., 2017; Yang, 2016). Additionally, SMEs account for 95% of the Caribbean region's businesses and contribute 40% to gross domestic product (McLean & Charles, 2020). SMEs can help reduce the current high unemployment for the Windward Islands (Government of Grenada, 2021; Government of St. Lucia, 2021; McLean & Charles, 2020; Williams & Ramdani, 2018). Economic

development and a reduction in unemployment can be social benefits from my research on open innovation. SMEs' owners and managers will acquire knowledge on the role of the leader's ability to strategically lead and manage their organization to drive open innovation in the context of Caribbean developing economies.

Individual Level Implications

Findings from my study revealed that the interviewed SME leaders engaged in internal knowledge sharing and conflict resolution. Some leaders decided on tangible recognition programs to reward employee idea sharing while others recognized them verbally. Managerial competency entailed the manager's decision making, management style and general approach to people development (Baden-Fuller & Teece, 2020). The managerial competencies relationship with open innovation was positive in firms, and the middle-level leadership positively affected knowledge sharing (Lambrechts et al., 2017; Yao et al., 2020). Furthermore, West and Bogers (2017) argued that empowering leadership influenced the implementation of open innovation in organizations. The findings provided an opportunity for SME leaders to focus on developing their managerial competency and adapting flexible leadership styles.

Organizational Level Implications

The findings from my study indicated that organizational practice among the SMEs varied based on the level of technology used to engage in open innovation. SME's implementation of open innovation was heterogeneous in nature. Accordingly, the literature's categorized open innovation as follows: (a) technology, (b) managerial competencies, and (c) organizational practices (Greco et al., 2016; Greco et al., 2017;

Gentile-Ludecke et al., 2020). SMEs using low technology included the introduction of new equipment to high technology SMEs to include the development of Apps for product purchases and tracking of product quality and performances. Both low technology and high technology SMEs engaged in strategic external knowledge which included filling out forms for low technology SMEs and using custom designed software programs for high technology SMEs. Organization innovation practices typically involved the use of business models, adaptive innovation approaches to create as needed innovative products, and corporate culture, which all had a positive influence on the open innovation process (Oliviera et al., 2018, Fainshmidt & Frazier, 2017; Pranciulytė-Bagdžiūnienė, Petraitė, 2019). The findings will benefit SMEs' owners and managers in understanding the varying levels of technology that can be implemented while simultaneously having a positive effect on the organization's open innovation.

Theoretical Implications

The findings from my study revealed that the interviewed SME leaders engaged in open innovation with the strategic use of internal and external knowledge. In the last decade, innovation and its relevance in SMEs have increased due to SMEs organizational flexibility, the effect on firm performances, and the need to remain competitive (Albats et al., 2020; Crupi et al., 2020; Hermawati, 2020; Usman et al., 2018). SMEs in developing economies can benefit from engaging in open innovation. Caribbean economies' SMEs lack competitiveness; they have a weak capacity for innovation and a lack of strategic leadership (Acevedo et al., 2013; Hurley, 2018; Minto-Coy et al., 2018; Williams & Ramdani, 2018). Findings from my study indicated that Caribbean SMEs' external

knowledge sources included consultants, competitor collaborations, monitoring of customers' complaints, and customer feedback to engage in product innovation. While internal sources of knowledge included an idea sharing organization culture using individuals and teams to increase SMEs product and process innovations. Additionally, exportation increased both the innovation of SMEs and the general performances. The findings of my study will add to the strategic and management literature on developing economies SMEs and how leaders can drive open innovation from both the external knowledge and internal knowledge of the organization.

Methodological Implications

The study methodology was a qualitative study with a multiple case study, approach to exploring the understanding of open innovation in SMEs at an organizational level. Many open innovation studies in the literature commonly used quantitative methods, mixed methods, and the use of panel data with fewer studies using an exploratory qualitative case study methodology to understand the heterogeneous context of open innovation (Obradovic et al., 2021; Mohan et al., 2017; Morris, 2018). Limited studies use a qualitative methodology, and many are based in high technology industries within developed economies (Santoro et al., 2020; Zajkowska, 2017). Consequently, there was a deficiency in the open innovation literature for qualitative studies addressing open innovation in the context of developing economies. The findings will add methodologically to the literature providing qualitative insight, with rich data to understand the experiences of leaders of SMEs in developing economies and their approaches to driving organization open innovation.

Managerial Implications

My study has provided evidence that SME owner-managers in the Caribbean have limited knowledge regarding the leadership impact on organization open innovation and the implications for organizational performances. Researchers have found that the relationship between leadership and SME performances included primarily: (a) open innovation and firm performances, (b) leadership knowledge and firm performances, (c) leadership style within an organizational context, and (d) the flow of knowledge through outbound and inbound open innovation (Ahn et al., 2015; Chesbrough & Brunswicker, 2013; Hossain, 2015). Specifically, leadership styles varied among SMEs engaging in open innovation. Leaders of SMEs managed open innovation through internal knowledge sharing, their flexible leadership styles and the different approaches to product and process innovation. Specifically, SMEs engaged in the use of external knowledge using consultants' knowledge, competitor collaborations and customers' feedback and complaints. The literature confirmed that some organizations engaged in open innovation through knowledge flows from affiliations with other organizations, knowledge from external sources with the organization's ability to use the external knowledge through its absorptive capacity (Greco et al., 2017; OECD, 2018). The findings implied that SME managers and owners should adopt a continuous system of knowledge flows internal and external of the organization to increase their open innovation while leaders should understand the implications of using a flexible leadership style based on the organization's context.

Conclusions

The purpose of this qualitative exploratory multiple case study was to reveal the understanding on how leaders of SMEs in the Windward islands lead and manage their organization to drive open innovation. The data analysis indicated four themes: (a) Theme #1 absorptive capacity and the use of external knowledge, (b) Theme #2 approaches to product and process innovation, (c) Theme #3 Flexible leadership styles within SMEs, and (d) Theme #4 knowledge sharing within SMEs. The identification of all the four themes was contingent upon the contributions from all the 15 participants to the coded categories, which meant that every participant contributed to the data that led to each emergent theme. The conceptual framework for the study encompassed the dynamic capability framework consisting of four dimensions: sensing of purposeful information, seizing opportunities, transforming, and managing threats (Teece, 2007a). The research findings included the identification of five leadership approaches: democratic, autocratic, transformational, transactional, and visionary leadership. The findings confirmed that SMEs leaders in developing economies consistently engaged in activities of sensing, seizing, and transforming knowledge. The flexible leadership style used varied between transformation, transactional, autocratic, democratic, and visionary. SMEs engagement in a continuous flow of internal and external knowledge, with a flexible leadership approach impacted the ability to drive open innovation in the context of developing economies.

References

Abulrub, A.-H. G., & Lee, J. (2012). Open innovation management: challenges and prospects. *Procedia-Social and Behavioral Sciences, 41*, 130-138. https://doi.org/10.1016/j.sbspro.2012.04.017

Acevedo, S., Cebotari, A. & Turner-Jones, T. (2013). Caribbean small states: Challenges of high debt and low growth. *IMF Occasional Paper*. Retrieved from https://www.imf.org/external/np/pp/eng/2013/022013b.pdf.

Ahlstrom, D. (2010). Innovation and growth: How business contributes to society. *Academy of Management Perspectives, 24*(3), 11-24. https://doi.org/10.5465/AMP.2010.52842948

Ahmed, F., Naqshbandi, M. M., Kaur, S., & Ng, B. K. (2018). Roles of leadership styles and relationship-based employee governance in open service innovation: Evidence from Malaysian service sector. *Leadership & Organization Development Journal*, *39*(3), 353-374. https://doi.org/10.1108/LODJ-08-2017-0225

Ahn, J. M. (2020). The hierarchical relationships between CEO characteristics, innovation strategy and firm performance in open innovation. *International Journal of Entrepreneurship and Innovation Management, 24*(1), 31-52. https://doi.org/10.1504/IJEIM.2020.105275

Ahn, J. M., Minshall, T., & Mortara, L. (2017a). *CEOs in Innovative SMEs: Open Innovation Initiators and Facilitators*. In *Open innovation:Unveiling the power of the human element* (pp. 135-166). https://doi.org/10.1142/9789813140851_0006

Ahn, J. M., Minshall, T., & Mortara, L. (2017). Understanding the human side of openness: the fit between open innovation modes and CEO characteristics. *R&D Management*, *47*(5), 727-740. https://doi.org/10.1111/radm.12264

Ahn, J. M., Mortara, L. & Minshall, T. (2014). Linkages between CEO characteristics and open innovation adoption in innovative manufacturing SMEs. Paper presented at the DRUID Academy, Aalborg, Denmark.

