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**Does financing matter? Financing sources as an impactful factor on
export performance: an empirical study on exporting companies.**

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ABSTRACT - English

In a global and highly interconnected economic context, the development and management of an export business has become an increasingly relevant and necessary activity for the expansion of one's own offer and the diversification of the markets served. In particular, following the introduction of the internet, digital exporting has taken on a pivotal role in international trade.

In order to guarantee the success of a digital export strategy, it is necessary to use a structured approach that is divided into seven interconnected pillars: commercial channels, logistics channels, marketing and communication channels, organisational aspects, payment systems, legal aspects and sources of financing. The latter, despite its importance, is generally approached in a generalised way and not specifically related to export.

Focusing on the relationship between exporting and financing, an analysis of the existing literature was conducted focusing on three areas: the relationship between exporting and financing needs, the influence of digital technology in facilitating exporters' access to different financing sources and the impact of financing on export performance. From the analysis, it emerged that there was a gap regarding how the financial performance of an export business can be affected by the mode of financing used.

Following an in-depth study of this topic, including interviews, six hypotheses were developed and a research question was posed to explore the most appropriate forms of financing to adopt to support an export activity.

Then, after the data of 102 companies were collected through an online questionnaire through Opinio, Probit and Oprobit models were run on STATA to test the hypotheses and explore the research question.

The results obtained show: (1) a positive correlation between financing through own capital generated and the export financial performance achieved; (2) a positive correlation between external financing from state-owned credit institutions and the export financial performance achieved; (3) a positive correlation, and better than that obtained from financing in foreign countries, between loans granted in the company's home country to finance export activities and the financial performance achieved; (4) the role of digital exporting as a facilitator in accessing financing; (5) the increased probability of receiving external financing in the destination country in case of using digital exporting.

These implications allow for the development of a framework that highlights the most suitable types of financing to be used in an export and the pivotal role that digital export plays in this activity.

Keywords: digital export, funding, accessibility, financial performance.

ABSTRACT - Italian

In un contesto economico globale ed altamente interconnesso, lo sviluppo e la gestione di un export sono diventate attività sempre più rilevanti e necessarie per la diffusione della propria offerta e la diversificazione dei mercati serviti. In particolare, a seguito dell'introduzione di internet, l'esportazione digitale ha assunto un ruolo cardine nel commercio internazionale.

Per riuscire a garantire il successo di una strategia di digital export è necessario utilizzare un approccio strutturato che si articola in sette pilastri tra loro interconnessi: i canali commerciali, i canali logistici, i canali di marketing e comunicazione, gli aspetti organizzativi, i sistemi di pagamento, gli aspetti legali e le fonti di finanziamento. Quest'ultimo ambito, nonostante la rilevanza, è generalmente approcciato secondo una visione generalizzata e non specificatamente legata all'export.

Concentrandosi sulla relazione tra export e finanziamenti è quindi stata condotta un'analisi della letteratura esistente focalizzandosi su tre ambiti: la relazione tra export e necessità di finanziamento, l'influenza del digitale nel facilitare l'accesso degli esportatori a diverse fonti di finanziamento e l'impatto dei finanziamenti sulle performance dell'attività di export. Da quanto analizzato è emerso che vi fosse una lacuna riguardante come le performance finanziarie ottenute in un export possano essere influenzate dalle modalità di finanziamento utilizzate.

In seguito all'approfondimento di questo argomento anche attraverso alcune interviste sono state elaborate sei ipotesi ed una domanda di ricerca volta ad esplorare quali fossero le forme di finanziamento più adeguate da adottare per sostenere un'attività di export.

Quindi dopo che i dati di 102 aziende sono stati raccolti attraverso un questionario online attraverso Opinio, sono stati realizzati dei modelli Porbit ed Oprobit su STATA per verificare le ipotesi ed esplorare la domanda di ricerca.

I risultati ottenuti mostrano: (1) una correlazione positiva tra finanziamento attraverso il capitale proprio generato e le performance finanziarie di export ottenute; (2) una correlazione positiva tra finanziamento esterno da istituti di credito statali e le performance finanziarie di export ottenute; (3) una correlazione positiva, e migliore di quella ottenuta da finanziamenti in Paesi stranieri, tra i prestiti concessi nel Paese d'origine della società per finanziare le attività di esportazione e i risultati finanziari ottenuti; (4) il ruolo del digital export come facilitatore

nell'accesso ai finanziamenti; (5) l'aumento della probabilità di ricevere finanziamenti esterni nel paese di destinazione in caso di utilizzo di un export digitale.

Queste implicazioni consentono di elaborare un framework che evidenzia le tipologie di finanziamento più adatte da impiegare in un export e il ruolo cardine che il digitale ricopre in questa attività.

Parole chiave: export digitale, finanziamenti, accessibilità, performance finanziarie.

EXECUTIVE SUMMARY

1. Purpose

This is an exploratory thesis that addresses the link between financing and export. In particular, it aims to analyze the effectiveness of different modes of financing and also to understand how the use of digital solutions for export can facilitate access to finance.

2. Introduction

In order to increase profitability and profits, many companies have recourse to the strategy of internationalisation. By entering new markets, internationalisation enables them to pursue economies of location and gain an advantage by exploiting economies of experience and scale. With the advent of new digital technologies, export strategies have undergone a major revolution. In fact, through the use of e-commerce, companies can take advantage of three main economic benefits: improved business performance, increased productivity and a significant reduction in costs, as demonstrated by Transaction Cost Theory (TCE). Indeed, E-commerce facilitates trade and increases trade volumes, while reducing costs and time.

After highlighting the positive impacts of digital export, the pillars of an export strategy (Trade channels, Logistics channels, Communication and Marketing channels, Legal aspects, Organizational issues, Payment systems, Funding sources) are briefly presented in this thesis. The focus of this paper is on the relation between export and funding sources, so there is a more in-depth analysis of this pillar. To do this, the various existing financing modalities were briefly outlined: own capital generated, capital increase, capitalisation by state-owned credit institutions, equity crowdfunding, fund as venture capital or private equity, business angels, bank loan, subsidised loan from state-owned credit institutions and lending crowdfunding. An in-depth study was also conducted of the financing services offered by Italian credit institutions, ICE, SACE and SIMEST.

Financial resources are critical for any company but particularly crucial for exporters (McNaughton & Bell, 2004). Therefore, through a systematic analysis of the literature the academic papers about three main areas were investigated. First, the impact of exporting on financing was examined by collecting the main characteristics of the financial structure of an exporting company: their main features are the high presence of short-term debt or the high probability of obtaining government subsidies given the quality represented by export

operations. It is particularly interesting to note that exporters have better internal finance (Ayob, Ramlee, & Rahman, 2015). The second stream explores the impact of digital on the link between finance and export. In particular, it was noted how cross border e-commerce (CBEC) could reduce uncertainties and opportunistic behaviors, while increasing trust (Qi, Chan, Hu, & Li, 2020). The last topic deals precisely with how financing impacts export performance. One of the main results is the importance of having high financing flexibility and how using primarily equity is perceived by the market as more promising (Kraus, Mitter, Eggers, & Stieg, 2016).

After a systematic review of the literature, the contribution of this thesis aims to address the gaps in this economic area, updating and unifying all the theses found. Above all, this paper makes a detailed examination of all the different modes of financing, trying to find a common guideline among the conflicting opinions of different authors. In addition, an in-depth analysis of how digital exporting can influence financing is needed, as this topic is little addressed in the literature.

3. Hypotheses

The hypotheses were developed combining some interviews conducted with the literature reviewed and also considering Pecking Order Theory and Information Asymmetry Theory. In particular, of the four interviews, the first three were conducted with exporting companies trying to understand their business strategies and characteristics related to sources of financing. While the last interview was carried out with a professional in the field of finance who provided important insights in order to understand where to focus attention. Six hypotheses and one research question were formulated. The latter was an exploratory reflection aimed at conducting an overview assessment of all funding modalities. The first hypothesis is articulated in three sub-hypotheses inherent to the impact of different modes of financing on export financial performances. The first one (1a) is on own capital generated, the second (1b) on subsidised loans by state owned credit agencies, and the third (1c) on capitalisation by public bodies. The hypothesis number two (2) is a reflection on the country from which the financing was obtained and how this impacts financial performance. While hypotheses three (3) and four (4) are related to the role that digital can play in accessing external financing and in obtaining financing from the country of destination of the export strategy respectively.

4. Descriptive analysis, Model, Discussion

In order to test the hypotheses, it was necessary to conduct a questionnaire to collect the data necessary to validate the ideas formulated. The survey in question asked for various information, such as the company's profile data, i.e., its size, the segment and industry in which it operates. While there were questions more related to financing, such as the country from which the financing was obtained, the type of financing used and the performance obtained. A total of 72 answers were collected from exporters to the survey, these represent the sample of exporting firms on which the analyses have been performed. Through the descriptive analysis of the responses, it was attempted to understand the characteristics, behaviors and formulate a qualitative assessment of the opinions by trying to relate some of the responses. An attempt was made to assess the use of debt or equity financing as the main source of funds in relation to the use of a digital export or not.

Descriptive statistics are divided into: demographic profile of companies, export and digital strategy adopted, financial characteristics and barriers, digital impact and performance.

After creating the database with all the responses collected, this was translated into variables that could test the hypotheses. In fact, through STATA were executed econometric analysis. For hypotheses 1a, 1b, 1c and 2 the Ordered Probit regressor was used, while for hypotheses 3 and 4 the Probit regressors were used. For the first hypotheses model A was created which has Return on Investment as the dependent variable and, as independent variables, the different types of financing and the obtaining of financing in the country of origin. In order to test hypothesis 3, model B was created with external financing as the dependent variable and the level of digital export as the independent variable. For hypothesis 4, model C was created with the obtaining of financing in the country of destination as the dependent variable and the level of digital export as the independent variable.

From the regressions, hypotheses 1a, 1b, 2, 3, and 4 were found to be verified. Hypothesis 1a demonstrates how exporting companies have solid internal finance and effectively manage their profits, being able to properly reinvest them to finance their own activities. Hypothesis 1b underlines how subsidised loans are advantageous and obtaining them forces one to better structure the project to be financed. The validity of Hypothesis 2 demonstrates how it is of great interest for the domestic country to finance its exporting companies and how a domestic origin of financing is highly efficient. Hypotheses 3 and 4 underline the fundamental role of

digital as a facilitator for obtaining external finance and funding from the target country of the exporting activity.

However, more detailed comments on the reasons for the validity of the hypotheses are given in the concluding paragraph.

A robustness check was carried out on model A by including EBIT as the dependent variable. This test confirmed all the previous validated hypotheses apart from 1b which lost significance, in accordance with the Pecking Order Theory, which indicates own capital generated as the preferred form of financing.

5. Conclusion

Before concluding, it is necessary to say that the research question aimed at creating a complete framework on all the modes of financing could not be significantly completed including all the financing modalities due to the low number of responses.

In conclusion, the results of these analyses have shown that exporting companies enjoy a high level of internal finance. In fact, it is through their ability to make profits and the usage of their own capital generated that companies have been able to successfully expand abroad. This is confirmed by an econometric analysis that defines a positive link between own capital generated and ROI. This result is in line with the Pecking Order Theory that says that companies prioritise sources of financing from internal finance. The relevance of own capital generated is also linked to the fact that, being an internal financing, it is not subject to repayment according to specific contractual time constraints. Therefore, it can be used to finance investments necessary for the success of one's export activity but not directly linked to the generation of short-term profits needed to repay a hypothetical loan.

The second result is that subsidised loans by state-owned credit institutions are positively related to the increase of the ROI indicator. This is mainly explained by the extremely favourable interest rates. Indeed, the aim of state credit institutions is not to collect short-term profits but to facilitate the development and growth of exporting firms abroad. For instance, some state-owned credit institutions, such as ICE, SACE and SIMEST in the Italian case, also offer some advisory services to support the exporter. Moreover, the conditions of access to these loans force companies to structure and analyse in depth the project to be financed. This process of analysis and planning therefore implies a forced detailed evaluation of the criticalities, thus enhancing the probability of success. Another factor that positively

influences financial performance is obtaining financing from the home country. First, since the home country has strong economic and political interests in domestic companies expanding their business abroad, it offers advantageous conditions for loans to exporters. Secondly, it is easier for companies to obtain financing from the home country because they probably have a history of previous cooperation between the company and the creditor entities. Moreover, companies prefer domestic creditors, probably for cultural reasons, for lack of information on foreign credit possibilities or because they do not want to expose themselves to too many different risks and contractual obligations.

The last two results add to the Information Asymmetry Theory, because they show that increasing the level of digital export facilitates access to external financing and the obtaining of financing from the destination country. These two results can be explained by the mitigating effect that digital solutions offer to the problem of information asymmetry between lender and borrower. In particular, due to the large amount of available data that is created using e-commerce and increased digitisation, the problem of information imbalance can be resolved. This improves financial and fiscal management of the company by increasing transparency and the amount of historical data, thus overcoming the barrier that forced many exporters to be credit rationed.

The last result demonstrates how the use of digital technology can allow for greater scalability of export projects, thus creating more developments and future opportunities that can benefit the exporting company and the country in which it operates by increasing the local economic flow. Thus, making financing institutions in destination countries more willing and interested in lending

In summary, this research has tried to offer a theoretical and practical contribution to the pillar of export finance, encountering some limitations such as the limited sample observations. Nevertheless, this work is intended as a first step for future research aimed at deepening the dynamics between financing and exporting, and how digital exporting impacts on this relation.

CHAPTER 1: DIGITAL EXPORT & FINANCING ALTERNATIVES

In this chapter, after briefly explaining what is meant by the term *export*, the concepts of *e-commerce* and *digital export* will be clearly defined and analysed, explaining their evolution from inception to current developments.

The role of e-commerce in digital exporting as a possible internationalisation strategy for companies will then be assessed.

The final part of the chapter will be dedicated to the description of the different forms of existing financing, classifiable in the two macro-categories of equity and debt; for each of the mentioned modes of financing, advantages and disadvantages will be briefly provided.

1.1 INTERNAZIONALISATION

In order to increase profitability and profits, many companies have recourse to the strategy of internationalisation. By entering new markets, internationalisation enables them to pursue economies of location and gain an advantage by exploiting economies of experience and scale. Depending on the different degree of risk, level of control, integration into the new market and the amount of investment a company is willing to undertake, there are various ways of entering foreign markets (Qi et al., 2020).

Exporting, which allows for limited risk and relatively low investment, involves the transfer of services and goods from one country to another; however, the low risk is balanced by a lower level of control that the exporting firm retains when entering the selected foreign market compared to other forms of internationalisation.

Several studies have been conducted to assess the role, now recognised as fundamental, that technology, through increased automation and standardisation, has played in reducing logistics and production costs. In an environment characterised by a high level of standardisation at industry level, value-added activities have assumed a decisive role in creating differentiation and competitive advantage for companies.

According to Mudambi in 2008, value-added activities are concentrated at the ends of the value chain because they require a higher level and use of skills and knowledge. Upstream, activities such as research and development require a high level of technical knowledge, while downstream, customer contact activities require a high level of market knowledge. This different distribution of value has been defined as “the smile of the value creation” (Mudambi, 2008).

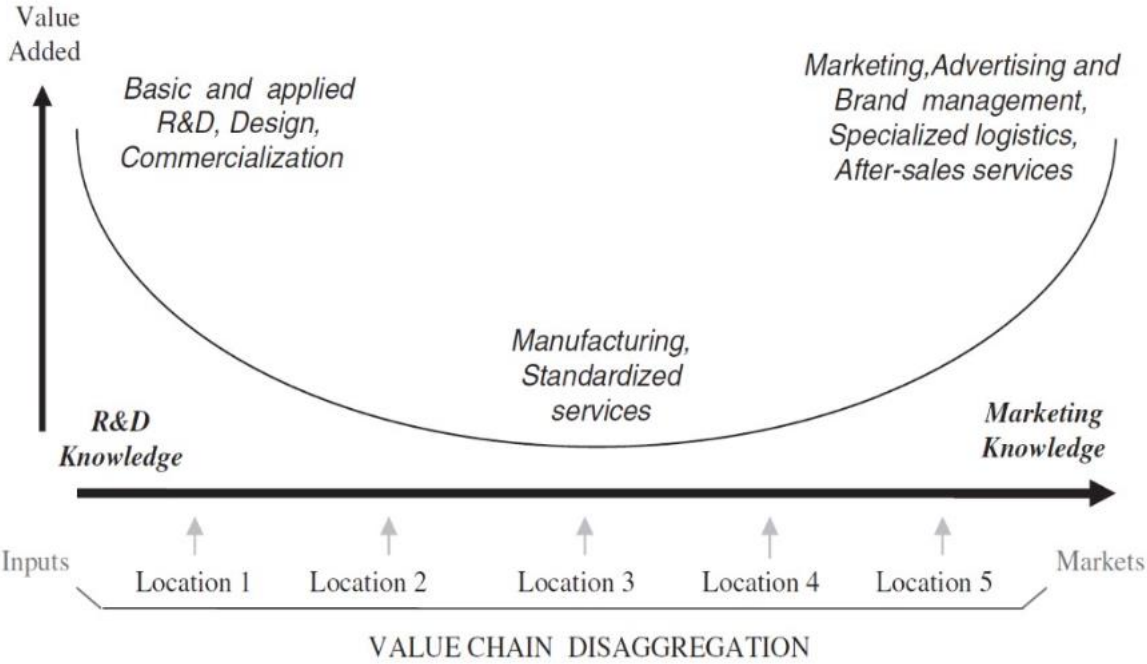


Figure 1 - Smile of value creation (Mudambi, 2008)

According to studies on international business (McCann and Mudambi, 2005) internationally operating companies create their competitive advantage by combining comparative advantage with their knowledge and resources used to carry out their value-added activities. Comparative advantage consists in choosing the right location to carry out non-value-added activities. Usually, according to what is also shown by the “smiling curve” (Tsai et al., 1999) the activities at the ends of the chain are performed in the more developed countries while the more standard and less value-added activities are carried out in the still-developing countries in order to take advantage of reduced labor and production costs. The dynamic competencies of the company, aimed at linking the two ends of the smile in order to integrate research and development with what is learned from marketing and customer relations, are crucial (Leenders and Wierenga, 2002; Winter, 2003).

It is necessary to point out that today the curve of this “smile” distribution is flattening as emerging countries, having acquired know-how and developed specific knowledge, are also able to carry out value-added activities. As a result, the production activities at the centre of the “smile” are becoming increasingly important in bringing value and we are witnessing both reshoring and offshoring phenomena. In particular, following the Covid-19 pandemic, the phenomenon linked to the shortening of companies’ logistics and production chains has become even more pronounced, showing an increase in reshoring phenomena.

1.2 DEFINITION OF EXPORT

In economics, the term export refers to the sale by a company of goods or services in another country than the one in which the company is based.

Commonly, as certified by several studies (Dutt et al., 2013; Manova, 2013; Ndubuisi, 2020), two basic measures are used to assess the size of an export activity: the extensive margin and the intensive margin.

The extensive margin is defined as the varieties of exported products and the number of exported market destinations, while the intensive margin is the export intensity and the average export per variety (Ndubuisi, 2020).

From a theoretical point of view concerning the international economy, the role of international trade, and therefore of exports, is fundamental. In fact, it allows a country to concentrate more on the production and export of those products and services whose production is more efficient, thus concentrating its resources on these activities, while importing from other countries those goods whose production would be inefficient if carried out internally. This mechanism leads to better efficiency with better use of resources and increased welfare

1.3 E-COMMERCE: A NEW WAY OF DOING BUSINESS

1.3.1 DEFINITION OF E-COMMERCE

The term e-commerce, which was originally defined as electronic commerce, initially when it appeared in the 1970s, defined any economic activity that was pursued through an electrical connection (Kilian et al., 1994).

In 1996, although there was widespread interest on the part of companies in using e-commerce as a consequence of the exponential development and spread of the Internet, Wigand denounced the fact that the term was still vaguely linked to the simple use of technology and was not yet well understood in its meaning.

He therefore proposed the following definition of e-commerce: “electronic commerce denotes the seamless application of information and communication technology from its point of origin to its endpoint along the entire value chain of business processes conducted electronically and designed to enable the accomplishment of a business goal” (Wigand, 1997).

To date, as suggested by Ngai & Wat (2002), there are different perspectives to frame e-commerce.

The first perspective is that of the online point of view, which is the most commonly used one, according to which e-commerce makes it possible to buy and sell both information and products on the internet.

The second point of view is that of communications; according to this, e-commerce is understood as the delivery and reception of information, goods and services via communications networks such as telephone lines and computer networks.

Moreover, e-commerce can also be analysed from a business process perspective as it is understood as the application of technology for the automation of business transitions.

Finally, e-commerce can also be interpreted as a tool for consumers, businesses and management used to reduce costs and time and improve the quality of goods and services: this is the service point of view.

In accordance with these different points of view, various definitions of e-commerce have been given over the last two decades.

Initially in 2001, e-commerce was defined rather broadly by Shin N. as a transition in which the Internet is used firstly as a platform to establish certain terms of trade and secondly to sell goods and services that can be delivered both online and offline.

Then, in 2009, the Organization for Economic Co-operation and Development (OECD) proposed a new definition of e-commerce: “E-commerce transactions are the sale or purchase of goods or services conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders; payment and delivery are not considered. Transactions can occur between enterprises, households, individuals, governments, and other organisations. The definition includes orders made through web pages, extranet or EDI and excludes orders by telephone calls, fax or manually typed e-mail.” (Organization for Economic Co-operation and Development, (OECD), 2013).

A further interesting definition, emphasising the benefit to be derived from the amount of data shared through e-commerce and identifying an opportunity given by the increased competition in supply chains at global level, was subsequently provided by Terzi who postulated that: “E-commerce can be defined as the use of Internet to conduct business transactions nationally or internationally. E-commerce has come to take on two important roles; first as a more effective and efficient conduit and aggregator of information, and second, as a potential mechanism for the replacement of many economic activities once performed within a business enterprise by those that can be done by outside suppliers that compete with each other to execute these activities.” (Terzi, 2011).

It can be noted that the definition provided by the OECD is the most comprehensive as it mentions the actors involved, the means used and the economic-commercial purpose of the transaction.

However, all three previous definitions share the common perspective that e-commerce is understood as a means of enabling the exchange of goods and services through the use of the Internet.

1.3.2 DEVELOPMENT OF E-COMMERCE

The introduction of the Internet and the significant role it has assumed in global trade has profoundly changed both business-to-consumer (B2C) and business-to-business (B2B) transactions.

Following Terzi (2011), there has been a progressive individualisation of trade; indeed, thanks to e-commerce, any customer can buy products and services from any supplier and, vice versa, any supplier can sell wherever he or she wishes, thus developing a marketplace on a global scale.

In a quick historical overview of the development of e-commerce, some key milestones can be identified. First of all, e-shops such as eBay and Amazon.com were introduced in 1995, soon followed by Alibaba.com (1999).

Schneider (2015) states that there are three relevant phases in the development of e-commerce: the first, which is the one in which the 2000 crisis of the dotcom companies took place, runs from 1995 to 2003; the second phase started in 2004 and ended in 2009; finally, the third is the one that started in 2010 and continues until today. The latter period was marked by an exponential increase in the spread of mobile phone sales and a profound change in the way they are used around 2013. According to Schneider, new forms of e-commerce such as mobile commerce (M-commerce), social commerce (S-commerce) (Khan & Sagar, 2015) and Facebook commerce (F-commerce) (Turban et al., 2015), which use social networks and mobile phones as a meeting point between supply and demand, have been developing since the last few years.

In the last two years, because of the Covid-19 pandemic and the associated movement restrictions, e-commerce has become a key player in both global and local transactions. In fact, the possibility of selling one's products online has proved to be a key point of survival for companies; this has led to a forced innovation of the traditional market, leading to the extinction of those economic realities that were still based on offline trade only. Furthermore, it is important to note that there has been a decisive expansion of e-commerce even in those sectors in which it played a rather marginal role until a few years ago.

It is in this context that the role played by the mobile channel has once again proved fundamental; in Italy, in 2020, it accounted for 48% of the turnover of Italian e-commerce companies (Casaleggio Associati, 2021).

The changes and the boost that e-commerce has received because of the pandemic have been significant and it is plausible to think that they will bring persistent and radical effects in the near future as well.

1.3.3 CRITICAL SUCCESS FACTORS

In order for a company to make the most of the potential offered by e-commerce, it is essential that it is able to identify the critical success factors (CSFs) that were first identified by Rockart (1979).

With the development of technologies around the 2000s, this issue has gained relevance, and several studies have focused on it.

First of all, critical planning factors (Damanpour, 2001) for e-business enterprises to ensure success in the transition from traditional to digital channels have been identified; there are three of them and they are interrelated:

- Collaboration: It is imperative for companies to be able to develop dynamic collaborations with valuable partners.
- Speed and flexibility: as the Internet has reduced operating times in almost every sector, an economic player needs to be able to adapt to these tighter rhythms; it is therefore essential for a company to be able to be precise, fast and flexible in developing customised solutions not only in the B2C market but increasingly also in the B2B market.
- Execution and demand fulfilment: In an e-business, one of the objectives must be to reduce the time between demand and supply. This can be achieved by better influencing demand, implementing communication and interaction, linking websites and supply chains and offering better services.

The subject of CSFs has also been addressed by Dubelaar, Sohal, and Savic (2005), who have compiled a summary of the contemporary literature on the subject (e.g., Phan, 2001; Turban et al., 2000; Porter, 2001; Butler, 2000) classifying CSFs into three classes:

- Strategic factors: concerning the ability to use the Internet and related technologies as a complement to existing strategies, a marketing strategy that is Web centric, the identification and tracking of new competitors and market shares, the analysis of buyer behaviour and a personalisation towards the customer, the strengthening of the company's strategic position in the market, the possibility to exploit the first-mover advantage, a reduced time to market and other advantages related to the possibility to offer products and services through an e-business.

- Structural factors: including comprehensive e-business training of staff and customers, adoption of the appropriate digital infrastructure, more detailed cost control and extension of current systems to the entire supply chain.
- Management-oriented factors: including endorsement of e-business and communication of its value to the whole organisation by top management, organisation-wide commitment to e-business leadership.

Furthermore, according to Dubelaar, Sohal, and Savic (2005), as a result of a case study, the CSFs needed for e-business adoption are: “combining e-business knowledge, value proposition and delivery measurement, customer satisfaction and retention, monitoring internal processes and competitor activity, and finally building trust. Findings suggest that above all, adoption of e-business should be appropriate, relevant, value-adding, and operationally as well as strategically viable for an organisation instead of being a result of apprehensive compliance.”

In addition, it has been demonstrated, especially for the B2C market, that for established companies, offline brand replication has proven to be a critical success factor in online activities. For e-businesses, customer satisfaction is of paramount importance in building trust and ensuring customer retention, and online performance measurement tools have been created, linked to both internal and external processes, to monitor consumer needs and ensure a responsive response to any changes in market demand.

More recent studies have identified as new success factors the spread of a digital culture, the guarantee of privacy and the accessibility of digital tools, online payment methods, logistical infrastructures and the possibility of offering a customer experience.

Finally, in 2017, Varela, Araújo, Vieira, Manupati, and Manoj highlighted the need to adopt an approach that has an integrated and simultaneous consideration of critical success factors when creating an online shop and its website.

1.3.4 BENEFITS OF E-COMMERCE

The economic benefits of e-commerce mainly concern three areas: improved business performance, increased productivity and a significant reduction in costs, as demonstrated by Transaction Cost Theory (TCE). In fact, according to Williamson (1991), e-commerce allows a significant reduction in both production and transaction costs, which include: the costs of

searching for suppliers, sellers, customers and products, the costs of drafting and adapting contracts, and monitoring costs.

In later years, this thesis was supported by Damanpour (2001) who also argued that there are additional benefits of e-commerce such as: a wider and more widespread geographic coverage, a better understanding of the market and the necessary partnerships, a more integrated supply chain both downstream and upstream and an optimisation of information management.

However, the benefits of e-commerce on supply chains are not only limited to greater integration but also to make them shorter and more responsive (DePrince Jr & Ford, 1999; Wadhvani, 2000) and to reduce present inventory by facilitating inventory management through pull strategies (Paradkar, 2014); this allows for a reduction in both management and inventory-related costs in warehouses.

With regard to the expansion of the market, Nejadirani, Behravesht and Rasouli (2011) point out that the benefits are not only spatial but also temporal as e-commerce makes the offer and purchase available 24 hours a day throughout the week.

In addition, marketing costs also benefit from the use of e-commerce, as it not only reduces the use of expensive traditional marketing channels but also allows for more targeted and personalised campaigns for customers, thereby increasing effectiveness.

Finally, the economic benefits of e-commerce also include a decrease in R&D costs, an optimisation of information management and organisation with a reduction in co-ordination costs (Wigand, 1996) and improved financial and fiscal management of the company by increasing transparency and the amount of historical data available (Whyte, 2000).

1.3.5 THE IMPACT OF E-COMMERCE ON BUSINESS STRATEGY

As a result of the pivotal role that digital and technology have taken on in ensuring that companies can remain competitive by increasing operational efficiency, e-commerce has become a topic of discussion for management and business governance (Wang & Zhou, 2009). As a consequence, a reciprocal relationship between business strategy and information technologies (ITs) has been established: firstly, because business strategies define the most appropriate use of information technologies and, secondly, because the use of ITs makes it possible to structure new processes and develop new strategies. It is precisely because of this interconnected relationship that these two factors, if properly harmonised with each other, create added value for the company (Wigand, 1995).

E-commerce offers the opportunity for companies to adopt a new strategy, based on their e-commerce strategy, which potentially allows them to reach the customer all the time (Oudan, 2010). It is precisely to ensure this continuous relationship with the customer that technologies can offer multiple strategies while still ensuring an optimisation in the use of resources towards the most effective strategies (Lee & Kao, 2015).

