

**The Impact of Digital and Real-Time Financial Management on Internal Financial Performance and Decision-Making in Small and Medium-sized Enterprises (SMEs)**



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## **Abstract**

Digital and real-time financial management have a profound impact on the internal financial performance and decision-making processes of small and medium-sized enterprises (SMEs). In the highly competitive business landscape, effective financial management is crucial for SMEs to drive growth and make informed strategic decisions. By embracing digital tools and real-time financial management practices, SMEs can enhance their internal financial performance and optimize decision-making.

However, the adoption of digital and real-time financial management practices may pose challenges for SMEs. Limited resources, lack of technological expertise, and concerns about data security are among the barriers that SMEs may face.

**Keywords:** Internal financial management, Digital real-time financial performance, decision making, small and medium-sized enterprises (SMEs)

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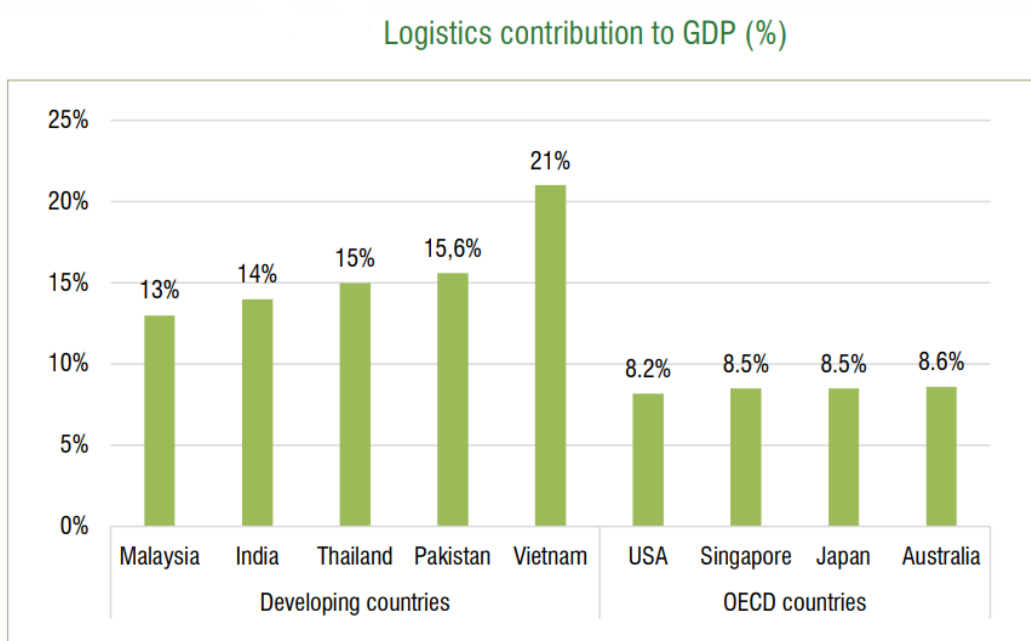
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## Chapter 1: Introduction

### **Introduction:**

**In the dynamic business environment**, small and medium-sized enterprises (SMEs) face unique challenges as they compete against multinational corporations (MNCs) in a tough macroeconomic landscape, particularly in Pakistan. SMEs contribute roughly 40% in the GDP of Pakistan, and up to 25% in Exports (State Bank of Pakistan). Additionally, they absorb roughly 78% of the non-agricultural labor force of the country (State Bank of Pakistan). These SMEs, especially those operating in the logistics industry, operate in a fast-paced environment where quick and accurate processing of financial information is crucial for making timely and informed business decisions. The development of the logistics sector of Pakistan is a key priority of the Government of Pakistan in order to capitalize on the country's strategic geographical location. The aim is to establish Pakistan as an important trade route, connecting various parts of the developing world.



Cost of operations and turnaround time are two important factors that draw multimodal transport and logistics businesses. Pakistan remains trails behind its top rivals in logistics performance, despite significant improvements. In 2018, Pakistan was ranked 122 out of 160 nations by the World Bank's Logistics Performance Index (LPI), far behind all other South Asian nations except the Kingdom of Bhutan (Table 2). This index takes into account the effectiveness of the clearance procedure, the standard of infrastructure associated with commerce and transportation, the general level of competence, the standard of logistical services, and some other crucial elements. As the economy develops, other sectors expand while the contribution of logistics to GDP declines.

| Country    | LPI score | LPI rank | Customs | Infrastructure | International shipments | Logistics competence | Tracking and tracing | Timeliness |
|------------|-----------|----------|---------|----------------|-------------------------|----------------------|----------------------|------------|
| India      | 3.18      | 44       | 2.96    | 2.91           | 3.21                    | 3.13                 | 3.32                 | 3.50       |
| Maldives   | 2.67      | 86       | 2.40    | 2.72           | 2.44                    | 2.55                 | 2.77                 | 3.18       |
| Sir Lanka  | 2.6       | 94       | 2.58    | 2.49           | 2.51                    | 2.42                 | 2.79                 | 2.79       |
| Bangladesh | 2.58      | 100      | 2.30    | 2.39           | 2.56                    | 2.48                 | 2.79                 | 2.92       |
| Nepal      | 2.51      | 114      | 2.29    | 2.19           | 2.36                    | 2.46                 | 2.65                 | 3.10       |
| Pakistan   | 2.42      | 122      | 2.12    | 2.20           | 2.63                    | 2.59                 | 2.27                 | 2.66       |
| Bhutan     | 2.17      | 149      | 2.14    | 1.91           | 1.80                    | 2.35                 | 2.35                 | 2.49       |

**Source:** Logistic Performance Index, World Bank, 2018.

Logistics companies, particularly freight forwarders, play a pivotal role in facilitating international trade by handling various tasks such as customs clearance and paying expenses on behalf of their clients. Therefore, having a clear and real-time visibility of their finances and cash flow is essential for their operations. Unlike MNCs, SMEs often lack the financial resources and cash flow capacity to invest in expensive accounting software solutions.

## 1.1 Background:

Freight forwarders play a critical role in Pakistan's economy, facilitating international trade and connecting businesses with global markets. In a country facing unique macroeconomic challenges, such as regulatory complexities, infrastructure limitations, and geopolitical factors,

freight forwarders serve as key enablers for SMEs operating in the logistics industry. With Pakistan's strategic geographic location, the efficient movement of goods is paramount to sustaining trade relationships and economic growth. Freight forwarders in Pakistan navigate these challenges by providing expertise in customs clearance, documentation, and transportation logistics, ensuring the smooth flow of goods across borders. Their services are particularly valuable for SMEs, as they help navigate the complexities of international trade and provide essential visibility into finances and cash flow. By leveraging digital and real-time financial management tools, Pakistani freight forwarders can enhance their operational efficiency and make informed decisions while minimizing costs and maximizing productivity.

Freight forwarders play a vital role in the global supply chain by facilitating the transportation of goods from one location to another. They act as intermediaries between the various parties involved in international trade, including exporters, importers, shipping lines, airlines, trucking companies, customs authorities, and other logistics service providers.

**The primary responsibilities of freight forwarders include:**

**1. Documentation and Customs Clearance:** The considerable paperwork and documentation needed for international shipment is handled by freight forwarders, who also prepare and process customs declarations, certificates of origin, shipping instructions, and other trade-related documents. They guarantee adherence to customs rules and promote efficient goods clearance.

**2. Transportation and Logistics Coordination:** Freight forwarders plan the movement of commodities by a variety of routes, including the sea, air, road, and rail. To provide their customers with the most effective and affordable transportation options, they collaborate closely with shipping lines, airlines, trucking companies, and other carriers. This calls for controlling the logistics flow from point of origin to point of destination, tracking shipments, and coordinating the movement of commodities.

**3. Freight Consolidation and Deconsolidation:** To achieve economies of scale and lower transportation costs, freight forwarders frequently combine smaller shipments from many clients into bigger shipments, known as consolidations. When a shipment arrives, they separate it into individual consignments and deliver them to the appropriate receivers.

**4. Warehousing and Inventory Management:** Freight forwarders may offer warehousing and storage services for the goods of their clients, either in-house or through joint ventures with outside warehouses. They oversee stock control, manage inventory, and guarantee prompt delivery of items in accordance with client needs.

**5. Insurance and Risk Management:** To protect against potential loss or damage during transit, freight forwarders help clients obtain cargo insurance. In the event of any events or problems during shipment, they provide advice on insurance alternatives, set up coverage, and help with claims handling.

**6. Supply Chain Consultation:** In addition to offering information on shipping routes, carrier selection, packaging needs, and compliance with international trade standards, freight forwarders have expertise in streamlining supply chain processes. They assist companies in streamlining their supply chain efficiency and logistical operations.

In general, freight forwarders serve as middlemen who organize and streamline various logistics tasks, facilitating the quick and easy transfer of commodities across international boundaries. Their knowledge of logistics, paperwork, customs processes, and supply chain management is crucial for promoting international trade and streamlining the movement of commodities around the world.

**Cash flow management plays a vital role in the operations of freight forwarders**, making it a crucial aspect of their business. As middlemen in the logistics sector, freight forwarders oversee different financial transactions and handle the movement of products on behalf of their clients. The following main justifications underline the significance of cash flow management for freight forwarders:



**1. Liquidity and Financial Stability:** Effective cash flow management guarantees that freight forwarders have enough money to cover their ongoing operational expenditures, such as paying vendors, staff, and other overhead expenses. It ensures the business's seamless operation and continued financial stability.

**2. Timely Payments and Credit Management:** On behalf of their customers, freight forwarders sometimes pay up front for a variety of expenses such as customs duties, shipping costs, and insurance premiums. In order to avoid supply chain hiccups, they can manage their credit terms with suppliers and track unpaid invoices thanks to effective cash flow management.

**3. Working Capital Management:** By balancing incoming and leaving cash flows, cash flow management enables freight forwarders to maximize their available working capital. It assists companies in managing inventory levels, identifying cash flow gaps, and negotiating advantageous payment terms with vendors, thus enhancing profitability and lowering financial risks.