Ahn, J. M., Mortara, L. & Minshall, T. (2015). Open innovation: a new classification and its impact on firm performance in innovative SMEs. Journal of Innovation Management, 3, 33-54. http://doi.org/10.2139/ssrn.2431205

Ahn, J. M., Mortara, L., & Minshall, T. (2018). Dynamic capabilities and economic crises: has openness enhanced a firm's performance in an economic downturn?. Industrial and corporate change, 27(1), 49-63. https://doi.org/10.1093/icc/dtx048

Albats, E., Alexander, A., Mahdad, M., Miller, K., & Post, G. (2020). Stakeholder management in SME open innovation: interdependences and strategic actions. *Journal of Business Research*, 119, 291-301. https://doi.org/10.1016/j.jbusres.2019.07.038

Ali, I., Ali, M., Salam, M. A., Bhatti, Z. A., Arain, G. A., & Burhan, M. (2020). How international SME's vicarious learning may improve their performance? The role of absorptive capacity, strength of ties with local SMEs, and their prior success

experiences. *Industrial Marketing Management*, *88*, 87-100. https://doi.org/10.1016/j.indmarman.2020.04.013

Ali, Z., Sun, H., & Ali, M. (2017). The impact of managerial and adaptive capabilities to stimulate organizational innovation in SMEs: a complementary PLS–SEM approach. *Sustainability*, *9*(12), 2157. https://doi.org/10.3390/su9122157

Ali, Z., Zwetsloot, I. M., & Nada, N. (2019). An empirical study to explore the interplay of Managerial and Operational capabilities to infuse organizational innovation in SMEs. *Procedia Computer Science*, *(15)*8, 260-269. https://doi.org/10.1016/j.procs.2019.09.050

Alleyne, A., Lorde, T., & Weekes, Q. (2017). A firm-level investigation of innovation in the Caribbean: A comparison of manufacturing and service firms. *Economies*, *5*(3), 34. https://doi.org/10.3390/economies5030034

Amabile, T. M. (1997). Motivating creativity in organizations: On doing what you love and loving what you do. *California Management Review*, *40*(1), 39-58.

Aminullah, E., Fizzanty, T., & Soesanto, Q. M. B. (2018). Drivers of innovation without formal R&D: Selected cases of Indonesian firms. STI Policy and Management Journal, 3(2). http://doi.org/10.14203/STIPM.2018.130

Asunka, B. A. (2016). "The Significance of Information and Communication Technology for SMEs in Rural Communities." *Journal of Small Business and Entrepreneurship Development 4* (2), 29–38. https://doi.org/10.15640/jsbed.v4n2a4

Avolio, B. J., Waldman, D. W., & Yammarino, F. L. (1991). Leading in the 1990's: towards understanding the four l's of transformational leadership. *Journal of European Industrial Training, 15*(4), 9 –16. https://doi.org/10.1108/03090599110143366

Ayyagari, M., Demirguc-Kunt, A., & Maksimovic, V. (2014). Who creates Jobs in developing countries? *Small Business Economics, 43*, 75-99. https://doi.org/10.1007/s11187-014-9549-5

Baden-Fuller, C., & Teece, D. J. (2020). Market sensing, dynamic capability, and competitive dynamics. *Industrial Marketing Management, 89*, 105-106. https://doi.org/10.1016/j.indmarman.2019.11.008

Baillie, L. (2015). Promoting and evaluating scientific rigour in qualitative research. *Nursing Standard, 29*(46), 36-42. https://doi.org /10.7748/ns.29.46.36.e8830

Barasa, L., Kimuyu, P., Vermeulen, P., Knoben, J., & Kinyanjui, B. (2014). Institutions, resources and innovation in developing countries: A firm level approach. *DFID Working Paper*. http://www.tilburguniversity.edu/dfid-innovation-and-growth

Baregheh, A., Rowley, J., & Sambrook, S. (2009). Towards a multidisciplinary definition of innovation. *Management Decision, 47*(8), 1323–1339. https://doi.org/10.1108/00251740910984578

Barham, H., Dabic, M., Daim, T., Shifrer, D. (2020). The role of management support for the implementation of open innovation practices in firms. *Technol. Soc. (63),* 101-282. https://doi.org/10.1016/j.techsoc.2020.101282

Bass, B., M. (1985) *Leadership and performance beyond expectations*, New York: Free Press.

Bass, B. M. (1990). *Bass & Stogdill's handbook of leadership: Theory, research, and managerial applications*. (3rd ed.). New York. Free Press.

Bass, B. M. (1997). Does the transactional–transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist, 52*(2), 130–139. https://doi.org/10.1037/0003-066X.52.2.130

Batterink, M. H. (2009). Profiting from external knowledge: how firms use different knowledge acquisition strategies to improve their innovation performance. PhD thesis. University of Wageningen, Wageningen.

Baxter, P., & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report, 13*(4), 544-556. http://www.nova.edu/ssss/QR/QR13-4/baxter.pdf

Bhatti, N., Maitlo, G.M., Shaikh, N., Hashmi, M.A., & Shaikh, F.M. (2012). The impact of autocratic and democratic leadership style on job satisfaction. *International business research, 5*(2), 192. http://dx.doi.org/10.5539/ibr.v5n2p192

Berisha, G., & Pula, J. S. (2015). Defining SMEs: a critical review. *Academic Journal of Business, Administration, Law and Social Sciences*, *1*(1), 17-28. https://www.researchgate.net/publication/276294683_Defining_Small_and_Medium_Enterprises_a_critical_review

Bessant, J., Lamming, R., Noke, H., & Phillips, W. (2005). Managing innovation beyond the steady state. *Technovation*, *25*(12), 1366–1376. https://doi.org/10.1016/j.technovation.2005.04.007

Bessant, J. R., & Tidd, J. (2015). *Innovation and entrepreneurship* (3rd. ed.). Wiley.

Bigliardi, B., Ferraro, G., Filippelli, S., & Galati, F. (2020). The past, present and future of open innovation. *European Journal of Innovation Management*. https://www.emerald.com/insight/1460-1060.htm

Bigliardi, B. and Galati, F. (2018).“An open innovation model for SMEs”, in Frattini, F., Usman, M., Roijakkers, N. and Vanhaverbeke, W. (Eds), Researching Open Innovation in SMEs, World Scientific, Singapore, pp. 71-113. https://doi.org/10.1142/9789813230972_0003

Block, J. H., Fisch, C. O., & van Praag, M. (2017). The Schumpeterian entrepreneur: a review of the empirical evidence on the antecedents, behavior and consequences of innovative entrepreneurship. *Industry And Innovation*, *24*(1), 61-95. https://doi.org/10.1080/13662716.2016.1216397

Bogers, M., Zobel, A. K., Afuah, A., Almirall, E., Brunswicker, S., Dahlander, L., Frederiksen, L., Gawer, A., Gruber, M., Hawfliger, S., Hagedoorn, J., Hilgers. D/. Laursen, K., Magnusson. G/. M., Majchrzak, A/. McCarthy, P.,I., Moeslein. M/. K., Nambisan, F., T., Piller, A., R., ... & Ter Wal, A. L. (2017). The open innovation research landscape: Established perspectives and emerging themes across different levels of analysis. *Industry and Innovation, 24*(1), 8-40. https://doi.org/10.1080/13662716.2016.1240068

Boly, V., Morel, L., Assielou, N.G., and Camargo, M. (2014) Evaluating innovative processes in French firms methodological proposition for firm innovation capacity evaluation. *Research Policy, 43,* 608–622. https://doi.org/10.1016/j.respol.2013.09.005

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health,* 11, 589-597. https://doi.org/10.1080/2159676x.2019.1628806

Brinkerink, J. (2018). Broad search, deep search, and the absorptive capacity performance of family and nonfamily firm R&D. *Family Business Review, 31*(3), 295-317. https://doi.org/10.1177/0894486518775187

Brunswicker, S., & Vanhaverbeke, W. (2015). Open innovation in small and medium-sized enterprises (SMEs): External knowledge sourcing strategies and internal organizational facilitators. *Journal of Small Business Management, 53*(4), 1241-1263. https://doi.org/10.1111/jsbm.12120

Burkholder, G. J., Cox, K. A., & Crawford, L. M. (Eds.). (2016). The scholar-practitioner's guide to research design. Baltimore, MD: Laureate Publishing.