It is interesting to analyse the results of using traditional business strategy theories in the context of e-commerce. Referring to the traditional business strategies of 4Ps (product, price, promotion, place) of McCarthy (1960) and Five Forces of Porter (existing competitiveness, threat of new entrants, threat of substitute products, and bargaining power of customers and suppliers) (Porter, 1980, 1985), Shin (2001) argues that there is a decrease in market entry barriers as a result of the reduction of investments needed to implement online strategies compared to offline ones and the widespread availability of Internet use; these two factors lead to an increase in competitiveness. Furthermore, due to the use of the Internet and technologies, there is also a reduction in the bargaining power of suppliers as buyers benefit from reduced search and comparison costs; however, at the same time, there is also an increase in the bargaining power of customers as a result of reduced switching costs. Moreover, the Internet also increases the risk of potential substitutes by widening the places and times of promotion and stimulating the emergence of new solutions to customers' needs.

At the same time, the exploitation of information technologies facilitates price discrimination and the management of price costs (Bakos and Brynjolfsson, 1997).

Also supply chain integration costs are reduced by e-commerce which facilitates the creation of new strategic partnerships (Shin, 2001).

Finally, according to Pires and Aisbett (1997), industry and circumstances are also relevant for the adoption of e-commerce as they influence the environment in which e-business is conducted. It turns out, therefore, that although it is a decision at the level of the individual company whether to adopt an online or offline business mode, if a company operating in one market introduces e-commerce by adopting an e-business strategy, it has consequences for all competitors present (Hodkinson and Kiel, 1996; Peterson, 1997).

E-commerce facilitates trade and increases trade volumes, while reducing costs and time. This is the thesis supported by Terzi (2016): "The use of electronic means and the Internet can make the process of initiating and doing trade a lot easier, faster, and less expensive. Collecting information is a costly activity when it involves acquiring information across national borders.

In fact, these costs can be so high that they can be considered a substantial barrier to trade. In this respect, the Internet will likely promote trade much in the same way as lifting other trade barriers. Thus, the volume of international trade will likely increase”.

Time-consuming tasks that could previously have been regarded as barriers to trade, such as gathering information, choosing suppliers, retailers, prices and quality standards, are being optimised through the use of technology. With e-commerce applications, the need for physical proximity between seller and buyer is almost completely overcome as a new mode of interaction between the two parties is developed: the digital one.

However, the increase in trade linked to e-commerce also depends on the nature of the good or service traded (Terzi, 2016); for many goods, the transport costs incurred to transfer the product from the seller to the buyer will remain rather high, thus partly dampening the growth in trade due to e-commerce.

It is interesting to pay particular attention to how e-commerce impacts trade in services; in fact, it makes tradable many types of activities that were previously not tradable, such as R&D, accounting, marketing, quality control, personnel, and inventory management and distribution. In conclusion, the Internet plays a role in promoting and liberalising international trade by breaking down multiple barriers, and although, in the short term, the benefits of e-commerce on trade have so far been seen mainly in developed countries, it is likely that, in the long term, they will extend to all developing economies as a result of the progressive expansion of digital technologies that is taking place on a global scale.

1.4 CROSS-BORDER E-COMMERCE

1.4.1 INTRODUCTION TO CROSS-BORDER E-COMMERCE

At the level of international trade, the spread of the Internet and the consequent development of e-commerce has raised issues in multiple areas such as intellectual property, privacy rights and the management of international transfers.

Although e-commerce possesses unique characteristics and is in many respects profoundly different from international trade, it was initially classified and regulated through pre-existing trade agreements.

In 2001, Damanpour complained that e-commerce involved some different issues than traditional trade and therefore needed to be analysed in a dedicated way. He identified seven areas that needed revision.

First of all, he pointed out that, among the countries belonging to the World Trade Organization (WTO), e-commerce was only regulated at domestic level and not in an integrated manner.

In addition, customers were not protected at all when using the Internet, as they had to rely on online businesses with no security guarantees.

A very sensitive issue was also the protection of various rights that e-commerce could not guarantee; in fact, in the Agreement on Trade-Related Aspects of Intellectual Rights (TRIPs Agreement) signed by the WTO in 1994, there were gaps and problems regarding the protection of property rights such as patents, copyrights, data protection and trademarks.

As regards the management of traded goods and services, since 1998, when the WTO established the Work Programme on E-commerce, they were regulated according to the Most Favoured Nation (MFN) obligations, the General Agreement on Tariff and Trade (GATT) and the General Agreement on Trade in Services (GATS).

The turning point for cross-border e-commerce came after the 2008 financial crisis, when the simultaneous increase in world trade volumes and the rise in global Internet use led to the widespread adoption of global e-commerce; in this situation, the world's first electronic economic transactions were classified as "digital export" or "cross-border e-commerce".

The consequence of the increase in cross-border e-commerce on the possibilities of accessing new markets has been significant; in fact, it has enabled micro, small and medium-sized enterprises (MSMEs) to access global economic opportunities.

As cross-border e-commerce has become so widespread, it has become essential to implement a regulatory and associated risk management approach that is innovative, inclusive, collaborative and strategic.

It is imperative that the private sector and governments can ensure that there is a materialisation of the potential benefits through the establishment of secure partnerships, the efficient and fair collection of revenues and by ensuring the protection of the community.

It is with this end in mind that the World Custom Organization (WCO), whose role is to coordinate global efforts to facilitate and legitimise cross-border e-commerce, drafted the "Resolution on Cross-Border E-commerce" in 2018.

This publication summarises the principles for the management of cross-border e-commerce:

- Streamlining and simplifying procedures;
- Security and safety;
- Establishing partnerships;
- Measurement and analysis systems;
- Revenue collection;
- Public awareness and capacity building;
- Establishment of defined and agreed regulatory frameworks;
- Use of advanced electronic systems for data and risk management.

1.4.2 DEFINITION OF CROSS-BORDER E-COMMERCE

The definitions that have been used to define cross-border e-commerce, also known as digital export, have been varied and diverse, starting with those of Bradley et al. (1999) and Afuah and Tucci (2001) who labelled it simply as an electronic form of international trade; later Terzi (2011) and Youwei and Kaiqian (2014) pointed out that its role had been expanded to become not only a means through which information of buyers and sellers could be found but also the medium through which the exchange and economic transaction of goods and services took place.

It was then Ma and his colleagues (2018) provided the most appropriate definition to date, stating that cross-border e-commerce is a new form of commerce that includes international business activities conducted by actors in different states who exploit e-commerce platforms to succeed in concluding economic transactions and payments for goods and services that are then transferred to the buyer through an international logistics system.

Cross-border e-commerce, which can be carried out through own or third-party channels, can be business to business (B2B) when two companies engage in an economic transaction, business to consumer (B2C) when one of the two agents engaging in the transaction is an end-customer or business to business to consumer (B2B2C) when the transaction between the selling company and the end-customer is intermediated by a third-party channel. The latter third-party transaction mode is particularly relevant in cross-border e-commerce and is used by about 80% of sellers (Ma et al., 2018).

Each transaction mode involves the use of different channels (Giuffrida et al., 2017) as illustrated below:

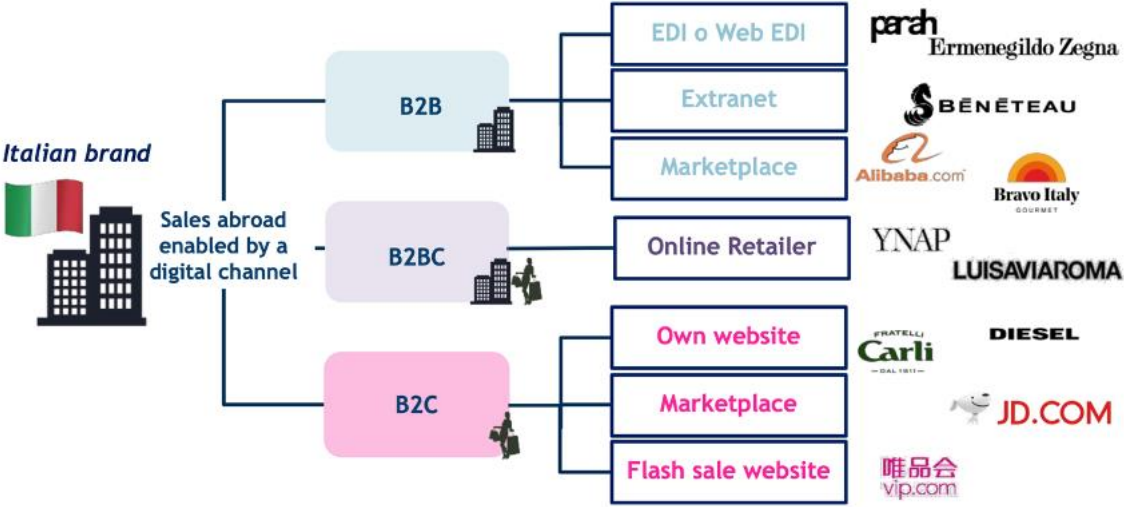


Figure 2 - The different online channels (Giuffrida, 2021)

- B2B transactions: take place via electronic data interchange (EDI) or web electronic data interchange (web EDI), extranets and marketplaces. The electronic data interchange is a method of exchanging data electronically through the use of a digital channel in order to increase the level of automation. The extranet consists of a series of selectively accessed Internet sites aimed at exchanging documents, information and data and providing functions and services between a company and its business partners. Marketplaces are digital platforms accessible via the Internet that enable the matching of supply and demand and provide a range of ancillary services.
- B2B2C transactions: these take place via online retailers. The difference between an online retailer and a marketplace lies in the ownership of the goods transacted; when a seller uses a marketplace it retains ownership of the goods and the marketplace acts as a showcase for greater visibility in the market; when an online retailer is used, it buys the goods from the seller and then resells them on the market; in this second case, therefore, ownership of the goods passes from the seller to the online retailer and, finally, to the final customer. Given these differences between the two channels, it is clear that small companies often prefer to use a

retailer in order to minimise risks and avoid increased market competition, whereas larger companies can choose between marketplaces and online retailers.

- B2C transactions: these take place via own website, marketplace and flash sale website. The latter is a type of online channel designed to attract new and very different types of customers by allowing companies to sell high-quality products at very low prices for a limited period of time. The own website, on the other hand, simply consists of a dedicated e-commerce site managed solely by a company that wants to sell its products online.

It is important to emphasise that, in developing a cross-border e-commerce business, the different channels listed above are equally important; what is relevant for a company is to be able to match them appropriately to its objectives and customer preferences.

Therefore, the best strategy is most often to adopt a multi-channel strategy or even an omnichannel strategy. The peculiarity of these strategies is the use of different channels to reach the customer; in fact, the objective of companies is no longer to have one-off transactions with several customers but to establish an ongoing and customised relationship with their customers.

1.5 DIGITAL EXPORT

1.5.1 WHY DIGITAL EXPORT IS IMPORTANT

According to what has been discussed up to this point, it is clear that, as a consequence of the growing process of innovation and diffusion of technologies combined with some contingent factors, such as the Covid-19 pandemic, digital exports have assumed a pivotal role in world trade.

The following graph shows the ever-increasing trend, particularly in the last period, to which global e-commerce in the B2C sector has been subject.

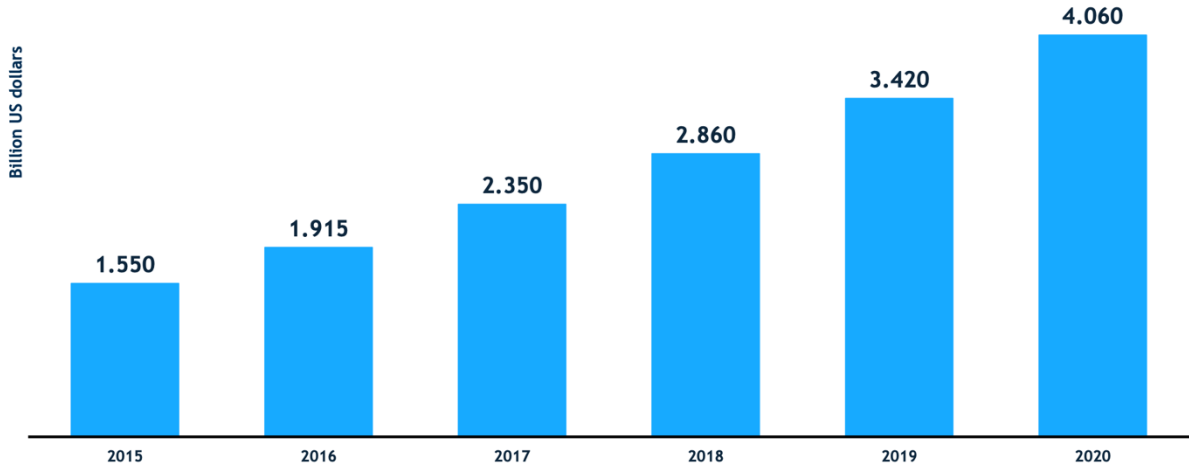


Figure 3 - Development of global e-commerce in the B2C market (eMarketer, 2020)

In 2020 in particular, the global pandemic saw a sharp increase in the number of goods traded online; however, at the same time there was a decrease in services sold online.

The image below describes the main markets for B2C e-commerce.

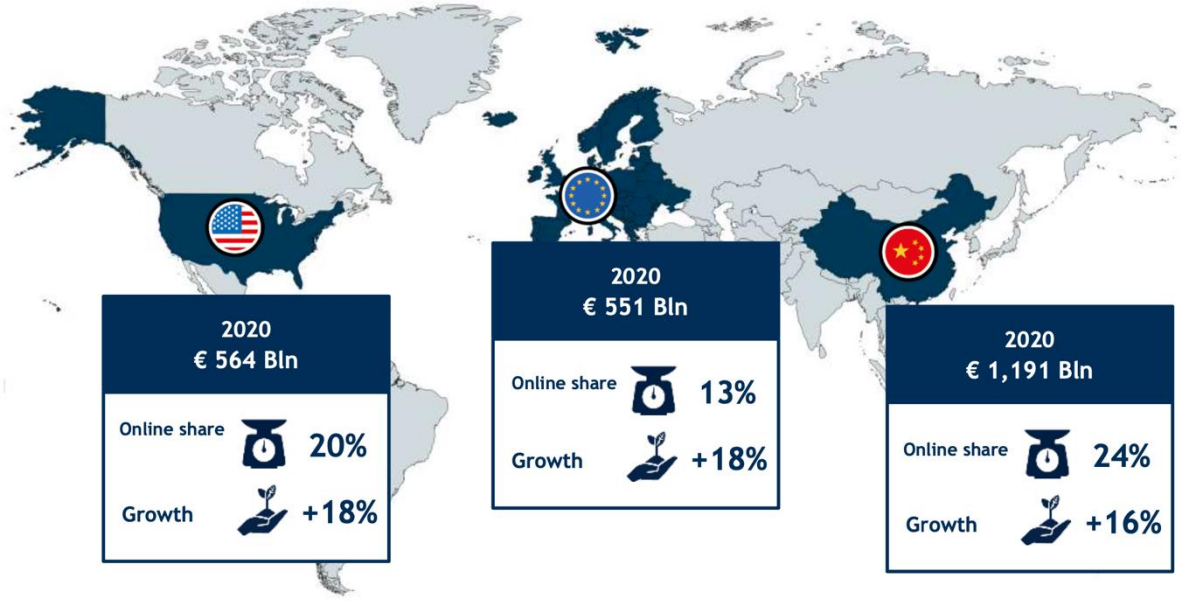


Figure 4 - Global B2C e-commerce relatively to products (Giuffrida, 2021)

Looking at the 2020 figures, we can see that the Chinese market is twice the size of both Europe and the US in absolute terms. However, the growth rate is higher in the latter two; this could be justified by the fact that, although it is in the middle of a modernisation and expansion

process, Chinese trade is still held back by the presence of some barriers such as the presence of large rural areas, deep social differences and protectionist economic policies that sometimes result in disincentives for foreign companies to enter the market directly.

1.5.2 PILLARS OF AN EXPORT MODEL

A business strategy based on digital export is a complex process that requires adequate planning of activities. One of the main steps is the identification and subsequent implementation of the export model that best suits your business. By export model we mean the set of choices that the company makes with reference to a series of fundamental aspects commonly defined as the “seven pillars of export”. As suggested by Giuffrida and Mangiaracina (2021) they are, as shown in the figure and subsequently described:



Figure 5 - The seven key pillars of a digital export strategy (Giuffrida, 2021)

1. Trade channels: these are the sales channels through which products are conveyed from the seller to the buyer. In the context of online internationalisation, in addition to the more traditional offline physical channels (importers, distributors, wholesalers, retailers and own shops abroad), there are a number of online channels, represented by digital alternatives (e.g. in the B2C context online retailers, marketplaces, flash sales and own websites).

Being able to select the right online commerce channel to serve a given market is a complex choice that requires being aware of the structure of the target e-commerce market in terms of both relevant digital players and consumer habits.

2. Logistic channels: these are the solutions that allow the physical distribution of products in the selected market. In order to define the possible alternatives, it is necessary to consider several aspects, such as: the configuration of the distribution network, the mode of transport (road, sea, rail, air), the location and size of warehouses, the level of externalisation of the logistics process to a third-party logistics provider. There are many different logistics solutions available, depending on the following factors: expected volumes, the complexity of regulatory and customs constraints and the value of the product.
3. Communication and marketing channels: these are the tools through which a company advertises and promotes its offer and brand to the selected market. In the context of digital export, digital marketing solutions are particularly important, including search engine optimisation (SEO), search engine marketing (SEM) and social media marketing.
4. Legal aspects: an export activity implies understanding the tax and legal requirements and procedures, customs duties, contractual rules and regulations to be respected in order to sell online in foreign markets.

Issues relating to the legal aspects of a digital export business can be classified into three categories: barriers to foreign market entry, the regulation currently in place, and how to access the foreign market.

5. Organisational issues: for a company evolving towards a digitally oriented business model, organisational change is a critical phase.

In a situation of minimal specialisation there are neither export managers nor e-commerce managers. The company can therefore decide to structure its organisation in two directions: the first implies the introduction of a traditional export manager, i.e. an expert in offline exports, while the second requires the presence of an e-commerce manager. The level of specialisation of these two figures in relation to the specific markets in which the company sells varies depending on the export strategy adopted by the company.

For a digital export strategy to be effective, the two figures must either coincide or at least work closely together.

Moreover, the organisational structure of a company that exports digitally requires the existence of people who can combine the skills of the export manager and the e-commerce manager.

6. Payment systems: these consist of the system of means and procedures by which the buyer transfers money to the online seller. Payment systems are a particularly delicate aspect in a digital export business as, if they are overly complex, opaque or unusual to the buyer's habits, they may discourage him from pursuing his online purchases.

Digital payment instruments are diverse and range from common credit or debit cards to digital wallets. However, it should not be forgotten that, since the consumer is the focus of the offer, it is always necessary to be able to meet their needs and therefore these new online payment methods should be combined with the more traditional offline ones.

The type of consumer, the product or service offered and the target market play a decisive role in the choice of payment method.

7. Funding sources: since the export activity, although an opportunity to increase profits, represents for the company an additional activity compared to selling on the domestic market, it implies an increase in management and organisational complexity and in the need for investment to be able to sustain the activity.

A profitable export activity should be able to sustain itself in the medium to long term; however, entering new foreign markets entails a series of initial costs for the company which, in addition to representing an obstacle to internationalisation, increase the uncertainty and riskiness of the new economic activity conducted.

Therefore, the ability to find and manage sources of finance is essential to exploit the opportunities offered by an export business. In most cases the use of external resources is also required, which as explained in the following paragraphs include private debt capital, loans from credit institutions and banks, and public funding

1.6 FUNDING SOURCES

1.6.1 INTRODUCTION

After having seen the seven pillars of an export model, this section will deepen the analysis of the financing alternatives. Indeed, one of the major constraints to the internationalisation of SMEs is the lack of financial resources (Bellone, Flora, Musso, Nesta, & Schiavo, 2010); (Paul, Justin, Parthasarathy, & Gupta, 2017).

In spite of the importance of private, smaller-sized businesses to economic growth and development, the extant literature on internationalisation and financing policy is confined to large, traded firms (Maes, Dewaelheyns, Fuss, & VanHuelle, 2019).

However, in this section no distinctions have been made based on the size of the companies in need of funding.

The first major distinction is between internal and external financing, or in other words, being financed through equity capital or through debt capital. Through internal finance, a company uses its own resources generated as net income or collected from new or pre-existing shareholders to finance its expenditures and to take the opportunity to invest in new or already existing projects. Instead, external finance is characterised by the exploitation of external resources collected outside of the company to finance ordinary and extraordinary operations. A crucial difference between these two alternatives is the priority of repayment in case of bankruptcy, shareholders are always the last to be remunerated, compared to debtholders.

The second division regards the nature of the company's resources, which can be private or public. Briefly, a public external finance comprises the supply of the resources from the government, through a specialised public body (e.g., SACE, SIMEST, and ICE; in Italy), or from the crowd of citizens. A private external finance solution is defined as a relationship between the company and a private entity, which can be even a single person providing the necessary funds to keep the company alive and to continue its business growth. However, this second distinction is somewhat less clear and defined. In the next sections will be presented various forms of financing, describing them, and giving a brief overview of the main advantages and disadvantages of each one.

1.6.2 DESCRIPTION OF VARIOUS TYPES OF EXPORT FINANCING

1.6.2.1 INTERNAL / EQUITY

Regarding the internal financing method, the main feature is the ownership right.

When you invest through the capital of a company you become a shareholder and thus obtain an ownership share that provides you with voting rights and the possibility to claim a relative share of dividends, i.e., the part of the net profit that the company does not retain. Moreover, the crucial aspect is that you are subject to the uncertainty and volatility of the company; therefore, by becoming the owner, in case of bankruptcy you become the last to be remunerated. Equity is a title of ownership of the firm and the remuneration is residual. The different types of internal equity financing are report below.

OWN CAPITAL GENERATED

The first type of financing method is the use of the own capital generated through the Profit & Loss statement. This type of resource is the most basic form of financing.

Indeed, at the end of the fiscal year, each company can discover through the last line of the Income statement if there is enough net income that can be exploited to face ordinary expenses and to seize extraordinary opportunities to invest. However, the decision about the pay-out ratio is taken by the Board of Directors led by the General Meeting of shareholders. The pay-out ratio is a financial metric showing the proportion of earnings a company pays its shareholders in the form of dividends, expressed as a percentage of the company's total earnings. This decision can be seen as a proxy of the propensity of the company to reinvest profits and take the opportunity to improve its business scope.

The main advantage of using the net profit generated is the possibility to keep control of the company and the ownership structure. Moreover, a company that uses only its own capital generated is seen by the market as a solid enterprise with a high margin and stable profits, thus identifying a mature company. This can be positive since investors and employees appreciate the stable cash flow and earnings in this current context of extremely high uncertainty of markets. At the same time, this can be negative because an excessively stable company that uses only its own capital generated to finance its operations, probably lost, lose and will lose the opportunity to invest in expanding its business abroad, to seize new trends, and to develop new technologies.

The main disadvantage is represented by the time and the impossibility of financing each operational expense and investment that occurs during the year with a sum that is collected once a year. This divergence is a common problem of each company, but it is more pronounced for exporting firms, and mainly SMEs. Indeed, most of the exporting SMEs need a lot of working capital since international sales transactions take much longer to complete than domestic sales transactions and so exporters face considerably longer cash conversion cycles and a higher need for working capital financing solutions.

CAPITAL INCREASE

This type of financing consists of raising the company's capital (shareholders' capital) by increasing the number of shares.

Equity issues allow companies to raise equity capital to collect cash for new investments (or for paying back other securities or any other need). The capital increase may be distinguished into three types, according to the investors the company is tapping:

- Existing shareholders = **RIGHT ISSUE**
- Other certain investors = **PRIVATE PLACEMENT**
- Retail investors = **PUBLIC OFFERING**

The first one consists of giving existing shareholders a ticket to decide to subscribe to new equity shares. Subscribing the new shares gives the possibility for the existing shareholders of not being diluted, and the control power can be maintained. Otherwise, the ticket can be sold, and it represents the premium for being diluted. It's an opportunity to maintain the existing ownership structure. This is important for governance objectives (e.g., in companies controlled by coalitions).

The second one is targeted to specific investors that may be:

- Investors that will obtain the majority of the equity capital;
- Industrial partners (typically subscribing minority stakes);
- Investors specialised in restructuring (distressed companies);
- Private equity and venture capital deals are examples of private placements.

Wealth transfers may occur, and pre-issue shareholders are diluted.

The third one is the Public Placement, and it is targeted to all retail investors on the market, and therefore, pre-issue shareholders will be diluted.

The second and the third modes are similar but differ in terms of the number of investors targeted and the bargaining power. While for the Public Placement each investor has weak

bargaining power, in Private Placement the counterpart represented by a single investor holds a strong bargaining power towards the company. This is a crucial difference, and it can drive the decision-making process.

Another slightly different type of capital increase is the Initial Public Offering if the offering is alongside the first flotation on a stock exchange. Indeed, the company's stock becomes listed, and the only difference between a company listed on an Exchange and a company non-listed is that its shares may be easily and freely traded, while for the latter it is more difficult and costly.

The main advantage of a capital increase is that the company can count on additional liquidity and take the opportunity to invest in new projects trying to grow and avoid the cost of missing a chance. Another important benefit is the meaning of signalling that a capital increase provides to the market. Indeed, a company that issues new equity seems to have more soundness from the market standpoint.

The main drawback is the possibility of losing control of the enterprise through a wealth transfer towards new shareholders, thus changing the ownership structure. Moreover, the capital increase process is expensive and time-consuming.

The next sections provide some particular and interesting cases of capital increase.

CAPITALISATION BY PUBLIC BODIES (E.G., IN ITALY ICE, SACE, AND SIMEST)

This type of financing consists of a capital increase, particularly the private placement towards a public body of the government. It is the opposite of the privatisation of a company. The government, represented by a public body, buys some share of the company, and supports its needs of financial resources.

The financing aims to improve or maintain the level of capital solidity (ratio of shareholders' equity / net fixed assets) at the time of the financing request with respect to a predetermined "threshold level".

This "nationalisation" process is driven by the willingness of the government to help financially constrained firms and, at the same time, provide a signalling effect.

Indeed, the public body decides to subscribe to the shares of a company that needs financial help only if it thinks that the enterprise will be able to recover the initial negative situation growing and showing strong profitability.

This will make the market see this company in a new, more optimistic perspective, considering that the government is behind it.

EQUITY CROWDFUNDING

This type of financing consists of a capital increase, particularly a Public Offering towards a crowd of people, virtually everybody with an internet connection and some savings in the bank account.

Crowdfunding is defined as “an open call, mostly through the Internet, for the provision of financial resources either in form of donation or in exchange for the future product or some form of reward and/or voting rights” (Giudici, 2021)

In this specific case, the equity crowdfunding consists of raising capital by the company through the introduction of investors into the shareholding structure or by selling them a number of shares or stakes in the company.

The main advantage is that through this type of financing, each small retail investor invests in the company is limited because he puts a little of his savings in the capital increase.

This modality takes advantage of “a little from many is better than a lot from one”. Equity crowdfunding can be a turning point for companies, and in particular for SMEs, financing, but also a cause of many risks, mainly related to the absence of strong regulation and the fact that you as an investor must trust the collection platform and the project without many certainties. However, investors are more likely to invest as this is a more accessible way.

Among the non-financial benefits that arise from raising funds through crowdfunding, the preliminary feedback obtained stands out. Second, turning to crowdfunding can increase the opportunities for obtaining funds through other forms of financing, such as business angels or venture capital.

Crowdfunding can be an excellent marketing tool to present a new product, a new business, or its expansion

In this way, companies will have their own means adequate to the size of the investment they need, and these means will be procured by a multitude of subjects. The world of crowdfunding and more generally of fintech is triumphing because it offers transparent solutions and in almost all cases, the cost structure of the operation is known in advance, also facilitating those who are less financially educated. This can contribute to the spread of a market to which one turns with confidence.

Concluding the main advantages are the easy accessibility, the shorter time, and the lower cost to get funds relative to other financing solutions.

BUSINESS ANGELS & STRATEGIC INVESTORS, FUND (VENTURE CAPITAL, PRIVATE EQUITY, HEDGE FUND)

These financing alternatives are reported together since they share the same mode of entry through equity capital, supporting the company in its growth path. The main difference between these financing solutions is the moment in the lifecycle in which they subscribe to the company's shares.

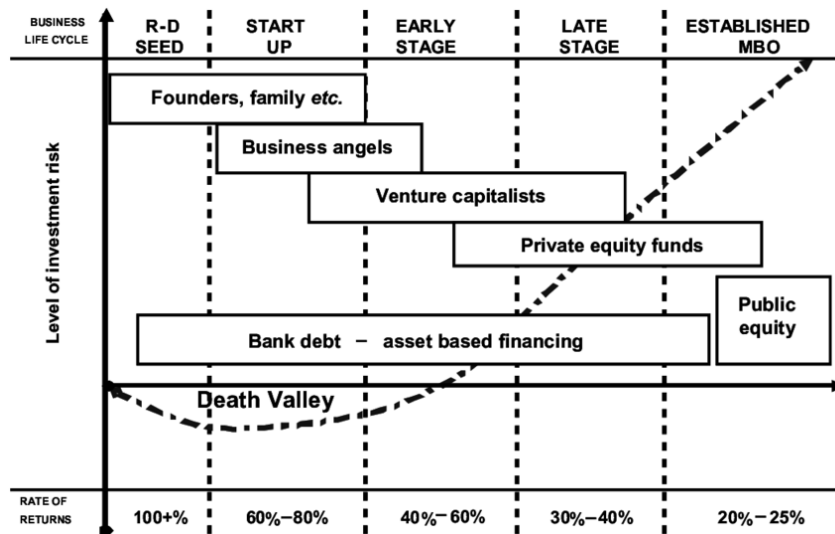


Figure 6 - Life cycle of a company

According to the moment in which they start to support the company they have different objectives and strategies.

Business Angels and Strategic Investors: this type of financing is typical of the early stages of the life of a company. Business angels or strategic investors are affluent and competent individuals who provide capital for a business start-up, usually in exchange for a minority ownership share.

Moreover, an increasing number of angel investors organise themselves into angel groups or angel networks (e.g., Italian Angels for Growth, IAG) to share research and pool their capital and provide advice to their portfolio companies.