**4. Business Expansion and Investment:** The money required for freight forwarders to invest in business growth efforts, such as increasing their service offerings, modernizing infrastructure, or entering new markets, is provided by adequate cash flow management. They can take advantage of chances and maintain their competitiveness in the dynamism of the logistics sector.

Overall, the financial stability, operational effectiveness, and long-term viability of freight forwarders depend on proper cash flow management. Freight forwarders may navigate economic uncertainty, satisfy customer expectations, and promote business growth by maintaining a positive cash flow and making the best use of financial resources.

**Freight forwarders operate in a fast-paced logistics environment where the flow of information and data is vast and critical.** They deal with a huge volume of logistics data, including shipment information, customs paperwork, transit schedules, and client-specific specifications. Additionally, a substantial amount of transactional data is produced by freight

forwarders in relation to financial activities, invoices, payments, and cost allocations. It is crucial to control this complex information flow and analyze huge amounts of data quickly and effectively.

Freight forwarders need reliable systems and technologies that facilitate continuous information flow and speedy data processing in order to manage this data-intensive environment successfully. Real-time data capture, storage, retrieval, and analysis should be possible with these technologies. Additionally, they must include features like automated document processing, data integration across many platforms, and safe data sharing with pertinent parties.

For freight forwarders, processing transactional data and logistics data quickly has a number of benefits. It enables quick decision-making, enabling them to track shipments, reply quickly to consumer enquiries, and handle problems immediately. Effective financial management, including precise billing, cost analysis, and financial reporting, is supported by quick data processing as well. Additionally, it makes it possible to spot operational inefficiencies, optimize resource allocation, and put proactive steps in place to improve logistics performance as a whole.

Having reliable data processing systems is essential given the enormous volume of logistics information and transactional data handled by freight forwarders. In the fiercely competitive logistics sector, these technologies facilitate the smooth flow of information, enable speedy data processing, and give freight forwarders the ability to take well-informed decisions, increase operational effectiveness, and provide first-rate customer service.

In this context, MS Office, which contains the go-to data processing application, MS Excel, is used by the majority of Pakistani SMEs, including freight forwarding businesses. As a popular set of tools that is included with the widely used operating system Windows, Microsoft Office has become the standard in many different businesses and academic institutions. According to Microsoft's reports, as of 2021, over **1.3 billion people worldwide use MS Office**. MS Excel, known for its powerful data processing and analysis capabilities, is a popular tool for financial management, data organization, and reporting.

At the graduate level, which is considered the entry level education for the Skilled WorkForce in Pakistan, the use of the MS Office is mandatory. Along with the MS Office suite, the Google suite of products are widely used as they come packaged with Google email addresses, and are free to use.

In contrast, Accounting Softwares such as QuickBooks (starting at \$30 per user per month for a basic package), Xero, SAP ERP, and Oracle Financials, while popular choices for big corporations, cost significantly higher and need specialized training in order to operate within an organization's framework.

With over one billion users worldwide, MS Excel offers powerful data analysis and real-time reporting capabilities. By developing the necessary skills to effectively utilize MS Excel, Pakistani SMEs can achieve greater operational efficiency and gain a competitive edge without incurring substantial costs associated with new accounting software.

Utilizing MS Excel's data analysis and reporting features can be quite helpful for Pakistani freight forwarding SMEs. With the use of these technologies, they are able to evaluate financial data, provide real-time reports, and get insightful information for smart business decisions. SMEs can achieve operational efficiency and financial insight at a fraction of the cost compared to deploying new accounting software by employing the resources and expertise currently widespread in the sector. Additionally, because many workers are already familiar with MS Excel, there are fewer training needs for using these features, allowing SMEs to concentrate their resources on logistics software and other specialist tools.

## **1.2 Problem Statement:**

Small and medium-sized businesses (SMEs), especially freight forwarders in the logistics sector, encounter substantial obstacles while trying to manage their finances successfully in Pakistan's fiercely competitive macroeconomic climate. The necessity for real-time information to make informed judgments is one of these difficulties, along with restricted cash flow and quick operations. Furthermore, freight forwarders, who play a crucial role in facilitating international

trade, manage a sizable amount of financial and logistical data, keeping track of profit, inventory, accounts receivable, and customs charges on behalf of their clients.

Traditional accounting software is expensive, and it requires specialist training. This creates further barriers for SMEs, especially when they already need to spend money on logistical software and train their workforce. SMEs in the freight forwarding industry need more adaptable and user-friendly reporting methods that reduce the amount of training needed and the cost per user in order to overcome these challenges. This study attempts to look into how SMEs' internal financial performance and decision-making processes are affected by digital and real-time financial management. It is anticipated that SMEs would be able to improve operational effectiveness, cost-effectiveness, and competitiveness in the difficult business environment they operate in by filling this research need.

### **1.3 Research Gap:**

The existing literature on financial management, decision-making, financial performance, and accounting information systems has extensively explored various digital tools and technologies. Research on how digitalization affects firm value and performance is still in its infancy (Kohtamäki et al., 2019; Ricci et al., 2020). Particularly, there is a notable research gap regarding the utilization of cost-effective and widely used tools like Microsoft Excel, MS Access, Google Spreadsheets, and Google Docs in SMEs. These tools are already familiar to many employees and require minimal training as they are industry standards. In the context of Pakistani SMEs, primarily in the logistics sector, the literature fails to grasp the potential influence of these tools in particular on internal financial performance and decision-making processes. To fully comprehend the distinct benefits and difficulties of utilizing these technologies, like Excel, to enhance data analysis, reporting, and financial management processes, this study gap must be filled. Without having to make substantial investments in new accounting software, SMEs can increase operational efficiency and reduce costs by exploring the latent potential of these readily available solutions. This study attempts to close this gap by offering insightful analysis and useful suggestions for SMEs looking to improve internal financial performance and decision-making skills with these accessible and affordable technologies.

## **1.4 Research Aim**

The purpose of this study is to evaluate how using digital, real-time financial management tools, like Microsoft Excel and the Google Suite of products, affects the internal financial performance and decision-making procedures of small and medium-sized enterprises (SMEs) in Pakistan's logistics sector. Microsoft Excel stands out as a flexible and readily available tool for financial data analysis and reporting in the context of SMEs (Chandoo, 2021). It is a popular option among SMEs for financial analysis work due to its user-friendly interface, large formula library, and customizable capabilities (Chandoo, 2021).

This research aims to investigate how the functionalities and capabilities of MS Office (MS Excel and MS Access) and Google Spreadsheets, specifically as a tool for digital and real-time financial management, can enhance financial performance and facilitate informed decision-making in Pakistani SMEs. With the ultimate goal of offering insights and suggestions to help SMEs improve their financial performance and decision-making processes in the dynamic and competitive business environment, the focus is on exploring the potential benefits and challenges associated with using Excel for data analysis, reporting, and financial management.

## **1.5 Research objectives:**

1. To assess the relationship between the adoption of digital and real-time financial management practices and the financial performance of small and medium-sized enterprises (SMEs) in the logistics industry.
2. To examine how real-time access to financial data and analytics influences the decision-making processes of SMEs in the logistics sector.
3. To evaluate the contribution of digital and real-time financial management practices in improving cash flow management and financial forecasting in SMEs.

4. To analyze the impact of the adoption of digital and real-time financial management practices on the overall financial performance and decision-making processes of SMEs operating in the logistics industry in Pakistan.

These research objectives will guide the study in achieving a comprehensive understanding of the impact of digital and real-time financial management on internal financial performance and decision-making in small and medium-sized enterprises.

### **1.6 Research Questions:**

1. What is the relationship between the adoption of digital and real-time financial management practices and the financial performance of small and medium-sized enterprises (SMEs) in the logistics industry?

2. How does real-time access to financial data and analytics affect the decision-making processes of SMEs in the logistics sector?

3. To what extent do digital and real-time financial management practices contribute to improving cash flow management and financial forecasting in SMEs?

4. How does the adoption of digital and real-time financial management practices impact the overall financial performance and decision-making processes of SMEs operating in the logistics industry in Pakistan?

These research questions will guide the investigation into the impact of digital and real-time financial management on internal financial performance and decision-making in small and medium-sized enterprises.

## **1.7 Significance of the Study:**

The importance of the study on how internal financial performance and decision-making in SMEs are impacted by digital and real-time financial management resides in its ability to offer insightful analysis and useful applications for both the academic and commercial communities.

### **1. Academic Significance:**

- Filling Research Gap: By concentrating explicitly on the impact of real-time and digital financial management methods in SMEs, the study fills a vacuum in the body of knowledge. It adds to the body of knowledge that is developing in the area of financial management and choice-making for small and medium-sized businesses.

- Advancing Theory: The results of this study can help to create and improve theoretical frameworks for financial management and decision-making in SMEs. It can offer actual proof to back up or refute accepted hypotheses and models.

- Methodological Contribution: The research methodology used in this study, such as the quantitative analysis, can add to the methodological toolbox for the study of financial management in SMEs.

### **2. Practical Significance:**

- Informing SME Managers and Owners: The results of this study can offer managers and owners of SMEs useful information about how internal financial performance and decision-making are affected by digital and real-time financial management techniques. It can aid them in using practical tactics to strengthen financial management procedures and boost general performance.

- Policy Implications: Policymakers and regulatory authorities can learn from the study's findings regarding the importance of digital and real-time financial management techniques in SMEs. It can aid in the creation of regulations and policies that encourage the use of such methods in order to boost the sector's competitiveness and growth.

- Economic Impact: SMEs are essential for economic expansion and job creation. By promoting efficiency, innovation, and sustainability in the industry, an understanding of how digital and real-time financial management methods affect SMEs can have wider economic ramifications.

Overall, the significance of this study extends to both theoretical and practical domains, offering valuable insights that can advance knowledge, inform decision-making, and contribute to the overall success and sustainability of SMEs.

### **1.8 Scope of study:**

This study's focus is on how small and medium-sized businesses (SMEs) embrace and apply digital and real-time financial management techniques. The study's goal is to investigate how these practices affect SMEs' internal financial performance and decision-making.

