Blockchain technology, an enabling force: Getting access to a new spectrum of international markets

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Term: VT22
Course code: 2FE52E
Level: Degree of Bachelor
Subject: International Business
Abstract

The impact that technology has on modern international business is comprehensive, it has, and is transforming the way that business and interaction are conducted across borders. Through development of new technologies arises opportunities to be exploited in the search for beneficial advantages. To meet the development and evolution of today’s society’s demanding social and digital needs, advancements and measures are being made in key areas such as methods of payment, supply chain management and data transformation.

Blockchain is currently one of the hottest topics when it comes to developing new ecosystems within the financial global environment. The technology of blockchain has disrupted traditional models and solutions both across the public and private sector and across different industries. Blockchain is basically a digital networking system of computers that monitors, distributes, and duplicates information regarding for example, transactions, that then is stored in a digital ledger within the blockchain. The usage of different types of blockchain setups is having an exponential growth across the international business landscape, the potential benefits of receiving and distributing information as well as transactions in a faster, transparent, and more secure way is intriguing.

Despite its relevance to international business theory, there has been limited academic contribution on the impact of blockchain technology. By relating blockchain technology to theoretical models and providing a new context for the phenomenon this thesis contributes to the existing research. The study revolves around the following research questions: “What impact has blockchain on businesses ability to reach and gain access to international markets?” as well as “What are the main challenges that companies face when using blockchain technology to conduct business across borders?” In which the empirical findings from four company representatives concluded that, objectively blockchain has made it easier for companies to gain access to international markets. The internationalization process becomes more efficient and transparent, relationships and network creation across borders gets substantially easier through increased interconnectivity. Blockchain creates new business models and processes that reaches consensus and trust more effectively. Furthermore, obstacles associated with international payments that can be seen to limit cross-border trade gets mitigated by transparent chains of information. The main challenges companies face when using blockchain technology to conduct business across borders mainly relies on the counterpart experiencing structural difficulties to understand how to comprehensively implement blockchain technology throughout the organization.

Keywords: Blockchain, Technology, International markets, Economic Globalization, International payments, Cross-border transactions, International business, Technology, Trust, Transparency, Efficiency
Acknowledgements

First, we would like to express our sincere gratitude to iGrant.io, Company X, Haidrun and Rusani Ventures LLC who together all made this thesis possible. The valuable insights provided and collected from the interviewees Lal Chandran, Company X, Jonas Lundqvist and Sami Rusani constituted the empirical findings presented in this thesis. The authors want to deeply wish you, your employees and your companies’ continuous success. Secondly, we would like to thank our supervisor Professor Selcen Öztürkcan and examiner Professor Richard Afriyie Owusu who with their perspicacious knowledge guided us through the entirety of the process. Thirdly, we would like to express a huge amount of gratitude towards our fellow classmates and friends Mr. Jonatan Pajkin and Mr. Christian Jönsson who gave us valuable feedback and supported us in moments when it was needed the most. Finally, we would like to take the opportunity to formally thank each other for conducting this thesis and withstanding one another during the period of time.

Kalmar, Sweden. May 26th, 2022

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List of Abbreviations

IB    International Business
B2B    Business-to-Business
FDI    Foreign Direct Investment
SWIFT    Society for Worldwide Interbank Financial Telecommunication
EY    Ernst & Young
AI    Artificial Intelligence
MNC    Multinational corporation
B2C    Business-to-customer
1 Introduction

In this chapter the study will introduce the reader to blockchain technology and its attachment to international business. First, the reader will be introduced to the background, which is followed by the problem discussion where previous research is discussed, and a knowledge gap is identified. Which forms the research gap and the birth of the authors research questions. The research questions lead into the purpose that the research desires to fulfill. Lastly, the delimitations of the conducted study, as well as a concise overview through the outlining structure of this thesis will be presented.

1.1 Background

Cross-border trade functions as a crucial element within the international business field. Important drivers behind modern day cross-border trade have close ties to the constant development in areas such as digitalization and technology (Głodowska and Maciejewski, 2017). Digital and technological innovations have ignited progress in modes of digital payment methods, information flows, and connectedness across borders (Głodowska and Maciejewski, 2020).

A fascinating and emerging piece of technology that is estimated by 2025 to account for 10 percent of the world's GDP is blockchain according to the World Economic Forum, the evolving number of companies that are integrating the technology as a feature to conduct international operations occur at fast pace (Zalan, 2018). Evans (2017) predicts a few critical areas that may be transformed by blockchain technology, among these are financial services, logistics, cybersecurity, legal, governance and healthcare mentioned. So, the transactional mainframe of technology that is central for all cross-border trade within IB can be expanded to different industries as well as for purposes that stretches further than transactions like cybersecurity and information flows (Gupta, 2017).

Paech (2017) concludes that the simplest way to grasp blockchain technology, is to see it as a digital database for storing entitlements, with each network participant holding identical copies of equal constitutive worth. While blockchain is also clarified in non-too technical terms as a digitally distributed ledger, the word ledger can be referred to as a database, but the term ledger will be used throughout this study. The distributed ledger stores information in a secure, transparent and decentralized way.
On the contrary to a traditional database blockchain organizes and distributes information in infinite smaller data storages (Nofer, M. et al., 2017). According to Davidson et al. (2018) when viewing ledgers from a business standpoint they constitute the basis of technological documentation of transactions in modern economies. The novelty of blockchain remains in the fact that it presents a new method of constructing trust without the requirement of being centralized, excluding the intermediary involvement from institutions such as banks and governments.

The fact that the ledger cannot be changed is emphasized as a key takeaway from Gupta (2020), furthermore, he highlights that the reduced costs, fast pace, and the multiple areas that the technology can be implemented in across industries. Reasons to why the international business field have shown enthusiasm towards the topic. Additionally, blockchain is perceived to increase transparency through guaranteeing that every participant is granted access to the same data. These aspects are related to why actors within the financial industry and companies that conducts cross-border payments in their daily operations can be considered as main users of blockchain technology (Strawn, G., 2019).

Digitalization is a widely researched topic within IB, Schiopu (2020) elaborates on the fact that the development of digitalization has led to a transformation of traditional operations, the result is highly technological creations that have affected fundamental sectors of international business and cross-border trade. Furthermore, Schiopu states that as technology improves, new capabilities arise to enhance the quality and effectiveness of activities within firms. In order for firms, governance, and institutions to develop, it is of utmost importance to follow digital and technological progress to ensure that one has the right preconditions to later capitalize on.

Hooper & Holtbrügge (2020) argues that establishing an optimized blockchain can provide preconditions where there are great possibilities to be capitalized on from an international business context. For example, the technology can prove a more clear and transparent depiction of international marketing processes, where the use of a blockchain ledger can provide information about in what ways data is used and to whom and where it ultimately ends up with. Hooper & Holtbrügge explains that within supply chain management blockchain can showcase whether ethics, sustainability and transparency is upheld, areas that are perceived to be audited. The technology has the capability to hold companies accountable by displaying all actions from the acquisition of raw materials and the following processes that leads up to the final sale, processes that today is vaguely disclosed and lacks in transparency.
Hooper & Holtbrügge further clarifies that international finance and cross-border trade are the most obvious areas blockchain technology can commute when it comes to IB. Since international money transfers and current methods of payment are processes which are perceived to be slow and costly (Hooper & Holtbrügge, 2020).

Van Tonder et al. (2020) argues that the process of digital transformation in business has in similar fashion been of strategic importance for companies to enhance. She defines that the purpose of digital transformation “is to create new possibilities for the future as opposed to simple technological changes seeking to correct the mistakes of the past.” (Van tonder, et al., p. 116, 2020). She further claims that emerging digital technologies has rendered in gained access to previously “unexplored” markets and increased global connectivity. As she puts emphasis on explaining that the majority of trade and commerce is conducted via the digital infrastructure of the Internet, the reality of international business today is that enterprises work within an increasingly growing interlinked world economy.

In the words of Hollensen (2020), globalization is the increasing shift of interconnection between national economies, primarily involving suppliers, customers, and producers together with governments and firms from other markets. Conducting business internationally and performing cross-border trade are missions firms seek to accomplish. As such ventures provides firms with opportunities to attain new revenue streams and grow. Aspects lifted forward by Torres de Oliveira et al. (2020) is that blockchain is a phenomenon that is digital, global right from the start, that in some regards does not require a traditional internationalization process. There are close ties between the technology and economic globalization, however, in comparison to traditional international economic ventures it has the leverage of not being regulated and affected by legislation and governmental interference to the same degree. According to Kshetri (2019) blockchain technology can potentially improve international trade and payments substantially by improving the speed and efficiency of the process. Furthermore, Kshetri emphasizes than blockchain can make it feasible to maintain a better overview and closer eye on operations within international trade, such as the transit of commodities, documents and contracts. In this way, technology can aid in the battle against fraud.

Kimani et al. (2020) argues that while the symbiosis of internet, digitalization and economic globalization has been major contributors of the current international business landscape that is today, blockchain may be the innovational driver and most significant breakthrough in technology of the 21st century.
Reframing international business and global operations for multinational firms to what it can become in the future. Incentives speak for enhancements of cross border-trade, reduction of obstacles and to achieve trade in new markets.

1.2 Problem discussion

When reviewing current standards and traditional methods of conducting business across borders, there are areas that have not kept up with the rapid pace of development within the scope of digitalization. Informational transparency between companies and transactional details are areas that have not evolved to a great extent. Furthermore, international payments are perceived to be a costly and slow process that lacks transparency and has involvement from an unnecessary amount of parties (Hooper & Holtbrügge, 2020).

Cross-border transactions are main pillars to the foundation of economic globalization. However, concerns that form obstacles towards international business involve currency conversion and exchange, governmental regulation, and the security and trust of transactions (KPMG, 2018). Milkau (2019) explains that new alternatives of international payments are on the rise, mainly because of the complexity that cross-border payments present. The complexity consists of requirements that come from regulatory measures on for example, anti-money laundering, capital requirements and differences on technical and operational standards across jurisdictions. Milkau sheds light on the routes of payment and explains that there is limited insight in the process since it is coordinated by correspondent banking networks.

Van Tulder et al. (2019) emphasizes on digitalization as a central component of modern-day international business, the expansion of economic globalization has close ties to the digital economy. The effect of digitalization can be visualized in information technologies, an area that branches towards finance, marketing, and strategies that allows for competitive edges regarding international business. Van Tulder et al. states that there have been large increases in terms of global connectedness during a 10 year period of time between 2005-2015, on the contrary, economic cross-border exchange has not been able to keep up with the development and has remained rather stable during this period. Although, it is concluded that blockchain technology has an incentive towards revolutionizing areas within corporate finance, as an extension of its design for payments. The technology is perceived to have a long way to go both in technological and in political turns, however, this is referred to as whether the implementation occurs on a broader governance level and not from a private company perspective.
Aspects that need to be considered among international businesses as the adoption of blockchain technology grows, is how the technology should be integrated and co-exist with software that is already in place. Another aspect is that it is an expensive investment, whereupon the fruit of its labor may not be seen instantly. The aspect of fulfilling corporate social responsibility goals is also something that needs to be reviewed since the technology is perceived to render a high level of energy consumption (Lielacher 2018).

According to Deloitte (2021) around US$ 2 trillion in global payments was attached to cross-border payments, revenues that are believed to decrease. Due to the fact that blockchain and decentralized currency allows international companies to independently handle transactions themselves. Consequently, the traditional banking system faces a threat from this technology as it generates faster transactions, removes regulatory obligations, and allows companies to meet their own capital and liquidity needs. However, banks are finding ways to adopt the technology themselves in order to exploit the potential and to hedge towards losses from traditional services regarding cross-border payments.

There is limited research on subject whether blockchain has or is making it easier for companies to reach and gain access to international markets. Nevertheless, Riesco et al. (2019) states that the function of the technology to automatically provide trust towards untrusted sources is an incentive to gain access. The security of cryptography compiled with the digital ingenuousness provides a less time-consuming process that at the same time validates key information more safely, which establishes trust. Additionally, Riesco et al. highlights that these economic incentives can lead to less asymmetry between businesses and consumers.

1.3 The scientific research gap
Ernst &Young claims that “blockchains will do for networks of enterprises and business ecosystems what enterprise resource planning ERP did for the single company” (EY, p.1, 2022). Moreover, it is contended that the technology will allow for information to be incorporated in processes that exceed company boundaries, the incorporation can further eliminate intermediaries, sustain threats from cyber-attacks and access as well as exploit new business ecosystems (EY, 2022).
At the same time, the CEO of IBM Ginni Rometty claimed in 2018 that “blockchain will do for transactions what the internet did for information.” a proclamation that is considered to go further than its sentence as the internet goes further than information exchange and rather expands to areas such as analytics, business, and Artificial Intelligence (Cochrane, p.1, 2018). Cochrane argues that blockchain is attached to transactional purposes and data, similarly to the internet, it will expand to other areas. Development of blockchain occurs swiftly compared to the early days of the internet, the first generation of blockchain was solely used for transactions through cryptocurrency. At this stage, the technology can obtain compatibility with other systems and services beyond transactional purposes (Cochrane, 2018).

International payments, digitalization, and economic globalization are all areas that are interlinked to blockchain. That blockchain is a part of digitalization and used for international payments which can revolutionize economic globalization is cemented. However, in what ways? The perks and how it can be used to influence areas such as transparency in the health industry, effectiveness regarding supply chain and reduce costs in the financial system is sustained (Zalan, 2018). Are these factors that have allowed companies to capitalize across borders.

Nevertheless, the key point and takeaway is that there are all these supporting features and upsides ascribed to the technology, advantages that could generate access and allow companies to reach international markets. However, there is rather restricted and limited research whether blockchain in fact has allowed companies access, which this study aims to determine. The intriguing aspect is that the technology inclines strong incentives for it, the wide scope of major international firms seems to see an opportunity that may position themselves in a future necessary and emerging space. However, just like any opportunity certain risks are also attached, regulatory obligations are something that needs to be accounted for when dealing with the technology.