The angel investor, also known as a seed investor, angel funder, business angel, and private investor (in Italian: informal investor), is a private entity that contributes funds to a nascent company or start-up in exchange for its risk capital, by becoming a shareholder. In addition to the contribution of financial capital, the business angel also brings its know-how and its

network of relationships, provides portfolio companies with value added in areas where companies lack expertise, massively uses tax breaks to reduce investment risk, has intrinsic motivations, and co-invests with other sources including crowdfunding.

The adjective “informal” contrasts this figure with “formal” venture capital investors, those who adopt a formal analysis approach to equity investments, such as closed-end investment funds, more properly venture funds capital, and private equity. The relationship that is created between the informal investor and the entrepreneur is purely spontaneous and based on trust. The angel investor, or business angel, is a single high net worth individual (HNWI) who, alone or via an informal network, invests some of his wealth in stocks of innovative and high-potential start-ups to make them grow through the “initial” capital, the seed capital. After it grows, the angel investor can profit in the form of dividends from their development; start-ups, on the other hand, grow and can receive other investments or financing once again, such that their share capitalisation increases.

Angel capital fills the gap in start-up financing between “friends and family” and formal venture capital.

Fund (Venture Capital, Private Equity, Hedge fund): these three types of financing are almost the same. Venture Capital (VC) and Private Equity (PE) funds usually invest in more advanced rounds, from the seed stage onwards, sometimes in co-investment with other funds or with the same Business Angels that financed the initial stages. A Venture Capital or a Private Equity fund brings to the start-up the knowledge and experience of its managers as well as its network, with a greater degree of control of the business and governance and the aim of maximising the return on investment.

Unlike a Business Angel, which invests personal capital, a Venture Capital and Private Equity fund have in turn investors (called Limited Partners or LP's) who are usually professional subjects (Pension Funds, Foundations, Banks, etc.) to whom it must guarantee returns with high multipliers, due to the significant risk they assume.

They provide a substantial infusion of financial resources, enlargement and improvement of the firm's resources and capabilities due to the coaching performed by the VC or PE investor and its network of business contacts. While the main drawback is the increase of Principal-Agent agency costs as the financial and / or strategic objectives of the VC and PE investors may diverge from those of the firm's owner-managers. While Venture Capitalists enter the

early stage of the company's lifecycle, Private Equity funds enter the later stage, but they share all the other characteristics.

Regarding the Hedge fund, it is in many ways similar to any Private Equity fund: it is typically structured as a limited partnership (LP) and, as an entry strategy, they can block access through a very high contribution threshold. Hedge funds also participate in companies by buying their shares to make a profit, but as a first difference, they can act in the sphere of both private equity and public equity as they buy and sell them both over the counter OTC and on the stock exchange.

The second difference is the fact that they also buy bonds, such that they do not limit themselves to practicing public equity financing and private equity financing, but also debt financing.

The third, which shows how their field of action is vast, derives from the fact that hedge funds invest in all securities (e.g., in stocks, bonds but also in derivatives such as commodity futures) through public (stock exchange) and private (OTC) channels. Finally, hedge funds are highly speculative as they aim to make as much money as possible in the shortest possible time and in any way possible, perhaps neglecting the company's long-term growth strategy.

Hedge funds have minimal liquidation protection as, if they did not have any, the shareholders could withdraw their investment at any time (the fund would have to pay them back): after the purchase of the holding, the shareholders cannot withdraw their investment for typically from 3 to 7 years. This block is called the "lock-up period" and is very reminiscent of the IPO Lock-Up in the IPO. Finally, hedge funds are open-end funds as they can theoretically issue an infinite number of shares and raise money indefinitely.

1.6.2.2 EXTERNAL / DEBT

It was found that in the search for funds, European SMEs, especially Italian ones, mainly turn to traditional forms such as bank loans. The main cause of this is recognised in the fact that the small size of the companies and the family governance culture have led to an exaggerated development of the commercial bank, to the detriment of the spread of a credit capital market (Iacomini, 2018).

While internal financing can be seen as an investment of which returns are not decided a priori, therefore dependent on the variability and uncertainty of the project, the external financing solutions through debt have a pre-determined return, proportional to the risk of the project.

Indeed, those who invest through internal finance usually put more effort and dedication than debtholders to ensure that their initial capital grows with the company's expansion.

From this point of view, it may be said that the debtholders only take care to verify the feasibility and success of the project without paying too much attention to maximise their contribution, so while internal finance can be seen as an investment, external finance appears to be more of a loan without ulterior motives.

Indeed, while shareholders are residual and play a crucial role in the voting meetings of the company, debtholders are not owners of the firm and are entitled to a return that is contractually known through the payment of an interest rate, that represents the percentage rate of profitability on capital that they have lent.

However, external financing through debt issuance has two advantages: the key to their widespread use, the leverage effect and the tax shield.

The leverage effect is briefly explained by Modigliani & Miller's Trade-off Theory of Leverage: *“as the proportion of debt in the firm's capital structure increases, the profitability expected by the shareholder increases in a linear function, under the assumption that the return on the investment is larger than the interest rate on debt”*.

The concept of the tax shield derives from the fact that cash flow distributed to debtholders is tax-deductible, whereas cash flow distributed to equity holders is not. Consequently, a company that issues debt capital can maximise the expected return of the owners by exploiting the leverage effect, thanks to the lower interest rate on debt compared to the return of the project, and mainly due to the fact that through external finance the company can benefit from the tax savings created from the tax shield.

Therefore, it would seem that using debt is always convenient and that the more you use, the better it is, but this is not the case.

A firm will not increase debt indefinitely because tax savings are limited (e.g., if a company shows a Gross income equal to zero, the company will not pay taxes), and most countries impose restrictions on the deduction of interests like Italy (anti-thin-capitalisation rules).

However, the most important aspect is that when debt is too high compared with equity capital, several problems and costs arise:

- **Cost of financial distress:**

As the debt increases, the probability of a default increases and the company may not be able to pay back debt. When a default occurs, all the assets of the firm are sold and

creditors receive cash collected according to a hierarchy: suppliers, employees, debtholders, and residually shareholders. Even if assets are not sold, the debt must be re-negotiated. This implies a number of costs, such as legal fees, liquidation costs, image damages, tight payment conditions imposed by suppliers and other financiers. Such bankruptcy costs are discounted in advance, even if the company at the current moment is not in default, but it is getting close, and the probability increases.

- **Agency costs:**

They refer to the Principal-Agent problem. The Agent is delegated by the Principal (in our case the debtholders invests in the company managed by equity investors), but the Agent may act opportunistically maximising his interest and not the Principal's interest. The main reasons are:

- Information asymmetry: the Principal is not able to totally control the Agent or correctly judges his actions
- Moral hazard: the Agent has an incentive to maximise his utility function

Agency costs do generally characterise the relationship between debtholders and equity holders (and also between controlling and non-controlling shareholders), but if the company is close to default the problems are more relevant.

Finally, there is an inverse u-shaped curve that relates debt amount and company value, there is a maximum level of debt that maximise the value for shareholders and all stakeholders.

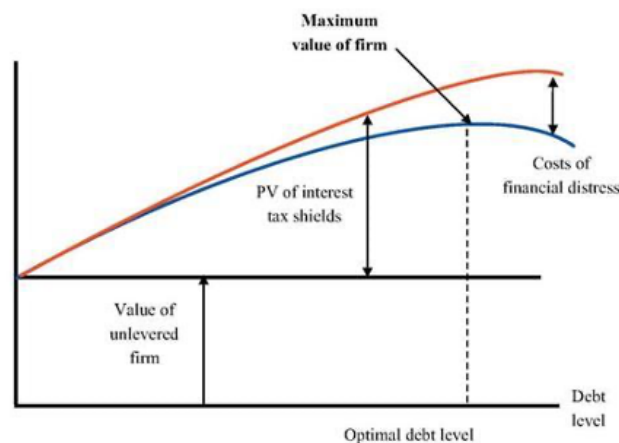


Figure 7 - Graph of the relationship between firm's value and level of debt

In *Figure 7* there is a relation between debt and the firm's value, and it is reported the optimal amount of debt that maximises the value of the firm. It is the best trade-off between tax savings and the cost of debt.

However, the optimal amount of debt is quite impossible to be theoretically calculated through a formula because it depends also on the characteristics of the firm and on how the company is seen in the eyes of the market and from the perspective of rating and credit institutions in terms of probability of default.

BANK LOAN

This is the most traditional form of financing. It represents the more basic, ancient, and widespread forms of support towards companies.

Indeed, it is factual that European SMEs, especially Italian ones, while searching for funds prefer to turn to traditional forms such as bank loans. This is true even for the majority of all other companies, mainly due to the family governance culture and the inertia of tradition that blocks the transition to more innovative and recent solutions, and above all tailor-made solutions more suited to the specificities of the company.

These are the main reasons why commercial banks still play a fundamental and primary role in the access to credit.

Bank loans do not provide ownership right, but they allow the investor (mainly commercial banks and credit institutions) to receive a pre-determined return through the principal and interests' payment, contractually defined at the moment of the debt issuance. This proves the possibility of knowing a priori the profitability of the investment.

Debtholders have an advantage over shareholders, in case of bankruptcy they enjoy greater seniority. This means that if the company is in default, they are remunerated before all the owners.

The main advantages of bank loan financing, like all other forms of debt financing, are those characterising ones of the external finance. Thus, the leverage effect and the tax shield increase the expected profitability for the shareholders.

However, there are drawbacks quite important to the company, especially SMEs, when it decides to apply for a bank loan.

The first one is related to the interest rate charged. Usually, the interest rate of a traditional bank loan is quite high, and it is proportional to the level of risk perceived by the bank or the credit institution.

The second and most significant disadvantage is related to guarantees and collateral. Indeed, banks and credit institutions require the company to show great guarantees and demonstrate to have enough assets that are valuable to be used as collateral in the event of default. Only by

respecting these requests the company can get a loan and cannot be rationed by the bank or credit institutions.

These conditions are exaggeratedly prudential, especially for SMEs that most of the time do not have enough guarantees or collateral and which are seen as highly risky by banks that do not trust in debt repayment.

In this paragraph bonds, that have practically the same nature as bank loans, are also briefly presented. A bond is a certificate showing that a borrower owes a specific sum. To repay the money, the borrower has agreed to make interest and principal payments on designated dates. There are many types of bonds in the capital markets, for instance, corporate bonds and sovereign bonds. The main discrimination among issuers is the risk of insolvency. In fact, bonds may be disregarded and go into default.

The main difference from bank loans is that while loans target a systematic and financial entity, bonds can target virtually anyone, as the total value of the debt is broken down into small packages and sold freely on the market at a price linked to the perceived risk.

SUBSIDISED LOANS FROM PUBLIC BODIES (e.g., in Italy ICE, SACE, and SIMEST)

The subsidised loans are public loans mainly granted by state entities aimed at recovering the national economic system. Thus, they are aids for those companies that cannot afford to take advantage of a bank loan and without the injection of liquidity would find themselves in a negative situation, perhaps unable to seize the opportunities of investment that could have been the key to the recovery and growth of the company itself.

Like all debt financing solutions, they enjoy leverage effect and tax shield.

Virtually identical in nature and definition to bank loans, the only differences, which are also the main advantages, are related to the terms and conditions of interest payments and repayment of the principal amount.

Indeed, this type of loan is advantageous in the eyes of the borrowers for two main reasons.

The first one is related to the interest rate charged significantly lower than the interest rate typical of a normal bank loan.

This lower rate makes it possible not to have to drastically increase the company's risk profile and above all, it gives the possibility of not running into negative situations in which there is a lack of liquidity or the pressure to pay high interest impacts on the cash flow statement.

Something that can make the company be dominated by the banks or even, to the extreme, generates negative cash flow that immediately determines the company's bankruptcy.

The second advantage and the most crucial one is that these subsidies often have a percentage of the value of the loan that is non-refundable which therefore must not be repaid, as a gift for the development of your project.

This feature is the one that most attracts companies to apply for this type of financing.

There are also public loans to create guarantees and collateral that can then be used to apply and request a loan.

In fact, these loans are often guaranteed by the state, which entails an additional advantage, that is the signalling effect of having a state behind you that acts as a guarantor. This causes the company to be seen as stronger and reduces the likelihood of bankruptcy and reassures the market's perception towards the enterprise.

The only barriers are represented by the many conditions that are imposed to obtain the loan. These rigid characteristics that a company must own are a strong barrier to entry that drastically skims the number of applicants and represents the strength of these tools.

Indeed, the initial conditions of economic strength and financial prosperity make the investment much more effective and more likely successful, while the requests for feasibility studies and in-depth analysis of the project allow the company to structure the investment to be subsidised in a linear and profound way.

LENDING CROWDFUNDING

This is the external version of equity crowdfunding, and it is characterised by all the features of external financing solutions.

It therefore benefits from the leverage effect and tax shield, characteristics which, as already mentioned, attract entrepreneurs.

Lending crowdfunding is defined as an open call, mostly through the Internet, for the provision of financial resources in exchange for an interest in the amount lent.

This type of financing exploits the concept of community, collecting a modest amount from a crowd of small retail investors instead of requesting and obtaining financing from large systemic entities that can exploit their greater bargaining power by imposing excessive conditions on the loan.

From the point of view of the retail investors, this “investment” is small and allows them to diversify their investment portfolio.

Basically, it is as if the bank is cut off as an intermediary and each investor individually decides how to invest or lend his or her own deposits or savings.

At the same time, by adding up all the small contributions, the company can raise the total capital necessary for the achievement of its project.

But, while for equity crowdfunding you become owners and therefore suffer the variability and uncertainty of the project and of the whole company in which you have invested, in lending crowdfunding the investor already knows initially what the profitability of his contribution will be because it is pre-determined and almost entirely certain.

Therefore, for the applicant company, it represents a possibility to finance itself at reasonable rates, not suffering the enormous bargaining power of the banks, and still benefiting from the advantages of an external financing solution of tax shield and leverage effect.

While for an investor it represents the possibility of investing a small sum aware of obtaining a practically certain return in exchange, and also have the possibility to better diversify the individual investment portfolio.

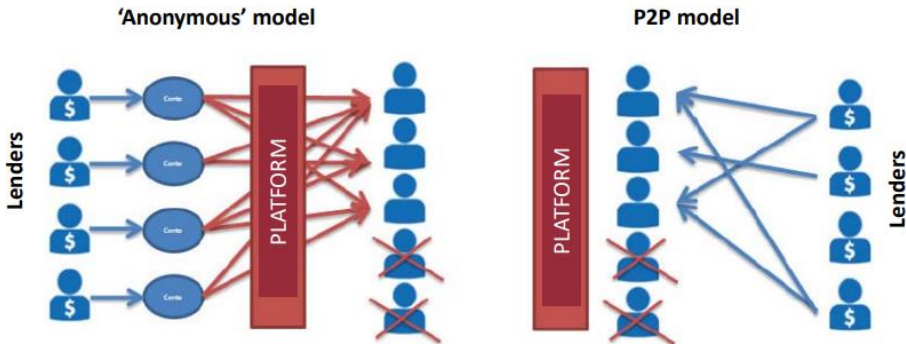


Figure 8 - Lending crowdfunding models

Concluding in figure 8 the two methods of lending crowdfunding are presented, the first method, called anonymous, in which the platform, acting as an intermediary and “container” of the capital, decides autonomously to whom and therefore to which project to assign which sum, thus making anonymous the contribution.

While in the second case, called peer-to-peer (P2P), it is directly the small investor to decide who to contribute, always through the platform which continues to be the “container” of capital.

1.6.2.3 SUMMARY

To summarise the various forms of funding have been presented in this section. Moving from the internal financing solution to the external, analysing the main disadvantages and advantages of each form.

These presented are, in general, all the forms of financing that a company looking for financial resources can draw on.

While in this section no distinctions have been made based on the size of the applicant company, in the next sections, the analysis will be also differentiated according to the internal characteristics of the various companies.

Furthermore, the specific characteristics of financing linked to export companies, and how these companies traditionally use these tools, have not been completely addressed in this general financing list.

Through the analysis of the little literature on the subject, the implications related to digital and traditional export concerning the types of financing presented in this part will be introduced in the next sections.

This section serves the reader to understand the various forms of financing and the main pros and cons so that they can better understand what will be discussed once they are analysed in relation to exports.

In fact, the literature section will be the key point of the thesis, because the hypotheses on the link between financing and export performance will be developed starting from the extant literature and the interviews and then verified in the subsequent sections.

1.6.3 FINANCING SOLUTIONS OFFERED BY SACE, SIMEST, AND ICE

The various financial and operational supports offered by Italian public bodies will be specifically presented in this paragraph.

In particular, the three main Italian entities that offer services aimed at supporting export activities will be analysed.

These public bodies are SACE, SIMEST, and ICE. They provide solutions and aids specifically for Italian exporting firms, trying to help those companies in a stalemate in the growth path.

Indeed, these public bodies particularly help companies that have serious problems in accessing bank loans and consequently SMEs which are the most financially constrained and credit rationed by the banking system.

The main problem, that not only SMEs encounter when applying for a loan, is that banks ask for excessive guarantees and collateral that are often not owned by the same companies.

The problem of lack of financial resources could jeopardise the survival of these companies that find themselves unable to seize the expansion opportunities offered by the market and by their business operations.

SACE is the acronym for “*Sezione speciale per l'Assicurazione del Credito all'Esportazione*”, a state body established in Rome in 1977. Over the next forty years, it evolved, until it became a joint-stock company in 2004, controlled by the Ministry of Economy and Finance.

The company is active in export credit (in fact it stipulates export credit insurance), credit insurance, investment protection, financial guarantees, and factoring. It is 100% owned by Cassa Depositi e Prestiti (CDP), the group which try to reduce the risks to which Italian companies are exposed in their international transactions and in investments abroad.

SIMEST is the company of the Cassa Depositi e Prestiti Group which since 1991 has supported the growth of Italian companies through the internationalisation of their business. Shareholders are SACE, which holds 76% of it, and a large group of Italian banks and business associations. It supports the companies throughout the expansion cycle abroad, from the first evaluation of opening to a new market to expansion through direct investments. It operates through financing for internationalisation, support for export credit, and participation in company capital.

SIMEST, together with SACE, is part of the CDP Group's Export and Internationalisation Hub, a single point of contact for companies that want to compete and grow internationally.

The ICE agency, *Agency for the promotion abroad and the internationalisation of Italian companies*, is an Italian agency whose main purpose is to promote foreign trade and Italian exports.

ICE operates to support Italian exports, investments around the world and to encourage foreign investments in Italy.

Since SIMEST is 76% owned by SACE, these two entities are analysed together with regard to the services offered.

Regarding ICE, this offers various services and divides them into *services to know*, which aim at discovering markets, sectors, and opportunities and *services to grow*, aimed at entering new markets.

The services offered by the three public bodies are the following:

- Subsidised debt financing: subsidised and state-guaranteed loans that fall into the category of external debt financing. See the dedicated section with the relative advantages and disadvantages.
- Equity financing: internal financing methods in which the public body becomes the owner buying part of the shares of the company.
- Credit Insurance: service aimed at ensuring the credit of a company towards customers (business or consumer), a form of financial insurance that is part of supply chain finance solutions.
- Operational consulting: general operational consultancy services (e.g., online consultation by reservation, education to export, advisory, and sales information).
- Support services: assistance, support, and comparison services (e.g., participation in tenders and dispute resolution).
- Risk analysis and protection: risk management services (e.g., Surety guarantees and construction protection as yard covers, and property covers).
- Marketing services: services such as market analysis, promotion abroad, and research of customers and foreign partners.
- Guarantees and collaterals: guarantee services aimed at providing collateral to the company which will thus be able to take advantage of a bank loan backed by the state.

The division of the previous services between the two public bodies is shown in the table below.

Type of service	SACE / SIMEST	ICE
Subsidized debt financing	X	X
Equity financing	X	
Credit Insurance	X	
Operational Consulting	X	X
Support Services		X
Risk analysis and protection	X	
Marketing services		X
Guarantees and collaterals	X	

Table 1 - Division of public services for export

Some interesting stories of collaborations between companies and SIMEST are presented below, which can be an example of the help these public bodies provide (Sole 24 Ore, SIMEST, 2020).

1. **CICORIA:**

Collaboration to expand its range of action across borders.

In particular, a loan of € 72,000 with 40% non-repayable, to participate in EIMA (Esposizione Internazionale di Macchine per l'Agricoltura e il Giardinaggio) international exhibition of agricultural machinery

2. **EUROSTYLE:**

Subsidised loan for the development of an E-commerce with a maximum amount of € 450,000, of which € 100,000 is non-repayable. The goal is to reach Brazilian customers directly through an e-commerce portal increasing margins by 50%.

Furthermore, € 600,000 of equity financing, half of which non-repayable to capitalise the company by increasing the share capital.

3. **ITALTRACTOR:**

Financing of € 2.5 million (subsidised loan), of which € 100,000 non-repayable for commercial insertion in the Australian market.

This is the SIMEST's tool to facilitate the launch and the spread of new products and services or the acquisition of new markets for existing products and services, using permanent structures.

4. LAICA

A financing of € 800,000 for capitalisation of which € 100,000 is a non-repayable fund (equity financing).

The resources will be used to support the 2020-2023 plan which provides for an increase in production capacity.

CHAPTER 2: LITERATURE REVIEW

This chapter systematically reviews the extant literature to understand the current state of academic and business research on export and financing solutions and how these two concepts relate to and impact company performances.

2.1 LITERATURE SEARCH STRATEGY

In this section of the research, a systematic literature review is conducted of the studies published so far.

In this paragraph, the method by which the various articles are collected and selected was shown.

The arguments of these studies were dictated by the keywords on which this research is based and analyse the relationship between export and financing, given the goal to understand how this rapport can influence the performances of a company.

Moreover, the effect that digital export has on this relationship and how it influences the financing solutions is also analysed, with the further aim of understanding the impacts on performance depending on whether an offline or online export is used.

A systematic literature review (SLR) is “a systematic, explicit, and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work produced by researchers, scholars, and practitioners” (Okoli & Schabram, 2010). This type of review is characterized by several steps, as recommended by (Tranfield, Denyer, & Smart, 2003)

The first step consists of identifying relevant keywords consistent with the purpose of this research.

The main keywords used are *cross-border economy*, *digital export*, *digital export financing*, *e-export finance*, *e-commerce financing*, *export financing platform*, *financing SME*, *e-commerce marketplace export*, *e-commerce marketplace*, *export PMI*, and *digital internationalisation*.

The databases that have been used were Scopus¹ and Google Scholar², which are search engines for academic and economic articles, which allow the personalisation of searches.

The procedure used in the research was very similar for both databases and started entering the keywords which were constructed in queries with Boolean and proximity operators.

As far as Scopus is concerned, once the initial results of the query have been obtained by typing the TITLE-ABS-KEY, the search can be customised by adding filters and taking advantage of the inclusion and exclusion criteria with the AND, OR functions.

In particular, the two main filters that were used concern the year and the subject area, limiting the search to articles published after 2010 and considering the fields of Economics, Econometrics, Finance, Business, Management, Accounting, and even Engineering.

Furthermore, only the reports written in English were considered with some exceptions of very few articles in Italian.

	Cross-border economy
Layer 1	TITLE-ABS-KEY ((cross-border AND economy) OR (cross-border AND e-commerce))
Layer 2	AND (firm AND financial)
Filter 1	AND (LIMIT-TO (SUBJAREA, "ECON") OR LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ENGI"))
Filter 2	AND (LIMIT-TO (LANGUAGE, "English")
Filter 3	AND (LIMIT-TO (SRCTYPE,"j") OR LIMIT-TO (SRCTYPE,"b"))
Filter 4	AND (LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT-TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUBYEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012) OR LIMIT-TO (PUBYEAR , 2011) OR LIMIT-TO (PUBYEAR , 2010))
Number of results	152

Table 2 - Structured query for cross-border economy

Table 2 shows an example of structured query for the cross-border economy, the same procedure has been applied for all the other keywords.

¹ Scopus is a database of summaries and citations for articles in research-related publications. The database was created in 2004 by the Elsevier publishing house.

² Google Scholar is a freely accessible search engine that, using specific keywords, allows you to identify texts from academic literature such as peer-reviewed articles, graduate and doctoral theses, books, preprints, summaries, reviews, and technical reports of all sectors of scientific and technological research.

The result obtained after applying these filters was the first set of papers represented by the first number in the *Table 3*.

Keywords	# Result	By title	# Select by abstract
cross-border economy	152	34	4
digital export	71	19	7
digital export financing	14	2	1
e-export finance	0	0	0
e-commerce financing	48	21	7
export financing platform	10	2	1
financing SME	70	36	13
e-commerce marketplace export	5	3	1
e-commerce marketplace	16	3	1
export PMI	15	2	0
digital internationalisation	107	21	3

Table 3 - Scopus literature review process

After that, a manual analysis of relevance and affinity with the research topic was carried out on the titles of the articles and some were excluded, arriving at the number in the second column of the *Table 3*. Finally, to narrow the field and analyse reports focused on the topic of this thesis, the number of papers previously identified was skimmed twice through the reading of the abstracts so as to arrive at the final number of articles to be read, represented in the third column of *Table 3*.

This last final procedure is shown in the *Figure 9*, through which every single article has been classified into "to be read" or "excluded".

Keyword	Title	Link	Author	Year	Abstract	Value 1	Value 2
cross-border economy	A Panel Analysis on the Cross Border E-commerce Trade: Evidence from ASEAN Countries	https://www.koreascience.or.kr/article/JAKO201915658234895.page	HE Yugang, and WANG Jingnan	2019	Along with the economic globalization and network generalization, this provides a good opportunity to the development of cross-border e-commerce trade. Based on this background, this paper sets ASEAN countries as an example to exploit the determinants of cross-border e-commerce trade including the export and the import, respectively. The panel data from the year of 1998 to 2016 will be employed to estimate the relationship between cross-border e-commerce trade and relevant variables under the dynamic ordinary least squares and the error correction model. The findings of this paper show that there is a long-run relationship between cross-border e-commerce trade and relevant variables. Generally speaking, the GDP(+) and real exchange rate(-export & +import) have an effect on cross-border e-commerce trade. However, the population (+) and the terms of trade (-) only have an effect on cross-border e-commerce import. The empirical evidences show that the GDP and the real exchange rate always affect the development of cross-border e-commerce trade. Therefore, all ASEAN countries should try their best to develop the economic growth and focus on the exchange rate regime so as to meet the need of cross-border e-commerce trade development.	0	0
	Motivations for selecting cross-border e-commerce as a foreign market entry mode	https://www.scienceirect.com/science/article/pii/S001985018308071	Xiaoguang Qi, Jin Hooi Chan, Junyan Hu, and Yifan Li	2020	This article is an in-depth case study examining a foreign firm deploying Cross-border E-commerce as an entry mode to the Chinese market, integrating services provided by a major technology provider and a leading marketplace platform. Selecting which foreign market entry mode is an important internationalization strategic decision of firms and could have a considerable impact on the firm's performance. The CBEC mode emerges as a plausible choice: e-commerce has grown rapidly in many markets, particularly in China. Additionally, foreign firms face high transaction costs due to unfamiliar consumer behavior and institutional barriers. It is especially difficult for SMEs. This study deploys transaction cost theory as the underpinning framework to explain the motivations for selecting a CBEC entry mode. The findings suggest that CBEC could reduce uncertainties and opportunistic behaviors, while increasing trust. Foreign firms could lower their asset investment in physical shops, staff requirements and training, logistics and warehousing; these supports are provided by marketplace platforms. This new entry mode also takes advantage of the involvement and the dependency of intermediaries. In addition to providing market knowledge, technology providers help to build trust and reduce risks and thereby transaction costs, despite the high transaction frequency of e-commerce.	1	2

Figure 9 - Double skimmed process on abstracts

This was done through a colour hierarchy (red: not interesting; yellow: could be interesting; green: interesting) and comparing the opinions of the two thesis researchers about the abstract to actually understand if the article in question was suitable. In addition, for each abstract that was read, both authors of this thesis made a personal comment highlighting possible insights that could be used in the analysis of the subject matter of the thesis.

The same procedure was applied on Google Scholar, where the filters were based on the year, articles published after 2010, and through the internal algorithm of the database according to the relevance detected with the keyword.

In fact, by ordering the results by relevance, the titles that were most in line with the thesis were selected.

To focus the attention even more, the same final double filtering procedure was applied by reading the abstracts in question to arrive at the number of final reports to be read, the third number reported in the following table.

Keywords	# Result	By title	# Select by abstract
cross-border economy	30	4	2
digital export	50	12	3
digital export financing	46	8	0
e-export finance	48	5	4
e-commerce funding	10	1	0
export financing platform	55	7	0
financing SME	50	7	5

e-commerce marketplace export	32	3	2
export funding resources	16	1	1
export PMI	70	8	4
digital internationalisation	60	11	3

Table 4 - Google Scholar literature review process

Moreover, to further expand our base of articles, a search was made through the bibliography of the various texts and theses selected.

In fact, once it was understood where to look and which topics to analyse in more depth, through the citations found in the articles, further papers were selected that investigate relevant issues relating to the thesis in a targeted manner.

In the next section, the content of the selected articles will be presented and discussed concerning the research questions of this thesis which are the relationship between funding and exports and how this impacts on performances.

2.2 LITERATURE REVIEW

Despite their crucial importance, the financing pillar of the export strategy has not been analysed in-depth in the existing literature.

Almost all the studies refer to the characteristics of the financing linked to exports, and therefore to the internal characteristics of the companies, while they do not focus on explaining what impacts the financing has on export performance.

In this paragraph, all the extant studies in the academic and business literature concerning this export pillar will be presented.

2.2.1 THE RELATIONSHIP BETWEEN EXPORTS AND FINANCING

The link between export and financing is analysed hereafter, summarising the most important information found in the articles selected through the process of the Literature search strategy cited above.

Starting from the existing literature, it has been noted that the strategic factor of financing is an aspect that guides the internationalisation process.

“Financial resources are particularly crucial for the implementation of internationalisation strategies” (McNaughton & Bell, 2004).

Access to finance may be both a determinant and an outcome of internationalisation; indeed, according to Manova (2013) financially developed economies export relatively more in those sectors that demand more external capital. Therefore, it is crucial that there is an efficient and functioning financial sector. In this regard, according to Klein and Olivei (2008), a liberalisation of the capital account would lead to gains in the scope and efficiency of the national financial sector as it exposes the domestic credit market to international competition, which may increase the pool of available savings. So, from a policy point of view, removing restrictions on cross-border capital flows could alleviate domestic credit constraints and thereby enhance access to external finance for exporters, with a larger gain in developing countries, where the financial market tends to be underdeveloped, and there are scarce capital resources to engage in economic activities (Gideon Ndubuisi, 2020).