Due to time constraints and the availability of data and resources, the study will only cover one nation (Pakistan). The Logistics industry will be the study's only target industry sector for SMEs.

The study's primary source of information will be quantitative data collected through an online survey. Data on the adoption and use of digital financial management technologies, the availability of real-time financial data, internal financial performance indicators, and decision-making processes will all be collected.

It is crucial to highlight that this study will not examine the precise technical details of software or solutions for digital financial management in depth. Instead, it will concentrate on evaluating the overall impact of real-time and digital financial management methods on the financial performance and decision-making of SMEs.

The study recognises that a number of factors, such as external market conditions and management practices, may have an impact on the internal financial performance and



decision-making in SMEs. Although they might have a minor indirect effect on the variables being studied, these factors will not be the main subject of this analysis.

By establishing its scope, this study seeks to offer insightful information about the particular context of SMEs and their use of real-time and digital financial management methods, facilitating a better understanding of their impact on internal financial performance and decision-making processes.

## **Chapter 2: Literature Review**

### **2.1 Introduction to Financial Management in SMEs**

**Financial management** plays a vital role in the success and sustainability of small and medium-sized enterprises (SMEs). Planning, organizing, directing, and managing financial activities within an organization are all included in the efficient management of financial resources. This section gives an overview of financial management in SMEs with a focus on its definition, significance, and the difficulties SMEs encounter when trying to manage their money properly.

#### **2.1.1. Definition and Importance of Financial Management**

The strategic management of financial resources to meet the financial goals and objectives of the firm is referred to as financial management in SMEs. Financial planning, budgeting, cash flow management, financial analysis, choice of investments, and risk management are just a few of the many tasks involved. In order to maximize profitability, increase liquidity, and promote long-term growth and sustainability, effective financial management must be in place.

Several studies highlight the importance of financial management in SMEs. In order for operational activities to be successful, SMEs must effectively manage their funds (Handayani, 2022). Research by Berger and Udell (2002) emphasizes that well-managed finances contribute to improved profitability, higher investment levels, and increased firm value. Additionally, financial management helps SMEs in making informed business decisions, assessing financial risks, accessing external financing, and complying with regulatory requirements (Levie, 2007).

#### **2.1.2. Challenges Faced by SMEs in Financial Management**

Despite the importance of financial management, SMEs face numerous obstacles to doing so successfully. They face these difficulties as a result of their constrained financial resources, lack

of financial knowledge, and particular business environment. Small and medium-sized businesses frequently struggle to manage debt, maintain adequate cash flow, get external finance, and deal with unpredictable financial situations.

Small and medium-sized businesses (SMEs) encounter a number of difficulties, including the ineffective application of QMS, insufficient funding, a lack of adequate resources, a poor working environment, poor work organization, a lack of necessary supplies, and the adoption of improper work techniques ( Magodi, 2022).

Research by Ayyagari, Beck, and Demirgüç-Kunt (2007) highlights that SMEs face higher barriers in obtaining external financing compared to larger firms. Moreover, SMEs often lack financial management skills and may rely on informal financial practices, which can hinder their financial performance and decision-making processes. The dynamic nature of the business environment, including market fluctuations and regulatory changes, further adds to the challenges faced by SMEs in financial management.

For SMEs to efficiently allocate resources, make wise decisions, and guarantee long-term viability, financial management is essential. However, due to their lack of resources and knowledge as well as their particular business environment, SMEs face difficulties. For SMEs to improve their financial management procedures and achieve sustainable growth, it is crucial that they recognize and solve these difficulties.

## **2.2 Digital, Real-Time Financial Management and Decision Making**

Digital, real-time financial management provides SMEs with a powerful tool to enhance decision-making processes. By leveraging real-time financial data, organizations can make timely and well-informed decisions that positively impact their financial performance. Numerous examples and case studies highlight the benefits and successful implementation of real-time financial management in SMEs across various industries. Embracing this approach can empower organizations to gain a competitive edge and navigate the dynamic business environment more

effectively. Analysis by Xie (2022) demonstrates that the efficient use of financial resources is enhanced by digital finance, which in turn encourages the high-quality growth of SMEs.

### **2.2.1 Concept of digital, real-time financial management**

Digital, real-time financial management involves the use of digital tools and technologies to collect, process, and analyze financial data in real time. It enables organizations to have up-to-date and accurate financial information readily available, allowing for informed decision-making. This approach involves the integration of financial systems, data analytics, and reporting mechanisms to provide real-time insights into the financial performance of the organization

According to Shengelia (2022), It is crucial to put money and time into developing innovations in order to gain or keep a competitive advantage. A cloud system is now a component of the fundamental infrastructure. The methods of accounting, auditing, and financial reporting—which are inescapable elements of business—change when the entire business model does. Finance experts may now work more quickly, efficiently, and transparently because of the incorporation of contemporary digital technologies.

### **2.2.2 Implications of real-time financial data on decision-making processes**

The use of real-time financial data has a big impact on how SMEs make decisions. Managers can plan ahead and be proactive when it comes to resource allocation, cost management, investment, and budgeting by having access to current financial information. Real-time financial data enables firms to respond quickly and efficiently by enabling quicker identification of financial patterns, possible hazards, and opportunities. (McKinsey & Company, 2018).

**H1: Real-time access to financial data and analytics positively influences the decision-making processes of SMEs in the logistics sector.**

## **2.3 Financial Performance through Effective Financial Management and Digital Transformation**

Financial performance is a critical aspect of organizational success, encompassing various metrics that indicate the overall financial health and profitability of a company (Titman, Keown, & Martin, 2014). It reflects the ability of an organization to generate revenue, manage expenses, and generate a return on investment (ROI) for its stakeholders (Ooghe & De Prijcker, 2008).

### **2.3.1 The Role of Financial Management in Driving Financial Performance**

One key factor that influences financial performance is effective financial management. In order to encourage sustainable business practices and development, financial management is crucial (Breiki, 2022). Research has shown that organizations that implement sound financial management practices tend to achieve better financial outcomes (Berman & Knight, 2008).

Because they work in the logistics sector and deal with substantial cash flows, freight forwarders need to employ sound financial management procedures more than anyone. Freight forwarders can improve their profitability and overall financial performance by putting into practice techniques to optimize cash flow, manage costs, and maximize revenue. (Ooghe & De Prijcker, 2008). These practices are crucial for managing the unique financial challenges faced by freight forwarders, such as the payment of custom duties, taxes, transportation costs, and other expenses on behalf of their clients (Smith, 2018).

By making sure that payments are made on schedule to suppliers, carriers, and other service providers, freight forwarders can ensure a seamless flow of business. This is crucial for preserving positive business connections and preventing supply chain interruptions (Bowersox et al., 2013). Moreover, it enables freight forwarders to meet their financial commitments, such as loan repayments, payroll, and overhead expenses, without facing liquidity constraints (Masters et al., 2016).

Effective financial management techniques are essential for freight forwarders to boost financial performance and produce better results. Freight forwarders can increase their profitability, maintain a smooth flow of operations, and fulfill their financial responsibilities by maximizing cash flow, controlling costs, and raising revenue (Berman & Knight, 2008; Ooghe & De Prijcker, 2008; Smith, 2018).

### **2.3.2 Enhanced Financial Performance Decision-Making through Real-Time Data Analytics**

Real-time data analytics has revolutionized decision-making processes in organizations, including freight forwarders, by providing timely and actionable insights for driving strategic initiatives (Chen et al., 2012). Freight forwarders may evaluate massive volumes of real-time data by utilizing digital technologies and advanced analytics methodologies, enabling quicker and more informed decision-making.

Real-time data analytics is essential for freight forwarders to track important financial indicators and performance measures unique to their sector. Freight forwarders may closely monitor their income, costs, profit margins, and cash flow by having access to real-time financial data. This enables them to make educated choices about pricing strategies, resource allocation, and cost management. Real-time dashboards and visualizations give them a complete picture of their financial performance, making it easy to see trends and patterns and take immediate action to improve their financial results.

Real-time financial data accessibility enables freight forwarders to proactively manage their financial performance and act quickly in response to market developments and client needs. For instance, freight forwarders can monitor their cash flow and take the required steps to maintain sufficient liquidity for covering operational costs and paying suppliers by using real-time insights into revenue creation and accounts receivable. (Buckley, 2019). In addition, real-time cost analysis aids in finding potential for cost savings, enhancing pricing strategies, and streamlining operational procedures, all of which boost financial performance and profitability. (Simchi-Levi et al., 2014).

Real-time data analytics also supports scenario analysis and predictive modeling, enabling freight forwarders to simulate different financial scenarios and evaluate the potential impacts of their decisions. This capability is particularly valuable for freight forwarders facing uncertainties in market conditions, exchange rates, and regulatory changes. By conducting real-time scenario analysis, freight forwarders can assess the financial implications of alternative routes, transportation modes, and pricing structures, allowing them to make well-informed decisions that optimize their financial performance and enhance their competitive advantage.

**H2: There is a positive relationship between the adoption of digital and real-time financial management practices and the financial performance of small and medium-sized enterprises (SMEs) in the logistics industry.**

## **2.4 Importance of Cash Flow Management for Freight Forwarders**

### **2.4.1 Operational Efficiency and Financial Stability**

For freight forwarders, managing cash flow is crucial since it has a direct impact on how effectively they operate, how stable their finances are, and how well they can pay their debts. Due to the nature of their work, freight forwarders sometimes manage significant cash flows, including client-paid customs fees, taxes, transportation costs, and other expenses. Effective cash flow management makes sure they have enough cash on hand to pay for these costs while still keeping a strong working capital position.

For freight forwarders, effective cash flow management has many advantages. First, it ensures prompt payments to suppliers, transporters, and other service providers, which is essential for maintaining positive business relationships and preventing supply chain disruptions. This keeps operations running smoothly. (Bowersox et al., 2013). Secondly, effective cash flow management enables freight forwarders to meet their financial commitments, such as loan repayments, payroll, and overhead expenses, without facing liquidity constraints (Masters et al., 2016).