As Zalan (2018) mentions international business researchers are put in front of a phenomenon that is blockchain, and its distributed ledger technology presents research opportunities within the IB spectrum that “enables to study a population of highly innovative firms literally at birth.” (Zalan 2018 pp. 20). Furthermore, the blockchain technology is described to defy the very meaning of national borders and traditional modes of entry to a new market since its simply global from the beginning and can be run without a managerial footprint.
1.4 Research Questions

With the previous chapter in mind, to fill existing gaps the authors of this thesis constructed the following questions below:

*Rq1:* What impact has blockchain on businesses ability to reach and gain access to international markets?

*Rq2:* What are the main challenges that companies face when using blockchain technology to conduct business across borders?

1.5 Purpose

The purpose of this study is to provide the reader with an increased understanding of blockchain and the effect that the technology has in an international business context. The target is to find out whether blockchain technology has made it easier or not for companies to reach and gain access to international markets. Additionally, the authors want to discover what the drivers and main challenges are that companies face when using and implementing the technology to conduct business across borders. Lastly, this study wants to contribute and provide valuable insights towards international business research in the regards of blockchain technology, through the discovered empirical findings revealed from the qualitative research.

1.6 Delimitations

- The empirical findings from this study are limited to interviews with companies that conduct and offer business-to-business services.
- Companies that only offer platforms that interact with blockchain’s and offer business-to-consumer services are excluded.
- The chosen respondents have been selected based on their expertise and companies’ involvement regarding blockchain technology. Which results in that the respondents have different leading roles within their organizations and operate within different industries and markets.
- Due to the complexity of blockchain and our limited technological expertise, the decision to not deep dive into the most technological aspects and elements of blockchain was taken. Mainly, due to the fact that we want to gauge blockchain from a business perspective, since that is our main field within academia.
- Blockchain has a close connection to cryptocurrency, we decided to exclude cryptocurrency and only mention the phenomenon, in order to mainly target and focus on blockchain technology.
1.7 Outline

- **Introduction**: The introduction chapter contains the background together with the problem discussion and the research gap to motivate the chosen field of study. Further, the research questions, purpose, delimitations is presented for the reader.

- **Literature review**: The chapter of literature review showcase the concept and theories that is seen relevant to the topic. Further, the chapter illustrates the constructed conceptual framework made by the authors.

- **Methodology**: The methodology chapter provides a structure of the decisions that were made in constructing the research. Arguments that supports and motivates the choices of our research approach will be presented.

- **Empirical findings**: The empirical findings chapter contains the data that was collected from the qualitative research. The respondents that were interviewed represent separate international companies from various industries with extensive knowledge of blockchain.

- **Analysis**: In the analysis the reader will be able to follow the gathered empirical findings objectively connected to the theoretical framework.

- **Conclusion**: The final chapter will display the conclusions drawn from the analysis, which will be used to answer the research questions. Moreover, practical implications, limitations and suggestions for future research will be exhibited.

Figure 1. *Outline of the study*. Source: Authors
2 Literature Review

This chapter are presenting the theoretical frameworks that is relevant to the topic. Definitions and explanations will be displayed due to the complexity of blockchain technology, the chosen concepts and connecting theories are provided due to its relevancy to the research topic. To stimulate the readers ability to comprehend the technology of blockchain’s and gain knowledge of its role in international business, a wider range of concepts is implemented. Therefore, are the following concepts addressed in the research in addition to blockchain: Economic globalization, digitalization, internationalization and cross-border transactions. In addition, general theory and the network model will be presented and together with the mentioned concepts above forms the conceptual framework.

2.1 Internationalization

Johanson & Vahlne (2017) describes internationalization as the development and broadening of network and business relationships in foreign nations and markets through expansion, integration, and connectivity. A major focus of networks is to sustain and develop the quality of company’s ties between firms, as it can influence and play a big part in a firms’ internationalization process. When exploring possibilities in international markets, one must consider potential uncertainties and risks that can occur. Therefore, accounting for one’s business network and integrating them as part of the strategical process of internationalization is beneficial so that relationship-specific decisions and obligations tied to other companies are upheld. International business networks are not only about the width and extension of the network, but the quality of the relationships is equally important, if not more. The cornerstone of business relationships is to establish trust, minimize risks and maximize the conditions for cooperation. As a result, joint growth, a smoother internationalization process and shared contribution of expertise and resources can be achieved.

International expansion is enticing and appealing as it presents the possibility of entering unexplored profitable markets, that can result in growth. Additionally, the fact that it can increase a firm’s competitiveness and yield development of new technology, products and services is what makes it a strategically enticing opportunity to approach (Hollensen, 2020).
Businesses with a broad international reach can become more valuable to customers through increased international presence and activity, which can be a component to grow networks. To put it another way, the quantity and dispersion of existing customers has an impact on the value of the service to the next client. Every new foreign client generates an extension and broader network reach (Verbeke, 2021). Novinkina highlights that when establishing these networks, the process enhances if both sides are connected to the same technology, making them more compatible and understanding of each other’s business nature (Novinkina, et al., 2021). As mentioned above, Johanson & Vahlne emphasized that it is essential to establish trust in relationships and business networks as a part of a firms’ internationalization process. It is argued that the use of blockchain as part of an internationalization process could lower risks and uncertainties, which is incentives to establish trust. Which could possibly ease the process of making relationships specific decisions when exploring business opportunities in foreign markets (Gaur, 2020).

Furthermore, since internationalization is a business strategy of making products and services more adaptable, easily implemented and accessible to international markets, blockchain fulfill many criteria’s of creating better preconditions to internationalize. Novinkina, highlights some of the benefits of adopting the technology of blockchain, since it has the ability function anywhere at any time digitally, it is perceived as a born global technology that can be implemented to remove obstacles that occur from national boundaries. At the same time, it can speed up the process of various activities within a firm and therefore enhance performance. In fact, Novinkina et al. states that “Blockchain can store data about multiple commercial and non-commercial use cases related to electronic data interchange: financial transactions; commercial contracts; purchases of services and goods; transfer of confidential information; insurance; protection and transfer of property rights; personal data management; archiving of official documents; protection of intellectual property; supply chain and logistics” (p.320). Which further implies that in an internationalization process these benefits can lower the uncertainty and risk associated with traditional technologies that is not as easily adaptable to international markets across borders. Moreover, these concluding facts could also be used as an advantage when making entry to a new market (Novinkina, et al., 2021).

According to Zalan (2018) digital internationalization is reliant on the content and value of information. As digitized information has become increasingly more important, blockchain gained credibility by having the capability to enhance the authenticity of information through consensus mechanisms validating and keeping the information more secure and transparent.
Improvements within digitalization can therefore enhance the process of transferring information to one another, by making the information more valuable through increased trust, transparency and effectiveness.

Business to business transactions is elaborated as one of the largest activities of financial institutions. While traditional methods of payment are claimed to be unsecure, costly and slow. Blockchain driven payment networks have a strong potential to be successful by making transactions more transparent and faster. Putting focus on the internationalization of firms, foreign direct investment or merger and acquisitions occur frequently, activities that is related to transactions of high costs and lengthy processes, which can be perceived to be aided by the assistance of blockchain. The alternative of using Society for Worldwide Interbank Financial Telecommunication (SWIFT) payment system for transactional purposes across borders, are somewhat considered to have a long processing time. Moreover, it is costly and ineffective in comparison to the alternative of using blockchain which could not only be faster but more secure and inexpensive, especially in regards of cross-border transactions (Hashemi, et al., 2021).

2.1.1 Economic globalization

This study wants to discover the role and impact of blockchain technology in an international business context, it is therefore essential to feature economic globalization as a part of the discussion due to its relationship with trade with different markets. The economic dimension of globalization, which includes the trade and financial aspects of globalization, is relevant in the debate of the rise of blockchain-based technology in the context of international business, particularly cross-border transactions. Coulibaly et al. (2018) holds the view that economic globalization plays an important role, from an economic, social, cultural, and technological standpoint. Through the results of capital flows, free trade and technological advancements, it has shaped global growth and development patterns since the mid-nineteenth century. Ahmed et al. (2020) argues that economic globalization differs from other types of globalization in the sense that it focuses on the interconnectedness of economic activity throughout the world-

Heimberger (2020) state that globalization is a significant contributing factor of economic growth since trade openness allows countries to take advantage of comparative advantages, benefit from specialization, and promote innovation. Therefore, one can follow recognized conceptual frameworks of economic globalization indicators by limiting the attention to the economic dimension of globalization.
Gräbner et al. (2020) argues that these frameworks consistently differentiate three elements of international market integration: trade globalization, financial globalization, and total economic globalization, with measurements of the latter combining trade and financial globalization dimensions. However, the theoretical predictions of economic globalization on growth are disputable when financial transparency is of focus. It is argued that blockchain could provide a more transparent solution when making a transaction, which could further boost the amount of trust that is involved in business (Hashemi, et al., 2019).

As economic globalization enables and boosts trade of goods, capital and services the obstacles of conducting business across-borders are steadily being attenuated, progress which have affected and intensified international markets to a more competitive state. Which leads to international firms being constantly in the search for technology and innovations that can provide a competitive edge (Gräbner, et al., 2020). According to Li et al. (2021) blockchain could enhance the amount of trust that is involved in economic transactions. Since the use of a decentralized system in blockchain technology, it is argued that it could create a competitive edge within economic transactions compared to the traditional process involving banks and several intermediaries. Which could further boost trade in an international context and economic growth.

2.2 Digitalization

Services and especially financial service organizations in general are progressively moving towards online and digitalized value production as a result of fast technology innovation (Niemand, et al., 2021). Gobble (2020) argues that companies that wants to stay relevant and conduct business on the international arena for the next decade must incorporate digital development to enhance the competitive edge of their businesses in order to survive. Notably, digitalization has led to immense changes in the business environment. The digital economy shapes new demands of labor markets as there is an increased need for professionals with digital skills, which is ultimately a result from firms’ dedication to adopt more advanced processes of digitalization (Kostetskyi, 2021).

However, it is important to recognize that the rapid growth of digital technology promotes greater transparency, at the same time it also creates new possible threats to companies not fulfilling their obligations.
By the growth of more inclusive, transparent, and efficient digital transformation processes, a paradigm shift may occur to new emerging technologies (Kostetskyi, 2021). When corporations become increasingly reliant and used to digital technology, they can transform operations across their channels to make improved strategic business decisions, but they may become more vulnerable to potential risks of cyber threats (Tiutiunyk, 2021).

Digitalized resources and technology have advanced to the point that conducting business and personal errands without it is nearly impossible. Firms are eager to strategize their businesses around digitalized processes and digital potential. But as mentioned it is not only upsides (Kostetsky, 2021). Although, technological advancements can lead to increased efficiency in a variety of business activities, such as businesses abilities to reach out to new customers and adapt to possibilities in new markets. The natural order of industries and businesses within them relies on the constant adaptation and development of technology and market demands to maintain long-term competitive edges on the globalized market (Niemand, et al., 2021).

Such adaptations and developments can be seen in areas of digitalized payments. To meet the development and evolution of today’s society’s demanding social and digital needs, advancements and measures have been made in key areas such as methods of payment. Various digital payment solutions are brought to light with the intention of making our daily living smoother and more agile since a large portion of the world’s population basically lives through their phones and computers. Traditional means of payment e.g. cash, credit cards, checks are being used less as a result of digital payment development through mobile-apps as well as the continuous expansion of global trade. Hence, the development has led to a growing dependence and attractiveness towards digital payment methods. The decreasing need of cash and other traditional payment methods together with visits to physical stores have resulted into the growth of virtual payment methods. Blockchain technology is a product of such development and are perceived to have the ability to enhance the speed of transactions processes compared traditional methods (Luther, 2016).

The ongoing development of digitalization has affected both the global economy and the way that firms internationally within the global economy must cope with decision making related to economic, technological and competitive aspects. Despite the fact that that change may result in expensive expenditures, digitalization has become a strong instrument, crucial to take steps to conduct business beyond national borders.
Implemented digital processes has the potential to eliminate and overcome difficulties as well as increase efficiency, through ease of communication, streamlined operations and a better overall operational overview (Knudsen, et al., 2021).

Firms that are seeking to take economical steps within digitalization can benefit from how blockchain is related and perceived to virtually transform business processes through increased transparency and trust in addition to the fundamentals of being more secure and cheaper when it comes to transactional processes (Dagnino & Resciniti, 2021).

When businesses adapt to new technology there are possible advantages to exploit, frequently implemented digitalization processes has contributed to increased revenues and profits because of easier access to new markets (Kostetsky, 2021). Consequently, digitalization has provided an easier way to identify and take advantage of market opportunities as well as establishing relationships with firms in foreign markets (Dagnino & Resciniti, 2021).

2.3 General theory

2.3.1 Competitiveness
A firm that conducts business internationally faces competition, international competitiveness broadly refers to advantages and disadvantages that organizations possess in relation to other organizations within the international market. Competitiveness is closely related to change, and to stay competitive and advantageous, adaptation to the rapid changing climate that international business constitute is essential. Big companies have continuously been perceived to beat the small ones, however, the fast beating the slow ones is a predominant take on the current state of international business. Whether a firm is conducting B2B or B2C, affecting customers to choose your goods or services over competitors is fundamental, satisfying and understanding customers’ needs is therefore a key aspect. Competitiveness therefore often originates in the question of which company that can provide the most value to the customer, which can be from a service that is offered at lower cost, are more technologically advanced, or of higher quality. Which means that considering and gauging actions from competitors and evaluating potential opportunities, threats and risks are aspects that connects to competitiveness, especially in terms of staying competitive (Verbeke & Lee, 2021).

