



**University of
East London**

**‘The impact of health pandemic on WCM: Evidence from
the UK’**

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Philosophy**

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Declaration

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List of abbreviations

AIM	alternative investment market
ANOVA	analysis of variance
APEC	Asia-Pacific Economic Cooperation
ARIs	areas of research interest
BSC	balance scorecard
CCC	cash conversion cycle
CFA	confirmatory factor analysis
CIMA	Chartered Institute of Management Accountants
EEA	European Economic Area
EU	European Union
GAAP	generally accepted accounting principle
GDP	gross domestic product
HMRC	HM Revenue and Customs
IFAC	International Federation of Accountants
IMA	Institute of Management Accountants
IMF	International Monetary Fund
MAT	management accounting technique
MSMEs	micro-, small, and medium-sized enterprises
NPV	net present value
OBR	Office for Budget Responsibility
OECD	Organisation for Economic Co-operation and Development
ONS	Office for National Statistics
POST	Parliamentary Office of Science and Technology
SEM	structural equation modelling

SMEs

small and medium-sized enterprises

UNECE

United Nations Economic Commission for
Europe

WCM

Working Capital Management

Abstract

The primary purpose of this exploratory research was to provide evidence of the impact of COVID-19 financial crisis on the working capital management of UK micro, small and medium-sized enterprises (MSMEs). The secondary aim was to provide insights into micro-, small, and medium-sized enterprises' (MSMEs) use of management accounting techniques. Such organisations were purposely selected as the subject of this study because they face challenges (even in times of general economic prosperity, owing to their small profit margins) in maintaining an effective WCM policy, which involves managing and controlling cashflow, risks, opportunity costs, and expected returns. Understanding how the COVID-19 financial crisis has impacted UK MSMEs cannot be understated, as policymakers urgently seek evidence to shape their agenda to support this vital sector. The study employed mixed methodology by collecting both quantitative and qualitative data. The empirical data were obtained from a survey conducted among 150 micro-, small, and medium-sized UK businesses and a number of follow-up interviews. A contingency approach was adopted, and structural equation modelling was applied to analyse the data, using a Likert or ordinal scale of 1 to 5 to test the hypotheses. The empirical results indicate that the COVID-19 financial crisis has negatively impacted both the WCM, and cash flow/liquidity of UK MSMEs measured through both observed and unobserved/latent variables. The causes of these negative impacts are reduced customer demand (market channel) and the anxiety of a positive economic outlook (emotional channel). The research contributes to both knowledge and literature in the field, as no previous studies have provided such evidence in the UK.

Keywords: UK MSMEs, survey research, pandemic/COVID-19, management accounting, working capital, cash flow/liquidity, contingency theory, structural equation modelling.

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CHAPTER ONE

1 OVERVIEW OF MANAGEMENT ACCOUNTING TECHNIQUES AND THE AIMS OF THE RESEARCH

1.1 Introduction

This section is organised as follows. The first part provides a brief overview of management accounting techniques, working capital, cash flow and liquidity, and then explains the importance of working capital, cash flow, and liquidity management. This is followed by an overview of MSMEs and their use of management accounting techniques. The second part examines the problem statement, identifies the research aims and objectives, provides the research questions and presents a summary of the findings. Next, the contribution and limitations of the present study are described, following which the section ends by outlining the structure of the thesis.

1.2 Management Accounting Overview

In the globalised business environment, all businesses are situated within a fiercely competitive global market. The advent of technologies such as Facebook has made the business environment even more global, where competition and the recent turmoil in the business environment caused by the COVID-19 financial crisis have had a significant impact on how all types of businesses, including MSMEs, manage their scarce resources (Houge and Uliana, 2005). A challenge for every business is how to use and sustain their resources. Each decision made by the management or decision-makers can lead to the success or failure of a business. Therefore, to make a good business decision, the information needs to be clear, accurate, relevant, and timely. In a highly competitive business environment, information is the most significant factor needed to survive, and one of the most important types of information required is management accounting information. Accounting does not exclusively involve number crunching; although it involves numbers, these are just part of the language. Management accounting is the language of business, and decision-makers depend

on information provided by accounting to communicate and make financial decisions. Management accounting provides both the financial and non-financial informational needs of management so that they can make sound business decisions and help the business achieve its goals and objectives. Defining the set of information that should be provided by management accounting requires the identification of factors that determine the way in which the information is used and the informational needs of a business, small or large. According to contingency theory, no accounting system is appropriate for all organisations in all circumstances (Emmanuel et al., 1990). As indicated by Scapens (1991), there are several definitions of management accounting, but for the purposes of this study, only the definitions of the CIMA, IMA and IFAC will be considered.

1.3 CIMA

In the United Kingdom (UK), the Chartered Institute of Management Accountants (CIMA) defines management accounting as the practical science of value creation within organisations in both private and public sectors. It provides the information needed by management teams to help them to make informed decisions such as the planning and control of the activities of an organisation, while taking various actions and releasing information to stakeholders and others, as well as protecting the assets of the enterprise. Management accounting contributes substantially to the overall management of contemporary businesses, including MSMEs. Additionally, in the *Global Management Accounting Principles*, published in 2014, CIMA states that the broad purposes of management accounting are, inter alia, performance management, cost management, budgeting and planning, decision-making, supporting the implementation of strategy, profitability, and project management.

1.3 IMA

The American Institute of Management Accountants (IMA) (2008) describes the function of a management accountant as a 'partner' in decision-making. According to IMA, 'Management accounting is a profession that comprises of partnering in management decision-making, devising planning and performance management systems, and providing knowledge in financial reporting and control to support management in the preparation and implementation of an organisation's strategy.' Management accounting also involves the preparation of financial reports for non-management groups such as shareholders and creditors.

1.4 IFAC

International Federation of Accountants describes management accounting before 1950 as a technical activity that is necessary for the pursuit of organisational objectives. At that time, management accounting was mainly oriented towards the determination of product cost. Production technology was relatively simple, with products undergoing a series of distinct processes. Labour and material costs were easily identifiable, and the manufacturing processes were primarily administered according to the speed of manual operations. The focus of management accountants shifted to the generation or creation of value through the effective use of resources. This was to be achieved through the 'use of technologies which examine the drivers of customer value, shareholder value, and organisational innovation' (IFAC, 1998). According to IFAC (1998), management accounting is a vital element of management procedures, and its role is to offer information critical for monitoring the present undertakings of an enterprise; designing or developing its future policies and procedures; appraising performance; decreasing bias in making decisions; and improving overall communication processes.

1.5 The Role of Management Accounting in Modern Business Settings

Management accounting, also known as managerial accounting, is an accounting concept designed to support strategic development, execution, decision-making, and risk management in business organisations. It involves the evaluation of both financial and non-financial measures. Management accounting was first introduced as an innovative form of cost accounting. Academics argued that it would make accounting more useful in helping managers conduct their day-to-day activities. The failure of the practice to live up to its potential led to the emergence of strategic management accounting as an enhanced version of management accounting, with a new declaration to overcome the limitations of the earlier version. The use of critical concepts of strategic management accounting, such as the balanced scorecard (BSC) and activity-based costing, has enabled management teams to obtain a true and fair view. Therefore, management accounting has become an integral part of management practice in organisations. It provides the information necessary for controlling the current activities of an organisation, planning its future policies, strategies, and operations, thereby enhancing the use of its resources, assessing, and evaluating performance, reducing bias in the decision-making process, and improving internal and external communication (IFAC, 1998). Management accounting is a technique for attaining high-level performance, as it provides a measure of performance, warning of risks, information for decisions, and data for planning (Cole, 1988). It is also employed as a device to manage the resources of a business. Cole (1988) explicitly claims that an effective management accounting technique achieves the following: identifies the costs and profitability of running a business, product, services, and major customers; enables managers to explain their performance as it is reported; and facilitates timely, accurate, relevant, and comprehensive reporting.

Previously, management accounting was largely concerned with cost accounting, which mainly relates to financial measures for the valuation of stocks etc to meet the objectives of internal profit dimensions and external reports (Bromwich and Bhimani, 1994). Focusing only on financial measures, the traditional cost accounting method transformed into management accounting. Again, management accounting focused solely on information concerning decision-making, controlling, planning, and appraising business performance. However, Simmonds (1981) then established a strategic management accounting concept that underscores and links cost accounting (financial information) and management accounting (non-financial information) for decisions to be made effectively and successfully. The use of management accounting concepts, such as working capital management (WCM), by businesses can help them maintain sufficient liquidity, function effectively, and improve profitability and sustainability (El-Ebaishi et al., 2000). Management accounting lies at the heart of every organisation at the intersection between finance and management. It offers structured answers to unstructured challenges by transforming the complex into the simple and by making the simple convincing. Bringing together both financial and non-financial factors, it is the concept needed to run an organisation, as well as to control and improve business performance. Management accounting assists businesses to make better decisions by obtaining value from information, embedding decisions in evidence, or ensuring they are based on informed judgements (rather than assumptions) to make sustainable success more feasible (Global Management Accounting Principles, 2017).

However, the present financial challenges faced by MSMEs in the UK and across the world are having an important effect on the use of management accounting information due to factors such as the impact of the COVID-19 financial crisis on working capital, borrowing constraints, and costs (Gooderham et al., 2004; Chand and Dahiya, 2010). These factors can influence the

relationship between the providers and users of external sources of support and advice from private advisers such as accountants and business advisers (Dyer and Ross, 2007). These financial challenges, the liability of being small, and a lack of resources and skills among managers and owners of MSMEs, inter alia, are some of the reasons for their high failure rates (Bennett, 2008; Ebben and Johnson, 2011). It is widely believed that external help and advice from accountants and business advisers can overcome information and skills gaps among MSME owners and managers (Chrisman and McMullan, 2004).

According to Adomako et al. (2015), Mbogo (2011), and Van Praag (2003), the high failure rates and limited growth of MSMEs around the world can be attributed to a lack of suitable management accounting and financial management skills. A study conducted by Hall and Young (1991) of the possible reasons for the 182 compulsory insolvencies of small business in the UK concluded that poor management accounting practices were a significant factor. Further research undertaken by Huang and Brown (1999) suggested that a lack of access to finance is another problem that contributed to these failures.

Hence, due to the financial challenges caused by the pandemic, it is vital that MSMEs manage their resources effectively by adopting efficient management accounting practices to increase their growth and success rates, thus improving their chances of survival in this volatile global business environment. The need for an efficient management of resources is a matter of survival or failure for a large number of MSMEs (Opiela, 2006). One of the fundamental roles of management accounting is to provide relevant and timely information for better decision-making to help businesses, including MSMEs, to improve their performance which is crucial during this pandemic, as businesses of all sizes are facing financial challenges because of a drop in sales or commercial activities caused by lockdowns. However, the overall aim of the present research was

to provide empirical evidence of the impact of the current financial crisis caused by the pandemic on the working capital management of UK SMEs.

1.6 Working Capital

Working capital is the difference between current assets and current liabilities. Current assets are funds in cash or easily convertible into cash. Current assets include all those that in the usual course of business return in the form of cash within a short period of time, usually in a year, and such short-term investments are easily convertible into cash when needed. Therefore, the working capital of a business represents its current assets less current liabilities. As the name suggests, it is the capital needed for the business to work in terms of meeting its day-to-day operational commitments such as daily expenses and the payment of wages. Working capital is crucial for small businesses because it directly affects their profitability and liquidity (Raheman and Nasr, 2007). Thus, undertaking such decisions involves the thoughtful preparation and control of the current assets and liabilities in a way that eliminates or reduces the risk of the business not being able to meet its current liabilities or avoids maintaining an unnecessary level of working capital requirements. Therefore, any increases in working capital must be acceptable in terms of increasing net operational cash flows from additional sales (Eljelly, 2004). The structure of working capital is illustrated as follows:

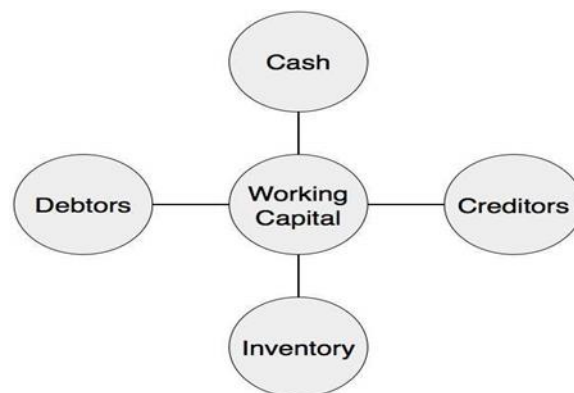


Figure 1. The Structure of the Working Capital Cycle

Table 1: Current Assets

Cash in hand	000
Cash at the bank	000
Sundry debtors	000
Bills receivables	000
Inventories of stock	000
Short-term investments	000
Prepaid expenses	000
Accrued income	000
Total current assets	000

Table 2: Current Liabilities

Sundry creditors	000
Short-term loans/overdraft	000
Bills/expenses payable	000
Provisions	000
Total current liabilities	000
Working capital = (A – B)	0000

1.7 Cash Flow

Cash flow is the net amount of cash and cash equivalents going into and out of a business. Positive cash flow suggests that a business's liquid assets are growing, allowing it to settle debts, reinvest, return money to stakeholders, pay expenses, and provide a safeguard against potential financial challenges, while an adverse cash flow suggests that a business's liquid assets are reducing. Net cash flow is different from net income which consists of accounts receivable and other items for which payment has not actually been obtained. Cash flow is used to assess the quality of a business's revenue, that is how liquid it is, which usually indicates whether the business is placed to remain viable. In operational terms, this entails generating positive cash flows from successful ventures. Businesses that generate substantial amounts of cash from profitable trading can fund new investments and are mostly able to raise more finance as needed. They generate their own cash excesses, which can then be invested. Even successful businesses may occasionally experience cash shortages when ventures generate negative cash flows. These must be financed, otherwise poor investment decisions and bad financing decisions may be made. This means the business will not be able to undertake profitable investment projects, and results in failure to maintain a sufficient level of working capital.

All businesses use cash to buy materials, to pay wages/salaries and to spend on administrative, selling, and distribution expenditure, as well as goods, services, labour, and other operational expenses. These products and services are eventually sold to customers, referred to as debtors for those who owe the business money. Eventually, debtors pay the business in cash, which completes the working capital cycle. Therefore, cash flow is an integral part of the working capital cycle; hence, cash is utilised in producing finished goods/services. These products and services are sold to clients, who then pay in cash. The business may not pay all its expenses in cash, but sometimes

receives credit from the suppliers. This process involves current assets and liabilities, and these are known as the components of working capital; described as stock, short term debtors, creditors, and cash. Therefore, the difference between the current assets and the current liabilities is what is known as working capital (Jarvis, 1996).

Therefore, cash flow is the real-time flow of income in and out of a business. When sales are made, this is recorded as revenue on the day of the sale, but the business may still have to wait weeks or even months for the cash to be received, depending on the terms of the sale to the customers or the fact that customers are slow payers when sales are made on credit. Although accounts receivable is listed on the balance sheet as an asset, it can negatively affect cash flow. To provide goods and services to customers, the business has to pay for supplies and labour. Thus, if a business is not paid promptly or on time for the goods and services provided to its customers, it may find itself short of cash. Consequently, the profit/net worth of the business may look strong on paper, but the business could still run into problems in covering day-to-day expenses. The cash flow challenges of many small businesses are worsened by inadequate financial management, particularly in relation to the management of cash flow (Jarvis, 1996).

1.8 Liquidity

The liquidity of a business refers to cash or how quickly the business can convert assets into cash to meet its operational expenses. Liquidity, in theory, is known as viability, meaning a business's continuous capacity to satisfy its immediate commitments. Cash management plays a major role in this; hence, cash flow is a pure measurement of liquidity. Therefore, proper cash management is not only crucial for the effective utilisation of cash, generating positive cash flows and financing new and profitable investments, but also helps to meet the short-term liquidity needs of a business. If liquidity is too low, the smallest crisis or unanticipated expense can leave the business

vulnerable. This means it may not have sufficient funds to pay for wages, utilities, bills, and other running expenses. Financial ratios such as current ratio can also help managers make effective use of resources in determining the liquidity position of a business, which can help businesses, including MSMEs, control and measure their liquidity positions and track early signs of liquidity challenges and vulnerability to failure. Therefore, cash is a critical factor in determining the liquidity position of a business because it has an impact on both the liquidity and viability of a business (Bhatia and Srivastava, 2016; Naser et al., 2013; Laux, 2012; Shin and Soenen, 1998; Owoo, 2018). Liquidity is also a significant factor in determining the working capital policy of a business. It is a function of current asset and liability levels and structures, as well as the ability to raise funds when needed. One way to evaluate how well working capital is managed is to determine the liquidity competency of a business.

1.9 The Importance of WCM

WCM is important for small businesses because it directly affects their profitability and liquidity (Raheman and Nasr, 2007). To ensure liquidity and maximisation of profitability, an optimal level of working capital needs to be found. WCM is especially important to MSMEs, because with limited access to long-term capital finances, these businesses tend to depend all the more strongly on owner financing, short-term bank loans to finance their required interest in real cash, accounts receivable, and inventory (Chittenden et al., 1998; Sacurato, 1994). Working capital measures, the short-term liquidity of a business. Businesses need sufficient working capital to pay for short-term commitments such as materials, services, salaries, and other immediate obligations. Therefore, poor management of working capital can lead to a business being unable to pay its short-term obligations such as rent, salaries, and interest/credits costs. Lenders and service providers may then start to charge fines and interest. Management of working capital involves the

management of cash flow and liquidity, which if poorly executed can lead to less cash/liquidity, and thereby lower competitiveness; hence, the business may not be able to finance the operational strategies required to achieve a competitive edge. Therefore, some of the most important decisions made during any financial crisis are those regarding WCM (Salehi et al., 2019). In the continuing health pandemic, competent management of working capital plays a vital role in facilitating business continuity and survival, as well as in reducing the risk of financial problems (García-Teruel and Martínez-Solano, 2007; Howorth and Westhead, 2003; Sensini, 2015; Padachi, 2006; Amendola et al., 2011; Campos et al., 2014).

However, there is evidence that SMEs deal badly with their working capital management, as numerous small businesses experience the terrible consequences of a lack of sufficient capital. Hence, the importance of having tight control over working capital investment is difficult to overstate. Research has been conducted on the WCM practices of both small and large businesses in the UK, US, Belgium, and India using either an overview-based methodology (Burns and Walker, 1991; Peel and Wilson, 1996) to identify the push elements for businesses to squeeze effective working capital practices or an econometric analysis to discover the relationship between working capital and profitability (Shin and Soenen, 1998; Anand, 2001; Deloof, 2003). A business can be highly productive, but if this is not translated into cash from operations inside the same working capital cycle, the business will need to obtain cash to strengthen its necessary working capital requirements. Alongside these factors, the dual objectives of profitability and liquidity must be coordinated, and one should not override the other for long. A further element of working capital is accounts payable. However, this is unique as it does not utilise assets; instead, it is often used as a short-term source of finance. Therefore, it gives businesses some support with their cash operating cycles, yet it has a certain expense in cases where rebate is offered for early settlement

of receipts (Padachi, 2006). Related to this concept is a profitability ratio commonly known as net working capital turnover. This is an asset management ratio and measures how effectively working capital is working for a firm. However, this ratio is not considered in the study due to its irrelevance to the ratio analysis. There are two main levels of WCM: aggressive and conservative, and these sit at opposite ends of the scale. An aggressive WCM policy means spending as much as possible to produce goods and deliver services and move inventory, while in a conservative policy, money is being saved and the business is protected against sudden and unexpected risks (Eric,2019).

1.10 Aggressive WCM Policy

When a business chooses an aggressive WCM policy, it tries to hold on with a marginal investment in current assets combined with an extensive use of short-term credit. The objective is to put as many funds to work as possible in order to reduce the time needed to produce goods, turn over inventory or provide services. Accelerating the business cycle increases sales and revenues. This means keeping minimal funds on hand, reducing slow moving stocks and unnecessary supplies to the bare minimum, and delaying bill payments for as long as is feasible.

1.11 Conservative WCM Policy

Businesses in a volatile business environment such as that caused by the current pandemic may adopt this policy to protect against risks. When a business implements such a policy, it tends to keep a substantial amount of cash in the bank, maintain plenty of inventory, and ensures that all short-term debts are up to date. For instance, in this case, the working capital ratio which is current assets divided by current liabilities may look like 2:1. This means the business has £2 in current assets for every pound of current liabilities. Working capital managed conservatively will help to lower the risks of short-term shortages of resources in a volatile business environment such as the

current situation caused by the pandemic. However, this may affect future growth, and thereby long-term profitability because excess idle cash/fund does not earn much return as indicated below.

WCM strategy	
Conservative Policy	Aggressive Policy
This policy aims to maintain relationships with clients and suppliers. It involves sustaining liquidity and directing funds to constrained businesses through trade credits.	This policy aims to release funds to ease resource constraints. It involves working capital alternatives for cash inflows.
<ul style="list-style-type: none"> • Give trade credits • Increase stocks • Reduce short-term creditors • Accumulate funds 	<ul style="list-style-type: none"> • Collect receivables • Sell stocks • Increase short-term creditors • Reduce cash
↓	↓
Lower profit	Higher profit

1.12 Risks, opportunity costs, and returns of WCM policies

The risks of default and insolvencies increase when a business adopts a more aggressive working capital management policy. For instance, a sudden emergency such as the sudden loss of revenue during the pandemic due to lockdown can leave the business unable to make interest payments. Tight inventories can lead to scarcities and declining sales. Suppliers might hesitate to offer further business credit if payments are delayed past 90 days. However, the major risk of a conservative WCM policy is the opportunity costs of idle assets that the business can put into effect. Such a

policy reduces sales competency, which is sales revenue divided by working capital. The impact of aggressive and conservative working capital policies on assets are that an aggressive working management capital policy can generate a higher return on assets ratio, which can be indicated by dividing gross income by working capital. However, though these ratios may be high, the total amount of gross income may fall. This is because the business squeeze inventory, sales and receivables could fall as a result of a business running out of product. Inventory shortages could lead to reduced income, enabling competitors with well-stocked inventories to steal their clients.

Conversely, a conservative WCM policy means that some of the business's assets are not being put to effective use and are referred to as lazy assets. The business needs to use these lazy assets more productively to increase the return on assets. Businesses choose what amount of working capital to maintain based on their risk acceptance. They evaluate averting short-term revenue loss by maintaining a high amount of working capital against the risk of less growth due to lower amounts of investment in long-term productive assets. The best possible policy is one in which the business allocates only the amount of working capital needed to simultaneously increase revenue and decrease the risks. However, during periods when there is an adverse economic environment such as under the current pandemic businesses can draw from their working capital to sustain the business.

1.13 WCM and Risk Tolerance

Working capital can assist a business to absorb a period of sudden income shocks by protecting its long-term assets during financial crisis such as that caused by the pandemic. By preserving levels of working capital, a business can continue to make use of long-term assets rather than having idle assets or even selling them off to compensate for the financial challenges. The level of working capital a business decides to maintain will depend on the risk tolerance of its management and

stakeholders. Therefore, a business must weigh the risk of a short-term income with the return linked with investing cash in long-term assets. The more cash invested in working capital, the less cash there is available to finance growth.

1.14 Growth and Risk Trade-offs

Moreover, the more cash invested in working capital, the less the amount of cash that will be available to invest in long-term productive assets. Hence, there is a trade-off between safe levels of working capital and lost growth opportunities. If a business retains high levels of working capital in relation to long-term assets, there is a risk that growth will be impaired. For instance, a business may decide not to invest in more productive capability, choosing instead to maintain a safe level of working capital. However, in doing so, the business could find itself unable to meet a sudden increase in demand for goods and services, thus being disadvantaged by competitors with more capacity who are able to meet the increased demand from the same customer base. Therefore, deciding on which course of action to take regarding working capital decisions may depend on multiple factors, including the business environment.

In many small businesses, the total amount of working capital invested in current assets may be considerably high as a percentage of capital employed. It is therefore important that these resources are used effectively so that there is no surplus of working capital, suggesting the presence of idle assets without any return, which can eventually lead to a low rate of return on capital employed. This subsequently impacts the profitability of a business. This implies that idle working capital imposes opportunity costs on the business, which can result in the decline of its margin of profit, and ultimately, the value of the business. This suggests that both an inadequate, as well as unnecessary quantity of working capital are adverse for the liquidity and profitability of the business. It is believed that a business that wants to be successful tends to implement optimum rather

than minimum or maximum working capital (Liapis, 2010). The proper assessment of working capital and identifying its fundamental components such as inventory, debtors, creditors, cash can assist all businesses to make more competent decisions regarding their operational activities, allowing them to manage working capital efficiently in a manner that helps to achieve the best possible level of liquidity and profitability. This may impact the level of investment in current assets and the relevant sources of finance (Atseye et al., 2015). Therefore, working capital is regarded as the lifeblood of a business, as it directly impacts its liquidity which is vital in maintaining good financial health or indeed the very survival of the business.

1.15 The Importance of Cash Flow Management

Cash flow is used to evaluate the quality of a business's income, that is how much liquidity the business has, which usually indicates whether the business is placed to remain viable. In operational terms, this means generating positive cash flows from successful ventures. Therefore, poor cash flow management reduces the competitiveness of a business because it may not be able to fund the necessary activities to attain a competitive edge. It is also essential to pay attention to the liquidity constraints faced by businesses of all sizes during financial crises, including SMEs, and the potential impact of these limitations on the growth of a business. Oliveira and Fortunato (2006) provide a summary of various findings investigating these impacts. They examined the impact of cash flow on investments and found that financial constraint is a significant factor in businesses' investment decisions. For instance, economies of scale will allow the business to price products and services competitively, which will lower production/service costs due to increased production levels. However, when it lacks adequate funds, the business may not be able to adopt economies of scale to purchase materials/services in volumes and maintain intensive operations. Cash flow is therefore a significant element in the theory of WCM, which in relation to the scope

of the present research concerns the impact of the current pandemic on the working capital of UK MSMEs. Therefore, poor management of cash can have an extremely serious impact on both the working capital and the viability of a business. Appropriate management of cash flow is advocated as a matter of survival or failure for a large number of MSMEs (Opiela, 2006). Cash-flow management helps businesses evaluate whether they have enough liquid assets to remain solvent. The management of cash is critical for enhancing performance, competitiveness, and better handling of change (Reid and Smith, 2002). The availability of funds is critical for the smooth running and sustainability of any business, including MSMEs, because without immediate funds, salaries, suppliers and rents cannot be paid. Due to the current pandemic, businesses, including MSMEs, are struggling to keep afloat because of various forms of lockdown, social distancing, and a lack of spending by consumers as a result of unemployment and various other factors. The projected cash-flow balance communicates to the business whether there are sufficient funds for a specific month or period. An adverse figure is an indication that the business must organise to pay the obligations due later or acquire funds immediately to pay these commitments.

A common error SME business owners and managers make in their accounting is that of poor cash-flow planning, which can lead to financial difficulties even when sales are increasing. This is particularly true for new and small businesses that do not have several years' worth of revenue and expenditure to appraise. Just because a business is profitable on paper does not mean it can pay its debts and may find itself running out of cash, if cash flow is poorly managed. Although there may be several short-term solutions when this occurs, the best approach is to manage the cash flow appropriately to prevent problems with suppliers and creditors. Not keeping a close eye on the receivables and payables can trigger a business failure arising from cash-flow problems. For many businesses, components of working capital have the largest impact on their short-term cash flows.

These components normally include raw or finished goods, debtors, creditors, and cash. The movement in working capital at times causes large voids or shortfalls of cash which can endanger the viability of a business. This can happen due to the gap between the accounts payable and cash cycles. The accounts payable period is the time a business takes to pay for its supplies, while the cash cycle is the period debtors take to pay for goods and services. There are reasons as to why significant cash shortages happen. For instance, a business may adopt an aggressive promotion strategy, whereby it permits its debtors to pay their debts over an extended time. Such a strategy can harm the business's cash flows from two standpoints. Firstly, it ties up cash in receivables with borrowers, and secondly, the business may finance additional stocks for new sales with no recourse to its cash inflows. Businesses also confront such problems when they purchase new equipment or are enduring natural calamities such as the pandemic (Eric, 2019).

1.16 The Importance of Liquidity Management

The impact of the pandemic/COVID-19 financial crisis on the working capital management of UK MSMEs forms both the subject and scope of the present research, and in working capital management theory liquidity is a fundamental component. Therefore, poor management of liquidity can have a critical impact not only on the working capital management policies, but also on the overall viability of a business. Liquidity is a sign of the financial strength of a business, and one of the areas reflecting its performance. Liquidity management maintains the balances of current assets and liabilities at an appropriate level and is a significant condition for improving the performance of a business and enhancing its value. Hence, for that reason, enhancing liquidity has direct positive effects on a business's performance. As such, businesses are expected to meet all their outstanding financial commitments daily, regardless of whether they are able to convert their assets into cash in a short period of time to settle obligations when they are due. A business which

is not able to settle its debts/obligations when due can trigger conditions of bad debts, leading to the risk of bankruptcy (Lin et al., 2014). Oliveira and Fortunato (2006) claim that the accessibility and cost of finance affects the ability of all businesses, including SMEs, to grow. There is a common belief that even a highly profitable business can go bankrupt if it does not manage its liquidity properly (Blach et al., 2014).

Management of liquidity belongs to a wider area of WCM which is an integral part of business financial management. The main purpose of WCM is to make decisions regarding the management of current assets and liabilities to facilitate the best possible financing decisions and maximise the value of a business. This can be achieved by enhancing positive cash flows as a result of striking an appropriate balance between costs, returns, and risk (McLaney, 2006). The trade-off between liquidity and profitability must be managed by the business to achieve the eventual goal of accruing the best possible amount of working capital. Therefore, WCM is typically of a short-term nature and directly impacts the liquidity of a business. From this perspective, liquidity is seen as the capacity of a business to settle its financial commitments in a timely manner without decreasing its financial flexibility. Businesses need to have an adequate cash flow to conduct operations with the intention of reducing the risk of failure to meet their immediate and maturing liabilities. This ability is a measure of a business's liquidity. Thus, efficient management of liquidity is one of the most significant choices regarding the existing operations of any business. It is evident that the assessment of WCM decisions, especially the liquidity analysis, is of vital significance for any business. The implementation of efficient components of WCM, including the liquidity analysis, is a recommended approach in pursuit of quality in the financial performance of any business, including MSMEs. Efficient liquidity management of a business enhances the quality of procedures at the level of overall financial management and the calibre of WCM. Hence, liquidity

measures areas of business performance and its effective management is a significant factor in improving financial performance, enhancing value, and contributing to the overall success of a business (Vladimír et al.,2016).

1.17 Overview of Micro-, Small, and Medium-Sized Enterprises

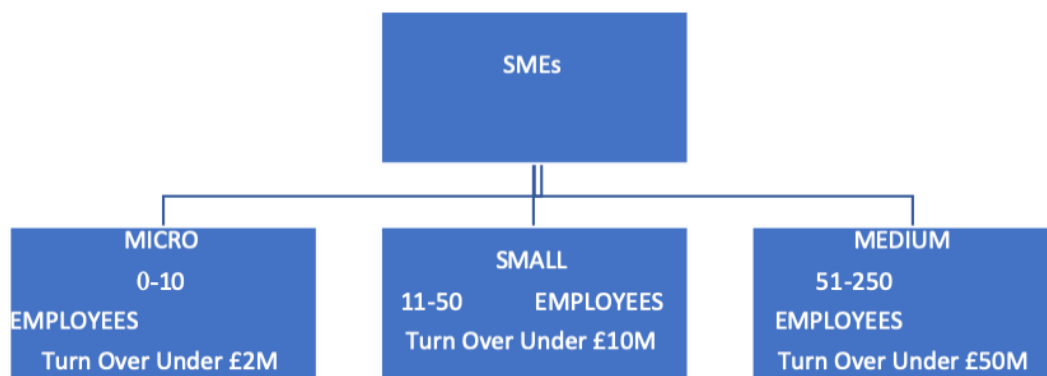
MSMEs perform a key role in economies across the globe as major creators of employment and income, as well as being drivers of innovation and growth. SMEs are significant contributors to the economies of most countries, as they represent around 90% of all businesses globally (Aghelie, 2017; Asgary et al., 2020). In the UK, SMEs provide employment for about 16.3 million people and account for 50% of GDP, contributing approximately £2 trillion per annum to the UK economy (Lerong, 2017).SMEs comprise more than half of private sector employment in OECD countries (OECD 2014). As a result of their significance, they are vital for the economic recovery from the financial crisis initiated by the pandemic. In the UK and Europe, an SME is defined as an independent enterprise with up to 250 employees or a turnover of less than £40 million pounds (Afrifa, 2013). MSMEs are a diverse group. They can be found operating in numerous different forms of business activities, ranging from traditional household industries, a single craftsperson producing apparatus for the town marketplace, the coffee shop, the corner shop. They can also include those that could be referred to as contemporary MSMEs which are innovative in nature: internet cafés, ICT companies, and medium-sized retailers and hotels. These businesses operate in quite different locations: urban, rural, local, national, provincial, and global. They represent various levels of talent, investments, complexity, and growth preferences and may operate in the conventional or the informal economy.

1.18 Division of SMEs

The definition of an SME varies globally, but is generally based on the number of employees, a company's turnover, or the value of its investments. Due to its simplicity of compilation, the most commonly applied variable is the number of employees. The EU and most OECD and developing countries set the threshold of employees for a company to be considered an SME to be 0 to 250, except for Japan and the US which define an SME as having 300 and 500 employees, respectively (Ayyagari et al., 2007). In 2018, the UK Parliament recognised 5.7 million businesses in the UK as SMEs, which effectively covers 99% of all UK businesses. There were 5.4 million microenterprises which are defined as businesses that have up to 0 to 9 employees. Around 96% of all UK businesses were therefore defined as microenterprises in the UK in 2018 (House of Commons, 2018). Many countries classify SMEs as a group that denotes a combination of self-employed workers and microenterprises with up to 10 employees. Regardless of the degree of development of an economy, a considerable percentage of micro- and small enterprises are found in the informal sector or the shadow economy. According to a study conducted by Schneider (2003), the informal sectors in 22 former Soviet bloc countries and 21 OECD countries from 2000 to 2002 contributed averages of 16.7%, 29.2%, and 44.8% of GDP in OECD; Eastern and Central European; and former Soviet Union countries, respectively. The SME definition differentiates between three different groupings of enterprises. It is vital to identify which businesses are genuine SMEs because they need support that other businesses do not, especially during the current financial crisis caused by the pandemic.

In contrast with larger businesses, SMEs are faced with an exceptional set of challenges, such as market failures. SMEs frequently confront financial constraints that make the environment in which they operate and compete extremely challenging. Market failures can happen in areas such

as finance, particularly during the pandemic. SMEs may not be able to access finance to undertake further investments due to a lack of resources. The present study uses the definition of the UK Companies Act 2006, sections 382 and 465, as well as the EU’s definition of SMEs. According to these definitions, micro-businesses are businesses that employ fewer than 10 people and the yearly revenue does not exceed £2 million; small businesses are businesses that employ fewer than 50 people and the yearly revenue does not exceed £10 million; and medium-sized businesses are businesses that employ fewer than 250 people and have a yearly income that does not surpass £50 million. Throughout this thesis, the word SMEs is used interchangeably with MSMEs, as illustrated in the figure below (European Union, 2015).



SMEs create competition and promote more innovation across multiple industries. They provide many economies with a healthy source of new talents and ideas, as well as making the marketplace more vibrant. The success of start-ups such as Uber, Deliveroo and Airbnb have all created further competition through creativity in their individual industries. This could lead to more SME start-ups by identifying new markets and opening new businesses. According to the Department for Business, Energy and Industrial Strategy, in 2018, SMEs accounted for approximately 99.5% of businesses across all sectors in the UK. SMEs are acknowledged as being crucial to the UK

economy and the government has recognised that they could be the key to boosting the country's economic productivity, which has been affected by the pandemic.

1.19 MSMEs' Use of Management Accounting Techniques

This section examines MSMEs' use of MATs and their importance to business performance and profitability. It is anticipated that this analysis will create general awareness among SME managers and owners of the importance of MATs as a means of improving performance and maintaining competitiveness in a global marketplace. It will then narrow the scope to specific practices such as budgeting, cash-flow forecast, break-even analysis and performance evaluation/BSC to meet the objectives of the present study. More specifically, the analysis will contribute to the debate in the SME literature regarding the value of management accounting concepts such as cash-flow management, budgeting, break-even analysis, and performance evaluation/BSC in SMEs.

Several SMEs do not implement management accounting techniques at their onset. Reid and Smith (2000) claim that formal and conventional techniques are only used when the business is facing cash flow or financing challenges or when innovations are implemented. Reid and Smith (2002) also reveal that only a small number of SMEs prepare budgets and only owner/managers tend to produce any financial information for their own needs. Lohr (2012) states that SMEs are hesitant to introduce management accounting techniques when their business is performing strongly. As a result, they find it difficult to justify the extra spending for what they consider needless additional information. Several studies have examined the use of management accounting information for different types of decision-making by SMEs.

Curran et al.'s (1997) study of the pricing decision in SMEs discards the logic commercial model that presumes a sole profit-maximisation goal. They expand the idea of judgement to allow for the fact that owner-managers might have several individual objectives which may affect their

decision-making. In an SME situation, the business often develops into an extension of the owner-manager's identity. This makes pricing decisions more complicated in a global marketplace and the logical standards fail to incorporate this complexity. In another study examining pricing decisions, Carson et al., (1998) found that many SMEs tend to apply simple cost-plus pricing methods. However, in several situations, this is only the beginning rather than the conclusion of the pricing decision-making process. Greenhalgh (2000) noted that the MATs in an SME setting are implemented as a management approach which depends on the use of easier techniques rather than the more sophisticated ones. A possible reason for this is that the traditional techniques such as budgeting for planning, cash-flow forecasts, break-even for pricing and the BSC for performance evaluation and benchmarking are better understood, and are therefore, considered reliable sources of information in a business environment. SMEs utilise real-time information from several sources, both financial and non-financial, with the importance being placed on local measures such as cash flows and stock levels (current assets) instead of wider profit measures. The BSC is a technique utilised in an SME setting as a decision support tool for taking quality measures. However, McAdam (2000) indicated that its inflexibility sometimes creates problems for SMEs, as it reduces their capacity to react rapidly to market changes such as the shock income loss caused by the pandemic.