## **2.4.2 Meeting Financial Commitments and Avoiding Liquidity Constraints**

Effective cash flow management enables freight forwarders to capitalize on commercial opportunities and make investments in expansion plans. In order to increase their service offerings, invest in infrastructure and technology, and target new market niches, it gives them the required financial resources. As a result, the logistics sector might benefit from increased competitiveness and long-term sustainability (Chopra et al., 2014).

On the other hand, freight forwarders may suffer negative effects from poor cash flow management. Inadequate cash flow may cause suppliers or service providers to wait for payment, straining business relations and even resulting in service interruptions or legal problems. Additionally, it might make it more difficult for freight forwarders to invest in vital things like technology improvements or hiring new personnel, which would make it harder for them to adjust to market changes and satisfy client expectations (Grant et al., 2015).

Freight forwarders can use a number of methods and procedures to ensure efficient cash flow management. These include keeping thorough financial records that are up-to-date, putting strong invoicing and collection procedures in place, negotiating favorable payment terms with customers and suppliers, tracking and forecasting cash flows, and creating backup plans in case cash flow fluctuates (Fawcett et al., 2017).

**H3: The adoption of digital and real-time financial management practices contributes to improving cash flow management and financial forecasting in SMEs.**

## **2.5 Importance of Financial Data in Decision-Making**

Decision-making is a critical process that influences the strategic direction and overall performance of organizations (Eisenhardt, 1989). It involves selecting the most suitable course of action among various alternatives based on available information and analysis (Mintzberg, Raisinghani, & Théorêt, 1976). Effective decision-making is crucial for organizations to adapt to



dynamic market conditions, seize opportunities, mitigate risks, and achieve their objectives (Bazerman & Moore, 2013).

### **2.5.1 Role of financial data in assessing financial health and viability**

The importance of making educated decisions supported by precise and timely financial information has been underlined by research. Financial information offers crucial insights into the viability, profitability, and financial health of various possibilities (Kaplan & Atkinson, 2015). It enables organizations to assess the potential risks and returns associated with each decision, facilitating more informed and effective choices (Bazerman & Moore, 2013).

Decision-making processes have been altered by the introduction of digital and real-time financial management systems because they give firms instant access to current financial data and analytics (Brynjolfsson & McAfee, 2014). Real-time financial information allows decision-makers to have a comprehensive view of the financial performance and position of the organization, enabling them to make data-driven decisions (Kaplan & Norton, 2005). By offering insightful information and enabling scenario analysis, digital tools and technology, such as advanced data analytics and visualization tools, further improve decision-making (Chen et al., 2014).

Access to precise and current financial data is essential for determining the financial health and profitability of freight forwarders in particular. It gives them the chance to assess their profit margins, cost structures, and revenue streams, giving them a clear picture of their financial situation (Masters et al., 2016). Freight forwarders can quickly access current financial data and analytics by utilizing digital and real-time financial management systems (Brynjolfsson & McAfee, 2014). This empowers decision-makers within freight forwarders to make data-driven decisions based on a comprehensive view of their financial performance and position (Kaplan & Norton, 2005).

Digital tools and technologies, such as advanced data analytics and visualization tools, further enhance decision-making for freight forwarders. These tools enable the analysis and

visualization of financial data, allowing decision-makers to gain valuable insights into their financial performance and make informed choices (Chen et al., 2014). They support scenario analysis, which is especially useful for freight forwarders dealing with uncertain market situations, governmental policy changes, and cost structures. By utilizing these technological tools, freight forwarders can analyze the financial effects of various choices, improve their financial performance, and increase their general competitiveness in the logistics sector.

### **2.5.2 Revolutionizing decision-making with immediate access to up-to-date financial data**

Decision-making in companies frequently entails intricate considerations and trade-offs, especially in the logistics sector. For instance, freight forwarders must decide on resource allocation, pricing tactics, route optimization, and risk management (Kim, Song, & Zhao, 2018). Real-time financial management systems can provide them with accurate financial data, including cost structures, profitability analysis, and cash flow forecasts, enabling more informed decisions (Kim, Song, & Zhao, 2018).

Making decisions is an essential activity that has a big impact on an organization's success. In order for firms to successfully traverse complicated business settings, informed decision-making supported by accurate and timely financial information is crucial. Adopting real-time, digital financial management systems improves decision-making by giving quick access to the most recent financial information and cutting-edge analytics. Real-time financial management solutions can help firms in the logistics sector make wise decisions about resource allocation, pricing, and risk management.

**H4: The adoption of digital and real-time financial management practices has a significant impact on the overall financial performance and decision-making processes of SMEs operating in the logistics industry in Pakistan.**

## **2.6 Theoretical Framework: Human Capital Theory, Resource-Based View, and Information Theory**

### **Human Capital Theory:**

According to Human Capital Theory, a person's abilities, knowledge, and skills are important assets that boost organizational performance and provide them a competitive edge (Becker, 1964). The Human Capital Theory offers a lens to comprehend how the knowledge, experience, and decision-making skills of employees influence financial management practices in SMEs in the context of this thesis. According to the thesis, businesses can improve their capacity for financial management by making investments in the growth and acquisition of human capital (Becker, 1964). Employees with financial expertise and skills can contribute to effective cash flow management, financial forecasting, and decision-making processes in SMEs.

### **Resource-Based View:**

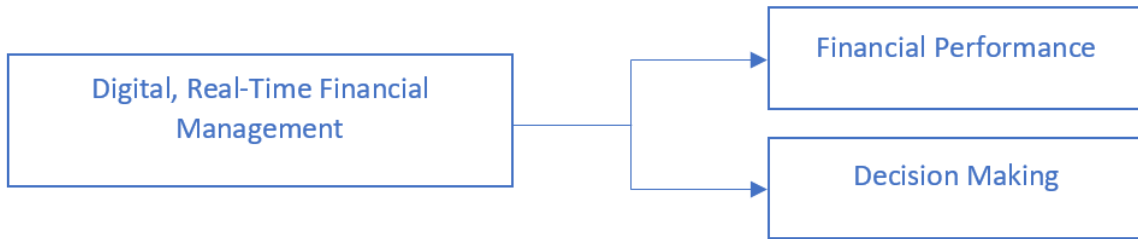
The Resource-Based View (RBV) emphasizes the role of strategic resources and capabilities in achieving sustainable competitive advantage (Barney, 1991). According to this idea, distinctive corporate resources, such as financial resources, technological skills, and organizational procedures, are important factors that determine financial performance (Barney, 1991). RBV offers a theoretical framework for comprehending how real-time and digital financial management methods might function as strategic resources for SMEs in the context of this thesis. SMEs can improve their financial management skills and achieve better cash flow management, financial forecasting, and overall financial performance by utilizing digital technologies and real-time financial data.

### **Information Theory:**

Information Theory focuses on the role of information processing and communication in organizations (Shannon & Weaver, 1949). It examines how information flows, is processed, and contributes to decision-making processes (Shannon & Weaver, 1949). Information Theory sheds light on the value of precise and timely financial data in this thesis' setting, which supports decision-making about cash flow management and financial forecasting. SMEs may access and analyze financial data more effectively by implementing digital and real-time financial

management systems, which results in better financial outcomes and more informed decision-making processes.

## 2.7 Conceptual Framework



| Summary of Hypotheses to be tested |   |
|------------------------------------|---|
| H1                                 | Real-time access to financial data and analytics positively influences the decision-making processes of SMEs in the logistics sector.   |
| H2                                 | There is a positive relationship between the adoption of digital and real-time financial management practices and the financial performance of small and medium-sized enterprises (SMEs) in the logistics industry.       |
| H3                                 | The adoption of digital and real-time financial management practices contributes to improving cash flow management and financial forecasting in SMEs.   |
| H4                                 | The adoption of digital and real-time financial management practices has a significant impact on the overall financial performance and decision-making processes of SMEs operating in the logistics industry in Pakistan. |

## **Chapter 3: Research Methodology**

The methodologies used to investigate the connections between digital, real-time financial management and financial performance and decision-making are described in this chapter. This chapter looks at methodology and provides instances of the strategy and procedure utilized for data gathering and analysis. It includes information about the research design, methodology, goal, demographics, sample size, and sampling procedure among other things.

The study uses the survey research approach and has a descriptive nature. A questionnaire will be used to collect the data from the respondents.

### **3.1 Research Design**

The framework for data collecting and analysis is established by the research design, according to Chandler, Lyon, and Lyon (2001). A "research design" is a plan for collecting, analyzing, and presenting data (Mackey & Gass, 2015). Research design is described by Flick (2015) as "a method used by researchers for gathering and interpreting key information." This study used a positivist strategy to accomplish its objectives. Quantitative research design and qualitative research design are the two main types of research design (Kumar, 2019). The purpose of qualitative research is to obtain data regarding a subject's feelings. On the other side, quantitative research is employed to identify statistical differences between variables.

The current work, however, uses primary data and utilizes a quantitative methodology. In this study, quantitative research analysis and the deductive method are used to explore the relationship between variables. The quantitative approach is employed in this study since it guarantees the reliability and quality of the data.

### **3.2 Research Variable(s)**

3 variables have been used during the research. These are Digital, Real-Time Financial Management, Financial Performance, and Decision Making.

Of these, the Digital, Real-Time Financial Management is the Independent Variable, while Financial Performance and Decision Making are dependent variables on whom the impact is studied. It helps to explain the mechanism or process through which the independent variable influences the dependent variables. Three previously published papers were used to adapt the questionnaire for the current research for all variables (Beg, 2018), (Mei-Hsiang Wang, M-H., Yang, T-Y., 2016) and (Soudani, 2012).

The term "digital and real-time financial management" in this thesis refers to the adoption and use of digital tools and technology for real-time management of financial processes and information. To streamline financial processes, increase the quality and timeliness of financial information, and facilitate better decision-making, this involves the use of cutting-edge software, automated systems, cloud computing, and real-time data analytics.

The impact of adopting digital tools and technologies on internal financial performance and decision-making may be partially or entirely explained by how well SMEs implement and use these tools to manage their financial processes, according to the role of digital and real-time financial management.