While there are numerous forces and reasons to why a business can stay competitive in an international market, Kotler et al., emphasizes that building relationships and creating strong business networks is a fundamental component beyond offering a great service or product.
Business networks can function as a competitive advantage in the sense that it could provide access to new customers both within the already existing operational market as well as new markets. The fundamentals of building business networks and relationships within international business is often derived from trust, transparency and mutual value-creation (Kotler, et al., 2020).

While handling the phenomenon of competitiveness is a demanding task for international businesses, it is at the same time one of the most important parameters that drives progress, technology and innovation forward. It ignites incentives to become more profitable, superior and knowledgeable to exceed the pressure that comes from external forces (Kotler, et al., 2020). Knight, Cavusgil and Riesenberger (2019) argues that technological advancements is one of the main drivers of innovation, thus, it generates competitive advantages that allow companies to outperform competitors. Many of the modern-day advancements in technology are developed to increase productivity and profit through enhanced modes of interaction across borders. Enhancements in the areas of interaction and communication can increase profit and streamline process within the scope of international business, since it builds stronger relationships with customers, employees and shareholders.

In order for a company to make viable technological changes that fulfill the preconditions of being a competitive advantage, the change should counterbalance costs that is acquired in establishing the technology as well as operating it, mainly, the advantages should exceed the disadvantages (Knight, T. Cavusgil & Riesenberger, 2019).

2.3.2 Trust

Trust and transparency are two words widely used to discuss dynamics of relationships in a B2B setting. Continuously, research demonstrates that it is far less costly, and time consuming to preserve and maintain customers rather than entice new ones. Essentially, it is therefore in a company’s best interest to shape relationships with customers that builds on the foundation of loyalty, trust and transparency. Impacts from both external and internal forces and factors makes relationship building an intricate process that is easier said than done. Trust is referred to as a crucial component of shaping B2B relationships in the international arena, it is described as the faith and conviction that the counterpart operates and act in goodwill. It should generate a situation where mutual interests are looked after, ensuring collective profit and growth.
Moreover, trust as a part of a successful business-to-business relationship is integrated in the term transparency, which is rooted in the willingness of sharing information and knowledge of often strategic characteristics. The close connection resides in the fact that the action of sharing such information is considered as a gesture of trust, exposing a form of vulnerability to the counterpart.

The key to grasping the concept of trust in a B2B relationship is to understand that it is not a fixed achievable state. Effort needs to be made to maintain and grow a trustful relationship, trust can be betrayed or decay over time if actions that are counter-efficient and hurts one party or dishonesty occur. Embracing transparency as an ingredient of building trust can therefore be perceived as an efficient act that can possibly generate satisfaction and value as it reduces the degree of uncertainty within a B2B relationship (Kumar & Yakhlef, 2016).

2.4 Network model

The network model is constituted by actors that are linked to one another through trade connections and interaction, the interaction is what form those relationships and enables the connection between actors that creates networks (Johanson & Mattson, 2015). Hollensen emphasize that businesses are dependent on gathering resources owned by other enterprises, it is actions that form the basis of supply chain and is a core premise within the network model. By being a part and operating within a network, companies attain connections that provide them access to these external resources. It is argued that entering a network from the outside rather is a process that develops over time, through successful collaborations and interactions. Companies that aim to be a part of networks must therefore adapt the way they are conducting their business accordingly (Hollensen, 2020).

Relationships of a firm that operates in a domestic network has the possibility to work as a bridge to foreign networks, for example this can be viewed in Fig 2. In general, direct or indirect bridges between enterprises and different country networks might be considered. Such bridges can be useful both in taking the first moves overseas and later entering new markets (Hollensen, 2020).
As viewed in Figure 2 moving from home country to a foreign market through an existing network could ease the firm’s internationalization process. For instance, Hollensen argues when utilizing the existing network, it is argued that the process of internationalization will advance at a faster pace than normal, there will be fewer obstacles in terms of market knowledge and established communication channels with useful actors. He further highlights that technology often is the driver and the underlying factor that allow companies to establish internationalization processes of these characteristics. Hence, why new models have emerged that allows companies to internationalize in completely different ways than before (Hollensen, 2020).

A relatively new piece of technology that has emerged and is believed to represent such change and the birth of new models is blockchain. According to Gaur (2020) it is believed that network creation powered by blockchain technology have the potential to enhance companies’ internationalization process. The dynamics of the network change as the technology is global right from the start, which means that participants can be granted access from all over the world. A variety of bi-lateral and multilateral connections arise. Gaur explains that the blockchain-powered network ensures a dynamic marketplace where linkages, interactions and information are represented in a systematic, real time, digital way. One can already see new business models develop as blockchain creates new networks for sectors, prompting many firms to reassess their present business models and strategies.

It is therefore a major opportunity for businesses to adapt and take advantage of new technology to create new networks and business relationships (Gaur, 2020).
2.5 Blockchain

The technology of blockchain is a worldwide digital ledger, in comparison to traditional databases the technology is a distributed network in which data of information and/or transactional characteristics are verified and approved without influence from a central system or database. The technology was first introduced in 2008 by Satoshi Nakamoto as the underlying technology behind the cryptocurrency of Bitcoin. The distributed ledger provides consensus of all transactions ever made, however it can be automated to document anything perceived to be of value. Areas that are exemplified to be of value are; legal identity documents, medical procedures, financial accounts, titles of ownership and so forth. Hence, the technology is ascribed the acronym of being the World Wide Ledger of value just like the internet is described as the World Wide Web of information. Conclusively, the technology has the ability to constructs trust and transparency through digital records in real time about whatever that is desired (Tapscott & Euchner, 2016)

The distributed ledger of blockchain is unchangeable and tamper-proof, the data is encrypted, shared, replicated, and synchronized within the chain of blocks, furthermore, any party that is authorized to the network is granted access to the data (Nakamoto, 2008). The key aspect of blockchain’s digital ledger technology relies on the fact that it is upheld by a decentralized network, which means that the data is stored across the network and is not governed by a single party. A peer-to-peer system which is a computable network that communicates through nodes, a node is either a branch or end point within the computer communication network, where each node can transmit and receive data in a non-hierarchical manner. This means that privileges are not assigned to the nodes, neither are specific functions assigned within the network, which ultimately means that every node can function as a peer (Zalan, 2018).

The decentralized, peer-to-peer technology of blockchain is therefore claimed to overcome aspects that hinders cross-border trade and transactions, for example the involvement of intermediaries such as banks or legal enforcers. Excluding the involvement of intermediaries of that stature, can reduces costs, increase transparency and speed up the processes, all which are incentives that benefits conducting business across borders (Chang, Y, et al., 2020).

These concluding facts are shared by Hooper & Holtbrügge (2020) that similarly explains that the benefits of blockchain technology is that the intermediary intervention can be eliminated since the data and information about an operation or transaction is permanently stored as a part of the network.
Trust is reassured by both parties, since both the providing and receiving end accept and verifies the same version of the ledger, having the exact same access to the full data. Further benefits highlighted in a business context in addition to the ones mentioned is that the process becomes streamlined which saves time, there is an increased security towards fraud and external cyber-threats, as well as the reduced risk for human errors due to the networks’ algorithms. However, according to Evans (2014) to state that blockchain technology eliminates the need for intermediaries is not completely true. Evans argue for the fact that the platform itself is the intermediary, just an intermediary of very different type of kind.

2.5.1 Blockchain Distinctions

There are some distinctive facts that needs clarification in order to detect areas of applicability as well as how to fully understand the structure and preconditions of blockchain technology. The technology is mainly divided and described as either permissionless or permissioned, the two most well-known structures is public and private blockchains. Public blockchain in which the cryptocurrency of Bitcoin reside in was the first network that was brought to light, the chain is truly decentralized and permissionless of nature. There is no central authority, which means that everyone can access and participate in the consensus process under a truly permissionless umbrella. Private blockchain on the other hand is permissioned of nature in which participants needs to be verified and authorized to be allowed entrance, it is ultimately controlled by one entity. Within private blockchains there is a setup that is called consortium which is built on the same premises as a private blockchain despite from being controlled by a joint group instead of one entity (Gupta, 2018). The different structures and its characteristics can be seen below in Figure 3.

![Figure 3. Permissionless & permissioned (Wegrzyn & Wang, p.2, 2021)](image)

The financial industry, banks to be more accurate, are among those who have created blockchain consortiums that is controlled by the permissioned members.
The R3 blockchain consortium is perceived to be the most powerful and influential, it has assembled more than 40 of the world’s leading financial establishments, in order to strengthen exchange and cooperation across borders between banking units operating through blockchain technology. Among the members are Deutsche Bank, Barclays Bank, Bank of America as well as China Merchants Bank (Guo & Liang, 2016). Three Nordic banks, Nordea, Danske Bank and SEB have chosen to participate in this blockchain consortium and elaborate that a collaborative model has been a recipe proven to be successful when it comes to innovate financial services on another level that has not been experienced before. There is an interesting aspect of former competitors, joining forces to increase strategic partnerships to enhance technological development and participation of distributed ledger technology built on blockchain (Leijonhufvud, 2017).

The process of conducting business across-borders has a great deal of involvement from financial institutions, mainly when it comes to transactional purposes. The financial institutions are not alone when it comes to industries envisioning useful areas of blockchain (Hooper & Holtbrügge, 2020). Just like financial institutions see advantages of developing blockchain networks to create more trustworthy, rapid, less costly and transparent process across the business landscape. Several other industries and sectors within them are of the perception that blockchain can transform their operations and potentially cut out the use of intermediaries such as financial institutions. Certainly, when it comes to transactions and especially those that occurs across-borders. To name a few sectors, supply chain management, transport, marketing and healthcare are some of them (Zalan, 2018).

However, the technology of blockchain expands further than transactions, services among the mentioned sectors is considered to be revolutionized in areas of data transfer and information technology which is highly relevant in the digital age of international business. The incentives that speak for transformation through blockchain relies on the fact that the technology allow for data to be more secure, trustworthy and transparent. Additionally, data can be more accessible and easily shared through specific blockchain consortiums, which can spark international business as well as the development of new services (Chen, Song & Lv, 2019).

2.5.2 Cross-border payments
Many sectors and industries are affected by innovation and technological development, however, the financial sector is perceived to be among those who are affected the most.
Individual firms just like the whole scope of international business depend on involvement from banks, investment companies, organizations and firms that allocate capital and contributes to monetary resources (Głodowska & Maciejewski, 2020).

Involvement from the financial sector is evident when trades of commodities and services appear beyond national borders. Businesses, that see opportunities to expand new markets in addition to the domestic one is faced with complications and difficulties within many areas. Cross-border transactions are a prevailing difficulty that firms seek to overcome (Kimani, et al., 2020). Increasing international presence from corporations can be seen in the urge of manufacturers seeking to grow supply chains in new markets, management of assets across borders and international flows of investments. The movement of people, services, capital and goods ignites international business which leads to an exponential growth of cross-border payments. The growth put emphasis that the process of cross border payments are well-functioning and more connected, from 2017 to 2027 an estimated growth from $150 trillion to $250 trillion is the expected value of cross-border payments. The increased use and requirement of such services means that difficulties that are currently ascribed to traditional cross-border payment services must be solved. The services are perceived to be inefficient, unsafe, costly and lack in the area of transparency, which is related to the involvement of intermediaries along the journey of capital transference.

While opportunities continuously appear across borders, firms with the pursuit to grow and increase revenues will only generate a broader scale of expansion towards new emerging spaces beyond borders. Meanwhile, domestic payment methods are generally not connected and interlinked with those within another country. Hence, the involvement of intermediaries (Bank of England, 2022).

Figure 4. “A simple cross-border payment using accounts held at each bank” (Bank of England, p.1, 2021)
Displayed above in Figure 4, a simple cross-border payment without the use of intermediaries is presented. The image describes a payment between two companies conducting business together, one company transfers and one receives a payment using different banks. The company that has made a sale constitute the receiving end of the payment, the receiving end’s “Bank B” gets a notice from “Bank A” telling them to issue a payment for their customer in which Bank B then credit the customer’s account from an account that Bank A holds at Bank B. A situation that does not occur as often among the wide range of companies of different sizes, structures and industries that reside within international businesses. While well-established MNC’s (multi-national-corporations) of greater size are more likely to have connections that renders into clear paths of payments, on the contrary mid-sized and smaller firms operating internationally may face bigger complications due to not being as well connected with financial institutions abroad (Bank of England, 2022).

![Figure 4. A simple cross-border payment without the use of intermediaries.](image)

Figure 5. “A cross-border payment using a correspondent bank” (Bank of England, p.1, 2021)

When banks do not have direct relationships as in Figure 4, the use of an intermediary is the common solution.

The intermediary is often referred to as a correspondent bank, which task is to provide accounts for both Bank A and Bank B a scenario visualized in Figure 5. Since companies’ individual banks commonly do not have relationships between them, especially past borders, the correspondent banking system constitute a fundamental piece of the global payment system, specifically when it comes to conducting cross-border transactions.

When the number of intermediaries increase in the process of making cross-border transactions, the more slowly and costly the process gets, due to more parties being involved creating a longer chain (Bank of England, 2022).
Showcased in Figure 6 above is when numerous correspondent banks are compulsory to complete the cross-border transaction. One main reason to why the payment needs such high involvement from intermediaries lies in the fact that the currency pairing is weak. Regulations, jurisdiction and different time zones are among other reasons that affect the transaction. Capital controls and the request for documentation by the various involved banks ultimately leads to incurring costs and a lengthier process. In the correspondent-banking network of cross-border transactions presented above, each of the correspondent bank in the process of payment will charge fees for handling the foreign exchange. Furthermore, the balances within the domestic account must repeatedly be updated to ensure sufficient funding for incoming and outgoing payments, as well as to cover unpredictable fees, additionally, there is also a necessity to ensure that financial crimes are not performed (Bank of England, 2022).