Management accounting information is important, even for MSMEs, because most lenders and external stakeholders need some kind of management accounting information for lending and investment decisions. However, even with this requirement, management accounting information of MSMEs is usually out of date. As such, numerous substitutes are often utilised by some bankers as a basis for their lending decision. Nevertheless, scholars stress the importance of management accounting or financial information as a familiar language that needs to be used by both the bankers

and small business owners (Berry et al., 1993). Strong financial information is the main driver for the growth of many SMEs (ACCA, 2012). Gul (1991) claimed that in a highly volatile and uncertain business environment such as that one caused by the pandemic, advance MATs can assist SME owners and managers by providing speedy, comprehensive information necessary to manage the volatile business environment. However, in a less volatile business environment, advanced MATs may actually be imperfect for SMEs and hinder their performance. Therefore, formal planning and control techniques are important elements in the growth of SMEs (Romano and Ratnatunga, 1994). Those businesses that fail to enhance their planning and control techniques such as budgeting for planning, cash flow management, and pricing exhibit less growth than businesses that do (King et al., 2010). This reasoning has supported the theory of fit developed by Ismail and King (2005) who claimed that the level of alignment between accounting information and the needs of a business such as the frequency and speed of reporting is vital, especially for SMEs, if the information is to be useful.

Hence, when accounting information systems meet the needs of SMEs, they tend to perform better than when they are incompatible. This concept of management accounting information is mostly relevant to SMEs where maximisation of profit may not always be the primary goal of the owner (Jarvis et al., 1996). Consequently, the bank and cash balances and other cash-related assets become crucial to owner-managers' measurement of business performance. Further non-financial measures such as the number of customer complaints and quality of goods and services are combined to provide a thorough picture of the degree of performance for some SMEs (Jarvis et al., 2000). Therefore, management accounting systems need to be able to meet the requirements or needs of SMEs if they are to be of any importance or to help them improve performances in line with their expectations. This section has provided a broad overview of MSMEs' use of

management accounting techniques. It has served to underscore the multiple versions of what amounts to management accounting and its potential role in an SME situation. Apart from the economic and social significance of SMEs, the analysis reveals that several unanswered questions remain, which can be addressed by conducting further studies in an SME situation, as there is a shortage of studies on the use of MATs by SMEs (Nandan, 2010).

1.20 Statement of the Problem, Motivation, and the Need for the Research

The key research problem of this thesis is to determine the impact of the financial crisis caused by the pandemic on the WCM of UK MSMEs. There are several studies (see, for instance, the review in Chapter Three) which indicate that WCM is critical to businesses' profitability and liquidity, particularly SMEs. Firstly, WCM is especially significant to MSMEs because of their small profit margins and limited access to credit from external sources such as banks and other lenders. As claimed by Padachi et al. (2011), banks and other stakeholders have been unwilling to give credit to SMEs for a number of reasons such as the fact that SMEs are considered high-risk borrowers because of the lack of assets they can provide as security/collateral and the low level of long-term assets, their vulnerability to market instabilities such as the financial crisis caused by the pandemic, as well as their high insolvency rates. Furthermore, information irregularities resulting from a lack of proper accounting records and insufficient financial reports makes it difficult for banks and other lenders to evaluate the creditworthiness of most MSMEs. Due to their limited financing options, SMEs tend to depend on credit from suppliers. Their dependency on short-term assets makes the effective management of working capital critical for their survival and growth (Grablowsky, 1984; Pass and Pike, 1987; Padachi, 2006). Secondly, SMEs tend to preserve high liquidity which makes WCM vital in relation to cash flow, liquidity, and profitability as WCM is concerned with the current assets and liabilities of a business (Gill et al., 2010; Garcia-Teruel and

Martinez-Solano, 2007; Raheman and Nasr, 2007). Furthermore, their high investment in current assets demands proper management to improve their use, and hence improve profitability. According to Garcia-Teruel and Martinez-Solano (2007), the management of current assets and liabilities is critical for SMEs because the assets of these businesses are mainly current assets, whereas current liabilities also represent the bulk of creditors of a typical SME.

Moreover, SMEs usually lack the necessary managerial skills to implement and manage financial resources, particularly WCM, while the lack of resources is one of the reasons for managerial incompetency in MSMEs. The failures of the financial managers/owners of these businesses to strategise and appropriately control their current assets and liabilities is the reason why many SMEs fail (Smith, 1973; Padachi, 2006). Studies in the UK and the US have indicated that poor management of working capital is the leading cause of failures among SMEs (Dunn and Cheatham, 1993). Aldrich and Langton (1997) claim that recruiting and retaining competent employees is one of the major challenges confronting SMEs. A lack of skilled financial managers means that sufficient time should be dedicated to the management of financial resources of these businesses overall, particularly working capital. As debated by Valipour et al. (2012), the theory of WCM implies that managers require competence in managing short-term investments. According to Nguyen (2001), financial management is one of the challenges facing SMEs because if the financial decisions are not correct, the liquidity and profitability of the business will be negatively impacted.

For instance, in the UK, despite the significant economic and social contributions of SMEs in providing employment for approximately 16.3 million people and contributing approximately £2 trillion per annum to the UK economy, the extent of credit they borrow from the banking sector appears insufficient for their survival and growth, even in normal times. According to the Bank of

England's lending information from July 2017, British SMEs borrowed a total of £5.17 billion from banks and building societies (17% of total loans), while large businesses obtained £25.4 billion (83% of total loans). Although SMEs account for 60% of total employment and contribute to 50% of the GDP in the UK, they have access to only one-sixth of bank credit. Clearly, the inequality of credit access has resulted in a financing dilemma for millions of SMEs (Lerong, 2017). Furthermore, after the 2007–2008 financial crisis, there was a lending squeeze in the British banking industry and banks became more risk averse, and therefore refused to lend to many small businesses. This led to many SMEs seeking alternative financing avenues outside the traditional banking sector and capital markets in order to satisfy their growing financial requirements (Lerong, 2017).

The importance of WCM gained increasing attention during and after the 2007/2008 financial crisis. In fact, businesses that adopt the practice of WCM during a financial crisis tend to improve their liquidity situation by providing short-term financial viability and profitability during periods of financial challenges (Deloof, 2003; Eljelly, 2004; Simon et al., 2017). WCM reduces such challenges by providing liquidity on a stable basis for businesses to finance their operating activities (Deloof, 2003; Eljelly, 2004; Mathuva, 2014; Afrifa and Padachi, 2016). Elfani and Lois (2010), Goel and Sharma (2015). Nobanee and Ellili (2015) argued that access to finance remained problematic during periods of financial constraints such as the 2007/2008 crisis, which impacted the WCM components and policies. They added that because of this, attention started to be given to WCM as a source of financing. This led to speculation that the main reason behind this increased focus on WCM was changes in the financial and banking sector lending criteria after the 2007/2008 financial crisis, which had a notably negative impact on the ability and willingness of banks to lend to businesses and impacted the WCM of such businesses. As indicated in this review,

numerous studies on working capital have investigated the connection between WCM and business performance and how WCM variables should be controlled, including those by Deloof (2003); Lazaridis and Tryfonidis, (2006); Baños-Caballero, García-Teruel and Martínez-Solano, (2012); and Afrifa and Padachi, (2016). Such measures are only intended to address the liquidity/cash flow requirements of businesses during periods after a financial crisis or during times when normality returned to the economic systems. Most of these studies have repeatedly failed to acknowledge that although their findings may have been effective in improving the cash flow/liquidity and profitability of businesses in normal times, they might be insufficient in drawing lessons for future financial crises or in implementing actions to prevent the negative impact of such crises on the WCM of small businesses. Examples of this include the current financial crisis caused by lockdowns and limited financing options during the pandemic, the impact of which on the WCM of UK SMES remains unknown and is continuing to unfold at the time of undertaking the present research.

Even studies that have investigated the relationship between financial crises and WCM (e.g., Deloof, 2003; Eljelly, 2004; Simon et al., 2017; Pawel et al., 2017; Baveld, 2012) have failed to provide evidence of the relationship between the COVID-19 financial crisis and the WCM and cash flow/liquidity of UK SMEs. Therefore, the present study sought to fill this gap and also to provide evidence of its impact on the WCM and cash flow/liquidity of UK MSMEs, from which important lessons can be drawn. Specifically, the question the present study addressed is how the financial crisis caused by COVID-19 impacts the WCM of UK MSMEs as a result of lockdowns and limited access to financing options. Providing evidence as to the nature of this impact may help policymakers and SME business managers/owners in formulating policies to improve operational efficiency, competitiveness, liquidity, and profitability during similar volatile

economic environments in the future. Thus, addressing difficult business financing environments that may have a negative impact on WCM is crucial in building the financial strength of UK SMEs in the event of another financial crisis.

Regarding the problems identified above, the present study was motivated by the absence of research in this area. Specifically, although several studies have examined the impact of the 2007/2008 financial crisis on the working capital management of SMEs, no research to date has examined the impact of the COVID-19 financial crisis on the WCM of UK SMEs.

1.21 Research Aims and Objectives

The aim of the research was to determine whether the COVID-19 financial crisis has impacted the WCM and cash flow/liquidity of UK SME businesses. This was achieved by fulfilling the following objectives:

1. To find evidence that the COVID-19 financial crisis may impact the WCM of UK MSMEs due to the reduced level of consumer demand (market channel);
2. To find evidence that the COVID-19 financial crisis may impact the cash flow/liquidity of UK MSMEs due to the reduced level of consumer demand (market channel);
3. To find evidence that the impact of the COVID-19 financial crisis on the WCM and cashflow/liquidity of UK MSMEs may be due to MSMEs' expectations or feelings of a positive economic outlook in the UK (emotional channel).

1.22 Research Questions

1. What is the impact of COVID-19 financial crisis on the WCM of UK MSMEs?
2. What is the impact of the COVID-19 financial crisis on the cash flow/liquidity of UK MSMEs?

3. What is the impact of COVID-19 financial crisis on both the WCM and Cash flow/liquidity due to the expectations or feelings of MSMEs about the overall economic outlook of the UK?

In chapter Four the empirical literature was drawn upon to develop the variables of the present study, based on which the research questions were translated into testable statistical hypotheses.

1.23 Summary of the Research Methodology

The research aims and objectives were examined through a positivist paradigm where quantitative methods were employed to measure the dependent and independent variables and establish the impact of COVID-19 financial crisis on the WCM of UK MSMEs.

1.24 Mixed Research Methodology

Two sets of quantitative and qualitative data were collected for the questionnaire survey analysis and qualitative interview analysis. Conducting qualitative interviews can sometimes improve the value of a research design that employs primarily quantitative measurement techniques, as was the case with the present research. Qualitative data can provide evidence of the quality of consistent records and quantitative survey procedures and offer some insight into the meaning of particular fixed responses. For the quantitative data analysis, the sample comprised 62 businesses from a potential sample population of 150. The requirements set for the sampling frame were that all the businesses were expected to meet the definition of an SME specified by the UK Companies Act 2006, sections 382 and 465. Thus, the quantitative data findings were built on the email questionnaire responses of 62 businesses that met the above-mentioned benchmark. The key dependent variables were WCM and cash flow/liquidity, while the independent variable was the COVID-19 financial crisis. Using Stata, structural equation modelling (SEM) was used to determine the impact of COVID-19 financial crisis on the WCM of UK MSMEs, and the statistical

test employed was hypothetical testing. Confirmatory factor analysis (CFA) was used to estimate the latent constructs/variables implicated in the relationships between the variables. The questionnaires were administered to a sample of 150 businesses with a response rate of 44%.

1.25 Key Research Findings

The overall results indicate that the COVID-19 financial crisis has negatively impacted the WCM of UK MSMEs due to reduced customer demand (market channel) and MSMEs' expectation or feelings of the overall economic outlook in the UK (emotional channel). The results also indicated that the COVID-19 financial crisis negatively impacted the cashflow/liquidity of UK MSMEs. The first impact on WCM and cash flow/liquidity was due to the reduction in the level of consumer demand and the consequent reduction in business turnover (market channel) caused by lockdowns.

The second impact was due to MSME owners and managers' worries concerning the severity of the pandemic and associated economic crisis, as well as their expectations or feelings about the overall economic outlook in the UK (emotional channel). These results support the theory that SMEs are more vulnerable to financial crises because even a short-term loss of revenue can lead to financial challenges and, ultimately, bankruptcy (Zimon, 2020). The results further support suggestions that MSMEs face financial challenges during economic crises such as 2007/2008 and the current COVID-19 financial crisis is no exception (Artola and Genre, 2011).

1.26 Significance and the potential Contributions of the research

To underscore the significance and contribution of the present research, the Parliamentary Office of Science and Technology (POST) in the UK has published 20 COVID-19 related areas of research interest (ARIs) for the UK Parliament, utilising the input of over 1,000 experts. The report was presented to the UK Parliament's Select Committee, and the present research topic happens to be relevant to one of the areas identified by these experts. This is how the COVID-19 pandemic

will impact the viability and functioning of UK businesses; which sectors and sizes of businesses have been considerably impacted by this pandemic; and what particular support can be offered to those businesses in the short and long term. Therefore, the present research makes the following new contributions, as well as extending the extant literature on the relationship between financial crises and the working capital management of UK SMEs by providing novel evidence that COVID-19 financial crisis has negatively impacted both the WCM and cash flow/liquidity of UK SMEs, as there was no such study that has provided such evidence in the UK. The reason for the lack of literature on the current topic may stem from the fact that COVID-19 had only been in existence for about a year during the time of conducting this research. Hence, in relation to UK MSMEs, this research will provide answers to crucial, but fundamental, questions such as the nature of the impact of COVID-19 financial crisis on both the WCM and cash flow/liquidity, which involves the management of current assets and liabilities.

1.27 Limitations of the Research

The usual limitations related to survey-based research, especially during a pandemic, should be considered before drawing conclusions from the results. In this regard, the findings are used for theorisation rather than offering generalisable results; therefore, replications of the present study could be useful. Additionally, the range of contingent variables employed in this research was small. These factors may impede the generalisability of the results to some extent; hence, caution must be exercised when extrapolating from the results. Also, data collection concerning MSMEs was difficult due to the time and cost involved. SMEs lack appropriate and formal internal controls, which may allow for free and available accurate information, and this makes it extremely difficult to collect sufficient and correct information to fulfil the research objectives. As such, the constraint of low response rates could not be prevented. Furthermore, the possibility of respondents

misunderstanding and misinterpreting the questions cannot be ignored, as this period was difficult for many businesses in that they may have lost loved ones during the pandemic, whereas the business environment has also been challenging. Therefore, the response rate of the present research was deemed acceptable as small businesses are known for not being particularly willing to respond to questionnaires (Marriott and Marriott, 2000), especially during a pandemic.

1.28 Framework of the Thesis

The remainder of the thesis is divided into six chapters and arranged as follows. Chapter Two reviews the theories that have been employed to explain the relationship between WCM and business performance/profitability, and then narrowing this to the theory that was used to explain the relationship between WCM and the financial crises in relation to the present research. Chapter Three reviews literature on the use of MATs from both developed and developing countries and the relationship between WCM and business performance/profitability. It then narrows this to literature on the management of working capital and financial crises, which underpins the selection of the study variables, considers the limitations of the extant research, and outlines the need for the present study. The chapter concludes that the findings of prior empirical studies on the relationship between WCM and business profitability are mixed, but generally they did not investigate WCM during a financial crises. Among those that did, no UK-based evidence was provided regarding the impact of COVID-19 financial crisis and the WCM of UK MSMEs.

Chapter Four explains the development of hypotheses based on the analysis of existing theories and literature reviewed in Chapters Two and Three, respectively. The hypotheses postulate the relationship between the COVID-19 financial crisis and the WCM and cash flow/liquidity of UK MSMEs. Chapter Five discusses methodological issues in relation to the quantitative data analysis. The first section discusses the sampling selection process for the quantitative data, including the

required criteria. It also specifies the different sources of data and justifies their reliability. An explanatory description of the statistical methods used to test the impact of COVID-19 financial crisis on the WCM of UK MSMEs is provided. Finally, the non-response bias test used in this thesis is examined. Chapter Six describes the quantitative data and empirical results. The chapter includes a visual presentation of SEM in the form of path diagrams, analysis of key results obtained from both the survey and qualitative interview data, a robustness test, and a comparison with previous studies. The chapter begins with an explanation of the SEM procedure, including the study variables, the key empirical findings, robustness test and concludes with a summary of the chapter. Chapter Seven describes the overall conclusions and theoretical and empirical contributions of the present research.

CHAPTER TWO

2.1 THEORETICAL OVERVIEW

This chapter examines some of the theories that have been used to explain the relationship between WCM and business performance and profitability, narrowing this to the theory that underpins the relationship between financial crisis and WCM for the purpose of the present study. The chapter also reviews the various current theoretical underpinnings of WCM and its key components of cash, inventories, accounts receivables, and accounts payable. In the forthcoming analyses, each of these components will be examined during financial crisis and non-financial crisis periods. Additionally, the collective components of WCM will be examined in the form of the cash conversion cycle. The theoretical background is vital, as it illustrates how the current theoretical literature links financial crises and working capital management. It helps in establishing the factors that are considered essential to measure and also the statistical associations to identify. The theoretical background provides the context for conducting research and interpreting the results

(Turner et al., 2013). Numerous researchers such as Chiou, Cheng and Wu (2006); and Ng, Smith and Smith, (1999) have investigated the theories of working capital investment in an effort to build on the concepts underpinning WCM policy to secure the continuity of the business and smooth workflow of business operations. Therefore, several theories have been used to explain these relationships between working capital management and its components such as inventory, accounts receivable and payable and cash. The first part comprises a review of resources, agency, transaction cost and cash flow theories, followed by inventory holding periods, accounts receivables, and payable theories. It then narrows these to the theory that underpins the relationship between financial crises and WCM for the purpose of the present study.

2.2 Resource-based Theorists

Resource-based theorists believe that businesses can gain a competitive advantage by having a brand name and skills that are difficult to replicate. In this way, businesses operate mainly according to available resources (Barney, 1991). There is a debate among academics concerning the applicability of resource-based theory (Barney, 2001). Nevertheless, the concept has been utilised by academics to investigate the development of small businesses (Howorth and Westhead, 2003). The theory clarifies some of the differences in business behaviour that can be observed among both small and large businesses. The central notion is that the resources available to small businesses may influence the type of WCM practices they adopt (Howorth and Westhead, 2003).

2.3 Agency Theorists

Agency theorists believe that in many businesses, managers are agents who sometimes maximise their interests at the expense of the owners' interests (Wynarczyk et al., 1993). This means that managers may undertake actions in their own interest to the detriment of the owners (Jensen and Meckling, 1976). This conflict of interest between owners and managers can impact the investment

and liquidity decisions of managers. When the managerial structure is inadequate, managers in search of individual interests can invest cash into projects that may produce negative cash flows rather than investing in positive cash-flow projects. In such instances, managers are likely to take such actions either for self-indulgent reasons or personal interests (Chung, Firth and Kim, 2005).

2.4 Transaction Cost Theorists

Transaction cost theorists claim that obtaining the necessary information to satisfy stakeholders' needs comes at a cost (Smith and Mian, 1992). Small businesses adopt practices (including WCM practices) where the benefits are expected to be higher than the costs, in line with Vroom's (1964) theory. According to Howorth and Westhead (2003), some SMEs are better off investing in other parts of the business where the marginal returns may exceed the returns of investing in parts of WCM systems. Therefore, faced with this choice, SMEs may decide to invest in other ventures where the perceived benefits may be higher. Likewise, they may invest in notions of WCM where the marginal returns are also expected to be higher. These SME businesses only adopt variables of WCM that they believe will increase their marginal revenue. However, the cash conversion cycle has become the dominant theoretical framework employed to describe the relationship between WCM policy and business profitability (Talonpoika et al., 2014; Yazdanfa and Öhman, 2014).

2.5 Cash Flow and WCM Theory

The amount of cash kept by businesses indicates its significance to their performance. According to Guney et al. (2003), 10.3% of the total assets held by British businesses is in cash. The availability of cash flow will have an impact on the relationship between WCM and the performance of businesses. Prior findings have suggested that cash-flow accessibility leads to greater investment in working capital (Hill et al., 2010). The accessibility of cash flow can lead to a more substantial investment in inventory, which will improve the total cash conversion cycle of

a business. A business with accessible cash flow can benefit from buying in wholesale, which may decrease the purchasing cost of production. The wholesale cost savings may also result in a reduction in the cost of sales of a product/service, which will reduce the total price of the service/product, leading to better performance. These savings in the costs of buying in bulk may happen for several reasons. A business that buys in large quantities may benefit from quantity discount. Purchasing in large quantities may also save businesses money in transportation costs; instead of having to transport goods using multiple journeys, businesses can cut those costs by buying in large quantities so that the goods can be transported in one journey. The accessibility of cash flow can also lead to an investment increase in accounts receivable. A business with available cash flow may be in a healthier position to give generous credit to clients. An increase in accounts receivable in investment may lead to better performance. The availability of cash flow may lead to greater investment in working capital by reducing the payable period.

2.6 Theories of Association Between Inventory Holding Period and Profitability.

The concepts of stock holding days and profitability can be used to describe the reasons why businesses keep stock and their association with profitability. Under normal conditions, businesses will not have to keep stock as they will be expected to produce in exact amounts to satisfy sales demand. However, due to volatilities in business environments, businesses are compelled to keep stock to safeguard against any eventualities. As claimed by Zappone (2006), keeping stock for future sale is commonplace in business. However, this incurs a cost to businesses and hence, several theories try to produce the means to reduce the costs linked with keeping stock. According to Hill and Sartoris (1992), the theories and methods used in dealing with cash management challenges can also be applied to manage stock more efficiently. Some of the concepts that were

presented to describe why businesses hold stock include the transaction motive concept, cautionary motive concept, speculative motive concept, and the JIT principle.

2.7 Theory of Transaction Motive

This concept proposes two aspects that influence the association between stock-keeping period and financial performance. The first presupposes that businesses can improve profitability through a reduction in the stock holding cycle by maintaining the least amount of stock required to satisfy the anticipated need of production. This assumes that management predict the future demand for goods, and hence plan for it by maintaining the stock necessary to meet the expected demand. Businesses should also maintain the lowest stock for exhibition reasons (Bhattacharya, 2008), as consumers continually like to observe a sample of a certain merchandise before pledging to buy it. Keeping the lowest amount of stock will decrease the stock holding time. This can reduce several costs linked with the keeping of stock, resulting in better profitability. Another element suggests a positive relationship between stockholding period and profitability by buying in large quantities. Purchasing wholesale will increase stock, thereby increasing the holding of stock. However, purchasing large quantities may also decrease the cost of production activities. Buying in large quantities for the purpose of cost savings may result in a reduction in the cost of sales of the goods, which will reduce the total price of goods leading to higher profitability. The cost savings of buying in large quantities may happen for several reasons. A business that purchases in large quantities may enjoy discounts from suppliers. It may also save businesses funds regarding transportation costs, as rather than having to pay for several trips to bring in goods a business will pay for only one. An increase in the stockholding time will increase the cost to the business due to the costs of keeping stock which include interest, spoilage, out-of-date, storage costs, and so on. According to Modigliani (1957), beyond a particular point the decreased cost of one unit can more

than compensate for the increasing cost of storage. It is therefore necessary for businesses to use statistical methods such as the economic order quantity to purchase amounts that achieve the twofold objective of reducing the costs of both holding and ordering.

2.8 Theory of Precautionary Motive

This concept proposes a positive relationship between stock holding time and profitability. The rationale underpinning this is that greater stock holding time will prevent the possibility of running out of stock (Christiano and Fitzgerald, 1989; Wen, 2003), but could lead to the decline of profitability due to the costs of holding inventory. Running out of stock will have a terrible effect on a business's success because it could lose its sales revenue and goodwill (Bhattacharya, 2008). A shortage of inventory will push both existing and potential customers away to rivals. This may not only impact the current profitability of the business, but also its potential profitability as it can lead to a bad name among customers. Wen (2003) claims that the inventory out prevention hypothesis is factually stronger than any other concepts describing the relationship between stock holding time and profitability. Even though businesses can have a contractual arrangement with their suppliers for delivery of inventory, unexpected situations can cause an interruption in the delivery process. This can diminish potential sales, thereby reducing the profitability of a business. Likewise, the normal lead-time interval could mean that businesses must stockpile inventory in between the placing of a new order and the time of receiving the goods. Due to this doubt in lead time and the gap between ordering and receiving the goods, businesses are required to maintain a safety stock level. This is the lowest amount of goods required to prevent them from running out of stock during the period spent waiting for delivery of goods, preventing the unwanted outcomes of the failure to meet demand. According to Blinder and Maccini (1991), the buffer-stock level

model has contributed to both the theoretical and empirical literature connecting the stock holding period to profitability.

2.9 Theory of Speculative Motive

According to this theory, a higher stock holding period can lead to greater profitability because of the potential of achieving an unusual profit in the future (Christiano and Fitzgerald, 1989). According to this principle, one reason for a higher stock period is the anticipated higher fluctuations in prices of goods which can lead to higher profitability. Businesses may be persuaded to keep stock, thereby improving the stock holding period if potential prices are likely to rise, thus gaining unusual profit. The anticipated higher price variations reason for increasing the stock holding period works best under inflationary situations (Hill and Sartoris, 1992). Morgan (1991) declared that the swift inflation level during the late 1970s and early 1980s inspired businesses to increase the stock holding period prior to price rises. The additional speculative motive for a higher stock holding period involves an anticipated change to the product. A variation in the product may result in the removal of the old style from the marketplace. The shortage of old merchandise will increase its demand over supply, leading to an increase in prices. This will cause a business to enjoy higher profitability. It is thus common for retailers to increase the stock holding period if commodities are about to be withdrawn from the marketplace due to the expected potential higher price for these. A typical example cited by Hill and Sartoris (1992) is the statement from Coca-Cola that it would cease manufacturing the 'Old Coke' in the mid-1980s, which led to sellers hoarding the 'Old Coke' in an expectation of higher future price increases. In spite of the potential benefits of a speculative motive concept for holding stock, studies conducted by Christiano and Fitzgerald (1989) discovered that the scale of the speculative motive concept for raising the stock holding period is numerically insignificant. The speculative motive of higher stock holding time

may increase the profitability of businesses if the anticipated potential price rises happen. However, higher stock holding time could result in a reduction of profitability if the anticipated future price rises do not happen or are not able to compensate for the cost of keeping the stock (Afrifa, 2013).

2.10 Theories of Association Between the Accounts Receivable Period and Profitability.

This concept posits a positive relationship between accounts receivable period and profitability because suppliers presuppose the position of financial institutions and thus increase finance to businesses in the shape of higher credit sales, as outlined in the following section.

2.11 Financing Theory of Accounts Receivable

The financing theory focuses on the giving of credit simply on financial bases, and therefore considers trade credit as an alternative for institutional financing (Bhattacharya, 2008). There are multiple reasons why businesses switch from their core business to give credit to their clients. The first reason is that suppliers have numerous advantages over financial lending institutions (Freixas, 1993; Jain, 2001). They are able to reduce the information asymmetry between themselves and the customer, thereby decreasing the rate of default. Due to the continuous trading bond, suppliers are in the best position to better assess the credit merit of their clients (Jain, 2001; Van Der Wijst and Hol, 2002). They are also better placed to monitor their clients than financial institutions because of the regular trade dealings. The second reason is that suppliers have a more efficient and quicker means to collect and sell assets of defaulting clients, particularly durable assets which are easier to repossess and sell. A further factor underpinning the financing concept is that the rise in the receivables period leads to better control over clients. This is because a supplier can threaten to cut off supplies should the client default in repaying. According to Garcia-Teruel and Martinez-Solano (2010), control over clients becomes even more critical in the case of a small

number of suppliers in the marketplace, as they will be worried about defaulting due to lack of alternative suppliers. Kandori (1992) and McMillan and Woodruff (1999) argue that control becomes even greater if the supplier is a member of a group of suppliers and that restrictions can be imposed by the network as a whole. The financial theory of accounts receivable may enhance the profitability of businesses because it will create a good supplier-client relationship which may improve profitability because it ensures future sales and may tempt clients to buy more.

2.12 Theory of Quality Guarantee

This concept aims to decrease the information asymmetry between the retailer and the customer (Ng et al., 1999; Pike and Chang, 2001; Pike et al., 2005). According to the theory of quality guarantee, businesses offer trade credit to allow clients the necessary time to verify the value of the merchandise (Smith, 1987; Long et al., 1993; Danielson and Scott, 2000). This is because customers, especially new ones, lack knowledge of the quality of products. Product assurance is highly significant to retailers as it will enable future acquisitions (Bastos and Pindado, 2007). It helps in reducing uncertainty over the merchandise by assuring the client about the product prior to payment, which helps to avoid potential conflicts. In this instance, a client who is displeased with the value of the product can stop payment for the goods and return them to the seller. Avoiding the payment and the return of goods will prevent both the supplier and customer wasting time and resources by avoiding the situation in which the client will request a cash refund, which could be a protracted and expensive process (Garcia-Teruel and Martinez-Solano, 2010a).

In a worst-case situation, a seller may file or enter into liquidation prior to finding defects in the goods. Based on this line of reasoning, it is thus claimed that SMEs and new competitors tend to give more credit than larger and current businesses, as they still have to determine their reputation regarding the quality of their goods (Long et al., 1993; Bastos and Pindado, 2007). Likewise,

clients of goods whose quality is difficult to prove or which need a longer period to be validated will also require more trade credit. There are certain claims against the reasoning of the quality guarantee theory with respect to giving trade credit. Firstly, if SMEs and new businesses offer trade credit to rationalise the quality of their goods, then what happens when they become established businesses in the marketplace? According to this presupposition, there should be a decrease in the quantity of trade credit offered. However, studies have discovered that in fact this does not happen; instead, the credit conditions continue and finally develop into a pattern. A further contrary argument is that, according to the principle underpinning this concept, no trade credit ought to be granted in the case of fragile goods, as they last only for days and no time is needed to verify the quality of the goods. However, it has been discovered that, in reality, payment times for fragile goods are as long as those for non-fragile goods (Bhattacharya, 2008). In addition, a study conducted by Wei and Zee (1997) found no empirically consistent support for the quality assurance concept from their data. The quality guarantee concept of receivables may influence the profitability of businesses. Hence, offering clients the chance to evaluate the goods prior to final payment could help increase their confidence in the business, which would enhance profitability due to repeated purchases. Likewise, the financial performance of businesses may be enhanced because offering clients time to certify the quality of goods will generate a good reputation for the business.

2.13 Theory of Transaction Cost

This theory was developed by Ferris in 1981 to explain the fact that the purpose of trade credit is to enhance operational efficiencies. As argued by Emery (1987), the transaction cost motive for extending trade credit is motivated purely by the desire to enhance operating flexibility, which may encourage higher profitability. According to the transaction cost theory, businesses indulge

in trade credit in order to reduce the cost of transactions between them, which may lead to an increase in profitability (Petersen and Rajan, 1997; Nelson, 2002; Banerjee et al., 2007; Bhattacharya, 2008). Without trade credit, businesses would be required to make payment on the delivery of goods and services. By agreeing to the terms of payment, a business is able to divide its acquisitions cycle from the payment cycle. This helps avoid the situation whereby businesses may have to continually plan to pay instantly for the acquisitions of products and services. Even though immediate payment upon purchases will be wise in the case of periodical transactions, in situations where transactions between a seller and a buyer are common, the cost involved can be significant. By splitting purchases from payment and consenting to a regular payment time, a business can plan and control its financial resources with confidence (Schwartz, 1974). When trade credit does not exist, businesses may be obligated to retain a large amount of cash as a safeguard to pay for an unexpected or sudden request for goods. By using trade credit, a retailer is able to influence transactions in periods of less demand, which could increase profitability. A business can ease trade credit when sales have dropped and tighten it when sales increase. In this case, trade credit is utilised as a reward system for consumers who patronise the business in periods of low demand. This claim is empirically backed by Long et al. (1993) who discovered that businesses with varying demand offer trade credit for a longer period than those with steady demand. A business can also decrease the cost of keeping stock with the help of a trade credit. If the cost of holding stock is high, a vendor may offer goods to consumers by proposing generous credit terms. In this situation, the reduction in storage costs may enhance profitability. However, care should be taken to ensure that the marginal cost of keeping accounts receivable is less than the cost of keeping inventory. One criticism of the transaction cost philosophy for the application of trade credit is that it lowers transaction costs by utilising periodic payments. Whilst this claim may have been sound

in the 1980s due to the plethora of traditional measures for making payments, with the arrival of technology leading to more enhanced ways of settling payments, one may speculate whether the decrease in transaction cost is still a valid argument for the practice of trade credit. Ultimately, the relationship between receivables and profitability from the point of view of transaction cost theory stems from the decrease in transaction costs between the seller and consumer (Afrifa, 2013).

2.14 Theory of Price Discrimination

This theory is built on the idea that a retailer can sell to two separate customers at completely separate prices without changing the initial price of the goods or services (Meltzer, 1960; Schwartz and Whitcomb, 1979; Brick and Fung, 1984; Brennan et al., 1988; Mian and Smith, 1992; Petersen and Rajan, 1997; Ng et al., 1999). By proposing separate amounts of trade credit, a business will eventually trade at separate prices. A client who is given a lengthier credit time is in fact paying at a lesser price compared with other clients (Garcia-Teruel and Martinez-Solano, 2010a). This theory is very significant as clients are diverse, and it is more convenient to offer at separate rates based on separate attributes between clients. There are two motives for businesses to give trade credit as a mode of price discrimination instead of directly cutting prices. Firstly, due to marketplace and regulatory constraints on the practices of price discrimination, businesses can only do this through the implicit use of trade credit. As claimed by Emery (1987), extending trade credit allows a retailer to essentially breach price controls. Secondly, in a highly competitive marketplace, a direct fall in price will draw a reaction from fellow competitors, which may lead to a price war. For this reason, a business that wants to improve sales within a competitive marketplace can do this with the help of trade credit. According to Bhattacharya (2008) and Petersen and Rajan (1997), businesses that enjoy higher price-cost margins gain from the price discrimination concept of trade credit. Because of their higher profit margin, in contrast to their

competitors, such a business can essentially lower its price by using trade credit to further increase sales, which can lead to an increase in profitability. A further increase in the use of the price discrimination concept is driven by the use of trade credit as a way to subsidise the price paid for goods and services by greater-risk clients (Petersen and Rajan, 1994; Bhattacharya, 2008). Because of the inherent interest rate included in the trade credit, it clearly appeals to greater-risk clients who are refused credit from the banks or who are allowed to borrow at an exorbitant cost. For this reason, such businesses will want to receive trade credit from suppliers. According to Banerjee et al. (2007), trade credit essentially price discriminates in favour of greater-risk clients by relieving their immediate cash challenges. However, using trade credit for this purpose can be hazardous for the retailer with regard to profitability. This is because greater-risk clients have the greatest tendency for non-payment on their accounts, increasing the incidence of defaults and leading to a drop in profitability. An additional difficulty with this concept is that it does not in any way help lessen the risk of losing loyal clients. Because they can easily obtain lower credit from banks, there is every prospect of them refusing any trade credit. Therefore, it is sensible for businesses to use trade credit carefully and for a limited purpose. It is claimed that a business that uses price discrimination of receivables may enhance profitability by giving a longer credit period built on the profitability margin for each client.

2.15 Theory of Product Differentiation

According to the product differentiation concept, trade credit can be utilised in the same way as any other sales marketing tool to enhance sales, and subsequently profitability (Nadiri, 1969). It is applied to distinguish a business's goods from those of its rivals. By giving trade credit, a business can convince clients that its goods offer extra value for money. This concept proposes that businesses can enhance profitability by giving more trade credit. Past studies have discovered a

positive association between the degree of trade credit and profit margin (Petersen and Rajan, 1997). A further justification of the product differentiation concept regarding the seller is its capacity to preserve long-term affiliation with clients, which may lead to improved profitability. By giving trade credit, businesses can keep consumers. Maintaining loyal clients has a potential reward for a business in terms of improved profitability; hence, it will assist in generating additional potential sales in terms of both current and potential customers. In this case, trade credit is seen as an investment in clients who are not expected to generate instant gains, but instead to generate future profitability over time. However, in spite of the comparisons between trade credit and other types of sales marketing, there are variations in their usage and reasons behind them (Bhattacharya, 2008). Whilst conventional methods of sales campaign are aimed at the whole marketplace or a section of it, trade credit is used for specific consumers.

2.16 Theory of Market Power

This concept of receivables is applied when the client has extra power in relation to suppliers. A client who has more control will ask for more credit from its suppliers, which may improve profitability. Client power over supplier occurs when the client is reasonably larger than the supplier in that the revenue received from this particular client forms a key part of the supplier's revenue (Banerjee et al., 2007). A further basis of client power is when there are several suppliers but only a few clients, which means the client has several options to choose from. Therefore, the competitiveness of the trader's market will assist in increasing trade credit. According to Wilson and Summers (2002), there is a positive relationship between client power and trade credit. The market power association between a business and its supplier may impact profitability. A business with more power over the supplier can request favourable credit terms, thereby improving profitability. However, a business with less power in relation to sellers may experience a decrease

in profitability as the seller may suggest unfavourable terms of credit or request payment upfront. An unfavourable credit term could reduce profitability; hence, it may force a business to sacrifice other profit improvement commitments or borrow expensively. Another reason for the adverse relationship of market power and trade credit is that a client with more marketplace power will be in a decent financial position and so will request less trade credit from suppliers. This is because such a business can obtain credit from more conventional financial organisations.