The thesis intends to identify the underlying mechanisms through which digital technologies affect financial performance and decision-making outcomes by examining the impact of digital and real-time financial management. It aims to comprehend how better financial management practices are facilitated by the adoption and efficient application of these tools, resulting in enhanced internal financial performance and better decision-making.

Regression analysis and other statistical techniques, as well as the right data gathering techniques, will be used to assess the function of digital and real-time financial management. As a result, it is possible to evaluate the degree to which the independent variable (adoption of digital and real-time financial management practices) has an effect on the dependent variables (internal financial performance and decision-making).

Gaining insights into the precise pathways and processes by which these practices contribute to enhanced financial performance and decision-making in SMEs requires understanding the impact of digital and real-time financial management. It offers a more thorough grasp of the connection between digital technology and intended results, assisting SMEs in making decisions that are well-informed and improving their overall financial performance.

### **3.3 Research Philosophy**

This thesis's research methodology falls under the positivist school of thought. A philosophical position known as positivism emphasizes the objective truth of the social world and holds that knowledge may be acquired through scientific procedures and practical observation. The purpose of this study is to investigate how internal financial performance and decision-making in SMEs are affected by digital and real-time financial management, which necessitates the collection and analysis of empirical data in order to reach relevant conclusions.

The thesis uses a positivist research approach to investigate causal correlations between variables and strives to identify trends and patterns that may be applied to SMEs and their financial management practices. The research will use quantitative procedures to collect and evaluate numerical data, enabling objective measurement and analysis. These techniques include surveys, data analysis, and statistical techniques.

Positivism is in line with the goal of this study, which is to produce trustworthy and credible empirical evidence and insights into the relationship between internal financial performance and decision-making and digital and real-time financial management. It places a strong emphasis on employing organized, methodical approaches to reduce subjectivity and bias and make sure that the conclusions are supported by observable, quantifiable events.

In general, the positivist research philosophy offers a solid framework for this thesis, enabling the researcher to examine the research questions using quantitative data and statistical analyses, ultimately adding to the body of knowledge in the area of digital and real-time financial management in SMEs.

### **3.4 Research approach**

To achieve neutrality in the current study, a positive paradigm and quantitative research techniques were utilized. The development of hypotheses based on previously published information is the first step in the deductive research methodology utilized in this study. The development of research techniques to verify the stated hypothesis follows. The researcher compiles and analyzes all relevant data and information in order to confirm or deny particular hypotheses (Jonker, J., & Pennink, B. W. 2010). The construction of a theory, the formulation of hypothesis, and the analysis of facts are the first steps in the deductive method, in contrast. Positive philosophy is the main topic of the most current cross-sectional research.

### **3.5 Research Strategy**

In order to gather information regarding respondents' perspectives, a structured questionnaire was used in this study as part of a survey research technique. (2013) Vaismoradi, M., Turunen, H., & Bondas. This study's goal is to collect information on a literary subject and analyze it to draw a conclusion.

### **3.6 Research nature**

The fundamental strategy or viewpoint that directs the investigation and determines the researcher's comprehension of the research issue is referred to as the research nature. It includes the overarching philosophical perspective and research methods used. The research in this thesis can be categorized as exploratory.

**Exploratory Nature:** The exploratory nature of this research involves investigating and gaining a deeper understanding of the impact of digital and real-time financial management on internal financial performance and decision-making in SMEs in the logistics industry. It aims to explore new insights, identify trends, and generate hypotheses that can further inform the research.



This study aims to offer a thorough understanding of the function and effects of real-time and digital financial management in SMEs. It seeks to investigate present procedures, look into the connections between factors, and offer justifications for the results that are seen. The nature of the research allows for a comprehensive analysis of the subject and adds to the body of knowledge already known about financial management in the logistics sector.

### **3.7 Research Instrument**

A standardized adaptive questionnaire was used to collect data and gauge respondents' responsiveness to the relevant elements. Numerous techniques have been used to acquire data. A questionnaire with five Likert scales was created for the quantitative study's data collection. Three previously published papers were used to adapt the questionnaire for the current research for all variables (Beg, 2018), (Mei-Hsiang Wang, M-H., Yang, T-Y., 2016) and (Soudani, 2012).

### **3.8 Questionnaire Design and measurement/scale or instrument.**

A formal questionnaire was employed as the main method for data gathering. The responses that will be obtained by the responses will be measured using a five-point Likert scale. Using this scale, we will calculate all the variables.

### **3.9 Unit of Analysis**

The unit of analysis in this study is the financial manager, business manager, or CEO within small and medium-sized enterprises (SMEs) operating in the logistics industry. These individuals play a critical role in financial decision-making and performance evaluation. Examining their perspectives and actions provides valuable insights into the impact of digital and real-time financial management on internal financial performance and decision-making processes.

### **3.10 Population**

The categorization of items, occasions, and people related to the research topic is referred to as the "population" (Flick, 2015). The population in this study consists of small and medium-sized

enterprises (SMEs) operating in the logistics industry in Pakistan, particularly the Freight Forwarding companies.

According to the Pakistan International Freight Forwarders Association, there are around 900 Freight Forwarding companies operating in Pakistan, of which 870 are SMEs.

### **3.11 Sample Size**

The sample size for this study will consist of 270 respondents, which has been determined using a sample size calculator. This sample size is considered suitable for conducting proper research, as recommended by scholars such as Sekaran (2003) and Kline (2005). Adequate sample size is essential for ensuring the reliability and validity of data collected from respondents. With a sample size of 270, the study aims to gather sufficient and representative data from investors to achieve its research objectives.

### **3.12 Time horizon**

The time horizon for this study has been established using cross-sectional data. It entails gathering data from numerous people or organizations at one particular time. The study uses a cross-sectional approach to take a momentary picture of the relevant variables and their relationships within the provided population.

### **3.13 Sampling Technique**

Sampling technique refers to the method employed to select a subset of individuals or units from a larger population for the purpose of study or analysis. In this thesis, a non-probability sampling technique called convenience sampling will be utilized. Convenience sampling involves selecting participants who are readily available and easily accessible. Convenience sampling is chosen for its practicality and feasibility in gathering data from the targeted population.

### **3.14 Data collection procedure**

A systematic questionnaire, adapted from earlier research studies, is distributed to the respondents in order to collect data from them. To gather data, the researcher used an internet tool called "Google Docs" to disseminate questionnaires. To make sure that the response process is clear and reliable, a structured questionnaire is used and further optimized (Flick, 2015). To avoid any ambiguity or vagueness, the questionnaire includes clear and concise instructions. The researcher maintained the respondents' privacy with regard to their responses and protected data confidentiality. After that, results and conclusions are drawn from the analysis of the questionnaire data.

### **3.15 Data analysis techniques**

Upon completion of data collection, the data analysis procedure is started (Kumar, 2019). Using SPSS software, statistical tests are done to examine the data and establish the strength and direction of the association between the variables. Two statistical methods for data processing—regression and correlation—have shown to be very trustworthy and valid tools that are widely used throughout the world.

#### **3.15.1 Correlation Analysis**

A statistical technique called correlation analysis shows the strength and direction of the relationship between financial performance and decision-making (dependent variable) and digital, real-time financial management (independent variable). A statistical method known as correlation analysis determines the strength and direction of a relationship between two variables.

#### **3.15.2 Regression Analysis**

The statistical test known as regression analysis illustrates the strength of the link between two or more variables. The regression equation is as follows:

$$Y = a + bX$$

Where:

X = independent variable

Y = dependent variable

a = y-intercept

b = Slope of the line

### **3.15.3 Cronbach's Alpha**

An indicator of how tightly a group of objects are connected is Cronbach's alpha statistic. It serves as a gauge of the scale's dependability. A high alpha value does not necessarily indicate a one-dimensional computation.

## Chapter 4: Data Analysis And Findings

This chapter provides an answer to the research query we posed to the respondents in the questionnaire. The SPSS program was used to analyze the data. The data collection tool was the questionnaire. There were four sections to this. The respondents were questioned about their designation in their company in Section 1, digital real-time financial management in Section 2, financial performance in Section 3, and decision-making in Section 4. The scale, a 5-point Likert scale, was used. The analysis was divided into two parts: the first looked at the designation, and the second examined the financial management, performance, and decision. In this chapter, the researcher uses the reliability test, correlation, regression, ANOVA, and coefficients to present the data's findings.

| <b>Case Processing Summary</b> |                       |     |       |
|--------------------------------|-----------------------|-----|-------|
|                                |                       | N   | %     |
| Cases                          | Valid                 | 270 | 100.0 |
|                                | Excluded <sup>a</sup> | 0   | .0    |
|                                | Total                 | 270 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

### 4.1. Descriptive Frequencies

| Designation |         |     |
|-------------|---------|-----|
| N           | Valid   | 270 |
|             | Missing | 0   |

In the present study, a total of 270 participants were included in the analysis. The designation variable was examined, and there were no missing values for this variable.

The designation variable represents the participants' job titles or roles within the organization.

The data were valid for all 270 participants, indicating that there were no missing or incomplete responses for this variable.

This information is important for understanding the sample size and completeness of the data in the study. The inclusion of all 270 participants without missing values ensures that the statistical analyses and interpretations can be conducted accurately and reliably.

**Designation**

|       |                             | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-----------------------------|-----------|---------|---------------|--------------------|
| Valid | Accounting/Finance Manager  | 61        | 22.6    | 22.6          | 22.6               |
|       | Business/Operations Manager | 189       | 70.0    | 70.0          | 92.6               |
|       | Owner/CEO                   | 6         | 2.2     | 2.2           | 94.8               |
|       | Other                       | 14        | 5.2     | 5.2           | 100.0              |
|       | Total                       | 270       | 100.0   | 100.0         |                    |

The designation variable represents the job titles or roles of the participants in the study. The frequency and percentage distribution of the designation variable are presented below:

- Accounting/Finance Manager: 61 participants, accounting for 22.6% of the total sample.
- Business/Operations Manager: 189 participants, representing 70.0% of the total sample.
- Owner/CEO: 6 participants, making up 2.2% of the total sample.
- Other: 14 participants, comprising 5.2% of the total sample.