The complexity of traditional cross-border payment modes and processes incurs obstacles for international businesses that seek trade within other markets than the domestic one. Difficulties which the technology of blockchain is perceived to address.

For example, having the capability to eliminate the need of trusted third parties in transactions, excluding banks and other financial institutions lowers transactions costs and speeds up the process. The more correspondent banks and third parties involved, the more slow and costly the transaction gets. Obstacles that hinder international trade across markets (Kimani, et al., 2020). However, according to Zalan (2018) the very meaning of national borders, barriers of entry into a new market is all changed in the context of blockchain. The technology is a disruptive and enabling force that does not take national borders into account, which creates opportunities both for existing companies and start-ups.
Since, the process does not need intermediary involvement, there is no centralized core that can be exploited and vulnerable in terms of data manipulation. Which constitute to key advantages of being safe and transparent, areas in which traditional cross-border payments lacks in (Zalan, 2018).

Additionally, transactions are permanently stored within the blockchain network and cannot be tampered with, security measures that prevent fraud as well as money laundry. When then applied by businesses conducting cross-border payments, increased trust and security, transparency, cost and time savings leads to streamlined processes that should allow for better abilities to access new markets. Whether the common international business or start-up sets up their own blockchain networks or not, the message has reached financial institutions. Improvements can be made in several areas regarding cross-border payments, excluding intermediaries is not to these institutions benefit, therefore, implementing their own blockchain networks may be a necessity (Hooper & Holtbrügge, 2020).

![How a blockchain works](image)

Figure 7. "How blockchain works" (Financial Times, p.5, 2015)

Figure 7 displays how a blockchain works and how a transaction within blockchain could look like. Company A wants to pay company B, noticeably, no aspects to where these companies are situated in the world are given, because it does not matter. The process of this transaction simply includes a transaction request, a validation of that request which creates a block and updates the ledger. In comparison to Figure 6 and a traditional cross-border payment, where numerous steps and institutions are involved to validate and secure the transfer or currency (Hooper & Holtbrügge, 2020).
2.5.3 Challenges

Although blockchain technology possess many potential value increasing attributes, one still needs to address the challenges the technology is facing. It is highlighted that blockchain is not generally accepted and that financial industries and governments are experimenting with the blockchain technology with the aim to better comprehend it. Furthermore, it is argued that blockchain has a small possibility to become real until existing businesses understand the transaction audibility and integrate the process in their business (Gaur, 2020).

It is important to distinguish blockchain from cryptocurrencies when focusing on challenges in regard to blockchain. Hashemi, et al, (2020) argues that there could be a number of users who are used to the more traditional transfer systems that offer them a sense of security which makes them concerned about the peer-to-peer, decentralized structure without a central authority or a financial middleman. Which could slow down the process of business implementation of blockchain further (Hashemi, et al., 2020).

Furthermore, while blockchain's groundbreaking technology has made it a popular alternative to conventional methods for money transfers and keeping information, it remains vulnerable to hackers. It's worth mentioning, though, that all recent cryptocurrency-related hacking instances have involved digital currency exchanges rather than blockchain technology. Therefore, one could mention that the security behind blockchain technology is regarded as intact, nevertheless these incidents affect blockchain in a negative manner. (Li, et al., 2021) Another negative impact is implied by Werbach (2018) who notes that although it is argued that smart contracts have the possibility to enhance business transactions, there could likely be security flaws and errors like any other type of code. Furthermore, Werbach implies that the use of blockchain software to replace human enforcement of agreements has substantial practical constraints. Upadhyay (2020) states that although smart contracts are promising for reducing bias, manual intervention, and enhancing transparency, they also have a lot of drawbacks. Recent research suggests that blockchain poses a considerable barrier in terms of designing and executing smart contracts. The legal definition and scope of smart contracts between participating parties is currently a work in progress.
2.6 Conceptual framework

Illustrated below is Figure 8 which presents the conceptual framework that is constructed by the assemblance of the various theories presented in the Literature review in accordance with the research questions of the thesis. Firstly, the theory of internationalization is presented to gain an understanding of the thought process and decision to why companies seek to expand their operations into markets abroad. Secondly, the modern business environment is heavily defined by the conversion of digitalized technological improvements to streamline processes and develop new business models, hence, why digitalization is followed. Further, general theory and the network model is highlighted to assess the dependence of staying competitive, building business networks and establishing trust both internally and externally to conduct business in markets abroad. Finally, the phenomenon of blockchain technology is highlighted since it transitions into all of the mentioned theories and is the main component of the research and to answer the research questions. Conclusively, the circular conceptual framework will illuminate the chain and interlinked relationship of the theories and what impact has blockchain has had on businesses ability to reach and gain access to international markets together with the main challenges that companies face when using blockchain technology to conduct business across borders.

Figure 8. Conceptual framework. Source: Authors.
3 Methodology

This chapter constructs the bridge between the theoretical framework leading into the research findings. It addresses and arguments for the methodological choices made to fulfill the answering of the purpose and research questions of this study sufficiently and most effectively. Firstly, the chosen research approach will be exhibited. Followed by which method that have been chosen and the clarification of the study’s design. Later it describes how data has been collected. Lastly, the construct of validity and reliability as well as ethical considerations will be addressed.

3.1 Research approach

There are various research approaches that can be implemented from a researcher, three commonly used approaches are deductive, inductive, or abductive. In general, qualitative research is conducted using an inductive technique, while quantitative research is conducted using a deductive approach. The abductive approach starts with gathering data to investigate a topic, discover themes and explain patterns, to develop a new or existing theory which is consequently tested with more data (Bryman and Bell, 2017). When performing qualitative research, the abductive technique eliminates the difficulty of choosing between inductive and deductive approach. According to Saunders, et al. (2019) the abductive approach enables researchers to find in-depth hidden structures by observing patterns more easily.

This thesis will explore the influence of blockchain technology from an internationalization aspect, therefore it is reasonable to do the study in an abductive manner. Because the goal is to learn about the problems and potential of applying blockchain in international business and cross-border transactions, interviews with a few carefully chosen persons working in the many domains mentioned in this thesis will be conducted.

3.2 Research method

When deciding upon a research method, there are two methods to use, quantitative and qualitative. Which method and technique to apply for the research depends on the research problem and purpose (Ghauri, et al., 2020). These two methods have different approaches to gather data from respondents.
Quantitative method contains data that can be quantified and is often used from a deductive approach, on the contrary qualitative method is often used together with a verbal outcome, i.e interviews. In comparison to quantitative research, qualitative research demonstrates an inductive viewpoint between offered ideas and research to accept the ongoing adaptability of modern society and tends to be more open-ended (Saunders, et al., 2019).

The methodology deemed most appropriate for this thesis is qualitative, with the reasoning being that blockchain has not been extensively researched to see if it would be beneficial to use when conducting cross-border transactions, so it was decided that creating and distributing a questionnaire would not be beneficial due to the difficulty in obtaining a large enough sample of people with relevant knowledge. Instead, interviews were conducted with a small number of persons who were thought to have the necessary knowledge to assist in answering the study questions. Therefore, this study will focus on four interviews that will be viewed as four different case studies. According to Leavy (2020) many aspects of qualitative case study research are similar with other forms of qualitative research, such as narrative, oral history, life history, ethnography, in-depth interview, and observational studies. Furthermore, the focus of case studies is to depict an in-depth view from the representative. Advantages from using case studies in a research method is the flexibility, while conducting the interviews and letting the participants use their natural language together with familiar methods i.e interview and oral history, will enable the interviewees to interact in the research process and further contribute to the case's knowledge development.

Each respondent in this thesis will be considered as a separate case. Four examples were investigated in the study to focus on the case's depth. Therefore, in this thesis participants from the cases will be conducted with business professionals that are well known in the subject. Furthermore, the authors argue that the four interviews will not be specified to a single industry. We have chosen to interview business professionals from different kinds of industries that are related to blockchain technology in their work. Applying this method will better answer our research question and gain credibility when being answered from business professionals that act in different sectors. This strategy, along with semi-structured interviews and open questions, allowed for the collection of meaningful and in-depth information from the case subjects.
3.3 Research design

There are five types of research designs, according to Leavy (2020), namely exploratory, descriptive, explanatory, evaluative, and mixed. When a researcher wants to learn more about a subject, they can do an exploratory study to acquire a deeper understanding of the subject by applying open questions (Saunders et al., 2019). This sort of research may be done in a variety of methods, including interviewing experts in the field, conducting a literature search, or conducting in-depth individual or focus group interviews (Saunders et al., 2019).

Considering that blockchain implementation in cross-border transactions is a relatively low researched theme and knowledge regarding how it might operate in various industries is few, exploratory study would be the ideal technique for this thesis. We can gain a better sense of what can be done and is being done in the shadows with blockchain technology in terms of trade finance and international payments by using that study approach.

3.4 Data collection

According to Leavy (2020) data collection is one of the most essential principles for research. From a qualitative perspective research could be from different methods e.g., in-depth interview, semi-structured interview, focus group interview, oral history, document analysis. Furthermore, Leavy argues that the qualitative interview method has become pivotal “Qualitative interviewing has today become a key method in the human and social sciences and also in many other corners of the scientific landscape from education to the health sciences” (Leavy, p., 277, 2020). Therefore, the authors of this thesis will focus on gathering primary data from semi-structured interviews to get a nuanced perspective and furthermore aid the aim of this study.

Saunders et al. (2019) highlights that research interviews can aid in the collection of valid and trustworthy data related to your research questions and aims. Furthermore, Ghauri, et al. (2020) emphasize that which option to choose while collecting data is determined by the overall judgment and the sort of data that would be most useful in addressing the research problem. Leavy (2020) argues that interviews will allow for a highly individualized data collection, whereas surveys do not provide respondents the same ability to express all potential personal information. When interviews are used as the major source of evidence in a study, the researcher has the opportunity to ask follow-up questions.
Therefore, the authors of this thesis will focus on gathering primary data through viewing the separate interviews as individual case studies. With the intent of getting a nuanced perspective to aid the aim of this study. Hence, the interview method that will be applied is semi-structured interviews.

Conducting semi-structured interviews was used to collect primary data. Because of our respondents’ diverse geographical locations, all interviews were performed online through Zoom. Before conducting the interviews, a guideline was created to enhance the interviews and be sure that it was conducted in a correct manner. Another reason for this guideline, is in accordance with Leavy (2020) where it is argued that a guideline will help the authors to collect primary data in a more reliable manner. In the interview guideline there is a list of questions and themes the interview will focus on. The Appendix contains this interview guideline.

When conducting interviews in a semi-constructed manner the most common approach is to make an audio recording. In accordance with Saunders et al. (2019) the authors recorded these interviews, the recordings were through zoom and with iPhone record application in order to transcribe the interviews. The interviews were held between 7th of April and May 11th, 2022. It is of essence that the respondents possess knowledge about blockchain in an international context. Therefore, the process of choosing candidates was conducted through purposive sampling, purposive sampling is one of the most often used sampling methods in qualitative research, in which researchers select samples based on their purpose rather than at random. This process started with searching for companies that are involved and implements blockchain technology in their business. When a company was found, the next step was to make contact through Email and Linked-In and from there on book an interview.

### 3.4.1 Criteria for interviewees

To improve and present data that contains high reliability, the respondents to the thesis must pass certain criteria from the authors that is presented below.

**Criteria for interviewees:**

1. Operate on the international market
2. Work professionally with blockchain technology
3. Conduct and offer business-to-business services
4. Have experience with cross-border operations
5. Minimum 3 years of professional experience with blockchain technology
6. Key position in their company
A list of the respondents can be seen below:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Company</th>
<th>Date</th>
<th>Duration h/min/sec</th>
</tr>
</thead>
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<tr>
<td>Lal Chandran</td>
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<td>iGrant.io</td>
<td>2022-04-07</td>
<td>56:41</td>
</tr>
<tr>
<td>**</td>
<td>Manager</td>
<td>Company X</td>
<td>2022-05-03</td>
<td>38:18</td>
</tr>
<tr>
<td>Jonas Lundqvist</td>
<td>CEO</td>
<td>Haidrun</td>
<td>2022-05-10</td>
<td>01:01:56</td>
</tr>
<tr>
<td>Sami Rusani</td>
<td>CEO</td>
<td>Rusani Ventures LLC</td>
<td>2022-05-11</td>
<td>01:02:22</td>
</tr>
</tbody>
</table>

**Personal details are not being shared due to company policy.

Table 1. Information about the interviews. Source: Authors

3.4.2 Operationalization

<table>
<thead>
<tr>
<th>Concepts</th>
<th>Questions</th>
<th>Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>General information</td>
<td>1-9</td>
<td>Starting with general questions about the respondent and the company.</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>10-13</td>
<td>Questions about competitiveness are asked to understand their view on the competitive landscape.</td>
</tr>
<tr>
<td>Trust/Transparency</td>
<td>14-17</td>
<td>Questions regarding how the company view trust when conducting B2B and shaping new business relations.</td>
</tr>
<tr>
<td>Technology</td>
<td>18-20</td>
<td>Technological aspects from the company and how it influences the future of business.</td>
</tr>
<tr>
<td>Internationalization</td>
<td>21-23</td>
<td>Questions on how the company view internationalization.</td>
</tr>
<tr>
<td>Blockchain</td>
<td>24-44</td>
<td>Blockchain contribute with opportunities as well as challenges, these questions are asked to give valuable insights on how the technology is perceived from a business perspective when conducting business across borders.</td>
</tr>
</tbody>
</table>

Table 2. Operationalization. Source: Authors
3.5 Method of data analysis

The data acquired has been thoroughly analyzed throughout this thesis to ensure that it can sustain a level that is compatible with the research's goals. With suggestions from Saunders et al. (2019) to selectively focus on some parts of the data collected, data condensation was performed to further illuminate the answer to the key research questions of: “What impact has blockchain had on businesses ability to reach and gain access to foreign markets?” together with “What are the main challenges that companies face when using blockchain technology to conduct business across borders?”. The method of choice to use while analyzing the data from the interviews will be of a thematic approach, since, according to Saunders, et al, (2019) it can be used to analyze large data from a qualitative perspective. Furthermore, adapting a thematic approach is valuable for us since it is important for us to search for themes and patterns from the data collected. Besides this, all the data from the interviews that is published in this paper will first be approved by each respondent so that the information will be reliable.