2.17 The Relationship between Payables and Profitability Theory

In pursuing financial support, it is common for businesses to turn to financial organisations due to their knowledge in offering such services. Yet there is a suggestion of the prevalent use of suppliers' credit by clients. A study by the National Bank of Belgium (1995, cited in Deloof, 2003) discovered that payables represent around 12% of the total debts of businesses. Deloof and Jegers (1999) argued that payables are a crucial substitute not only for a short-term bank loan, but also for a long-term financial loan.

2.18 Theory of Accounts Payable Financing

This concept helps in explaining the reason why businesses overlook financial institutions but accept credit from their suppliers. The theory of financing suggests that businesses take credit from suppliers because of inadequacies in the financial market (Kohler et al., 2000). Due to these market inadequacies, not every business has the same access to credit from banks. Several businesses, particularly MSMEs, are regarded by some banks as highly risky and as such are refused credit. Consequently, these businesses are forced to accept any credit proposal from suppliers. Therefore, it is claimed that businesses with more access to financial institutions will act as a go-between by borrowing from banks and then lending to consumers as trade credit (Schwartz, 1974; Emery, 1984; Garcia-Teruel and Martinez-Solano, 2010a). According to this theory, the awarding of trade

credit will depend heavily on the access to financial institutions of both the client and the seller. The financial concept effect on accounts payable has an impact on businesses' profitability. This is because businesses with no access to capital markets might have to depend on trade credit to finance their business, which may impact profitability. Moreover, the capacity to purchase with no immediate cash means that businesses can fund other profitable projects. However, the financial concept of payables may lead to a decrease in the profitability of a business due to the loss of discounts given by suppliers. Traders usually give cash discounts for quick settlement and thus, requesting trade credit means that those cash discount savings may be lost.

2.19 Theory of Liquidity

The liquidity concept describes why some businesses are always keen to take the highest credit being offered to them. It suggests that more liquid businesses are keen to give trade credit and that SMEs request more credit from their bigger colleagues (Nelson, 2002). This is due to the fact that, on average, larger businesses are usually more liquid than SMEs because they have greater access to financial organisations. Bigger businesses, because of their collateral foundation, are more likely to be given credit than small businesses. An additional difference of the liquidity concept is that businesses with negative cash flow or reduced sales are most likely to demand trade credit (Petersen and Rajan, 1997). A negative cash flow implies that the expenditure is greater than the revenue. Businesses in this position may not be able to buy on a cash basis because of lack of cash. Therefore, they may not have any option but to have trade credit as the only substitute. A business with reduced sales will have less revenue, and as such may find it challenging to meet its immediate to medium-term commitments when expected. Such a business will avoid paying any expenses with direct cash. Thus, due to the above-mentioned reasons, in periods of a constrained financial policy, trade credit will compensate for the decrease in credit from banks and other lending

institutions. A study conducted by Nilsen (2002) discovered that MSMEs respond to financial constraints by borrowing more from suppliers. Because of the negative relationship between a financial organisation's lending and trade credit, it is suggested that a better relationship with banks will curtail the use of the latter (Bastos and Pindado, 2007). According to Petersen and Rajan (1994), businesses with lengthier banking connections depend less on trade credit. The liquidity concept describes the association between payables and business profitability. Hence, a business with liquidity challenges may delay settlements to suppliers and instead use the funds to settle other debts when they fall due, which may enhance profitability.

2.20 Theory of Financial Distress

The theory of financial distress of payables originates from 'buyer opportunism'. This trade credit concept proposes that a supplier in financial difficulty is forced to give extra trade credit to its clients (Petersen and Rajan, 1997; Wilner, 2000; Bhattacharya, 2008). A business in financial trouble will have a weaker negotiating position from which to efficiently adhere to its trade credit strategy. Such a business will be desperate for trade as it will be unable to afford the multiple costs connected with keeping stocks. Because of this feeble position, clients will exercise their demands on the supplier. As noted previously, the financial assumption implies that traders have power over their clients by threatening to cut back suppliers. A trader in financial difficulty, however, will not be in a strong enough position to apply such a tough policy. A financially constrained business may also lack the financial resources to litigate a client for outstanding trade credit. Because of these vulnerabilities, clients of a financially constrained business will obtain an unjustified advantage to request more credit and can demand several other compromises, including more discounts (Bhattacharya, 2008). According to Bhattacharya (2008), the opportunistic conduct of the client becomes more evident when such client is one of the main customers. Also, Wilner

(2000) revealed that such businesses will not gamble, even to charge for late settlement. A study conducted by Petersen and Rajan (1997) provides empirical evidence to suggest that financial constrained businesses give additional trade credit. The financial difficulty of suppliers has an impact on business profitability. A client of a distressed supplier may enhance its profitability by taking advantage of the condition of the finances of the supplier and request vast credit terms by utilising suppliers' credit as a source of finance.

Given that the objective of this study was to examine the impact of the COVID-19 financial crisis on WCM and its components in UK MSMEs, components comprising accounts receivable (current assets), and payables (current liabilities) this chapter explored the various theoretical frameworks that have been developed to explain the relationship between the components of WCM and performance/profitability. Firstly, under stock holding, four theories were identified to explain the importance of inventory in relation to companies' profitability. These were transaction motive, precautionary motive, speculative motive, and JIT theory. The transaction motive of holding inventory justified the need to keep inventory as a means to satisfy the expected demand of a company, including keeping inventory for display or demonstration purposes. The precautionary motive of holding inventory explained why companies may choose to keep inventory in addition to what is needed to serve customers. It clarified that companies keep inventory as a precaution against the prospect of unwanted circumstances. According to the speculative motive of holding inventory, companies keep inventory with the sole purpose of realising abnormal profit in the future. Finally, the JIT theory regards the holding of inventory in any form as a waste, and therefore suggests that a zero inventory will increase the profitability of a company.

2.21 Influence of Financing Constraints on WCM

According to Petersen and Rajan (1997), trade finance can play a redistributive role by directing credit funds from less financially restricted businesses with better access to investment markets to weaker businesses. Hence, trade credit alternatives for external finance are available for businesses confronting information asymmetry problems. Additionally, financially sound businesses were found to be granted relatively more trade credit, which may be attributed to their willingness to secure future business, a lower degree of information asymmetry, and dependence on guaranteed credit supported by goods purchased. Related findings were also reported by Cuñat (2007) for UK businesses where, to maintain customer relations, businesses are willing to ease trade credit conditions so as to lessen the cash-flow constraints faced by their clients and ease the problem of limited access to capital markets. However, findings by Nilsen (2002) have cast doubt on the redistributive purpose of trade credit because both small and large businesses have been reported to increase their reliance on trade finance during negative economic shocks caused by a credit crunch. Conversely, the claims of financing constraints theory hold with large businesses returning to external borrowing to a larger extent than small businesses suffering a cash deficiency. Yang (2011) concludes that during periods of financial constraints businesses tend to replace trade credit for bank loans due to the increased cost of external borrowing, while during economic growth, trade credit and bank borrowing appear to have a complementarity impact. The same study indicates a high sensitivity of inventory investment to exchange rate variations for financially constrained businesses during a period of financial crisis. Casey and O'Toole (2014) examined the lending patterns of SMEs in the Eurozone and found that financially limited businesses were more likely to depend on trade credit, return to inter-business credit financing and apply for grants. Opler, Pinkowitz, Stulz, and Williamson (1999) examined cash holding arrangements based on US business data. Businesses with considerable growth capacity and unpredictable cash flows are

inclined to hold more stocks of cash. These businesses were more likely to encounter financing difficulties, whilst businesses with investment credit score tend to hold relatively lower amounts of cash. The evidence implies that the main reason for holding cash for constrained businesses may be that it can offset possible operational losses. Because an economic downturn may cause a significant fall in sales, holding cautionary cash reserves seems to be a good decision.

2.22 Influence of WCM on Profitability Theory

Deloof (2003) examined the influence of WCM on the profitability of Belgian businesses. The results indicated that the decrease in account receivables and inventory turnover days improved the operating performance of businesses. The study also uncovered a negative relationship between operating profit and payables, which may be due to underachieving businesses short of cash needing more time to pay their suppliers. Enqvist, Graham, and Nikkinen (2014) identified a negative relationship between the profitability of Finnish businesses, measured by gross operating income and return on assets and the cash conversion cycle, with the impact being mainly noticeable during an economic crisis. A negative correlation was also found between profitability and payable days and between profitability and stock levels. The impacts were more evident during an economic crisis. These findings suggest that to alleviate the negative results of adverse situations, management should try to reduce accounts receivable and stocks and increase payable periods. In another study, Garcia-Teruel and Martinez-Solano (2007) reported a negative association between cash conversion cycle and profitability, and that a decrease of stocks and receivables seems to enhance key performance indicators (KPIs). Based on information from the Portuguese corporate sector, Pais and Gama (2015) determined that the implementation of a more aggressive WCM policy by SMEs can improve their operational performance. Furthermore, a decrease in payable days was discovered to positively influence profitability, which echoes the evidence cited earlier.

2.23 WCM During Conditions of Financial Crises Theory

Campello, Graham, and Harvey (2010) applied qualitative research methodology to establish the impact of financing constraints on business decision-making during the 2008 financial crisis. The businesses identified as financially constrained were more likely to cut investments, reduce safety cash reserves, depend on credit options and external funding and sell assets to offset insufficient internal funds. Furthermore, because of limited access to external funding, constrained businesses reported having lost attractive investment prospects. According to Love, Preve, and Sarria-Allende's (2007) study on the influence of credit reduction during the 1997 crisis in Asia on the undercurrents of trade finance in developing economies, the crisis outbreak was followed by a trade credit increase followed by an ensuing slow decline. The writers concluded that the reduction had a supply chain source when financial limitations compelled the businesses to reduce trade credit to maintain liquidity. Moreover, businesses which faced a cash-flow deficiency and mainly depended on short-term debt financing tended to cut back on trade finance and increase accounts payables. According to Gertler and Gilchrist (1994), large and small businesses respond in different ways to an economic crisis. Big businesses tend to be strongly reliant on short-term debt financing which steadily increases during economic growth and consequently falls after the outbreak of an economic crisis. SME businesses display more conservatism and start reducing short-term debt prior to an economic crisis. SMEs were also found to be largely reducing stock expenditure in comparison with big businesses. In line with conclusions by Fazzari and Petersen (1993), this implies that financially constrained businesses may use working capital as a reserve of liquidity, which in the short term may compensate for the internal cash-flow shortage. The advent of a financial crisis may trigger significant changes in a business's strategic operations, with more financially sound businesses profiting at the expense of weaker ones. Baskin (1987) argues that businesses may hold extra cash as a deterrent for possible competitors. The cash reserves may

become a worthy advantage in this competitive rivalry. Therefore, if the insecurity triggered by the COVID-19 financial crisis has taught SME owners anything, it is that liquidity and cash flow matter most and is the theory that underpins the aims and objectives of the present study. The above chapter provides a review of the theoretical background of WCM and its components in SMEs, and was then narrowed to the selected theory for the present study. In linking this framework to the variables of the present study, Chapter Three reviews relevant literature to develop the hypothesis in the area of financial crisis and working capital, cash flow, and liquidity, which identifies the gap in the literature to be filled in the thesis.

CHAPTER THREE

3.1 REVIEW OF MANAGEMENT ACCOUNTING TECHNIQUES AND THE EMPIRICAL LITERATURE ON WCM.

This chapter reviews the literature of management accounting and WCM. First, it reviews management accounting techniques from developed and developing nations before focusing on specific areas of management accounting techniques for the purpose of the present research, namely budgeting, cash flow, break-even analysis, and the balance scorecard. The section then continues with a review of the literature on WCM, followed by empirical literature that underpins the aims and objectives of the present research. The review concludes that the extant empirical literature on the relationship between the financial crisis and the working capital management are inadequate for the purpose of the present research, leading to the development of the study hypothesis. The inadequate results may be due to the fact that these studies were conducted prior to the COVID-19 financial crisis and during different periods of study; therefore, the present study fills this gap by providing evidence of the impact of the COVID-19 financial crisis on both the working capital management and cash flow/liquidity of UK MSMEs.

3.2 Research on Management Accounting Techniques from Developed and Developing Countries

The justification for this review of management accounting techniques from developed and developing countries is that management accounting information needs for businesses in particular SMEs across the globe are similar. Hence, this analysis will increase the general awareness among SME managers and owners of the importance of management accounting techniques as a means of improving performance and maintaining competitiveness in a globalised marketplace. This is essential because the world is interconnected economically and environmentally due to the advancement of technology such as Facebook.

Therefore, this section provides insights into the use and the importance of management accounting techniques/information in general to business performance, more specifically to the performances of SME businesses, but also to contribute to the debate in the literature regarding the value of management accounting concepts such as, budgeting, cash flow management, break-even analysis, and performance evaluation (BSC) to the performances of SMEs, in terms of planning, controlling, pricing and bench-marking in a competitive and volatile business environment (Davila and Foster, 2005). The functions of management accounting or managerial accounting have been studied by numerous researchers across the globe (e.g., Amara and Benelifa, 2017; Ahmad and Zabri, 2015; Adelegan, 2004; Bogale, 2013; Christina, 2014; Dung, 2018; Gliubiccas, 2011; Hieu and Dung, 2018; Haldma and Lääts, 2002; Hilton and Platt, 2011; Hoque and Uliana, 2005; Ahmad and Zabri, 2015; Lapsley and Wright, 2004; Ladislav, 2016; Mahfar and Omar, 2004; Oyerogba, 2015; Mahdi and Azam, 2018; Szychta, 2018; Shahzadi et al., 2018; Nikolaos and Theriou, 2010; Melek and Aytac, 2010; Tuan and Malcolm, 2010; Sudhashiniomas and Kertu, 2002; Uyar, 2016; Yeshmin and Hossan, 2011). Management accounting concepts started being widely used at the beginning of the 1960s (Wilson and Chua, 1988). Hiromoto (1988)

indicates that the key aim of management accounting is to offer appropriate, precise, and important information to decision-makers (Mahfar and Omar, 2004). Garrison and Noreen (2000) explain that management accounting concepts are vital in helping managers perform activities such as planning, guiding, inspiring, and monitoring (Perez de Lema and Durandez, 2007). Research undertaken by Dick-Forde et al. (2007) concludes that management accounting information is significant in business decision-making. Notwithstanding an increase in management accounting research, there is still a lack of clear knowledge regarding the nature and usefulness of management accounting systems in small businesses (McChlery et al., 2005).

According to Pavlatos and Paggios (2009), management accounting has moved to assume the role of value creation through better use of resources. Bhimani (2002) indicates that the key role of management accounting is to help enterprises design their future and monitor their performance. Importance has been placed on in-house procedures to allow managers to examine, analyse and forecast information, thereby assisting managerial operations. Chenhall and Langfield-Smith (2007) add that management accounting has helped in creating performance measures to support managers in planning and monitoring their enterprise's activities, including SMEs. Baines and Langfield-Smith (2003) further explain that the role of management accounting is to provide managers with accurate information to assist them in their decision-making processes in an increasingly competitive environment and to help them monitor the impact of policies. Shahzadi et al. (2018) state that management accounting practice refers to the use of information produced by financial accounting to make decisions.

Hutaibat (2005) conducted research into management accounting practices and concluded that most literature on management accounting contends that designing, monitoring, assessing performance, and helping to create competitive strategies are the core functions of management

accounting in terms of helping firms achieve their goals. Other researchers propose that the role of management accounting has moved to a wider area – a point that is emphasised by Kaplan (1995) who argues that management accounting must assume a wider role in the operational process.

Kaplan (1995) explains that an ideal management accounting practice should develop an organisation's expertise, contribute to the design and application of strategy and convert strategic ideas and skills into effective and decision-making measures. The results of a survey-based study conducted by Freedman (1996) reinforce Kaplan's view. Most of the survey respondents believed that contemporary management accounting must deliver information that enhances overall strategic implementation. McNair (1997) adds that the role of management accounting in the new millennium is characterised by planning, controlling, monitoring, and value-added activities. In addition, some academics contend that management accounting should be used strategically in order for the management team to concentrate on improving productivity.

According to Bhimani (2002), management accounting in modern-day enterprises is far-reaching and has multiple functions, from a focus on in-house procedures to an outward orientation. Its control systems should cover both financial and non-financial measures to assist operations managers with financial and non-financial information, control costs, and to create up-to-date reports regarding the nature of costs for upper management. Management accounting and working capital concepts have important roles to play in the management decision-making processes of all businesses, including MSMEs, to help them make effective business decisions and compete strongly in the modern competitive business environment (Ashfaq et al., 2014; Reid and Smith, 2002). Talha et al. (2010) state that MATs support businesses of all sizes (including MSMEs) in evaluating their performance in both financial and non-financial realms and in handling change successfully, as underscored by Mia and Clarke (1999) and Reid and Smith (2002).

Management accounting studies continue to advocate the rewards of implementing management accounting systems in terms of improving business performance and sustainability (Srikant et al., 2009). These benefits have been studied in detail by Azudin and Mansor (2016) who investigated the use of MATs by Malaysian SMEs and found that they are still utilising traditional MATs (Mahfar and Omar, 2004). The results further show that the adoption of advanced management accounting systems remains low in developing countries, which the authors suggest may be due to a lack of knowledge of the rewards of implementing MATs. The study further indicates that, with respect to business DNA and potential and operational technology, only operational technology has a significant effect on the implementation of management accounting systems (Isa and Thye, 2006).

Armitage et al. (2014) investigated the use of various MATs (such as budgets, performance evaluation techniques, costing practices, variance analysis, planning, and control) among Canadian and Australian SMEs. Their findings revealed that SMEs are an important part of the business sector in industrialised economies, but little is known about the level at which they are used by SMEs. Andersén and Jansson (2016) conclude that there is a positive relationship between the nature of a business and its location and the adoption of some form of MATs such as budgeting. Acemoglu and Daron (2003) explain that SMEs lack accounting knowledge, and as a result, many fail to realise their potential, thereby threatening their survival. In a study of the use of MATs by small businesses in the UK, Collis and Jarvis (2002) found that cash flow and periodical management accounts were their most common sources of financial information.

The importance of the use and nature of management accounting systems has been emphasised in a wealth of studies which have employed various concepts to underscore the relevance of such techniques to businesses (e.g., CIMA, 2013; Maziriri and Miston, 2016; Ghorbel, 2016; Aouni et

al., 2015; Tappura et al., 2015; Hyvonen, 2005; Kaplan and Norton, 2001; Ahmad, 2014; Haron et al., 2013; Mitchell and Reid, 2000; OECD, 2004; Abdel-Kader and Luther, 2008; Nandan, 2010; Smith, 2013; Sandalgaard and Nielsen, 2018; Reid and Smith, 2002; Rufino, 2015; Szychta, 2004; Lay and Jusoh, 2013; Afrifa, 2013).

3.3 Research on the Situation in the UK and Europe

In a study of UK SMEs, Reid and Smith (2002) concluded that only a small number use budgets. Payback was the most commonly used investment appraisal method among the participant SMEs, and the MATs used by SMEs impacted the processes and performance of these businesses. According to the results, the effect of MATs is highest among businesses that are struggling to survive, where it is used to help to monitor cash flow and movements in key variables. The results further show that businesses whose profitability and performance are good seem to put less emphasis on the importance and provision of management accounting information than businesses that are struggling.

Jarvis et al. (2000) reported that SMEs in the UK have different objectives. Their results revealed that owners and managers of SMEs use wide-ranging procedures and indicators to evaluate organisational performance. While cash-flow forecasts are critical, profit measures are less significant than traditional views have implied. There have been further calls for more empirical studies by Tillema (2005), Gerdin (2005), and Chenhall (2007) to advance knowledge and understanding of issues that explain the nature of management accounting and its complexity. Further studies have since been undertaken in the UK and worldwide to investigate the nature of existing management accounting systems within all businesses, including MSMEs.

Among these studies is that of Magdy (2008) whose UK study of a sample population of big industries extends knowledge of the impact of potential dependent variables on a wide-ranging set

of management accounting tools. The data obtained through questionnaires indicate that the complexity of management accounting tools adopted by those businesses who participated in the research was influenced by factors such as environmental issues, size, customer behaviour, and globalisation.

The results further indicate that the more volatile the business environment is, the greater the importance placed on management accounting information. They also demonstrate that the more influential the customers are, the more advanced the management accounting information is. This phenomenon is most prevalent in food and drink retail businesses because they are more concentrated as manufacturers, influenced by their supermarket-chain customers and consider the adoption of innovative management accounting systems to be essential.

A study sponsored by CIMA (2013) explored the use and nature of MATs among UK SMEs. Nandan (2010) stated that the failure or underperformance of SMEs is often due to their lack of utilisation of appropriate MATs. This study investigated the nature and general quality of MATs among UK SMEs such as product costing, break-even analyses, WCM, debtor and creditor days, daily cash balances, stock turnover, budgeting, variance analyses, responsibility centres, standard costing, and capital expenditure appraisal techniques (payback and NPV), overhead allocations, and strategic management accounting.

The study also considered how management accounting roles are funded in such organisations and which techniques are infrequently used. It questions why some techniques are more frequently used than others. This study identified areas in which management accounting functions can be advanced within such businesses. The data were collected through interviews with CEOs, owners, and managers among the selected sample along semi-structured questionnaires of other senior managerial staff such as financial managers.

The findings revealed that there is a significant difference in the uses of MATs by the sample population of UK SMEs in the UK and that knowledge and understanding of these techniques can enhance performance. However, their use seems to be influenced by size, financial limitations, shareholder needs, background, knowledge, type of activities, and the overall experience of the managers (Magdy, 2008). The results also indicate that all the participant businesses have adopted the following techniques: product or service pricing; profitability analyses; and WCM (receivable and payable turnover, inventory turnover, and daily cash balances). Medium-sized businesses seem to use formal methods, while small businesses tend to use informal methods.

According to all the participant businesses, the three above-mentioned MATs are the most important elements of financial information. However, the study acknowledges that there is room for educating incoming SME owners and managers on the importance of basic management accounting knowledge that is needed for survival; for example, the necessary skills for understanding the application of WCM techniques, break-even analyses, and product costing, which are considered essential by all the participant SMEs and can help facilitate their survival during a challenging time of intense competition and in an uncertain business environment.

Similarly, the purpose of Collis and Jarvis's (2002) study was to discover the sources and usefulness of financial information among small businesses. The results of this multivariate analysis of questionnaire responses from 385 private limited companies in the UK, which focuses on the use of financial information by small companies, show that these companies have adopted several management accounting concepts such as formal planning or budgets. Furthermore, the results indicate that a large number of the small businesses that participated in this research implement management accounting procedures that include formal budgeting, planning, and control. Importance is placed on regulating cash and monitoring performance within the

framework of sustaining good relations with financial institutions. The results also indicate that the most used and valuable sources of financial information are monthly or periodical management accounts and cash-flow statements.

A study undertaken by Sandalgaard and Nielsen (2018) investigated MATs among SMEs in Denmark, focusing in particular on the value of planning, budgeting, and performance evaluation to manufacturing SMEs. The data were collected through questionnaires completed by Danish manufacturing SMEs and analysed using an exigency approach and SEM. The findings indicate that the importance attributed to the use of budgets by the participant SMEs was influenced by factors such as size, regionalisation, and interdependence. Furthermore, the extent to which budgeting was adopted was positively related to performance. One of the outcomes of this research is that it provides a good understanding of the role of management accounting within Danish production SMEs. It also brings further impetus to the academic debate concerning the value of planning and budgeting among MSMEs and emphasises the importance of budgets in performance. The most valuable consequence of this study is that it emphasises the importance of the budget target in performance appraisals for Danish manufacturing SMEs.

Andersén and Jansson's (2016) research employed different variables to investigate how family ownership and business orientation influence the adoption of MATs (such as formal planning) by performing a multivariate regression analysis of data obtained from a sample of 156 Swedish manufacturing SMEs. The study highlights the fact that there has been an abundance of previous studies on the importance of MATs such as short- and long-term planning or budgets for SMEs' performance, but many of these fail to consider what really causes differences in the uses of budgets in the context of management accounting methods among MSMEs. The research concludes that family ownership and the nature of the business are two reasonable clarifications

of such variations. Additionally, previous research on planning by SMEs such as the study conducted by Honig and Karlsson (2004) has employed extensive academic methods; for example, formal models, to explain variances in planning.

This makes it essential to investigate how specific characteristics of SMEs' management influence the use of formal operational planning. According to the authors of this study, the purpose was to determine how ownership and business orientation impact the use of MATs such as short- and long-term operational forecasting in SMEs. The results confirmed that family SMEs in Sweden use less formal planning methods than non-family businesses. However, contrary to previous research, this study concludes that there is a positive relationship between factors such as business orientation and the adoption of some type of formal short- and long-term forecasting. Ladislav's (2016) comprehensive analysis of different management accounting practices identified relatively low implementation of current management accounting practices in the Czech Republic such as the activity-based approach or BSCs. Szychta's (2018) study notes the slow progress of management practices in Poland. The results suggest that traditional cost accounting systems and methods remain dominant. Similarly, Uyar (2016) concludes that Turkish businesses still perceive traditional MATs as important.

In a further study, Cuzdriorean (2017) argues that the nature of both traditional and current MATs used by Romanian SMEs in decision-making was unknown. They add that SMEs are significant contributors to the Romanian economy, and indeed economies across the world. They undertook this research to investigate the nature of MATs used by Romanian SMEs. The study analysed 37 responses to questionnaires distributed to SMEs in one of the most industrialised areas of Romania. The results indicate that most of the respondents utilise a small number of traditional MATs, and that many of the current MATs documented in past studies and accounting books are rarely utilised

by these SMEs. The results further show that among the traditional MATs most utilised by Romanian SMEs are budgeting for cost control and cash-flow management. The most commonly used current MATs are benchmarking and performance evaluations based on monetary and non-monetary indicators. Additionally, the results indicate that the factors that impede the adoption of some of these techniques by Romanian SMEs are the costs of implementation, a lack of managerial determination, and financial limitations.

3.4 Research on the Situation in the US and Canada

The use of MATs and their worth in all organisations has attracted global research interest, especially in the US and Canada. Tara (2011), for example, investigated the relationship between the use of MATs and the success of small businesses in South Carolina in the US. The findings imply that the success of small businesses is vital and is relevant to both academics and small business owners. Tara claims that the complexity of accounting information and practices in relation to the success of an enterprise would make a considerable addition to the current body of relevant knowledge.

The main question addressed in this study was whether the high complexity of accounting information practices improves the success of MSMEs in South Carolina. According to the findings, there was a positive correlation between the high intricacy of accounting practices and high revenue among MSMEs, but no positive significant correlation between the high complexity of accounting practices and owner or manager education, experience, ethnicity, or gender.

Given the interest in studies on management accounting and MSMEs, further research relating to the use of MATs by microenterprises in the US was undertaken by Shields and Helleman (2016). This study was one of the first of its kind in the US and it provides the first known empirical evidence on the adoption and consequences of wide-ranging MATs in US microenterprises.

The data, taken from a sample population of 55 microenterprises, were analysed by means of a stepwise regression analysis. The results revealed that the participant businesses used multiple forms of management accounting practices to assist in their decision-making such as product and service profitability, break-even analyses, the monitoring of budgeted against actual performance, and evaluations of customer profitability. The results also indicate that regular use of MATs to evaluate product or service profitability and to assess customer profitability have a significant positive impact on return on investment. The findings also increase awareness of the comparative importance of management accounting information for microenterprise owners in the US.

Notably, the results also reveal that microenterprises that regularly evaluate customer acquisition costs have a lower return on investment. This might be considered inconsistent with the idea that management accounting practices have a positive impact on performance, as acknowledged in several studies (Wijewardena and De Zoysa, 2001; Wijewardena et al., 2004). However, considering the positive impacts of the calculation of product, service, and customer profitability, the outcome does make sense. The study was intended to have practical consequences because it provides clear evidence that management accounting concepts can lead to better performance, even among microenterprises.

The researchers hoped that the evidence revealed in the study would increase the efforts of microenterprise owners and managers to adopt appropriate management accounting tools to help them achieve higher business performance. As stated in Vroom's (1964) expectancy theory, 'the more an individual values an outcome, the greater the effort the person will spend to attain the desired outcome'. This concept has also been considered by Pineda et al.: '[a] greater effort will be used if a person believes that their actions will lead to effective performance' (1998, p. 69).

Finally, the researchers argue that within the context of US MSMEs, the study has consequences for academics interested in developing an enhanced understanding of microenterprise owners and managers' level of awareness of these issues from a different perspective. The researchers also suggest that future studies may aim to investigate more extensively the nature and adoption of management accounting concepts by microenterprises in the US and across the world.

Similar quantitative, questionnaire-based research undertaken by Darin (2016) focused on the use of activity-based costing techniques within the hospital accounting systems, specifically the relationship between factors linked to the use and adoption of activity-based costing in such systems in the US. The researcher argues that there were gaps in the literature regarding the use of activity-based costing in healthcare accounting systems in the US, and the effect of its exigence factors on the adoption of activity-based costing. Even though structural factors affecting the successful application of activity-based costing have been studied (Ibrahim and Saheem, 2013), no academic information is available regarding the use of activity-based costing in hospital accounting systems in the US.

The researcher's goal was that the study would add to the exigence concept in the literature on management accounting by increasing awareness of attitudinal exigency influences relating to the adoption of activity-based costing in healthcare accounting. Awareness of the associations between these exigency influences would help to increase the development of an academic database for the use and implementation of activity-based costing in hospital accounting and other businesses. The researcher adds that the study was desirable because research investigating activity-based costing and attitudinal contingency factors relating to activity-based costing in hospital accounting is inadequate in the US, despite the fact that the extant literature recommends that businesses should implement activity-based costing systems.

The activity-based costing system was developed in the mid-1980s in response to the wide-ranging implementation of old-fashioned and inappropriate costing techniques (Kaplan, 1984). Its application and use can lead to important rewards in terms of the enhanced the quality of strategic planning, growth in profitability, and the creation of operational procedural advancements (White et al., 2015). It can also enhance the quality of cost information, increase awareness and understanding of business procedures, increase clarity in the elements of costs and their structure and eradicate non-value-added activities (Kaličanin and Knežević, 2014).

While evidence in the management accounting literature demonstrates that businesses need to implement activity-based costing systems (Wegmann, 2008), implementation levels continue to be low, a phenomenon identified as the activity-based costing paradox (Gosselin, 1997; White et al., 2015). No adequate reason is given in the extant research to explain this paradox. Many of the costing methods that have been applied in healthcare businesses are considered inadequate and do not fulfil the requirements of those using the information, even though the managers of these businesses need adequate and appropriate cost information (Campanale et al., 2014).

Finally, the findings of this study suggest that an understanding of exigency issues can be vital to the successful adoption of an activity-based costing system (Velmurugan, 2010). The effectiveness of the use of activity-based costing systems in enhancing the value of cost information is mainly linked to the level of understanding and opinions of hospital chief financial officers concerning the usefulness of implementing an activity-based costing system to enhance cost-control systems. Additionally, the findings further indicate that implementation levels of activity-based costing systems in hospital accounting supports the presence of the activity-based costing inconsistency. No meaningful variances in hospital chief financial officers' opinions concerning the usefulness of the application of activity-based costing systems were found among businesses that have

implemented activity-based costing systems and those that have not. The results also reveal that hospital chief financial officers' opinions regarding the effectiveness of the practice of an activity-based costing system impact the following attitudinal exigency aspects: enhanced cost information and management systems.

However, the results also highlight the fact that the adoption and use of activity-based costing systems cannot eliminate the problems related to the use of insufficient costing techniques. According to a study undertaken by Huang et al. (2014), managers sometimes consider the activity-based costing system to be long and ineffective because of the data collection involved, allocation of costs to cost centres, and the evaluation of activities. The study also shows that the use of activity-based management accounting systems is inadequate (Tsai et al., 2010).

At the same time, Armitage et al. (2014) investigated the use of various MATs (such as budgets, performance evaluation techniques, costing practices, variance analysis, planning, and control) by Canadian and Australian SMEs. The researchers underscored the importance of SMEs in industrialised economies, but cautioned that little is known about the level of the use of MATs by SMEs such as costing, budgets, and responsibility centres within such businesses (Hudson et al., 2001). As a result, they researched a sample of 22 SMEs. They concluded that several MATs are utilised by these businesses, but their usage is determined by several factors such as the age and complexity of the business and the environment in which it operates (Moore and Yuen, 2001; Davila and Foster, 2005, 2007).

3.5 Research on the Situation in Africa

Ghorbel (2016) states that MATs are important in supporting good decision-making for most enterprises, as they provide both quantitative and qualitative information, which also assists in improving efficiency and profitability (Aouni et al., 2015). It is common knowledge that most

MSME managers and owners do not have the required level of accounting or financial knowledge to make important planning and financial decisions, which would help them improve their businesses' financial performance (Fischer et al., 2014).

The authors add that due to the current dynamic business environment, SMEs must double their efforts to succeed, compete well and strengthen their credibility with all their external partners such as banks. For SMEs to survive and thrive, managers need suitable MATs in order to acquire appropriate accounting data. This study investigated the relationship between the profile of managers and the use of MATs such as traditional and current management accounting practices based on the hypothesis that the profile, age, size and experience of managers will impact their use of MATs. A multiple linear regression analysis was performed on the data collected from the questionnaire responses of 221 Tunisian manufacturing SMEs.

The findings indicate that the profile of a manager partly affects their use of MATs (Hamadi et al., 2014; Ngongang, 2007, 2010; Ben Hamadi et al., 2014; Chapellier et al., 2013). According to Maduekwe (2015), SMEs in South Africa are failing because of their inadequate use of MATs such as budgets and pricing techniques, even though there are around 2 million SMEs in South Africa that contribute approximately 52% to 57% to the nation's GDP and account for 61% of its employment level. However, there remains a lack of clear knowledge concerning the nature and impact of MATs on the performance of South African SMEs. Mahdi and Azam (2018) also investigated the impact of MATs on the performance of SMEs in the Gauteng Province of South Africa, concluding that an increase in the use of such techniques leads to increased productivity. The findings of Amara and Benelifa's (2017) study reveal that 50% of Tunisian SME businesses make use of MATs.

A further study of the nature of MATs in South African SMEs was undertaken by Maziriri and Miston (2016) who assert that an insufficient number of studies have examined the effect of MATs on the business performance of SMEs in South Africa, and therefore, there is a need for more empirical studies. Studies that focus on MATs as an indicator of business performance are scarce. Their study considered the relationship between the use of MATs and the performance of SMEs in South Africa using a probability sample of 380 SMEs in the Gauteng Province of South Africa. A regression analysis was performed to investigate the relationship between MATs and organisational performance. The results revealed that the use of MATs has a positive impact on the profitability of SMEs in South Africa, as alluded to by Amoako (2013).

The results further demonstrated that costing technique is an important indicator of business performance, and that a high use of the costing technique improves performance, as indicated by the results of research by Elhamma and Zhang (2013) who claim that MATs, such as the activity-based costing technique, lead to improved business performance. Additionally, the use of budgeting has been found to be an important indicator of business performance and its use has helped in improving the performance of South African SMEs (Maziriri and Miston, 2016).

The study concludes that the use of MATs such as costing, budgeting, performance evaluations, and acquiring the information needed for decision-making has helped in raising the performance level of SMEs in the Gauteng Province of South Africa. It further states that the South African businesses that have applied these concepts improved their business performance. However, the researchers indicate that, due to the limitations of the study, further studies that use different variables are needed.

3.6 Research on the Situation in Asia and Asia-Pacific

The global volatile business environment has led to a change in direction by SMEs towards a more efficient use of resources. Therefore, the role of MATs in helping them achieve profitability and sustainability has become a global topic and has led to much research being undertaken to investigate and provide evidence regarding the nature of the relationship between the use of various MATs and business performance (in terms of liquidity and profitability). Asia, in the same way as Europe, the US, and Africa has also witnessed an increasing interest in empirical research concerning the impact of MATs on the business performance of SMEs in various regions due to the importance and contribution of SMEs in all economies. Kamilah (2012) researched the use of MATs by Malaysian manufacturing SMEs by performing an analysis of the responses of 160 Malaysian account managers to a postal questionnaire. The results indicate that these SMEs use a wide range of MATs, including budgeting, performance evaluation, and costing. They further suggest that many of the businesses that participated in the survey utilise both monetary and non-monetary measures, but the use of monetary measures is greater. This conclusion, according to the Kamilah, is consistent with the results of past studies such as those of Luther and Longden (2001) and Abdel-Kader and Luther (2006).

The results of a similar study undertaken by Azudin and Mansor (2016) also reveal that many Malaysian SMEs still utilise traditional MATs, as reinforced by the study of Maclaren and Liu (2012). However, Azudin and Mansor (2016) reported that there is minimal use of advanced MATs by such SMEs, which might be caused by businesses lacking knowledge of the relevance of MATs to business performance. Nevertheless, the results of Rufino's (2015) research into the use of MATs by SMEs in the city of Tarlac in the Philippines, based on data obtained from both questionnaire responses and interviews, revealed that many of the participant SMEs utilise MATs.

Costing and variance analysis were the most adopted MATs, while the least-used concepts were NPV and zero budgeting. The results further indicate that time constraints formed the main obstacle to the adoption of MATs by the participant SMEs. Nevertheless, the researcher recommends increased use of MATs by these SMEs to help them enhance their business performance.

Mohinder and Ankush (2013) compared the MATs used by 100 Indian businesses in the hospitality sector and 100 businesses in the services sector. The aim of the study was to determine the importance of the use of MATs by these businesses and to reveal any differences concerning their use in the two sectors. The findings revealed one important difference which was that use of the main MATs (activity-based costing, budgeting, discount cash-flow, and profit and SWOT analyses) was higher in the service sector businesses than among businesses in the hospitality sector. Additionally, participant businesses in both sectors indicated that their use of MATs contributed to their overall success.