Burns, J., M. (1979). *Leadership.* Harper & Row

Chaudhary, S., & Batra, S. (2018). Absorptive capacity and small family firm performance: exploring the mediation processes. *Journal of knowledge management. 22(*6) 1201-1216. https://doi.org/10.1108/JKM-01-2017-0047

Chege, S. M., & Wang, D. (2020). Information technology innovation and its impact on job creation by SMEs in developing countries: an analysis of the literature review.

*Technology Analysis & Strategic Management, 32(*3), 256-271. https://doi.org/10.1080/09537325.2019.1651263

Chen, J. X., Sharma, P., Zhan, W., & Liu, L. (2019). Demystifying the impact of CEO transformational leadership on firm performance: Interactive roles of exploratory innovation and environmental uncertainty. *Journal of Business Research*, *96*, 85–96. https://doi.org/10.1016/j.jbusres.2018.10.061

Chesbrough, H., & Bogers, M. (2014). Explicating open innovation: clarifying an emerging paradigm for understanding innovation. In H. Chesbrough, W. Vanhaverbeke & J. West (Eds.), New Frontiers in Open Innovation. Oxford, UK: Oxford University Press.

Chesbrough, H., & Brunswicker, S. (2013). Managing open innovation in large firms. *Garwood Center for Corporate Innovation at California University, Berkeley in US & Fraunhofer Society in Germany*. http://openinnovation.berkeley.edu/managing-open-innovation-survey-report.pdf

Chesbrough, H., & Crowther, A. K. (2006). Beyond high tech: early adopters of open innovation in other industries. *R&d Management*, *36*(3), 229-236. https://doi.org/10.1111/j.1467-9310.2006.00428.x

Chesbrough, H., Vanhaverbeke, W., & West, J. (Eds.). (2006). *Open innovation: Researching a new paradigm*. Oxford University Press on Demand.

Cirera, X., & Muzi, S. (2020). Measuring innovation using firm-level surveys: Evidence from developing countries. *Research policy*, *49*(3), 103912. https://doi.org/10.1016/j.respol.2019.103912

Colombo, M. G., Laursen, K., Magnusson, M., & Rossi-Lamastra, C. (2012). Introduction: Small business and networked innovation: Organizational and managerial challenges. *Journal of Small Business Management, 50*(2), 181-190. https://doi.org/10.1111/j.1540-627X.2012.00349.x

Cooper, I. A. (2016). *The First 4 Years: A Small Business Sustainability Study*. Scholar Works, Retrieved from https://scholarworks.waldenu.edu/

Crespi, G., Dohnert, S., Maffioli, A., Hoelz Pinto Ambrozio, A. M., Barron, M., Bernini, F., & Morris, D. (2017). *Exploring firm-level innovation and productivity in developing countries: The Perspective of Caribbean Small States*. IDB.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

Creswell, J. W., & Poth, C., N. (2018). *Qualitative inquiry research design. Choosing from among five approaches* (4th Ed.). Sage publications.

Cui, T., Wu, Y., & Tong, Y. (2018). Exploring ideation and implementation openness in open innovation projects: IT-enabled absorptive capacity perspective. *Information & Management, 55*(5), 576-587. https://doi.org/10.1016/j.im.2017.12.002

Crupi, A., Del Sarto, N., Di Minin, A., Phaal, R., & Piccaluga, A. (2020). Open innovation environments as knowledge sharing enablers: the case of strategic technology and innovative management consortium. *Journal of Knowledge Management, 25*(5) https://doi.org/10.1108/JKM-06-2020-0419

De Marco, C. E. 2017. "The Challenges of Implementing Open Innovation. A Systematic Literature Review." PhD Dissertation, Scuola Superiore Sant' Anna, Pisa.

De Marco, C. E., Martelli, I., & Di Minin, A. (2020). European SMEs' engagement in open innovation When the important thing is to win and not just to participate, what should innovation policy do?. *Technological Forecasting and Social Change*, 152, 119843. https://doi.org/10.1016/j.techfore.2019.119843

D'Angelo, A., & Baroncelli, A. (2020). An investigation over inbound open innovation in SMEs: insights from an Italian manufacturing sample. *Technology Analysis & Strategic Management*, *32*(5), 542-560. https://doi.org/10.1080/09537325.2019.1676888

De Zubielqui, G. C., Jones, J., & Lester, L. (2016). Knowledge inflows from market-and science-based actors, absorptive capacity, innovation and performance—a study of SMEs. *International Journal of Innovation Management*, *20*(06), 1650055. https://doi.org/10.1142/S1363919616500559

Damanpour, F., & Schneider, M. (2006). Phases of the adoption of innovation in organizations: effects of environment, organization and top managers 1. *British journal of Management*, *17*(3), 215-236. https://doi.org/10.1111/j.1467-8551.2006.00498.x

Damanpour, F., Sanchez-Henriquez, F., & Chiu, H. H. (2018). Internal and external sources and the adoption of innovations in organizations. *British Journal of Management*, *29*, 712-730. https://doi.org/10.1111/1467-8551.12296

Danneels, E. (2010), "Trying to become a different type of company: dynamic capability at Smith Corona", *Strategic Management Journal*, *32*(1), 1-31. https://doi.org/10.1002/smj.863

Dereli, D., D. (2015), “Innovation management in global competition and competitive advantage”,*Procedia - Social and Behavioral Sciences, 195*, 1365-1370. http://dx.doi.org/10.1016/j.sbspro.2015.06.323

Direction, S. (2020). Chief executive officer success secrets from Tunisia's tech sector: Embracing the human dimension of open innovation. *Strategic Direction*, *36*(11), 5-7. https://doi.org/10.1108/SD-09-2020-0159

Donate, M. J., & Sánchez de Pablo, J. D. (2015). The role of knowledge-oriented leadership in knowledge management practices and innovation. *Journal of Business Research*, *68*(2), 360–370. https://doi.org/10.1016/j.jbusres.2014.06.022

European Union Law, (2003). Definition of micro, small and medium enterprise. http://data.europa.eu/eli/reco/2003/361/oj

Fainshmidt, S., & Frazier, M. L. (2017). What facilitates dynamic capabilities? The role of organizational climate for trust. *Long Range Planning*, *50*(5), 550-566. https://doi.org/10.1016/j.lrp.2016.05.005

Fainshmidt, S., Pezeshkan, A., Frazier, M., L. Nair, A., & Markowski, E. (2016). Dynamic capabilities and organizational performance: a meta-analytic evaluation and extension. *Journal of Management Studies*, *53*(8), 1348-1380. https://doi.org/10.1111/joms.12213

Ferreira, J., Coelho, A., & Moutinho, L. (2020). Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation*, *92*, 102061. https://doi.org/10.1016/j.technovation.2018.11.004

Florén, H., Frishammar, J., Parida, V., & Wincent, J. (2018). Critical success factors in early new product development: a review and a conceptual model. *International Entrepreneurship and Management Journal*, *14*(2), 411-427. https://doi.org/10.1007/s11365-017-0458-3