3.6 Quality of research

According to Leavy (2020) most researchers major concern is that they are not taken seriously when conducting research, thus they aim for high quality for their findings to be accepted from different viewpoints and have high credibility. Validity and reliability are considered to be the two main perspectives to confirm the quality of a research. Saunders et al. (2019) explains that the goal of reliability is to show if a research instrument can be used in a consistent and reliable manner. Validity is concerned with whether the researchers are measuring what is intended to be investigated and the research's purpose. Therefore, it is of utmost importance that the research conducted contains high quality. The authors of this study will aim to gain reliability and validity from using case studies in an exploratory manner and focus on people that has extensive knowledge within the use of blockchain.

3.6.1 Validity

Since the research is focused on what impact blockchain has made regarding business ability to reach and gain access to international markets as well as the main challenges companies face when using blockchain technology to conduct business across borders, one has to justify the chosen method and data is appropriate for the thesis. A general answer to our set of questions will be obtained considering that the authors have chosen to disregard a specific industry, and focus was held more on the participants expertise in the subject which would aid in the exploratory research (Saunders, et al., 2019).
Following the interviews, it will be possible to determine the impact and challenges that blockchain has on business in an international context. To put it differently, the answers that will be received by the respondents will vary since they are from different industries.

3.6.2 Internal Validity
Internal validity necessitates a pattern of correlation between the impact and challenges that blockchain has on business in an international context, which is supported by both existing and freshly obtained data. Existing data from case studies can be analyzed to make inferences. Leavy (2020) emphasizes that researchers need to focus if the conclusion is correct and that all the explanations and possibilities are examined and if there is a uniting pattern in the evidence. The whole data gathering process centered on verifying the information received from the interviews with relationship to theory and concepts.

3.6.3 External Validity
When dealing with external validity difficulties of understanding whether or not a research’s empirical findings can be regarded as generalizable outside the current case study can appear that, which is addressed by external validity (Saunders, et al., 2019). However, because this study is primarily concerned with qualitative research, it is critical that the data will be constructed in such a way that it can be used in future academic work. In this paper, we examine external validity in this study by ensuring transparency and depth of information of the qualitative findings. As a result, the interviews were conducted with business professionals within the field of blockchain.

3.6.4 Reliability
Data reliability refers to the completeness and accuracy of data, and it is a critical basis for establishing data confidence within research (Leavy, 2020). In accordance with Saunders et al (2019) the authors prepared in the best suitable way to avoid threats that could affect the reliability in terms of participant error, participant bias, researcher error and researcher bias. All the interviews were conducted in a non-open space during business hours of Central European Time. To counteract researcher bias and errors, the authors were well prepared for each interview and before publishing the final paper all the answers will be approved by each respondent. As a result, it's safe to believe that the data collecting method used is trustworthy.
3.7 Ethical consideration

When it comes to research ethics, the most important thing to remember when conducting a study is to cause no harm, this should be the case regardless of the methods utilized (Bracken-Roche, 2017). When it comes to potential harm to participants, it's critical for researchers to assess if what they're doing might affect them in any manner. As the Stanford prison experiment showed, injury can include not just physical pain but also psychological harm in terms of how people feel afterwards (Bryman and bell, 2017). Participants being involved in research without their awareness or agreement is known as lack of informed consent, and one thing that researchers can do to guarantee that they acquire informed consent from participants is to be clear about the research's objective and the research procedure (Saunders et al., 2019).

The authors kept ethical issues in mind at every stage of our research. Further, the authors have no ties to any of the respondents and have no intention of profiting or benefiting from the study’s results in any manner. The respondents were approached by social media, such as LinkedIn or email, and had the option to reject or refuse our requests for an interview if they did not feel comfortable with it. Even after agreeing to do the interview, the authors made it plain at the start of each interview that they may stop the process at any moment or skip a topic that they did not feel comfortable answering due to a lack of knowledge or a perception that the question was too intrusive. With suggestions from Saunders et al, (2019) the respondents were also informed of the option to remain anonymous to protect personal data in accordance with General Data Protection Regulation, (GDPR). GDPR is a European Union legislative document that ensures individual protection in the processing of personal data and the free movement of such data. Therefore, it is important to process the collected data in accordance with this regulation for the paper to protect each respondent’s personal data. The respondents could choose the option of being anonymous under the circumstance that we would want to know which sector they worked in if they opted to remain anonymous, to still bear credibility to our findings.

3.8 Authors contribution

This report was conducted by two authors that equally contributed to the outcome of this thesis. During the process of writing the thesis, the authors have kept close contact to ensure joint responsibility. However, along the course the authors have divided some reading between each other to maximize efficiency.
In order to maintain the same quality, comments on each other’s part have been made throughout the process to reach consensus. Therefore, the authors of this thesis will take equal and full responsibility for the content that is provided.

3.9 Cases

3.9.1 Lal Chandran – iGrant.io

An interview was conducted with Lal Chandran, co-founder, and CTO of iGrant.io. Mr. Chandran has extensive knowledge in the field of blockchain technology as well as public key infrastructure and his main area of expertise lies in software product development. iGrant is an international cloud-based personal data exchange platform that was founded in 2017. iGrant.io’s services allow for a completely transparent and reliable data sharing economy through blockchain technology. The company benefits both private and public organizations by assisting them in unlocking the value of personal data while remaining regulatory compliant and respecting individual data rights when sending information across country borders. iGrant.io has their main focus on the European countries, yet they are largely active in the Nordic countries.

3.9.2 Company X

An interview was conducted with a respondent that is obliged by corporate policy to both keep the company and himself anonymous, which was a premise to conduct this interview. Therefore, will any information that is too specific and inductive be excluded so that the respondent and the company not get revealed. The published data in this thesis has been approved and validated by the company representative. To distinguish the respondent in the findings, we have chosen to refer to the company as “Company X”. Company X is one of the largest consultant firms in the world and a multinational organization that provides their various range of services to different industries internationally. Furthermore, they assist businesses all around the world in achieving their blockchain deployment objectives. Their ecosystem for education, ideation, planning, prototyping, and development assists customers in maximizing the benefits and potential of blockchain technology.
3.9.3 Jonas Lundqvist - Haidrun

An interview was conducted with Jonas Lundqvist, CEO and founder of Haidrun. Mr. Lundqvist launched Haidrun in 2019 after 27 years in the software industry, the last 12 in the digitalization space, to assist organizations manage the rising expectations on efficiency and security while also creating new income and value-producing options. Haidrun develops and offers blockchain network platforms targeted for B2B, the platform assists companies and industries through digital transformation by constructing networks and chains built on blockchain technology.

3.9.4 Sami Rusani - Rusani Ventures LLC

Sami Rusani is a serial entrepreneur that has been involved in several multi-million-dollar businesses. Through his career he has worked together with major global brands, such as Apple, Heineken, Mercedes, Universal Music and many others. He has previously been involved in a blockchain company in the US that was listed on Forbes 500 fastest growing companies in USA. His knowledge of blockchain technology has led him to work as an advisor for blockchain companies, besides running his own investment company he is also involved with many blockchain startups. Moreover, he is also fund manager for the first blockchain fund in Sweden that can be traded on Swedish platforms, such as Avanza and Nordnet. Rusani Ventures LLC is an investment company that has allocated over 2 billion SEK to various blockchain companies around the world.
4 Empirical findings

This chapter presents the empirical findings collected during the thematic analysis from the interview process. Each company case will be divided into subchapters, answering questions residing from the conceptual framework. The internationalization incentives, positive and negative aspects as well as the challenges and potential of the technology will be presented among other interesting experiences. The empirical findings are gathered from the interviews with: Lal Chandran from iGrant.io, Person X from “company X”, Jonas Lundqvist from Haidrun and Sami Rusani from Rusani Ventures LLC.

4.1 Lal Chandran, iGrant.io

Lal Chandran highlights that the international business landscape is heavily dependent on digital data and a fundamental problem is the integrity of the data, transparency and trustworthiness are fundamental parts of conducting business and establishing relationships but the visibility of what is really happening is quite poor. Lal further states that his viewpoint of blockchain technology has mostly been driven by the value it can offer in terms of integrity and tamper proof mechanisms and fully auditable systems. A precondition that can translate to and transform many different industries when it comes to information and transaction exchanges across borders. Mr. Chandran state that the maturity of blockchain is from a technological point of view fully mature, the challenges reside in governance, regulations and for companies to adopt the technology in ways that benefits them and provide a competitive edge. Should public blockchain be steered by nobody or should there be a global regulation?

Lal Chandran further concludes that there are some obvious areas where blockchain constitute huge potential, banking and finance are among those where the technology can be a driver in terms of improving fraud and anti-money laundering measures. The fact that we are now seeing that banks and central banks are creating blockchain networks through consortiums which extends across borders speaks volume about how blockchain can transform banking services, especially in terms of trust. Facts that underline that blockchain does not only allow us at iGrant.io, who are a data company, easier access across borders but also other industries like financial institutions. These are incentives that benefits and have expanded international business further through creation of new relationships, extended networks and the fact that intermediaries are not a necessity to the same extent. According to Lal Chandran, we will see companies participating or creating certain networks, such as banking trust networks but supply chain, logistics as well as healthcare are other areas that are highly applicable.
Chandran states that when talking about transactions, blockchain is often ascribed of being a method that is less costly, however, the internal transaction costs that is incurred from maintaining and running a blockchain network is an expensive affair. Chandran continues and elaborates that the transition and developing an optimized blockchain while simultaneously incurring maintenance and operational costs is one of the reasons to why the technology does not get adopted by companies. The value provided and the outcome must justify the costs, ultimately, when these types of processes get perfected, costs are often lowered by time Chandran ends with. Chandran then resumes by stating “by making it fully auditable and being able to actually provide a trail of the transaction from a point of view, it is very interesting in terms of transparency, but I do believe that the key driver of a blockchain system would actually be in anti-money laundering services when making international payments.”.

According to Chandran, it is somewhat easier for start-ups or new companies to pull together an implementation of blockchain technology compared to large corporations, at iGrant.io we have a really clear view on how to apply it throughout our organization, add to that we also have the necessary technological competence, which is easier for a smaller company to attain. In a large corporation it is more of a requirement to have legal and technological competence across the board, then a deep understanding on applicability from a totality perspective, that translates to real-life daily work and situations.

Mr. Chandran is of the opinion that the biggest potential of blockchain resides in digitalization, specifically deriving some of the benefits offered by blockchain to access and provide the right, trustful data. “I think it is fundamentally needed for digitalization, companies have realized the power of data in which it begins to be misused for surveillance purposes and be used for intruding your privacy.”. iGrant.io as a company and Lal Chandran are of the opinion that the technology can benefit international business digitalization by and spark competitiveness if companies use the technology to create trustworthiness and transparency while not misusing the data to violate privacy and user rights. Moreover, influencing the important aspect of establishing ownership of data. The way assets are exchanged, kept, and accounted for is fast changing thanks to blockchain technology. These advancements herald the beginnings of a whole new financial industry, as well as the associated entrepreneurial potential combined with new networks emerging in the digital world.
When asked about the potential of blockchain, Mr. Chandran responded by saying, “It's actually about deriving some of the benefits offered by blockchain in one way or the other that I think is fundamentally needed for digitalization, and the potential improvement actually is all around governance and regulations”. Blockchain as a progress of digitalization has created new types of services, according to Mr. Chandran those services have the possibility to satisfy the urge of companies that are seeking to reach new international markets. Although he explains that it does not solely have to be linked with blockchain. He highlights that iGrant.io works towards a wide range of different actors, where some do not lie great attention to whether blockchain is used or not. At the same time, they work towards companies that are technologically advanced who puts a great deal of emphasis on the involvement of blockchain.

All in all, these new emerging business networks connected to blockchain will not last forever according to Mr. Chandran. Blockchain has the feasibility to prosper business around the globe in many aspects, but at the same time the technology does not stop to evolve. Companies are constantly searching for a more convenient way of making our lives and business easier, therefore, Mr. Chandran argues that blockchain as we know it today will not remain as a technological tool for business in the future, blockchain will still exist although in a different way that only the future can tell. Thus, for now it could be favorable for those who manage to implement the technology successfully.

4.2 “Company X”

The interviewee of Company X stated that within the markets that they are operating there is a very high level and presence of competition, however, there are many beneficial aspects of being a large well-known corporation. Firstly, you are associated and recognized for providing quality and upbringing value for customers, which is helpful. Nevertheless, there is a lot of pressure of being in the forefront in terms of progress and development both from an internal and external perspective. Both competitors, management and we as individual employees put emphasis on keep delivering value towards customers, which includes improving processes and developing work procedures. Areas which are usually defined and influenced by technological developments that enhance various processes within the scope of conducting international business.
The interviewee further explained that being a part of a big firm means that nurturing and maintaining relationships is of utmost importance, being aware and keep tabs on what is in the pipeline of other companies within the business network is crucial. Working closely and establishing trust has been particularly important during the virtual working climate that the pandemic has forced upon us, ensuring that we are still producing even when we are not physically present has been essential. It is something that has actually brought Company X closer to its customers, creating stronger bonds through more intense communication and increased amount of follow-ups where communication and being transparent has been a key to establish trust.