According to the literature, the type of financing must vary according to the mode of internationalisation adopted by the company.

Initially, a step-by-step strategy was used for internationalisation, but this strategy was later questioned in favour of a more dynamic and less structured process. It is clear that the two modes also require a different use and type of financial resources, moving from a financing structure that manages to provide constant resources diluted over time to another that manages to make larger amounts of capital flow when necessary and in a more occasional manner. A particular consideration has been given to Born Global firms, which, because they have been internationalising since their inception, would face considerable difficulties if they were to finance themselves through an equity-only model.

In addition, there are some firms for whom the development of relationships is fundamental to the internationalisation process and export activities: according to this view, the emphasis is on the ability to establish relationships rather than on the more operational aspects. In this context, however, funding is necessary, although often overlooked and underestimated, in order to build the right environment in which the company can develop its relationships (Dethine, Enjolras, Monticolo, 2020).

Previous studies have shown that the lack of financial resources can be a major impediment to a company's international aims, as these resources are a crucial driver for export

participation (Bellone, Musso, Nesta, & Schiavo, 2010); (Chaney, 2016); (Faucegna, 2015); (Greenaway, Guariglia, & Kneller, 2007).

Kaleka (2002), Minetti and Zhu (2011) claim, through empirical evidence, that the presence of a strong financial capital constitutes an encouragement for companies to start exporting; this thesis is also supported by the study “*Effect of the Internet on Services Export Diversification*”, particularly with regard to service export diversification, which can be influenced by various factors: indeed financial development, improved FDI inflows, increase in the size of the population and education level are positively associated with a diversification in services export (Gnangnon, 2020).

Moreover, the financing pillar is also crucial and vital throughout the life cycle of an exporting company and not only when entering a foreign market.

As regards access to finance, it is important to note that this problem affects small companies more severely: while the majority of firms with a turnover of less than USD \$16,000,000 say that access to financial instruments is a potential obstacle to their operations, only 33% of large firms consider that access to finance could limit their operations (Giral & Navia, 2017). This is also supported by the study “*Benchmarking Firm-level Resources, Capabilities, and Postures Driving Export Performance of SMEs*” which states that expansion into foreign countries requires investment (i.e., promotion, new sales teams). However, collecting funds is harder for small firms due to their limited equity and securities, which constrains their options to enter new markets (Mischensky, 1998). Because of the financial limitations of SMEs, investments also need to break even faster, which reduces the intensity of export activities (Hutchinson et al., 2005). Thus, more financial resources do not boost export performance per se, but lack of funds definitely inhibits SMEs to engage in export activities (Celec, 2016).

In any case, exporters face longer sales conversion cycles and therefore need more working capital in their life cycle.

“Indeed, financial performance (in terms of internal liquidity so a high availability of working capital and tangible assets) is positively associated with export participation” (Ayob, Ramlee, & Rahman, 2015). For this reason, working capital schemes exist to provide firms with funds to operate and generate new services and goods for international markets. Factoring and production loans can be listed as two of the main instruments (Giral & Navia, 2017).

Therefore, only those who are financially profitable would remain exporting, while the rest would have withdrawn.

Internationalisation means, among other barriers and other extra costs, higher agency costs for investors which refers to the Principal-Agent problem, characterised by information asymmetry and moral hazard, that arise both during the entry into a new foreign market, but above all, characterise the entire export path.

“The reasons are twofold: first, it increases complexity due to a higher variety of external conditions” (Sanders & Carpenter, 1998); and secondly, “internationalisation relates to higher risks because of the uncertainty associated with it” (Abor, Agbloyor, & Kuipo, 2014).

Concerning financing solutions for international activities, a company can take advantage of different options ranging from retained profits through debt (mainly by banks or public entities) to get to external equity (i.e., capital increases).

Given that financial capital is a determining factor for internationalisation, only companies with an adequate level of funds are able to offset all costs, become exporters and remain profitable (Das, Roberts, & Tybout, 2007; Minetti & Zhu, 2011), and since internal finance is the cheapest form of financing (Fama & French, 2002) this is crucial for export strategies because insufficient financial resources emerge as a barrier, preventing companies from carrying out an export process.

“Empirical studies also show that the capital health of a firm, as measured by its internal liquidity and leverage, is significant for predicting the propensity for exporting” (Greenaway, Guariglia, & Kneller, 2007).

Therefore, a company's success in its internationalisation strategy can be explained by having more internal financial resources than its non-exporting peers.

“Indeed, exporters have better internal financial resources than non-exporters, which allows them to pursue an export strategy” (Ayob, Ramlee, & Rahman, 2015).

Generally, it is more expensive for companies to raise debt than use retained profits due to information asymmetries between lender and borrower, a negligible problem in the case of the use of internal finance.

Indeed, as Fama and French (2002) suggest, in their pecking order theory, the cost of financing increases with asymmetric information.

This is caused by the monitoring process being more stringent and consequently more expensive, in addition to the fact that if there are asymmetries of information, the lender perceives greater risk and charges greater interest.

This aspect is more marked for SMEs than large companies (e.g., (Chittenden, Hall, & Hutchinson, 1996)), since as claimed by McNaughton and Bell (2004) they have less elaborate reporting systems and are therefore less able to be transparent in the eyes of debt providers and provide information to reduce information asymmetries.

As internationalisation is related to higher agency costs, this is particularly crucial for internationally active SMEs because of their opaqueness.

Another line of previous studies focused on the classification of the characteristics of the debt that export companies usually have.

In particular, these studies analyse which type of debt is most used, diversifying between short term and long term.

“The empirical evidence on the impact of multinational status on the financing policies of large listed firms shows that internationalisation results in a lower level of long-term debt and a higher level of short-term debt for multinational corporations (MNCs) than that for comparable domestic corporations (DCs)” (Brugman, 1996);(Doukas & Pantzalis, 2003);(Fatemi, 1988).

As far as SMEs are concerned, the extant literature seems to provide little information about them, this is mainly attributable to the limitations on the availability of data on the export-import flow of these companies.

However, Maes, Dewaelheyns, Fuss, and Van Hulle (2019) document that exporting SMEs exercise greater leverage than their non-exporting peers. This is because exporting companies rely more on short-term debt.

Therefore, it was noted that there are no differences based on the size of a company, from the point of view of the percentage of short-term debt.

The higher reliance of exporters on short-term debt financing directly results from their higher working capital needs. Exporters face much longer cash conversion cycles, as international sales transactions are characterised by higher completion times than domestic sales transactions. (Maes, Dewaelheyns, Fuss, & Van Hulle, 2019).

Indeed, summarising these concepts expressed by the authors, (Vos, Yeh, Carter, & Tagg, 2007), on the one hand, exporters solve their higher need for working capital financing by carrying more short-term debt on their balance sheets, on the other hand, loan maturities are shortened by the lenders (mainly banks or public entities) to mitigate the problems associated with the exporter riskier borrower profile.

Moreover, the same studies investigate whether there is a characteristic link of export companies between debts and short-term assets.

Apart from having more need to finance working capital due to the nature of their business model, exporters seem to have more access to debt finance than non-exporter peers due to the greater availability of pledgeable short-term assets.

Within exporting firms there is a stronger association between short-term assets and the amount of short-term financial debt, and this is more pronounced for firms with high export intensity and firms that target more distant and riskier destinations (Maes, Dewaelheyns, Fuss, & Van Hulle, 2019).

Thus, the effects of short-term assets and the consequent effects on total and short-term debt accessibility are significantly positive for internationalisation strategies.

Finally, export-intensive firms that have more short-term collateral also have higher total leverage, and this indication is in line with the Trade-Off Theory, i.e., there is a reduction of information asymmetries due to the availability of collateral that allows to borrow more. (Maes, Dewaelheyns, Fuss, & Van Hulle, 2019).

However, export operations require a substantial investment which often cannot be supported by internal financing.

Hence, searching for external capital, especially for SMEs, is essential for planning an export strategy (Vos, Yeh, Carter, & Tagg, 2007).

Literature in management studies suggests that for firms a stimulus to export participation is identified in the external financing agents from private banks (Leonidou, 1998).

Therefore, there is a very precise pattern for exporters, they have a stronger linkage between short-term assets and short-term debt than non-exporter peers, which makes it easier for exporters to access external finance.

“Limited capital from outsiders is more prevalent among non-exporters and has a negative impact on their export decisions” (Bilkey, 1978), (Leonidou, 1995), (Zia, 2008).

Although in this case, this condition appears to be invalid for all companies of different sizes and as some authors argue, exporting SMEs do not enjoy greater access to external financing. In fact, as (Tannous 1997) finds, the risk of non-repayment of loans for exporting SMEs is perceptibly high since they are highly dependent on cash inflows from international transactions, thus putting their ability to raise outside capital at risk.

However, keeping to the most recent literature sources, these generalise the concept of the best access to finance for all exporting companies without distinction.

Thus, “exporters are less constrained by external financing than non-exporters” (Ayob, Ramlee, & Rahman, 2015).

Moreover, through some studies, it has been noted that there is a macroeconomic link in which the strong dependence of exporting companies on short-term (asset-backed) financing and commercial financing brokered by banks can be an explanation for the collapse of trade during periods of the credit crunch.

In fact, it has been shown how restrictive policies by credit institutions and banks have negative impacts on exports by reducing transaction volumes (Ahn, Amiti, & Weinstein, 2011; Amiti & Weinstein, 2011; Paravisini, Rappoport, Schnabl, & Wolfenzon, 2015) particularly for those firms operating in sectors that are highly dependent on financing.

Switching to public subsidised loans, the extant literature seems to support their importance for exporting companies which also get them more easily.

“Firms that export and therefore compete on international markets are also more likely to receive and use subsidies” (Chies, Podrecca & Rossi, 2020).

Of particular interest is the relationship between public subsidies and exports; according to Chies, Podrecca and Rossi (2020), smaller firms benefit more from this instrument than larger ones, mainly in terms of survival, employment and sales turnover, while the effects on productivity are unclear.

It is also important to state what the literature reports about the probability of obtaining public subsidies for companies; according to Aschoff (2010), one of the key factors in the probability of accessing public support is having received public support in the past. This thesis is also supported by Chies and colleagues who, having ascertained the existence of a direct link between the use of public funding and past experience in the use of subsidies, suggest that there is a learning-by-doing effect in the participation in funding programmes as a result of the selection rules of funding agencies or policies that tend to favour certain groups. Disagreeing with this are Gustafsson et al. (2019) who find that subsidies tend to be allocated to less productive firms. Moreover, a third factor that positively influences the likelihood of receiving and effectively using public funding is the propensity of firms to invest in R&D and the innovation experience they possess (Chies, Podrecca & Rossi, 2020). Finally, it has been

shown that although in general the sector to which firms belong is not relevant to the probability of using subsidies, firms operating in industry are more likely to use subsidies than those operating in services (Chies, Podrecca & Rossi, 2020).

Financial constraints act as a barrier to export participation. Better access to external financial resources increases the probability of exporting and shortens the time before firms decide to serve foreign customers. Indeed, given the sunk costs of entering foreign markets through a process of internationalisation, public intervention can help those efficient but financially constrained firms overcome market imperfections (high agency costs, asymmetric information, and moral hazard). (Bellone, Musso, Nesta, & Schiavo, 2010).

The innate presence of market imperfections, which increases in export strategies, can be resolved through subsidised credit by public entities. However, this dynamic seems to be more marked for some types of companies.

The removal of subsidised credit has different impacts depending on the nature of the company. In fact, this phenomenon causes a significant drop in exports for private small companies, while for listed and large companies, exports are not impacted. This difference denotes that listed companies, in general, are not financially constrained. (Zia, 2008).

There are strategic export dynamics that can characterise access to finance and the literature on this subject is based on the concept of signalling.

In fact, the main problem today for a company looking for funding is being rationed and therefore undergo adverse selection. This is generated when, due to information asymmetries, the lender believes that the company is too risky and therefore proposes excessive terms and conditions or even refuses to finance. This problem can be solved with the signalling that reassures the lenders about the success of the operation.

Based on this concept Song, Yang, and Yu (2020) argue that an exporting company through the creation of a solid international supply chain network can overcome the problems of information asymmetry.

This connects to all supply chain finance (SCF) solutions for exporters that exploit the concept of supply chain network. “SCF is the inter-company optimisation of financing as well as the integration of financing processes with customers, suppliers, and financial service providers (FSPs, which promote cash flow services in the supply chain) in order to increase the value of all participating companies and facilitate the management of the transaction, physical, and

information flows within a supply chain” (Hofmann, 2005; Pfohl and Gomm, 2009; Camerinelli, 2009; Lamoureux and Evans, 2011; Caniato et al., 2016).

Along the path of export, joining a business group allows you to share the risk and overcome market friction as information asymmetries, reducing market uncertainty in the eyes of banks and, therefore, obtaining more favourable terms on loans (Seung & Lee, 2020).

Moreover, in order to mitigate asymmetric information, “companies may rely on exporting activities to overcome the effects of credit constraint.” (Motta, 2018).

Project quality, through export sales, can signal the soundness of the company. Since only firms with high productivity and low marginal costs can survive the high fixed costs associated with entering foreign markets, having a higher percentage of export sales implies the possibility of higher profitability, especially for SMEs (Golovko & Valentini, 2011).

Campa, Shaver (2002) and Greenaway, Guariglia and Kneller (2007) also claim that a positive effect on the financial health of firms is given by undertaking export activities that reduce the grip of financial constraints.

Therefore, there is a relationship between how export is undertaken and what effects it has on the corporate characteristics of internal and external finance and assets, on the debt features, on the types of financing, and on access to credit.

2.2.2 HOW DIGITAL FACILITATES ACCESS AND IMPACTS ON THE USE OF EXPORT FINANCE

Often one of the main problems hindering the development of an internationalisation process and the start-up of export activities is the lack of financial resources to invest in the functions and processes that need to be implemented in order to expand one's offer internationally.

As suggested below, the use of digital and the development of a digital export strategy can, to some extent, solve or mitigate this problem: “In terms of credit, relying on resources and modern information technology, large-scale e-commerce platform opens up new avenues for the credit system. [...] It could provide supply chain finance, reduce the cost of financing for small and micro enterprises, and promote foreign trade enterprises to enhance overall competitiveness.” (Wanxin Xue, Dandan Li, Yilei Pei, 2016).

First of all, starting with the issue highlighted by Dethine and his colleagues: “Financial barrier to internationalisation are common for SMEs, along with the risk of losing investments. Von Leipzig et al. (2017) show that, in addition to financial obstacles, a lack of technology and

skills related to digitalization, as well as a poorly structured strategy, can also constitute a missed opportunity for digital transformation.” (Dethine, Enjolras & Monticolo, 2020) it must be said that, thanks to increased digitisation, the company acquires greater awareness and develops a clearer and more structured vision of its processes, the functions involved in them and their relevance. This makes it possible both to gain a deeper and more precise understanding of the financial needs of each function in order to carry out its activities in the best possible way, and to optimise the allocation of available financial resources by making their use more effective.

Furthermore, the development of digital export strategies involving the creation of e-commerce enables the mitigation of one of the problems that frequently afflicts companies, and mainly small and medium-sized enterprises, that require external financing: the presence of information asymmetry.

Often, due to a lack of information about the company and its activities, an information imbalance arises between the external lender and the company requesting financing. This is suggested by the paper “*The Export-Import Bank’s Relevancy Today*” by Robert Allen (2015) in which it is reported: “the existence of “aggravated asymmetric information” between the two transacting parties produces a capital market failure. This scenario occurs naturally as a borrower has the advantage of possessing better information regarding its proposed project’s risk and potential returns. [...] The private sector’s unwillingness to cover the entirety of commercial and political risks associated with international trade, thus resulting in risk, uncertainty, and incomplete insurance markets.”. Consequently, the presence of information asymmetries often leads to the failure to obtain external financing or the request for excessively high guarantees for the financing to be granted. The direct consequence is an inevitable sinking of the export activities of small and medium-sized companies.

Thanks to the use of e-commerce and the development of digital technology, this problem of information imbalance is partially solved by increasing the transparency of the company's processes and providing data about its activities; this thesis is supported by Robert Allen (2015) who states that: “technology has wholly changed the environment in which investing and financing decisions are made, with any individual now able to obtain data and detailed information on individual companies, countries, and sectors, all within mere seconds.”. This concept is also supported by Qi and colleagues who state that CBEC could reduce uncertainties and opportunistic behaviours, while increasing trust (Qi, Chan, Hu, & Li, 2020).

So, thanks to the increased transparency and signal of credibility represented by the use of an e-commerce the company would access loans more easily without further guarantees, thus avoiding the problem of adverse selection and therefore no longer being credit constrained.

This view was also underlined by the study of Ying Wang et al. who showed that the development of digital solutions increased the confidence of potential investors in a company operating in the Chinese market: “trust is the perception of confidence in the exchange partner's reliability and integrity. We measure this through the attainment of government certifications demonstrating good customer service and venture capital investment the firms obtained. Osell gained trust from investors, foreign market governments, and Chinese governments, which shows a relatively high level of trust. Zongteng also obtained the status of “e-commerce model enterprise”, which is certified by the Ministry of Commerce of China, in addition to receiving 100 million Yuan in investments in 2018.” (Ying Wang et al, 2020).

A further benefit of the widespread use of the Internet is the possibility for companies to expand their network “greater Internet access would allow firms to overcome the drawbacks of limited resources and build knowledge networks, resulting in sizable gains, including innovation” Jensen (2007) and, in particular, to extend the pool of potential sources of credit. In fact, the costs and the process of searching for and selecting potential lenders are reduced and streamlined, as mentioned above for the search for potential suppliers.

The following image, from “*The Development and Current of Cross-border E-commerce*” (Xue, Li, Pei, 2016) shows how the possibility of using cross-border e-commerce platforms allows both access to a wider base of potential lenders and to lower the costs of accessing and managing credit, thus enabling SMEs to increase their level of competitiveness in foreign markets.

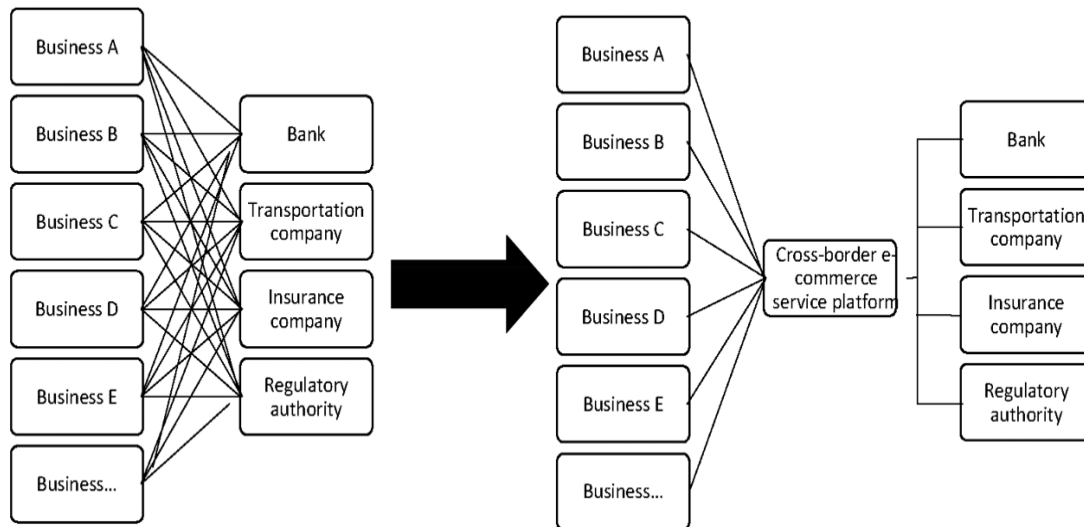


Figure 10 - Cross-border e-commerce service platform

However, the benefit of the advent of digital technology is not limited to a broadening of the sample of potential customers and lenders, but also to the spread of new financing solutions; indeed, crowdfunding platforms are increasingly being used to obtain financing. As suggested by the following words “perhaps the most phenomenal and impactful result of this transformation is that it allows for different minds from all around the world to come together and collaborate in the pursuit of common goals. From crowdfunding to microfinancing, the investing world has been completely revolutionised as financial markets have expanded to include just about any form of capital raising imaginable.” (Allen, 2015), crowdfunding on the side of the funder reduces the risk associated with the provision of funding. The use of online platforms allows multiple actors to "join forces" in order to provide common financing solutions. In this way, each of the backers is exposed to a rather small part of the overall financing.

Furthermore, it is important to stress that from a financial point of view, the use of digital and in particular of online large platforms, as suggested by the study "*Barriers to European cross-border E-commerce*" reduces the risk of financial exposure and decreases the relevance of financial barriers: “Using a large platform is associated with less vulnerability to (financial and market) barriers [...] financial barriers do not appear to be a significant obstacle to online sales. [...] use of a large platform is associated with lower financial and market barriers.” (Coad & Duch-Brown, 2017).

It is therefore clear that digital can be an essential key to exploit in one's internationalisation process and the faster a company understands the benefits of using digital technologies, the faster it can improve its decision-making processes and accelerate its internationalisation speed (Neubert, 2018).

2.2.3 ANALYSIS ON THE IMPACT OF FINANCING ON EXPORT

If the effects of exports on financial characteristics have been presented, the link is turned and the impact of the financing on exports is analysed. In this context, the existing literature does not seem to have investigated the topic in detail, but few articles describe some of its characteristics.

First of all, exporters need more funding for working capital than non-exporting peers.

In fact, to sell their products abroad, companies have to incur significant fixed and sunk costs (customs and regulatory requirements, establishment of a foreign distribution network and higher variable costs given the longer time required to finalise cross-border sales). Since these costs must be paid upfront, the working capital requirements of exporting firms are higher than those that only serve the domestic market. As a result, the need for external financing is greater for exporting companies. (Petrovito & Pozzolo, 2019).

Moreover, from the literature analysis, it would seem that undertaking an export strategy through equity financing is perceived as an advantage over using debt financing.

Indeed, companies that are heavily indebted and therefore with high leverage lose the opportunity to invest in projects for internationalisation, which could increase the value of the company, because the main beneficiaries of these opportunities are the debtholders that will collect high interests charged due to high risk perceived from the excessive disproportion of debt. Thus, “resulting in an “underinvestment” problem” (Myers, 1977).

Therefore, even if companies are able to raise debt, leverage is supposed to negatively impact (international) investments (Aivazian, Ge, & Qiu, 2005); (Park, Suh, & Yeung, 2013).

Whilst debt redemption and interest payments drastically impact a firm's liquidity (McNaughton & Bell, 2004), on the other hand, external equity allows for an increase in the pool of liquid resources.

In addition, unlike debtholders, external investors can contribute with their experience, knowledge of foreign markets, and useful international business contacts, as well as provide the necessary capital. (Kraus, Mitter, Eggers, & Stieg, 2016)

Consequently, the literature seems to argue that financing international initiatives through equity is more advantageous than debt financing and in general is related to greater success probability.

Hence, as stated by Kraus, Mitter, Eggers and Stieg (2016), “SMEs that rely predominantly on equity financing in their internationalisation are perceived to be more successful than SMEs that rely predominantly on debt financing.”

This can be further extended to all export companies neglecting the discrimination of size. Moreover, according to Lee and Rhee (2011) an important source of short-term financing is deferred payment (trade credit). In the US, trade credit is the main source of short-term financing (Petersen & Rajan, 1994) and in the UK more than 80% of B2B transactions are carried out through credit sales (Wilson & Summers, 2002). Even in economies quite different from those mentioned above such as China, at the end of 2017, the cumulative credit of industrial firms that can be classified as a delayed payment reached 1998.38 billion dollars (Chen et al., 2019). As revealed by Biais and Gollier (1997), bank credit and trade credit could be the complementary financing resource; this is also verified by Cai et al. (2014).

Considering its characteristics and its consequences on trade, Lee and Rhee (2011) state that trade credit (deferred payment) is the most important short-term financing mode. It could also motivate the buyer to increase the quantity of the order.

Subsequently, further research on this topic was carried out and it was found that, considering the whole supply chain, delayed payment is most profitable for the supply chain when the initial capital is relatively low. The supply chain profit is higher through the use of bank loans when the initial capital is relatively high. The dual financing mode (mix of delayed payment and bank loan) contributes to the highest profit of the channel when the initial capital is moderate and the bank's interest rate is more competitive than the interest rate of the supplier (Ruihong Tang, Lei Yang, 2020).

Therefore, these alternative forms of financing using trade credits, under some conditions, would seem to involve better export performances compared to classic bank loans.

Given their high need for funding an impact of financing on exports is linked to financial constraints.

Petrovito and Pozzolo (2019) find robust evidence of a negative, “statistically and economically significant effect of financial constraints on both the probability that a firm exports (the extensive margin) and the share of exports over total sales (the intensive margin)”.

Furthermore, discriminating by size, the same authors state that credit constraints have a greater negative effect on exports for smaller and younger SMEs and also for those companies operating in countries with less developed financial systems and institutional environments. Policymakers who support exports should seek to remove the obstacles posed by banks and self-perceived by companies that prevent them from applying for and obtaining credit. In fact, a crucial aspect is the degree to which institutions favour exports, reducing the negative effect of credit constraints, creating a more market-friendly environment (Pietrovito & Pozzolo, 2019).

It is, therefore, noted how access to financing through institutional finance or bank loans impacts exports. Institutional finance refers to finance raised from financial institutions other than commercial banks. These financial institutions act as an intermediary or link between savers and investors. They provide finance and financial services in areas which are outside the purview of traditional commercial banking.

Institutional finance compared to other sources plays a more important role. The increased flow of bank credit to SMEs can help stimulate their export performance (Raju & Rajan, 2015). Another impact of financing on exports is given by the flexibility of the instruments used to finance the companies.

“Export participation increases with the flexibility of finance, not the quantity of the finance. Most importantly, financial constraints, specifically the flexibility of finance available to firms (as measured by the availability of an overdraft facility variable), have a large economic significance on the intensive margin and the extensive margin of exports, particularly so for the SMEs with loan needs.” (Jinjarak & Wignaraja, 2016).

Furthermore, given the importance represented by institutional finance and bank loans, the authors argue that firms in an economy with a bank-based financial structure have a higher share of exports in total sales than firms in an economy with a market-based financial structure. Given the key importance of banks and credit institutions, it is essential to understand how a company is perceived by the same entities. Seung and Lee (2020) showed that “a firm with lower market uncertainty or higher productivity is offered better financial terms and exports more in the intensive and extensive margins”.

In fact, by sharing the risk through the business groups, the exporting companies are seen as more stable from the point of view of the banks that will offer favourable conditions that will

be the basis of competitive advantage by generating better export performances (Seung & Lee, 2020).

Other studies have analysed the effect of various types of equity-financing on export performance.

In particular, these focus on venture capital financing dividing it into lump-sum, incremental and syndication³ financing. Incremental financing is also known as staged financing since venture capital funds divide the disbursement of funds into several tranches. In contrast, in a lump-sum financing arrangement, all funds are received at one time (Smolarski & Kut, 2009). “Syndication appears to have a positive effect on both performance measures and exporting activity. Stage financing increases the probability of both performance measures and exporting activity.” (Smolarski & Kut, 2009).

This is consistent with Duffner’s (2003) thinking that incremental financing conserves capital and creates value.

The incrementally financed firms had higher annual sales growth, but lower turnover and export ratio compared to lumpsum financed firms (Smolarski & Kut, 2009).

Furthermore, it would appear that receiving staged funding from syndication has negative effects on both performance and export activities.

These two modalities can be seen as strategies to control risk.

In fact, too restrictive monitoring and control (companies subject to both staged financing and syndication) could have a negative effect on performance and internationalisation activities. Given that companies, and in particular small and medium-sized enterprises, must be flexible in their business on international markets. When incremental financing and syndication are used separately, they have a positive effect on the likelihood of high performance and internationalisation. While when they are used at the same time there is a negative impact on the export activities (Smolarski & Kut, 2009).

Moreover, another positive impact on the internationalisation of SMEs is given by the presence of a venture capitalist who uses control and risk management mechanisms. (Carpenter, Pollock, & Leary, 2003).

Indeed, venture capitalists could increase efficiency by selecting the correct financing strategy. If performance targets are unfulfilled, venture capitalists using incremental financing may

³ *Syndication* means having several investors get together and share in the deal rather than making the entire investment alone. Venture capital (VC) investors syndicate on a deal for sharing the risk, taking advantage of increased deal flow and having enough money to fund the deal

withhold future cash infusions. In fact, through incremental financing it is possible to effectively align the objectives of the entrepreneur and of the venture capitalist, implying that a company that uses this more effective monitoring solution outperforms the others (Smolarski & Kut, 2009).

There are conflicting opinions, and the literature is not always consistent, for example, Smolarski and Kut (2009) argue that bank debt appears to have a negative impact on firm growth and internationalisation, while Jinjarak and Wignaraja (2016) argue that firms in an economy with bank-based financial structure have a higher share of exports in total sales than firms in an economy with a market-based financial structure.

In conclusion, the main articles dealing with debt vs equity financing, financial constraints, institutional finance, bank-based vs. market-based financial structure, risk-sharing through a business group, equity-financing divided in lump sum, incremental and syndication were presented and analysed in this section.

2.2.4 EXPORT CREDIT AGENCIES AND THEIR ROLE AS PROMOTERS OF INTERNATIONAL TRADE

In this paragraph, the relationship between export and credit agencies will be analysed in detail, firstly described in general terms and then more specifically according to the country of origin.

Since an increase in export activities and performance has a positive impact on the company conducting them and on the economic system of which it is a part, agencies have developed in many countries to guarantee credit to companies on more favourable terms than the traditional banking system. They are the export credit agencies (ECAs), and their ultimate aim is to provide economic and diplomatic benefits to the ECA government. This has been analysed by Robert Allen (2015) in his study *“The Export-Import Bank's Relevancy Today”* which found that ECAs operate for export risk mitigation by providing support with regard to insurance of export credit guarantees and the provision of direct export credits (loans). The types of risk mitigation instruments that can be used to facilitate international trade are varied and mainly include project finance guarantees, reinsurance, bond guarantees and working capital guarantees.