A similar study undertaken by Chand and Dahiya (2010) on the use and importance of MATs among Indian SMEs in the hospitality sector considered the obstacles hindering their adoption of MATs. The researchers found that the use of MATs by such SMEs influences their cost savings and enhancement of quality. However, high costs, ownership type and business characteristics were identified as the main obstacles to the implementation of MATs by these businesses.

Budgeting for planning and control is one of the most important MATs, and it is for this reason that Robyn et al. (2010) explored the relationship between the use of budgets and the performance of small primary healthcare businesses in Australia. Based on an analysis of questionnaire responses from 144 members of The Association of Australian Practice Managers, the results revealed that the implementation of budgets among these businesses is linked to their size and

structure. However, strategy and environmental issues are linked to the level of use of MATs. The study also concluded that the use of budgets has a positive impact on the performance of these businesses. However, the researchers recommended that further studies should be undertaken to validate the accuracy of the determinant factors associated with budget adoption. Similarly, a study conducted by Fu (2012) of the adoptability of MATs (particularly budgeting) by Chinese electronic household appliance companies focused on establishing the differences between the Western practice of budgeting and those used by Chinese companies. The results indicated that issues concerning the environment motivate Chinese companies to adopt budgeting systems and other MATs. Other reasons for the use of MATs include the need to regulate prices and reduce costs.

3.7 Research into Specific Areas of Management Accounting Techniques

The above literature review focused on management accounting techniques from developed and developing countries. This section reviews studies on specific areas of MATs that relate to MSMEs' needs in terms of accounting information such as budgeting, cash flow, break-even analyses, and strategic management accounting (BSC). The listed concepts are relevant to all businesses, including MSMEs, due the nature of their sector and activities. These are budgeting for planning and control of business activities, cash-flow forecasts (projecting the cash position of the business, and break-even analyses (to improve pricing and the BSC). These concepts were selected because of their relevance to MSMEs in terms of cost control, pricing purposes, and so on (Dick-Forde et al., 2007). They are particularly relevant to the MSME sector, as explained by Gerdin (2005) and Chenhall (2003). According to Azudin and Mansor (2016), there is no unanimously appropriate accounting system that is equally applicable to all businesses in all situations. The adoption of a particular suitable accounting system by a business depends on the condition of the business in terms of its structure, size, available resources, technology, and

external environment (Haldma and Lääts, 2002; Tillema, 2005). Therefore, the concept must recognise the correct features of a suitable MAT or systems that are correlated with certain clear conditions of an organisation and establish a match. Greenhalgh (2000) stated that the management accounting techniques employed in an SME setting constitute a management approach which depends on the use of easier management accounting techniques rather than the more sophisticated techniques. A possible reason for this is that traditional techniques such as budgeting for planning, cash-flow forecasts, break-even for pricing and the balanced scorecard for performance evaluation and benchmarking are better understood and are therefore reliable sources of information for MSME businesses.

3.8 Budgeting

Budgets are forecasting tools. They help organisations communicate their objectives in financial terms. Budgets usually cover a specific project period or a financial year. A budget is expressed in words and agreed by the managerial team. Budgeting is used to forecast income and expenditure and is a vital component of any business activity, particularly for MSMEs due to their financial constraints. It is a valuable tool that can help businesses manage their scarce resources – even MSMEs formulate budgets – and is critical for business success (Huang and Chen, 2010). It can also be implemented as a control mechanism to monitor and compare actual revenue and expenditure against what was budgeted. Monitoring is a vital part of budgeting in order to maintain control and to ensure that resources are being well managed (Abdel-Kader and Luther, 2006).

Numerous previous studies have debated budgets and their importance in the context of organisational planning and control such as those of Frow et al. (2010), King et al. (2010), Libby and Lindsay (2010), Sprinkle et al. (2008), and Waldmann (2008). Organisational control is one of the most important mechanisms of budgeting and deals with business governance, while its

importance has been highlighted as a vital component of budgetary control systems in any organisation (Baxter and Chua, 2008; Gulamhussen and Guerreiro, 2009; Hughes, 2009; Gurbuz et al., 2010; Major and Marques, 2010; Ekanayake et al., 2009). Another important aspect of budgeting is performance evaluation. With the help of budgets, a manager can evaluate a company's performance by comparing budgeted against actual to ascertain how the business has performed during a particular budgeted period (Deville, 2009). The performance evaluation aspect of budgeting has been discussed by an extensive range of researchers (Chung et al., 2009; Church et al., 2008; Demski et al., 2008; Dossi and Patelli, 2008; Hall, 2008; Hansen, 2010; Hartmann and Slapničar, 2009; Mensah et al., 2009; Román, 2009; Schueler and Krotter, 2008). Incentive systems have also been studied in depth (Budde, 2009; Dikolli et al., 2009; Homburg and Stebel, 2009; Pfeiffer and Velthuis, 2009; Upton, 2009; Zamora, 2008), as has the major area of performance measurement systems (Abernethy et al., 2010; Broadbent and Laughlin, 2009; Burney et al., 2009; Cardinaels and Van Veen-Dirks, 2010; Davila et al., 2009; Demski et al., 2009; Ferreira and Otley, 2009; Kennedy and Widener, 2008; Lillis and Van Veen-Dirks, 2008; Malmi and Brown, 2008; Mundy, 2010; Sandelin, 2008; Van Veen-Dirks, 2010; Wiersma, 2008, 2009; Wouters and Wilderom, 2008; Tucker, 2010; Abdel-Maksoud and Kawam, 2009; Taticchi et al., 2008; Yu et al., 2008; Bedford et al., 2008; Ratnatunga and Montali, 2008).

Stephen and Van Der Stede (2004) investigated four potential reasons as to why a business adopts a budgeting practice by examining businesses in the US: planning, performance evaluation, communication of objectives, and strategy development. The data comprised questionnaire responses from 57 managers accountable for budget preparation in their areas of expertise and the data were analysed by means of a Pearson correlation analysis and a regression analysis. The results indicated that budgets are adopted for performance evaluation in large firms with clearly

defined and verifiable funds (Rufino, 2015). Even businesses facing high competition seem to find budgets useful for communicating business objectives and policy creation. Dugdale and Lyne (2004) reported that the UK's medium- and large-sized companies utilise budgets. However, the same competitive conditions seem to negatively affect the importance of budgets for performance evaluation (Stephen et al., 2004). The study found that important backgrounds largely reveal small overlap in the reasons to budget, and some have conflicting reasons to budget. After identifying the factors that affect businesses' adoption of budgeting, the study considered how well businesses do in fulfilling their determined purpose for budgeting. The results revealed that the use of a rolling budget improves operational planning and reduces budget performance in performance evaluations, but the target obstacle reduces budgeting performance for both the statement of objectives and strategy formulation. These results demonstrate that there is no single set of features that consistently and positively impacts each reason for adopting a budgeting practice. Different budgets require diverse levels of budget participation for their adoption to be useful (Stephen et al., 2004).

However, these results should be interpreted with caution because the sample size was small. Even though the respondents who participated in this survey are responsible for budget preparation in their areas of expertise, this association may result in self-selection bias. Furthermore, caution should be exercised when considering the outcome of this study regarding the impact of budgeting on business performance because the performance assessments represented only one variable, and the effects of budgeting on business performance may change from time to time. Nevertheless, the researchers trust that the findings are both educative and helpful concerning the overall expectancy that a properly selected budget adoption should have a positive impact on business performance. In a similar vein, Yuliansyah et al. (2018) explored the impact of budgeting on individual

performance. The study was based on questionnaire responses from 88 hotel businesses in Indonesia. SEM using SmartPLS software was applied to analyse the data. The researchers claimed that past management accounting studies found it challenging to analyse the impact of employee pride in being a member of a certain organisation. This study has advanced management accounting studies, particularly concerning the participation of employees in the budgeting process of the hotel industry.

Budgeting practice, according to researchers, is an important concept in management accounting (White and Fruco, 2006; Lau and Tan, 2012; Maiga and Jacobs, 2007). The results of many prior studies (Agbejule and Saarikoski, 2006; Brownell and Dunk, 1991; Frucot and White, 2006; Jermias and Yigit, 2013; Lau and Lim, 2002; Leach-López et al., 2007, 2009; Uyar and Bilgin, 2011; Yuliansyah and Khan, 2017) indicate that budget participation mainly occurs at managerial level. However, Derfuss (2016), Maiga (2005) and Yuen (2007) suggest that there is still no uniformity between participation in budgeting and performance; therefore, this cannot be generalised to different situations. Derfuss (2016) suggests that the association of participative budgeting with performance raises a considerable argument, and the matter remains inconclusive in management accounting studies. In fact, Maiga (2005) claims that the past evidence as to the relationship between participation in the budgeting process and performance has revealed that the impact is highly inconsistent – it can be positive, weak, neutral, or even negative. Hence, based on these inconsistent assertions, Yuen (2007) concluded that there is no simple relationship between budget participation and job performance and claimed that other factors may affect the relationship.

As a result, Yuliansyah et al. (2018) focused on two other factors of employee pride in their organisation and budget participation, job satisfaction and performance outcomes in different

situations. There has been a lack of research into this relationship and accountants have also neglected to investigate this association. The underlying notion here is that being associated with a business that has a good name and record can create job satisfaction, especially in the hospitality industry (Bouckaert, 2001; Helm, 2013).

Job satisfaction is vital in hospitality because if employees of a particular hotel or restaurant are unhappy, it will be difficult for the organisation to provide quality service to clients, which may lead to the business developing a bad reputation in its sector where there may be stiff competition (Gouthier and Rhein, 2011; Darvishmotevali et al., 2017). Therefore, employee involvement in certain decision-making processes such as budgeting or even some form of consultation can have a rewarding outcome for hospitality businesses, as such involvement may be seen by employees as enhancing their sense of belonging and can increase job satisfaction (Jermias and Setiawan, 2008; Kung et al., 2013; Huang and Chen, 2010; Lau and Tan, 2003; Yuliansyah and Khan, 2017). It is also important to note that job satisfaction can be further enhanced by how well managers communicate openly with junior employees and by allowing a two-way flow of information regarding decision-making and budgeting processes. This strategy of involving employees in some form of the decision-making process can increase their job satisfaction and their overall trust in managers and these factors will increase employee efficiency. This is because the employees feel trusted by their superiors to contribute opinions and make proposals as to how to assist the business in attaining its overall objectives (Yuliansyah and Khan, 2017). Conversely, businesses that discourage employee involvement in decision-making, such as in the budgeting process, reduce employee satisfaction and efforts (Steven et al., 2013).

Notwithstanding these assertions, past studies have failed to investigate the impact of employee involvement in budgeting in promoting employee pride in membership of their organisation, which

can increase job satisfaction and in turn elevate individual employee and overall business performance (Kung et al., 2013).

The findings indicate that employee involvement in the budgeting process has positive direct and indirect effects on employee performance. It gives them the sense of psychological ownership of being involved in the budgeting process and enhances their commitment to the success of the budget, which can lead to improved overall business performance (Boujelbene and Affes, 2012; Stammerjohan et al., 2015). Such involvement gives employees a sense of satisfaction as they perform their tasks (Decrop and Derbaix, 2010; Kraemer et al., 2017). Overall, the results suggest that employee participation in the budgeting process enhances employee performance. Organisations that reward employees not only in monetary terms, but also make them feel proud and respected will motivate these employees to work hard and better serve the organisation. Managers should encourage and welcome employee participation in decision-making and make them feel that they are part of the organisation. Finally, it is important to note that the study was limited in terms of its small sample size and the fact that it focused only on hotels in the city of Lombo; hence, the results may not illustrate the actual reality of the hotel industry in other parts of Indonesia and other parts of the world. Additionally, the factors considered in this research are not the only factors affecting employee performance.

3.9 Cash Flow Forecast

The budgeting process informs a business as to whether there are enough resources to cover its overall expenditure for the next quarter or financial year, while monitoring indicates how well the business is keeping to its budget. Cash-flow forecasting has always been a vital tool for all businesses, whose purpose is planning and control, as well as in some cases supporting decisions that have already been made. This tool is valuable because it indicates whether there will be enough

resources to pay for immediate commitments as they become due. A cash-flow forecast also provides an understanding of changes in the structure of working capital by indicating whether creditors, debtors and stock have decreased or increased in a specific period. Cash-flow statements also show how cash has been generated and how these funds have been utilised by the business. The cash-flow statement enables users of financial statements to assess the liquidity, viability, and financial adaptability of a business, as well as the fact that its heightened importance at present cannot be understated – it is now more important than ever due to the negative impact of the pandemic on the resources of all businesses, including MSMEs. Unlike the reported profit in the financial statements which can be manipulated using different depreciation methods or valuations of stock, cash flow cannot be easily manipulated.

According to Rufino and Henry (2015), cash flow is a significant tool for decision-making for SMEs in the city of Tarlac in the Philippines. The cash-flow statement illustrates incoming and outgoing funds over a specific period. It displays the net cash and equivalents coming in and out of a business. If it is positive, the business's liquid assets are improving, allowing the business to settle its debts, reinvest, pay dividends and daily expenses, and safeguard against future financial challenges. However, negative cash flow is an indication of the deterioration of the liquid assets of a business. Net cash flow is different from net income which incorporates debtors and other receivables for which payments are yet to be received (profit), in that net cash flow signifies the resources readily available to the business (liquidity) for settling debts, paying wages, and other immediate commitments. Therefore, appropriate management of cash flow is advocated as a matter of survival or failure for many MSMEs (Opiela, 2006). Cash-flow management thus helps MSMEs evaluate whether their business has enough liquid assets to remain solvent. The application of this concept is critical for enhancing performance, competitiveness, and for better

handling change (Reid and Smith, 2002). Thus, the availability of funds is critical for the smooth running and sustainability of any business, including MSMEs, because without immediate funds, salaries, suppliers and rents cannot be paid, which is currently prevalent due to the COVID-19 pandemic. Businesses are presently struggling to keep afloat because of various forms of lockdown and a lack of spending by consumers as a result of unemployment and various other factors.

The projected cash-flow balance communicates to the business whether there are sufficient funds for a specific month or period. An adverse figure is an indication that the business must arrange to pay the obligations due later or acquire funds immediately to pay these immediate commitments. If the business does not have available funds to make these payments, a bank overdraft or loan will be needed to keep the business going. Therefore, as indicated in this brief scenario, it is vital and relevant for business managers and owners of all businesses, including MSMEs, to understand and appreciate the value of management accounting concepts for the sustainability of their organisations (Ahmad, 2012).

3.10 Break-even Analyses for Better Pricing

The break-even analysis is another essential MAT that supports planning and is vital for all businesses, including MSMEs, as it helps set pricing targets (Dick-Forde et al., 2007). The total contribution increases as more services or units are sold and there comes a time when the contribution is just sufficient to cover the direct costs. When the business reaches this point and all the expenses have been covered, then the next service provided or unit sold will produce the first indication of a profit for the organisation. The point at which the business makes no profit or loss is known as the break-even point, and knowledge of this is critical for all businesses, including MSMEs. A break-even analysis is important for planning and controlling the vital areas of any

business, and it is crucial for all business managers and owners to understand this concept because it helps a business determine its profit objectives (Garrison et al., 2015).

The aim of academic discussions on break-even analyses is to demonstrate the importance of this concept in all pricing decisions. It is also necessary to indicate the two dimensions of the break-even point: static and dynamic. The static dimension is when a single calculation of the break-even point in units – for example, in British pounds – is based on a certain set of related costs and a single presumed sale price. The outcome of this calculation is important and can be useful for understanding how much output would be needed for a business to avoid losing money on a project being undertaken. A dynamic break-even analysis is a recapitulation process, whereby several break-even points are calculated for prices to be considered by comparing the change in the break-even point as a result of changes in these prices. It is important to understand the association between these two factors – the change in price and the resultant change in the break-even point. Therefore, it is vital that business managers and owners understand the relevance of the appropriate pricing of products and services in any business venture.

Both the static and dynamic concepts of the break-even analysis underline the fact that pricing policy dictates any maximisation of profits. It is the mechanism by which businesses are able to achieve their profit objectives. However, the balancing act of maximisation profit and setting appropriate prices for products and services poses challenges for a large number of businesses because they need to set a price that will enable them to achieve their profit targets, but will not exceed what customers are willing to pay, as we have started seeing recently in the case of Apple's iPhones. The iPhone X costs around £1,249 at present, even though experts have found that consumers have started hanging on to their previous iPhone models due to the high cost of the latest version. Apple has denied that this issue is the reason for the reduction in its recently

forecasted profits. Rather, they attribute the reduction to the trade war between the US and China, which led to fewer iPhones being sold in China.

Kavita et al. (2018) investigated the level at which 10 selected banks in both the public and private sectors in India reached their break-even point: the deposit and advances amounts. They analysed secondary data – the annual reports of these banks from 2001 to 2015. The results indicate that the break-even points of both the public and private banks were gradually lowering, but the break-even ratio was less among private sector banks than among those in the public sector. The researchers suggest that every business should be aware of its break-even point, including banks, because it is after this point that any increase in the units or services sold will lead to the point at which the business is achieving profit. Likewise, in a study of 55 microenterprises in the US, Shields and Helleman (2016) conclude that microenterprises utilise break-even analyses. This conclusion is supported by the study conducted by Baron and Shane (2008) who found that the break-even analysis is a crucial component of business activities because it provides a reality checkpoint at which the business should have an idea as to how things are progressing in terms of profitability and other issues (Garrison et al., 2015). Hunter (2011) adds that paying attention to such an important accounting concept is crucial for the success of SMEs.

3.11 Strategic Management Accounting

The concept of BSC is derived from strategic management accounting, the improved version of management accounting which stresses not only internal financial information, but also the external characteristics of the business operations (Smith, 2005). Simmonds (1981) first coined the phrase ‘strategic management accounting’, and considered it to be separate from management accounting because of its greater emphasis on the evaluation of the business alongside its competitors. Strategic management accounting supports a business’s management team in gaining

an overall view of the practices and business methods of its competitors, as well as in making decisions in response to competitors (Bromwich, 1990). Sleihat et al. (2012) assert that modern-day management accounting systems such as strategic management accounting and BSC provide quality information to managers in order to improve decision-making. There is no universal definition of the role of strategic management accounting among academics. There are those who even question the role of accounting information in decision-making and claim that pragmatic evidence on the successful dissemination of strategic management accounting is still not unanimous.

By contrast, scholars such as Hopper et al. (2007) who strongly believe in the future of management accounting profoundly emphasise the use of strategic management accounting. Juras (2014) and Alnawaiseh (2013) also state that the concept of strategic management accounting is gaining momentum. Furthermore, Roselender and Hart (2003) maintain that strategic management accounting is not only about making management accounting more strategic, but can also benefit businesses. According to Baines and Langfield-Smith (2003), the non-financial characteristics of strategic management accounting are the unique selling point of the practice. Mayanga (2010) and Drury (2015) also explain that management accounting information has both quantitative and qualitative elements. The quantitative elements include internal management accounts and stock records, while the qualitative elements relate to non-financial information which cannot be presented in monetary terms. Qualitative factors are occasionally overlooked by managers and owners when the numbers that are produced directly point only to one resolution. This policy is imperfect because the qualitative parts of a solution are as important as the quantitative or monetary parts. Hence, the best decisions usually involve consideration of all these factors.

To determine the most appropriate business strategies for any organisation, including MSMEs, in a volatile and competitive business environment such as the present crisis caused by the pandemic, both quantitative and qualitative information produced by accounting practices is critical, as formulating the most appropriate policy is a process that needs a significant amount of consideration and data. Determining the most appropriate business strategy requires accurate information and MATs not only produce the skills and knowledge required to formulate appropriate strategies, but also control the success of those strategies (Uyar, 2019). Shah et al. (2011) explored the role of management accounting, examining the claim that strategic management accounting is the future of this approach. Their study considered the advancement of strategic management accounting as a discipline, thereby contributing to the management accounting data by illuminating the role of management accounting in decision-making. The research question addressed in this study was whether strategic management accounting has become a champion for the management accounting discipline.

They employed Norreklit's (2000) analytical technique to answer the question, which involves increasing the extent of clarity and accuracy in the meaning of the ideas contained in the model. The researchers state that the benefit of using this technique is that a particular answer is evaluated in terms of its accuracy and strength. This analytical method supports the usefulness of and contributes to the further advancement of any academic framework (Haider et al., 2011). Some researchers argue that the most notable developments in management accounting are strategic management accounting, activity-based costing, and BSC because these innovative models focus on both the internal monetary information and external features of organisational procedures. According to one study, the main characteristics of strategic management accounting are its

inclusion of non-monetary aspects in decision-making purposes and BSC (Abdel-Kader and Luther, 2006).

These characteristics are ‘collecting information related to the competitors, using accounting for a strategic decision, cutting costs on the basis of strategic decisions, and gaining competitive advantage through it’. According to the researchers, the accounting discipline has been criticised for not utilising strategic management accounting. To address this criticism, researchers in the management accounting discipline have been promoting the use of systematic tools established in the field of strategy and marketing, including BSC, activity-based costing, and value chain analysis.

Finally, the researchers reviewed the claim that strategic management accounting is the future of management accounting. The reasoning behind this claim is that strategic management accounting solves all complaints concerning traditional management accounting systems. There remains a lack of strong empirical evidence as to the belief that strategic management accounting will satisfy researchers’ expectations, but there is a strong association between business performance and a formal strategic policy. Strategic management accounting can play a vital part in bridging the gap between accounting and strategy management (Anderson, 2007; Roselender and Hart, 2003).

The study concludes by asserting that the future of traditional management accounting is not only strategic management accounting, but also the integration of all management fields. The researchers also highlight the need for further research into the dissemination, implementation, and usefulness of strategic management accounting systems and state that only empirical evidence can establish whether strategic management accounting is the champion of management accounting (Shah et al., 2011).

The present study focuses on BSC, specifically its relevance in the decision-making processes of all businesses, including MSMEs in the UK and worldwide. It will also briefly consider costing techniques such as activity-based costing. Despite claims regarding the importance of strategic management accounting in business success, empirical studies conducted by Alkaraan and Northcott (2006) and Kamilah (2013) found that the uptake of such tools among UK businesses is limited.

3.12 Balance Scorecard (BSC)

The evaluation and enhancement of business performance is a challenging goal for any organisation, including MSMEs, and one of the MATs that helps businesses comprehensively undertake these activities is BSC as it incorporates both financial and non-financial factors.

However, most empirical studies on the use of BSC have been conducted in relation to large businesses (Malagueño et al., 2017). BSC enables businesses to undertake regular self-performance evaluations and to utilise benchmarking methods by identifying their competitors' strengths and weaknesses.

The concept of BSC was first presented by Kaplan and Norton (1992) as an effective management technique that combines employees' activities with organisational strategy by harmonising both financial and non-financial measures for performance-monitoring purposes (Latshaw and Choi, 2002). It classifies strategic objectives according to numerous perspectives such as financial, customer, internal business, learning, and growth and links them to performance indicators. Quantitative and qualitative objectives can be considered equally and BSC thus overcomes the overemphasis of financial objectives (Butler et al., 1997). These perspectives are important and relevant to almost all business activities, including those of MSMEs operating in all sectors in the UK. Every business requires start-up capital which is provided by the owners or owner-managers,

who also need recompense. A business also needs to find a way to satisfy its customers and remain competitive in order to survive. For a business to achieve its aims and objectives, it must first establish both the internal and external methods that will be employed to do so (Kaplan and Norton, 2001; Hagood and Friedman, 2002).



Figure 2: Vision of Business Strategy (Kaplan and Norton, 2001)

Kaplan and Norton (1992) explain that by combining tangible and intangible assets, a business can create customer differentiation value propositions and better results. One of the reasons why businesses use BSCs is the flexibility of the tool. Its four perspectives are standard, but a fifth element may be added as in the case of the Tesco steering wheel, which it considers useful and relevant to the company's achievement of its objectives. In the 1990s, Tesco was third in the UK

retail market and losing its market share. The recession had impacted its performance, but it has since managed to thrive and became the UK's preferred supermarket in 2004.

The Tesco steering wheel includes a fifth perspective in its BSC to communicate its strategy-aligned goals and manage strategic performance. This allows the company to monitor its progress and measure its success. The core purpose of adding the fifth element – to create value for customers and earn their lifelong loyalty – has been delivered according to a clear simple strategy of long-term growth. The strategy that underpins Tesco's four operational elements are core UK business, non-food business, retailing services, and international operations. The four perspectives are people, customers, financial, and operations. The fifth perspective is intended to encourage Tesco employees to be responsible residents in the societies in which they work and reside, as illustrated on the following page. Each perspective is monitored according to demanding, but achievable, business targets. Each store has its own individual steering wheel to which all staff member objectives are connected and which relates to day-to-day business operations. At every level, if the wheel moves in the wrong direction – that is if targets are not being met – the steering wheel group investigates the reasons for this and formulates corrective actions.



Figure 3: Tesco PLC's Steering Wheel BSC (Tesco PLC, 2013)

The concept of BSC has featured more prominently in academic discussions in recent years (e.g., Sundin et al., 2010; Tayler, 2010; Vila et al., 2010; Herath et al., 2010; Kraus and Lind, 2010; Cokins, 2010; Albright et al., 2010; Neumann et al., 2010; Cardinaels and Van Veen-Dirks, 2010; Northcott and Smith, 2011; Butler et al., 2011). BSC is one of the most important MATs and is extensively used by all types and sizes of businesses, including SMEs (Rigby and Bilodeau, 2015; Cooper et al., 2017). In recent years, efforts have been made to increase and improve the use of BSC by SMEs (Fernandes et al., 2006; Garengo and Bititci, 2007; Hudson-Smith and Smith, 2007; Wouters and Wilderom, 2008; Taylor and Taylor, 2014). Proponents of BSC argue that SMEs could benefit considerably from adopting it; however, empirical evidence concerning the impact of adopting BSC on SMEs' financial performance (profitability) is scarce (Gumbus and Lussier,

2006; Biazzo and Garengo, 2012; Hoque and James, 2000; Crabtree and Debusk, 2008). Moreover, there are researchers who argue that the benefits gained from the use of BSC may come at the expense of the flexibility associated with MSMEs due to the formalisation of their business activities (Benner and Tushman, 2003). Nevertheless, it is widely held that BSC, as a performance measurement system, allows businesses to translate their objectives into achievable goals. A critical hypothesis of BSC is that each performance measurement element is one component of an overall combination of measures (such as financial and non-financial results of previous business activities) which can be tracked and measured against the business's actual progress. Corrective action can be taken if there are any signs of deviation from the desired objectives (Garengo et al., 2005; Bisbe and Malagueño, 2012).

Davisa and Albright (2002) investigated the usefulness of BSC in improving performance in the US banking sector. The aim of their study was to ascertain whether the bank branches that adopted the BSC practice outperformed those that did not. According to the researchers, there is insufficient practical evidence to support the implementation of BSC measurement techniques. Therefore, the researchers attempted to provide such evidence by studying the effect of BSCs on the performance of some US banks by means of a field study. This is because the application of BSCs, according to Kaplan and Norton (2001) can vary between organisations, between branches, and between units due to their disparate objectives.

Considering the limitation of the lack of availability of relevant data, the research method applied in the study was in line with that of Cook and Campbell (1979), although the plan for the study differed from similar studies such as those conducted by Banker et al. (2000) and Hoque and James (2000) who collected data by means of questionnaires relating to non-financial measurement and usage. Usable data in a study undertaken by Davisa and Albright (2002) was collected by means

of a field study from 1999 to 2001 of nine bank branches in the south-eastern region of the US. According to the researchers, the participant branches were located in both rural and urban areas, whereas the branches were of different sizes. The participant bank had 375 employees at the time of the study – 250 at branch locations and 125 at the head office. Access to the bank was gained through friends of the researchers who were working at the branches, but these friends were not involved in the development and adoption of BSC. Composite key financial measures were the financial perspective, the customer perspective, the internal business perspective, and the learning and growth perspective. According to the researchers, in addition to bearing the learning and growth perspective in mind, it is important to improve staff satisfaction and retention. The managerial team of the participant bank hoped that introducing BSC would increase staff satisfaction and retention rates. The statistical T-test method was used to analyse the data, and the results indicated that the branches that adopted BSC performed better than those that were not using a composite financial measure. The research design, according to the researchers, allowed for the use of casual statements regarding the relationship between the implementation of BSC and any improvement in financial performance.

The findings are in line with the conclusions of similar studies conducted by Banker et al. (2000) and Hoque and James (2000) who included non-financial measures, the results of which indicate that the inclusion of non-monetary measures improves financial performance. Rufino (2015) also reported that SMEs in the city of Tarlac in the Philippines were able to achieve their financial and non-financial targets with the help of MATs. Egbunike et al. (2015) investigated the combined use of activity-based costing and BSC among Nigerian businesses, concluding that the use of activity-based costing would provide data which, if entrenched within the four perspectives of BSC, would help a business develop advanced MATs. Management teams develop core

competencies in their managerial function, which could also support the policymaking procedure and provide managers with the information needed to make better decisions.

Notably, however, research undertaken by Ittner et al. (2003) revealed a negative relationship between the use of BSC and return on assets, while the results of a study conducted by Davisa and Albright (2002) identified a positive enhancement in targeted measures. Likewise, Lawrie et al. (2004) claim that BSC has failed to present a link between non-financial data and future financial performance. Naro et al. (2011) also assert that BSC overlooks important factors such as the impact of a volatile business environment and society. Finally, Davisa and Albright (2002) conclude that their study has contributed to the relevant literature by providing evidence that the adoption of BSC can improve financial performance. Even though the researchers could not obtain detailed performance information concerning the non-financial BSC measures, they compared composite key financial measures for both the branches that used BSC and those that did not prior to and after the programme. The results suggest that the adoption of BSC was the main reason for the difference in the level of performance between those branches that adopted the BSC and those that did not, as the former seemed to perform better in all aspects of performance.

Therefore, in addition to the aforementioned limitation of researchers not obtaining non-financial measurement data, it is important to note other shortcomings of this research such as the 24-month duration of the study – a longer duration may result in a different conclusion. Another limitation, according to the researchers, is the lack of generalisability of the findings because businesses operate in different conditions. Hence, the study cannot conclude that adoption of the BSC leads to improved performance in every case. Nevertheless, the researchers maintain that the BSC can be effectively utilised to improve financial performance.

One of the benefits of adopting management accounting concepts is that it provides a system that can help a business improve its ability to interact with its external environment and attain its objectives (Lohr, 2012). One of those concepts is Porter's five forces which provide management teams with knowledge of both the competition among existing businesses and other forces such as the threat of new start-ups, alternative options available to consumers, and the bargaining power of buyers and suppliers. These factors can have an impact on the overall profitability of any organisation, including MSMEs, due to strong competition in the business environment (Manegold et al., 2007). There are other external forces that are equally critical to businesses aiming to become competitive: political, economic, social, technological, and legal. These forces are beyond the control of organisations, yet they can have an enormous influence on the overall performance of all types of businesses (Chapman, 2005). Therefore, managers, owners and management accountants should be aware of these forces, employing an analysis commonly known as a PESTLE analysis (Danneels, 2002).

Korcsmáros and Simova (2018) investigated the issues that influence the external business environment of SMEs in the Nitra region of Slovakia. The data comprised questionnaire responses from 496 SMEs and were analysed using the applied quantitative technique known as ANOVA. Supported by the application of Porter's five forces to the data, the researchers concluded that factors such as technology, environmental regulation, economic conditions, purchasing power of customers, and the climate all impact the productivity of SMEs in the Nitra region of Slovakia. Furthermore, the findings indicate that the costs of raw materials and of transporting them impact the quality of the products. The results also indicate that competition can be both a negative and positive factor because it motivates enhancement of the quality of products and services, which helps businesses remain competitive. Finally, the researchers acknowledge that while the findings

provide important information, such as any other research, they also have limitations. For instance, the data used were derived only from non-financial sectors of the Nitra region of Slovakia, so the researchers encouraged further studies using data from the financial sector in other parts of Slovakia.

Another important strategic management accounting tool is activity-based costing, a costing technique that is relevant to all types of businesses due to global competition, including MSMEs (Kaličanin and Knežević, 2014). It is critical that businesses align their costs with their structural requirements. According to Drury (2008), in recent years, businesses have adopted activity-based costing, despite some of the criticisms of this approach (Lockamy, 2003).

To become competitive, a business must have capabilities that will enable it to outperform its competitors, and this also applies to retail and hospitality MSMEs in the UK. For instance, to satisfy its customers, a business must concentrate on all the key success factors that are most likely to have a positive impact such as cost efficiency, quality, time, and innovation. It is vital that managerial accountants apply a cost structure that is competitive. Thus, there is a pressing need for businesses to utilise costing methods that provide the relevant information needed for determining internal profit and to fulfil external financial accounting needs (Cohen et al., 2011).

Furthermore, businesses of all types, including MSMEs, should implement value chain analysis as a tool by which they may become competitive based on the products and services they are providing. This analysis allows management to focus on increasing the margin between the income generated and the service value package, as well as the costs of producing the product or service (Drury 2008). The value chain analysis implies that products and services can be perceived as a set of rewards, and it is with respect to value chain rewards that customers base their purchasing and price decisions (Bromwich, 1990). For instance, IKEA, the home furnishing retailer,

concentrates on evaluating its value-added chain by minimising its production costs while improving the perceived value to the consumers. It achieves this goal by selling unassembled furniture and fittings to its consumers straight from the warehouse (Horgren et al., 2002). Therefore, it is vital that businesses of all types cost their value chains according to the product and services package in a competent and timely manner by considering future prospects and by evaluating the costs of competitors in order to strive for a competitive advantage.

To summarise, the roles of management accounting systems and concepts such as cost accounting, management accounting and strategic management accounting have not always had a positive impact, as indicated in the above literature review, particularly budgeting, cash-flow forecasting, break-even analyses, and strategic management accounting (Ittner et al., 2003; Lawrie et al., 2004). However, one important point that emerges from the review is that the appropriate use of management accounting systems can have a substantial and positive impact on the performance of many businesses, including MSMEs (Kaličanin and Knežević, 2014; Abdel-Kader and Luther, 2006). Observations on the use of MATs made by numerous insightful empirical studies are based on different variables used to assess the impact of MATs on SME performance in many parts of the world, including Europe, the US, Africa, and Asia.

On balance, the picture emerging from these studies is that the adoption of such techniques contributes to the success of a large number of SMEs worldwide (Ghorbel, 2016; Armitage et al., 2014; Christian, 2016; Maziriri and Miston, 2016; Shields and Helleman, 2016; Kamilah, 2012; Rufino, 2015). In fact, a CIMA-sponsored study (2013) of the MATs used by SMEs revealed that the failure or underperformance of SMEs in the UK is often due to their failure to utilise appropriate MATs. Additionally, a wide-ranging study of microenterprises in Kenya found that the owners and managers of such businesses lack necessary management accounting skills such as

budgeting and financial management (Mwobobia, 2013). Chand and Dahiya (2010) further highlight the cost of implementing MATs as one of the obstacles preventing many MSMEs from adopting MATs. The size of the business, financial limitations, shareholder needs, background, knowledge, type of business activities and the overall experience of managers are all cited as obstacles preventing the uptake of MATs by SMEs (Magdy, 2008), while structure and environmental factors are similar obstacles (Robyn et al., 2010).

Furthermore, the literature review acknowledges an important gap in the research concerning the use of MATs by SMEs. There is a need for more research to advance knowledge of the importance of MATs and their potential to improve profitability and sustainability by building on these insightful studies. This is supported by Azudin and Mansor (2016) and Nandan (2016) who state that in the same way as large businesses, SMEs also need suitable and advanced MATs to better manage their scarce resources and improve their value. Although SMEs may have some limitations in terms of their ability to fully exploit MATs due to their rather small size and inadequate resources, SMEs, in the same way as large businesses, face multiple difficulties and uncertainties and are more susceptible to failures. Thus, the requirement for strategic, precise, and reliable information, largely provided by management accounting, can be useful for SMEs (Mbogo, 2011). In this regard, MATs assume a theoretically significant function. This literature review has enhanced existing knowledge of the benefits of using MATs by providing evidence from documented literature on the use of MATs by MSMEs in the UK and worldwide.

3.13 The Empirical Literature on WCM

WCM involves four distinct components: inventories, accounts receivable, accounts payable, and cash. WCM choices are the highest priority for many businesses because they serve as an indicator of a sound liquidity position, and hence have continued to attract interest from researchers.

According to Eljelly (2014), effective management of liquidity depends on how working capital is managed. Whilst the descriptions of working capital differ across various studies, for the purpose of the current study, WCM is described in line with Guthman and Dougall (1984), Pandey (2013), and Simon et al. (2017) as the difference between current assets and liabilities. A plethora of researchers have investigated the relationship between WCM and business performance from different viewpoints, environments, and assumptions. Examples are Usman et al.'s (2017) study of Danish, Norwegian, and Swedish businesses from 2003 to 2015 and Howorth and Westhead's (2003) research on UK firms. Similar research has also been undertaken in developing countries such as Bin et al.'s (2019) study on East Asian emerging markets, Alshammari's (2018) research on the emerging markets in Gulf Cooperation Council countries, Ding et al.'s (2013) study of Chinese firms, Wasiuzzaman's (2015) research on Malaysian firms, and Mielcarz et al.'s (2018) study of Polish companies. Research on the effect of WCM on organisational profitability has also been undertaken by Charitou et al. (2010) who investigated the impact of WCM and control on business profitability within developing markets. Dang and Soo (2010) studied the association between business profitability and WCM in Vietnam, while Gill et al. (2010) focused on the association between WCM and the control and profitability of businesses in the US. Raheman et al. (2010) researched the association between profitability and WCM in Pakistan. Studies conducted by Sing and Penny (2008) and Anvar et al. (2007) both focused on the relationship between WCM and business profitability. The shared conclusion of all these studies is that there is some form of a relationship between WCM and profitability such as the relationship between cash conversion cycle (CCC) and profitability. Dang and Soo's (2010) study was based on a survey of businesses in Vietnam from 2006–2008, from which they concluded that there is a negative relationship between CCC and profitability in that when CCC increases, profitability decreases.