When asked upon in what areas the company involves blockchain technology as a part of their operations the interviewee responded “In our domestic market, it is still at a quite low frequency, however, internationally we incorporate the technology in numerous areas. We have adopted it in accounting as well as in supply chain in which we still have not reached an end state, which is impossible to reach when it comes to technology due to the constant development.”. The interviewee further explained that Company X are working upon finding ways that blockchain can be integrated in terms of how investments are conducted, which at present time requires a lot of capital, which can by blockchain and tokenization be revolutionized. For example, if a building on Manhattan is tokenized in thousands of shares, a company can more easily invest in its own little share, making foreign direct investments more accessible for a larger portion. However, it may convey certain challenges and regulatory risks. Regulatory risks, that Company X is a big piece of the puzzle to handle and overcome for their customers.

The interviewee shared that following development in technology is very important, however, it is not sufficient to just be aware, understanding the technology is equally important in order to realize and assess what impact it can have. When understanding in what ways technology can transform certain areas it is easier to appraise opportunities and challenges. When it comes to blockchain technology “it is quite easy to see and understand the advantages if you either have tested or seen someone perform a transaction.” the speed of the transaction while excluding intermediaries and be able to say who owns what, and where something has been at a specific point of time are benefits that are bright for the future.
However, when asked upon if there are any risks of not engaging in blockchain, the interviewee explains that there are always some risks of not adapting to new technology, “for the average company I believe that you can close your eyes for a while, but in the other ring corner, those that are alert and early in development, for example start-ups that play their cards right could potentially see an exponential growth that is unprecedented since the IT-bubble. In conclusion, there is a lot of ground and market shares to win for those who are innovative and strikes right and not a lot to lose for those who takes a few steps back to see where the development goes.”.

Furthermore, the interviewee of Company X stated that if one looks objectively there is no doubt that blockchain technology has made it easier for companies to reach and gain access to international markets, especially in a context when trying to conduct business in an emerging market. The technology can more easily create trust and transparency and a smoother transactional process, which is a key to reaching other markets and particularly emerging markets where uncertainties revolve around regulations, corruption and underdeveloped technology and transactional processes. The fact that you suddenly have access to a global market that is open 24/7 and do not have to wait for a transaction to go through until Monday morning is revolutionary. The interviewee further elaborated “As I suspect that you already know, international transactions are not cheap and sending larger sums internationally is not easy, the transaction cost becomes very high but through the use of blockchain it does not matter if the payment is 10 SEK or millions. Ultimately, you can cut-out the middleman”. For Company X these advantages have meant that transaction costs are being lowered, leading to increasing internal investments which has made the company more profitable. A competitive edge that still is in its infancy, the respondent then finished off by stating “It is a wise subject to write a thesis about, continue to be interested because we (Company X) personally believe that if we are having this conversation in 10 years it will not look the same, there is a saying that goes “first slowly, then suddenly”.”.

One game changer according to the interviewee could be the possibility to automatically issue a contract without the need for unnecessary time spill and intermediaries. The respondent argues that from a business perspective, smart contracts could be a possible factor to ease internationalization and sort of skip the traditional approaches. Which could further pave the way for a new era of making business. At the same time, it is mentioned that this area needs to be more regulated than it is at the current state to function on a global scale.
4.3 Jonas Lundqvist, Haidrun

Jonas Lundqvist CEO at Haidrun explains that the company creates and develops software platforms built on the form of blockchain technology, they solely conduct business-to-business activities and do not provide a platform to launch cryptocurrencies on. Lundqvist explains that the company are of the born global stature that desires to derive a large proportion of the company’s revenues from conducting business in international markets, further, Lundqvist states that Haidrun seek to be present on all big markets, but emphasis will be put on Asia and America. The perception of Haidrun and Lundqvist is that the business landscape that they now reside in is not particularly competitive from the standpoint that the market is so large and undeveloped at this point, Haidrun has not yet been exposed to threats of competitors due to their smaller size. The strategy of Haidrun to target companies that for example does not want, or thinks it is too expensive to use the service of IBM is another reason to why the effect from competitors is lessened. Providing an option and solution that is less costly and easier to adopt is certainly a competitive edge.

However, Lundqvist elaborates that it was crucial that Haidrun developed and keeps develop services that are creates consensus through blockchain technology in a much faster and less energy consuming manner. Moreover, Lundqvist states that there are several processes that Haidrun develops to become more competitive and gain attraction, for example, the company works with British business professionals and PR bureaus for both financial, market and business network reasons. In terms of relationships and business networks Lundqvist highlights that is one of the beautiful aspects by the technology, the technology allows that relationships can be built, and networks can be created without even being buddies, the technology is what creates trust. Nevertheless, relationships can still be built on the same traditional values but the perception of trust changes, the blind faith and expectation that the counterpart will not only do things for its own benefits and leave you exposed and vulnerable are covered by blockchain Lundqvist concludes. Further, Lundqvist clarifies that technology has a great ability to link actors together “We have in the shipping industry seen to a great extent that employees no longer need to control and verify cargos multiple times, blockchain technology is immutable so when it is verified and put on the blockchain all the actors that are interlinked can follow the process and have the same insight. Which in return means that both time and money are saved, and if the costs are lowered in the supply chain of course you become more competitive.”.
At the same time, there are challenges to overcome since the process is still in an early stage, but the ones that see the potential and strategize a process for implementation will be able to conduct business more rapidly and cheaper and construct competitive edges towards other actors within the same industry.

Haidrun are of the opinion that in terms of business-to-business several areas can be improved with the use of blockchain technology, supply chain being mentioned earlier and most certainly digitalization will follow, the fact that you can own your own data is a specific trait that will be ground-breaking when it comes to web 3.0. Moreover, the big potential lies in the applicability of the technology to a broad range of areas and industries. He mentions that cross-border payments most likely will be positively affected when it comes to anti-money laundering measures. Lundqvist then continues by claiming that pretty much every company that is profit-driven strive to become more effective and that is the nature of business, technological development in general is one of the main pillars in today’s international business climate.

When it comes to blockchain and for Haidrun, the main challenge to internationalize and grow further is the financial aspects and funding, it is expensive to grow and take a market such as USA. It mostly comes down to marketing in the regard of Haidrun. Other challenges that Lundqvist presents, is the fact that in their sphere of business, companies have quite good technical understanding, the challenge rather resides in figuring out the process and business model. The challenge does not transition into using the technology but changing the way to do business both internally and externally. Lundqvist concludes that it is a demanding task to for example merge all actors to reach “authenticated products” where transparency in the regard of origin of components is established in a supply chain. However, Lundqvist still puts emphasis on how big the potential of blockchain technology is, especially in terms of sustainability objectives and proof of origin, although the impact still has not been widespread in an international business context yet. Lundqvist sums up by stating that if you are not engaged in blockchain technology at present time, you are most likely not missing out yet, but do you want to be credible and prove sustainable thinking there is a lot to win.

Lundqvist, states objectively that he thinks that blockchain has made it easier for companies to reach and gain access to international markets, although it is still very much in an innovation stage.
Additionally, Lundqvist adds “That it will become even more easier but the technology of blockchain should be used as a complement in the internationalization process, it should not be the driving force, companies should make sure that you have a service/product and an organization that fits the market you want to enter”. Lundqvist then proceeds to profess that Haidrun is a software company that has merged that product to allow for companies that buys their product to use it as a part of their internationalization process, since it enables the company to establish a network with different actors’ etcetera. Lundqvist argues that one of the biggest potentials of blockchain lies in the ability to not be dependent on the intermediary. Hence it is argued that to create new business networks one does not have to be business friends per se, the blockchain technology will create the trust that is needed from one another. Furthermore, it is mentioned that the possibilities are endless. Nevertheless, blockchain is only at the developing stage which makes it more challenging to comprehend for business today.

Furthermore, as the business landscape evolves, more and more focus has been applied to sustainability. Lundqvist believes that there are great opportunities to prosper from when applying blockchain in the business network “Society changes, now people ask questions like, where does the leather to my car seat come from?”. He exemplifies this with large corporations that have goals to go green by 2030, to go green they need to purchase from a green source, and how will that source be validated? He argues that with the traditional process and admin can go and alter what is written in the documents, meanwhile whit blockchain, every transaction could be transparent and valid. Hence lies the great opportunity to build networks with transparency and trust toward a more sustainable future. However, when asked about the risks of not engaging in blockchain, Lundqvist believes that companies will not miss out on anything at the current state of the blockchain.

4.4 Sami Rusani, Rusani Ventures LLC

Sami Rusani is involved in numerous blockchain related organization, however, as the CEO of his investment company Rusani Ventures LLC he operates both as an investor and advisor to conclude global strategies for blockchain processes. He explains that he does not really strive to build a global household name since the involvement exist in a quite niche market, Rusani Ventures LLC rather focus on conducting business with the elite. He further adds that to a great extent he wants to be involved in projects that have positive social impact while at the same time being profit-driven.
Rusani describes the business landscape that he resides in to be competitive in a certain way “Of course there are competitors, but there are also several companies that I actively work with where there form of co-opetition is apparent, we compete to let’s say 80% but the other 20% we complement each other and exchange service and clients. So sure, there is competitiveness.”. He continues by putting emphasis on the fact that it is important to be updated regarding what other companies are doing to stay competitive, if you are involved in blockchain and stay out of the game for two months it is easy to fall back since the technology and market is still at an early stage. Nevertheless, there is room for everyone.

Rusani proceeds by explicating that building relationships and business networks is a very important aspect of international business, especially when it comes to blockchain technology, the whole technology enables the creation of new relationships, which builds interconnectivity and business networks across borders. He continues by explaining that trust and transparency in a relationship is a human factor that is extremely important, however, when it comes to blockchain the business side of trust in the relationship is confirmed by the technology itself. Rusani concluded “Since the technology is algorithmically based it allows for trust to be created without me neither knowing you, or “trusting” you, which is an incentive for doing business across borders in an easier and more safe way.”. He argues that it is of utmost importance to have interconnectivity for companies that want to build new business relationships. Furthermore, it is argued that to survive in the business landscape, one must build business relations with competitors and create coopetition. Hence, Rusani says “The money is in the network”.

As far as challenges and difficulties goes, Rusani Ventures LLC perceive competence to be the most prominent challenge. Strategically and tactically, the understanding of how to implement blockchain, in what areas and in which order it should be done is lacking. Do we need blockchain and why, are therefore questions that should be answered, hence, the reason to why educating and advising strategic implementation of blockchain technology is of the essence. Other aspects that Rusani highlights as challenges is the transaction speed and energy consumption within certain types of blockchains structures and setups. Conclusively, he mentions that it can be an expensive process and there is a limited number of individuals that have the knowledge able to implement the technology correctly, but that is rather on the companies and people behind the companies than the technology.
Rusani explains that the technology of blockchain is extremely innovative and world-changing, since it eliminates instances where for example an administrator or a company can cheat and present false numbers. Transactions and data are time-stamped, immutable and stored in a way that disintermediate involvement from third parties to a great extent, which in return streamlines and reduces cost. The result is transparency where the potential can transform emerging markets, supply chain, and sustainability in general. Rusani claims that although that the technology is in its infancy, it has still had a large impact, all the major financial institutions and supply chain companies are looking into the technology which shows a great deal of impact, even if implementation is not widespread yet. Additionally, when speaking of financial institutions Rusani mentions that “It is somewhat outrageous that in year 2022 it should take 4 days to transfer money from Great Britain to Sweden, the moon-landing occurred 50 some years ago but such a simple transaction takes so long. To 100% certainty blockchain will make these transactions faster and more transparent.”.

Lastly, Rusani is of the opinion that blockchain has made it easier for companies to reach and gain access to international markets, however, he accentuates that it is to a smaller extent at present time. The potential lays ahead, and it is up to companies to find out and realize how the technology should be used to provide them with advantages that enhances their businesses in the international arena. Furthermore, “you can’t hide anything in the blockchain, that is why it is so great.”. Rusani highlights general examples of traditional challenges from the past where money has been embezzled since an administrator has the power to alter the information. Rusani holds the view that blockchain is highly innovative and the technology could also be world-changing because of the prevention of altering information. All of the transactions in a blockchain are time-stamped and saved, without the possibility to change them. This decentralization and disintermediation mean that all unnecessary fees from different middlemen will disappear.

Moreover, according to Rusani, one of the biggest impacts blockchain has made on international business is the supply chain industry together with fintech and transactions. Since consumers today demand more and more transparency, businesses today need to prove where their products come from and not just say that it is sustainable. Furthermore, it is argued that blockchain has worked as a catalyst for conscious consumerism.
5 Analysis

The purpose of the analysis chapter is to integrate the theoretical data presented in the literature review and the empirical findings. The analysis will objectively connect the gathered empirical findings from the interviews and the theoretical framework. The framework will form a basis from which the empirical findings is compared to find differences and similarities and highlighting the most essential parts of the thesis. The effects of Blockchain technology implementation of international companies will be highlighted as the center of attention to establish its connection to the theoretical points of references in; internationalization, digitalization, general theory and the network model.