To better understand how an ECA works, it is necessary to understand its three most common policy instruments: a buyer credit guarantee, a supplier credit guarantee, and a direct export credit.

The buyer credit is issued by the ECA in the country of the exporter and guarantees the loan to the lending bank so that, in case of default, the ECA covers the losses incurred. The bank, in turn, pays the exporter when it collects payments from the importer. Often when using this method, local banks in both countries involved in the export-import process are included in the transactions.

As for the credit guarantee of the supplier, it is often required in an international transaction. It is basically an insurance sold by the ECA to the exporter to cover risks that cannot be fully transferred to the importer through the good's purchase price. Again, this model can use the exporter's local bank as an intermediary between the ECA and the exporter, or alternatively a combination of local banks in each country and letters of credit can be used to spread the risk mitigation efforts more fully.

Finally, there is direct export credit, which is essentially simply a loan. There is frequent use of this instrument when the risk of the project exceeds what one of the local banks is willing to cover. In fact, ECAs have a higher risk threshold for a much lower return because of their ability to lend at government-subsidised, below-market interest rates.

However, compared to the two previously proposed instruments, direct export credit has a generally higher cost and is therefore more rarely used.

The relevance of credit agencies was also shown by the study *"Trade Finance as a Barrier for Chilean Services Internationalization"* (Giral & Navia, 2017), which showed that during 2016, financing for trade and export transactions provided by export credit agencies amounted to approximately \$400 billion, with a significant use, of approximately \$50 billion, also in projects towards emerging markets and developing country economies.

The same paper also described some of the major trade agencies operating globally, which are reported below:

- Compagnie Française d'Assurance pour le Commerce Extérieur: created in 1946, its task is to provide export guarantees and insurance. It plays a particularly important role in credit insurance for SMEs, protecting them against the risk of non-payment of credits.

- Foreign Trade and Investment Promotion Scheme of the Federal Republic of Germany: this system offers support for internationalisation and export insurance with a clear distinction between goods and services. It is designed to enable credit insurance for German exporters. The credit cover systems are different depending on the type of credits being secured: for short-term trade credits there is the Revolving Supplier Credit Cover, for export-related production costs there is the Manufacturing Risk Cover, for cross-border leasing risks there is the Leasing Cover and the Contract Bond Cover and Constructional Works Cover to protect against the risks of opportunistic behaviour and the risks of construction work in foreign countries.
- Israel Export Insurance Corp. Ltd.: founded in 1957, is a government-owned company designed to encourage Israel's exports in foreign trade; it is able to insure and manage risks that banks and other financial institutions are unwilling to bear. It has various instruments at its disposal among which the key ones are: Promissory Notes-Forfeiting which covers against the risk of non-payment of promissory notes, Letter of Credit-Confirmation which protects against the risk of non-payment by a bank that had previously issued a letter of credit, Pre-Shipment-Export Contract which allows the exporter to obtain compensation in case of cancellation of the order.
- Swedish Exports Credit: it is a Swedish government agency aimed at supporting the export of goods and services, with a particular focus on the latter. It offers long-term financial solutions complementary to those offered by banks.
- Nippon Export and Investment Insurance: it focuses on credit and export insurance for both exporters of goods and services. It is also supported in its operations by the Japan Bank for International Cooperation, a financial institution that lends, invests and insures the operating activities of companies.
- Mexican Bank for Development: its task is to identify and support strategic sectors in need of support and assistance.
- UK Export Finance Agency: its job is to protect British exports from funding or insurance problems. It often works in conjunction with the British Business Bank,

which aims to make the financial markets easy for small and medium-sized enterprises.

- Export-Import Bank of the United States: its task is to protect American exporters from the risk of non-payment by providing guarantees and insurance to facilitate access to credit.

2.3 RESEARCH GAPS

In conclusion, it is, therefore, necessary to summarise the results obtained by analysing the existing literature, and then identify the gaps that will be partially filled through this research. Despite the importance of financing for export, the impacts that it has on export performance are not thoroughly investigated in the existing literature.

Starting from the articles that deal with how exporting impacts financing, several well-defined characteristics emerge.

In fact, depending on the type of export strategy, there is a more suitable financing methodology.

After observing the greater need to finance working capital on the part of exporters, several authors argue that exporters have better internal finance than non-exporters.

Moreover, exporters have potentially more accessibility to external finance and are generally less financially constrained, which is denoted by a higher level of short-term debt than non-exporters. The greatest motivation is the high level of short term pledgeable assets held by exporters that can be used as collateral when accessing external financing.

The last features of export financing are the greater access to public finance and the use of business groups sharing the risk. Moreover, other supply chain network solutions represent signalling that allows obtaining financing with better terms and conditions.

With regard to the contribution of digital technology, the existing literature argues that a digital transformation of one's business and the use of large platforms facilitates access to funding, primarily because it allows for the mitigation of information asymmetries. In addition to other operational benefits, the advent of digital allows for the exploitation of new and innovative financing solutions, such as crowdfunding.

Furthermore, it has been analysed how financing impacts export even if academic contributions seem to be very limited.

In fact, some articles offer interesting ideas on which financing method is the best in terms of export performance. However, there does not seem to be a single answer in this regard, since some authors claim that the use of equity is more efficient, while other authors claim that better results are obtained through the use of debt solutions.

Furthermore, some articles focus on analysing individual forms of financing such as the contribution of venture capitalists and the use of short-term financing solutions such as deferred payments.

What seems to be shared by many authors is the importance of flexible financing, the central role of institutional finance and how policy makers must help and facilitate access to credit.

The latter is accurate because, for exporters in a more marked way, financial constraints represent an extremely negative block to export activities.

As a final topic, the various types of Export Credit agencies and their solutions have been analysed.

Therefore, the intent of this research is first of all to update and unify all the theses found by analysing the literature and, above all, to make an in-depth analysis of the different modes present and not only specific to a mode as it is present in the literature. Indeed, export companies need a guidance on how to use it and what to expect in terms of financing and performance. So it is necessary, on the one hand, to collect useful information and opinions directly from exporting companies and on the other hand to formulate a guide on all forms of financing by creating a model that allows to identify analytically the most advantageous.

In addition, an in-depth analysis of how digital exporting can influence financing is needed, as this topic is little addressed in the literature.

In particular, the literature is limited, and it is noted that different authors hold conflicting views.

This leaves room for this research aimed at investigating in-depth the effects of financing on export performance.

CHAPTER 3: INTERVIEWS AND DEVELOPMENT OF HYPOTHESES

In this chapter, the hypotheses of this thesis project are outlined, which will then be tested in chapter 5; moreover, before the hypotheses are made explicit, some interviews that were carried out to help formulate them are summarised.

3.1 INTERVIEWS

During this thesis project, in order to collect some direct experiences of some companies that carried out export activities and to better understand the possible impacts that financing can have on the performance of an export process, four interviews were performed; the first three were conducted with Italian small-medium enterprises while the fourth with Dr. Olga Ignjatov, an expert in financing.

The profiles of the three companies interviewed were quite different, in terms of the sector in which they operate and their business processes' organizational and management characteristics.

As a result of these interviews, there were some trends and considerations that were supported by all the interviewees, while others were profoundly different as they depended on the specific characteristics of the company and the sector in which it operates.

The following is a summary of the fundamental concepts that emerged from each of the interviews.

3.1.1 FIRST INTERVIEW: RB

The first interview was conducted with RB, a small company operating in the engineering sector and dealing mainly with management consulting in various fields (design and construction management, implementation of photovoltaic systems, safety at work and provision of integrated management systems).

Regarding the internationalisation of a company of this kind, Raffaele Bernardo, who is the administrator and technical director, argued that it was essential to participate in fairs with

international visibility and, in particular, participation in their case the Ecomondo fair. Participation in this fair was an opportunity for RB to learn about the existence of and take advantage of the possibilities offered by financing bodies such as SACE and SIMEST which, together with Cassa Depositi e Prestiti, offer companies non-repayable financing to undertake internationalisation activities. Participation in international trade fairs such as Ecomondo is fundamental for a small-medium enterprise as it is not only essential for building a network of potential partners and customers but is also an excellent opportunity to keep up to date and learn about all the innovations taking place in the sector. Indeed, the small size of a small-medium enterprise does not allow it to carry out all the research and development activities on its own to remain constantly up to date; international trade fairs are therefore excellent opportunities for exchanging knowledge and skills.

In addition to SACE and SIMEST RB has also successfully used other forms of financing such as low-interest or non-repayable loans provided by Invitalia and the Chamber of Commerce. Regarding the interaction with SACE and SIMEST Dr Bernardo expressed particular appreciation for the seminars and webinars that these bodies offer to the users of the funds to maximise their use.

In addition, among the various modes of financing by ICE and SACE, Dr Bernardo was reluctant to take advantage of those concerning an increase in equity through the acquisition of part of the company by the financing bodies as it believes that this is more suitable for realities that are either very innovative or operating in the field of start-ups given their high growth rates.

Finally, the main problem encountered by RB was related to the fact that it is an exporter of services, and therefore it pointed out that, while for companies exporting products, the financing solutions are broader and better defined, in the field of services, there are still several gaps.

3.1.2 SECOND INTERVIEW: FER STRUMENTI

The second interview was with Dr Alessandro Piva from Fer Strumenti, a company that is still family-owned, working in the production of monitoring systems for industrial chimneys and analysers for the control of oxygen in combustion.

Despite its small size (20 employees), the company is fully autonomous because it carries out all activities from research and development to after-sales service in-house.

In its internationalisation process and to conduct its export activities, Fer Strumenti has historically always acted through representatives who resold the products in foreign markets. However, recently, to reduce the risk of insolvency and increase its effectiveness in penetrating new markets, rather different from the domestic and developing ones, such as those in South East Asia, it relied on local resellers.

As far as the internationalisation strategy is concerned, in its search for new markets, Fer Strumenti acts mainly through exploiting chances and opportunities offered to it rather than through particularly technical and structured market analyses. This *modus operandi* is justified and allowed by the fact that the level of competitiveness in the sector in which the company operates is rather low in the domestic Italian market and almost null in the developing foreign markets as the backwardness of skills and techniques of these realities prevents the development of local competitors.

One of the central themes that emerged during the interview was the corporate culture and attitude to risk developed within this SME, which greatly influence operational and financial management choices. An excessively cautious approach has a negative impact on the propensity to internationalise and export, as they imply potential risks, and on the interest in finding potential sources of external financing to support these activities.

What emerged with regard to financing is that, although, as mentioned above, external financing is not used to support operational activities in foreign countries, external capital could be useful to cover unforeseen temporary delays in payments as it must be borne in mind that, operating in a foreign market, orders are less frequent but of greater volume; therefore, delays in payment could lead to considerable losses.

3.1.3 THIRD INTERVIEW: EUROSTYLE

The third interview was conducted in cooperation with Dr Vincenzo Apicella from Eurostyle, which is mainly active in the cosmetics sector through its own brand products with large distributors. However, in recent years, an e-commerce website has also been developed to offer its products directly to B2C end customers. Eurostyle takes care of the production chain's upstream and downstream activities (R&D and marketing and sales) while outsourcing the production activities.

The choice of internationalisation aims to decrease the country risk to which Eurostyle was subject by showing an unbalanced presence in the domestic market compared to the foreign one.

The distribution channels used in its export activities are mainly e-commerce and the use of local distributors.

Particularly interesting is the fact that, compared to interview number 2, in this case, considerable importance was given to the presence of a structured export strategy starting from the research of the new foreign market to the careful choice of the levers that can lead to success in a foreign market.

According to Dr Vincenzo Apicella, the fundamental tools to ensure greater success in a foreign market are financial, marketing, and logistical ones; moreover, also as a result of the Covid-19 pandemic, the use of digital tools has become particularly relevant to stimulate interaction between the company and the customer, even with those types of consumers that until recent years were not used to using digital.

Regarding the e-commerce methods used to serve foreign markets, of particular interest is the one used in the Brazilian market, which is significant in terms of potential sales volumes. In fact, in this context the platform, created through a collaboration with SIMEST, is not just a simple website that allows the purchase of products online, but also a tool to manage all the logistical aspects of both the international and Brazilian markets, as well as the administrative aspects associated with sales.

With regard to the sources of financing, Eurostyle had always used either internal capital or external bank capital in the past; recently, considering the opportunities offered by SIMEST, the offer relating to e-commerce was used, which provides a non-repayable fund and a subsidised loan rate of 0.007% compared to the reference rate. It is interesting to point out that the possibility of accessing this financing opportunity was granted by the high level of digitalisation that the export project to the Brazilian market implied.

SIMEST's support offered three main advantages, as follows:

1. The possibility of developing the online platform solution in the best possible way, which otherwise would have been impossible to achieve in such a complete and efficient, but at the same time complex, way, with only internal capital or with the help of the banking system.
2. The costs of the banking system would undoubtedly have been higher.

3. In the absence of SIMEST, some decisions would have had to be limited because, following the heavy impact of the Covid-19 pandemic on the fashion and cosmetics sector, the internal cash flow had practically gone to zero.

It is also worth analysing the bank lending scenario of the last two years and the role played by the government and public bodies; in fact, contrary to what one might think, during the Covid-19 pandemic, the banking system did not particularly increase interest rates on loans. This was possible thanks to the government's pressure on banks to consolidate debts and provide other financings to provide the liquidity needed to continue economic activities (both at the national and international level). In this context, SACE played a fundamental role as, together with Mediocredito Centrale, it acted as a guarantor for loans granted by banks to companies, thus allowing interest rates to remain at low levels.

Regarding the relationship between SIMEST and the company, in the experience of Dr Vincenzo Apicella, it emerged that there was considerable efficiency in the delivery and development of the file and prompt assistance from SIMEST in the presentation phase of the project before disbursing the loan.

Dr Vincenzo Apicella believes that a particularly useful aspect of the relationship with SIMEST is the fact that SIMEST imposes a greater and better structuring of the information and the project, obliging the company to undertake an internal reflection phase for the detailed evaluation of the potential returns on the investment. This mechanism is particularly relevant for the success of export projects of SMEs that otherwise, all too often, tend to make choices based excessively on entrepreneurial intuition rather than on a technical and analytical assessment.

Finally, with regard to the business functions that have most needed and benefited from the funding to support their export, Dr Vincenzo Apicella believes that, given the high level of competitiveness of the sector in which Eurostyle operates, it has been essential mainly for the marketing and sales functions in order to allow them to structure all those activities (starting from the e-commerce platform) that enable them to make their brand and their offer known to foreign consumers.

3.1.4 FOURTH INTERVIEW: DR IGNJATOV

The fourth interview was carried out with Dr Olga Ignjatov, an expert in financing.

First of all, we discussed the issue of the origin of financing, i.e. whether it is better for a company that chooses to operate in a foreign market to ask for financing from entities operating in the domestic market or in the market selected for its export activities; there is no single answer, but several considerations can be made. First, as each country seeks to finance its entrepreneurial fabric to receive future returns in taxation and job creation, public bodies will generally be more inclined to lend to initiatives that envisage such scenarios. Moreover, sometimes, according to the corporate directives of a brand's parent company, it is preferred to avoid other types of debt in other countries where the parent company cannot have direct control.

It was then assessed which business functions most need and are best able to take advantage of financing during internationalisation phases. Again, the answer is not unique and is influenced by several characteristics of the context, the sector, and the company itself. For companies that offer products with a high level of knowledge and technical capacity, it is essential to be able to invest large sums of money in research and development to ensure that they remain up-to-date and competitive in meeting customer demands. Other functions, such as marketing and sales require financing regardless of the sector in which the company operates; in fact, entry into a new market must always be accompanied both by promotion of the brand and the offer (especially in highly competitive context) and by the implementation of sales and payment channels that are in line with the habits and preferences of the customer. In addition, the strategy chosen to internationalise also has an impact on the different capital absorption by the various corporate functions.

Subsequently, when analysing whether there is a correlation between sector and efficiency in the use of funding, Dr Ignjatov explained that today it is clear that there are sectors that are more in need of financial support than others; for example, the service sector usually generates value for its customers through activities that are less capital intensive, while sectors that include extensive production, use of technology and research are much more capital intensive. Dr Ignjatov also highlighted a particularly interesting point: although all companies theoretically strive to achieve their strategic goals with the funding they receive, it should be borne in mind that the profitability and return on investment also depend heavily on the sector in which a company operates.

In addition, there was a discussion on how companies that use digital exporting are able to take advantage of financing compared to those that conduct traditional export activities; the

discussion showed that the advantage of a digital export is not so much in a greater ability to exploit the financial resource but more in the possibility of accessing more financing, possibly even cumulative, given the large number of financing programs that tend to encourage solutions that adopt digital.

Finally, Dr Ignjatov analysed the problem of access to finance for SMEs, describing it as a structural problem of the economic system, particularly in Italy. However, she pointed out that the possibility of receiving external loans is not the same for all companies. In addition to depending on their size, it is also very much influenced by the level of innovation of a company both in its management and processes in its business. In addition, other sources of financing than the traditional ones have been established to address this issue: P2P lending and crowdfunding.

3.2 HYPOTHESIS DEVELOPMENT

In this section, the hypotheses of this thesis project are described; they were developed from insights gained from the literature review and reflections and opinions suggested during the interviews.

RESEARCH QUESTION

The development of an exploratory analysis is essentially the focus of this thesis project and stems from the intention to explore and recognise which modes of financing lead to better financial performance in export activity. Therefore, rather than a hypothesis to be tested, it turns out to be a research question that one would like to answer through a statistical analysis of the data collected through a questionnaire that will be later described in chapter 4.

However, a priori, thanks to what has emerged from the literature and through the interviews, some trends have been highlighted and, within the research question, hypotheses have been formulated on which to focus with particular attention when carrying out exploratory analyses.

Research question: *Assessing the impact of different types of financing used to finance export activities on financial performance.*

HYPOTHESIS 1a

This first hypothesis argues that there is a positive correlation between the use of own capital generated to finance export activities and the financial performance achieved. This hypothesis is suggested by two main reasons.

Firstly, the companies considered are mainly small-medium enterprises. Therefore, given their small size, they are often victims of the negative consequences of the information asymmetry phenomenon, as described in Chapter 2. In particular, this phenomenon leads to an aversion on the part of external financing institutions to grant financing and, consequently, to an increase in the cost of financing if it is granted (Fama and French, 2002). This problem disappears if internal means of financing are used.

Furthermore, according to Ayob, Ramlee and Rahman (2015), exporters are able to be more efficient in managing internally available resources than non-exporting firms. This maximises the effectiveness of the results that can be achieved for the same amount of financing used and, therefore, enables them to achieve objectives that non-exporting firms could only achieve by employing more capital and thus necessarily having to resort to external capital.

Indeed, as Kraus, Mitter, Eggers, and Stieg (2016) have argued, companies that rely principally on internal capital in their internationalisation are perceived as more promising.

Finally, it should be in mind that a company's ability to manage its activities adequately by reducing external financing and using only its own generated equity capital as much as possible also reflects a very good ability to manage, use, and optimise available resources. Therefore, a company that is able to manage its activities with its own generated equity capital provides a stronger image of itself. This can positively impact the willingness of other companies to enter into partnerships, the possibility of receiving longer payment terms from suppliers, or other aspects that can lead to improved economic results.

***Hypothesis 1a:** The use of own generated equity capital to finance export activities correlates positively with financial performance.*

HYPOTHESIS 1b

The second hypothesis is that subsidies obtained from state-owned credit institutions to finance their export activities positively influence the economic performance obtained.

There are essentially three reasons for this. The first, again, is partly a consequence of information asymmetry. In fact, since the objective of state-owned financing bodies is not so

much to create profits as to encourage growth, development and the spread of a solid entrepreneurial and economic fabric in the country, they are willing to grant low-interest or even non-repayable loans even to medium-small companies, as was also found in the interview with Dr. Vincenzo Apicella.

The second reason lies in the fact that these credit institutions, such as ICE, SACE and SIMEST in the Italian case, aim to encourage and favour the spread of export activities to increase national political and economic relevance. Therefore, they offer not only financing but also consultancy services in terms of information on foreign markets and the management and monitoring of the projects financed to increase the results obtained, thus maximising the effectiveness of the financing granted.

Finally, the third reason, which also emerged from the interview with Dr. Vincenzo Apicella, is the fact that, before granting a loan, state owned credit institutions require a detailed presentation of the project, both in terms of timeframes, the resources used, and the operating and management methods for the various phases. This step obliges the company applying for the loan to conduct a more in-depth analysis of its export project, assessing in greater detail the advantages, disadvantages, and any unforeseen events to be taken into account during the operational phase. This process therefore acts both as a filter, encouraging companies to select the best projects in terms of their chances of success, and as a phase of analysis, preparation and structuring of the implementation of the operations necessary for the realisation of the project.

***Hypothesis 1b:** The use of external financing from state-owned credit institutions to finance export activities is positively correlated with the financial performance obtained.*

HYPOTHESIS 1c

The third hypothesis is that financing involving capitalization by new third parties, such as by state or public bodies, is negatively associated with the export performance of medium-small enterprises.

As also stated by Dr Raffeale Bernardo, medium-small enterprises need extreme dynamism to be able to adapt to the economic context in which they operate; this dynamism must be even greater in the case of an export activity as it is necessary to adapt to social, political, and economic realities that are often different from domestic ones and sometimes much more unpredictable.

Therefore, as capitalisation by third parties, by introducing new actors as owners, risks increasing the complexity in the management of the business, it decreases the possibility of having a dynamic and reactive management.

This problem is particularly relevant for family-owned small and medium-sized and privately-owned enterprises, where new ownership could lead to a loss of strategic control and divergent objectives, which inevitably lead to a decrease in the dynamism and flexibility of the company necessary for being competitive on international markets.

***Hypothesis 1c:** The use of third-party capitalisation from state owned credit institutions to finance export activities is negatively correlated with financial performance.*

HYPOTHESIS 2

A further hypothesis that was formulated concerns the link between financial performance and the country in which the financing was obtained.

This hypothesis suggests that financing obtained in the company's home country leads to better financial performance than financing obtained in the foreign country to which the export activity is directed.

This is justified by some aspects that have emerged from the literature such as the fact that it is easier for a small company to obtain external financing if it has already received it in the past (Aschoff, 2010). Therefore, it is clear that it is easier to obtain financing from the credit system of the market in which one has historically operated for the longest time, i.e., the domestic market.

In addition, since small and medium-sized enterprises often suffer from a more limited knowledge of the possible methods of financing and since the latter also differ according to the country in question, it is easier for a small and medium-sized enterprise to manage better, in terms of deadlines, guarantees and repayment methods, a loan received in a domestic context than a foreign one.

Moreover, the opportunity to obtain better financial performance is also correlated to the possibility that the country of origin may offer better conditions on financing, having macroeconomic interests linked to the development of the national economic fabric.

Finally, a common reason for both large and small companies to prefer domestic rather than foreign financing emerged from the interview with Dr Ignjatov. Indeed, a cons of a company

that is exposed to financing from several countries other than its home country is the risk of having less control over its financial activities.

***Hypothesis 2:** The use of loans granted in the company's home country to finance export activities positively and more significantly influences financial performance than financing obtained in the foreign country.*

HYPOTHESIS 3

The greatest barrier to access to external financing is the adverse selection dictated by the asymmetry of information between the lender and the borrower. The lender is not aware of all of the borrower's characteristics and cannot a priori ascertain the use of the financing. This dynamic means that external lenders are not inclined to lend the necessary financial resources given the low levels of transparency and, therefore, the high perceived risks associated with the transaction. Consequently, failure to obtain financing or charging high collateral for the loan is driven by strong information asymmetries that hinder the flow of external financing. This is exacerbated when a company implements export strategies because serving foreign and distant markets increases the company's perceived risk, increasing lender aversion. Even if the company manages to diversify its profits across multiple countries, it becomes opaquer in the eyes of external lenders who must monitor various sources in several distant countries. In addition, exporting results in higher sales conversion cycles, which represent a risk due to irregular cash flows, thus increasing lenders' feelings of insolvency. In this context, the role that digital export strategies involving the creation of e-commerce can play in solving the problem of information asymmetries appears crucial. New digital technologies offer the possibility of obtaining data and detailed information on individual companies, countries, and sectors, all within mere seconds (Allen 2015). In fact, the problem of information imbalance is partially solved by increasing the transparency of business processes and providing data on each activity through e-commerce and the development of digital technology that diminishes information asymmetries. Moreover, CBEC could reduce uncertainties and opportunistic behaviours while increasing trust (Qi, Chan, Hu, & Li, 2020), and the development of digital solutions increased the confidence of potential investors (Ying Wang et al.). Therefore, thanks to the greater transparency of digital technology and the signal of credibility represented by the use of e-commerce, the company is able to decrease the information imbalance and more

easily access external financing without further guarantees. This allows the company not to suffer adverse selection and therefore no longer be credit constrained.

This dynamic is also supported by certain points that emerged from the interviews that were conducted. In the third interview with Eurostyle, it emerged that, in their case, the possibility of obtaining external financing from SIMEST was guaranteed and facilitated by the high level of digitalization that the export project to the Brazilian market required.

Moreover, in the fourth interview, Dr. Ignjatov expressed the notion that the financial advantage of a digital export strategy lies in the ability to access more external funding, given the large number of funding programs that tend to favour projects that adopt digital.

Following the statements and the rationales above explained, it can be claimed that information asymmetries are reduced through the use of digital export. These asymmetries are the main barrier to access to external funding.

***Hypothesis 3:** Digital export facilitates access to external finance.*

HYPOTHESIS 4

The fourth hypothesis was formulated following the interview with Dr Ignjatov, who pointed out that one of the prerogatives of financing bodies, and mainly public ones, in deciding whether or not to grant a loan to a company is the contribution of value, by the financed project, to the economic fabric in which the funder operates. Therefore, it is often more difficult for exporting companies to obtain funding from foreign lenders because they fear that the benefits of the project carried out do not relate to the context in which they operate.

However, digital technology brings two advantages in this direction. Firstly, as already mentioned, it reduces information asymmetry, increasing the company's transparency applying for the debt and how the funding will be used. Secondly, digital technology allows for greater scalability of export projects, thus creating more future developments and opportunities that may affect the exporting company and the country in which it operates increasing the local economic flow. Thus, making financing bodies in the target countries more willing and interested in lending.

***Hypothesis 4:** Adoption of digital exporting increases the possibility of receiving funding in the foreign target countries of one's exports.*

3.3 CONCEPTUAL FRAMEWORK OF THE HYPOTHESES

According to the assumptions made, three different models can be theorized. Firstly, a framework according to the research question, which includes hypotheses 1a, 1b and 1c, and hypothesis 2, which will be called model A. Secondly, one that follows hypothesis 3, which will be called model B. Finally, one that conforms to hypothesis 4, which will be called model C.

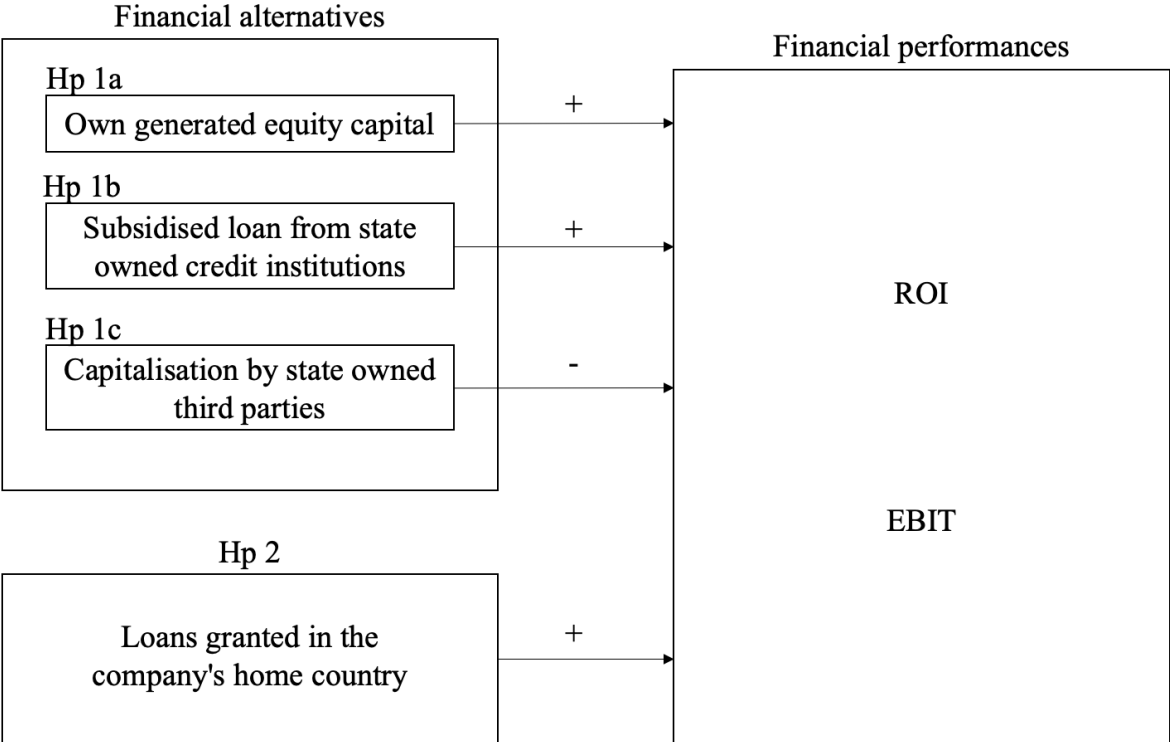


Figure 11 - Model A

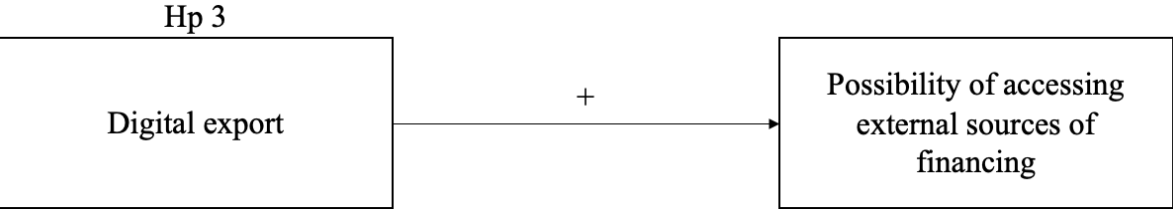


Figure 12 - Model B

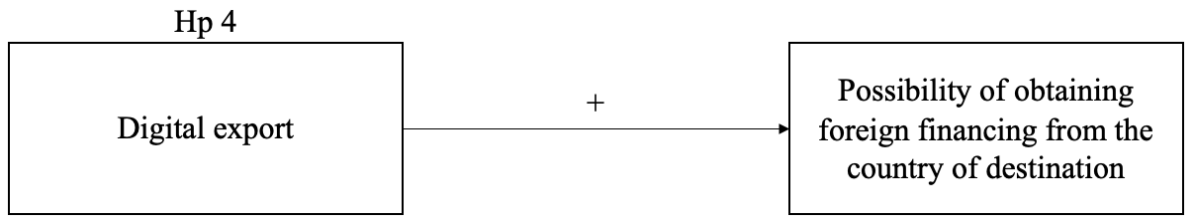


Figure 13 - Model C

CHAPTER 4: METHODOLOGY AND DESCRIPTIVE ANALYSIS

This chapter presents the methodology adopted for the survey, after which how the survey was designed and how the answers were gathered will be shown.