What this result implies is that business managers and owners can increase profitability by decreasing CCC.

In Bilal et al.'s (2017) research, a relative analysis of short- and long-term strategies of SMEs was undertaken in the context of resource-based theory. They investigated the facilitating role of distinctive management competencies in terms of efficient financial policies and growth among SMEs. The study was based on data collected from an industrial panel of 273 manufacturing companies in Spain and 224 in Pakistan from 2006–2013. Multivariate techniques evaluated the effect of efficient financial policies among SMEs on their performance, while the advance mediation model (Kenny and Judd, 2013) was used to test the mediation confirmation of distinctive management competencies, and the Sobel test was performed to investigate the strength of the mediation outcomes. Afrifa (2013) investigated the effect of education and experience on the WCM of SMEs. The data comprised questionnaire responses from 72 managers of 248 AIM-listed SMEs in the UK, which were analysed using a T-test, one-way ANOVA, and a post-hoc test. The results indicated that participant managers who had been educated at a higher level and had more years of experience confidently applied all the concepts of WCM and, as such, have the best WCM techniques. The results further show that participant managers who had professional qualifications and those who had over 21 years of experience were more competent in their application of WCM, resulting in better practices. The researcher underscores the importance of education in WCM in the competitive business environment (Magoutas et al., 2012). The study further demonstrates the importance of SMEs controlling and monitoring their working capital due to instable cashflows and their dependency on short-term financing (Peel et al., 2000). However, research suggests that most SMEs still do not apply appropriate WCM practices (Khoury et al., 1999; Howorth and

Westhead, 2003). It has also been asserted by Gockel and Akoena (2002) that the reason for the low level of adoption of MATs by SMEs is a lack of managerial knowledge.

Joshi (2016) researched the financial data of 30 US retail businesses from 2006 to 2015 to establish the relationship between WCM and the profitability of these businesses. The variables used for the calculation and analysis of the data (by means of a Pearson correlation and multiple regression analysis) were days sales outstanding, stock turnover, creditors and debtors' collection periods, and CCC. The results indicated that aggressive WCM is linked to higher profitability – that is, a shorter CCC for most retail businesses. The results further revealed that the small businesses that participated in the study demonstrated an appropriate management of a number of variables of working capital, which has helped them improve their profitability (Moussawi et al., 2006). However, a negative relationship was identified between the days sales outstanding and the payable period, stock turnover, and profitability. An empirical study undertaken by Joseph et al. (2018) considered the determinants of working capital requirements on listed firms in Ghana. The researchers focused on 28 businesses listed on the Ghana Stock Exchange from 2007 to 2014 and used a dynamic panel system of general methods of moments to test their hypotheses. This method can produce consistent and unbiased findings, even when there is endogeneity in the model. The findings suggest that the determinants of the working capital of Ghanaian businesses are profitability, age, operating cycles, leverage sales, and GDP growth. Using panel data from 2005 to 2014 across five East Asian countries, Leo et al. (2019) investigated the determinants of working capital in emerging Asian markets by analysing the potential optimal level of working in these markets. The results indicate that WCM strategies, assessed by net liquid balance and working capital needs are strongly influenced by business leverage and the running cash-flow level. The optimal level of working capital can assist these businesses in maximising their value.

Studies conducted by Deloof (2003), Lazaridis and Tryfonidis (2006), Tauringana and Afrifa (2013), Almazari (2013), Arshad and Gondal (2013), Tufail, Bilal and Khan (2013), and Korankye and Adarquah (2013) all identified a strong negative association between working capital variables and profitability. Eljelly (2004) reported that competent liquidity management includes planning and controlling of current assets and liabilities in a manner that eradicates the risk of inability to meet immediate obligations and prevents unnecessary investment in those assets. Insufficient WCM policies can have a negative impact on business profitability (Gill and Biger, 2013). In the US, The Federal Reserve Bank of New York (2014) indicated that 41% of small businesses operated at a loss in 2013 because of insufficient working capital and credit unavailability. The common business problem for SMEs is the failure of owner/managers to align WCM with the changing business environment and market requirements, which negatively impacts profitability. It is well established that SMEs face considerable limitations in raising external debt and long-term capital. Creditors and stakeholders are unwilling to provide SMEs with financing due to the risks and costs involved, making external financing challenging and expensive for these businesses (Cassar, 2004; Levenson and Willard, 2000; Rajan and Zingales, 1995; Berger and Udell, 1995; Holtz-Eakin, Joulfaian, and Rosen, 1994). Due to these capital limitations, it is crucial that SMEs manage cash efficiently through the effective handling of working capital. Cash-flow management is proposed as make or break for SMEs (Opiela, 2006). The accessibility of cash determines whether a business can pay its workers, suppliers, and creditors. In short, management of SMEs is cash-flow management. Yet it is generally accepted that SMEs confront significant problems in managing cash and working capital (Dodge, Fullerton, and Robbins, 1994), and that its ineffective management is prevalent in such companies (Dunn and Cheatham, 1993; Berryman, 1983; Smith, 1973).

Recently, the cash conversion cycle has become a more common tool for examining a business's management of cash. The business's cash cycle refers to the period between tangible cash expenses on a business's acquisition of goods and the recovery of cash revenues from the sale of goods. Research on this has regularly discovered that effective cash cycles lead to greater returns in both large businesses and SMEs (Lazaridis and Tryfonidis, 2006; Deloof, 2003; Wang, 2002). It also claimed that efficient management of working capital is symbolic of the overall management of a business because well-run businesses may be expected to achieve greater financial performance. Testimony from two recent findings on WCM and SME performance validates this perception (Garcia-Teurel and Martinez-Solano, 2007). Liquidity is also an important element of working capital; hence, its management involves appropriate management of both the current assets and liabilities. In the light of this, one can assert that enhancing liquidity can positively affect business performance. Therefore, liquidity management is a key managerial area within the processes of working capital management, and if implemented effectively may help the business achieve its goals, even in financially challenging periods. It is therefore vital that a business is able to turn its assets into cash in a short period to pay its obligations when they are due. A business which is unable to pay its debts when due can lead to bad debts and may also confront the risk of bankruptcy (Lin et al., 2014), which can affect its ability to grow (Oliveira and Fortunato, 2006). There is a general understanding that even the most profitable business can go bankrupt if its liquidity is not managed properly (Błach et al., 2014).

Management of liquidity belongs to a wider area of WCM which is an integral part of business financial management. WCM is one of the important elements of financial management in most businesses (Deloof, 2003); hence, it mainly makes decisions regarding the amount and composition of the current assets and liabilities in an organisation (Mansoori and Muhammad,

2012). Management of working capital is crucial for the survival and growth of any business; therefore, it affects its profitability and the liquidity accessible for business operations (Deloof, 2003; Falope and Ajilore, 2009; Gill et al., 2010). Decisions that are intended to improve profitability are likely to increase risk, while decisions that focus on the reduction of risks are likely to reduce profitability (Juan Garcia-Teruel and Martinez-Solano, 2007). Therefore, WCM seeks to maintain a balance between liquidity and profitability in the day-to-day functions of a business (Falope and Ajilore, 2009). Efficient management of working capital can be achieved through frequent monitoring of working capital elements such as accounts receivables and payables (Karaduman et al., 2011). Optimum investment in working capital is critical to provide liquidity and improve business profitability. WCM is a policy for producing unrestricted cash flow which largely enables business operations and continuity. Overall, the purpose of WCM is intended to produce sufficient liquidity through free cash flow.

Management of working capital is a time-constrained process and exhibits liquidity through the process of utilising cash to convert raw materials into finished commodities, to the sale of goods, then to cash again. To improve the cash flow of a business, the cash conversion cycle must be completed within a short time. Therefore, WCM is important to businesses in myriad ways, some of which involve important decisions in relation to improving performance and stakeholders' value (Deloof, 2003; Filbeck and Krueger, 2005; Makori and Jagongo, 2013). Emphasising this point, Orobia, Padachi and Munene (2016) stated that poor WCM impacts the growth and survival rate of businesses and their overall financial growth. However, the results in the literature are inconsistent (e.g., Makori and Jagongo, 2013; Salman, Folajin and Oriowo, 2014; Yazdanfar and Öhman, 2014). This indicates that the theory of WCM and its impact on business profitability/performance can vary and may conflict, in that it is either negative or positive depending on

additional relevant variables and situational circumstances. Several studies have examined the theory of working management's impact on cash holding and liquidity levels. The management of working capital has a major impact on the cash holding levels of businesses because the amount of cash flow in a business differs considerably according to its size. Big businesses tend to keep more cash due to their substantial levels of operations. Conversely, SMEs need not keep large amounts of cash because of their minimal levels of operations. However, SMEs usually keep more cash as they are more likely to endure financial distress due to financial limitations, while larger businesses tend to maintain minimal cash levels in reserve because of their economies of scale (Gao et al., 2013). Consequently, the trade-off between liquidity and profitability is one of the problematic areas of WCM for financial managers. Therefore, efficient management of working capital and its components such as cash conversion cycle (CCC) and liquidity is vital for all businesses, but critical for MSMEs in both normal times and during financial crises. Financial ratios can also provide tools for SME managers to control and measure their liquidity positions and track early signs of cash-flow challenges and vulnerability to failure (Bhatia and Srivastava, 2016; Naser et al., 2013; Laux, 2012; Shin and Soenen, 1998; Owoo, 2018). The cash conversion cycle can be an impactful measure of the overall changes in working capital and liquidity; it denotes the length of time that a business needs to finance operations to run the business, and the lower the CCC, the better for the business.

Therefore, the various theories of WCM and its components provide a coherent theoretical explanation of the relationship between the present research variables – the relationship between the health pandemic/COVID-19 financial crisis and the working capital management and cash flow/liquidity of UK SMEs. Therefore, the key research question guiding the selection of the research variables for this thesis aimed to identify the relationship between the COVID-19

financial crisis and the working capital management of UK MSMEs. This research question assisted in making accurate decisions about the research methodology, model, data collection, and analytical methods employed. Allwood (2012) stated that every scientific investigation entails some kind of questioning and the use of gap detection in current literature to devise research variables. This research question still needs to be translated into testable statistical hypotheses, which will be performed in Chapter Three which focuses on the empirical literature in the context of the present study.

Therefore, in developing the variables for this thesis, the present study reviews empirical literature regarding the relationship between WCM during a financial crisis such as in 2007/2008. Competent management of working capital reflects policies and procedures of the management of current assets and liabilities of a business in such a way that maturing commitments are met in a timely manner and the long-term assets are effectively serviced (Osisoma, 1997). Businesses that adopt the practice of WCM during a financial crisis tend to improve their liquidity situation by providing short-term financial viability and profitability in the face of financial challenges (Deloof, 2003; Eljelly, 2004; Simon et al., 2017). Efficient WCM (WCM) is a policy that can lead to a shorter cash conversion cycle, resulting in an improved cash flow which considerably enables smooth business operations. Efficient management of working capital can help ease financial challenges and improve cash flow and liquidity during a financial crisis for all businesses, and SMEs are no exception in this regard.

3.14 WCM During a Financial Crisis

It is difficult to make generalisations concerning the impact of previous financial crises in all business sectors and countries; however, the 2007–2008 financial crisis created a volatile economic environment for all business types and sizes across the globe. This was manifested in

the collapse of the financial market, difficult lending requirements, and the related liquidity problems that had a considerable impact on financial organisations in many countries (Khor, 2017; Simon and Hamid, 2017). This crisis has had a negative impact on bank lending. SMEs are normally more vulnerable and affected than large businesses when lending is reduced (OECD, 2012) and credit sources also diminish more quickly for small businesses than for large businesses during financial downturns (European Central Bank, 2013). According to Nobanee and Ellili (2015), large construction businesses in Kuwait managed their working capital or cash flow better than small businesses during the financial crisis and non-crisis periods between 2001 and 2013. This result is significant because it indicates that small businesses are likely to face liquidity problems during a crisis; hence, WCM involves ascertaining the optimal combination of the various sources and uses of cash to lower costs and improve the liquidity of a business. Liquidity is a concept of continuity and implies the capability of a business to generate sufficient cash from both internal and external sources to meet its cash-flow requirements (Egbi and Enyi, 2008). It is also known as solvency, indicating a business's continuous capacity to meet immediate commitments. Profitability refers to a business's capacity to generate returns that are greater than the cost of producing those returns. Most practical studies recognise liquidity and profitability as the most critical objectives of WCM, which are generally linked (Raheman and Nasr, 2007; Shin and Soenen, 1998; Pandey, 2005). Therefore, WCM is important in any time period, but much more so during global crises such as the 2007–2008 financial crisis. This is because illiquidity was widespread worldwide, requiring cash or the efficient and effective management of all available resources to ensure that the business breaks even and endures the crisis, as credit facilities were difficult to acquire (OECD, 2012).

As a result of the 2007–2008 crisis, in the Euro area of the EU, SMEs faced difficulties accessing financing (Artola and Genre, 2011) due to the disintegration of the economic and banking markets. The overall financial situation, characterised by the dissolution of bank support and restrained loan increases in some areas, thereby creating a challenging atmosphere for SMEs (ECB, 2013). The data from these countries reveal that small businesses were more impacted than large businesses. As a result, EU SMEs managed to cope as a result of the help given by a range of government measures implemented to alleviate the problems. Some EU countries also launched credit intervention programmes that were useful and remained in place in many of these countries, developing into long-term schemes to support SMEs that face obstacles in the insurance and credit markets (OECD, 2014). Additionally, public financial institutions helped SMEs' access finance in some of the OECD countries, and these institutions often assumed more active roles after similar crises by tackling short-term funding gaps and mitigating recurrent instabilities in the lending activities of monetary institutions, particularly for SMEs (OECD, 2014). SMEs have been strongly dependent on conventional bank finance, which makes them the most vulnerable business type in financial crises compared with businesses with other sources of finance (Chava and Purnanandam, 2011).

Simon and Hamid (2018) studied the relationship between WCM and business performance in Nigeria during the 2007–2008 financial crisis. The participant businesses faced lending challenges. The study sought to clarify whether the financial crisis impacted WCM and anticipated that the outcome would be relevant in similar future crises. Therefore, in addressing this issue, the researchers used data comprising observations between 2007 and 2008 of 675 businesses listed on the Nigerian stock exchange, which were analysed using an OLS regression. The study aimed to understand the effect of the financial crisis on WCM and the variations in the lending environment

due to the financial crisis of 2007–2008. It further aimed to assess how such businesses managed to improve their effectiveness, competitiveness, and profitability during a time of instability in the business environment. It employed working capital variables such as return on assets, debtor and creditor turnover, stock turnover, and CCC to assess the impact of the financial crisis on the profitability of the participant businesses. The results indicated that WCM techniques had more influence after the crisis than before it. The results also revealed that working capital or liquidity was affected during the financial crisis, which led to low business profitability, a finding that is in line with the outcome of previous studies (Nobanee and Ellili, 2015). Concerning the situation after the crisis, WCM was found to be linked to enhanced profitability among Nigerian businesses such as return on assets, but there was an important difference between the reported return on assets during and after the crisis.

The results further demonstrated that more attention has been paid after the crisis to WCM as a source of funding, which many claimed was due to changes in the lending procedures of banks and other loan providers. The crisis has had a negative effect on the willingness and ability of banks and other providers of finance to lend to such businesses (Simon et al., 2017). Finally, the results suggested that the maximisation of WCM is crucial, and that failure to appropriately manage working capital can have an adverse effect on a business's ability to generate a sufficient cash flow to fund its day-to-day activities (Padachi and Howorth, 2014; Kesimli and Gunay, 2011; Reason, 2008). It also underscores the importance of the effect of external forces on working capital, which in turn can affect the availability of funding from lenders. The researchers recommended that further studies be undertaken using different variables to assess the nature of WCM practices during similar financial crises. Therefore, in parallel with the 2007–2008 crisis, the present COVID-19 financial crisis may cause financial challenges in terms of cash flow and

liquidity problems for MSMEs in the UK, the impact of which is as yet unknown. The hostile business environment that has arisen due to the COVID-19 financial crisis facing all businesses is quite challenging, as are all financial crises (Cefis and Marsili, 2019). During such crises, a deterioration in consumer spending can lead to increased uncertainty and business failures (Bloom, 2014). The relationships that may have existed between even well-established businesses and their loyal customers for many years can suddenly disappear (Accetturo and Giunta, 2018). Furthermore, banks may be unwilling to lend to businesses due to inadequate information, which would otherwise have enabled them to correctly evaluate the creditworthiness of a business which has led to a decrease in the availability of credit facilities for a large number of businesses (Djankov et al., 2007; Ivashina and Scharfstein, 2010).

Investment in working capital has been advocated by several researchers as it can have a positive impact on profitability, leading to more sales, better client relationships, less supply costs and information asymmetry (Smith, 1987; Emery, 1987; Blinder & Maccini, 1991; Fazzari & Petersen, 1993; Wang, 2002; Deloof, 2003; Lazaridis & Tryfonidis, 2006; García-Teruel & Martínez-Solano, 2007; Zariyawati et al., 2009; Erasmus, 2010; Aktas et al., 2015). However, other researchers have indicated that the increase in working capital may in fact have a negative impact on profitability, as it may increase financial and storage costs (Kim & Chung, 1990; Ek & Guerin, 2011; Alipour, 2011; Karaduman et al., 2010), leading to a rise in financial difficulty and the possibility of bankruptcy (Kieschnick et al., 2013).

However, according to Dunn and Cheatham (1993), inadequate WCM is the main cause of SME bankruptcies in the UK and the US. Therefore, efficient management of working capital is always critical for small businesses, but it is especially crucial during an economic crisis such as the present COVID-19 financial crisis. To underscore this point, Schumpeter's (1934) creative

destruction theory suggests that during downturns, small and less-efficient businesses are the ones most likely to shut down. Therefore, the need for efficient management of working capital is more critical now than ever due to the unprecedented financial challenges caused by the pandemic (Song et al., 2021; Ding et al., 2020). It has been argued that during financial crises, one of the key solutions to eliminating or lessening the financial challenges is to make appropriate choices relating to WCM strategies (Salehi et al., 2019). This is because WCM helps businesses plan how to efficiently utilise current assets and liabilities, enabling them to maintain enough liquidity to meet short-term obligations (Tandoh, 2020). However, these studies have revealed conflicting findings regarding the significance of WCM on business performance (e.g., Salehi et al., 2019; Ebben and Johnson, 2011; Singh et al., 2017; Akgün and Karataş, 2020; Oseifuah, 2018; Tsuruta, 2019; Zimon and Dankiewicz, 2020). It is apparent that global economic crises such as the 2007–2008 crisis have increased awareness of and perhaps shifted the mindset of many businesses towards using working capital policies to increase business profitability and sustainability (Gadelius and Larsson, 2019). The effect of WCM on a business’s performance, profitability and liquidity has been evidenced in various global studies (e.g., Ding et al., 2020; Enqvist et al., 2014; Zimon and Zimon, 2020; Vahid et al., 2012; Bei and Wijewardana, 2012; Mun and Jang, 2015; García-Teruel and Martínez-Solano, 2007). In today’s complicated and volatile economic environment, decisions concerning WCM policies are some of the most significant and difficult tasks for business managers because they can play a crucial role in enhancing their financial position during a crisis (Salehi et al., 2019). During a financial crisis, special consideration should be given to WCM; hence, the slightest errors relating to working capital may create liquidity challenges that result in defaults on credit commitments and, eventually, bankruptcies for businesses (Chang et al., 2019). A survey undertaken by KPMG (2010) indicates that businesses

around the globe started concentrating on cash and working capital to manage the credit crunch. According to Kesimli and Gunay (2011), businesses that manage working capital efficiently perform better during financial crises than those that implement ineffective practices. Therefore, as revealed by empirical literature, a financial crisis can impact business working capital, cash flow and liquidity (Akgün and Karata, 2020; Baveld, 2012) because it impacts current assets and liabilities, revenues, and costs of operations (Zimon and Dankiewicz, 2020). During an economic crisis, managers should be making every effort to maintain a sufficient level of working capital for their businesses to stay strong and competitive. To maintain sustainable improvement and development, businesses must constantly apply the right working capital policies, hence establishing a good level of net-working capital can help in maintaining financial liquidity (Zimon and Dankiewicz, 2020).

Therefore, the level of conflicting findings in the empirical literature concerning the relationship between working capital management and financial crisis, and also their repeated failure to acknowledge that although their conclusions may have been effective in improving the cash flow/liquidity and profitability of businesses in normal times, they might be inadequate in helping policymakers and SME businesses in the UK who are urgently seeking evidence to formulate policies to help reduce the negative impact of the COVID-19 financial crisis on working capital management of UK MSME businesses. The impact of this, which is still unfolding, reveals a clear gap that provides a rationale for undertaking the present research from which lessons can be drawn for future financial crises. Research in this area in the UK is currently non-existent. Even studies such as those undertaken by Simon et al. (2017), Pawel et al. (2017), and Baveld (2012) have not provided evidence of the relationship between the COVID-19 financial crisis and the working capital management and cash/liquidity of UK SMEs.

Therefore, the present study seeks to fill that gap by providing evidence of how the COVID-19 financial crisis impacts the working capital management of UK MSMEs as a result of lockdowns and limited access to financing options. Providing such evidence may assist policymakers and SME business managers/owners in formulating policies to improve operational efficiency, competitiveness, liquidity, and profitability during similar volatile economic environments in the future. Enabling policymakers to tackle difficult business financing environments that may negatively impact the working capital management of UK MSMEs will be crucial in building their financial strength post crisis and to cope in the event of any future financial crisis.

CHAPTER FOUR

4.1 HYPOTHESIS DEVELOPMENT

To understand theories of how working capital is managed during a financial crisis is to recognise that the major problem businesses face during these times needs to be explained. The difficulty is that businesses are not able to gain access to financial resources from lending institutions such as banks. This problem is triggered by the constraints that banks have imposed on short-term loans, thereby financially constraining businesses. Prior to developing hypotheses concerning WCM during financial crises years, theories and empirical evidence regarding financial constraints and their solutions are reviewed in this chapter.

4.2 Bank Lending Theory

Bank lending theory forecasts that during financial contractions, banks limit some loans given to businesses (Nilsen, 2002). These constraints cause businesses, particularly SMEs, to reject decent investment prospects. Gertler and Gilchrist (1994) indicated that smaller businesses have a major share in the fall in production during times of financial crisis. The question of whether these constraints were also employed during the financial crisis of 2007-2008 is examined by Ivashina

and Scharfstein (2008). They discovered that banks decreased lending, which caused a 36% drop from August to October 2008 compared with the previous three-month period. This caused financial constraints for businesses all over the world. Numerous businesses have mentioned limitations of bank credit as one of the most significant constraints on their operations and growth. These restrictions have the most impact on SME businesses (Love and Zaidi, 2010). During times of financial crisis, the financing constraints are expected to grow, thereby leading to slashing of investments and research and development and the avoidance of attractive investment ventures by businesses (Campello et al., 2009). Due to these constraints, financially restricted businesses have to explore different sources to meet their financial requirements. These businesses needed to survive the turbulent times of financial crisis (Baveld, 2012).

For businesses which are financially constrained and for which there is no other source of financing options, a trade credit might be a substitute for a short-term bank loan (Kohler et al., 2000). Although this claim was challenged by Gerlet and Gilchrist (1993) and Oliner and Rudebusch (1996), some studies have provided supportive evidence for this claim. Ramey (1992) asserted that when funds are tightened, trade credit is increased. Both in the long and short term, these variables are positively related. Swartz (1974) also discovered evidence that when funds are tight, SME businesses increase their trade credit as a short-term source of funds instead of bank credit. According to Laffer (1970), trade credit is a very close alternative to bank credit, and he reported evidence to suggest that a drop in bank lending is to some degree replaced by trade credit. Yang (2011) also uncovered evidence which suggests that trade credit is a substitute for bank credit, identifying a positive relationship between receivables and bank credit which implies that they compensate each other. He also discovered that accounts payable gradually rise during a financial crisis. The empirical evidence suggests that financially constrained businesses are highly likely to

be adversely affected by a financial crisis and to reduce their accounts receivable and increase their usage of trade credit. A significant finding of Nilsen (2002) is that big businesses with no bond rating also increase their usage of trade credit, even if they have a high quantity of cash. These results indicate that SMEs and big businesses who are credit constrained lack alternative financing options, and therefore can only utilise the existing trade credit as an alternative source of finance (Nilsen, 2002). The suggestion that large firms without bond ratings increase their use of trade credit is backed by the findings of Yang (2011). However, these results conflict with those of Ramey (1992) and Love et al. (2007). Nilsen (2002) claims that these cash-rich businesses utilise their cash surplus as a safeguard, as they are financially constrained and are likely to have an unstable demand which they have to deal with. This description is backed by the conclusions of Calomiris et al. (1995) which suggest that big businesses that are financially constrained construct a safety net of current assets. They also discovered that cash reserves are used to finance receivables at the beginning of a recession. When financially constrained businesses suddenly face an unexpected surge in inventories because of fluctuating demand, they receive support from trade credit by businesses who have better access to financial institutions (Calomiris et al., 1995). What the above analysis has revealed is that financially constrained businesses, either large or SMEs, enhance their use of trade credit to replace the limited-availability bank loans, while very cash-rich businesses increase their use of trade credit. This testimony is supported by the finding of Swartz (1974). He discovered that these businesses are large and still have access to lending institutions. Through accounts receivable, these businesses will boost their borrowing volume to direct funds to their clients, while big businesses increase their function as a financial intermediary during periods of financial crisis. Yang (2011) also uncovered evidence to indicate that businesses

that are not financially constrained increase their receivables, and thus extend more trade credit to their clients.

According to Love et al. (2007), the effects of the 1997 Asian crisis on businesses operating in some Asian countries and the effect of the 1994 peso devaluation on Mexican companies is that an increase in trade credit at the peak of a crisis is followed by a decrease in trade credit immediately after the crisis. There two explanations for this. Firstly, businesses that extend trade credit endure financial constraints themselves and thereby allow less trade credit. Secondly, the demand may be motivated; for example, clients want to receive trade credit for longer (Love et al., 2007). They discovered that businesses prior to the financial crisis, with more short-term loans, increase trade credit. Following the crisis, this increase is dramatically cut back, which indicates that the short-term loan financial situation characteristic of the pre-crisis was highly unfavourable following the crisis. Most of the above-stated studies discovered data which revealed that trade credit is seen as an alternative to a short-term debt; this is certainly the situation during a crisis. There is also conflicting evidence supporting this theory in Japan. According to Taketa and Udell (2007), after the effect of the financial shocks to the credit line to SMEs, they theorised that several lending networks were shut during these shocks, and others were boosted to replace them. However, there was little indication that trade credit could perform this role. What they truly discovered exhibited more of a conflicting nature; they discovered that during the Japanese financial crisis, the trade credit network complemented the prevailing bank lending channel. As indicated previously, big businesses are seen as financial intermediaries during a financial crisis, but the risks and rewards these businesses have to contemplate when they offer financing are not discussed. Pike and Cheng (2001) conducted a study among big businesses in the UK, which revealed that 77% of the respondents' primary reason for managing trade credit is to reduce risk.

This indicates that other aims of these businesses, including profit and sales growth, are considered less important objectives. Because a financial crisis raises the chance of a customer's default, and as a result a risk to the business, this may lead to less trade credit from these big businesses, even if they have the capability and resources to offer it. Notwithstanding this conflicting evidence, the expectations are that big public listed businesses increase their expansion of trade credit during period of financial crisis, to help their financially constrained clients. This conduct could facilitate the survival of these clients of the aiding business in a crisis period. This help could protect future trades, which in turn could enhance both the short-term and long-term profitability of the helping business. To assess the association between receivables and a business's profitability, both the short-term and much longer-term impacts will be assessed in periods of a crisis. This is because the help for financially constrained clients is useful for the profitability of a business.

4.3 The Development and Effects of the COVID-19 Financial Crisis Worldwide

In parallel with the above analysis, it is no coincidence that the current financial crisis is incredibly challenging for businesses across the globe. In 2019, the world witnessed the emergence of the COVID-19 health pandemic which originated in Wuhan, China. This contagious disease quickly spread worldwide, affecting millions of people and businesses. This health emergency and the subsequent economic crisis have led to a further credit squeeze that has had, and will continue to have, a strong impact on small and medium-sized enterprises (SMEs) due to financial constraints and their high dependence on bank loans (Sensini, 2020). Most businesses suffered from the economic downturn caused by the pandemic (Song et al., 2021). There is clear and compelling evidence that due to the severity and prevalence of the disease, its spread may lead to a far more destructive financial crisis than previous pandemics (Ding et al., 2020; Song et al., 2021). As such, its impact on humankind and businesses is a great concern for many governments and businesses

around the world, as the crisis is only just unfolding, and its overall impact is yet to be evident in all countries. Early evidence emerging across many countries of its likely impact on businesses, particularly SMEs, indicates that economic activities have been hampered by the crisis due to various factors such as joblessness and falling revenues for many households and businesses. This situation severely affects their ability to attract financial resources, which often leads to indebtedness that is not in line with their investment needs (Chalmers et al., 2014; Chen et al., 2014; Enow and Brijlal, 2014). The economic situation is expected to worsen and continue to have an adverse effect on SMEs in all global economies. This is because in what seems that in a very short time this /COVID-19 crisis has changed the lifestyles of millions globally, and the commercial activities and liquidity of SMEs across the globe have weakened. Therefore, it is important to consider how such businesses have been impacted by this crisis and what challenges may face them in the future.

It is known that SMEs usually have more limited options during severe financial crises (when their sales revenues are interrupted, leading to shorter survival times) than those available to larger businesses, as illustrated in the below diagram displaying data from selected high-, mid-, and low-income economies. Numerous studies have indicated that large businesses could ease the impact of COVID-19 on their revenues by drawing on the credit lines; however, SMEs need government support to alleviate liquidity deficits in order to avoid disproportionate insolvencies (Greenwald et al., 2020). In 12 high- and middle-income economies in Europe, Latin America, Africa, Central Asia, and the Middle East, the findings of the IMF study in 2020 indicated that due to the COVID-19 financial crisis, large number of businesses in these countries have experienced cash-flow challenges which have been so severe that some businesses and industries have only between 8 and 38 weeks of liquidity or cash in hand such as retained profits or other external sources of

finance. This problem demonstrates and has compounded the problems facing numerous businesses across the globe, whether these are in high-, middle-, or low-income countries. The situation is worse among low- and middle-income countries, as indicated in Figure 4. The severity of the impact of the health pandemic on businesses may differ in different countries. For example, although the US economy is the largest in the world, many experts and political commentators criticised the US Government's handling of the initial outbreak of the pandemic. However, there is no doubt that this pandemic has impacted almost all nations on earth, and thereby impacted their businesses and economies.

It is useful to explain why a comparison of these negative impacts on businesses across the world is being made, given that the present research is based on MSMEs in the UK. The comparison is required in order to demonstrate that business needs in almost all countries are similar in terms of liquidity and viability challenges during a global financial and economic crisis of this magnitude, which is similar to the 2007–2008 global financial crisis which started in the US. Additionally, a comparison is being made to reiterate the fact that the world is interconnected, both economically and environmentally due to globalisation, as evidenced by the fact that COVID-19 was first detected in a village in China and spread to almost every country. Lessons can be learnt for future economic crises regarding the different ways in which different countries have handled the pandemic (World Bank Enterprise Survey, 2020).

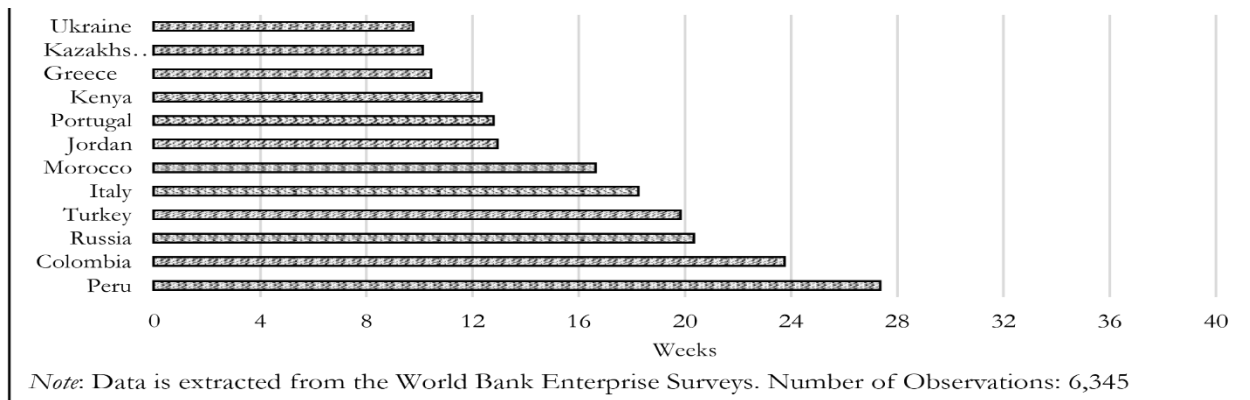


Figure 4: World Bank Enterprise Survey (2020)

The figures above demonstrate that the survival challenges vary significantly across countries due to a range of factors such as the availability of lending facilities or government support programmes to increase access to external finance. The differences could also be due to the type of industry in a particular country. For example, the median survival time for Portuguese businesses in the food and beverage, as well as the manufacturing industries in an economic crisis in terms of liquidity is about 7.6 weeks, while businesses in the same sector in Colombia have a liquidity of about 26.3 weeks. There may even be variations in the liquidity of businesses in the same country during a financial crisis such as in the case of Kenya where some businesses involved in the manufacturing of chemicals (such as plastics and mineral products) do not have sufficient liquidity to last even a week. However, a business in the Kenyan food and beverage industry has sufficient liquidity to last for about 16.8 weeks. These variations indicate that some businesses can survive even extreme economic hardships (such as the one caused by the present pandemic) than other businesses in different or the same countries. These variations in the ability to withstand financial distress could be due to an array of factors such as efficiency of resource management (e.g., WCM). Awareness of these variations could help governments tailor their support programmes for various businesses during similar crises (Erica et al., 2020). In support of this

theory, it has been reported that SMEs usually have the necessary liquidity to last, on average, about 10 weeks less than that of larger businesses when sales are stopped (Adian et al., 2020).

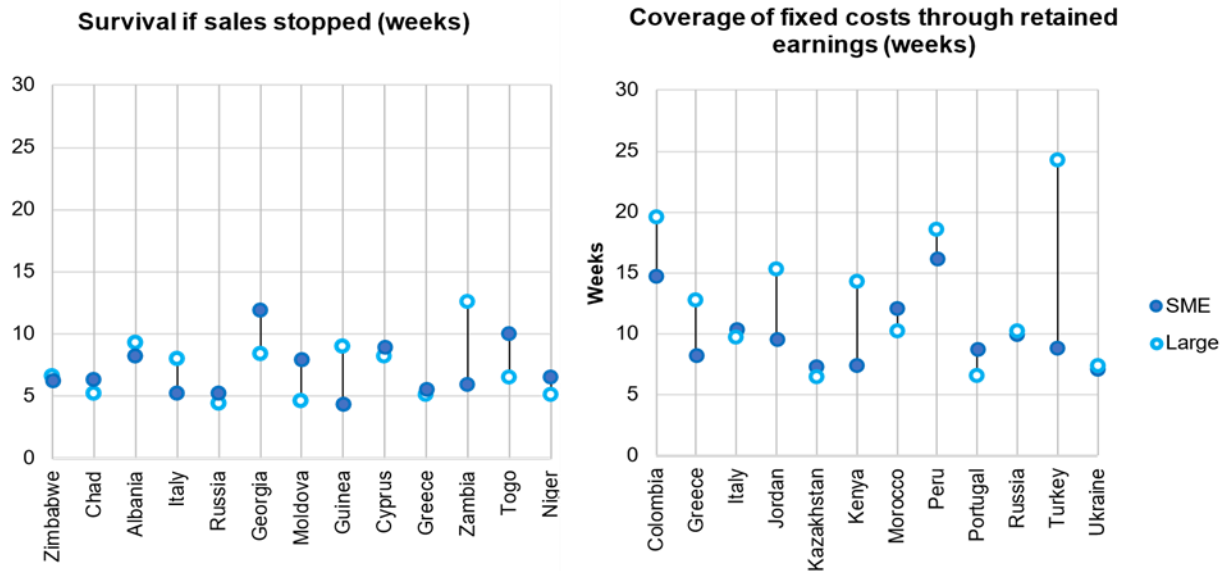


Figure 5: World Bank Enterprise Follow-up Surveys (Bosio et al., 2020)

Therefore, the importance of providing evidence or an understanding of how SMEs have been impacted by the COVID-19 pandemic or have overcome its negative impacts (due to the sudden shock that eliminated almost all their commercial activities) is that policymakers and business advisers or trainers can use this information to tailor agendas for MSME owners. Businesses across the EU have indicated that the early impact of the COVID-19 financial crisis has begun to affect their operations. Approximately 90% of SMEs in the EU reported that they had been negatively affected financially due to the outbreak of the pandemic. The segments impacted most are services (60% to 70%) and construction and production. In many EU countries, the incomes of 10% to 15% of food production SMEs have been negatively affected. For instance, in France and in Spain, 90% and 95% of SMEs, respectively, have been impacted. Furthermore, 30% of EU SMEs reported that

they suffered a loss of income of at least 80%, with an EU average income loss of 50%. For instance, Belgium reported a decline in turnover of 72% for businesses, and for 28% of SMEs, a loss of more than 75%. Germany reported a decline of 50%, while France and Spain reported declines of 80% and 75%, respectively, in lockdown areas. Although a thorough prediction of the effect of COVID-19 on overall employment may be premature at present, SMEs expect a surge in unemployment of between 3% and 5%, although in some countries the consequences of the pandemic have already proven more damaging than in others.