5.1 Internationalization

The enticing process of internationalization is a possibility that can allow for companies to enter and access markets outside the domestic national borders. The opportunities presented is appealing for companies that seek to expand and increase presence in new markets, markets that can allow for expansion, increased revenues and enlarged business networks (Hollensen, 2020)

Peter Lundqvist CEO of Haidrun explained that Haidrun is a company that is what we would call a born-global company, their internationalization process was determined and derived from the fact that their perception is that blockchain technology offers the ability to directly show an international presence right from the start. The target of Haidrun’s internationalization process was to enter early because of the large and quite undeveloped market. Rusani Ventures LLC shares the view of Lundqvist and stated that when it comes to offering services that builds on blockchain technology there is room for everyone. Although Rusani explained and have noticed that larger companies have a more difficult time of implementing blockchain technology into their international ventures, due to strategic and tactical competence are lacking in terms of implementation of the technology throughout the organization. Rusani’s statement was supported by “company X” who explained that the implementation of blockchain technology throughout their large organization has been to a limited extent. Mainly, because it is still unclear in what areas, how it will be done and what value the implementation of blockchain will ultimately provide. Novinkina et al. supports Lundqvist statement that blockchain offers the ability to directly show an internal presence, Novinkina highlighted that the technology terminates the concept of national borders since it can function anywhere at any time.
An incentive that should enhance the internationalization process and remove certain obstacles and risks attached to traditional entry modes to foreign markets (Novinkina, et al., 2021).

Haidrun, Rusani Ventures LLC & Company X all stated that if one looks objectively at the phenomenon blockchain, it has made it easier to reach and gain access to international markets, however, all insinuate that it has been to a small extent in comparison to the potential effect it could have had. The three companies agree on the fact that the potential and widespread effect lays ahead and that it is up to companies to implement blockchain to maximize and take advantage of the perks in a way that suits their companies best from an international business point of view. Lundqvist wanted to add “That it will become even more easier but the technology of blockchain should be used as a complement in the internationalization process, it should not be the driving force, companies should make sure that you have a service/product and an organization that fits the market you want to enter”. However, Lundqvist clarified that they managed to merge their product/service into a tool to use for internationalization processes of companies. On the other hand, Lal Chandran stated that it has been easier but not particularly by blockchain, but more specifically the new models that are emerging and resides from the technology.

5.1.1 Economic globalization

Economic globalization affects internationalization in terms of the enabling of trade of goods, capital and services which constitute in social, economic and technological development. Banks and financial institutions play an essential role within the spectrum of economic globalization and international business, cross-border payments between companies and organizations flows through these intermediaries (Coulibaly et al., 2018). The exponential growth of firms that seek to internationalize and penetrate markets beyond borders are consequently involved in cross-border payment processes. These processes generally consist of a high involvement from intermediaries, which results in inefficient, costly and untransparent payments (Bank of England, 2022). Rusani shared the view of Bank of England by stating “It is somewhat outrageous that in year 2022 it should take 4 days to transfer money from Great Britain to Sweden, the moon-landing occurred 50 some years ago but such a simple transaction takes so long. To 100% certainty blockchain will make these transactions faster and more transparent, ”.
The current positive aspects of transactions within blockchains are highlighted by Rusani who explains that transactions and transactional data are time-stamped and immutable, furthermore, it disintermediates involvement from third parties which reduces costs. However, it is a process that at present time is difficult to incorporate for b2b purposes.

Hooper & Holtbrügge just like Rusani are of the perception that if cross-border payments were performed using blockchain technology, they would not only be safer, but they would also be more time saving, transparent and reduce costs. These beneficial aspects and improvements would provide better possibilities to conduct business across borders and ultimately provide easier access to new markets (Hooper & Holtbrügge, 2020). Lal Chandran shared his view on the subject by saying that banking and finance are areas of great potential regarding blockchain, but primarily in terms of improving fraud and anti-money laundering issues.

Nevertheless, the major banks and central banks are looking into and adopting blockchain networks which says something about the potential he continued. Moreover, Chandran put emphasis on explaining whether you talk about transactions or data or whatever, one must be aware that running and maintaining a blockchain network usually is an expensive process. Hence, why we do not see a widespread adoption from existing companies where business models and processes are not developed in accordance with the technology. Lundqvist agreed with the fact that cross-border payments will most likely be influenced by blockchain technology and see positive effects when it comes to anti-money laundering measures, however, Lundqvist and Haidrun are of the opinion that the big potential regarding blockchain resides in the wide range of applicability towards different instances and industries. Such as increased transparency, creation of trust and more effective processes in supply chains. Improvements which by Johanson & Vahlne are mentioned as aspects that essential for internationalization of businesses. (Johanson & Vahlne, 2017)

5.1.2 Digitalization

The international business environment is steadily evolving, technological and digital development are two factors that have been prominent in the change. Through digitalization and technological development international firms seek to maximize effectiveness through streamlined, digitally monitored processes.
Which means that to stay relevant adaptation to digitalization is crucial, since business models and strategic decisions are more reliant on digitalized enhancements that take economic, technological, and competitive aspects into consideration (Niemand, et al., 2021; Knudsen, et al., 2021). Digitalization has led to a higher degree of interconnectivity between companies, which has made it both easier to establish b2b relationships in foreign markets as well as easier access to new markets (Dagnino & Resciniti, 2021; Kostesky, 2021).

According to “company X” the interviewee explained that digitalization has been a crucial part to improve the company’s line of work. The interviewee explained that following technological development is a vital part for “company x” to remain competitive performing international business. However, the interviewee emphasized that the most important part is to understand the technology, to assess the impact, challenges, opportunities and areas it can transform both internally and externally. As far as implementation and adaption to blockchain goes, iGrant.io claims that having the right technological competence and a deep understand of applicability from a totality perspective across the organization is a necessity. Otherwise, firms are presented with a large portion of challenges in comparison to opportunities.

The interviewee of “company X” explained that there is risks of not engaging in blockchain, just as there are risks of not adapting to any new technology, however, “for the average company I believe that you can close your eyes for a while, but in the other ring corner, those that are alert and early in development, for example start-ups that play their cards right could potentially see an exponential growth that is unprecedented since the IT-bubble. In conclusion, there is a lot of ground and market shares to win for those who are innovative and strikes right and not a lot to lose for those who takes a few steps back to see where the development goes.”.

In terms of digitalization, Grant.io is of the opinion that blockchain is currently transforming the area, specifically through some of the benefits offered by blockchain to access and provide rightful, trustful data. Chandran stated that ”I think it is fundamentally needed for digitalization, companies have realized the power of data in which it begins to be misused for surveillance purposes and be used for intruding your privacy.”.
5.2 General theory

5.2.1 Competitiveness
Verbeke & Lee puts emphasis on the fact that any firm that conduct business internationally needs to cope with the phenomenon of competitiveness, finding ways to develop processes, services and goods can result in advantages that provides the firm with competitive edges in relation to other operational firms within the market. Adaptation is an essential part for firms to remain competitive, international business is represented by a rapidly changing climate and companies are continuously evolving which puts emphasis on competitors to adapt to these changes. If a company is offering a product or service of higher quality to a lower price than competitors, that is something affects another and needs to be considered. (Verbeke & Lee, 2021)

Technological advancements are more often than not a reason behind the altering of competitiveness, it results in measures of adaptation from external forces as the advancements often drives progress and innovation forward through more profitable and streamlined process that ultimately generates competitive advantages that leads to outperformance of competitors in a market (Kotler, et al., 2020; Knight, T. Cavusgil & Riesenberger, 2019). Furthermore, another parameter that can be considered as the foundation for attracting new customers within an international market is the ability to comprehensive business networks and strong relationships. It is viewed as competitive edge in the sense that it can generate new customers both in existing and prospective markets (Kotler, et al., 2020).

iGrant.io explained that technology and blockchain technology in particular will benefit further digitalization of international business as it will increase competitiveness among companies since regulations will hinder further misuse of data in terms of violating privacy and user rights. The technology of blockchain should in that sense be used to create trustworthiness and transparency as well as determining the ownership of the data. The maturity of the technology is there to retain attain these competitive advantages, but certain companies must understand the technology and adopt it in the right way to be provided with all the incentives that creates competitiveness. Company X similarly stated that blockchain technology have given them several advantages regarding competitiveness, it is easier to create trust and transparency and smoother transactional processes. Competitive advantages that have been a key to reaching other markets, suddenly firms have access to a worldwide market that is never closed as far as transactions goes.
On the other hand, Rusani explicated that being present within international business revolves to a great extent by building relationships and business networks, blockchain technology is an enabler of the creation of new relationships and interconnectivity across borders through business networks. In accordance with Rusani, Lundqvist highlighted that the beautiful aspect of blockchain is that the competitive advantage of creating business networks and relationships comes for free with the technology. Even without being buddies, since the technology is what creates trust between the parties. Blockchain is perceived to be able to disintermediate banks and other legal enforcers which reduces costs, saves time, and increases transparency, factors that enhance the process of conducting business in foreign markets (Chang, Y, et al., 2020). Lundqvist stated that disintermediation is one of the biggest potentials of blockchain, trust does not need to be put into the hands of third parties but rather the technology. All the parties involved have access to the same unchangeable information that is exchanged faster and in a more transparent way which results in increased competitiveness through a process that is more optimized.

5.2.2 Trust/transparency
Business-to-business relationships are often constructed on the foundation of trust and loyalty, basically, trust is explained by being convinced and reliant that the other party in the relationship acts in goodwill and for towards mutual interests. Transparency is considered to have a close relationship to trust, since being transparent result in the creation of trust. Transparency can be shown in the form of the willingness to share information and knowledge to the counterpart (Yumar & Yakhlef, 2016).

The experience of iGrant.io tells that being a part of the international business landscape, as a firm one is very dependent on data, from their experience the integrity, transparency and trustworthiness of data is fundamental parts. Fundamental parts of conducting business as well as building relationships, however, international business lacks in the department of visualization of what is happening. Hence, why iGrant.io use blockchain to create trustworthiness and transparency without misusing data, which essentially establishes new networks. Company X explained that working closely and nourishing existing relationships through more extensive and intense communication where transparency was of the essence was something that brought them closer to their customers during the digital working climate that the pandemic resulted in. Actions that created stronger bonds and established trust further. Which goes in line with research that tells us that it is more time consuming and costly to entice
new relationships in comparison to maintaining existing ones, which goes to show of the importance of establishing relationships built on trust and transparency (Yumar & Yakhlef, 2016).

According to Chen, Song & Lv (2019) in the scope of blockchain, the whole technology and concept of the technology relies on the fact that it creates trust by being more secure and transparent. Through creating consensus that all involved parties agrees to and being immutable, it can spark development of new services within international business. As mentioned earlier by Lundqvist, “..relationships can still be built on the same traditional values but the perception of trust changes, the blind faith and expectation that the counterpart will not only do things for its own benefits and leave you exposed and vulnerable are covered by blockchain Lundqvist concludes.”. As Rusani Ventures LLC experienced “Since the technology is algorithmically based it allows for trust to be created without me neither knowing you, or “trusting” you, which is an incentive for doing business across borders in an easier and more safe way.”. Rusani Ventures LLC are of the opinion that building networks and business relationships is very important when being operational on the international arena as it creates interconnectivity. Rusani then concludes that “The money is in the network”.

An eminent problem that occurs within international business trade is the complexity and difficulty of performing cross-border payments. The higher the amount of involvement from financial institutions gets, the more slow, costly and untransparent the process gets. Blockchain is perceived to address these difficulties by having the capability to disintermediate involvement from third parties, resulting in a speedier process with lowered transaction costs and a higher degree of transparency (Kimani, et al., 2020). Rusani Ventures LLC has been exposed to the difficulties of cross-border payments and describes that “It is somewhat outrageous that in year 2022 it should take 4 days to transfer money from Great Britain to Sweden, the moon-landing occurred 50 some years ago but such a simple transaction takes so long. To 100% certainty blockchain will make these transactions faster and more transparent,.”.

5.3 Network model
The Network model is described as a network where actors are connected through trade connections (Johanson & Mattson, 2015). All the respondents shared the same core thought that blockchain could create new business networks, although it was perceived that for now, the technological adaptations of firms are too low.
It is widely held by the respondents that adapting blockchain will lead to further trade connections, since the whole process of conducting business will need to be more transparent towards the end consumer. Lundqvist claims that by integrating blockchain, new possible bridges to other actors will emerge for companies. Although the firm need to possess knowledge on how to implement the technology in a successful manner. Chandran shares this vision and further emphasizes the importance of firms’ ability to understand the value behind blockchain before implementing it in their businesses. One fundamental aspect for companies to enter new networks is the ability to adapt their current business processes (Hollensen, 2020).

Chandran argued that blockchain technology possesses the ability to ease the process of reaching new markets due to the digitalized business landscape. Furthermore, Chandran mentioned sectors such as healthcare, supply chain and banks that would benefit by adapting blockchain in the business processes. It is believed that in the network model, firms that can adapt their businesses to new technology will gain valuable new relations since individual business is dependent on resources from other actors in the network (Hollensen, 2020; Gaur, 2020). All the respondents concluded that large established corporations could have problems with implementing blockchain in their business processes. On the contrary, startups with technological knowledge could more easily adapt to the technology due to the size of the operation. Thus, there are possibilities of connecting to already existing networks of firms that has adapted the technology where one can exploit current contacts. This goes in line with Hollensen’s (2020) perception of how firms that possess technical knowledge can take advantage of existing networks because of easier adaptation and implementation of similar business processes.

All the respondents held the view that new networks that emerge from this technology could be a plausible factor to internationalize in the future. Where Rusani argues that blockchain could change the way of doing business between companies due to how trust is affected by the technology. The trust that is mentioned from the respondents could be a possible foundation to connect with new actors that is associated with other networks. This could lead to the creation of new networks emerging which goes in line with Gaur (2020) and how it is emphasized that blockchain create new networks for sectors, prompting many firms to reassess their present business models.
One of the fundamental changes that is connected to blockchain and can affect networks is the ability to prove the authenticity and source of data. Rusani argues that consumers today are becoming more and more concerned about sustainability which affects the process of how firms conduct business in a sustainable manner. Blockchains ability to show the transparency and authenticity could be a solution for firms when proving their sustainable impact. Lundqvist argues that blockchain possess the possibility to spark new business networks, where the foundation of the networks is to show the authenticity of data. Lundqvist further states that, “Blockchain could create easier ways of conducting business in a sustainable manner if the supply chain is completely transparent.”. Therefore, businesses that would adapt to an already existing network could exploit the advantages and internationalize through the help of existing actors in the network (Hollensen, 2020).