The process is aimed at producing a statistical analysis with the goal of understanding the relationship between exports and financing. After the responses have been collected, the data cleaning process is presented. Lastly, a descriptive analysis of the data is presented before addressing the econometric analysis.

4.1 SURVEY METHODOLOGY

In order to design and carry out research through a survey following a structured and academic method, the paper by Forza (2002) "*Survey research in operations management: a process-based perspective*" was followed.

Researchers often distinguish between exploratory, confirmatory (theory testing) and descriptive survey research (Pinsonneault & Kraemer, 1993); (Filippini, 1997); (Malhotra & Grover, 1998).

In this case, confirmatory (or theory testing or explanatory) survey research was adopted. "It takes place when knowledge of a phenomenon has been articulated in a theoretical form using well-defined concepts, models, and propositions. In this case, data collection is carried out with the specific aim of testing the adequacy of the concepts developed in relation to the phenomenon, of hypothesised linkages among the concepts, and of the validity boundary of the models" (Forza, 2002).

The survey methodology used in the thesis is consistent with Forza's theory-testing research process and follows the structure of recent studies adopting this technique (Evangelista, Mogre, Perego, Raspagliesi, & Sweeney, 2012); (Macchion, et al., 2017) despite some adjustments. The steps are presented in the figure below.

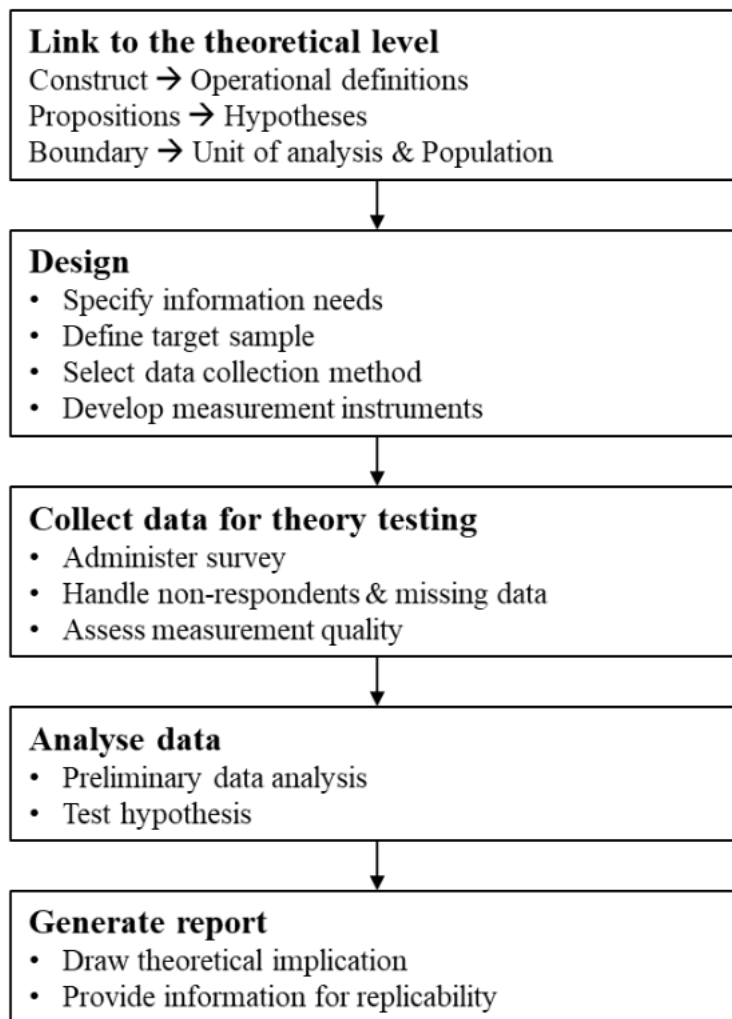


Figure 14 - Theory testing survey research process (Adapted from Forza, 2002)

4.1.1 LINK TO THE THEORETICAL LEVEL

As the first step of theory testing survey research, it is necessary to generate a link between the survey and the theoretical framework.

After structuring the concepts, defining their relationships, and their boundary conditions, the constructs must be transformed into variables or indicators so that the propositions specifying their relationships can be translated into hypotheses that can be tested (Forza, 2002).

Indeed, according to Forza (2002), to move from a conceptual level to an empirical level, it is necessary to (a) define the unit of analysis that correspond to the level of reference of the theory; (b) define the operational definitions for the construct; (c) translate the propositions

into hypotheses.

4.1.2 UNIT OF ANALYSIS

The empirical parallel of the level of reference of the theory is the "unit of analysis" issue. "The unit of analysis refers to the level of data aggregation during subsequent analysis. The unit of analysis in Operations Management studies, for instance, may be individuals, divisions, or companies" (Flynn, Sakakibara, Schroeder, & Bates, 1990).

In accordance with Forza (2002), to avoid any "cross-level interference" problem the reference level and the unit of analysis must be consistent, otherwise, the data collection and interpretation are incompatible (i.e., collecting data at one level and interpreting the result at a different level) (Dansereau & Markham, 1997).

In this study, the fundamental unit of analysis is, in general, the exporting companies, which therefore have a high percentage of their revenues deriving from foreign sales or services provided to foreign countries.

The unit of analysis will then be clustered into B2C, B2B or B2B2C companies, digital or traditional export strategy and even accordingly to the size of the company.

Therefore, the collected data are valid only at the firm level, while the individual data will not be taken into consideration.

4.1.3 OPERATIONAL DEFINITIONS

At this point, it is necessary to transform theoretical concepts into measurable variables.

According to Forza (2002), a single question is appropriate for objective concepts, whereas operational definitions containing multiple aspects are used to translate notions that are ambiguous and subject to individual feelings.

Using Boolean variables, it has been possible to convert part of the concepts, all the objective ones such as, for example, the use of a certain form of financing and the confirmation or not of different sentences.

While for more complex concepts, it was necessary to use variables identifiable through multiple-choice questions, such as the company size that can be translated into a multiple-choice question about the number of employees (Newbould & Wilson, 1977).

Moreover, if neither a Boolean variable nor a multiple-choice question is able to define and explain the most complex concepts a Likert scale is used.

For example, a 5-point Likert scale was used to identify the most impacted business functions and the impacts of Covid-19 on certain loan characteristics or the improvement of performances.

This study aims to evaluate changes in performance and, therefore, improvements or worsening rather than the performance itself.

4.1.4 HYPOTHESIS

The last step of the survey methodology is the translation in the hypothesis of the propositions. "A hypothesis is a logically conjectured relationship between two or more variables (measures) expressed in the form of testable statements. A hypothesis can also test whether there are differences between two groups (or among several groups) with respect to any variable or variables" (Forza, 2002).

As far as the relationship between two variables is concerned, this study tries to relate the performance to the funding obtained, while, for the variation dependent on a criterion, it is carried out by going to see, among other hypotheses, whether there are differences with respect to a variable depending on whether a company does digital or traditional export.

The hypotheses developed in this study can be found in Chapter 3.

4.2 SURVEY DESIGN

The process for structuring and designing the survey consists of several steps. First, it is necessary to understand what information is needed and define the constraints at a macro level; then it is necessary to identify and select the target sample that will be used to complete the survey; then it is necessary to proceed with the choice of measurement instruments and finally it is necessary to pass to the phase of data collection that will be filtered and analysed.

Although all these activities must be defined a priori, they are highly interconnected and therefore the choices made in the upstream activities might have an impact on the decisions related to the subsequent activities.

4.2.1 SAMPLE

This thesis focuses on the relationship between financing and exporting, more specifically it assesses how export performance varies according to the different financing methods used by a company to finance export activities in its internationalisation process.

The research was therefore directed towards companies that conduct export activities. The sample is mainly made up of companies based in Italy that export to foreign countries, accounted for 88.89%; however, the questionnaire was also submitted to some foreign companies to try to highlight whether there might be different trends depending on the market of origin of the company in question.

In addition, since the sample includes all exporting companies, the characteristics of the sample, in terms of company size, sector and exporting method (digital or traditional or both) are extremely varied, several questions were asked to provide a better picture of the companies and assess any different results according to the different profiles.

Non-exporting companies, on the other hand, were excluded using a gate question that explicitly asked whether the company was exporting.

4.2.2 MEASUREMENT INSTRUMENT

As suggested by Forza (2002) one of the most distinctive features of a survey is to use structured means and methodologies for data collection.

Once the empirical aspects to be measured have been established, there are several steps to be taken to create an appropriate measurement system. First of all, the formulation of the questions has to be defined, i.e. the way the questions are asked in order to be able to collect data effectively on a certain object; then the scaling has to be defined, i.e. deciding on the set of procedures to measure the answers of each of the questions; finally, the respondent identification has to be carried out, which consists in identifying the respondents who are potentially relevant for the questionnaire to be submitted.

In addition, when structuring a survey, it is important to pay attention to the design of the questionnaire, i.e. to ensure that the type of questions and the way they are arranged are such as to entice respondents to answer.

As regards the language used in the formulation of the questionnaire English was chosen, this was done to survey companies of different nationalities.

In order to receive coded answers avoiding bias or unreliability, and to facilitate the answers to the respondents by making them quicker, it was chosen to use closed questions; however, where deemed necessary, a blank answer option was included whose completion is optional. In terms of scaling, response modes were selected to facilitate both subsequent analysis of the data collected and the respondents in providing their answers. A nominal response system based on multiple-choice items was used in the case of qualitative data, while in the case of quantitative data, a system based on interval scales, such as the comparative scale or the Likert scale, was preferred.

Since, in order to select relevant respondents, it is necessary to choose professionals and company figures with the proper skills and knowledge about the data of interest, the questionnaire was mainly submitted to export or e-commerce managers or, in any case, to people working in the field of the management of the internationalisation of the company (i.e. foreign marketing and sales managers).

Finally, all basic rules of presentability, politeness and readability were respected in the design of the survey, providing a detailed introduction with clear instructions and appropriate response alternatives.

4.2.3 DATA COLLECTION

In order to collect the data subsequently used in the analysis, a special online questionnaire was created and used, which focused on the relationship between type of financing and company performance in the field of export activities.

The purpose of this questionnaire was to collect data in a concise manner by asking clear and circumscribed questions and then using them to carry out a structured and precise analysis. According to Forza (2002) this type of survey guarantees several benefits: reduced costs, attention to the convenience of the respondents, anonymity, flexibility for respondents to fill in the questionnaire when and where they prefer.

The programme to manage the survey between the beginning of July 2021 and the end of September 2021 that provided the data for this thesis was the online programme Opinio.

The following figure shows the data collection process that took place in collaboration with the Observatory of the Politecnico di Milano.

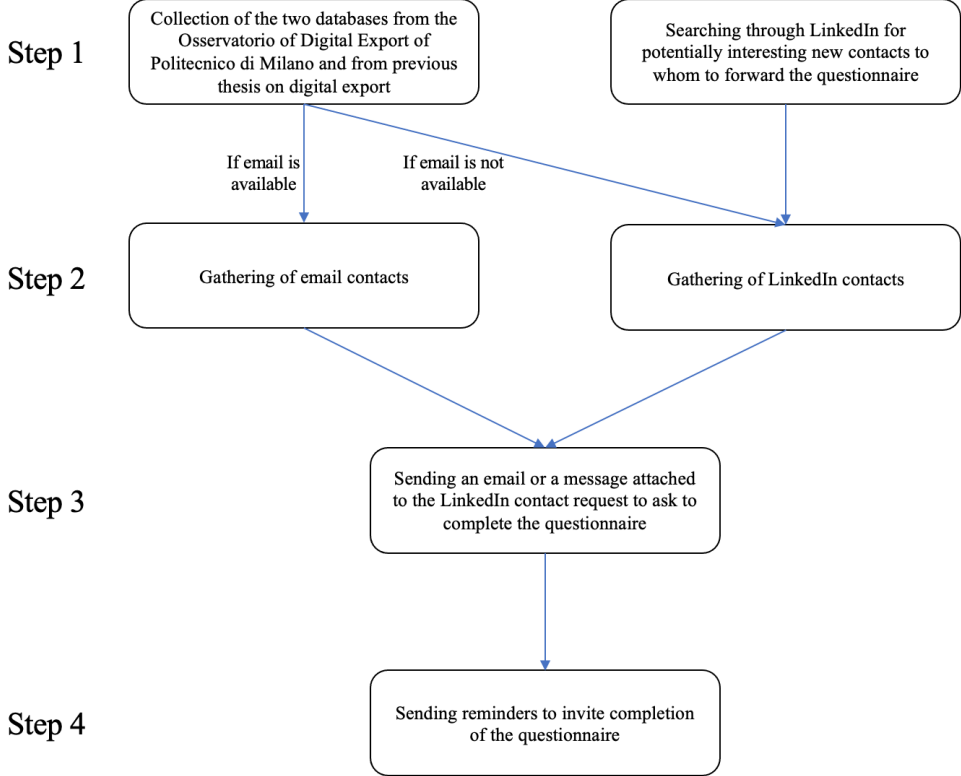


Figure 15 - Data collection process

In order to find some of the contacts of the potential interviewees in the survey, the database of the Digital Export Observatory was used; through this database, it was possible to obtain the contacts, email or LinkedIn, of the people who hold export-related roles in the companies considered. Telephone contacts were also provided for some names, but these were not used to avoid being invasive and make the interviewees uncooperative.

Furthermore, in addition to the contacts contained in the above-mentioned database, those included in a list provided by three students from the Politecnico di Milano who carried out a survey for a thesis on digital export last year were also used. In this case, the names, email or LinkedIn contacts were also provided for contacting the respondents.

For the contact methods, depending on the information available, an email message was used, which presented the thesis project and kindly asked to fill in the Opinio questionnaire. The survey could be reached through an attached link; as for the contacts via LinkedIn, a

connection request was sent to the interested parties with an attached message which, also in this case, presented the theme of the thesis project and invited them to access the online questionnaire through the link provided.

In addition, the third group of potential respondents was found through an individual search on LinkedIn, taking advantage of its networking features. For the search of these new profiles, the search was structured

1. Initially by entering keywords such as "e-commerce", "cross-border e-commerce", "export manager", "digital export", "sales export director", "international sales".
2. Subsequently, the suggestions obtained were filtered using the "people" filter to obtain the profiles of people who carried out export and internationalisation-related tasks during their work.
3. The profiles were then assessed by checking whether the company, in which they were currently employed, operated in foreign markets and had the right characteristics to provide relevant data for future analysis.
4. Finally, each of the professionals validated in step 3 was sent a connection request with an attached message presenting the thesis project and a polite invitation to complete the questionnaire.

During the months that the survey was active, multiple reminders were sent to selected contacts almost weekly.

In total, 1252 contacts were asked to complete the survey, 98 via LinkedIn and 1154 via email. Opinio stored 416 open surveys, indicating that 33.23% of the contacted professionals started to answer the questionnaire; the remaining people either declared themselves incompetent in the fields covered by the survey or not interested in collaborating unreachable through the email contacts used.

The number of surveys registered as "completed" on Opinio, i.e. all questions answered and the "finish" button pressed to register the questionnaire, was 78. This means that 18.75% of the users who started the survey completed it and that the response rate for the entire survey was 6.23%, which is lower than in previous research (Macchion et al., 2017).

However, it should be considered that in several cases, although the respondents had answered all the questions, the questionnaire was not recorded as "completed" because the last step of recording the questionnaire by clicking on "finish" was omitted; therefore, since the validity

of the answers of the questionnaire is total, it was considered appropriate and useful for the purposes of the research to include in the sample of responses to the survey also those coming from these completed questionnaires but not recorded as "complete" on Opinio. This made it possible to expand the sample of responses to 102 surveys, extending the response rate for the entire survey to 8.15%.

4.2.4 STRUCTURE OF THE SURVEY

Before the beginning of the questionnaire, there is a short introduction explaining the object and the structure of this survey, also indicating an estimate of the time needed to carry it out; then the confidentiality of the data provided in compliance with the General Protection Data Regulation is declared; finally, the students who carried out this questionnaire for their thesis project are introduced, also providing their contact details in case of need of clarification.

The survey, as it was designed to provide data for two different theses related to digital export, is articulated in such a way as to have 25 questions, of which some are of common interest while others are specific to each of the two thesis projects.

The first question, a gate question aims to understand whether the contacted company carries out export activities. If the answer is negative, the respondent is automatically sent to the closing questions of the survey as he/she does not belong to the sample of interest for the thesis project.

The first section of the survey concerns the organisational structure of the company, investigating the presence and profile of some company figures dedicated to exporting; it is also asked in which geographical markets the company operates, which are the export channels and what are the motivations for undertaking this activity.

Subsequently, two questions were asked that could provide, through quantitative data, information about export and company performance. This choice is due to the fact that since there are many SMEs in the sample of respondents, they often do not evaluate distinctly the performance obtained on the domestic and foreign market but, rather, tend to evaluate the company's performance as a whole.

This is followed by the section dedicated to financing export activities; firstly, it is asked whether the company mainly uses internal or external capital to finance itself and, for each of the two types, it is then asked how the company's performance has varied in relation to the

different financial instruments available. It is then asked which financial instruments have had the most significant impact on the performance data requested above; furthermore, it is asked to select, among the possible reasons, those that, in the respondent's opinion, most closely link the financial instrument used to the performance pursued.

The last two questions on financing investigate: on the geographical origin of the financing to see if and how different company profiles prefer to rely on the domestic financial market rather than on the foreign one to pursue their internationalisation strategies, on which company functions most need support and which ones can make the most of it, on possible relationships between export in digital form and financing, on the main problems of access to external credit and on the impact that the Covid-19 pandemic has had on export financing.

Finally, a series of general questions are asked in order to provide the company profile of the interviewed company in terms of name, country of origin, size with reference to the number of employees, job title of the person filling out the survey, sector in which the company operates and market segment to which it mainly refers (B2B, B2C, B2B2C).

The type of questions used in the questionnaire are closed multiple choice questions with one or more answer options, sometimes including the option "other" to be specified, and questions with answers arranged on a Likert or ordinal scale. Only one response is open-ended and concerns an optional final comment with possible comments and suggestions based on the respondent's personal experience of the issues dealt with in the survey.

The entire survey is however shown in full in Appendix A.

4.2.5 DATA CLEANING

A data cleaning phase was carried out in order to make the sample used in the following analyses valid.

With regard to the handling of missing data, either the exclusion of the entire questionnaire containing incomplete mandatory fields or the estimation of missing data can be used (Anderson et al., 1983). According to Forza (2002) the estimation of missing data is done by using regression or factor analysis on the variables.

However, due to the high number of answers left incomplete and the extreme subjectivity that characterised them, it was felt that it was not possible to fill in the fields left empty with reliable estimates.

Since the answers to the first 21 questions contained data that were absolutely necessary to carry out the analyses, it was decided to exclude all the questionnaires that were incomplete in the answers to this first section of questions.

Questions 22 to 25 were aimed at identifying the company that had carried out the questionnaire; for reasons of confidentiality and sensitivity of the data previously provided, some companies decided not to answer these last questions. However, it was decided to include in the sample also the companies that did not answer the previous 4 questions as they did not contain relevant data for most of the analyses conducted in chapter 5; it should be noted, however, that if a variable deducible from these last "identification" questions was used in the analyses, the companies that did not answer them would be excluded from the sample. Following the skimming according to the criteria described above, 314 surveys were eliminated, i.e. 75.48% of the questionnaires that were found to have been initiated.

It should also be mentioned that the 24th question asked which sector the surveyed company belonged to through a multiple-choice question, including the option other to specify. In order to carry out a more meaningful analysis that could highlight possible trends at a macro-sectoral level, sectors that presented similar characteristics in significant aspects were grouped into seven macro-sectors, as is shown below in the descriptive analysis.

Finally, it is necessary to point out that in the analysis, a distinction was sometimes made between digital use or non-digital use by the companies interviewed. This classification derives from a grouping of the answers given in question 1: all the firms that answered that they carry out digital exporting activities, regardless of the intensity, are recorded as digital users while those that do not carry out any digital exporting activity are recorded as not digital users. This is justified by the fact that it was not meaningful to assess the degree of digitalisation in too much detail; when this was considered relevant, it was taken into account.

4.3 DESCRIPTIVE ANALYSIS

In this paragraph, a descriptive analysis of the data collected through the survey has been carried out, which is useful to highlight characteristics in the answers before moving on to the validation phase of the previously formulated hypotheses.

Forza (2002) stated that the preliminary data analysis is carried out by checking correlations, frequency, dispersion, and possible trends.

4.3.1 DEMOGRAPHIC PROFILE OF COMPANIES

It is necessary to clarify. Since the questions on company demographics were positioned as the last in the survey, some enterprises did not complete the responses.

In addition, as previously stated, some firms did not respond to these questions because, after compiling other information they considered sensitive, they did not want to associate their company name with that information for reasons of corporate privacy.

First and foremost, it is essential to explain the demographic characteristics of the various companies that filled out the questionnaire.

Initially, a distinction is made between those who export and those who only serve the domestic market; secondly, for those who export, the degree of digital export in this activity is also indicated. Among the questionnaires that were considered to be valid, 30 interviewees, i.e. 29.41%, stated that they do not conduct any export activity, while the remaining 70.59% stated that they are exporters.

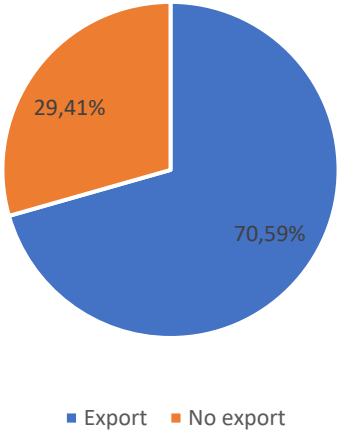


Figure 16 - Exporters

Regarding the country of origin, the sample has a clear majority of Italian companies. In fact, 88.89% of the companies have their headquarters in Italy, the remaining companies come from Swiss, the US, Spain, and Germany.

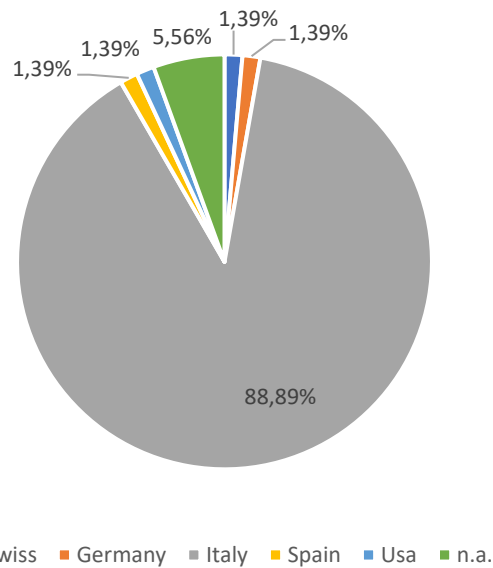


Figure 17 - Country of origin

Firms in the sample are distributed among four categories: micro (less than 10 employees), small (total number of employees between 11 and 50), medium (between 51 and 250 employees) and large companies (more than 250 employees).

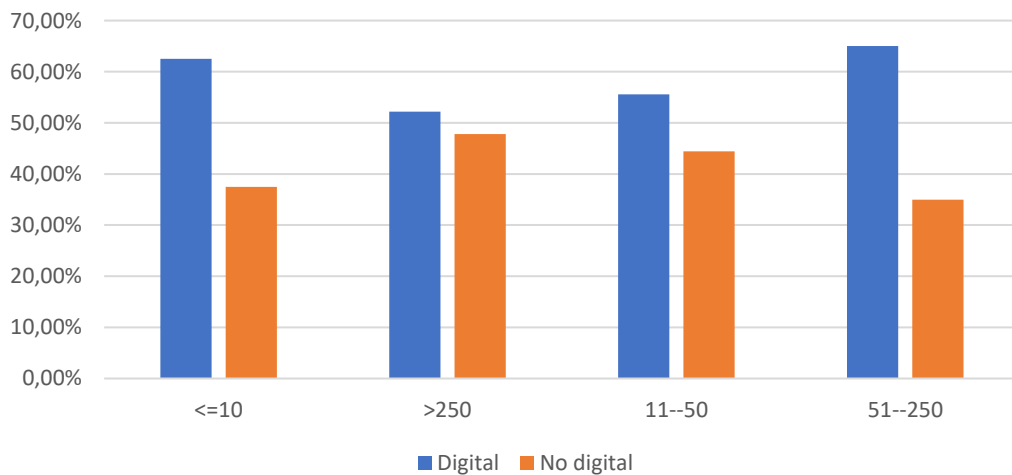


Figure 18 - Company size

32% of the survey sample are large-sized companies with more than 250 employees, 28% include medium-sized companies, 25% are small to medium enterprises, while just over 11% include micro-companies.

In addition, small and large companies are almost equally divided between those that use digital and those that do not use digital. While 62.5% of micro-enterprises and 65% of medium-sized enterprises use digital solutions in their export strategies.

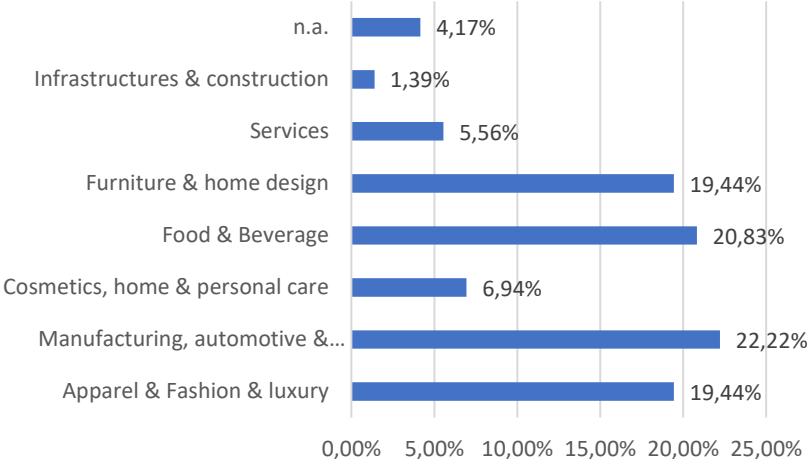


Figure 19 - Company sector

Concerning the sectors in which the companies in the sample operate, these are represented in Figure 19. The 22.22% include manufacturing automotive and electronics, while the least represented sector is infrastructure and construction only with 1.39%

In addition, the data has been aggregated into several sectors of greater importance, to carry out the analysis in a more agile and effective manner, and above all, so as not to have very specific sectors represented by just one company.

However, all the areas that were indicated in the survey can be seen in the Appendix B.

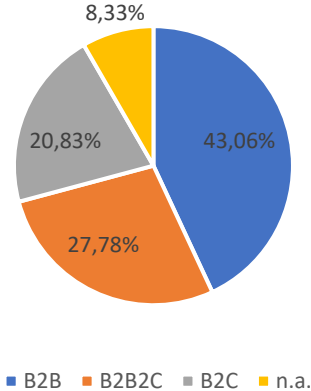


Figure 20 - Market segment

As specified in the unit of analysis section, the companies in the sample belong to the three market segments B2B, B2C, and B2B2C.

Most companies operate in the business-to-business segment and account for 43%, while the least represented segment is business-to-consumer.

4.3.2 EXPORT AND DIGITAL STRATEGY ADOPTED BY FIRMS

DIGITAL NO DIGITAL

As this thesis focuses on exporting, the portion of respondents who stated that they do not conduct any export activity was excluded in the subsequent analysis. The sample used is therefore reduced to only those who export; among the latter, it should be noted that the use of digital technologies is rather low; in fact, 90.28% state that they use online either not at all or less than offline, while only 9.72% state the opposite.

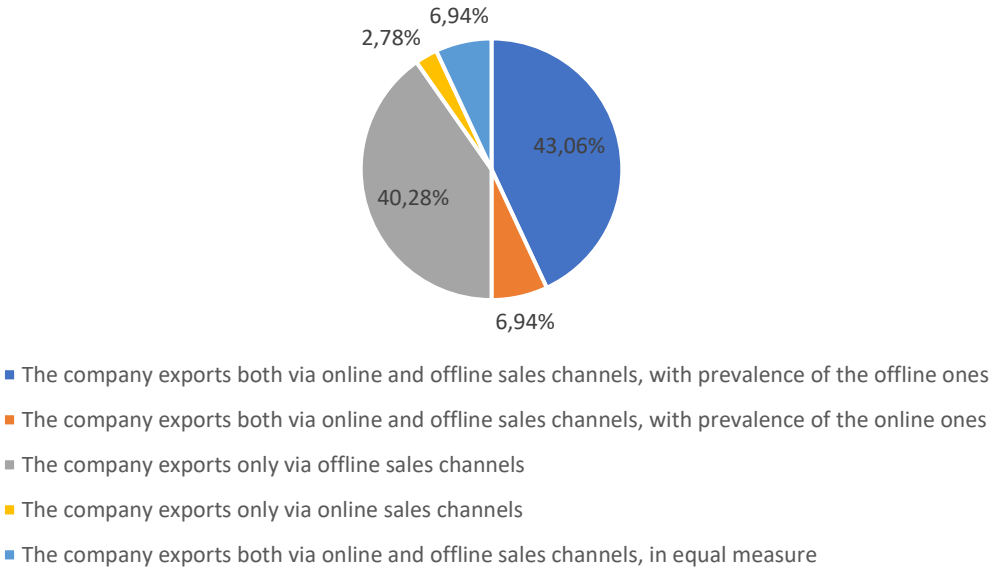


Figure 21 - Degree of digital export

For the analysis that will be carried out later, as anticipated in paragraph 4.2.5, it will not always be necessary to specify the intensity of the use of digital technologies in exporting activities, but only to make a distinction between those who use them and those who do not use them at all. Therefore, the graph in *Figure 22* summarises the percentage of those who use digital exporting and those who only export offline.