Freud, S. (1920). Group psychology and the analysis of the ego. In *The Standard Edition of the Complete Works of Sigmund Freud, Vol. 28: Beyond the Pleasure Principle, Group Psychology and Other Works, ed. J Strachey*, pp. 65–143. London: Hogarth

Fusch, P., Fusch, G. E., & Ness, L. R. (2018). Denzin's paradigm shift: Revisiting triangulation in qualitative research. *Journal of Social Change*, *10*, (2). https://doi.org/10.5590/JOSC.2018.10.1.02

Gardner, H. (1995). *Leading Minds: An Anatomy of Leadership*. Basic Books

Garcés-Galdeano, L., García-Olaverri and Emilio, H. (2016). Management capability and performance in Spanish family firms, *Academia Revista Latinoamericana de Administración*, *29*(3), 308–325. https://doi.org/10.1108/ARLA-08-2015-0195

Garone, L. F., Villalba, P. A. L., Maffioli, A., &Ruzzier, C. A. (2020). Productivity differences among firms in Latin American and the Caribbean (No. 136). https://webacademicos.udesa.edu.ar/pub/econ/doc136.pdf

Gentile-Lüdecke, S., de Oliveira, R. T., & Paul, J. (2020). Does organizational structure facilitate inbound and outbound open innovation in SMEs?. *Small Business Economics*, *55*(4), 1091-1112. https://doi.org/10.1007/s11187-019-00175-4

Glassman, B. S. (2009). *Improving idea generation and idea management in order to better manage the fuzzy front end of innovation* (Order No. 3378749). Available from ProQuest Dissertations & Theses Global. (304987772).

Government of St. Lucia. (2021). Budget address for the financial year 2021/2022- Government of St. Lucia. Retrieved October 2, 2021. prime-minister-s-budget-address-2021-22-adapting--overcoming-and-persevering-we-are-a-resilient-nation.pdf (govt.lc)

Government of Grenada. (2021). 2021 Budget statement. Retrieved October 2nd, 2021. budget-speech-2021.pdf

Grama-Vigouroux, S., Saidi, S., Berthinier-Poncet, A., Vanhaverbeke, W., & Madanamoothoo, A. (2019). From closed to open: A comparative stakeholder approach for developing open innovation activities in SMEs. *Journal of Business Research*. 119 (230-244). https://doi.org/10.1016/j.jbusres.2019.08.016

Grant, R. M. (1996). Toward a Knowledge-Based Theory of the Firm. *Strategic Management Journal (John Wiley & Sons, Inc.), 17*, 109–122. https://doi.org/10.1002/smj.4250171110

Grazzi, M., & Pietrobelli, C. (2016). *Firm innovation and productivity in Latin America and the Caribbean*. Inter-American Development Bank. https://doi.org/10.1057/978-1-349-58151-1

Greco, M., Grimaldi, M. and Cricelli, L. (2016), "An analysis of the open innovation effect on firm performance", *European Management Journal, 34* (5), 501-516. https://doi.org/10.1016/j.emj.2016.02.008

Greco, M., Grimaldi, M. and Cricelli, L. (2017), "Hitting the nail on the head: exploring the relationship between public subsidies and open innovation efficiency", *Technological Forecasting and Social Change,118*, 213-225. https://doi.org/10.1016/j.techfore.2017.02.022

Grigoriou, K., & Rothaermel, F. T. (2017). Organizing for knowledge generation: Internal knowledge networks and the contingent effect of external knowledge sourcing. *Strategic Management Journal*, *38*(2), 395-414. https://doi.org/10.1002/smj.2489

Grimaldi, M., Quinto, I., &Rippa, P. (2013). Enabling open innovation in SMEs: A dynamic capabilities approach. *Knowledge and Process Management*, *20*(4), 199-210. https://doi.org/10.1002/kpm.1423

Groves, K. S. (2020). Testing a moderated mediation model of transformational leadership, values, and organization change. *Journal of Leadership & Organizational Studies*, *27*(1), 35–48. https://doi.org/10.1177/1548051816662614

Guest, G., Namey, E., & Chen, M. (2020). A simple method to assess and report thematic saturation in qualitative research. *PLoS One*, *15*(5), e0232076. | https://doi.org/10.1371/journal.pone.0232076

Guo, Y., Zheng, G., & Liu, F. (2017). Non-R&D-based innovation activities and performance in Chinese SMEs: the role of absorptive capacity. *Asian Journal of Technology Innovation*, *25*(1), 110-128. https://doi.org/10.1080/19761597.2017.1302548

Haines, D. (2017). Ethical considerations in qualitative case study research recruiting

participants with profound intellectual disabilities. *Research Ethics*, *13*(3-4), 219–232. https://doi.org /10.1177/1747016117711971

Halkias, D., & Neubert, M. (2020). Extension of theory in leadership and management studies using the multiple-case study design. International Leadership Journal, 12(2), 48–73.

Hameed, W. U., & Naveed, F. (2019). Coopetition-based open-innovation and innovation performance: Role of trust and dependency evidence from Malaysian high-tech SMEs. Pakistan Journal of Commerce and Social Sciences (PJCSS), 13(1), 209-230.http://hdl.handle.net/10419/196194

Hancock, D., & Algozzine, B. (2017). *Doing case study research: A practical guide for beginning researchers* (3rd ed.). Teachers College Press.

Hassan, M. U., Iqbal, Z., Malik, M., & Ahmad, M. I. (2018). Exploring the role of technological developments and open innovation in the survival of SMEs: an empirical study of Pakistan. International Journal of Business Forecasting and Marketing Intelligence, 4(1), 64-85. https://doi.org/10.1504/IJBFMI.2018.088629

Hayes, R., Keyer, B., & Weber, E. (2015). *The case study cookbook*. Retrieved from https://web.wpi.edu/Pubs/E-project/Available/E-project-121615-164731/unrestricted/USPTO_CookbookFinal.pdf

Helfat, C. E., & Peteraf, M. A. 2009. Understanding dynamic capabilities: Progress along a developmental path. *Strategic Organization*, 7: 91–102. https://doi:10.1177/1476127008100133

Henttonen, K. and Lehtim€aki, H. (2017), “Open innovation in SMEs: collaboration modes and strategiesfor commercialization in technology-intensive companies in forestry industry”, EuropeanJournal of Innovation Management, 20 (2) 329-347. https://doi.org/10.1108/EJIM-06-2015-0047

Hermawati, A. (2020). The implementation of dynamic capabilities for SMEs in creating innovation. *Journal of Workplace Learning*. https://doi.org/10.1108/JWL-06-2019-0077

Hernández-Linares, R., Kellermanns, F. W., & López-Fernández, M. C. (2021). Dynamic capabilities and SME performance: The moderating effect of market orientation. Journal of Small Business Management, 59(1), 162-195. https://doi.org/10.1111/jsbm.12474

Hervas-Oliver, J.-L., Sempere-Ripoll, F., & Boronat-Moll, C. (2014). Process innovation strategy in SMEs, organizational innovation and performance. A misleading debate?Small Business Economics, 43(4), 873–886. https://doi.org/10.1007/s11187-014-9567-3

Hervas-Oliver, J. L., Ripoll-Sempere, F., & Moll, C. B. (2016). Does management innovation pay-off in SMEs? Empirical evidence for Spanish SMEs. *Small Business Economics*, *47*(2), 507-533. https://doi.org/10.1007/s11187-016-9733-x

Hoang, G., Wilson-Evered, E. & Lockstone-Binney, L. (2020), Leaders influencing innovation: A qualitative study exploring the role of leadership and organizational climate in Vietnamese tourism SMEs, *Employee Relations*, *43*(2*)*, 416-437. https://doi.org/10.1108/ER-07-2019-0279

Ho, Y.-P., Ruan, Y., Hang, C.-C., & Wong, P.-K. (2016). Technology upgrading of Small-and-Medium-sized Enterprises (SMEs) through a manpower secondment strategy – A mixed-methods study of Singapore's T-Up program. *Technovation, 57–58*, 21–29. https://doi..org/10.1016/j.technovation.2016.07.001