In navigating one of the most devastating crises the world has ever experienced (in terms of both human and financial costs), the human costs and economic costs are linked, as without the population/people of a country, there will be no economy. Therefore, most EU countries have adopted different strategies to alleviate the negative effects of the pandemic financial crisis on their citizens and businesses. The various economic considerations in the implementation of these policies resulted in a corresponding variety in the impacts of COVID-19 financial crisis on MSMEs in the EU and worldwide. The EU economies are some of the largest in the world in terms of industrial production and commercial activities – and SMEs account for about 55% of the value-added non-financial business economy. However, it is difficult to assess the relative impact of the COVID-19 financial crisis across EU economies due to the extremely high amount of available macroeconomic data and because different economies have been affected by several commonly differing macroeconomic influences. The GDP of the EU was estimated to be around \$18.8 trillion in 2018, representing almost 23% of global GDP. Regrettably, EU countries are presently facing a recession due to factory closures and a lack of raw materials due to the pandemic. After China, various government data sources suggest that EU countries, especially Italy, Spain, France, and the UK have been highly impacted by the early stage of the COVID-19 financial crisis.

Therefore, as a result of the present economic outlook, EU countries have decided to individually determine the course of action they need to undertake to mitigate the negative impacts of the pandemic on businesses, including SMEs. Moreover, this discretion will have had an indirect impact on their overall economies. For instance, the initial impact of the pandemic on SMEs in Sweden was not as bad as that of Spain, Italy, or the UK because Sweden decided not to lock down the country to the same extent as those countries. As such, the impact of the pandemic on the financial resources (sales revenues) of Swedish SMEs may be less than the impact thereof on the financial resources of SMEs in Spain, Italy, and the UK due to the sudden drop in commercial activities due to lockdowns (Huemer, 2020).

Therefore, varied economic considerations may have contributed to the impact of the pandemic on different SMEs in different EU countries, as some countries decided against full lockdowns, but this decision may also have come with increased costs in terms of human lives (if the need to protect the economy outweighed other considerations). Not going into lockdown or being slow to lock the economy down (with the goal of reducing the impact of the pandemic on commercial activities, and thereby protecting the economy) may have led to higher infection levels, and consequently, higher death rates. This will eventually affect the economy because the deaths of thousands of people will undoubtedly impact the population of a country, and thereby its economic activities. Therefore, as the saying goes, the people of any country are its economy because without the economic activities of the people in terms of production, selling, and buying, or if the activities are reduced to a certain level, this will affect the overall economy of a country and impact its business community. During the early stage of the pandemic, the UK Government was accused of being slow to introduce a lockdown. However, the trade-off between going into lockdown or not doing so to protect the economy has been a double-edged sword for the authorities in many

countries, including the UK; and has triggered a raging debate among the citizenry, including businesses, as to the pros and cons of lockdown. For instance, in the UK, 250,000 businesses warned in 2020 that they would face bankruptcy if the lockdown and trading activities remained in place for another month, and one million businesses said they would not survive if the lockdown were to continue for a further three months (Bibby, 2020).

A further study of 500 UK SMEs conducted by Bibby Financial Services in April 2020, focusing on the manufacturing, construction, wholesale, transport, and services sectors highlighted how severely the COVID-19 financial crisis impacted SMEs' operational and cost-control activities. The survey results indicate that about one-third of these businesses would not be able to cover their operating costs by the end of July 2020. The number of struggling businesses would have increased even further if the lockdown had been extended by a further three months. Many EU countries have introduced different subsidies to help businesses manage the COVID-19 financial crisis such as grants and loan schemes. In the UK, the government introduced grants and Bounce Back loans for small businesses and the Bank of England also decided to cut the bank rate by 0.50 percentage points from 0.75% to 0.25% to counter the financial shock of the pandemic. The government hoped this support would keep businesses going and that it would avoid longer-lasting economic harm.

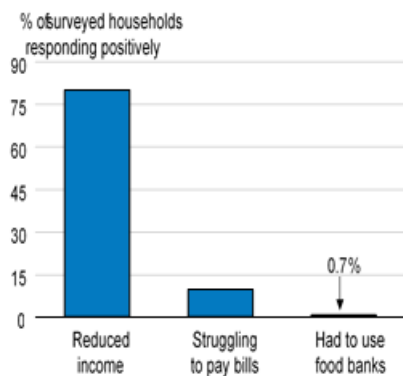
Therefore, as the levels of financial and other forms of support for SMEs vary across EU countries in their size and nature, there will inevitably be a differentiation in the effect of the pandemic on MSMEs in different EU countries. Technological capacity may also have varied the effects of the pandemic on MSMEs. For instance, Germany had a greater testing capacity for COVID-19 than that of the UK, Italy, or France during the first period of the pandemic (Buheji et al., 2020). Germany was therefore able to test a vast proportion of its population more quickly and efficiently than other EU countries, and was thereby able to control the level of infection more effectively

than the UK, and hence was able to ease its lockdown sooner than the UK, Italy, and Spain. In turn, this reduced the impact of the pandemic on Germany's business community, including SMEs, and overall commercial activities. However, in today's developing, fast-moving, difficult, and uncertain world, it has never been more difficult for businesses to forecast and navigate the outlook of the business environment, even for a month (much more a year) due to the uncertain nature of the way in which the COVID-19 pandemic crisis developed from month to month.

For instance, in the UK, some businesses started to recover slightly after the easing of restrictions and consumers started spending again. However, in October 2020, some businesses in the northern part of England faced the prospect of more uncertainty due to the area being considered by the government as needing to be placed under more severe restrictions due to rising COVID-19 infection rates. Consequently, this issue and the general economic uncertainty are likely to continue to affect consumer spending (Buheji et al., 2020). Most households in the UK experienced a reduction in Income because of the coronavirus outbreak. For instance, the impact on household finances worsened according to an Opinions and Lifestyle Survey (COVID-19 module, 2020) conducted from 4 May to 17 May 2020. Participants were asked to select more than one answer to each survey question. The survey asked questions such as 'How have your household resources been impacted in the last week?' According to the findings, many households experienced a decline in income during the study period because of the initial impact of the COVID-19 pandemic. This has since led to a more severe economic downturn in the UK, with a projected decline in GDP of 10% due to low consumer and business confidence, as well as a high level of national unemployment. Furthermore, the coronavirus crisis is likely to have a long-term impact on both productivity and unemployment for several years. Therefore, businesses of all sizes are likely to reduce their level of investment due to the uncertainty of the situation at present, but many may

emerge from the crisis with more debts, which may impact their ability to invest, as those debts must be serviced and paid (Demmou et al., 2019).

Fig 6. Most UK Households report lower income since the crisis started



Source: ONS (2020), "Coronavirus and the social impacts on Great Britain", June.

The key conclusion of this study is that the COVID-19 financial crisis has severely impacted the income of UK households, and thus the overall UK economy. The COVID-19 induced economic crisis is similar to previous economic crises in that it hit low-income regions and families the hardest. During the first three months of the crisis, March to May 2020, when there was a nationwide UK lockdown, all regions in the UK without exception experienced an economic downturn, however, low-income regions were the ones severely hit. The impact on the job markets was mixed – London, Northern Ireland and Scotland experienced the highest level of unemployment during the lockdown, whereas Wales had the lowest. According to the OECD report, the COVID-19 pandemic will have an enduring impact and unemployment may remain low in areas with less dynamic job markets. With area diversity in job markets, the longer-lasting impact is likely to differ across the UK. Businesses in regions such as London and the southeast

are forecast to be less impacted than Wales and the northeast, which are less likely to recover quickly from the impact of the pandemic (OECD, 2020).

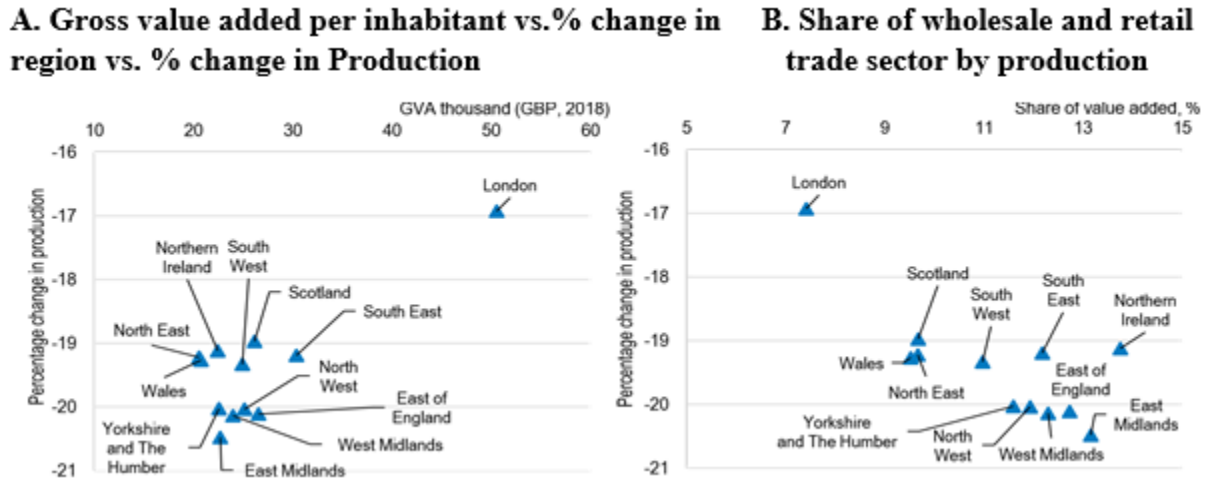


Figure 6: Change in Production and Trade Sectors by Production

Why is employment level important for the overall economic output of a country? It is said that ‘the people are the economy’ – a country’s economy is the wealth that is generated by its businesses and industries. Therefore, where there is a high rate of unemployment because of the impacts of the COVID-19 financial crisis, this will directly impact businesses and overall economic activity. It is known that GDP reflects the strength of the economy which depends on a low unemployment rate. This is because employees earn wages and then spend their wages on goods and services. Therefore, consumer spending is a critical factor that impacts economic growth and GDP. The GDP is the total market value of all goods and services produced in an economy and is one of the key indicators for measuring economic health. It denotes the change in the percentage of growth of an economy over a specific period – a quarter or year. The most important change in percentage is in real terms, removing the effect of inflation or rising prices. Therefore, if GDP is higher than it was in the previous period or quarter, the economy is growing, thereby

leading to more jobs and wealth. However, if the change in percentage compared with the previous period is negative, the economy is declining, and if that trend continues for two successive periods of three months, the economy is deemed to be in recession.

The most common method of measuring GDP is the output approach which denotes the total value of the goods and services produced by all sectors of the economy and the government. The expenditure method of measuring GDP considers the value of the goods and services purchased by people or households and the government, expenditure on machinery and buildings, and exports minus imports. The third method of measuring GDP is based on income – the value of income produced mainly by wages and profits. In the UK, the Office for National Statistics (ONS) usually publishes one single figure for GDP that combines all three measures. To calculate GDP, and therefore determine the health of the UK economy, ONS collects data from thousands of businesses across the UK. Due to the impact of the pandemic, GDP based on output has decreased considerably, as indicated in the following figure. This will regrettably have a direct impact on the overall economy and, as such, the spending power of the population. Households will face problems because of the economic downturn, as they may have lost their jobs or have been put on furlough. GDP is forecast to decrease by 10% in 2020, so productivity and employment are also expected to decrease.

Figure 7: Output During the COVID-19 Financial Crisis (Bank of England, ONS, and OECD, 2020)

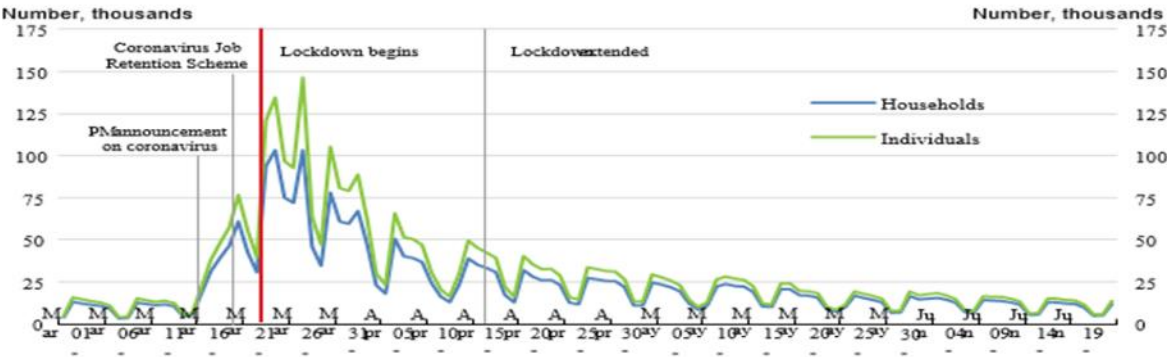
Therefore, the major challenge the UK economy is confronting is the doubt concerning the long-term economic challenges of the coronavirus crisis. Failure to provide SMEs, which have limited capital, with credit facilities will lead to more business bankruptcies (OECD, 2020). Due to the unprecedented nature of the pandemic and the unknown future prognoses for all businesses,

especially SMEs, policymakers and businesses need to adapt swiftly to changes in the commercial and economic environments in order to mitigate the impact of the pandemic on the financial resources of all businesses. However, one of the challenges facing all businesses is the liquidity and cash-flow problem, but this issue is even more severe for SMEs due to their small profit margins and weak capital bases (OECD, 2020). Therefore, it is vital for policymakers and governments to help these businesses overcome cash-flow challenges in the current volatile business environment. In the same way as many governments, the British Government has implemented several initiatives to alleviate these liquidity problems such as government-backed loans and tax deferment measures. However, these measures are likely to be insufficient and unsuccessful in terms of ensuring the long-term viability of businesses, especially those that were struggling before the COVID-19 financial crisis (OECD, 2020).

Nevertheless, to minimise the insolvencies of many of these businesses, particularly SMEs, governments and policymakers need to review these support programmes and amend them when required. Speedy decisions to support such businesses and restructure debt resolution may help to prevent some insolvencies and aid with quick recovery, but delays in implementing such programmes may negate their effectiveness (McGowan et al., 2017). These programmes may give businesses greater flexibility to contemplate alternatives for rescue while creditors and supplies are protected, which is especially vital given their limited financial resources, weak capital base, and restricted access to borrowing (Financial Conduct Authority, 2020). To prevent viable small businesses from becoming insolvent, governments should consider improving access to current loan programmes by momentarily easing co-financing needs while maintaining stringent monitoring procedures. These businesses are typically the most impacted in a crisis; therefore, it is important to support them with adequate liquidity so that they can be less impacted or survive

the present crisis. Yet in a liquidity crisis situation, as in the current crisis caused by the pandemic, banks are less willing to lend to small businesses because of the risk to the revenues of many of these small businesses. Therefore, European countries, including the UK, introduced loan guarantee support programmes to limit the negative impact of the COVID-19 pandemic on businesses, including MSMEs, such as high-risk cover of up to 80% for possible losses on loans instead of the usual 50% cover. Furthermore, there has been an increased focus on working capital loans across the EU (Target News Service, 2020).

Throughout the EU and the UK, businesses are suffering due to the COVID-19 pandemic; hence, the governments of these countries have responded with a wealth of support programmes to lessen the negative impact of the pandemic on MSMEs, as they are the most vulnerable business type in a financial crisis. The COVID-19 financial crisis has led to many employees losing their jobs or being furloughed – 19% of British workers were furloughed in 2020. In some SME sectors such as recreation, entertainment, arts, and hospitality, the percentage of employees furloughed was between 45%–64% (HMRC, 2020). The pandemic also led to an average loss of 18.4% working hours from January to June 2020 (ONS, 2020). In addition, there has been an increase in unemployment, reduced working hours, and self-isolation for many vulnerable employees, which



Source: ONS (2020), "Coronavirus and the latest indicators for the UK economy and society: 2 July 2020".

Figure 8: Claims for Universal Credit (ONS, 2020)

led to an upsurge in UK food insecurity and poverty (OECD, 2020). Therefore, numerous UK households were unable to afford their daily household expenses which subsequently led to an increase in claimants of the government financial benefit known as Universal Credit – a combination of various forms of benefits for low-income households and jobseekers in the UK. As in any economic downturn, households on a low income and low-skilled workers tend to be more severely impacted than those with a higher disposable household income. Furthermore, the impact on these vulnerable households in the UK due to the COVID-19 financial crisis was no different (Adam-Prassl et al., 2020). Despite all these support programmes, what is not yet clear is the extent of the impact of this crisis on the working capital and cash flow of UK MSMEs, and how useful the government support programmes have been in helping MSMEs avert or reduce the negative impact of the pandemic. It is also unclear whether the COVID-19 financial crisis has impacted the working capital and cashflow/liquidity of these businesses, hence the main purpose of the present research was to provide evidence of the relationship between the COVID-19 financial crisis and the working capital management of UK MSME businesses.

Therefore, based on the above analysis in the UK and previous literature, the present study proposes that the working capital management and cash flow/liquidity of UK MSMEs may be impacted by the financial challenges arising due to the COVID-19 pandemic. Hence, the pandemic has created a sudden shock due to lockdowns that eliminated almost all commercial activities of SMEs in many EU countries, including the UK, thereby presenting challenges for many small businesses in both the short and long term. This is due to their limited human capital and portfolios. The income streams that small businesses generate even in normal times are lower and more sensitive to any dramatic drop. The foregoing analysis also demonstrates the significance of WCM for such businesses; hence, it is a function of both current asset and liability levels and structure,

as well as the ability to raise funds when needed. One way to evaluate how well working capital is managed is to determine the liquidity competency level of any business, particularly in this volatile business environment. Due to these flaws, access to credit and credit quality may leave SMEs vulnerable to shocks such as the one we are witnessing due to the pandemics, as they are less able to adapt due to their operations and the increasing costs, lack of credit, while reduced revenue may lead to financial challenges and potentially threaten the survival of a business (Musso and Schiavo, 2008).

Therefore, the theory being evaluated in the present exploratory research is that the overall economic uncertainty caused by the COVID-19 financial crisis may impact both the working capital management and cashflow/liquidity of UK MSMEs. Working capital deficiency is one of the reasons for (if not the actual cause of) the failures of many small business in both developed and developing countries (Evcı and Şak, 2018; Rafuse, 1996). The success of a business mostly depends on its ability to generate more cash or revenues than expenditure, yet the cash-flow challenges small businesses face, even in times of financial prosperity, are also aggravated by a lack of financial management skills and planning of cash requirements or inefficient WCM (Jarvis et al., 1996). Notwithstanding the wealth of interest shown in WCM by numerous researchers, the economic crisis of 2007/2008 revealed severe inadequacy in the working capital management structures of many businesses. During the financial crisis, access to finance became extremely challenging, and because of the related risks, lending institutions such as banks tightened their credit requirements and became reluctant to lend. Several studies that investigated WCM during the financial crises discovered that liquidity for both financial and non-financial businesses was considerably impacted (Haron and Norman, 2015; Kesimli and Guney, 2011; Ramiah, Zhao and Moosa, 2014). These findings credited the failure of businesses to a high degree of liquidity

scarcities, which is essential for improving the productivity and performance of businesses (Simon et al., 2017). Theoretically, WCM practice has multiple aspects, measured with several dimensions that consider a business's profitability and liquidity positions.

The most commonly implemented measures concern decisions about accounts receivables and payable management, inventory management, and the efficiency of the cash conversion cycle (Deloof, 2003; Filbeck and Krueger, 2005). However, most studies that have investigated WCM during a crisis have concentrated on other measures such as debt, free cash flow, size of the business, current assets, cash/liquidity ratios, and the impact of financing constraints on business decision-making during the 2007/2008 financial crisis, as indicated in Chapter Two of the thesis. Almost none have used working capital management variables in determining the relationship between the financial crisis and WCM of UK SMEs. Therefore, the present research fills that gap by providing evidence of the impact of COVID-19 financial crisis on the WCM of UK MSMEs to assist SME businesses and policymakers in planning and formulating policies for the post pandemic recovery and for similar crises in the future in the UK. Therefore, with respect to the research question of the present study, it is no coincidence that during severe economic crises, many businesses face a challenging business environment, but SMEs are the most vulnerable because they have small profit margins and lack access to external funding (Erica et al., 2020). This is because many sectors witnessed demand for their products and services quickly fall, and the economic uncertainty caused by the pandemic is still being felt by a large number of businesses. The pandemic has posed major challenges for businesses such as a drop in sales and lack of financing options.

Built on this analysis, the following hypotheses were formulated:

H0: There is no relationship between the COVID-19 financial crisis and the WCM of UK MSMEs.

H1: There is a relationship between the COVID-19 financial crisis and the WCM of UK MSMEs.

H0: There is no relationship between the COVID-19 financial crisis and the cash flow/liquidity of UK MSMEs.

H1: There is a relationship between the COVID-19 financial crisis and the cash flow/liquidity of UK SMEs.

In the following chapter, these hypotheses will be explained, statistically tested, and translated into a meaningful result by examining (1) the relationship between the COVID-19 financial crisis and the WCM of UK MSMEs, and (2) the impacts of COVID-19 financial crisis on both WCM and the cash flow/liquidity of UK MSMEs.

CHAPTER FIVE

5.1 RESEARCH DESIGN AND METHODOLOGY

5.2 Introduction

This section outlines the study design and methodology employed for the collection and analysis of the data for the purpose of addressing the research questions. As explained in Chapter One, the goal was to provide evidence of the relationship between the COVID-19 financial crisis and the WCM of UK MSMEs.

This section is divided into four parts. The first explains the study design and pilot testing, and then describes the research population from which the sample data were gathered. This is followed by an outline of the data collection techniques employed (emailed questionnaires). The final part explains the choice of methodology for the data analysis in relation to the research aims and hypotheses.

5.3 Research Design

To understand the relationship between the COVID-19 financial crisis and the WCM of UK SMEs, the hypotheses need to be statistically tested. As stated previously, WCM comprises four distinct components: inventories, accounts receivable, accounts payable, and cash.

A research design dictates how a project will be implemented. An effective research plan should give appropriate information that will competently address the research questions and hypotheses (Hair et al., 2007). There are three different research models: empirical, descriptive, and causal (Hair et al., 2007). Descriptive and causative research designs meet the need to give appropriate information for the present research questions and hypotheses. Descriptive data allows for an indication of the nature and level of the impact of the COVID-19 financial crisis on the WCM of UK MSMEs. The causative research tests whether the independent variable (the impact of the COVID-19 financial crisis) is responsible for changes in the dependent variables (WCM and cashflow/liquidity of UK MSMEs) (Emory and Cooper, 1991). The reason this particular research design was chosen is that the hypotheses involve an independent variable and dependent variables, which are necessary to demonstrate a theorised relationship. The hypothesis tests this relationship through both observable and unobservable variables (the latent variable). This approach necessitates the use of explanatory data and hypothesis testing; therefore, the study requires a descriptive and causative research design. The study employed a mixed quantitative and qualitative methodology in that the data were obtained through a questionnaire and follow-up interviews.

5.4 Sampling

Representative samples are normally attained by defining the focus population, choosing a sampling technique and ascertaining a sample size. The present study therefore followed these

procedures, as suggested by Hair et al. (2007). These techniques for choosing a representative sample population are explained in more detail in the following sections.

5.5 Target Population

The focus population identified for the purpose of collecting relevant data comprised UK MSMEs from among the businesses in the various activities. The study focused only on MSMEs because this sector usually suffers the most during economic downturns, but such businesses contribute substantially to their economies – specifically to employment levels and sustained rapid economic growth – in many countries. The focus population was divided into three potential sampling components corresponding to the three categories of UK SMEs – microenterprises and SMEs, as defined earlier in Chapter One (Figure 4).

The sample was drawn from a sample population of 150 randomly selected UK MSMEs, comprising 50 micro enterprises, 62 small enterprises, and 38 medium enterprises. The sample was geographically selected by obtaining the email and postal addresses of MSMEs from the NEX exchange and AIM-listed databases, which displays the names, email addresses, and postal addresses of over 1,000 small UK businesses, as well as from the Federation of Small Businesses and other UK small business databases. These sources provide adequate information for classifying each member of the population into a sampling unit (subcategory). However, the contact details were not always up to date. To mitigate this limitation, the information in these listings was cross verified by checking the businesses' official websites or by making initial calls to the businesses to confirm that the details were correct.

5.6 Sampling Method

It is rarely possible to acquire data from an entire population, which is why information or data are usually collected from a selected sample from the relevant population. Therefore, one of the

primary objectives of statistical analysis is to utilise the data from the sample to draw a conclusion and make assumptions about the target population.

The sample population of the present research consisted of three subgroups: microenterprises, and small-, and medium-sized enterprises (Figure 4). Due to the prevalence of small businesses, it is vital that each group is sufficiently embodied in the sample. To manage the relative size of each subcategory, a stratified random sampling method was employed. In this process, a simple random sample was taken from each section, and the subsamples were then merged to create the total sample (Judd et al., 1991). The purpose of stratified random sampling is to ensure that every group is properly represented (Ghauri et al., 1995) via the stratification procedure.

5.7 Sample Size

The total size of the sample was 150 (the target population), comprising three subgroups: 50 microenterprises, 62 small enterprises, and 38 medium-sized enterprises. Any sample size, including this one, is influenced by several factors that need to be taken into consideration: cost and time limitations, the variability of components in the focus population, the required evaluation accuracy, the generalisability of the results, and the confidence level (Hair et al., 2007). In determining a sample size, there is frequently a trade-off between the cost and time limitations and the sample size. A large sample size clearly involves more expenses in terms of gathering and analysing the data (Henry, 1990). Therefore, these factors needed to be balanced to achieve an adequate sample size within the budget and time limitations. To determine whether a sample size can be effective within the cost and time constraints, it is important to review the possible methods for determining the sample size. There are several statistical methods that may be used; however, they manually require data on variability (standard deviation), appraisal accuracy, and level of confidence. Additional guidelines involve suggestions of consistent rules of thumb advocated by

statisticians for ascertaining the sample size. Stutely (2003) supports this suggestion, recommending a minimum sample size of 30 for statistical analyses.

This minimum sample size has been suggested because statisticians have demonstrated that a sample size of 30 or above generally leads to a sampling distribution for the mean, which is identical to a normal distribution – a point that is essential for ensuring that the study does not lead to false conclusions (Saunders et al., 2009). Therefore, with a large sample size of more than 30, it is likely that the distribution will be closer to a normal distribution and that the study will be more robust (Saunders et al., 2009). However, Kent (2001) proposes that in any type of quantitative analysis, a minimum of 100 cases is needed. As such, the sample size of 150 in the present research was deemed adequate for the results to be meaningful. Hence, the response rates in similar studies of this nature should be the benchmark for deciding how large the sample population must be to obtain the minimum required responses. For example, Afrifa (2013) investigated the effect of education and experience on the WCM techniques of UK SMEs based on 72 responses to 248 distributed questionnaires. Jusoh et al. (2008), who investigated performance measures among a sample of 975 Malaysian manufacturing SMEs, reported a response rate of 12.3%. Finally, Ahmad (2012), who investigated the level of use of MATs by Malaysian SMEs – a sample population of 1,000 – reported a response rate of 17.5%.

5.8 Data Collection Method, Measurement, and Scaling

The present study used emailed questionnaires for the purposes of data collection. In addition, several follow-up interviews were conducted by telephone. This technique allowed for data collection while coronavirus restrictions were being observed among the representative sample in the UK. In addition, this technique is one of the least expensive means of collecting questionnaire

data. Prior to undertaking data collection, a pilot survey was conducted to collect feedback about the response rate and the timing of responses, as outlined below.

5.9 Pilot Testing

A pilot survey precedes the main survey and is strongly linked to the larger study being undertaken (Lancaster, Dodd and Williamson, 2004; Eldridge et al., 2016). Pilot testing facilitates an assessment of the patterns of responses by participants and therefore, their interpretation of the questionnaire (Dillman, 1978). A pilot survey is frequently considered synonymous with a 'feasibility research intended to guide the preparation of a big-scale study' (Thabane et al., 2010). In conclusion, pilot testing includes a risk mitigation policy to lessen the possibility of failure in a full-scale survey being undertaken. The phrase pilot has several meanings in the research literature; although, as indicated by Eldridge et al. (2016), pilot experiments are generally assumed to concentrate on a research or project being undertaken in advance of an upcoming broader investigation. Therefore, a pilot survey enables decision-making, and as such serves as 'a small-scale testing or set of studies undertaken to determine just how and whether to embark on a full-scale study'. There is no clear difference between pilot testing and feasibility studies in the way the terms are used (Thabane et al., 2010). Teijlingen and Hundley (2002) claimed that the word 'pilot' testing means a small-scale test of a full-scale research project (also known as 'feasibility' experiments), and a particular prior testing of a certain study instrument such as a questionnaire or interview plan. Bowen et al. (2009) similarly used the phrase feasibility study to incorporate any kind of research that can assist researchers in planning for a full-scale study. Accordingly, the questionnaire used in this research was administered after pre-testing among fellow researchers at the graduate School of the University of East London and following approval of the sample questionnaire by the graduate school of UEL. The prior testing aimed to clarify the

wording of both the questionnaire guidelines and questions. No major issues were raised by these fellow researchers. Following this prior testing, a pilot test was run on 30 MSMEs. A response rate of 9% was achieved, which was in line with expectations, due to the difficult issues some of these businesses were facing as a result of the pandemic. It was also apparent that completion of the questionnaire did not appear to present problems for the target audience. For instance, a few of the participants did not initially want to participate in the study because they thought the questionnaire may involve some jargon that they would not be able to understand and therefore, that they may answer the questions incorrectly. However, when they received the testing questionnaire, they reported that the questions were not difficult to understand and were not time-consuming and therefore, they would like to participate in the actual survey. Consequently, it was considered appropriate to proceed with the survey.

The email questionnaire package sent to the sample population of UK MSMEs included a participation information pack describing the aim of the research and a copy of the questionnaire. A couple of weeks after the initial email, a follow-up telephone call was made if no response had been received. If a further three weeks had passed and no response to the email had been received, a further telephone call was made. However, due to the COVID-19 restrictions, which impacted the timeliness of responses, another follow-up call was made after four more weeks had passed.

5.10 Questionnaire Design

The most crucial feature of a questionnaire design is the choice of variables that will be the focus of the questions. The questionnaire design for this study was chosen for its relevance to MSMEs – it could therefore be easily understood by the target respondents. The purpose of the questionnaires was to seek information on the impact of the COVID-19 financial crisis on the working capital of UK MSMEs and MSME owners and managers' overall outlook on the UK

economy. The questionnaire contained 13 questions and was divided into two parts. This division was made in order to allow the researchers to gather information on the key issues in a coordinated way. This first part used nominal and ordinal measures in categorising the profiles of the businesses such as the type of business, the sector, and the role of the respondents. The second part used ordinal measures to determine the impact of the COVID-19 pandemic and the extent of some forms of government support (furloughing, loans, grants, etc.), using a five-point Likert scale (Hansen and Van Der Stede, 2003).

The questionnaires were initially emailed to the target participants in July 2020, together with the participation information pack which is included in the Appendix section of the thesis. The email also included a cover letter, consent to participation form, and a forwarding email address. To increase the response rate, participants were guaranteed that they would receive a summary of the findings, and they were advised that their identities and responses would be kept anonymous. A month after the first emails were sent, 10 participants responded. Follow-up emails and telephone calls were then made to those who had not responded, and another 15 responses were received after another month had passed. However, due to the disruption caused by the COVID-19 pandemic for many of these small businesses, it was difficult to obtain responses. Therefore, numerous follow-up processes were undertaken, including several telephone calls and emails. Finally, at the end of the process, a total of 66 questionnaires were received out of the 150 initially distributed – a response rate of 44%. However, four of these questionnaires were unusable. According to Neuman (2005), illegible responses should not be included in the sample. Hence, the net usable response rate of the sample was 41.3%. The specific response rates of the different business categories were 25% from microenterprises, 35% from small businesses, and 40% from medium-sized businesses.

Table 3: Questionnaire Response Summary

	No.	%
Total number of target respondents	150	100
Total responses received	66	44
Unusable/illegible responses	-2	-
Uncompleted questionnaires	-2	-
Usable questionnaires	62	41.3

5.11 Non-response Bias Test

Armstrong and Overton (1977) caution that the postal survey method has been criticised due to non-response bias. If respondents who do respond vary significantly from those who do not, the findings do not allow the researcher to say how the entire sample would have responded – indeed, this is an essential stage before the sample can be generalised to the wider population. Bose (2001) claims that non-response bias is related to both low response rates and sharp differences in the estimates between respondents and non-respondents. However, due to the relatively low response rate of 44% in the present research, non-response bias was a major concern. Therefore, a non-response bias test was performed using the Wallace and Mellor (1988) statistical test by comparing the early and the late respondents to the questionnaire survey. This was based on the underlying belief that late respondents are proxies to non-respondents, as indicated below. An analysis of the usable responses by the number of employees shown in the table below indicates

that responses were not uniformly spread throughout the sample. The response rate of small enterprises was higher than that of micro and medium enterprises (42%), indicating the overall result may be biased towards small enterprises. Therefore, non-response bias tests were conducted to confirm whether non-response bias was present.

Table 4: Non-response Bias Test

Number of employees in the business	Freq.	Percent	Cum.
Micro Businesses 0-10	20	32.26	32.26
Small Businesses 11-50	26	41.94	74.19
Medium Business 51-250	16	25.81	100.00
Total	62	100.00	

The prospect of non-response bias was investigated by making comparisons between the sample frame and the responding businesses based on the number of employees, business sector, and role in the business, as indicated in the tabulations below.