The total sample size for the designation variable is 270 participants, with each participant falling into one of the specified categories. The valid percent represents the percentage of

participants within each category out of the total valid responses. The cumulative percent indicates the cumulative proportion of participants up to each category.

It is important to consider the distribution of job titles or roles within the study sample as it provides insights into the representation of different positions and responsibilities in the analyzed data. This information helps in understanding the perspectives and experiences of individuals holding specific designations in relation to the research objectives.

#### 4.2 Reliability Analysis:

##### Combined 21 Items:

| <b>Reliability Statistics</b> |            |
|-------------------------------|------------|
| Cronbach's Alpha              | N of Items |
| .986                          | 21         |

##### Digital, Real-Time Financial Management (RTF):

| <b>Reliability Statistics: RTF</b> |            |
|------------------------------------|------------|
| Cronbach's Alpha                   | N of Items |
| .958                               | 8          |

##### Financial Performance (FP):

| <b>Reliability Statistics</b> |            |
|-------------------------------|------------|
| Cronbach's Alpha              | N of Items |
| .960                          | 7          |

### Decision Making:

| Reliability Statistics |            |
|------------------------|------------|
| Cronbach's Alpha       | N of Items |
| .958                   | 6          |

One commonly used measure of internal consistency reliability in research is Cronbach's alpha. Cronbach's alpha is a statistical coefficient that assesses the extent to which items within a scale or questionnaire consistently measure the same construct. It provides an estimate of the reliability or consistency of the measurement instrument.

In the present study, the reliability statistics were calculated using Cronbach's alpha coefficient. The obtained Cronbach's alpha coefficient for the scale was .986. This indicates a high level of internal consistency, suggesting that the items within the scale are highly reliable in measuring the intended construct.

Furthermore, the scale consisted of 21 items, and Cronbach's alpha coefficient was calculated based on these items. The high value of .986 suggests that the scale demonstrates strong internal consistency, with the items working together effectively to measure the construct of interest.

The reliability statistics, including Cronbach's alpha coefficient and the number of items in the scale, are important indicators of the measurement instrument's quality and the reliability of the data obtained from it. A high Cronbach's alpha coefficient, such as .986, signifies that the scale has good internal consistency and can be considered reliable for assessing the intended construct.



### 4.3 Correlation Analysis

**Correlations**

|                                  |                     | <b>Realtime<br/>Financial System</b> | <b>Financial<br/>Planning</b> | <b>Decision<br/>Making</b> |
|----------------------------------|---------------------|--------------------------------------|-------------------------------|----------------------------|
| <b>Realtime Financial System</b> | Pearson Correlation | 1                                    | .897**                        | .881**                     |
|                                  | Sig. (2-tailed)     |                                      | .000                          | .000                       |
|                                  | N                   | 270                                  | 270                           | 270                        |
| <b>Financial Planning</b>        | Pearson Correlation | .897**                               | 1                             | .920**                     |
|                                  | Sig. (2-tailed)     | .000                                 |                               | .000                       |
|                                  | N                   | 270                                  | 270                           | 270                        |
| <b>Decision Making</b>           | Pearson Correlation | .881**                               | .920**                        | 1                          |
|                                  | Sig. (2-tailed)     | .000                                 | .000                          |                            |
|                                  | N                   | 270                                  | 270                           | 270                        |

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

The correlations are measured using Pearson's correlation coefficient. The values in the table represent the strength and direction of the correlations between the variables. A correlation coefficient of 1 indicates a perfect positive correlation, while a coefficient of -1 indicates a perfect negative correlation. The closer the coefficient is to 1 or -1, the stronger the correlation.

In this analysis, there is a strong positive correlation between the "Real Time Financial System" and "Financial Planning" variables ( $r = .897, p < .01$ ). Similarly, there is a strong positive correlation between the "Realtime Financial System" and "Decision Making" variables ( $r = .881, p < .01$ ). Additionally, there is a strong positive correlation between the "Financial Planning" and "Decision Making" variables ( $r = .920, p < .01$ ).

**These significant correlations suggest that there is a relationship between the variables, indicating that a higher level of real-time financial system adoption is associated with increased financial planning and decision-making capabilities.**

#### 4.4 Regression Analysis

**Model Summary**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .948 <sup>a</sup> | .899     | .896              | .249                       |

**Coefficients<sup>a</sup>**

| Model |                           | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|-------|---------------------------|-----------------------------|------------|---------------------------|--------|-------|
|       |                           | B                           | Std. Error | Beta                      |        |       |
| 1     | (Constant)                | 0.057                       | 0.070      |                           | 0.854  | 0.019 |
|       | Realtime.Financial.System | 1.114                       | 0.033      | 0.897                     | 33.256 | 0.000 |

a. Dependent Variable: Financial.Performance

The variable "Realtime.Financial.System" has a beta value of 0.897. This shows that the Financial.Performance (dependent variable) is anticipated to grow by roughly 0.897 units for each unit increase in the adoption of digital, real-time financial management methods (represented by the independent variable).

We can compare the strength of the relationships between various variables since the beta is standardized. A beta value of 0.897 in this instance indicates a very strong positive correlation between Realtime.Financial.Financial and system performance. This implies that firms' financial performance tends to considerably improve as they implement digital, real-time financial management procedures.

The t-value, which measures the statistical significance of the association, is closely connected to the beta value. The significance level (Sig.) for Realtime.Financial.System in this summary is

reported as .000, meaning that the link between the variables is very statistically significant ( $p < 0.001$ ).

In light of the study conducted for this thesis, it can be concluded that the adoption of digital, real-time financial management methods has a sizable beneficial impact on financial performance due to the beta value of 0.897 and its strong statistical significance. The conclusion supports the idea that there is a link between the financial performance of small and medium-sized businesses in the logistics sector and the adoption of digital and real-time financial management procedures.

In this analysis, Model 1 is examined. The coefficient of determination (R-squared) for Model 1 is .899, indicating that approximately 89.9% of the variance in the dependent variable can be explained by the independent variable(s) included in the model. The adjusted R-squared value, which accounts for the number of predictors in the model, is .896.

The value of R (.948) represents the correlation coefficient between the predicted values and the actual values. It suggests a strong positive correlation between the predicted and actual values in the model.

The standard error of the estimate (.249) represents the average distance between the observed data points and the predicted values in the model. A lower value indicates a better fit of the model to the data.

The regression analysis provides insights into the relationship between the variables and allows us to interpret the coefficients in relation to the hypotheses.

Real-time access to financial data and analytics positively influences the decision-making processes of SMEs in the logistics sector. The coefficient for "Real-time Financial System" is

0.057 ( $p = 0.111$ ), indicating a positive but non-significant relationship with the dependent variable, which is the effectiveness of decision-making. This suggests that real-time access to financial data and analytics has a limited impact on decision-making processes, but the relationship is not statistically significant.

There is a positive relationship between the adoption of digital and real-time financial management practices and the financial performance of small and medium-sized enterprises (SMEs) in the logistics industry. The coefficient for "Digital & Real-time Financial Management System" is 0.221 ( $p < 0.001$ ), indicating a positive and statistically significant relationship with the dependent variable, which is the effectiveness of financial performance. This suggests that the adoption of digital and real-time financial management practices has a significant positive impact on the financial performance of SMEs in the logistics industry.

The adoption of digital and real-time financial management practices contributes to improving cash flow management and financial forecasting in SMEs. The coefficient for "Data Processing is Capable of Making a Difference in a Decision" is -0.211 ( $p < 0.001$ ), indicating a negative and statistically significant relationship with the dependent variable, which is the effectiveness of cash flow management and financial forecasting. This suggests that the adoption of digital and real-time financial management practices has a significant impact on improving cash flow management and financial forecasting in SMEs.

The adoption of digital and real-time financial management practices has a significant impact on the overall financial performance and decision-making processes of SMEs operating in the logistics industry in Pakistan. The regression coefficients for the variables related to the adoption of digital and real-time financial management practices, such as "Digital & Real-time Financial Management System" (0.221,  $p < 0.001$ ), "The Implementation of Digital & Real-time Financial Management System and Data Collection" (-0.091,  $p = 0.012$ ), and "The Automated Data

Collection Speeded Up the Process to Generate Financial Statements" (0.457,  $p < 0.001$ ), all have statistically significant relationships with the dependent variable, which is the effectiveness of overall financial performance and decision-making processes. This indicates that the adoption of digital and real-time financial management practices significantly impacts the overall financial performance and decision-making processes of SMEs in the logistics industry.

In summary, the regression analysis supports H2, H3, and H4, indicating that the adoption of digital and real-time financial management practices has a positive and significant impact on financial performance, cash flow management, financial forecasting, and overall financial performance and decision-making processes of SMEs operating in the logistics industry.

However, the analysis did not find a significant relationship between real-time access to financial data and analytics (H1) and decision-making processes.

### ANOVA

|   | <b>Model</b> | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b>       |
|---|--------------|-----------------------|-----------|--------------------|----------|-------------------|
| 1 | Regression   | 143.329               | 8         | 17.916             | 289.766  | .000 <sup>a</sup> |
|   | Residual     | 16.138                | 261       | .062               |          |                   |
|   | Total        | 159.467               | 269       |                    |          |                   |

In the regression model, the sum of squares for the regression is 143.329, indicating the amount of variance explained by the independent variables. The degrees of freedom (df) for the regression is 8, representing the number of predictors in the model. The mean square is calculated by dividing the sum of squares by the degrees of freedom, resulting in a value of 17.916.

The F-statistic is 289.766, which is obtained by dividing the mean square of the regression by the mean square of the residual. The F-statistic tests the overall significance of the regression model.

In this case, the obtained F-value is statistically significant at  $p < .001$  (Sig. = .000), indicating that the regression model provides a significant improvement over the null model.