Hochleitner, F. P., Arbussà, A. & Coenders, G. (2017). Inbound open innovation in SMEs: indicators, non-financial outcomes and entry-timing. *Technology Analysis & Strategic Management 29*(2), pp. 204–218. https://doi.org/10.1080/09537325.2016.1211264

Hochleitner, F., Arbussà, A., & Coenders, G. (2020). Evolution of inbound openness profiles in the innovation practices of small and medium-sized enterprises in Spain and Portugal. *International Journal of Entrepreneurship and Innovation Management, 24*(1), 73-96. https://doi.org/10.1080/09537325.2016.1211264

Hold, J. L. (2017). A good death: Narratives of experiential nursing ethics. *Nursing Ethics*, *24*, 9-19. https://doi.org/10.1177/0969733015602051

Hossain, M. (2015). A review of literature on open innovation in small and medium-sized enterprises. Journal of Global Entrepreneurship Research, 5(6), 1-12. https://doi.org/10.1186/s40497-015-0022-y

Hosseini, S. M. P. and Narayanan, S. (2014). Adoption, adaptive innovation, and creative innovation among SMEs in Malaysian manufacturing. *Asian Economic Papers 13*(2), pp. 32–58. https://doi.org/10.1162/ASEP_a_00279

House, R. J., & Shamir, B. (1993). *Toward the integration of transformational, charismatic, and visionary theories.* In M. M. Chemers& R. Ayman

(Eds.), *Leadership theory and research: Perspectives and directions* (p. 81–107). Academic Press.

Huber, F., Wainwright, T., & Rentocchini, F. (2020). Open data for open innovation: managing absorptive capacity in SMEs. *R&D Management, 50*(1), 31-46. https://doi.org/10.1111/radm.12347

Hurley, C. O. (2018). MSME competitiveness in small island economies: A comparative systematic review of the literature from the past 24 years. Entrepreneurship & Regional Development, 30(9/10), 1027-1068. https://doi.org/10.1080/08985626.2018.1515822

Hyslop, K (2015). Open innovation in SMEs and the role of the external network: A systematic literature review. WU Vienna University of Economics and Business, Institutfür KMU-Management, Working paper nr 2, 1–32. WP_2_web.pdf (wu.ac.at)

Jørgensen, F., & Ulhøi, J. P. (2010). Enhancing innovation capacity in SMEs through early network relationships. *Creativity and innovation management, 19*(4), 397-404. https://doi.org/10.1111/j.1467-8691.2010.00577.x

Korstjens, I., & Moser, A. (2017). Series: Practical guidance to qualitative research. Part 2: Context, research questions and designs. *The European Journal of General Practice*, *23*, 274–279. https://doi.org/10.1080/13814788.2017.1375090

Lambrechts, F., Voordeckers, W., Roijakkers, N. and Vanhaverbeke, W. (2017). Exploring open innovation in entrepreneurial private family firms in low- and

medium-technology industries. *Organizational Dynamics,* ISSN 0090-2616, https://doi.org/10.1016/j.orgdyn.2017.05.001. (article in press)

Laaksonen, O., & Peltoniemi, M. (2018). The essence of dynamic capabilities and their measurement. *International Journal of Management Reviews, 20*(2), 184-205. https://doi.org/10.1111/ijmr.12122.

Lasagni, A. (2012). How can external relationships enhance innovation in SMEs? New evidence for Europe. *Journal of Small Business Management, 50*(2), 310-339. https://doi.org/10.1111/j.1540-627X.2012.00355.x

Le, T. D., & Nham, P. T. (2022). A Qualitative Study of Leadership Styles in Vietnamese Small and Medium-Sized Enterprises. *The Journal of Behavioral Science, 17*(1), 100-112.

Limaj, E., & Bernroider, E. W. (2019). The roles of absorptive capacity and cultural balance for exploratory and exploitative innovation in SMEs. *Journal of Business Research, 94,* 137-153. https://doi.org/10.1016/j.jbusres.2017.10.052

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Newbury Park CA: Sage Publications

Lin, F. J., & Lin, Y. H. (2016). The effect of network relationship on the performance of SMEs. *Journal of Business Research, 69,* 1780–1784. https://doi.org/10.1016/j.jbusres.2015.10.055

Linton, G., & Kask, J. (2017). Configurations of entrepreneurial orientation and competitive strategy for high performance. *Journal of Business Research*, *70*, 168–176. https://doi.org/10.1016/j.jbusres.2016.08.022

Lowitt, K., Hickey, G. M., Saint Ville, A., Raeburn, K., Thompson-Colón, T., Laszlo, S., & Phillip, L. E. (2015). Factors affecting the innovation potential of smallholder farmers in the Caribbean Community. *Regional Environmental Change*, *15*(7), 1367-1377. https://doi.org/10.1007/s10113-015-0805-2

Love, J. H., & Roper, S. (2015). SME innovation, exporting and growth: A review of existing evidence. *International Small Business Journal*, *33*(1), 28-48. https://doi.org/10.1177/0266242614550190

Kapetaniou, C., & Lee, S. H. (2019). Geographical proximity and open innovation of SMEs in Cyprus. Small Business Economics, 52(1), 261-276. https://doi.org/10.1007/s11187-018-0023-7

Karna, A., Richter, A. & Riesenkampff, E. (2016), "Revisiting the role of environment in the capabilities-financial performance relationship: a meta-analysis", Strategic Management Journal, (37)6, 1154-1173. https://doi.org/10.1002/smj.2379

Kang, J. H., Solomon, G., T. & Choi, D., Y. (2015). "CEOs' Leadership Styles and Managers' Innovative Behavior: Investigation of Intervening Effects in an Entrepreneurial Context." *Journal of Management Studies* 52 (4): 531–554. https://doi.org/10.1111/joms.12125

Kesting, P., Ulhoi, J. P., Song, L. J., & Niu, H. (2015). The impact of leadership styles on innovation-a review. *Journal of Innovation Management*, *3*(4), 22-41. https://doi.org/10.24840/2183-0606_003.004_0004

Kim, M. S. (2014). Doing social constructivist research means making empathic and aesthetic connections with participants. *European Early Childhood Education Research Journal*, *22*(4), 538–553. https://doi.org/10.1080/1350293X.2014.947835

Knight, K. E. (1967). A descriptive model of the intra-firm innovation process, *Journal of Business*, *40*(4), 478–496. https://www.jstor.org/stable/2351630

Korstjens, I., & Moser, A. (2017). Series: Practical guidance to qualitative research. Part 2: Context, research questions and designs. *The European Journal of General Practice*, *23*, 274–279. https://doi.org/10.1080/13814788.2017.1375090

Kratzer, J., Meissner, D., & Roud, V. (2017). Open innovation and company culture: Internal openness makes the difference. *Technological Forecasting and Social Change*, 119, 128-138. https://doi.org/10.1016/j.techfore.2017.03.022

Kurtmollaiev, S., Pedersen, P. E., Fjuk, A., & Kvale, K. (2018). Developing managerial dynamic capabilities: A quasi-experimental field study of the effects of design thinking training. *Academy of Management Learning & Education*, *17*(2), 184-202. https://doi.org/10.5465/amle.2016.0187

Maldonado-Guzmán, G., Garza-Reyes, J. A., Pinzón-Castro, S. Y., & Kumar, V. (2019). Innovation capabilities and performance: are they truly linked in SMEs?.