Test of difference-in-the-proportions for the categories of variables Q1, Q2, and Q3 between 'early' (= 0) respondents and 'late' respondents (= 1)

Variables description

```

-----
Variable   Storage  Display  Value
name      type   format  label  Variable label
-----
Q1 = Number of employees in the business
QD11      byte   %8.0g           Q1==Micro Businesses 0-10
QD12      byte   %8.0g           Q1==Small Businesses 11-50
QD13      byte   %8.0g           Q1==Medium Business 51-250

Q2 = Sector of the business
QD21      byte   %8.0g           Q2==Retail
QD22      byte   %8.0g           Q2==Hospitality
QD23      byte   %8.0g           Q2==Hairdressers
QD24      byte   %8.0g           Q2==Gym
QD25      byte   %8.0g           Q2==Social-care provider
QD26      byte   %8.0g           Q2==Other

Q3 = Role in the business
QD31      byte   %8.0g           Q3==Owner
QD32      byte   %8.0g           Q3==Manager
QD33      byte   %8.0g           Q3==Accounts manager
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value for $H_0 = 0.132$ for owners of their businesses, 0.277 for managers of their businesses, and 0.789 for accounts managers of their businesses, as indicated in QD 31, 32, and 33).

In conclusion, the results described in the tabulations above show no evidence of non-response bias due to the lower response rate. The test of difference-in-the-proportions of the following variables: (1) number of employees in the business (micro, small, and medium enterprises; (2) business sector (retail, hospitality, hairdressers, gym, social-care providers and other; and (3) the role in the business (owner, manager, and accounts manager) between ‘early’ (= 0) respondents and ‘late’ respondents (= 1) reveals that – for each category of the above mentioned variables – there is no significant difference in the respective proportions. This further supports the fact that the sampling procedure was not affected by non-respondent bias. Therefore, the overall conclusion based on the sample frame is that the sampling procedure based on the number of employees in the responding businesses, the business sector, and the different roles in the business were not affected by non-respondent bias; therefore, the overall results can be extrapolated based on these findings.

To measure the responses to the questionnaires, scaling was used. This is a measurement tool that can be applied to measure a question with a predetermined number of results (Hair et al., 2007). The scale was primarily used to measure the profiles of the businesses and the business types. The data analysis for this scale was limited to the number of responses in each group, the calculation of the mode or percentage in relation to a particular question, and the use of the chi-squared statistic (Hair et al., 2007). Ordinal scaling was used in the form of a summated rating scale or Likert scale. Summated scales frequently use a five- or seven-point scale to measure the strength of agreement with a group of statements. When the scales for all the statements are tallied, it is described as a summated rating scale; and when the scale is applied individually, it is described as a Likert scale

(Hair et al., 2007). For the purposes of the present study, a five-point Likert scale was employed to measure the impact of the COVID-19 financial crisis on the working capital, liquidity, cash flow, and economic challenges facing UK MSMEs. The use of a five-point scale has been used in previous research on management accounting and finance (Drury et al., 1993; Guilding et al., 1998; Hoque and James, 2000; Hoque, 2004; Abdel-Kader and Luther, 2006). The five-point Likert scale was selected not only because it conforms with the approaches taken in prior studies, but also because it is a small scale which may lead to increased willingness on the part of participants to complete the survey, and thereby increase the response rate.

5.12 Data Analysis Methodology

The data gathered in the present exploratory study were employed to produce explanatory statistics, and SEM was conducted to test the hypothesis of the present research. Therefore, to develop a model or theory concerning how the COVID -19 financial crisis may have impacted the WCM and cash flow/liquidity of UK MSMEs, the present study hypothesises that the COVID-19 financial crisis may be related to both the WCM and cash flow/liquidity of UK MSME businesses, thereby impacting their WCM and cash/liquidity, due to the reduced level of consumer demand, and thus business turnover (market channel), and the other on the expectations or feelings about the positive running of the economy (emotional channel). The latter can be seen as a risk perception on the part of businesses due to the pandemic, and thus could be modelled as a latent variable. This latent variable is the driver of multiple indicators of an owner or manager's feelings or uncertainty about their business and can be linked to the outcome or performance variable. Therefore, the answers from MSMEs who completed the questionnaires and from three participants in the telephone follow-up interviews regarding their feelings about the economic outlook in the UK generated this latent variable via a confirmatory factor analysis. The latent variable influenced the

WCM and cash flow/liquidity of these businesses, as businesses are more reluctant to borrow money when this perceived risk is higher, even in the presence of low bank interest rates. Additionally, banks have been increasingly reluctant to lend money due to the uncertain economic environment caused by the COVID-19 financial crisis. The coefficient alpha which links the latent variable to MSMEs' WCM, and cash flow/liquidity is the central effect that led to a conclusion about the impact of the COVID-19 financial crisis on MSMEs' WCM and cash flow/liquidity; for example, by estimating and commenting on the sign, size, and significance of this parameter.

SEM was used to analyse and examine the relationship between the independent variable and the dependent variables. The exact equation models for each hypothesis and the results of the analysis are discussed in Chapter 6.

5.13 Reliability and Validity

Reliability and validity tests are essential to ensure the accuracy and uniformity of the variables. Hair et al. (2007) suggest that for a questionnaire scale to be reliable, the questions must be responded to consistently by respondents in such a way that is highly associated. If this does not happen, then the scale cannot be considered reliable. For the purposes of the present study, the reliability of the questionnaires was measured by means of Cronbach's alpha. This technique permits the computation of the alpha coefficient if one variable is eliminated from the initial set, enabling identification of the subcategory that has the highest reliability coefficient. If all the outcomes are above 0.7, the scales are considered reliable (Sousa et al., 2006). However, Hair et al. (2007) indicate that small coefficients may be adequate, depending on the study aims and objectives. For instance, Nunnally (1978) suggested that alpha coefficients of 0.50 to 0.60 are considered adequate for exploratory studies.

5.14 Summary

This chapter outlined the study design and methodology by which the research questions of this thesis were addressed. The chapter explained in detail that the aims of the present research were approached quantitatively using an explanatory and causal research model. The target population consisted of UK MSMEs, and the target sample was classified into three subcategories according to the sizes of businesses (micro, small, and medium-sized enterprises). After thorough examination, the sample size was determined to be 150 businesses. Emailed questionnaires and a number of follow-up interviews were used to collect the data from the sample. The questionnaire structure and the basis of the questions asked were also discussed and clarified. Finally, it was explained that the data analysis involved descriptive statistics for the purpose of satisfying the research goals and SEM was applied to test the hypotheses.

CHAPTER SIX

6.1 QUANTITATIVE DATA AND EMPIRICAL RESULTS

6.2 Introduction

This chapter builds on the previous one which discussed the research design and methodology. Its main purpose is to determine the extent to which the study results are meaningful and either support or reject the hypothesis. This part includes the visual presentation of SEM in the form of path diagrams, analysis of key results obtained from the survey and interview data, comparison with previous studies, and robustness test. In presenting these findings, the chapter starts with an explanation of SEM procedure, including the visual presentation of the study variables in the form of a path diagram followed by the key empirical findings, robustness test, and a final summary of the chapter.

6.3 Data Analysis Using Structural Equation Modelling

According to the results of the present study, the COVID-19 financial crisis has negatively impacted the WCM and cash flow/ liquidity of UK MSMEs in two ways: first, due to the reduced level of customer demand (market channel), and second, concerning the anticipation or feelings regarding a positive outlook on the UK economy (emotional channel). In presenting these findings, SEM methodology was employed to provide evidence of the impact of the COVID-19 financial crisis on the WCM of UK SMEs. The chapter begins with an explanation of the SEM analysis procedures.

6.4 Structural Equation Modelling Procedure

Structural Equation Modelling (SEM) is a complex analysis used to build structural connections measured variables and latent constructs. Structural equation modelling (SEM) is a methodology for representing, assessing and testing a network of associations between variables (measured variables and latent variables/constructs). This kind of analysis involves specific techniques that involve determining validity and reliability. Analysing research data and translating the results into meaningful information can be difficult and puzzling. Conventional statistical approaches to data analysis rely on default models, which are considered inflexible. By contrast, structural equation modelling (SEM) which involves specification of a model based on theory and research is a multivariate method integrating measured variables and latent constructs, and explicitly specifies measurement error. A model (diagram) enables the specification of relationships between these variables. It is a set of linear equations that define these relationships, comprising two components: structural and measurement models (Fan et al., 2016). The structural model links the constructs, expressing the dependent constructs as linear functions of the independent constructs. The measurement model links the constructs to observed measurements and is similar to the

confirmatory factor analysis (CFA) model (Novikova, 2013). SEM can be visualised using a path diagram as indicated in Figure 13. Whilst most multivariate techniques accidentally overlook measurement error, SEM estimates the measurement error variance parameters for both independent and dependent variables.

Conventional statistical techniques such as linear regression analysis examine the association between one or more independent variables and only one dependent variable. The independent and dependent variables in these models are observed ones such as revenue, height, weight, and years of experience. Such models can be described as traditional statistical methods. The single-equation method consists of examined variables on the left (dependent) and right sides (independent) of an equation. However, structural equation models, also known as simultaneous equation models, are multivariate (multi-equation) regression models. In contrast to traditional multivariate linear models, the response variable in one regression equation in a structural equation model may seem to resemble a predictor in another equation. Variables in structural equation models can impact each other, directly or through other variables as mediators. These structural equations are intended to represent causal associations among the variables in the model. SEM is a collection of statistical methods which allows researchers to test hypotheses concerning the relationships between variables. It incorporates other statistical technique such as correlation, regression, and factor analyses.

SEM can also be used for explaining and/or predicting objectives in the social sciences. One advantage of SEM is that unlike single-equation methods, it facilitates simultaneous evaluation of the relationship between several independent variables and more than one dependent variable. Additionally, while traditional methods (such as regression analysis) allow only the use of the examined variables, SEM incorporates latent, independent, and dependent variables and is a highly

flexible and a comprehensive methodology. SEM methodology is suitable for investigating accomplishment, economic trends, self-concept, depression, and psychotherapy. Measuring a psychological concept such as the perception of the overall severity of the pandemic/COVID-19 economic crisis in the UK and the anxiety of MSME businesses about the handling of the pandemic by the government can pose problems because direct measurement/units of these abstract concepts may not be feasible. However, statistical methods such as SEM can derive these values from other related variables being observed, in this case, the effect of the COVID-19 financial crisis on the working capital (and its components) of UK MSMEs. SEM utilises Confirmatory Factor Analysis (CFA) to estimate latent variables, which in the present study were the perceptions of MSMEs regarding the overall severity of the pandemic in the UK. However, the Latent Variables L1 and Lhat2 indicated in Figure 13 below are not in the data set as these are derived common factors of the observed variables: Health pandemic/COVID-19, WCM, and Cash Flow/Liquidity of UK MSMEs as causes/effects.

Therefore, SEM is a CFA technique, as it belongs to the so-called typical factor family of models which divides the variance of an indicator into shared variance and distinctive variance, including measurement error (Brown, 2015). By using a CFA, the measurement error (unreliability) of values is eliminated during the evaluation of the model. This aspect of CFA, as entrenched in SEM, contributes more to the reduction of bias among the estimates of structural equation models than traditional regression methods. Applying CFA, several factors and patterns of indicator-factor loadings are specified in advance along with other model factors such as those bearing on the independence or covariance of the components as detailed in the process below:

Model specification - In the specification phase, the researcher identifies the model by determining each relationship between the variables relevant to the topic of interest.

Model identification - The identified model has a distinctive solution for the parameters of the model. The main concern at this stage is whether the researcher can find a unique value for each parameter from the observed data because this is defined by multiple aspects such as measurement fixation, free parameters, and restrictions in SEM (Shaheen et al., 2017). For instance, in the present research, the model was identified by indicating the connection between working capital and the COVID-19 financial crisis.

Model estimation - The specified model consists of parameters, the values of which should be estimated by the researcher using sample statistics. Maximum Likelihood (ML), generalised least squares, weighted least squares and partial least squares are among the estimated techniques used in SEM. Maximum Likelihood estimation is the most well-known and frequently applied in this area of the SEM procedure (Shaheen et al., 2017). After estimating the parameters of the model, computer software is then used to produce the model regarding the relevant variables. For instance, in the present research, a model was estimated to state the effect of the COVID-19 pandemic on the WCM and cash flow /liquidity of UK MSMEs using Stata 17 software.

Model assessment/Test of the Model Fit - Model assessment contributes towards assessing the effectiveness of the model. This phase is based on assessing the fitness of the model by examining model fit indicators (Kocakaya and Kocakaya, 2014; Weston and Gore, 2006).

Model modification - If model fitness is not meeting the specified expectations of the research, then some parameters are eliminated and new ones are added or the model is changed (Shaheen et al., 2017). This is achieved by way of constructing in covariances and assessing the modification indicators between the error terms to improve the efficiency of the model. Therefore, from the procedures outlined above, SEM analysis can be incorporated, and a link established between the variables to determine the type of association. The assessment of the model fit gives an idea of

how well the hypothetical model can re-establish the observed data. However, a sceptical view of structural equation models is that their acceptance in the social sciences suggests that the models seem to provide a causal explanation of experimental data, when in fact such clarification is no less challenging than it is for other types of regression analyses applied to experimental data. However, a more sympathetic analysis is that SEMs are close to the sort of informal theory about causal relationships that is common in social sciences hypothesising; therefore, these models enable the interpretation of such concepts in data analysis. Consequently, the present study used SEM along with Stata to analyse the data gathered from the questionnaires in order to produce explanatory statistics for hypothesis testing.

The study tested the empirical sample using a covariance-based structural-equation model by testing both the structural model and the measurement model using maximum likelihood estimation (ML), as this is better suited for theory testing (Hair et al., 2013). In terms of the structural model, the fit of the model is evaluated prior to evaluating the individual path coefficients, following the same procedure used by Fullerton et al. (2013) to evaluate the measurement model. A visual representation of the model concerning how the pandemic impacts the working capital of UK MSEM is presented in Figure 10.

SEM MODEL

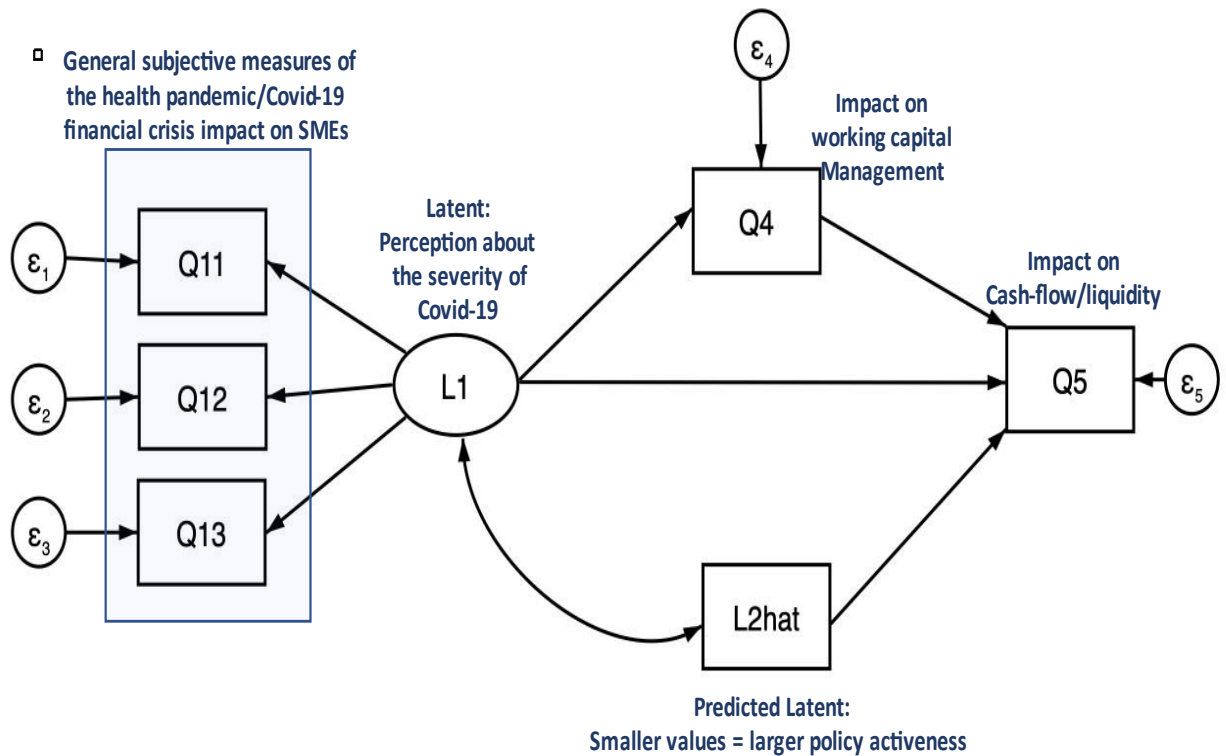


Fig 9. Visual representation of SEM in the form of a path diagram using Stata

6.5 Analysis of the Key Findings

This section provides an explanation of the data (in the form of the questionnaire responses) and presents the findings in relation to the research hypotheses and objectives: (i) to find evidence that the COVID-19 financial crisis may be related to the WCM of UK MSME businesses, (ii) to find evidence that the COVID-19 financial crisis may impact both the WCM and cash flow/liquidity of UK MSMEs due to the reduced level of consumer demand (market channel).

(iii) to find evidence that the COVID-19 financial crisis may impact both the WCM and cash flow/liquidity due to MSME businesses perception about the economic outlook of the UK (Emotional Channel)

The results are presented analytically in the order of questions Q1 to Q13. The first part of the analysis starts with the sample questionnaire, the first three questions of which include the categories of businesses or the number of employees in the business (micro, small, and medium), the sectors of the businesses, and the roles in their businesses (owner, manager, and accounts manager). The next part of the analysis presents tabulations of the results to analyse each question in relation to the overall findings.

Table 5: Variable description and summary tables

Q1	Number of employees in the business
Q2	Sector of the businesses
Q3	Role in the business
Q4	Pandemic/COVID-19 financial crisis impacted business WCM
Q5	Pandemic/COVID-19 financial crisis has impacted business cash flow/liquidity
Q6	Factor with the biggest negative impact on both the WCM and cash flow/liquidity due to the COVID-19 financial crisis
Q7	Type of government assistance utilised
Q8	Important factor in reducing the negative impact of the COVID-19 financial crisis on the WCM
Q9	Important factor in reducing the negative impact of the COVID-19 financial crisis on cash flow/liquidity
Q10	Government furlough payments have helped businesses avoid making redundancies
Q11	Severity of COVID-19 financial crisis for businesses, despite Government support
Q12	How likely are the challenges posed by the COVID-19 financial crisis to make businesses go into liquidation

Q13 Overall perception of the economic impact of the COVID-19 financial crisis in the UK

Number of employees in the business by percentage of respondents

Table 6: Tabulation of Q1

Number of employees in the business	Freq.	Percent	Cum.
Micro Businesses: 0-10	20	32.26	32.26
Small Businesses: 11-50	26	41.94	74.19
Medium Business> 51-250	16	25.81	100.00
Total	62	100.00	

As indicated in Table 6 above, the number of usable responses was 62, from which it is clear that the majority of the respondents (42%) were small businesses with 11 to 50 employees, while 32% were micro businesses with 0 to 10 employees, and 26% were medium businesses with 51 to 250 employees. Therefore, the majority of the usable respondents were from the small business category.

Sector of the business by percentage of respondents

Table 7: Tabulation of Q2

Sector of the business	Freq.	Percent	Cum.
Retail	29	46.77	46.77
Hospitality	18	29.03	75.81
Hairdressers	6	9.68	85.48
Gym	3	4.84	90.32
Social-care provider	4	6.45	96.77
Other	2	3.23	100.00
Total	62	100.00	

As indicated in Table 7, the number of usable responses was 62.

The results show that the majority of the respondents (47%) were businesses operating in the retail

sector, 29% were in hospitality, 10% in hairdressing, 6% in social-care businesses, 5% in gyms, and 3% in others. Thus, the majority of the responding businesses were in retail and hospitality sectors.

Role in the business by percentage of respondents

Table 8: Tabulation of Q3

Role in the business	Freq.	Percent	Cum.
Owner	16	25.81	25.81
Manager	30	48.39	74.19
Accounts manager	16	25.81	100.00
Total	62	100.00	

As revealed in Table 8, most respondents (48%) were managers of their business, while 26% were owners, and 26% were accounts managers. Therefore, most of the responding businesses were managers of their businesses.

COVID-19 financial crisis impact on business WC management by percentage of respondents

Table 9: Tabulation of Q4

COVID19 financial crisis impacted WCM	Freq.	Percent	Cum.
Strongly negative	27	43.55	43.55
Negative	26	41.94	85.48
Neutral	6	9.68	95.16
Positive	3	4.84	100.00
Total	62	100.00	

As indicated in Table 9, around 85% of respondents felt that the COVID-19 financial crisis had impacted the WCM of UK MSMEs in a ‘negative’ or ‘strongly negative’ way. This is clearly in

line with the overall empirical results indicated in the descriptive statistics tabulations, which reveals mean and the median are around 2, a value below the neutrality threshold of 3.

COVID-19 financial crisis impact on business cash flow/liquidity by percentage of respondents

Table 10: Tabulation of Q5

COVID-19 financial crisis impacted cash flow/ liquidity	Freq.	Percent	Cum.
Strongly negative	29	46.77	46.77
Negative	25	40.32	87.10
Neutral	4	6.45	93.55
Positive	3	4.84	98.39
Strongly positive	1	1.61	100.00
Total	62	100.00	

As suggested in Table 10, approximately 87% of respondents felt that the COVID-19 financial crisis has impacted the cash flow/liquidity of UK MSMEs in a ‘negative’ or ‘strongly negative’ way. This supports the overall empirical results indicated in the descriptive statistics tabulations, which reveals that the mean and the median are around 2, a value below the neutrality threshold of 3. Also, the mode is 1, indicating a strongly negative feeling among these MSME businesses.

Factor with the biggest negative impact on both WCM and cash flow/liquidity of UK MSMEs due to the COVID-19 financial crisis by percentage of respondents

Table 11: Tabulation of Q6

The factor with the biggest negative impact on both the WCM and cash flow/liquidity due to the COVID-19 financial crisis	Freq.	Percent	Cum.
Lockdown	56	90.32	90.32
Lack of financing options	5	8.06	98.39

None	1	1.61	100.00
Total	62	100.00	

As indicated in Table 11, the factor that has had the biggest negative impact on both the WCM and cash flow/liquidity of UK MSMEs due to the COVID-19 financial crisis has been the lockdown which has been indicated by around 90% of the respondents. This supports the overall empirical results, as it aligns with the follow-up interview findings, where all the participants indicated that as a small business, the lockdowns had the greatest negative impact on their business activities, including the supply chain because there was a total shut down for several weeks, which severely and negatively impacted their sales and revenue.

Type of government assistance utilised by percentage of respondents.

Table 12: Tabulation of Q7

Type of government assistance utilised	Freq.	Percent	Cum.
Loans	2	3.23	3.23
Grants	16	25.81	29.03
Furlough	36	58.06	87.10
None	8	12.90	100.00
Total	62	100.00	

Table 12 indicates that the most popular type of government assistance utilised by the respondents was furloughing (58%), followed by grants (26%), and loans (3%). Therefore, due to the financial challenges caused by the pandemic, the government support programme known as furloughing, whereby the government pays 80% of the wages of some of the employees while the businesses themselves pay the remaining 20% to avoid making employees redundant was the most utilised form of assistance undertaken by the responding MSME businesses. Again, this is

in line with the empirical results obtained from the participants during the follow-up interview process where all the participants indicated that, as a small business, the furloughing support programme was extremely helpful because it prevented them from making redundancies. It was the support system they preferred to grants and loans, as the process was very simple and quick as long as they followed the correct procedures and submitted the correct information to HMRC regarding the employees being furloughed. The funds were made available without delay to fill the cash flow/liquidity gap caused by the sudden loss of income as a result of the pandemic.

Important factors reducing the negative impact of the COVID-19 financial crisis on the WCM by percentage of respondents.

Table 13: Tabulation of Q8

The most important factor reducing the negative impact of the COVID-19 financial crisis on the management of WCM	Freq.	Percent	Cum.
Government loans	3	4.84	4.84
Government grants	24	38.71	43.55
Furlough	30	48.39	91.94
None	5	8.06	100.00
Total	62	100.00	

Table 13 indicates that the most important factor reducing the negative impact of the COVID-19 financial crisis on WCM is the furloughing support programme (48%), followed by government grants (39%). Again, this evidence supports the overall empirical results, as the results have indicated that the most popular support programmes used by these MSMEs were furloughing, followed by grants.

Important factors reducing the negative impact of the COVID-19 financial crisis on cash/liquidity by percentage of respondents.

Table 14: Tabulation of Q9

The most important factor reducing the negative impact of the COVID-19 financial crisis on cash flow/liquidity	Freq.	Percent	Cum.
Government loans	4	6.35	6.35
Government grants	23	36.51	42.86
Furlough	29	46.03	88.89
Deferred rent or rate payments	3	4.76	93.65
Other	4	6.35	100.00
Total	63	100.00	

As revealed in Table 14, the most important factors that reduce the negative impact of the COVID-19 financial crisis on cash flow/liquidity for the respondents were furloughing (46%), followed by government grants (36%). This supports the overall empirical results which suggest that the most popular support programmes were furloughing and followed by grants.

Government furlough payments have helped my business avoid making redundancies by percentage of respondents.

Table 15: Tabulation of Q10

Government furlough payments help avoid redundancies	Freq.	Percent	Cum.
Yes	29	46.77	46.77
No	18	29.03	75.81
Rather not say	15	24.19	100.00
Total	62	100.00	

The results in Table 15, reveal that 46% of respondents felt government furlough payments helped them avoid making redundancies. This aligns with the overall empirical results as the analysis has already indicated that the most popular support system utilised by these MSME businesses was furloughing. This was also supported by interview participants who stated that the furlough payments helped their businesses avoid making redundancies because the government pays 80% of some staff wages, without which they would have had to make some employees redundant due the sudden income loss and the subsequent financial challenges caused by the pandemic.

Severity of the COVID-19 financial crisis for businesses, despite government support, by percentage of respondents

Table 16: Tabulation of Q11

Severity of the COVID-19 financial crisis for SMEs, despite government support	Freq.	Percent	Cum.
Very severe	19	30.65	30.65
Severe	21	33.87	64.52
Very minimal	9	14.52	79.03
Minimal	10	16.13	95.16
No impact	3	4.84	100.00
Total	62	100.00	

The results presented in Table16, confirm that, notwithstanding government support, the impact of the COVID-19 financial crisis on the participant’s business was severe or very severe for around 64% of the respondents. This means that even though government support systems such as furloughing helped these MSME businesses, there was a general feeling that the COVID-19 financial crisis was severe and could have been probably worse without the support programmes which lessened its severity – a finding which is in line with the overall results indicated by the

responses of the respondents in both the quantitative and qualitative analysis that economic impact of the pandemic was very bad.

How likely the challenges posed by the COVID-19 financial crisis are to make businesses go into liquidation by percentage of respondents.

Table 17: Tabulation of Q12

The probability that the challenges posed by the COVID-19 financial crisis will cause the participant's business to go into liquidation	Freq.	Percent	Cum.
Very likely	3	4.84	4.84
Likely	7	11.29	16.13
Least likely	28	45.16	61.29
Unlikely	24	38.71	100.00
Total	62	100.00	

According to the results presented in Table 19, only 16% of the participants felt that the COVID-19 financial crisis was likely to make their business go into liquidation or bankruptcy. This result is telling because even though 64% of respondents indicated that the impact of the pandemic has been severe/very severe on their businesses, only 16% believed they would go into liquidation due to the challenges cause by the COVID-19 financial crisis. This optimism may be due to several factors such as the government's overall handling of the economic crisis and the belief that easing of the lockdown and other rules such as social distancing may lead to an increase in customer footfall. There is a meaningful linkage between such an assertion and the overall empirical results indicated in the descriptive statistics tabulations, which indicates that participants felt the likelihood of the COVID-19 crisis posing such severe financial challenges for the business that they go into liquidation/ bankruptcy is 'poorly strong'. This is because the mean, median, and mode are values in fact all around 3, which means 'Unlikely'.

Overall perception of the economic impact of the COVID-19 financial crisis in the UK by percentage of respondents

Table 18: Tabulation of Q13

Overall perceptions of the economic impact of the COVID-19 pandemic in the UK	Freq.	Percent	Cum.
Very bad	51	82.26	82.26
Bad	8	12.90	95.16
Not too bad	2	3.23	98.39
No impact	1	1.61	100.00
Total	62	100.00	

As indicated in Table 18, around 95% of the MSME respondents perceived the overall economic impact of the COVID-19 financial crisis in the UK to be ‘bad’ or ‘very bad’. This has a meaningful linkage with the overall results indicated in the descriptive statistics tabulations, where the feeling that the overall economic impact due to the COVID-19 financial crisis in the UK is very severe is confirmed by a mean, median, and mode all around a value of 1 which corresponds to ‘Very bad’.

6.6 Summarisation (Descriptive Statistics)

A descriptive statistic is a summary statistic that quantitatively describes the attributes of a collection of information (Ding et al., 2020; Enqvist et al., 2014). Generating descriptive statistics is a method of converting raw data into information that will make it easy to understand and interpret (Zikmund, 2003). Descriptive statistics are an essential part of any statistical analysis as they can help in revealing any irregularities in the data collected. As claimed by Quartey (2003), descriptive analysis is particularly valuable as it is a holistic approach that reveals useful features of a particular data. Therefore, to analyse the data, generating descriptive statistics, including the

minimum, maximum, mean, and median would be meaningful. However, given the nature of the variables of the present research, it was only feasible for questions Q4, Q5, Q12, and Q13 of the questionnaire. The numerical descriptive statistics presented in tables 19,20,21 and 22 provide evidence in support of the overall results of the present research. Therefore, in the next four models (questions 4, 5, 12, and 13) of the descriptive statistics analysis, the results are summarised and linked in a logical and meaningful way to underpin and support the overall research findings. These first relate to the health pandemic/COVID-19 financial crisis and its impact on both the working capital management and cash flow/liquidity of UK MSMEs, and secondly, whether such impacts will lead to these businesses going bankrupt, and finally their feelings about the overall economic outlook in the UK due to the COVID-19 financial crisis.

Table 19 Descriptive Statistics: The feeling that the COVID-19 Financial Crisis has Impacted Business WCM

Q4 = The COVID-19 financial crisis has impacted business WC management

	N	Mean	Median	Mode	SD	Min	Max
Q4	62	1.758	2.000	2	.824	1	4

Note: 1 = 'Strongly negative', 2 = 'Negative', 3 = 'Neutral', 4 = 'Positive', 5 = 'Strongly positive'

The empirical results in Q4 indicate that the impact of the COVID-19 financial crisis on the WC management of UK MSME businesses is perceived to be strongly negative. This can be seen from the fact that the mean and median are around 2, a value below the neutrality threshold of 3. From this output, the statistical relationship between the COVID-19 financial crisis and the WCM of those responding businesses are not only statistically strong but also have a negative impact on the WCM of UK MSME businesses. This negative impact has already been confirmed by the overall results of the thesis. According to the findings, these negative impacts are due to factors such as lockdowns which have undoubtedly impacted the market channels, which include four key components of working capital: cash, inventories, accounts receivables, and accounts payable.

Table 20 Descriptive Statistics: The feeling that the COVID-19 Financial Crisis has Impacted MSMEs' Cash Flow/Liquidity

Q5 = The COVID-19 financial crisis has impacted business cash flow/liquidity

	N	Mean	Median	Mode	SD	Min	Max
Q5	62	1.742	2.000	1	.904	1	5

Note: 1 = 'Strongly negative', 2 = 'Negative', 3 = 'Neutral', 4 = 'Positive', 5 = 'Strongly positive'

As the results for question 5 in indicate, the mean and median are around 2, a value below the neutrality threshold of 3. Also, the mode is 1, corresponding to a strongly negative feeling. This implies that the COVID-19 financial crisis is perceived to have had a negative impact on the cash flow/liquidity of UK MSMEs. This is due to factors such as lockdown and financing challenges which undoubtedly impact the four key components of working capital: cash, inventories, accounts receivables, and accounts payable. Furthermore, the management of these components will affect the cash flow/liquidity of MSME businesses because they may have more problems maintaining cash flow/liquidity at an appropriate level; hence, management of the components of working capital involves short-term receivables, liabilities, inventory, and cash. Additionally, banks and other lending institutions are reluctant to lend to businesses during the COVID-19 financial crisis without government loans. On some occasions, even with government backing, it can be difficult for some these of these businesses to qualify for the loans, which negatively impacts their cash flow/liquidity. Therefore, these descriptive statistics are in line with the overall results of the research.

Table 21 Descriptive Statistics: The Financial Challenges Caused by the COVID-19 Financial Crisis will make MSMEs Insolvent?

Q12 = How likely are the financial challenges caused by the COVID-19 financial crisis to make businesses go into liquidation/bankruptcy?

	N	Mean	Median	Mode	SD	Min	Max
Q12	62	3.177	3.000	3	.82	1	4

Note: 1 = 'Very likely', 2 = 'Likely', 3 = 'Least likely', 4 = 'Unlikely'

The findings relating to Q12 in Table 21 reveal that the feeling that the COVID-19 financial crisis is likely to pose severe financial challenges that force the business to go into liquidation/bankruptcy is 'unlikely'. This is because the mean, median, and mode are all around 3, which means it is 'poorly likely'. This indication is telling, because despite the financial challenges caused by the COVID-19 financial crisis, these businesses are still optimistic about their future prospects. This may be due to factors such as the easing of lockdown rules, which may eventually lead to higher customer demand and sales, or due to government support programmes such as furloughing and small business grants. Such findings are in line with the overall results of the research.

Table 22 Descriptive Statistics: MSMEs' Overall Perception of the Economic Outlook

Q13 = Overall perception of the economic impact of COVID-19 in the UK

	N	Mean	Median	Mode	SD	Min	Max
Q13	62	1.242	1.000	1	.592	1	4

Note: 1 = 'Very bad', 2 = 'Bad', 3 = 'Not too bad', 4 = 'No impact', 5 = 'Don't know'

As indicated, the feeling respondents that the overall economic impact due to the COVID-19 financial crisis in the UK is severe is confirmed by a mean, median, and mode that are all around a value of 1 which corresponds to 'Very bad'. As the results for Q13 in Table 22 reveal, the feeling of MSME businesses regarding the overall economic outlook in UK is that the impact of the COVID-19 financial crisis was adverse. This adverse feeling led to the creation of the latent

variables ($L1$ and $L2_{\text{hat}}$) linking the COVID-19 financial crisis to both the WCM and cash flow/liquidity of UK MSMEs. This is indicated in the summary empirical results in the visual presentation in the form of path diagrams in table 23 below, which depicts the eventual negative impact on both the WCM and cash flow/liquidity of UK MSMEs. Therefore, based on this and descriptive statistics, the analysis indicated that the financial crisis caused by the pandemic has had a negative impact on both the WCM and cash flow/liquidity of UK MSMEs, and one of the factors underpinning this was the feeling/anxiety of MSME businesses about the overall economic outlook of the UK at the time. However, these findings also indicated that despite these negative impacts and the financial challenges caused, these businesses are optimistic about their future prospects, indicating that they believe they will survive this financial crisis. Overall, the descriptive statistics and the summary of the empirical results of the present research indicated the significance and the magnitude of the statistical relationship between the COVID-19 financial crisis and the WCM of UK MSMEs as being strong, and thereby negatively impacting WCM, which inevitably includes its four key components of inventory, accounts receivable, accounts payable, and cash. This has undoubtedly had a negative impact on their cash flow/liquidity, measured through both the observed and unobserved/latent variables as outlined in the following summary of the empirical results.

Table 23: Summary of the Empirical Results

Structural equation model		Number of obs		=		62	
Estimation method		= ml					
Log pseudolikelihood		= -411.85822					
(1) [Q11]L1 = 1							
Standardized	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]		
Structural							
Q4							
L1	.390774	.180225	2.17	0.030	.0375396	.7440085	
_cons	2.148098	.1762444	12.19	0.000	1.802665	2.493531	
Q5							
Q4	.3257971	.2425201	1.34	0.179	-.1495335	.8011277	
L2hat	-.7841804	.4444382	-1.76	0.078	-1.655263	.0869024	
L1	1.296718	.5450576	2.38	0.017	.2284244	2.365011	
_cons	1.251358	.5309677	2.36	0.018	.2106803	2.292035	
Measurement							
Q11							
L1	.4696101	.1339456	3.51	0.000	.2070815	.7321387	
_cons	1.923611	.1326587	14.50	0.000	1.663605	2.183618	
Q12							
L1	.1582616	.1584271	1.00	0.318	-.1522498	.4687731	
_cons	3.904563	.4732931	8.25	0.000	2.976926	4.832201	
Q13							
L1	.1536544	.1517016	1.01	0.311	-.1436754	.4509841	
_cons	2.115361	.3191423	6.63	0.000	1.489854	2.740868	
var(e.Q11)	.7794664	.1258044			.5680872	1.069497	
var(e.Q12)	.9749533	.0501459			.8814608	1.078362	
var(e.Q13)	.9763903	.0466192			.8891634	1.072174	
var(e.Q4)	.8472956	.1408545			.6116897	1.17365	
var(e.Q5)	0	.4662648			.	.	
var(L1)	1	.			.	.	
cov(L2hat, L1)	.7758316	.0898746	8.63	0.000	.5996806	.9519826	

The results are as follows:

1. A larger perceived impact of the COVID-19 financial crisis (L1) increases the severity of its impact on the cash flow (coef. = 1.29). This means that because of the strong statistical correlation between L1 and Q5, lower values of Q5 (cash flow/liquidity) means that the COVID-19 financial crisis has negatively impacted the cash flow/liquidity. The response from the respondents tends to be 'negative' in Q5, indicating an adverse effect of L1 on Q5 with a large coefficient value of (1.29). The more upward these feelings about the

worsening situation regarding the financial crisis, the more negative impact this has on the cash flow/liquidity.

2. The same applies to variable L1 and Q4 (WCM), in that L1 (the feelings/anxiety of MSMEs about the severity of the financial crisis) impact the WCM, the responses to this particular question from the respondents tend to be negative meaning that the more these businesses felt that the pandemic/financial crisis is worsening, the more its negative impact on Q4 (the perceived severity of the COVID-19 financial crisis on WCM by a coefficient value of (0.39).
3. Greater government action to mitigate the COVID-19 financial crisis reduces the severity of its impact on cash flow/liquidity (coef. = -0.78), this is the L2hat not in the data set, but built outside the model, but a significant finding.

6.7 Explanation of the Model

L1: This latent variable measures MSME's perception of the severity of the COVID-19 financial crisis in the UK. This is the common attitude driving responses to questions Q11, Q12, and Q13 in the questionnaire. L2hat: This is the prediction of a second latent variable which has been built outside the model for identification purposes. It measures the common factor driving perceived government action in terms of policy (that is, responses to questions Q7, Q8, and Q9).

A correlation is assumed between L1 and L2hat, as perceptions of the severity of the COVID-19 pandemic/ financial crisis and perceptions of government policy activeness are interdependent.

Most important, however, is the link between L1 and questions Q4 and Q5 concerning the impact of the COVID-19 financial crisis on WCM and cashflow/liquidity. The perceptions of MSME businesses about the severity of the COVID-19 financial crisis in the UK has a direct effect on both the WCM and cash flow/liquidity in that when these businesses feel that the financial crisis

is getting worse, this leads to a worsening (severe) impact on both the working capital management and cash flow/liquidity, but if they think that the financial crisis is getting less worse (severe), then the impact on the WCM and cash flow/liquidity is also less. Table 24 below indicates the strength and the magnitude of parameter estimates/Coefficients of the impacts of the COVID-19 financial crisis on both WCM and cash flow/liquidity, with a coefficient values of (1.29) and (0.39) respectively.

Table 24: Summary of the Empirical Results

```

Structural equation model           Number of obs   =           62
Estimation method   = ml
Log pseudolikelihood = -411.85822
( 1)  [Q11]L1 = 1
-----+-----
Standardized |           Coef.   Robust      z    P>|z|    [95% Conf. Interval]
              |           Std. Err.
-----+-----
Structural
Q4
    L1 |    .390774    .180225    2.17    0.030    .0375396    .7440085
    _cons |  2.148098    .1762444   12.19    0.000    1.802665    2.493531
-----+-----
Q5
    Q4 |    .3257971    .2425201    1.34    0.179    -.1495335    .8011277
    L2hat |  -.7841804    .4444382   -1.76    0.078    -1.655263    .0869024
    L1 |    1.296718    .5450576    2.38    0.017    .2284244    2.365011
    _cons |  1.251358    .5309677    2.36    0.018    .2106803    2.292035
-----+-----
Measurement
Q11
    L1 |    .4696101    .1339456    3.51    0.000    .2070815    .7321387
    _cons |  1.923611    .1326587   14.50    0.000    1.663605    2.183618
-----+-----
Q12
    L1 |    .1582616    .1584271    1.00    0.318    -.1522498    .4687731
    _cons |  3.904563    .4732931    8.25    0.000    2.976926    4.832201
-----+-----
Q13
    L1 |    .1536544    .1517016    1.01    0.311    -.1436754    .4509841
    _cons |  2.115361    .3191423    6.63    0.000    1.489854    2.740868
-----+-----
var(e.Q11) |    .7794664    .1258044                .5680872    1.069497
var(e.Q12) |    .9749533    .0501459                .8814608    1.078362
var(e.Q13) |    .9763903    .0466192                .8891634    1.072174
var(e.Q4) |    .8472956    .1408545                .6116897    1.17365
var(e.Q5) |           0    .4662648                .                .
var(L1) |           1                .                .                .
-----+-----
cov(L2hat, L1) |    .7758316    .0898746    8.63    0.000    .5996806    .9519826
-----+-----

```

The variable L1, the latent variable concerning perceptions of the severity of the COVID-19 financial crisis (independent variable) has a sizable effect on the cash flow/liquidity (the dependent variable) of MSMEs, with a coefficient of (1.29). MSMEs' perceptions of the severity of the COVID-19 economic crisis are the common attitude driving responses to questions Q11, Q12, and Q13: This means that an increase of one standard deviation concerning L1 increases the perceived impact of the COVID-19 financial crisis on the cash flow/liquidity of UK MSMEs by more than one standard deviation. Thus, there is more than a proportional effect of L1 on cash flow/liquidity. Latent variable L1 measures the concern about the negative impact of the COVID-19 financial crisis on business activities, impacted either by the lockdown (market channel) or reductions in household income due to unemployment and furloughing as a result of the pandemic. Therefore, the COVID-19 financial crisis has a strong statistical relationship with the cash flow/liquidity of MSMEs. The perceived detrimental effect of the COVID-19 financial crisis on cash flow increases more than proportionally when the concern about the effects of the COVID-19 financial crisis is higher.

Variable L1 also has an effect on Question Q4 concerning the perceived severity of the impact of the COVID-19 financial crisis on the management of working capital management with a coefficient value of (0.39). Although this is a strong impact, it is more than three times smaller than the impact of L1 on Question Q5. Therefore, for MSMEs, the feeling of uncertainty generated by the COVID-19 financial crisis seems to have produced more profound worries about cash flow/liquidity than about WCM. However, WCM and cash flow/liquidity are connected in that worrying about cash flow/liquidity undoubtedly impacts investment in working capital. The latent variable L2hat, which measures the degree of policymaker/government activeness or efforts to mitigate the COVID-19 economic crisis, though not in the data set has a coefficient value of (-

0.78). The implication of this finding is that if MSMEs realise that government policy activeness is sufficient to manage the COVID-19 economic crisis, their worry about the detrimental effect of this crisis on both the WCM and cash flow/liquidity reduces, as indicated in **Error! Reference source not found.** below.

Table 25: Summary of the Empirical Results