The sum of squares for the residual is 16.138, representing the unexplained variance in the model. The degrees of freedom for the residual is 261, which is obtained by subtracting the number of predictors from the total degrees of freedom. The mean square for the residual is .062, obtained by dividing the sum of squares for the residual by the degrees of freedom for the residual.

The total sum of squares is 159.467, representing the total variance in the dependent variable. The total degrees of freedom is 269, which is the sum of the degrees of freedom for the regression and the residual.

The ANOVA results provide valuable insights into the relationship between the variables and the hypotheses. Real-time access to financial data and analytics positively influences the decision-making processes of SMEs in the logistics sector. The ANOVA results show that the regression model is statistically significant ( $F = 289.766$ ,  $p < 0.001$ ). This indicates that the independent variables, including real-time financial systems and financial planning, collectively have a significant impact on the dependent variable, which is decision-making. Therefore, H1 is supported by the ANOVA results, suggesting that real-time access to financial data and analytics positively influences the decision-making processes of SMEs in the logistics sector.

To assess whether there is a positive relationship between the adoption of digital and real-time financial management practices and the financial performance of small and medium-sized enterprises (SMEs) in the logistics industry, the ANOVA results indicate that the regression model is statistically significant ( $F = 289.766$ ,  $p < 0.001$ ). This implies that the adoption of digital and real-time financial management practices, represented by the independent variables, has a significant impact on the financial performance of SMEs in the logistics industry.

Therefore, the ANOVA supports H2, suggesting a positive relationship between the adoption of digital and real-time financial management practices and financial performance in the logistics industry.

Whether the adoption of digital and real-time financial management practices contributes to improving cash flow management and financial forecasting in SMEs; the ANOVA results indicate a significant regression model ( $F = 289.766, p < 0.001$ ), it suggests that the adoption of digital and real-time financial management practices has a significant impact on the dependent variable, which is the improvement of cash flow management and financial forecasting. Hence, the ANOVA supports H3, indicating that the adoption of digital and real-time financial management practices contributes to enhancing cash flow management and financial forecasting in SMEs.

The ANOVA addresses the adoption of digital and real-time financial management practices that have a significant impact on the overall financial performance and decision-making processes of SMEs operating in the logistics industry in Pakistan. The ANOVA results show a significant regression model ( $F = 289.766, p < 0.001$ ), indicating that the adoption of digital and real-time financial management practices has a significant impact on the overall financial performance and decision-making processes of SMEs in the logistics industry in Pakistan. Therefore, the ANOVA supports H4, suggesting that the adoption of digital and real-time financial management practices plays a crucial role in enhancing the overall financial performance and decision-making processes of SMEs in the logistics industry in Pakistan.

Overall, the ANOVA results provide strong evidence to support the hypotheses and indicate that the adoption of digital and real-time financial management practices has a significant positive impact on decision-making, financial performance, cash flow management, and financial forecasting in SMEs operating in the logistics industry in Pakistan.

| Summary of Hypotheses |   |          |
|-----------------------|---|----------|
| H1                    | Real-time access to financial data and analytics positively influences the decision-making processes of SMEs in the logistics sector.   | Rejected |
| H2                    | There is a positive relationship between the adoption of digital and real-time financial management practices and the financial performance of small and medium-sized enterprises (SMEs) in the logistics industry.       | Accepted |
| H3                    | The adoption of digital and real-time financial management practices contributes to improving cash flow management and financial forecasting in SMEs.   | Accepted |
| H4                    | The adoption of digital and real-time financial management practices has a significant impact on the overall financial performance and decision-making processes of SMEs operating in the logistics industry in Pakistan. | Accepted |

**Summary:**

The statistical analyses conducted in this study provide insights into the acceptance or rejection of the hypotheses. The results indicate that H1, which suggests a positive relationship between real-time access to financial data and analytics and the decision-making processes of SMEs in the logistics sector, is rejected. This means that the analysis did not find sufficient evidence to support the hypothesis.

On the other hand, H2, which proposes a positive relationship between the adoption of digital and real-time financial management practices and the financial performance of SMEs in the logistics industry, is accepted. The statistical analysis demonstrated a significant correlation between the adoption of these practices and improved financial performance.



Similarly, H3, which states that the adoption of digital and real-time financial management practices contributes to improving cash flow management and financial forecasting in SMEs, is also accepted. The analysis revealed a significant impact of these practices on enhancing cash flow management and financial forecasting.

Furthermore, H4, which suggests that the adoption of digital and real-time financial management practices has a significant impact on the overall financial performance and decision-making processes of SMEs operating in the logistics industry in Pakistan, is accepted based on the regression analysis.

Overall, the findings support H2, H3, and H4, highlighting the importance of digital and real-time financial management practices in enhancing financial performance, cash flow management, and decision-making in the logistics industry.

## **Chapter 5: Conclusion And Recommendation**

### **5.1 Discussion:**

The statistical analyses revealed that the adoption of digital and real-time financial management practices positively influenced the financial performance of SMEs in the logistics industry (Bazerman & Moore, 2013; Kim et al., 2018). These practices helped optimize cash flow, control costs, and maximize revenue, leading to enhanced profitability and overall financial outcomes (Berman & Knight, 2008; Ooghe & De Prijcker, 2008).

Moreover, the availability of real-time financial data and analytics significantly impacted the decision-making processes of SMEs (Chen et al., 2012). Access to up-to-date financial information empowered decision-makers to make informed choices, monitor key performance indicators, and identify trends and anomalies in real-time, resulting in more effective and timely decision-making (Davenport & Harris, 2007).

The analyses also indicated that digital and real-time financial management practices contributed to improved cash flow management and financial forecasting in SMEs (Kaplan & Atkinson, 2015; Chen et al., 2014). Through advanced data analytics and visualization tools, organizations gained valuable insights, identified cost-saving opportunities, and streamlined operational processes, resulting in better cash flow management and more accurate financial forecasting.

These findings emphasize the importance of adopting digital and real-time financial management practices to enhance the competitive advantage of SMEs in the logistics industry (Brynjolfsson & McAfee, 2014; Fawcett et al., 2016). By proactively managing financial performance, responding to market changes, and making data-driven decisions, SMEs can position themselves for success and sustainable growth.

Overall, this thesis highlights the significance of embracing digital transformation and leveraging real-time financial data and analytics in the logistics industry. It provides valuable insights for practitioners and decision-makers seeking to improve financial performance, decision-making

processes, and overall competitiveness in SMEs. While the study focused on the logistics industry in Pakistan, future research can explore the impact of these practices in different contexts to further enrich our understanding.

## **5.2 Conclusion:**

In conclusion, this thesis examined the role of digital and real-time financial management practices in small and medium-sized enterprises (SMEs) operating in the logistics industry. Through a comprehensive analysis of the data, several key findings emerged.

Firstly, the adoption of digital and real-time financial management practices was found to have a significant positive impact on the financial performance of SMEs in the logistics industry. By optimizing cash flow, controlling costs, and maximizing revenue, organizations were able to enhance their profitability and overall financial performance.

Secondly, the availability of real-time financial data and analytics greatly influenced the decision-making processes of SMEs. Access to up-to-date financial information empowered decision-makers to make data-driven choices, monitor key performance indicators, and identify trends and anomalies in real-time. This led to more informed and effective decision-making.

Thirdly, digital and real-time financial management practices contributed to improved cash flow management and financial forecasting in SMEs. By utilizing advanced data analytics and visualization tools, organizations were able to gain valuable insights, identify cost-saving opportunities, and streamline operational processes, leading to better cash flow management and more accurate financial forecasting.

Overall, the adoption of digital and real-time financial management practices played a crucial role in enhancing the competitive advantage of SMEs in the logistics industry. These practices enabled organizations to proactively manage their financial performance, respond swiftly to market changes, and make well-informed decisions that optimized their financial outcomes.

The findings of this thesis contribute to the growing body of knowledge on the importance of digital and real-time financial management practices in SMEs operating in the logistics industry. It provides valuable insights for practitioners and decision-makers seeking to leverage digital technologies to improve financial performance, decision-making processes, and overall competitiveness. In addition to improving employee productivity and having a beneficial impact on business financial performance, digitalization may be the driving force behind process and product advancements that offer value for customers (Zhou et al., 2021).

These findings support the existing body of research. For instance, Fährdrich states that reporting and budgeting are two Management Control tasks that are affected by digitalization (Fährdrich, 2023). The instruments and techniques made possible by digital platforms, business intelligence, cloud computing, big data, and automation can also be used by management accountants to expand their analysis. The results of the analysis are used by MC to optimize operational procedures for various company operations. Additionally, the quality of financial reporting data is considerably improved by computerized accounting systems (Itang, 2021).

However, it is important to acknowledge the limitations of this study. The research was conducted within a specific context (the logistics industry in Pakistan), and the findings may not be generalized to other industries or regions. Future research should explore the impact of digital and real-time financial management practices in different contexts to further enhance our understanding of their benefits and limitations.

In conclusion, this thesis underscores the significance of digital and real-time financial management practices for SMEs in the logistics industry. It highlights the potential for these practices to drive financial performance, improve decision-making processes, and contribute to sustainable growth. By embracing digital transformation and leveraging real-time financial data and analytics, SMEs can position themselves for success in today's dynamic and competitive business landscape. Big data analytics (such as using the company's financial and transactional data) has the potential to improve organizational agility and financial performance, which is especially important in challenging settings (Barlette and Baillette, 2020).

In addition to the adoption of digital and real-time financial management practices, another important aspect highlighted in this thesis is the significance of hiring key resources who possess expertise in using Excel and other reporting tools. These resources play a crucial role in formulating and implementing real-time financial systems at a fraction of the cost compared to traditional accounting systems.

These qualified personnel are able to create dynamic and user-friendly financial templates and dashboards by utilizing the capabilities of Excel and other reporting tools. Even with a rudimentary understanding of Excel, these templates enable staff members to input and evaluate financial data in real-time. This gives all employees inside the company the freedom to use and access financial information, enabling them to make educated decisions and contribute to the process of overall financial management.