5.4 Challenges
Gaur (2020), Hashemi, et al (2020), Werbach (2018) contemplate that although there are several positive aspects that emerge from blockchain there are also challenges that need to be addressed. It is important to take the challenges in consideration to understand the technology and what further implementation can add. All of the respondents share the view that there are challenges with blockchain from different aspects. One fundamental aspect that is highlighted by Mr. Chandran is the challenge that concerns governance, regulations and the ability for companies to adopt the technology in ways that benefit them and provide a competitive edge. This aspect is confirmed by Gaur (2020) who argues that for blockchain to become a valid process for firms, they need to understand the technological transaction audibility.

Gräbner, et al. (2020) argues that firms are constantly searching for new technology and innovations that can provide competitive edges on the global market, a competent workforce is therefore needed in order for it to produce and enhance value. Rusani Ventures LLC claims that the existing challenge for companies regarding blockchain, lies in the competence of the workforce and not in the technology of itself. Hence, it is of essence to educate and advise personnel if an implementation of blockchain is intended and desired. Lundqvist holds the view that most firms hold technical competence of blockchain, yet there is a lack of competence in understanding how to develop processes and business models. Therefore, the strategic and tactical capability of a firm is of the essence to overcome those challenges according to Rusani Ventures LLC.
6 Conclusion

In this chapter the authors will display the conclusions drawn from the analysis presented in the previous chapter. First, the answers to the research questions will be revealed, followed by the theoretical and practical implications of the conducted study. Ultimately, the chapter will be rounded off by showcasing the limitations of the study together with the suggestions for future research.

6.1 Answering the research questions

International business is to a great extent defined by identifying new business opportunities across borders, firms seek to further internationalize with the intention of becoming more profitable and partake in prosperous business networks. Technological developments have functioned as contributing factors to a climate where interconnectivity between firms and markets have increased. Developments that have led to an amplified importance of competitiveness, involvement in business networks and adapting to a rapid changing environment. Technology as a driver have formed concepts that have revolutionized international business, such as digitalization, which has streamlined processes, formed new business models and created opportunities for novel revenue-streams. An emerging piece of technology that is highly relevant within the scope of international business is the technology of blockchain. Blockchain is a digital, algorithmically based technology which purpose is to create consensus between parties regarding transactions, agreements and the exchange of data. The technology is a global phenomenon that does not take national borders into consideration and is open for use around the clock. Worldwide, companies are implementing blockchain technology with the hope that it can enhance strategies, processes and enable them to become more competitive in different aspects. Hence, why the authors formed and aimed to answer the following research questions:

Rq1; What impact has blockchain on businesses ability to reach and gain access to international markets?

The data collected by the four different interviews that was conducted came from companies that all conducts business internationally within different industries. The respondents elaborated that the technology of blockchain has had major impact on not only their own operational processes but also other companies within the same international markets. The impact within
their own organizations has predominantly had a positive effect, however, their general perception is that various other international companies have experienced obstacles attached to the incorporation of blockchain technology. According to some of the respondents, this occurrence is mainly in the regards of large corporations experiencing difficulties in comprehensive changes and adaptations to new process and strategies in terms of blockchain. On the other hand, the respondents are of the opinion that smaller companies and startups have an easier time to construct their business revolving blockchain, the adaptations are not as comprehensive as the change’s larger corporations experience.

Nevertheless, through conducting processes and offering services built on blockchain all four companies claim that it has had a positive impact in relation to the business ability to reach and gain access to international markets. When asked how the impact has been reflected on the business ability, the companies claim that the technology has allowed for easier creation of business relationships and networks through increased interconnectivity across borders. Which ultimately ends up in new customers. The precondition that grants the expansion of these relationships and networks, is built on the foundation of the trust and transparency that the technology achieves. Since blockchain creates consensus between all parties involved in a process, due to the fact that every participant is permitted access to the same transparent and immutable information. This is a scenario that is alluded to be achievable without neither party actually trusting each other, essentially, trust is put into and created between the parties by the technology.

Moreover, it is concluded that international businesses are able to attain competitive advantages that allows them to outperform other actors within a market. Examples of such advantages is highlighted by representants of the companies as faster, less costly and more transparent cross-border transactions. Which by the respondents is attained through disintermediation of financial institutions and correspondent banks. The result of the impact is that there are less obstacles to conduct business, which creates a situation where it is easier for businesses to reach international markets. Beyond cross-border transactions, findings show that blockchain technology is an enabler of changing the traditional structure of supply chains. Streamlined supply chains can be achieved by using blockchain as an instrument to become more effective and transparent, records do not have to be validated by as many instances. Which results in fewer activities, that provides a faster process with better overview. Ultimately, blockchain networks as an instrument used in these manners reduces costs.
Altogether, the respondents elaborated that one of the most present problems in modern day business, is companies trying to show their actions towards sustainability. Human interference and alteration of reports and data has been a significant problem for businesses, which can by blockchain and immutable records be overcome through increased transparency. Furthermore, findings elaborate on the potential of using blockchain towards data transformation measures within digitalization, specifically, as a tool to prevent misuse of data by companies that are violating privacy and integrity of customers.

Moreover, the findings also put emphasis on highlighting that developing, maintaining and implementing blockchain technology can be a substantially costly operation. The technology should not be used as the driving force in an internationalization process but rather as a complement. However, if the case is that blockchain technology is the factor that forms the internationalization process by being the service/and/or/product it could be considered. Conclusively, all four companies objectively state that the impact from blockchain and the abilities that the technology provides has made it easier to reach and gain access to international markets. However, yet to a small extent from a comprehensive international business point of view.

**Rq2: What are the main challenges that companies face when using blockchain technology to conduct business across borders?**

There are several challenges presented in front of companies when using blockchain technology as a part of the process to conduct business across borders. It could be argued that since blockchain technology is still in its infancy the market in which where the technology could be used is very spread out. Additionally, the market is at this stage quite underdeveloped. The fact that blockchain is somewhat of a buzzword among many that have not taken measures to understand what the technology really is and provides, is not a great start. However, when concluding the findings, it is evident that all of the respondents perceive the competence throughout organizations that actually knows what the technology is, is lacking. Generally, they have the technological knowledge but not the competence and understanding of how to apply it throughout their organizations. When reviewing the findings, it is also evident that applying it internally is not only the issue, an issue of how to apply it externally, in a situation where it
can benefit business-to-business purposes is also discovered. Basically, what is shown is that strategizing and forming an implementation plan from a totality perspective is a demanding task for businesses.

Furthermore, the data concluded that developing process and new models with the intent of using blockchain technology to conduct business across borders can be an expensive procedure. At the same time, the findings revealed that maintaining and operating a blockchain network if it is not optimized can be both costly and energy consuming. Which means that more capital needs to be allocated to optimize the technology. Simply, what needs to be determined is whether the costs that is incurred, and work that is put down at the beginning of the process will end up being valuable in a later stage. Essentially, companies need to determine whether the advantages of using blockchain technology to conduct business across borders exceeds the disadvantages. A challenge that can be claimed to also derive in not having the right competence.

Additionally, governance and regulations regarding data and transactions that occur on blockchains is perceived to be a challenge, however, more of a future challenge since it is something that is believed to emerge. A challenge that revolves around how regulations and governance will look like and be conducted between different markets.

6.2 Practical Implications and Recommendations

The findings presented in this thesis provide beneficial information to firms when it comes to evaluating blockchain in their business processes and what further advantages and challenges the technology can withhold. These findings can help firms in their decision process of adapting blockchain or not. Moreover, the findings reveal that firms who adopt blockchain in the startup stage can result in a favorable position for the future. It is also evident that blockchain will create an incentive regarding trust in business network, regardless of companies trust each other the trust will be in the technology. Additionally, since blockchain will limit the number of intermediaries the cost related to cross-border payments will be lower.

Ultimately, the authors of this thesis strongly suggest that international business companies should not neglect new emerging technology and should be aware of trends that is presented in the business landscape. There is always a risk of not engaging in a new technology that is emerging. Firms who conduct B2B on the international arena could benefit from lowering their transactional cost as well as increasing their transparency towards the end consumer. Therefore,
these findings could aid firms from not only a financial point of view, another advantage could be the fact that firms could back up their statements in their code of conduct by proving the authenticity of published data. We would recommend existing firms and future startups to research upon the topic and evaluate if they could benefit from implementing blockchain in their business processes.

6.3 Limitations
There are some limitations that the authors have observed along the course that could affect the end quality of the research findings. Firstly, the limited time and size of the thesis is considered to be small according to the authors, which may uphold potential findings. Secondly, the qualitative data collection is gathered from four different businesses that operate in different industries, focusing on a single industry could have resulted in a more accurate result. Lastly, due to the geographical differences of the respondents, the interviews were conducted online, if the interviews were to be conducted offline further discussions could have emerged since there would have been limited distractions in form of technical aspects.

6.4 Future research
Regarding the significant research gap that persists in the theoretical literature when focusing on blockchain technology correlated to the aspects of reaching new potential markets. For future research projects there is a lot of information to be discovered considering how fast blockchain develops. The authors of this thesis could explore blockchains impact from an international business context. In addition to writing this study, the authors developed further areas of interest that could be researched upon. Suggestions for future research are presented below.

1. Focus on analyzing web 3.0 and its implications on international business considering decentralization and token based economics. Further interesting research in the area could be on the misuse of data and data rights.

2. Since this study was conducted in a qualitative manner one could conduct a quantitative study on a larger number of firms from different types of sectors/industries, this way one could get a more general answer and see if those answers contradict or confirm our results.

3. Further exploration of the phenomenon of smart-contracts could be an interesting field of research. One could consider researching one specific company or industry e.g, supply chain, and explore what implications smart-contracts can contribute with.
References


7 Appendix

7.1 Interview guide

We are Felix Albrektson and Max Bergström, students of the International Business Programme at Linnaeus University in Kalmar, Sweden. For our bachelor thesis project, we are conducting a qualitative study to analyze the impact and challenges of blockchain technology from an international business perspective. We have two research questions that we aim to answer and they are the following:

Rq1: What impact has blockchain on businesses ability to reach and gain access to international markets?

Rq2: What are the main challenges that companies face when using blockchain technology to conduct business across borders?

There are no correct or incorrect answers. Everyone is asked to share their own thoughts, opinions and experiences. If you do not want to share confidential or sensitive proprietary information with us, that is fine. Please do not hesitate interrupt us and/or to contact us later if you have any questions. As researchers, we will make use of audio recording software and take notes. No recordings or notes will be shared with anyone else. The interviews will last about 45 minutes.

7.2 Interview questions:

General information

1. Do you want to be anonymous? (If not) Can we attach you to a company?
2. Are we allowed to record this interview?
3. Could you give a short introduction about who you are?
4. Describe your current position?
5. Could you explain more about your history with the company?
6. Could you make a short presentation of the company?
7. What is your main area of expertise?
8. What is the international presence of your company?
9. In what way/areas does your company involve blockchain?

Competitiveness

10. Do you perceive the business landscape that you reside in to be competitive?
11. To what extent would you say that you are affected by competitiveness and progress from competitors?
12. Do you think that competitiveness puts emphasis on you as a company making progress? In what ways?
13. What do you think is the most challenging aspect when it comes to competitiveness between international businesses?
Trust/Transparency
14. Do you think building relationships and business networks is an important aspect for international businesses? Why?
15. Do you think trust is an important component of conducting business? In what ways?
16. Is it important to shape relationships in a business context on the foundation of trust and transparency? If yes, how do you do it?
17. What processes of b2b do you think can be improved in terms of trust and transparency? How?

Technology
18. How important do you think technological development is in the current state of international business?
19. Do you find it important to follow and adopt advancements and trends within technology? Why? In what areas?
20. Do you see certain areas that by the effect of new technology can provide competitive advantages? Where?

Internationalization
21. What are your main reasons for expanding to new markets?
22. Do you want to internationalize further? why? How?
23. Do you see any particular difficulties/challenges in the process of internationalization towards new markets?

Blockchain
24. How did you first come in contact with blockchain technology and what developed further interest? Did you see advantages, useful areas from the start?
25. How did the involvement from the company in blockchain start?
26. In your opinion, in what way is blockchain innovative, compared to other current technologies?
27. How mature is the Blockchain technology at this point? In what areas?
28. How would you describe the general understanding from international companies of Blockchain technology?
29. In your opinion what impact has blockchain made on international business?
30. Based on your experience, where do you see the biggest potential for the Blockchain?
31. What positive aspects of implementing blockchain do you see for a company?
32. What negative aspects of implementing blockchain do you see for a company?
33. What challenges can a company come across when implementing blockchain technology?
34. Are there any risks of not engaging in blockchain?
35. Do you think that companies can build new business networks by implementing blockchain? If so, how?
36. There are 2 types of blockchains, public and private, permissioned and permissionless and within them 4 structures, public, private, consortium and hybrid. Can you elaborate what type of blockchain and structure your company have?
37. What type and structure of blockchain do you think is most useful in terms of reaching new markets as well as conduct business across-borders? Why?
38. Which type and structure is the most challenging for international businesses to use? Why?
39. Do you think blockchain has made it easier for companies to reach and gain access to international markets? How?
40. What possibilities do you see for companies that want to adopt blockchain technology in order to internationalize?
41. What is your view on traditional cross-border payments?
42. In your opinion, how do you view the cost, transparency and effectiveness of traditional international payments?
43. Do you believe blockchain technology can enhance cross-border payments? How? What are the pros and cons?
44. Do you have any other reflections on blockchain technology that you would like to share with us?