```

Structural equation model                Number of obs   =       62
Estimation method   = ml
Log pseudolikelihood = -411.85822
( 1)  [Q11]L1 = 1

```

Standardized	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
Structural						
Q4						
L1	.390774	.180225	2.17	0.030	.0375396	.7440085
_cons	2.148098	.1762444	12.19	0.000	1.802665	2.493531
Q5						
Q4	.3257971	.2425201	1.34	0.179	-.1495335	.8011277
L2hat	-.7841804	.4444382	-1.76	0.078	-1.655263	.0869024
L1	1.296718	.5450576	2.38	0.017	.2284244	2.365011
_cons	1.251358	.5309677	2.36	0.018	.2106803	2.292035
Measurement						
Q11						
L1	.4696101	.1339456	3.51	0.000	.2070815	.7321387
_cons	1.923611	.1326587	14.50	0.000	1.663605	2.183618
Q12						
L1	.1582616	.1584271	1.00	0.318	-.1522498	.4687731
_cons	3.904563	.4732931	8.25	0.000	2.976926	4.832201
Q13						
L1	.1536544	.1517016	1.01	0.311	-.1436754	.4509841
_cons	2.115361	.3191423	6.63	0.000	1.489854	2.740868

var(e.Q11)	.7794664	.1258044			.5680872	1.069497
var(e.Q12)	.9749533	.0501459			.8814608	1.078362
var(e.Q13)	.9763903	.0466192			.8891634	1.072174
var(e.Q4)	.8472956	.1408545			.6116897	1.17365
var(e.Q5)	0	.4662648			.	.
var(L1)	1	.			.	.
cov(L2hat,L1)	.7758316	.0898746	8.63	0.000	.5996806	.9519826

6.8 Model Robustness Check

This section examines the robustness of the empirical results. The main aim is to ascertain the extent to which the results reported in Chapter Six are robust to alternative model estimations.

Therefore, to assess the robustness of the estimated structural equation model, a modification index test needed to be performed. In general, such a test should provide a list of possible changes to bring into the model. Some of these changes could be, for example, new connections between variables that are otherwise unlinked or the introduction of cross-correlations among the error terms of the different equations in the model. These changes are referred to as new model paths whose creation results in an increase in the model's goodness of fit through a reduction in the Chi2 index.

Introducing a new path reduces the degree of freedom of the model by 1. This cost must be contrasted with the reduction in the Chi2 induced by the change, taking the Chi2 value with 1 degree of freedom as a benchmark which is equal to 3.84. Therefore, if laying down a new link does not reduce the overall Chi2 by more than 3.84, there is no reason to introduce this new path as the model is correct as it is. After running the structural equation model and evaluating its goodness of fit, a modification index test was conducted using the following Stata command: estat indices. Stata responded with this message, 'No modification indices to report – all MI values less than 3.84'. This indicates that the model is sufficient in its specification and does not require changes in terms of inserting new links or new correlations within the variables or the errors of the model. The model is therefore robust.

6.9 Qualitative Data Analysis

The aim of qualitative interview is to access and understand the common reality of individuals, groups, and cultures as they feel or experience it. Qualitative designs do not usually draw samples from large-scale data sets. Schostak (2005) uses the term 'inter-view' to describe how the words and texts produced through an interview are inevitably formed at the intersection of two different worlds, one of the researcher and the other of the participant. Due to the personal nature of

qualitative data and its source in single contexts, it is challenging to use conventional standards of reliability and validity. The purpose of a qualitative interview is to follow up areas of interest, develop an understanding of the context of respondents' answers, add richness to data and probe for further information or clarification. The process involves examining 'how' and 'why' things occur and incorporates people's own motivations, interpersonal cooperation, and conflict (Gray, 2013; Charmaz, 1995). The process can also include 'a sequence of predetermined but open-ended questions that could produce further information' (Ayres, 2008). Qualitative interviews are concerned with understanding people's narratives from their perspective. The data are collected through participant observation or interviews, and analysed in terms of themes derived from participants' descriptions in their language/narrative (Minichiello et al., 1990). Qualitative analysis allows for vagueness/inconsistencies in the data, which reflects human reality. This allows the researcher to identify matters that are often missed (such as subtleties and complexities).

Therefore, this section presents the findings of the follow-up telephone interviews with three MSME businesses respondents who have already participated in the questionnaire survey and agreed to answer four follow-up questions based on these questionnaires, using narrative analysis. Narrative methods use interviews and sometimes documents/observations to gather information from participants. The classification and conclusions of narrative analysis typically relate to the narratives as a whole, rather than different elements within them. The procedure revolves around interpreting the answers and classifying them into general patterns (Riessman, 2008). Prior to the start of the present interview process, the interviewees were asked to confirm that they were willing to participate in this process with the following declaration: 'I would like to have your opinion about the following questions regarding the research survey questionnaires you have already completed. Please indicate that you understand what is being proposed and that the processes in

which you will be involved have been explained to you and you are willing to participate.’ All of the participants said that they understood the whole process and were happy to participate. The initial stage of the telephone interview started with a brief discussion concerning participants’ opinions of the questionnaire they have completed in terms of how they found the whole process and their understanding of the questions. They all said that the process was not time-consuming and that the questions were not difficult to understand, which is why they decided to participate in follow up interviews, as they believed that the findings could be significant for businesses such as theirs facing a similar crisis in the future. Therefore, the ensuing telephone interview process concentrated on the following four questions:

1. What do you think about the government support programmes offered during the COVID-19 financial crisis for MSME businesses in the UK?
2. How would you describe the financing options for MSMEs during the COVID-19 financial crisis in the UK?
3. How would you describe the decisions made by the UK Government regarding lockdowns during the COVID-19 financial crisis?
4. What do you think about the overall economic impact of the COVID-19 financial crisis on UK MSMEs?

These questions formed the basis of the qualitative data, the purpose of which was to strengthen the findings of the quantitative survey. The data provided through these qualitative interviews helped to ascertain whether there was any alignment between the results of the questionnaire survey and the conclusion drawn from the follow-up interviews. For instance, qualitative data can provide information about the quality and reliability of the quantitative survey measures and offer some insight into the meaning of particular fixed responses. The interview process then started,

the answers were noted, and the written content was read to each participant to verify their answers and whether there were any omissions or additions that were not part of their answers.

The above sections outlined the purpose of qualitative interviews and the nature of the data collection procedure. The following section details further analytic tools that may help in analysing the data. These techniques involve pinpointing the answers given in order to understand what has been said and what they reveal about the wider narratives, in this case about the overall quantitative research findings. Although a full analysis of the data is the first stage of the analytical process, the analysis also needs to be moved from the analysis of specific answers to that of the data set as a whole. Not every answer stated or identified in the interviews will be included in the final analysis (Riessman, 2008). This means that the final conclusions drawn in relation to the interview questions will be a summary of the narratives drawn from the three participants to determine whether there is any alignment with the overall quantitative findings. To build this narrative analysis, the answers to be considered in the final conclusions are those that are relevant to the research questions, rather than everything that has been narrated. In developing the analysis, attention was paid to similarities and differences in the narratives given by the three respondents who participated in this interview process, as indicated below.

6.10 Narratives of the Interview Participants

Q1. What do you think about the government support programmes offered during the COVID-19 financial crisis for MSME businesses in the UK?

Jay (microenterprise): ‘Government support policies, in particular furloughing, were extremely helpful because they helped us in reducing the severity of the negative impact on our expenditure, in a particular payroll, which enabled us to retain some staff.’

Yvonne (small enterprise): ‘The furlough support system did help us to navigate the most difficult period of the pandemic in terms of supplementing our payroll expenditure, which enabled us to keep some of our staff, without which we would have made a number of the redundancies.’

Henry (medium-sized enterprise): ‘The support we utilised was government backed loans; however, this has to be paid back, but it did help us with some cash-flow problems due to the loss of revenue caused by the lockdown.’

Analysis of the above narratives: It is clear from the above narratives or answers to the first interview question that there are some similarities between the responses from Jay (microenterprise) and that of Yvonne (small enterprise) in that the support system they utilised that helped them to supplement their payroll expenditure and retain staff was furloughing, whereby the government pays 80% of some of the employees’ wages and the business pays the remaining 20%. However, Henry (medium-sized enterprise) utilised government backed loans instead of the furlough support, and the loan will have to be paid back. He indicated that it helped him with cash-flow issues at the time; hence, his narrative regarding the utilisation of support programmes differs from those of Jay and Yvonne.

2. How would you describe the financing options for MSMEs during the COVID-19 financial crisis in the UK?

Jay (microenterprise): ‘The financing options were extremely limited for us as a business during the health pandemic/COVID-19 crisis because banks were reluctant to lend unless collateral and other security requirements were met. Trade credit facilities were also substantially reduced in our case which impacted the operational activities in that period.’

Yvonne (small enterprise): ‘The overall lending environment was challenging for many businesses, including ours, but we were able to compensate the limited access to bank lending with trade credits which served us quite well during this period.’

Henry (medium-sized enterprise): We were lucky. Although the lending opportunities were below the pre-pandemic level from many banks, we were able to secure some lending through the government's back loan support scheme.’

Analysis of the above narratives: There were similarities between the participants’ narratives regarding the overall challenging lending environment; however, their narratives differed in terms of how these challenges affected them.

3. How would you describe the decisions made by the UK Government regarding lockdowns during the COVID-19 financial crisis?

Jay (microenterprise): ‘The decision was necessary, but was not thought through properly and was taken at a wrong time; therefore, it did not achieve what it was meant to do, which was to minimise the human cost of the pandemic, since the UK had the worst death toll in Europe during the early period of the pandemic. Additionally, the lockdown has caused a sudden loss of revenue for businesses, including ours, which has negatively affected both our operational activities and cash flow.’

Yvonne (small enterprise): ‘Lockdown decisions were minimally successful in terms of stemming the infection rates within the country at some point, but its impact on the supply chains and business activities was detrimental to our cash flow.’

Henry (medium-sized enterprise): ‘It was a terrible decision because it starved businesses of their vital financial resources, including us, because both our labour and income (customers) were in quarantine.’

Analysis of the above narratives: There seem to be similarities between the narratives of all the three respondents regarding the impact of the lockdown on their operational activities, which in turn impacted the cash-flow positions of their individual businesses.

4. What do you think about the overall economic impact of the COVID-19 financial crisis in the UK?

Jay (microenterprise): ‘The overall economic impact of COVID-19 has been terrible in the UK because many people and businesses lost their income streams due to various factors such as the collapse of economic activities, lockdown, and social distancing.’

Yvonne (small enterprise): ‘I have never seen anything as bad as the economic impact of the COVID-19 financial crisis in my lifetime in the UK. The impact was so sudden and sharp that many businesses, including ours, were hanging by a thread. There was a steep drop in spending on services by households, which has led to a drastic decline in GDP.’

Henry (medium-sized enterprise): ‘There is no other way to describe it – the economic impact of the health pandemic in the UK was unprecedented during April to June 2020, the first national lockdown, GDP dropped by a record 19.4%. This shows how terrible the overall economic impact during the COVID-19 economic crisis was in the UK.’

Analysis of the above narratives

There is complete similarity between the above narratives regarding the overall economic impact of the COVID-19 crisis in the UK. Therefore, the conclusions from the above narratives are that the overall economic impact of the COVID-19 crisis in the UK was extremely bad.

6.11 Comparing the Quantitative Survey and Qualitative Interview Results

First question - Government support schemes: The majority verdict/narratives among the MSME interview participants was that the support system they utilised that helped them to supplement

their payroll expenditure and retain staff during the COVID-19 financial crisis was the furloughing programme. This aligns with the results presented in Chapter Six in Table 21 where 47% of the respondents of the quantitative survey indicated that it was the government furlough payments that helped them to avoid making redundancies.

Second Question - Financing options: The narratives concerning this particular factor were telling because even though this was not a standout factor in the quantitative survey in percentage terms, it was revealed in the interview narratives as being a constraint during the COVID-19 financial crisis. This demonstrates the importance of qualitative interviews in a primarily quantitative project, as they allowed the researcher to identify matters that were not highlighted to any great extent in the results of the questionnaire survey, as demonstrated by this revelation about the financing options being a challenge in the interview process. This narrative is extremely important in the context of the present research because it enhances the quantitative results by revealing that the impact of the pandemic on both the working capital and cash flow/liquidity may have been due to a lack of financing options. This was not strongly highlighted in the quantitative survey results, and therefore could have contributed to the overall impact of the COVID-19 financial crisis on both the WCM and cash flow/liquidity of UK MSMEs, as indicated in the results presented in Chapter Six.

Third question - Lockdown Decisions: Overall, there was a consensus regarding the impact of the lockdowns on MSME businesses during the COVID-19 financial crisis in the narratives of the three interviewees' interviews, which was again in line with the results of the quantitative survey, where 90% of respondents indicated that the lockdown impacted both their WCM and cash flow/liquidity.

Fourth question: In terms of the overall economic impact of the health pandemic in the UK, the three interview participants described as terrible and unprecedented, and had ‘never seen anything like it’.

6.12 Conclusion

The purpose of the follow-up interviews was to ascertain whether there was any alignment between the quantitative and the qualitative results. From the narrative analysis, it is clear that an alignment exists between the quantitative and qualitative results because the interview narratives mainly supported the results of the quantitative survey, as detailed below.

Overall, the quantitative and qualitative results show more similarities than dissimilarities. Some of the similarities are that both indicate that the lockdown impacted both the WCM and cash flow/liquidity of UK MSME businesses. Both results also indicated that government support programmes, particularly furloughing and grants, were helpful for their businesses. There were also similarities in both results in that the overall economic impact of the COVID-19 financial crisis in the UK was perceived as bad. However, there were also dissimilarities regarding financing options because in the quantitative results this was not a standout factor, whilst in the qualitative results it was identified as one of the constraints for their businesses by all participants during the COVID19 financial crisis. Nevertheless, even though this factor was not a standout in percentage terms in the quantitative survey results, it may have been one of the causes of the impact on both WCM and cash flow/liquidity of UK MSMEs, as this factor relates to a lack of credit facilities and other financing opportunities during the pandemic. Therefore, it can be concluded that the qualitative results have supported, strengthened, added value and enhanced the overall results of the present research.

6.13 Summary

The primary research data was examined in this chapter. Here, the sample comprised 150 UK MSME businesses. The questionnaire design and structure were also examined. Structural equation modelling (SEM) was then used to analyse the data. The results of the questionnaire survey revealed a response rate of 41.3 per cent, comparable with previous studies on SMEs such as those undertaken by Afrifa (2013), Jusoh et al. (2008), and Ahmad (2012). The internal validity was then tested, which revealed that all 62 instruments were valid, reliable, and useable. The results indicate and supports the hypotheses that the COVID-19 financial crisis, not only has a significant statistical relationship with the WCM of UK MSME businesses, but also negatively impacted both their WCM and cash flow/liquidity of UK MSMEs due to the reduced level of consumer demand (market channel) and expectations or feelings of a positive economic outlook in the UK (emotional channel). The results further provided evidence that government support schemes such as furloughing, grants and loans have helped in minimising the negative impact of the pandemic on MSME businesses. The analysis also compared the findings from the quantitative survey with those of the qualitative interviews and found that they were largely similar.

6.13 Comparison of the Results with those of Previous Studies

The findings of the present study provide consistent and coherent evidence of a relationship between the COVID-19 financial crisis and the WCM and cashflow/liquidity of UK MSMEs, which support the main hypotheses. However, a large challenge concerning research into the COVID-19 financial crisis at the time is the lack of data, a flaw evident in almost every current report on the pandemic. Nevertheless, the present research attempted to assess and provide evidence of the impact of the COVID-19 financial crisis on the WCM and cash flow/liquidity of UK MSMEs during the early phases of the pandemic. In the future, based on the findings of this

research and after the pandemic has passed, it will be possible to evaluate and assess whether the findings provided by this research share any similarity with the results of future studies.

CHAPTER SEVEN

7.1 CONCLUSIONS

7.2 Introduction

This chapter provides a summary of the research and the conclusions drawn. It then discusses the possible policy and practical implications of the results and considers the limitations of the research. Finally, suggestions concerning avenues for future research and suggested improvements are given.

7.3 The Research Objectives

The importance of the MSME sector cannot be overemphasised because of the role they play in economic development in many nations. In the UK, they account for about 60% of employment and 50% of GDP (Lerong, 2017). Despite the economic and social contributions of the SME sector in most countries, including the UK, little was known about the impact of the COVID-19 financial crisis on the working capital management(WCM) of UK MSMEs at the time of conducting the present research. Therefore, the aim of the research was to determine the nature and extent of the relationship between the COVID-19 financial crisis and the WCM of UK MSMEs. The objectives were to find evidence that the COVID-19 financial crisis may impact the WCM of UK MSMEs due to the reduced level of consumer demand (market channel); to find evidence that the COVID-19 financial crisis may impact the cash flow /liquidity of UK MSMEs, due to the reduced level of consumer demand (market channel); and whether the impact of the COVID-19 financial crisis on the WCM and cash flow/liquidity of UK MSMEs may be due to MSMEs' expectations or feelings of a positive economic outlook in the UK (emotional channel).

7.4 Research Methodology

Sample section topics were discussed for both the quantitative and qualitative analysis. The thesis findings comprised quantitative survey results and three follow-up interviews to generate qualitative data to complement these results. For the quantitative data analysis, the sample population consisted of 62 usable questionnaires from a possible sample of 150 businesses. These businesses were meant to have met the definition of MSME as specified by the UK Companies Act 2006, sections 382 and 465. The questionnaire survey yielded a return rate of 41.3 per cent. The benchmark for inclusion in the sample frame was obtained from NEX exchange and AIM-listed small business, the federation of Small Businesses, and other UK small business databases.

7.5 Practical Implications

The results indicate that the COVID-19 financial crisis has negatively impacted the WCM of UK MSMEs due to reduced customer demand (Market Channels) and SMEs' expectation or feelings regarding the overall economic outlook in the UK (Emotional Channel). The results also indicated that the COVID-19 financial crisis negatively impacted both the WCM and cash flow/liquidity UK MSMEs. These impacts are twofold, the first of which is the reduction in the level of consumer demand and the consequent reduction in business turnover (market channel) caused by lockdowns. The second impact on both WCM and cash flow/liquidity is MSME owners' and managers' worries about the severity of the COVID-19 economic crisis and their expectations or feelings about the overall economic outlook in the UK (emotional channel), as measured through both observed and abstract/latent variables. Although previous research suggests that the WCM of SMEs in other countries was impacted by previous financial crisis, these studies did not provide evidence of the impact of the current COVID-19 financial crisis on the WCM of UK MSME businesses. Secondly, none of these studies measured the impact of a financial crisis on the WCM

of UK MSME businesses using SEM methodology to analyse findings which incorporates latent/abstract variables.

Finally, what the results of the present research indicate is that government protected support schemes such as furloughing, grants, and policies are critical in tackling the overall COVID-19 financial crises. Specifically, the more positive MSME businesses feel about the government's handling of the economic crisis, the less the impact of the financial crisis on both their WCM and cash flow/liquidity. This is indicated by L2hat which is outside the model for identification purposes, but highly significant because it measures the common factor driving perceived government policy activeness in tackling the pandemic and its subsequent economic crisis.

7.6 Policy Implications

As one of the published 20 COVID-19 areas of research interest (ARIs) for the UK Parliament, the policy implications of the present research for policymakers and the government are as follows. The robust government policy support schemes such as furloughing and grants have been critical for these SMEs during this financial crisis because 58% of them utilised government assistance in the form of furloughing and 26% in the form of grants, a total of 84%. The most important factor reducing the negative impact on the cash flow of MSMEs is the government furlough support scheme (46% of the responding MSMEs) followed by grants (36%).

According to 48% of the responding MSMEs, the most important factor reducing negative impact on their WCM is furloughing, while 39% stated that it was government grants. In addition, 46% reported that government furlough payments help them avoid making employees redundant. These findings were supported and enhanced by the qualitative results, where the interviewees also stated that the furlough support system helped them with their payroll expenditure, which enabled them to retain staff. Nevertheless, 64% of SMEs still indicated that, despite these policy support

schemes, the negative impact of the pandemic on their WCM was 85% and on cash flow/liquidity was 87%. Yet despite these financial challenges caused by the COVID-19 financial crisis, the MSMEs were optimistic about the future prospect of their businesses, in that only 16% indicated that their businesses would go into liquidation. This may be because the robust government policy support schemes such as furloughing and grants have helped many of these businesses avoid insolvency.

The key lesson to be learnt from these findings is that the government's overall handling of the pandemic and the resulting economic crisis, as well as its interventions and support systems have helped MSME businesses survive some of the most negative effects of the pandemic and lessen the impact of this unprecedented economic downturn in the UK, as indicated by the $L2hat$ variable in the analysis of the results. The results can also serve as a lesson from which MSME businesses can learn in terms of the importance of efficient management of working capital, during any period, but more importantly during a financial crisis. This is because the bank lending theory predicts that during a financial crisis, banks restrict extension of some loans to businesses (Nilsen, 2002); hence, the financing constraints are likely to grow, as shown by the findings of the present research due to COVID-19 financial crisis in the UK.

7.7 Theoretical and Empirical Contributions

To underscore the importance and contribution of the present research, the Parliamentary Office of Science and Technology (POST) in the UK has published 20 COVID-19 areas of research interest (ARIs) for the UK Parliament, utilising the input of over 1,000 experts. The report was presented to the UK Parliament's Select Committee and the present research topic happens to be relevant to one of the areas identified by these experts. Therefore, the present study contributes by providing evidence to show that the COVID-19 financial crisis has negatively impacted both the

WCM and cash flow/liquidity of UK MSMEs. These negative impacts were primarily due to reduced customer demand (market channel) and the anxiety of a positive economic outlook (emotional channel). The results also provide insights into the use of management accounting concepts in MSMEs. More specifically, the present research makes its own unique contribution to the field by providing knowledge of the impact of the COVID-19 financial crisis on both the WCM and cash flow/liquidity of UK MSMEs, the first study of its kind in the UK. Even though previous studies have investigated WCM during and after the financial crisis (e.g., Simon et al., 2017; Pawel et al., 2017; Baveld, 2012), they did not examine the impact of the current COVID-19 financial crisis on the working capital management of UK SMEs. Therefore, this research is unique, not only because of the topic that was covered, but also because it employed a unique methodology (SEM) to statistically test and develop hypotheses incorporating study variables measured through both observable and abstract variables, known as latent variables, for the first time in studies of UK MSMEs. These latent variables are unique because they extract a relatively pure measurement from these observed variables, uncorrupted by measurement errors and method variance, which capture common/share variance among the observed variables. Therefore, by filling the research gap described, the present research has not only made an original contribution to knowledge of the negative impact of the COVID-19 financial crisis on the WCM and cash flow/liquidity of UK MSMEs, but also made an original contribution to the academic knowledge base through its unique empirical results and the utilisation of a distinctive methodology in analysing the quantitative data. The study also contributes to the debate in the SME literature regarding the impact of the COVID-19 financial crisis on the WCM in the context of UK MSMEs, also the value and significance of management accounting concepts, more importantly during financial crises for MSME businesses, due to their smaller profit margins and cash flow and liquidity constraints. This theory has been

supported by the findings of the present research, which indicated that the COVID-19 financial crisis has negatively impacted both the working capital management and cash flow/liquidity of UK MSMEs.

7.8 Research Limitations

As indicated earlier in this thesis, the usual limitations related to survey-based research, especially during a pandemic, should be considered before drawing conclusions from the results. In this regard, the findings are used for theorisation rather than offering generalisable results; therefore, replications of the present study would be useful. Additionally, the range of contingent variables employed in this research was small. These factors may impede the generalisability of the results to some extent, so caution must be exercised when taking a general view of the results. Data collection concerning MSMEs is difficult; therefore, the response rate obtained was considered acceptable as small businesses are known for not being particularly willing to respond to questionnaires (Marriott and Marriott, 2000), especially during the COVID-19 financial crisis. Therefore, the constraint of low response rates could not be prevented. This research focused only on MSMEs because they are particularly vulnerable to financial challenges during economic downturns, and this sector is of immense significance to many economies, including the UK economy. A limited number of variables was also used to avoid confusing the participants which would have prevented them from answering some of the questions due to complexity, however the questionnaire items covered important aspects of WCM. The use of survey questionnaires also involves some limitations, such as the possibility of misunderstanding and misinterpretation of the questions by respondents. Furthermore, because this particular period was difficult for many business owners and managers in that they may have lost loved ones during the pandemic and the business environment has been particularly challenging, it is possible that some respondents may

have misunderstood some elements of the questionnaire. This does not, however, diminish the significance and importance of the findings obtained from this unique study.

7.9 Recommendations for Future Research

The findings of this research have raised several questions that could form the basis of future research. First, due to the evolving nature of the COVID-19 pandemic, the small sample size and the relatively low response rate, future research should be undertaken with a larger sample size. Furthermore, research that examines the impact of the COVID-19 financial crisis on the WCM and cash flow/liquidity of UK SMEs remains limited, this might be due to the fact that the virus has only been around for roughly two years at the time of writing this thesis. Therefore, additionally research on this topic should be conducted. Also post-pandemic research should be conducted to examine how MSME businesses coped after the withdrawal of government support schemes such as furloughing and grants. Finally, research in this area can be developed by conducting similar research on the severity of the impact of the COVID-19 financial crisis on WCM of MSMEs in other countries to identify differences in the results. In this regard, the findings can be used for theorisation rather than offering generalisable results, and replications of the present study would be extremely valuable.

7.10 Summary

In what seemed like a split second, the COVID-19 pandemic and corresponding financial crisis changed the lives of people and businesses across the world. The commercial activities and cash flow/liquidity of UK MSMEs drastically reduced. Therefore, the issue of how UK MSMEs have been impacted by this COVID-19 financial crisis and the possible future challenges connected to the pandemic are important topics that are worth researching because SMEs account for two-thirds of global employment and half its GDP. In the UK, SMEs account for about 60% of employment

and 50% of GDP, hence the motivation for this research. By investigating and providing evidence of the negative impact of the health pandemic/ COVID-19 financial crisis on the WCM of UK SMEs, the present research has filled a gap in the extant literature and knowledge in the field, as well as provides evidence and information for policymakers, MSME managers and owners to help them mitigate similar crises in the future. Therefore, the present research makes its own unique contribution to the field by providing meaningful statistical evidence to suggest that the negative impact of the COVID-19 financial crisis on the working capital management(WCM) of UK MSMEs were due to the reduced level of customer demand (market channel) and the general anticipations and feelings on the part of these small businesses regarding a positive outlook on the UK economy (emotional channel). These results can now be utilised by other researchers in future studies.

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APPENDIX



1 ETHICS AND INTEGRITY APPROVAL

Dear Lamin,

Application ID: ETH2223-0224

Original application ID: ETH2021-0211

Project title: The impact of health pandemic on WCM: Evidence from the UK'

Lead researcher: Mr Lamin Jabbi

Your application to Ethics and Integrity Sub-Committee (EISC) was considered on the 25th May 2023.

The decision is: **Approved**

The Committee's response is based on the protocol described in the application form and supporting documentation.

Your project has received ethical approval for 4 years from the approval date.

If you have any questions regarding this application, please contact your supervisor or the administrator for the Ethics and Integrity Sub-Committee.

Approval has been given for the submitted application only and the research must be conducted accordingly.

Should you wish to make any changes in connection with this research/consultancy project you must complete 'An application for approval of an amendment to an existing application'.

Approval is given on the understanding that the [UEL Code of Practice for Research](#) and the [Code of Practice for Research Ethics](#) is adhered to.

Any adverse events or reactions that occur in connection with this research/consultancy project should be reported using the University's form for [Reporting an Adverse/Serious Adverse Event/Reaction](#).

The University will periodically audit a random sample of approved applications for ethical approval, to ensure that the projects are conducted in compliance with the consent given by the Ethics and Integrity Sub-Committee and to the highest standards of rigour and integrity.

Please note, it is your responsibility to retain this letter for your records.

With the Committee's best wishes for the success of the project.

Yours sincerely,

Fernanda Pereira Da Silva

Administrative Officer for Research Governance

2 Participation Information Pack

University of East London

Royal Docks School of Business and Law, Water Lane, E15 4LZ London, United Kingdom.

Research Integrity

The University adheres to its responsibility to promote and support the highest standard of rigour and integrity in all aspects of research, observing the appropriate ethical, legal, and professional frameworks.

The University is committed to preserving your dignity, rights, safety and wellbeing and as such it is a mandatory requirement of the University that formal ethical approval, from the appropriate Research Ethics Committee, is granted before research with human participants or human data commences.

The Principal Investigator/Director of Studies

Dr Chau Duong
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Student researcher

Lamin Jabbi
Water Lane, E15 4LZ, London
United Kingdom
u1048106@uel.ac.uk

Consent to Participate in a Research Study

The purpose of this letter is to provide you with the information that you need to consider in deciding whether to participate in this study.

Project Title

An investigation of the impact of the health pandemic (COVID-19) financial crisis on the working capital of UK Micro, Small and Medium Sized Enterprises (MSMEs)

Project Description

The purpose of this research is to empirically investigate the relationship between the health pandemic/COVID-19 financial crisis and the WCM of UK MSMEs and the impact of the pandemic on both their WCM and cash flow/liquidity. An understanding of how MSMEs suffered, struggled, and/or perhaps overcame the challenges of the current COVID-19 financial crisis cannot be understated, especially as policymakers are urgently seeking evidence to shape their agenda to support this vital sector of the economy.

Therefore, the primary objective of the present study is to investigate and provide empirical evidence of the impact of the COVID-19 financial crisis and the WCM of UK MSMEs. The research design is exploratory. The data will be randomly collected through questionnaires from a sample population of 150 UK MSMEs and a series of follow-up interviews. The paper will use SEM to analyse the findings, and the outcome should hopefully be useful for policy makers and MSME businesses in the event of similar crises.

Confidentiality of the Data

The confidentiality of all respondents will be respected and protected. Records will be stored unanimously; and will be destroyed within 13 weeks of collection.

Location

Data collection across the UK between September and November 2020

Remuneration

No compensation will be paid to the participants of this research.

Disclaimer

Your participation in this study is entirely voluntary, and you are free to withdraw at any time during the research. Should you choose to withdraw from the programme you may do so without disadvantage to yourself and without any obligation to give a reason. Please note that your data can be withdrawn up to the point of data analysis – after this point it may not be possible.

University Research Ethics Sub-Committee

If you have any concerns regarding the conduct of the research in which you are being asked to participate, please contact:

**Catherine Hitchens, Research Integrity and Ethics Manager, Graduate School, EB
1.43
University of East London, Docklands Campus, London E16 2RD
(Telephone: 020 8223 6683, Email: researchethics@uel.ac.uk)**

For general enquiries about the research please contact the Principal Investigator on the contact details at the top of this sheet.

Consent to Participate in a Programme Involving the Use of Human Participants.

Please tick as appropriate:

	YES	NO
I have read the information leaflet relating to the above programme of research in which I have been asked to participate and have been given a copy to keep. The nature and purposes of the research have been explained to me, and I have had the opportunity to discuss the details and ask questions about this information. I understand what is being proposed and the procedures in which I will be involved have been explained to me.		
Participation will not be audio or video recorded, due to COVID-19 face to face restrictions.		
I understand that my involvement in this study, and particular data from this research, will remain strictly confidential as far as possible. Only the researchers involved in the study will have access to the data. <i>(Please see below)</i>		
I understand that maintaining strict confidentiality is subject to the following limitations: If the sample size is small, or focus groups are used, state that this may have implications for confidentiality/anonymity (if applicable). A clear statement that, where possible, participants' confidentiality will be maintained unless a disclosure is made that indicates that the participant or someone else is at serious risk of harm. Such disclosures may be reported to the relevant authority.		
Anonymized quotes will be used in publications.		

Participants will not be named in publications.		
[Give proposed method(s) of publication dissemination of research findings]- Journals and presentations.		
[If applicable, obtain participants' permission to use the data in future research by your team]-Not applicable.		
[If applicable, obtain participants' permission to be contacted for future research studies by your team]-Not applicable.		
It has been explained to me what will happen once the programme has been completed.		
I understand that my participation in this study is entirely voluntary and I am free to withdraw at any time during the research without disadvantage to myself and without being obliged to give any reason. I understand that my data can be withdrawn up to the point of data analysis and that after this point it may not be possible.		
Though it is not expected that participants will experience any direct negative impact as a result of taking part in this survey; however, if need be, participants can contact MIND on 0300 123 393/0208 2152243 or info@mind.org.uk , who could help with any emotional and mental health challenges.		
I hereby freely and fully consent to participate in the study which has been fully explained to me and for the information obtained to be used in relevant research publications.		

Participant's Name (BLOCK CAPITALS)

Participant's Signature

Investigator's Name (BLOCK CAPITALS)

.....
Investigator's Signature

.....

Date:

3 Sample Questionnaire

I am conducting a survey about the impact of the health pandemic /Covid-19 financial crisis on the working capital management of UK Micro, Small and Medium Sized Enterprises.

I would like to assure you that all information provided by you in this questionnaire will remain confidential. Please tick the box answer that best matches your view.

Thank you for your time.

Codes 1-5

1. Number of Employees in your Business?

Micro Businesses 0-10

Small Businesses 11-50

Medium Business 51-250

2. What is your sector?

Retail 1

Hospitality 2

Hairdressers 3

Gym 4

Social care provider 5

Other 6 Please specify

3. What is your role in the business?

- Owner 1
- Manager 2
- Accounts Manager 3
- Other 4 Please specify-

4. The Health pandemic/Covid-19 financial crisis has impacted the WCM of your business?

- Strongly negative 1
- Negative 2
- Neutrally 3
- Positive 4
- Strongly positive 5

5. The Health pandemic/Covid-19 financial crisis has impacted the cash flow/liquidity of your business?

- Strongly negative 1
- Negative 2
- Neutrally 3
- Positive 4
- Strongly positive 5

6. What factor has the biggest negative impact on both the WCM and cash flow/liquidity of your business due to the health pandemic/Covid-19 financial crisis?

- Lockdown 1
- Lack of financing options 2
- Delayed government support 3
- None 4
- Other 5 Please specify

7. Have you utilise Government assistance in the form of the following?

- Loans 1
- Grants 2
- Furlough 3
- None 4

8. What is the most significant factor in reducing the negative impact of the health pandemic /Covid-19 financial crisis on the cash flow/liquidity of your business?

- Government loans 1
- Government grants 2
- Furlough 3
- Deferred rent or rate payments 4
- Other 5 Please specify

9.What is the most significant factor in reducing the negative impact of the health pandemic/ Covid-19 financial crisis on the working capital of your business?

Government loans 1

Government grants 2

Furlough 3

Deferred rent or rate payments 4

None 5

10.Government Furlough payments has helped my business avoid making redundancies?

Yes 1

No 2

Rather not say 3

11. How damaging will the impact of the health pandemic/Covid-19 financial crisis has on the sustainability prospect of your business, despite Government loans, grants, and furlough payments?

Very Severe 1

Severe 2

Very minimal 3

Minimal 4

No impact 5

12. How likely is the financial challenges pose by the health pandemic/Covid-19 financial crisis makes your business go into liquidation or bankruptcy in the next 12 months?

Very Likely 1

likely 2

Least likely 3

Unlikely 4

13.What is your overall perception of the economic impact due to the health pandemic/Covid-19 financial crisis in the UK?

Very bad 1

Bad 2

Not too bad 3

No impact 4

I don't Known 5

Thank you very much for your participation.

Please after answering the questions at your convenience, email it to me at

u1048106@uel.ac.uk. You can add any additional comments on a separate piece of paper if you want to do so.

4. Follow-up interview Questions:

Thank you for agreeing to take part in this interview.

I would like to have your opinion about the following questions regarding the research questionnaires you have already answered. Can you please indicate that you understand what is being proposed and that the processes in which you will be involved have been explained to you and that you are willing to participate.

1.What do you think about the government support programmes during the health pandemic/COVID-19 financial crisis for MSME businesses in the UK?

2.How would you describe the financing options of MSMEs during the current health pandemic/ COVID-19 financial crisis in the UK.

3.How would you describe the UK Government lockdowns decisions during the health pandemic/COVID-19 financial crisis and their impact on your business?

4.What do think about the overall economic impact of the health pandemic/COVID-19 financial crisis in the UK ?

Thank you for your time in taking part in this interview.