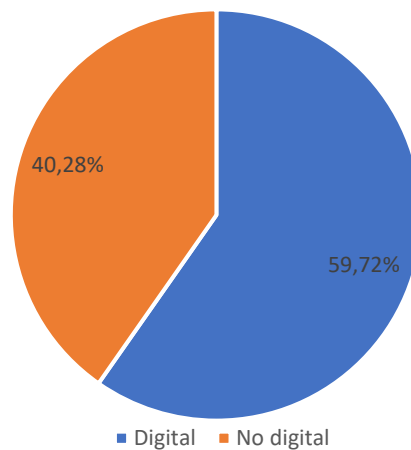


Figure 22 - Percentage of digital companies

EXPORT MANAGEMENT

Regarding management methods and the presence of a figure dedicated to exporting, it was noted that 88.89% declared the existence of a figure or unit dedicated to this activity, highlighting the primary importance it has in guaranteeing the effectiveness of exporting.

It is interesting to highlight the data on the use of business units for export activities; in fact, 56.52% of those who said they had a business unit dedicated to export activities carried out these activities in a non-digital way, while among those who had a team dedicated to export within another business unit only 11.11% carried out exports in a purely offline manner. This difference suggests that the use of digital technology allows them to manage their export activities in a more fluid, flexible and dynamic way, being able to integrate this task into existing parts of the organisation, while those who only use offline seem to be forced to structure the process in a way that is clearly more complex, so much so that they need to dedicate an entire business unit to it.

Moreover, 3.37% resort to temporary export managers and 7.87% resort to external consultants to manage and carry out these activities.

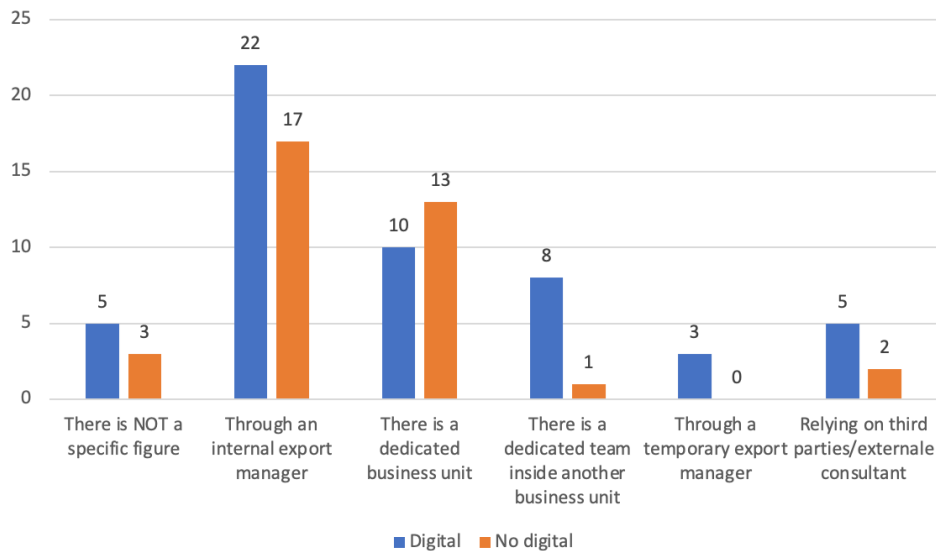


Figure 23 - Export management

MACRO-AREAS WHERE THE COMPANIES EXPORT

As far as the evaluation of the macro-areas in which the company operates is concerned, they are summarised in the following figure in which it is also specified how long these markets have been served by the companies interviewed; below, for reasons of graphic clarity, only some percentages, those considered most significant, have been shown explicitly in detail.

Since, as shown above, the sample is made up of European companies, the highest concentration of export activity is registered in Europe, where 79.17% have been present for more than ten years. This figure shows the tendency of companies to export their products to countries that have a shorter distance from their country of origin. The distance between two countries can be assessed through the CAGE distance framework (Ghemawat, 2001): cultural distance, administrative distance, geographic distance, and economic distance.

Even in the American market, 50% of the companies operating there have been present for at least 10 years, which can be explained by the fact that it is an established and fairly solid market, a condition often required by SMEs to select an area to export their products to.

As far as the African and Asian markets are concerned, it can be observed that the percentage of companies that have entered these markets either in the last year or in the last three years is higher than that of companies that have entered America, Europe and Oceania in the same

recent periods; this can be explained by the fact that Asia and Africa are emerging and developing markets.

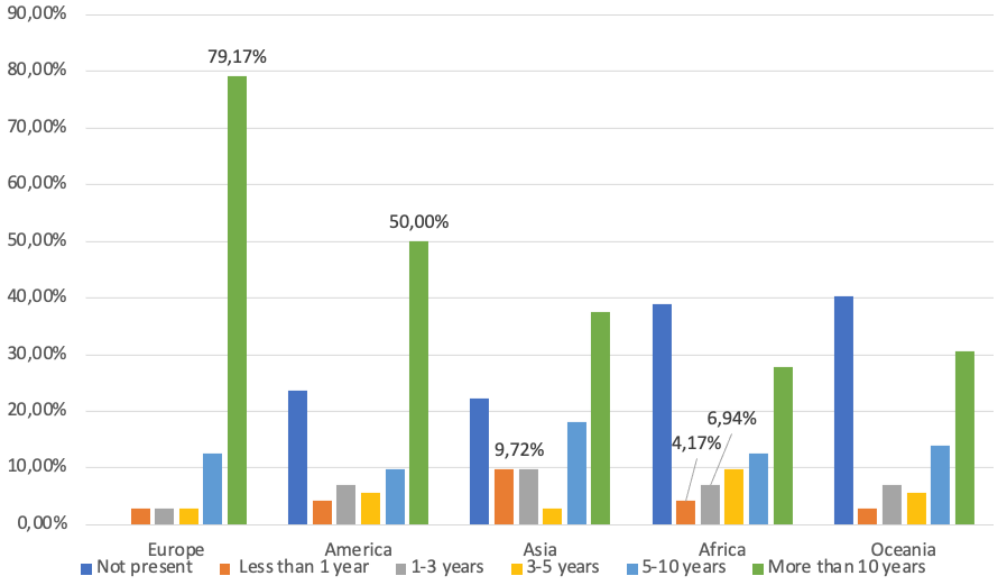


Figure 24 - Macro-areas of operation

EXPORT CHANNELS

The following graph summarises the channels used by the companies interviewed to export. As can be seen, data is represented for the digital channels, of which the most used is the own-website, adopted by 43.05% of the interviewees, and for the more traditional channels, among which the distributors and agents prevail, adopted by 69.44% and 50% of the interviewees respectively.

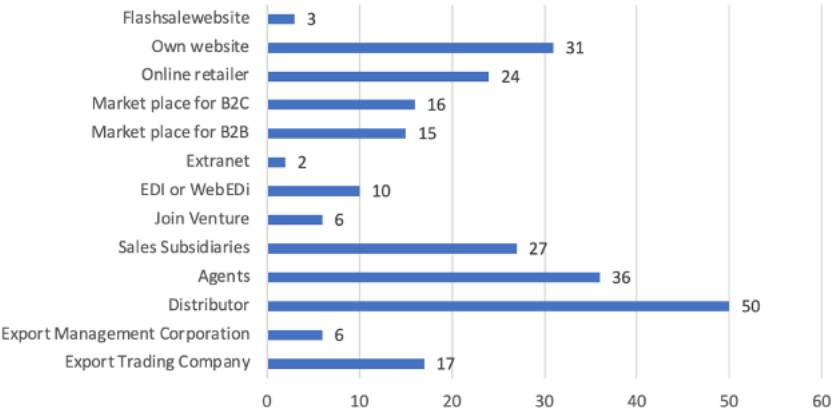


Figure 25 - Export channels

An interesting fact that has been noted that appears from the percentage distributions of use distinguishing between digital and non-digital in *Figure 26* shows that, even when conducting a digital type of export, it is essential to accompany this activity with more traditional offline channels to increase its effectiveness.

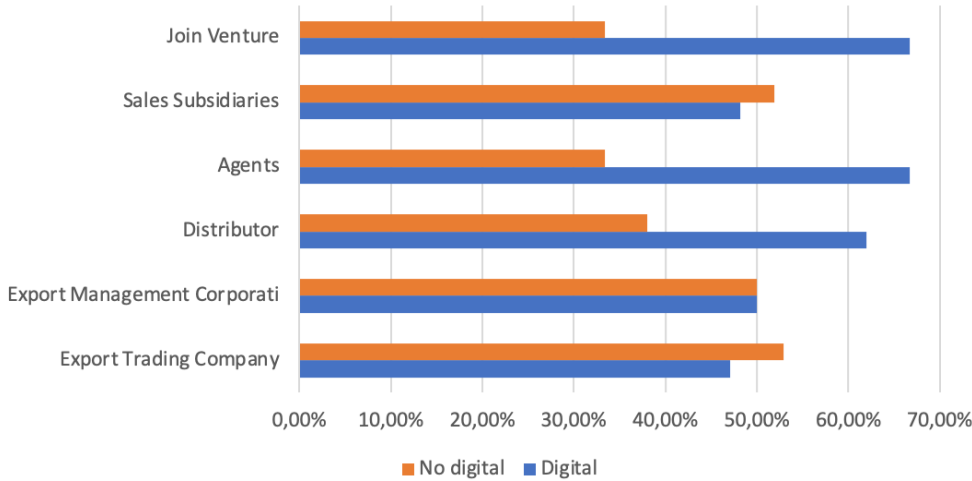


Figure 26 - Export channels among digital and offline exporters

4.3.3 FINANCIAL CHARACTERISTICS AND BARRIERS

The descriptive analysis in the financial area illustrated the main characteristics and perceptions of the companies in the sample regarding financing.

This paragraph is particularly relevant because it analyses the pillar of financing; in fact, each company has expressed its preferred options on certain financial questions.

In the survey, 44% of the sample expresses the predominant use of forms of equity financing, 38% uses both equity financing and debt financing, whilst only 18% use debt financing. This trend holds even when discriminating by digital or non-digital strategy both groups use equity predominantly, while debt is hardly used as the primary source of financing, only slightly less than 14% of non-digital exporters use predominantly debt-financing. This data underlines how exporters mainly use equity financing and seem to support certain strands of literature presented in chapter 2.

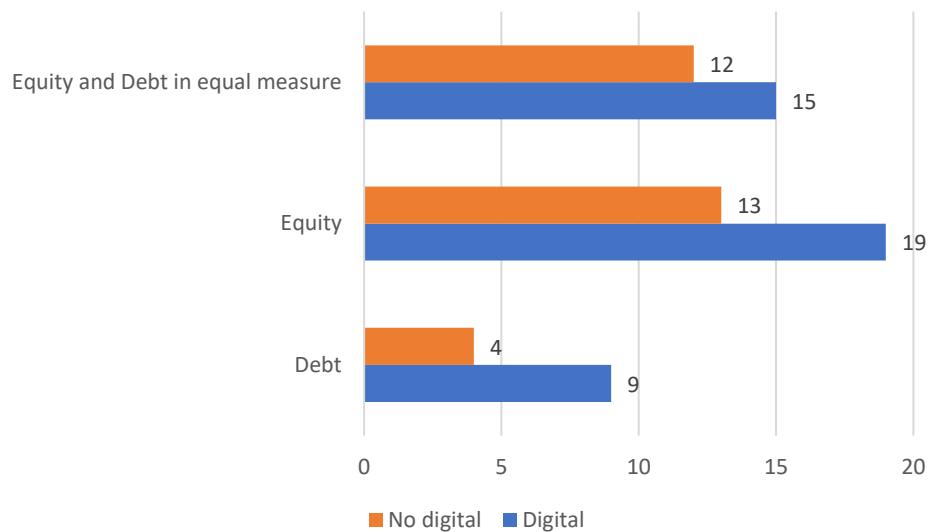


Figure 27 - Prevailing mode of financing

Graph in *Figure 27* shows the distinction between debt and equity as the main form of financing.

It is interesting to note that among the companies that use debt as their primary source of financing, many more companies adopt a digital strategy, which underscores how digital exporting can facilitate obtaining debt financing by reducing the barriers faced by traditional exporters.

The survey included a table designed to capture the opinions of the sample regarding the various financing alternatives. They were asked to evaluate the various financing alternatives and assess their effectiveness based on previous experience. The companies had to express for each type of solution between "Company's performance has strongly worsened", "Company's performance has worsened", "Company's performance has not changed", "Company's performance has improved", "Company's performance has strongly improved", and "Not used". From the analysis of the opinions of the sample, it is possible to derive the preferences and ideas of each company. Data for those who have never used this funding were overlooked in this chart.

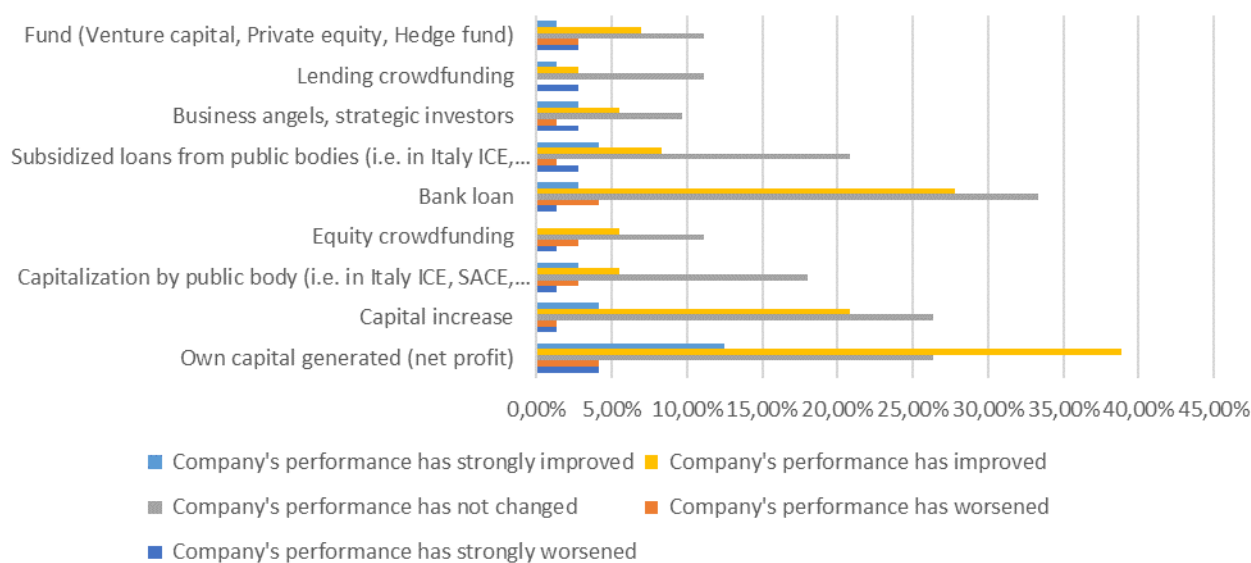


Figure 28 - Opinions on different financing solutions

In general, the sample considers the traditional financing of bank loans and own capital generated as the forms that improve performance. In particular, the latter is considered the method that most strongly improved performances. The types that are considered the worst in terms of variations in performance are funds and capitalisation by public bodies. While the sample remains hesitant and uncertain about the two new financing modalities of equity and lending crowdfunding, which can be explained by the brief history of these two modalities and the absence of real experience in their use.

This analysis can be used to verify or not the opinions of the companies in the sample through comparison with the results of the econometric analysis. In particular, since they represent an overview of the exporters' evaluation of the different financing methods, they could be used as a guideline. The graph represented to be easier to understand is without all the percentages, however, the table with all the preferences can be seen in the Appendix C.

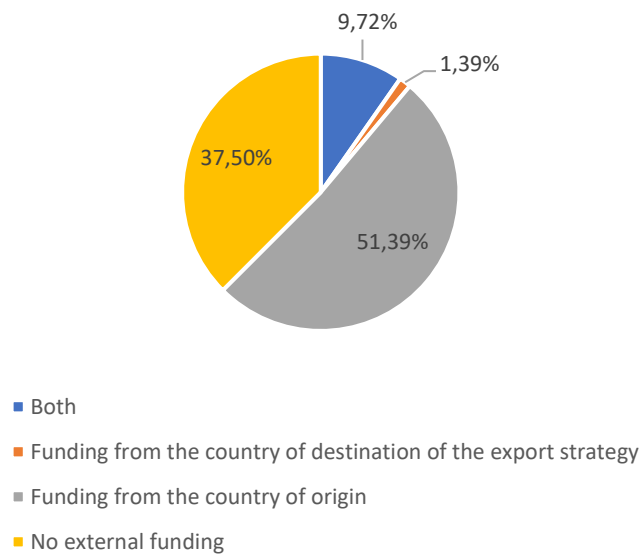


Figure 29 - Origin of the funding

About the country from which external financing was obtained, a decisive characteristic is clear. In fact, 51.39% of the companies in the sample state that they have always obtained this financing from the country of origin, underlining that aid from the domestic country is more widely used. Only 1.39% of the sample uses external financing obtained from the targeted country for export strategies, while 9.72% admit to using both these methods.

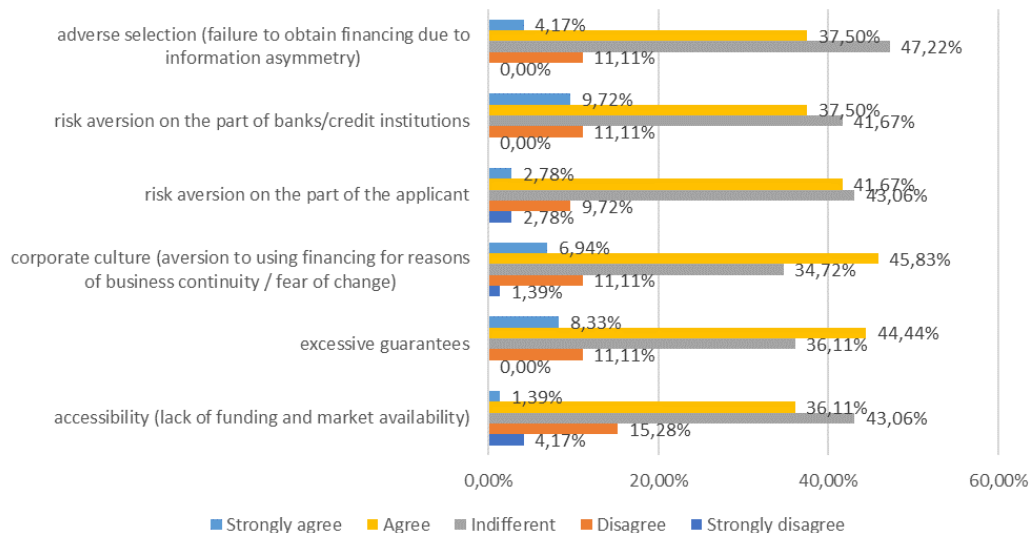


Figure 30 - Barriers to funding

A question in the survey was intended to highlight and understand the barriers to financing primarily perceived by exporters.

The barriers that are perceived as most impactful and as real obstacles to accessing financing are the excessive guarantees required at the time of application for the loan, risk aversion on the part of banks or credit institutions and the corporate culture linked to the aversion to use financing to maintain business continuity and for fear of change.

Whereas the barrier that seems not to be drastically perceived is the lack of accessibility and therefore the lack of funds and market availability.

Companies are aware that there are numerous solutions available on the market and several credit institutions, thus, it is not the absence of these that blocks access to financing, it is precisely the obstacles mentioned above that make exporters financially constrained.

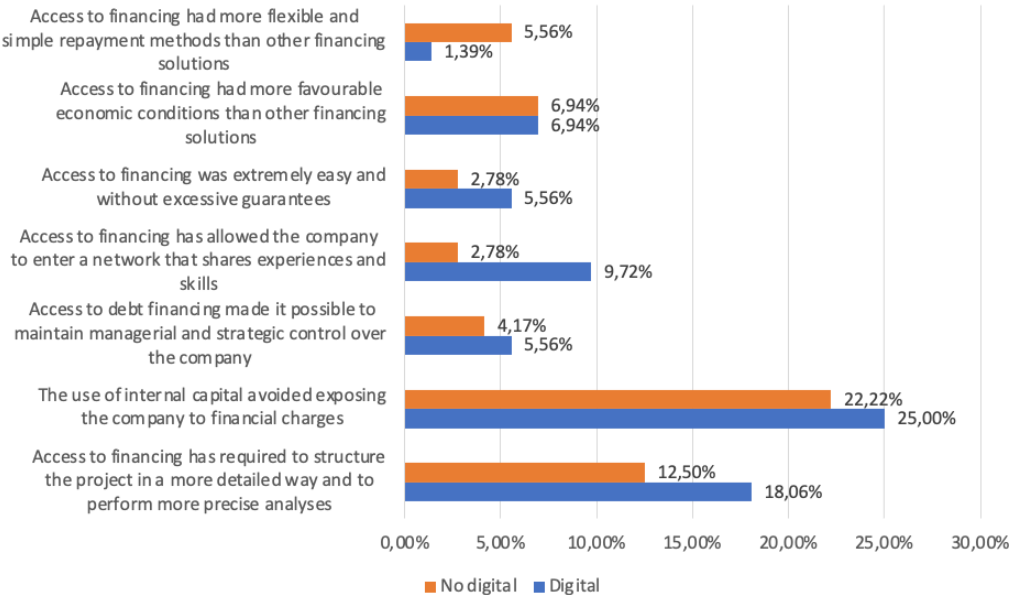


Figure 31 - Reasons of success

The chart in Figure 31 depicts the reasons that exporters believe have led to the greatest improvements in performance.

In particular, for both digital and non-digital exporters, the main explanations are "The use of internal capital avoided exposing the company to financial charges" and "Access to financing has required to structure the project in a more detailed way and to perform more precise analyses" with cumulative percentages of 47.22% and 30.56% respectively.

It is interesting to note where the two groups, digital and non-digital, express different opinions. Digital exporters have stated more clearly that the "Access to financing has allowed the company to enter a network that shares experiences and skills" is a more effective motivator than for non-digital exporters. While for non-digital exporters, it would appear that "Access to financing had more flexible and simple repayment methods than other financing solutions" is a more effective motivation than for digital exporters.

4.3.4 DIGITAL IMPACT

Figure 32 shows a graph summarising the extent to which respondents agreed with some of the statements made about the benefits and characteristics of digital exporting.

In general, all the proposed theses were endorsed by the majority of the respondents: the fact that digital exporting implies a faster and more intensive use of investment in the early stages than traditional exporting was endorsed by 59.72%; the statement about the reduction of break-even times thanks to the exploitation of digital exporting was shared by 50%; finally, the theses about the greater scalability of digital solutions for the same investment and the greater likelihood of receiving funding for export projects with a high digital content compared to traditional exporting was supported by 68.05%.

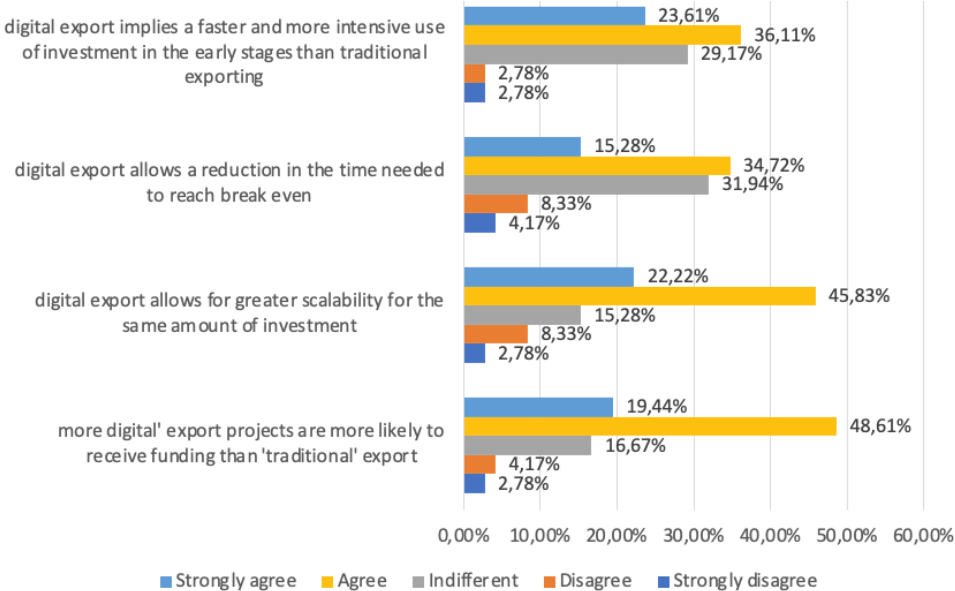


Figure 32 - Digital impact on investments

The results obtained are quite significant as they support the fact that, as supported by the literature, the transition to digital export is not only driven by new customer habits and to provide a more customer-centric experience, but also because it is motivated by operational benefits experienced by companies adopting a more digital approach.

4.3.5 PERFORMANCES

FUNCTION PERFORMANCES

Through the data provided, it was also possible to collect assessments of the performance of individual business functions and of the company as a whole.

As shown in the figure below, in most cases the respondents claim that there is a direct correlation between the need for funding and the improvement of the performance of the indicated function. This means that, where it is needed, the invested capital can be used effectively to achieve the expected results and vice versa.

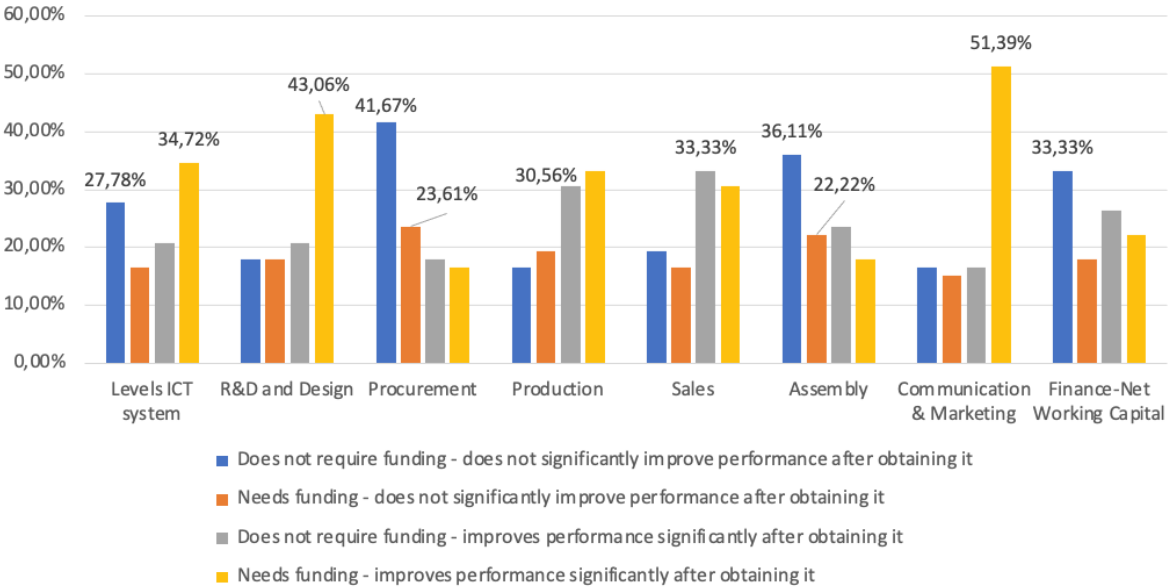


Figure 33 - Relationship between functions and funding

However, some aspects should be highlighted; in fact, of relevance are the opinions on the use of resources in the procurement and assembly functions, where 23.61% and 22.22% of respondents claim that although they need to use funding, they fail to improve their performance after obtaining and using it significantly. This suggests an ineffective use of

available resources by the functions considered, which could be related to the characteristics of the function itself. As for the production and sales functions, 30.56% and 33.33% of the respondents stated that, although there is no need for funding to ensure the desired performance, the performance would increase significantly if there were available investment. On the whole, through the data collected, it can be stated that the functions of R&D and design, production, sales and communication & marketing manage to make the most of the available investments to improve performance, while procurement and assembly absorb financial resources inefficiently and ineffectively; for the ICT and finance functions, however, opinions are mixed and results vary.

FINANCIAL PERFORMANCES

The data shown below captures the financial performance of the companies surveyed, differentiating between those companies that use digital and those that conduct their business only offline. According to the graph in *Figure 34*, for those who make use of digital export, it is possible to highlight that revenues were the factor most positively impacted by the investments made as 58.14% recorded an increase, while ROA was the one with the worst results as 65.12% felt that this indicator showed no change or even worsened.

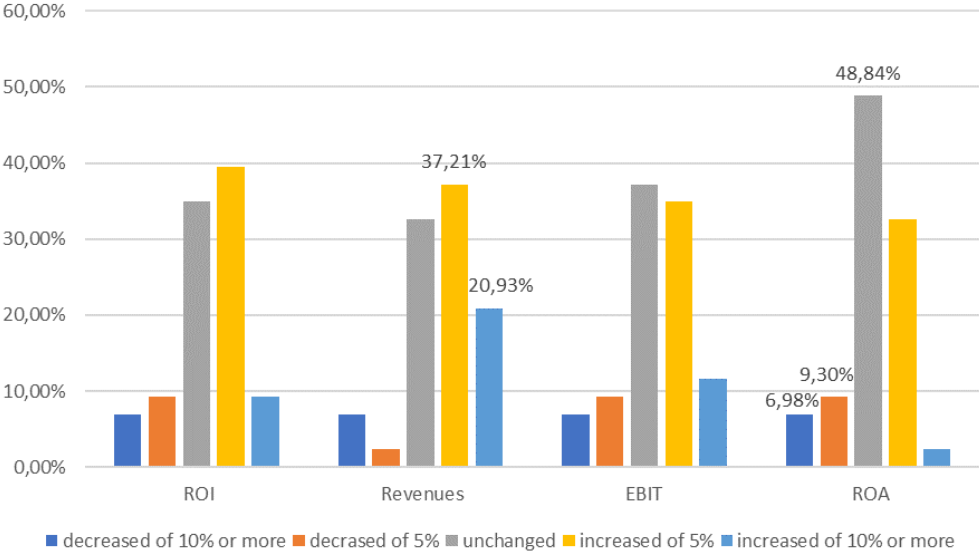


Figure 34 - Financial performances of digital companies

Figure 35 shows data from respondents using 'traditional' non-digital exporting.