Additionally, using Excel and reporting tools proficiently minimizes the need for costly accounting software and outside consultants. Having access to internal expertise enables SMEs to tailor their financial systems to meet their unique demands and guarantee compliance with their current infrastructure. Along with cost savings, this improves the organization's flexibility and agility in responding to shifting financial needs.

SMEs working in the logistics sector can create reliable and affordable real-time financial systems by investing in the recruiting and training of key resources knowledgeable in Excel and other reporting tools. These systems improve the accessibility of financial information throughout the firm, enable effective data processing, and support data-driven decision-making.

### **5.3 Research Limitation:**

While this thesis provides valuable insights into the adoption of digital and real-time financial management practices in the logistics industry, it is important to acknowledge certain limitations that may impact the generalizability of the findings.

The research's initial primary focus on the logistics sector may limit the conclusions' applicability to other businesses. Even though the logistics industry is notorious for having particular financial management difficulties, the results may still be relevant to SMEs in other industries. To determine whether the suggested approaches can be applied to various sectors of the economy and environments, more research is required.

The adoption of digital and real-time financial management methods and a variety of financial outcomes are examined in the current study, however there is room for additional research. The precise mechanisms and paths via which these activities affect financial performance, decision-making, and cash flow management could be the subject of further study. More thorough research would improve our comprehension of the underlying mechanisms and contribute to a framework that is more comprehensive.

It is also important to think about investigating questions based on abilities related to the use of digital tools and reporting technologies. Understanding how small and medium-sized enterprises (SMEs) can use technology to improve their financial performance may be furthered by conducting research into the specific skills and competencies required for employing these tools effectively and evaluating their impact on financial management practices. Organizations can create specialized training programs or hire people who have the requisite abilities by defining the main competencies needed for using these products. This would make it possible for SMEs to more fully utilize the capabilities of online tools and reporting technologies, resulting in improved financial decision-making and general performance.

In addition to the foregoing, as the majority of the businesses are privately held, financial performance data was not accessible to make estimates. In the future, data can be gathered from publicly traded corporations to allow researchers to conduct an unbiased review of the companies' financial performance.

Future studies should seek to replicate and expand the current study's findings, looking at additional industries and performing more in-depth analyses to uncover the complex connections

between digital financial management practices, organizational outcomes, and the expertise required to use these practices.

#### **5.4 Recommendations:**

Based on the findings and analysis presented in this thesis, several recommendations can be made to support small and medium-sized enterprises (SMEs) in the logistics industry in their adoption and utilization of digital and real-time financial management practices:

**1. Invest in digital tools and reporting technologies:** SMEs should think about making investments in online tools and reporting technologies that provide for instant access to financial analytics and data. In order to enable data-driven decision-making, these solutions give firms instantaneous insights into their financial performance and position.

**2. Enhance employee skills and competencies:** The development of personnel competencies and skills linked to digital tools and reporting technologies should be a top priority for SMEs. Employees can be empowered to apply these technologies successfully, maximizing their advantages and strengthening financial management practices, by being given training and development opportunities.

**3. Foster a data-driven decision-making culture:** SMEs ought to foster a culture that respects data-driven judgment. This entails encouraging employees to rely on data insights to drive strategic initiatives and promoting the use of real-time financial data and analytics in decision-making processes.

**4. Conduct regular financial performance assessments:** SMEs should analyze key performance indicators (KPIs) and do financial forecasting on a regular basis to evaluate their financial performance. They will be able to do this to identify potential improvement areas, make the required corrections, and maximize their financial results.

**5. Collaborate with financial professionals:** SMEs can gain from working with financial experts who are knowledgeable in digital and real-time financial management techniques, such as accountants or financial advisors. These experts can offer invaluable advice and assistance in putting into practice efficient financial management practices.

**6. Stay informed about emerging technologies:** SMEs should keep up with new developments in digital and real-time financial management, including trends in those areas. SMEs can proactively adjust their methods and use cutting-edge solutions to acquire a competitive edge in the business by staying informed of the most recent developments.

By putting these suggestions into practice, SMEs in the logistics sector can leverage the power of digital and real-time financial management practices to enhance decision-making, boost financial performance, and ultimately gain a competitive edge in the market.



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## APPENDIX -A

### Research Questionnaire

"The Impact of Digital and Real-Time Financial Management on Internal Financial Performance and Decision-Making in Small and Medium-sized Enterprises (SMEs)"

| Variable                                | #    | Item  | Source        |
|---|------|---|---------------|
| Digital/ Real-Time Financial Management | RTF1 | The data storage through the financial management system contributes to the integrity of the financial reporting process  | Soudani, 2012 |
|   | RTF2 | The digital & real-time financial management system has sufficient details to accurately and fairly reflect company assets  | Soudani, 2012 |
|   | RTF3 | The implementation of digital & real-time financial management system and data collection could save shareholder's money and time   | Soudani, 2012 |
|   | RTF4 | Data processing is capable of making a difference in a decision by helping managers to form predictions about the outcomes of past, present, and future events to evaluate financial performance in the organization. | Soudani, 2012 |
|   | RTF5 | Data processing caused the improvement of the quality of the financial reports and facilitated the process of the company's transactions  | Soudani, 2012 |
|   | RTF6 | The automated data collection speeded up the process to generate financial statements and overcome human weaknesses in data processing  | Beg, 2018     |
|   | RTF7 | It made integration and consistency among business functions faster.  | Beg, 2018     |

|                       |      |   |               |
|-----------------------|------|---|---------------|
|                       | RTF8 | It brings simplification in work.   | Beg, 2018     |
|                       |      |   |               |
| Financial Performance | FP1  | An effective measurement and reporting process can improve performance and lower costs                                  | Soudani, 2012 |
|                       | FP2  | Interactive control systems help managers integrate new data and learning into the decision-making process              | Soudani, 2012 |
|                       | FP3  | The digital & real-time financial management system minimizes the cost of recording and interpretation of data.         | Beg, 2018     |
|                       | FP4  | It contributes in quality control   | Beg, 2018     |
|                       | FP5  | It supports planning and execution in the organization.   | Beg, 2018     |
|                       | FP6  | It stores and retrieves information easily.   | Beg, 2018     |
|                       | FP7  | It brings high efficiency in storage, classification, and analyses of data.   | Beg, 2018     |
|                       |      |   |               |
| Decision Making       | DM1  | It (The Real Time System) helps the management to take timely decisions.  | Beg, 2018     |
|                       | DM2  | It provides accurate and valid information at the right time.   | Beg, 2018     |
|                       | DM3  | It makes the information more credible and understandable.  | Beg, 2018     |
|                       | DM4  | Your RT System improves the decisions you make.   | Yang, 2016    |
|                       | DM5  | Your Real Time System changes the way you do things in a way that is beneficial to the organization's overall interest. | Yang, 2016    |
|                       | DM6  | Your RT System allows you faster cycle time to problem resolution   | Yang, 2016    |





**1<sup>st</sup> Half Semester Progress Report**

|                      |   |
|----------------------|---|
| Name of Student(s)   | Zara Agha   |
| Enrollment No.       | 01-322212-025   |
| Thesis/Project Title | The Impact of Digital and Real-Time Financial Management on Internal Financial Performance and Decision-Making in Small and Medium-sized Enterprises (SMEs) |

**Supervisor Student Meeting Record**

| No. | Date                | Place of Meeting | Topic Discussed                | Signature of Student |
|-----|---------------------|------------------|--------------------------------|----------------------|
| 1   | 8 <sup>th</sup> May | Office           | Thesis Topic                   | Zara                 |
| 2   | 8 <sup>th</sup> May | Office           | Introduction/Problem Statement | Zara                 |
| 3   | 15 <sup>th</sup>    | Office           | Literature review/Methodology  | Zara                 |
| 4   | 15 <sup>th</sup>    | Office           | Questionnaire                  | Zara                 |

Progress Satisfactory

Yes

Progress Unsatisfactory

Remarks: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signature of Supervisor: \_\_\_\_\_ Rabia \_\_\_\_\_ Date: 03-07-23 \_\_\_\_\_

Name: \_\_\_\_\_ Rabia Sharif \_\_\_\_\_

Note: **Students attach 1<sup>st</sup> & 2<sup>nd</sup> half progress report at the end of spiral copy.**



MBA/BBA

**2<sup>nd</sup> Half Semester Progress Report & Thesis Approval Statement**

|                      |  |
|----------------------|--|
| Name of Student(s)   | Zara Agha  |
| Enrollment No.       | 01-322212-025  |
| Thesis/Project Title | <b>The Impact of Digital and Real-Time Financial Management on Internal Financial Performance and Decision-Making in Small and Medium-sized Enterprises (SMEs)</b> |

**Supervisor Student Meeting Record**

| No. | Date                  | Place of Meeting | Topic Discussed              | Signature of Student |
|-----|-----------------------|------------------|------------------------------|----------------------|
| 5   | 21 <sup>st</sup> June | Office           | Finding of Thesis            | Zara                 |
| 6   | 21 <sup>st</sup> June | Office           | Results                      | Zara                 |
| 7   | 21 <sup>st</sup> June | Office           | Conclusion & Recommendations | Zara                 |

**APPROVAL FOR EXAMINATION**

Candidates' Name: \_\_\_Zara Agha\_\_\_ Enrollment No: 01-322212-25

Project/Thesis Title: The Impact of Digital and Real-Time Financial Management on Internal Financial Performance and Decision-Making in Small and Medium-sized Enterprises (SMEs)

I hereby certify that the above candidates' thesis/project has been completed to my satisfaction and, to my belief, its standard appropriate for submission for examination. I have also conducted plagiarism test of this thesis using HEC prescribed software and found similarity index at \_\_\_ that is within the permissible limit set by the HEC for thesis/ project MBA/BBA. I have also found the thesis/project in a format recognized by the department of Business Studies.

Signature of Supervisor: \_\_\_Rabia\_\_\_ Date: \_\_\_03-07-23\_\_\_

Name: Rabia Sharif

## Thesis\_SMEs\_-\_5th\_July.docx

### ORIGINALITY REPORT

|                  |                  |              |                |
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