International *Journal of Innovation Science.11* (1): 48-62. https://doi.org/10.1108/IJIS-12-2017-0139

Makanyeza, C., & Dzvuke, G. (2015). The influence of innovation on the performance of SMEs in Zimbabwe. *Journal of African Business, 16*(1-2), 198-214. https://doi.org/10.1080/15228916.2015.1061406

Martín-de Castro, G., Delgado-Verde, M., Navas-López, J. E., & Cruz-González, J. (2013). The moderating role of innovation culture in the relationship between knowledge assets and product innovation. *Technological Forecasting and Social Change, 80*(2), 351-363. https://doi.org/10.1016/j.techfore.2012.08.012

Mansion, S. E., & Bausch, A. (2020). Intangible assets and SMEs' export behavior: a meta-analytical perspective. *Small Business Economics*, 55(3), 727-760. https://doi.org/10.1007/s11187-019-00182-5

McLean, S., & Charles, D. (2020). A preliminary review of policy responses to enhance SME access to trade financing in the Caribbean. Studies and Perspectives series-ECLAC Subregional Headquarters for the Caribbean, No. 88 (LC/TS.2020/4-LC/CAR/TS.2019/11). https://repositorio.cepal.org/handle/11362/45101

McDowell, W. C., Peake, W. O., Coder, L., & Harris, M. L. (2018). Building small firm performance through intellectual capital development: Exploring innovation as the "black box". *Journal of Business Research*, *88*, 321-327. https://doi.org/10.1016/j.jbusres.2018.01.025

McIntosh, M. J., Morse, J. M. (2015). Situating and constructing diversity in semi-structured interviews. *Global Qualitative Nursing Research*, *2*, 1–12. https://doi.org/10.1177/2333393615597674

Mei, L., Zhang, T., & Chen, J. (2019). Exploring the effects of inter-firm linkages on SMEs' open innovation from an ecosystem perspective: An empirical study of Chinese manufacturing SMEs. *Technological Forecasting and Social Change*, 144, 118-128. https://doi.org/10.1016/j.techfore.2019.04.010

Minto-Coy, I. D., Lashley, J. G., & Storey, D. J. (2018). Enterprise and entrepreneurship in the Caribbean region: introduction to the special issue. *Entrepreneurship & Regional Development*, *30*(9-10), 921-941. https://doi.org/10.1080/08985626.2018.1515823.

Mohan, P., Strobl, E., & Watson, P. (2017). Barriers to Innovation and Firm Productivity in the Caribbean. *Exploring Firm-Level Innovation and Productivity in Developing Countries: The Perspective of Caribbean Small States.*Washington, DC: Inter-American Development Bank. https://doi.org/10.18235/0000616.

Moilanen, M., Østbye, S., &Woll (2014). Non-R&D SMEs. External knowledge, absorptive capacity and product innovation. Small Business Economics, 43(2), 447–462. https://doi.org/10.1007/s11187-014-9545-9

Momeni, M. & Balslev Nielsen, S. (2016). Impact of personnel capabilities on organizational innovation capability. *Journal of Management and Innovation*, 2(2), 1–25. https://doi.org/10.18059/jmi.v2i2.22

Morris, D. M. (2018). Innovation and productivity among heterogeneous firms. *Research Policy*, *47*(10), 1918-1932. https://doi.org/10.1016/j.respol.2018.07.003

Najar, T., & Dhaouadi, K. (2020). Chief Executive Officer's traits and open innovation in SMEs: the mediating role of innovation climate. *Journal of Small Business and Enterprise Development*. (27) 4, 607-631. https://doi.org/10.1108/JSBED-04-2020-0109

Naqshbandi, M. M., & Tabche, I. (2018). The interplay of leadership, absorptive capacity, and organizational learning culture in open innovation: Testing a moderated mediation model. *Technological Forecasting and Social Change*, 133, 156-167. https://doi.org/10.1016/j.techfore.2018.03.017

Nestle, V., Täube, F. A., Heidenreich, S., & Bogers, M. (2019). Establishing open innovation culture in cluster initiatives: The role of trust and information asymmetry. *Technological Forecasting & Social Change*, 146, 563–572. https://doi:10.1016/j.techfore.2018.06.022

Ng, H. S., & Kee, D. H. (2018). The core competence of successful owner-managed SMEs. *Management Decision*, *56*(1), 252-272. https://doi.org/10.1108/MD-12-2016-0877

Obradović, T., Vlačić, B., & Dabić, M. (2021). Open innovation in the manufacturing industry: A review and research agenda. Technovation, 102221. https://doi.org/10.1016/j.technovation.2021.102221

Oliveira, L. S. D., Echeveste, M. E. S., & Cortimiglia, M. N. (2019). Framework Proposal for Open Innovation Implementation in SMEs of Regional Innovation

Systems. *Journal of Technology Management & Innovation,* 14(2), 14-20. https://doi.org/10.4067/S0718-27242019000200014

OECD. (2018). Oslo Manual 2018: Guidelines for collecting, reporting and using data on innovation. Organisation for Economic Co-operation and Development OECD.

Özer, F., &Tınaztepe, C. (2014). Effect of strategic leadership styles on firm performance: A study in a Turkish SME. *Procedia-Social and Behavioral Sciences, 150*, 778-784. https://doi.org/10.1016/j.sbspro.2014.09.059

Parida, V., & Örtqvist, D. (2015). Interactive effects of network capability, ICT capability,and financial slack on technology-based small firm innovation performance. *Journal of Small Business Management, 53*(S1), 278–298. https://doi.org/10.1111/jsbm.12191

Park, J. H. (2018). Open innovation of small and medium-sized enterprises and innovation efficiency. *Asian Journal of Technology Innovation*, *26*(2), 115-145. https://doi.org/10.1080/19761597.2018.1496796

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). Thousand Oaks, CA: Sage Publications.

Phelps, C., R. Heidl and A. Wadhwa (2012), "Knowledge, networks, and knowledge networks: A review and research agenda", *Journal of Management*, 38(4), 1115-1166. https://doi.org/10.1177/0149206311432640

Pilav-Velić, A., Jahić, H., & Grabovica, E. (2020, June). Open innovation practices in manufacturing smes: Evidence from a developing country. In *Proceedings of FEB*

Zagreb International Odyssey Conference on Economics and Business (Vol. 2, No. 1, pp. 617-625). University of Zagreb, Faculty of Economics and Business.

Pustovrh, A., Jaklič, M., Martin, S. A., & Rašković, M. (2017). Antecedents and determinants of high-tech SMEs' commercialisation enablers: opening the black box of open innovation practices. *Economic research-Ekonomskaistraživanja,* 30(1), 1033-1056. https://doi.org/10.1080/1331677X.2017.1305795

Pranciulytė-Bagdžiūnienė, I, & Petraitė, M. (2019). The Interaction of Organizational Capabilities and Individual Competences for Open Innovation in Small and Medium Organizations. *InformacijosMokslai*, 85. https://doi.org/10.15388/Im.2019.85.21

Presenza, A., Abbate, T., Meleddu, M., & Cesaroni, F. (2017). Small-and medium-scale Italian winemaking companies facing the open innovation challenge. *International Small Business Journal*, 35(3), 327-348. https://doi.org/10.1177/0266242616664798.

Radicic, D., & Djalilov, K. (2019). The impact of technological and non-technological innovations on export intensity in SMEs. J*ournal of Small Business and Enterprise Development*. *26*(4), 612-638. https://doi.org/10.1108/jsbed-08-2018-0259

Radziwon, A., & Bogers, M. (2018). Open innovation in SMEs: Exploring inter-organizational relationships in an ecosystem. *Technological Forecasting and Social Change*, 146, 573-587. https://doi.org/10.1016/j.techfore.2018.04.021

Rooney, T, Lawlor, K, & Rohan E (2016) Telling Tales: storytelling as a methodological approach in research. In ECRM2016-Proceedings of the 15th European Conference on Research Methodology for Business Management: ECRM2016 (p. 225). Academic Conferences and publishing limited

Ross, L. E. (2017). An account from the inside: Examining the emotional impact of qualitative research through the lens of "insider" research. *Qualitative Psychology*, *4*(3), 326–337. https://doi.org/10.1037/qup0000064

Robbins, S. P., & Judge, T. A. (2018). *Organizational behavior*. (18th Ed.). Pearson Publishing.

Rothwell, R. (1994) Towards the fifth-generation innovation process. *International Marketing Review*, 11, 7–31. https://doi.org/10.1108/02651339410057491

Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data (3rd Ed.).* Sage Publications.

Ruprah, I., Melgarejo, K., & Sierra, R. (2014). Is there a Caribbean Sclerosis?: Stagnating Economic Growth in the Caribbean. Washington DC: Inter-American Development Bank. Is There a Caribbean Sclerosis? Stagnating Economic Growth in the Caribbean | Publications (iadb.org)

Ruprah, I., & Sierra, R. (2016). An Engine of Growth?: The Caribbean Private Sector Needs More Than an Oil Change. Washington, DC: Inter-American Development Bank. Engine of Growth?: The Caribbean Private Sector Needs More Than an Oil Change | Publications (iadb.org)

Salisu, Y., & Abu Bakar, L. J. (2018). Strategic alliance and the performance of SMEs in developing economies: The mediating role of innovation strategy. *Asian Journal of Multidisciplinary Studies*, *6*(2), 47-56. Retrieved from www.ajms.co.in

Salisu, Y., & Abu Bakar, L. J. (2019). Toward Enhancing Sustainable Competitive Advantage of Small and Medium Enterprises in Developing Economies of Africa: A Confirmatory Analysis. *International Journal of Entrepreneurial Research*, *2*(2), 1-7. https://doi.org/10.31580/ijer.v2i2.898

Santoro, G., Ferraris, A., Giacosa, E., & Giovando, G. (2018). How SMEs engage in open innovation: a survey. *Journal of the Knowledge Economy*, *9*(2), 561-574. https://doi.org/10.1007/s13132-015-0350-8

Santoro, G., Quaglia, R., Pellicelli, A. C., & De Bernardi, P. (2020). The interplay among entrepreneur, employees, and firm level factors in explaining SMEs openness: A qualitative micro-foundational approach. *Technological Forecasting and Social Change*, 151, 119820. https://doi.org/10.1016/j.techfore.2019.119820

Saunila, M. (2017). Innovation capability in achieving higher performance: Perspectives of management and employees. *Technology Analysis & Strategic Management*, 29(8), 903–916. https://doi.org/10.1080/09537325.2016.1259469

Saunila, M. (2014). Innovation capability for SME success: perspectives of financial and operational performance. *Journal of Advances in Management Research*. 11(2). 163-175. https://doi.org/10.1108/JAMR-11-2013-0063

Saunila, M. (2016). Innovation capability for SMEs success: Perspectives of financial and operational performance in SMEs‟, *International Journal of*

Productivity and Performance Management Performance, *65*(2), 162–176. http://dx.doi.org/10.1108/JAMR-11-2013-0063

Saunila, M. (2019). Innovation capability in SMEs: A systematic review of the literature. *Journal of Innovation & Knowledge*, 5(4), 260-265. https://doi.org/10.1016/j.jik.2019.11.002

Saunila, M., & Ukko, J. (2014). Intangible aspects of innovation capability in SMEs: Impacts of size and industry. *Journal of Engineering and Technology Management*, 33, 32–46. https://doi.org/10.1016/j.jengtecman.2014.02.002

Schilke, O. (2014). On the contingent value of dynamic capabilities for competitive advantage: the nonlinear moderating effect of environmental dynamism. *Strategic Management Journal*, 35(2), 179-203. https://doi.org/10.1002/smj.2099

Schumpeter, J. A. (1934). Entrepreneurship as innovation. In R. Swedberg (Ed.). Entrepreneurship — The Social Science View: 51–75. Oxford: Oxford University Press.

Schumpeter, J. A. (1983). *Theory of Economic Development* - Social Science Classics Series. Taylor and Francis.

Schweisfurth, T. G., & Raasch, C. (2018). Absorptive capacity for need knowledge: Antecedents and effects for employee innovativeness. *Research Policy*, 47, 687–699. https://doi.org/10.1016/j.respol.2018.01.017

Singh, S. K., Gupta, S., Busso, D., & Kamboj, S. (2019). Top management knowledge value, knowledge sharing practices, open innovation and organizational

performance. *Journal of Business Research,* 128, 179-188. https://doi.org/10.1016/j.jbusres.2019.04.040

Slavec Gomezel, A., & Rangus, K. (2019). Open innovation: it starts with the leader's openness. *Innovation: Organization & Management*, *21*(4), 533–551. https://doi.org/10.1080/14479338.2019.1615376

Sok, P., Snell, L., Lee, W. J. T., & Sok, K. M. (2017). Linking entrepreneurial orientation and small service firm performance through marketing resources and marketing capability: A moderated mediation model. *Journal of Service Theory and Practice. 27*(1), 231–249. https://doi.org/10.1108/MRR09-2015-0216

Soto-Acosta, P., Popa, S., & Palacios-Marqués, D. (2017). Social web knowledge sharing and innovation performance in knowledge-intensive manufacturing SMEs. *The Journal of Technology Transfer*, *42*(2), 425-440. https://doi.org/10.1007/s10961-016-9498-z.

Srisathan, W. A., Ketkaew, C. & Naruetharadhol, P. (2020). The intervention of organizational sustainability in the effect of organizational culture on open innovation performance: A case of thai and chinese SMEs. *Cogent Business & Management*, 7(1). https://doi.org/10.1080/23311975.2020.1717408

Stake, R., E. (2006). Multiple case study analysis. The Guilford Press.

Sudarmaji, E., Nawasiah, N., Thalib, S., & Subhan, M. N. (2020). The individual competencies and organisational ambidextrous: Indonesian SMEs perspective. *International Journal of Society Systems Science*, *12*(1), 86-99. https://doi.org/10.1504/IJSSS.2020.106952

Tavassoli, S. (2018), The role of product innovation on export behavior of firms: is it innovation inputor innovation output that matters? *European Journal of Innovation Management*, *21*(2), 294-314. https://doi.org/10.1108/EJIM-12-2016-0124

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. https://doi.org/10.1002/smj.640

Teece, D. J. (2009). *Dynamic capabilities and strategic management. [electronic resource] : organizing for innovation and growth*. Oxford University Press.

Teece, D. J. (1986). Profiting from Technological Innovation - Implications for Integration, Collaboration, Licensing and Public-Policy. *Research Policy, 15*(6), 285-305. https://doi.org/10.1016/0048-7333(86)90027-2

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266

Thomä, J., & Zimmermann, V. (2019). *Non-R&D, interactive learning and economic performance: Revisiting innovation in small and medium enterprises*. (Econstor Working Paper, No. 17/2019). http://hdl.handle.net/10419/201855

Thomä, J., & Zimmermann, V. (2020). Interactive learning—The key to innovation in non-R&D-intensive SMEs? A cluster analysis approach. *Journal of Small*

Business Management, *58*(4), 747-776. https://doi.org/10.1080/00472778.2019.1671702

Tidd, J., & Thuriaux-Alemán, B. (2016). Innovation management practices: cross-sectorial adoption, variation, and effectiveness. *R&D Management, 46*, 1024-1043. https://doi.org/10.1111/radm.12199

Tiwari, R., Fischer L., Kalogerakis, K. (2017). Frugal Innovation: An Assessment of Scholarly Discourse, Trends and Potential Societal Implications. In: Herstatt C., Tiwari R. (eds). *Lead Market India. India Studies in Business and Economics*. Springer, Cham. https://doi.org/10.1007/978-3-319-46392-6_2

Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. *Qualitative inquiry*, *16*(10), 837-851. https://doi.org/10.1177/1077800410383121

Tyler, T. R., & Lind, E. A. (1992). A relational model of authority in groups. In *Advances in experimental social psychology* (Vol. 25, pp. 115-191). Academic Press.

Usman, M., Roijakkers, N., Vanhaverbeke, W., Frattini, F. (2018). A systematic review of the literature on open innovation in SMEs. In: Vanhaverbeke, W., Frattini, F., Roijakkers, N., Usman, M. (Eds.), Researching Open Innovation in SMEs. World Scientific Publishing Co. Ltd, pp. 3–35. https://doi.org/10.1142/10733.

Utterback, J. M., & Abernathy, W. J. (1975). A dynamic model of process and product innovation. *Omega*, *3*(6), 639-656. https://doi.org/10.1016/0305-0483(75)90068-7

Van de Vrande, V., De Jong, J. P., Vanhaverbeke, W. and De Rochemont, M. (2009). Open innovation in SMEs: trends, motives and management challenges. *Technovation 29*(6), 423–437. https://doi.org/10.1016/j.technovation.2008.10.001

Vanhaverbeke, W. (2017). *Managing Open Innovation in SMEs.* Cambridge University Press.

Vargas-Hernández, J., G.&Muratalla-Bautista, G. (2017). Dynamic capabilities analysis in strategic management of learning and knowledge absorption. *RACE: Revista de Administração, Contabilidade e Economia*, *16*(1), 227–260. https://doi-org.ezp.waldenulibrary.org/10.18593/race.v16i1.10997

Vogel, R., &Güttel, W. H. (2013). The Dynamic Capability View in Strategic Management: A Bibliometric Review. *International Journal of Management Reviews*, *15*(4), 426–446. https://doi.org/10.1111/ijmr.12000

Wadho, W., & Chaudhry, A. (2018). Innovation and firm performance in developing countries: The case of Pakistani textile and apparel manufacturers. Research Policy, 47(7), 1283-1294. https://doi.org/10.1016/j.respol.2018.04.007

Wales, W. J. (2016). Entrepreneurial orientation: A review and synthesis of promising research directions. *International Small Business Journal*, *34*(1), 3–15. https://doi.org/10.1177/0266242615613840

Wang, Y., & Wang, K. Y. (2017). How do firms tackle strategic change? A theoretical model of the choice between dynamic capability-based and ad hoc problem-solving approaches. *Journal of Organizational Change Management*, (30) 5, 725-743. https://doi.org/10.1108/JOCM-03-2016-0045

Wang, Y., Guo, B., & Yin, Y. (2017). Open innovation search in manufacturing firms: the role of organizational slack and absorptive capacity. *Journal of Knowledge Management*. (21) 3, 656-674. https://doi.org/10.1108/JKM-09-2016-0368

Wasike, S., Ambula, R. and Kariuki, A. (2016).“Top management team characteristics, strategy implementation, competitive environment and organizational performance“, *International Journal of Economics, Commerce and Management*, IV(6),60–618. https://doi.org/10.1016/j.jbusres.2019.04.040

West, J., & Bogers, M. (2017). Open innovation: current status and research opportunities. *Innovation, 19*(1), 43-50. https://doi.org/10.1080/14479338.2016.1258995

Williams, D. A., & Ramdani, B. (2018). Exploring the characteristics of prosperous SMEs in the Caribbean. *Entrepreneurship and Regional Development*, *30*(9–10), 1012–1026. https://doi.org/10.1080/08985626.2018.1515826

World Bank, (2019). *World Bank Group Support for SMEs : A Synthesis of Evaluative Findings (English).* IEG synthesis Washington, D.C.: World Bank Group. http://documents.worldbank.org

World Bank, (2021). *Data for St. Vincent and the Grenadines, St. Lucia, Grenada and Dominica.* World Bank Group. https://data.worldbank.org/?locations=VC-LC-GD-DM

Wynarczyk, P., Piperopoulos, P. and McAdam, M. (2013). Open innovation in small and medium-sized enterprises: an overview. *International Small Business Journal 31*(3), 240–255. https://doi.org/10.1016/j.technovation.2008.10.001

Xiao, J., Jin C., Liang M., & Qian W. (2018). How leadership matters in organizational innovation: a perspective of openness. *Management Decision, 56*(1), 6–25, https://doi.org/10.1108/MD-04-2017-0415

Yang, J. S. (2016). The governance environment and innovative SMEs. *Small Business Economics*, *48*(3), 525–541. https://doi.org/10.1007/s11187-016-9802-1

Yao, J., Crupi, A., Di Minin, A., & Zhang, X. (2020). Knowledge sharing and technological innovation capabilities of Chinese software SMEs. *Journal of Knowledge Management, 24*(3), 607-634. https://doi.org/10.1108/JKM-08-2019-0445

Yin, R. (2018). Case study research and applications (6th ed.). Sage Publications.

Yoon, B., Shin, J. and Lee, S. (2016). Open innovation projects in SMEs as an engine for sustainable growth. *Sustainability 8*(2), 146. https://doi.org/10.3390/su8020146

Zanello, G., Fu, X., Mohnen, P., &Ventresca, M. (2016). The creation and diffusion of innovation in developing countries: a systematic literature review. *Journal of Economic Surveys, 30*, 884-912. https://doi.org/10.1111/joes.12126

Zhang, J., & Chen, L. (2014). The review of SMEs open innovation performance. American *Journal of Industrial and Business Management, 4*(12), 716. https://doi.org/10.4236/ajibm.2014.412077

Zhang, X., & Jiang, J. Y. (2015). With whom shall I share my knowledge? A recipient perspective of knowledge sharing. *Journal of Knowledge Management, 19*(2), 277–295. https://doi.org/10.1108/JKM-05-2014-0184

Zhang, W., Kang, L., Jiang, Q., & Pei, L. (2020). A 2020 perspective on "From buzz to bucks: The impact of social media opinions on the locus of innovation": From surfaces to essences. *Electronic Commerce Research and Applications, 40*. https://doi.org/10.1016/j.elerap.2020.100964

Zoo, H., de Vries, H. J., & Lee, H. (2017). Interplay of innovation and standardization: Exploring the relevance in developing countries. T*echnological Forecasting and Social Change,118,* 334-348. https://doi.org/10.1016/j.techfore.2017.02.033

Appendix A: Semi-structured Interview Guide

Date----------

Introduction
To the Interviewee
This interview will be recorded so that your responses can be transcribed and analyzed. Is this acceptable to you? Please upon your request at any point during the interview, the recorder can be turned off"

"Please read the following information concerning the study and sign the informed consent form to participate in this study"

"The purpose of this study is to gain an in-depth understanding of how Small and Medium Enterprises leaders and managers in the Windward Islands lead and manage their organizations to drive open innovation in the form of inflow and outflow of strategic information from customers, suppliers and other external to generate new or improved products and processes?

"Do you have any questions regarding the study or procedures before we begin?"

Section One: Participant's Information
1.1 Participant's ID Number----------
1.2 Sector----------
1.3 Business Description----------
1.4 Date of Commencement of Business ----------
1.5 Number of Employees----------
1.6 Number of Years as owner-manager of the firm----------

Section Two: Main Interview Questions on Organization Open Innovation:
1. Describe how your organization creates process design?
2. Describe how your organization improves the attractiveness (aesthetics) or ease of use (functionality) of goods or services
3. Describe what technology activities you engage in to create new products or processes?
4. Describe how you use strategic information from customers to improve products and processes within the organization?
5. Describe how you use your relationships with suppliers or other external agents to collaborate to improve your products and processes?

Section Three: Main Interview Questions on Leadership

6. Describe your leadership approach in your organization?
7. How do you get your employees to resolve problems?

8. Describe how you would get employees to share ideas on new products or processes and how you encourage creativity within your organization?

Appendix B: Invitation to Participate in the Study

You are invited to participate in a study for my doctoral research study titled

"Leadership Experiences of Organization Open Innovation in Caribbean Small and Medium Enterprises".

If you agree to participate in the study, you will be asked 8 semi-structured questions with a few possible follow-up questions to clarify or to seek out additional information. The interview should last approximately 45-60 minutes.

The purpose of this qualitative multiple-case study is to explore how do SMEs' leaders in the Windward Islands lead and manage their organizations to drive open innovation? This study seeks to understand how leadership within organizations influence and drive open innovation, and the evidence of this innovation will be using SMEs who engages in product exportation and have generated process and product innovation within the last three years. Once the dissertation is approved by Walden University you will be provided with a copy of the manuscript.

The interview session will be recorded, and you will have the opportunity to review a transcript of the interview and to provide comments regarding accuracy. The data collected during the interview session will only be used for the purposes of this study. Your identity and responses to interview questions will be kept confidential and anonymous.

If you are willing to participate in this study, please sign the attached informed consent and return to me via email to @waldenu.edu. After receiving the signed consent form, I will contact you to schedule an interview. You can contact me by phone number xxxxxxx if you have any questions about the study.

Best regards,