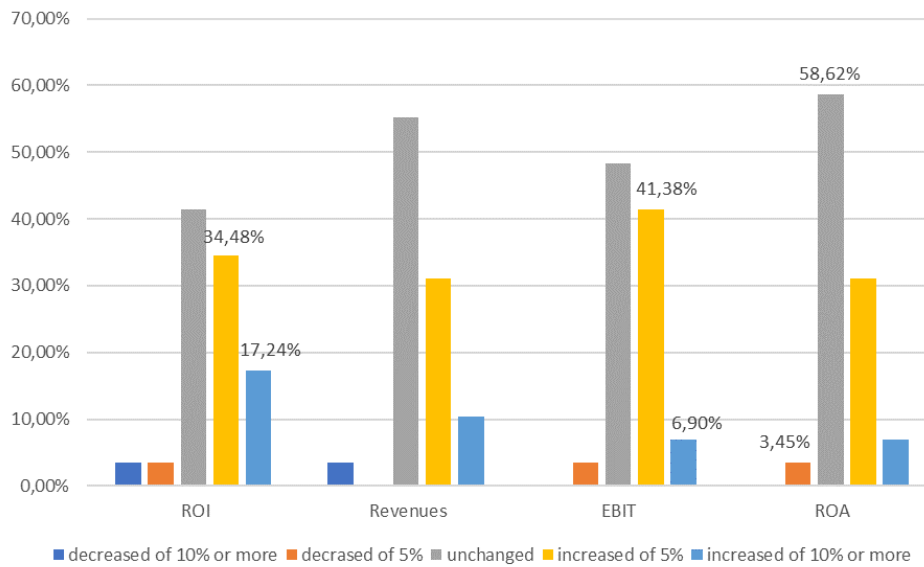


Figure 35 - Financial performances of offline companies

In this case, the best performers were ROI and EBIT, which improved in 51.72% and 48.28% of cases respectively, while the worst performing indicator was ROA, which worsened or remained unchanged in 62.02% of cases.

In general, comparing the two graphs some considerations can be made about the performances obtained according to whether a digital export strategy was used or not. In fact, it can be observed that in the case of non-digital export the performances remained unchanged on average in 50.86% of the cases, or more frequently than in the case of digital export where the performances remained unchanged on average in 38.37% of the cases. Moreover, in the case of digital export, performances were more variable, for the worse but also significantly for the better. This data leads to the hypothesis that potentially, if adequately structured, digital exports offer greater opportunities for the exploitation of the financing received than offline exports. At the same time, if it is not properly structured, digital exporting leads to a waste of resources and a worsening, sometimes significant, of financial performance.

EXPORT PERFORMANCES

Below are two graphs, differentiated according to the type of export, which show the impact and performance of exports on the entire business of the interviewed company.

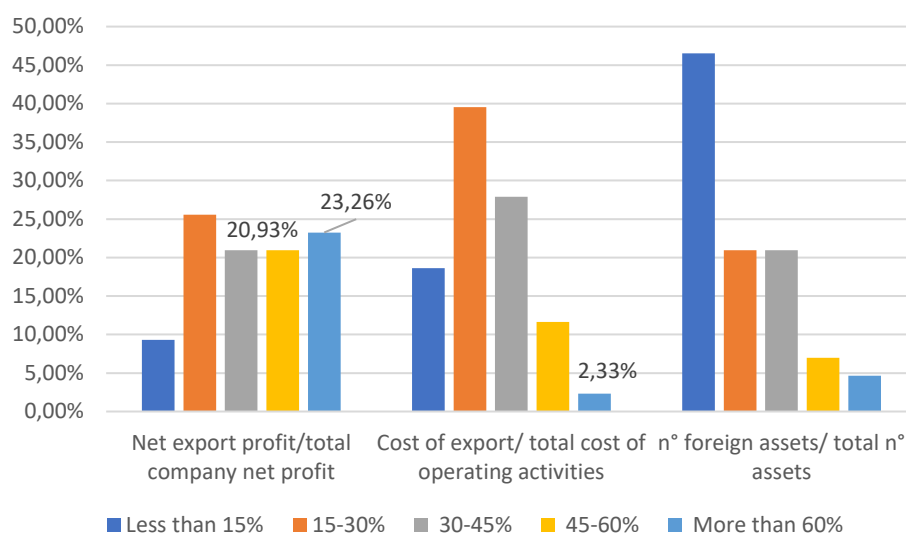


Figure 36 - Export relevance of digital companies

As far as digital exporters are concerned (*Figure 36*) it can be noted that the ratio between net export profit and total profit is higher than 30% in 65.12% of the respondents; the latter percentage drops to 48.27% among exporters that conduct this activity in a non-digital way (*Figure 37*). This figure suggests that the exploitation of technologies induces companies to expand their offer towards foreign markets, making the profits coming from them more and more relevant. This factor is positive both for growing companies as it offers an opportunity to expand demand and for established companies as it allows them to diversify the origin of profits, avoiding depending too much on the domestic market only.

Furthermore, it should be noted that export costs are more than 60% of the total costs of operating activities in only 2.33% of companies that export digitally, a percentage that rises to 13.79% in the case of companies that export offline. This data suggests that, although digital exporting firms base their business more on exporting than non-digital firms, as also shown by the data on profits and assets comparing *Figure 36* with *Figure 37*, the costs of exporting still remain lower than non-digital exporters.

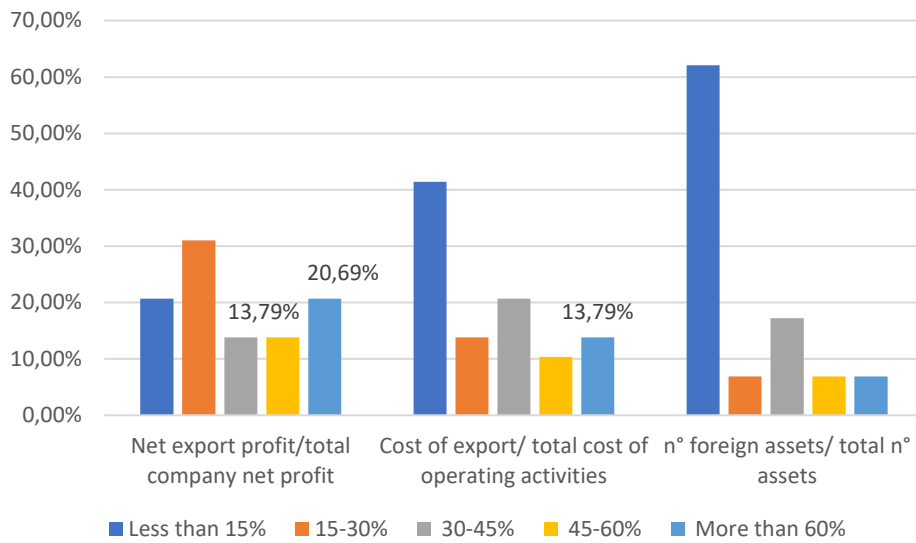


Figure 37 - Export relevance of offline companies

COVID-19 IMPACT

The graph in Figure 38 collects data on the impact of the Covid-19 pandemic on financing and business management for exporting companies.

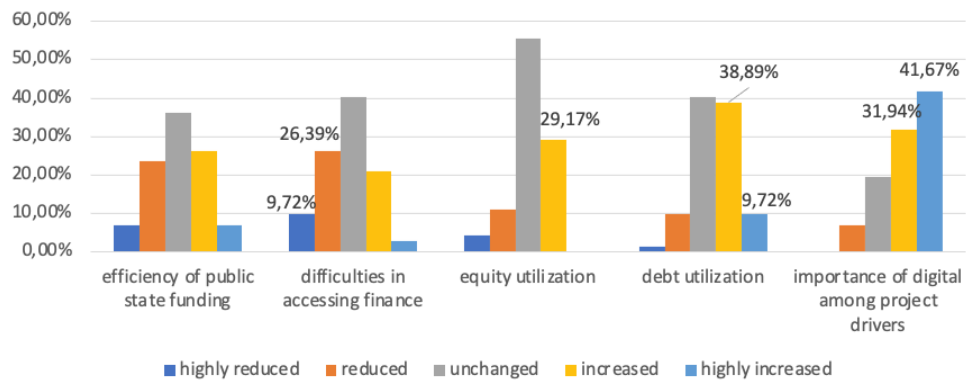


Figure 38 - Impact of Covid-19

From the data collected, it appears that there is a discordant opinion about the efficiency of public state funding and a slight tendency towards a decrease in the difficulties of access to financing, certified by 35.66% of the sample; this is also confirmed by the fact that 48.61% of those interviewed found an increase in the use of external debt capital as a source of financing; in the case of the use of equity, however, the percentage of those who found an increase drops to 29.17%.

A particularly significant finding was the growing importance of digital as a project driver, with 73.61% of respondents reporting this trend. This last figure is justified by the increase in efficiency brought about by digital technology and the forced change in the way customers purchase and search for offers following the Covid-19 pandemic.

CHAPTER 5: ECONOMETRICAL ANALYSIS, DISCUSSION AND CONCLUSION

In this chapter, the dependent, independent and control variables used for the model are initially described. In addition, an econometric analysis was conducted using models to investigate the research question and to test the hypotheses presented in the chapter, showing the results.

Furthermore, in order to confirm the validity of the analysis with a different dependent variable, a robustness check is also carried out in this chapter.

Finally, the statistical results obtained were evaluated and discussed to see whether to validate the hypotheses previously formulated.

5.1 EXPLANATION OF THE VARIABLES

The database to construct the variables was obtained from the valid data collected in the online survey through Opinio, as explained above, while the econometric analyses were carried out on the STATA software.

5.1.1 DEPENDENT VARIABLES

As previously stated, this thesis aims to explore what is the correlation between digital exporting and financing, with a particular interest in an assessment of which modes of financing, if used to support one's export activities, lead to better performance.

For the research question and hypotheses 1a, 1b, 1c and 2, company performance was chosen as the dependent variable; for hypothesis 3, the use of external financing was considered; finally, for hypothesis 4, access to financing in the country of destination of the export activity was considered. It was therefore relevant to understand how to measure these concepts correctly.

5.1.1.1 MODEL A

Regarding the performance related to export activities, since they are part of the company's performance and since, as previously stated in chapter 4, often small to medium sized companies, which are the largest part of the sample, do not differentiate between the performance obtained on the domestic and foreign markets, it was decided to use financial metrics.

This is also suggested by Zhu and Kramer (2002) who point to financial metrics for firm performance as the most suitable means of assessing e-commerce capabilities, endorsing the frequently held thought in the literature about the appropriateness of financial terms to assess the link between internationalisation and firm performance (Lu & Beamish, 2004; Contractor et al., 2007; Gao, Murray, Kotabe, & Lu, 2010).

Therefore, after deciding to use financial performance, it was decided to use ROI as an evaluation index.

ROI is an accounting-based indicator aimed at measuring operating profitability, which is a measure of the return on the capital invested in the company by way of debt or risk. It is given by the ratio of operating profit to invested capital.

It is therefore intended to measure the profitability of the invested capital and thus the ability to obtain a return on investment. Therefore, it does not only indicate the ability to remunerate risk capital (as is the case with ROE), but the ability to remunerate both risk and debt capital. Consequently, a positive ROI indicates that the project that has been financed is profitable, and an increase in the ROI value indicates that the company is able to optimise the choice and allocation of resources, including financial resources, in order to achieve better performance. The values indicating changes in ROI were collected directly from the survey because question 14 asked to specify, through some financial indicators including ROI, the company's performance pursued after obtaining financing.

Specifically, the response consisted of selecting one of five options indicating different levels of effect listed from lowest to highest on a Likert scale. Consequently, as the intent of this thesis was to assess which funding led to better performance by evaluating positive rather than negative changes, it was decided to assign a value of 0 to statements indicating a deterioration in performance ("decreased of 10% or more", "decreased of 5%" = 0), a value of 1 to those indicating indifference ("unchanged" = 1), a value of 2 to those indicating a slight

improvement ("increased of 5%" = 2), and a value of 3 to those indicating a marked improvement ("increased of 10% or more" = 3). Therefore, the dependent variable related to company performance is an ordinal variable.

5.1.1.2 MODEL B

As for the dependent variable indicating the use of external financing, it is intended to indicate all those forms of financing that include any type other than the use of equity capital deriving from the net profit of the economic activity or from an increase in capital required from the company's shareholders.

The values of this variable were obtained through the answer to question 15 in which it was investigated which financing was the most relevant in obtaining the company's performance. A value of 0 was assigned to the answers indicating own capital generated or capital increase as the main source of financing, and 1 to the others. Therefore, the dependent variable obtained is a binary variable.

5.1.1.3 MODEL C

Finally, the dependent variable indicating the access to financing in the country of export was described by the answers obtained to question 17 in which it was asked, with reference to the financing that had contributed most to performance, to specify whether it had been received from the country of origin of the company or of destination of the export activity.

The values assigned to the variable are 1 if it was stated that the financing came only from the destination country or from both countries, 0 in the other cases. Therefore, the dependent variable obtained is a binary variable.

It should be noted that this variable has been included as a dependent variable for model C while in model A it has been used as an independent variable

5.1.2 INDEPENDENT VARIABLES

5.1.2.1 MODEL A

In the research question and in hypotheses 1a, 1b and 1c, in order to be able to evaluate the impact of the use of the different types of financing used on the financial performance obtained, the variables indicating which of the different types of financing had contributed most to the performance obtained were used.

These independent variables are generated from the answers obtained to question 15. The answers, for each of the financial alternatives, were assigned a value of 1 if it was considered relevant in influencing the financial performance obtained, 0 otherwise.

It should be noted that this variable concerning the adoption of the different types of financing was considered as independent in model A, while it was considered as controlling in model B. To validate Hypothesis 2, on the other hand, the variable indicating access to financing in the country of origin was used, obtained through question 17, which investigated the geographical origin of the financing that had the greatest impact on financial performance. In this case, the values of the variable were obtained by assigning 1 if the financing was obtained entirely from the country of origin or from both countries, 0 otherwise. The variable obtained is therefore binary.

5.1.2.2 MODEL B & MODEL C

In both of these models the independent variable that was used was aimed at assessing the level of use of digital employed in export activities by the firm. The values of this variable were obtained through question 1 in which the respondent was asked to select the most suitable answer to describe how the company exports. The values assigned to the variable are 0 for companies that answered that they do not export, and from 1 to 5 for those that export depending on the level of digital employed; more specifically, a value of 1 was assigned to companies that export only offline, 2 to those that export predominantly offline, 3 to those that use online and offline in equal measure, 4 to those that predominantly use online exporting and 5 for those that said they use only the online mode. Thus, the variable obtained by considering the values from 1 to 5, which are those describing the exporters, is of ordinal type and measures the intensity of digital use.

It should be noted that this variable is also used in Model A, but as a control variable.

5.1.3 CONTROL VARIABLES

The first control variable is related to the extent of exports conducted by the firm. This variable measures the number of continents in which the firm is currently involved in exporting activities. Exporting, particularly digital exporting, facilitates the geographical expansion of firms across several continents. Therefore, the extent of geographical expansion and diversification plans can be measured by calculating the number of continents to which export activity is directed. In the past, export diversification was calculated through the number of countries to which exports were sent (Ramaswamy, 1993; Tallman & Li, 1996; Dhanaraj & Beamish, 2003; Lu & Beamish, 2004). Consequently, the variable is consistent with previous research.

The values of this variable were obtained from question 7: for each of the continents it was asked how long it had been a destination for export activities, then assigned a value of 1 if the company claimed to be operating there, regardless of when, 0 otherwise. The binary values assigned by each company to the five continents were then added together, resulting in an ordinal variable ranging from 1 to 5 depending on how many continents were served.

In addition, since company size and the sector in which the company operates can also be significant differentiating factors, they were used as control variables. The company size was derived from question 25, which asked to quantify the company size through the number of employees. The generated variable is categorical with a range from 1 to 4. Value 1 was assigned to the category of micro enterprises with less than ten employees, enterprises with 11-50 employees are classified as value category 2, value 3 was assigned to medium-sized enterprises with 51-250 employees, and large enterprises with more than 250 employees are classified as value category 4.

Question 24, on the other hand, provided the data necessary to create the control variable relating to sector of belonging: respondents were initially asked to choose from ten answers that included nine sectors and one 'other' answer to specify, which were subsequently aggregated into seven macro-sectors; each of these was then transformed into a dummy variable with value 1 in the case of belonging to the macro-sector, 0 otherwise. The macro-sectors considered are:

- Apparel, Fashion & Luxury
- Manufacturing & Automotive & Electronics

- Cosmetics & Home & Personal Care
- Food & Beverages
- Furniture & Home Design
- Services & Support
- Infrastructures & Constructions

Moreover, since the presence of a figure dedicated to exporting, such as a temporary export manager or an internal export manager, can have an impact on the ability to manage financial resources and, consequently, on the performance obtained in the export activity, it was decided to include their presence, through two dummy control variables. For both variables the values were obtained from the answers given to question 2 in which it was investigated how exports were managed in the company. If the figure in question was present, a value of 1 was assigned to the binary variable, 0 otherwise.

It was considered that the macro-typology of the financing received, i.e. whether it was predominantly equity or debt capital, could also be correlated with both the way the financing was used and consequently with the financial performance, as well as with the adoption of financing that included external capital and the possibility of accessing financing in the country of origin or destination of the business activity. Therefore, two control variables called EQUITY and DEBT were created to summarise the macro-category of financing obtained. These variables are binary. The variable EQUITY assumes value 1 if at question 11 the answer "Equity" or "Equity and debt in equal measure" was ticked, 0 otherwise; the variable DEBT instead assumes value 1 if at question 11 the answer "Debt" or "Equity and debt in equal measure" was ticked, 0 otherwise.

Finally, in order to create a common thread linking the three models also from a financial point of view, it was decided to introduce revenues and EBIT as control variables in models B and C. These two terms were chosen in particular because, as they are significantly influenced by the company's management and operational choices, they were assumed to be correlated both with the adoption of financing that provided external capital and with access to financing in foreign countries.

The two control variables REVENUES and EBIT were obtained, as previously explained for the dependent variable ROI, from question 14, focusing on responses that indicated an increase in these indicators. Therefore the variables, of ordinal type, were assigned value 0 if the

answers recorded "Decreased of 10% or more" or "decreased of 5%", value 1 for those indicating "unchanged", value 2 for those who answered "increased of 5%" and value 3 for those who said "increased of 10% or more".

To sum up, the table below summarizes the whole set of variables used in this thesis project.

Variable name	Question	Response categories	Type and Scale
Dependent variable			
ROI	<i>Question 14:</i> How have your performances changed with regard to the indicators below, as a result of the received funding(s)	<ul style="list-style-type: none"> • Decreased of 10% or more • Decreased of 5% • Unchanged • Increased of 5% • Increased of 10% or more 	Ordinal variable: from 0 to 3 ⁴
External Financing	<i>Question 15:</i> Which of the funding types selected in question 12 and 13 contributed the most to the results mentioned in question 14?	<ul style="list-style-type: none"> • Own Capital Generated • Capital Increase • Capitalization by Public Bodies⁵ • Bank Loan • Subsidized Loans from Public Bodies • Business Angels • Lending Crowdfunding • Fund (VC, PE, Hedge Fund) 	Dummy variable: <ul style="list-style-type: none"> • If "Own Capital Generated" or "Capital Increase" = 0 • Otherwise = 1

⁴ As the intent of this thesis was to assess which funding led to better performance by evaluating positive rather than negative changes, it was decided to assign a value of 0 to statements indicating a deterioration in performance ("decreased of 10% or more", "decreased of 5%" = 0), a value of 1 to those indicating indifference ("unchanged" = 1), a value of 2 to those indicating a slight improvement ("increased of 5%" = 2), and a value of 3 to those indicating a marked improvement ("increased of 10% or more" = 3).

⁵ The term "Public Bodies" refers to state owned credit institutions.

Destination Financing Country ⁶	<u>Question 17:</u> Referring to the type of financing that you think has been best for your performance (marked in question 15), did you obtain this financing from the country of origin or the country of destination of your export?	<ul style="list-style-type: none"> • No external funding • Funding from the country of origin • Funding from the country of destination of the export strategy • Both 	Dummy variable: <ul style="list-style-type: none"> • If “Funding from the country of destination of the export strategy” or “Both” = 1 • Otherwise = 0
Independent variable			
Financing Alternatives	<u>Question 15:</u> Which of the funding types selected in question 12 and 13 contributed the most to the results mentioned in question 14?	Multiple choice question from a list of different financing alternatives. Each variable corresponds to the selection of the financing itself.	Dummy variable: <ul style="list-style-type: none"> • Yes = 1 • No = 0
Origin Financing Country	<u>Question 17:</u> Referring to the type of financing that you think has been best for your performance (marked in question 15), did you obtain this financing from the country of origin or the country of destination of your export?	<ul style="list-style-type: none"> • No external funding • Funding from the country of origin • Funding from the country of destination of the export strategy • Both 	Dummy variable: <ul style="list-style-type: none"> • If “Funding from the country of origin” or “Both” = 1 • Otherwise = 0

⁶ This variable has been included as a dependent variable because in model C it is a dependent variable; however, this variable is also used in model A, but as an independent variable.

Digital levels ⁷	<p><u>Question 1:</u> Please choose the appropriate answer regarding the export activity in your company.</p>	<ul style="list-style-type: none"> • The company does not export • The company exports only via offline sales channels • The company exports both via online and offline sales channels, with prevalence of the offline ones • The company exports both via online and offline sales channels in equal measure • The company exports both via online and offline sales channels, with prevalence of the online ones • The company exports only via online sales channels 	Ordinal variable: from 0 to 5
Control variable			
N° of Countries	<p><u>Question 7:</u> How long has the company been internationalized and in which country(ies)?</p>	<p>From question 7 in which it was asked the presence in various macro-areas, if the company operates in that country is marked 1 otherwise 0. Then these variables are summed to find the total number of macro-areas covered</p>	<p>Dummy variable for presence or not:</p> <ul style="list-style-type: none"> • Yes = 1 • No = 0 <p>Ordinal variable: from 1 to 5 to indicate the coverage</p>

⁷ This variable is one of control for model A, while for models B and C it represents an independent variable of interest.

SIZE	<u>Question 25:</u> Considering all the locations where your company operates, what is the total number of employees?	<ul style="list-style-type: none"> • <= 10 • 11-50 • 51-250 • > 250 	Categorical variable: from 1 to 4
Industry of the Firm	<u>Question 24:</u> Which industry does your company operate in?	<ul style="list-style-type: none"> • Apparel, Fashion & Luxury • Manufacturing & Automotive & Electronics • Cosmetics & Home & Personal Care • Food & Beverages • Furniture & Home Design • Services • Infrastructures & Constructions 	Seven dummies (one for each industry): <ul style="list-style-type: none"> • Yes = 1 • No = 0
Internal Export Manager	<u>Question 2:</u> How is export managed in your company? (multiple selection is possible)	<ul style="list-style-type: none"> • Yes • No 	Dummy variable: <ul style="list-style-type: none"> • Yes = 1 • No = 0
Temporary Export Manager	<u>Question 2:</u> How is export managed in your company? (multiple selection is possible)	<ul style="list-style-type: none"> • Yes • No 	Dummy variable: <ul style="list-style-type: none"> • Yes = 1 • No = 0
Equity	<u>Question 11:</u> What kind of funding does your company use the most?	<ul style="list-style-type: none"> • Equity • Debt • Equity and Debt in equal measure 	Dummy variable: <ul style="list-style-type: none"> • If “Equity” or “Equity and debt in equal measure” =1 • Otherwise = 0
Debt	<u>Question 11:</u> What kind of funding does your company use the most?	<ul style="list-style-type: none"> • Equity • Debt • Equity and Debt in equal measure 	Dummy variable: <ul style="list-style-type: none"> • If “Debt” or “Equity and debt in equal measure” =1 • Otherwise = 0

REVENUES	<i>Question 14:</i> How have your performances changed with regard to the indicators below, as a result of the received funding(s)	<ul style="list-style-type: none"> • Decreased of 10% or more • Decreased of 5% • Unchanged • Increased of 5% • Increased of 10% or more 	Ordinal variable: from 0 to 3 ⁸
EBIT	<i>Question 14:</i> How have your performances changed with regard to the indicators below, as a result of the received funding(s)	<ul style="list-style-type: none"> • Decreased of 10% or more • Decreased of 5% • Unchanged • Increased of 5% • Increased of 10% or more 	Ordinal variable: from 0 to 3 ⁹

Table 5 - Summary of variables

Variable	Obs	Mean	Std. Dev.	Min	Max
ROI	72	1.5	.8721028	0	3
External Financing	72	.5416667	.5017575	0	1
Destination Financing Country	72	.1111111	.3164751	0	1
Financing Alternatives					
Own Capital Generated	72	.5555556	.5003911	0	1
Capital Increase	72	.2638889	.4438327	0	1
Capitalization by Public Bodies	72	.1111111	.3164751	0	1
Equity Crowdfunding	72	.0833333	.278325	0	1
Bank Loan	72	.3472222	.4794281	0	1
Subsidised Loan by Public Bodies	72	.1388889	.3482575	0	1
Business Angels	72	.0972222	.2983392	0	1
Lending Crowdfunding	72	.0416667	.2012286	0	1
Fund (VC, PE, Hedge Fund)	72	.1111111	.3164751	0	1
Origin Financing Country	72	.9861111	.1178511	0	1
Digitallevs	72	1.888.889	1.000.782	1	5
NofCountries	72	3.75	1.401.709	1	5
SIZE	69	284.058	1.023.592	1	4
Industry of the firm					
Apparel, Fashion & Luxury	69	.2028986	.4051038	0	1

⁸ Refer to the note 3 regarding the ROI variable

⁹ Refer to the note 3 regarding the ROI variable

Manufacturing & Automotive & Electronics	69	.2173913	.4154928	0	1
Cosmetics & Home & Personal Care	69	.0724638	.2611536	0	1
Food & Beverages	69	.2173913	.4154928	0	1
Furniture & Home Design	69	.2028986	.4051038	0	1
Services	69	.0724638	.2611536	0	1
Infrastructures & Constructions	69	.0144928	.1203859	0	1
Internal Export Manager	72	.5416667	.5017575	0	1
Temporary Export Manager	72	.0416667	.2012286	0	1
EQUITY	72	.8194444	.3873488	0	1
DEBT	72	.5555556	.5003911	0	1
REVENUES	72	1.611.111	.8484544	0	3
EBIT	72	1.458.333	.8211551	0	3

Table 6 - Descriptive statistics of variables

5.2 THE MODEL

In this section the empirical models used are presented and discussed, these were used for testing the hypotheses presented in chapter 3. Since the second (External Financing) and third (Destination Financing Country) dependent variables are both binary variables, the most suitable model for testing relationships with them is the Probit model. Instead, the first dependent variable (ROI) is ordinal, so the model used is the Ordered Probit model (Oprobit) which is the extension of the Probit analysis when applied to categorical variables with more than two categories.

5.2.1 SCREENING ANALYSIS

Before analysing the results of the regression operators, it is necessary to conduct a screening analysis by examining the Person correlation to evaluate the relationships between the variables. All correlation coefficients are presented in the Heatmap below. There are no particularly high values of correlation coefficients, suggesting the absence of multicollinearity, which was tested through the Vif operator. The only excesses are the high correlation coefficients between ROI, EBIT and REVENUES. It is precisely for this reason that in model A, which has ROI as the dependent variable, EBIT and REVENUES were not included to avoid problems of multicollinearity.

	ROI	External Financing	Destination Financing Country	Own Capital Generated	Capital Increase	Capitalization by Public Bodies	Equity Crowdfunding	Bank Loan	Subsidised Loan by Public Bodies
ROI	1								
External Financing	0,0101	1							
Destination Financing Country	0,0356	0,12	1						
Own Capital Generated	0,3741	0,0093	-0,1688	1					
Capital Increase	0,1482	-0,0753	-0,0807	0,1271	1				
Capitalization by Public Bodies	0,1121	0,3368	0,1782	0,1552	0,1081	1			
Equity Crowdfunding	0,1474	0,1063	-0,0834	-0,018	0,2899	0,1039	1		
Bank Loan	0,1913	0,191	-0,2454	0,191	0,0768	0,0207	0,2095	1	
Subsidised Loan by Public Bodies	0,2446	0,3003	-0,1383	0,1352	0,0512	0,4939	0,4264	0,3044	1
Business Angels	0,359	0,1839	0,237	0,0807	0,1816	0,0489	0,3636	0,2066	0,1652
Lending Crowdfunding	0,1267	0,1983	-0,0716	0,0558	0,043	0,1448	0,5553	0,1427	0,5179
Fund (VC, PE, Hedge Fund)	-0,019	0,12	-0,1129	0,0237	0,1421	0,0282	0,3275	0,057	0,1344
OriginFinancing Country	0,2041	-0,1128	-0,3609	0,1304	0,0693	0,0439	0,0301	0,0886	0,0499
Digitallevs	-0,0804	0,2062	0,4994	-0,003	-0,183	0,0594	-0,0231	-0,1932	-0,0172
NofCountries	0,1187	-0,1194	0,0732	-0,0986	0,1968	-0,148	0,1873	0,0284	-0,0871
SIZE	-0,1419	-0,0315	0,1	-0,2317	-0,1089	-0,2105	-0,0831	-0,3047	-0,0975
Apparel, Fashion & Luxury	0,0125	0,1079	0,3079	-0,1812	-0,2048	-0,0701	0,0291	-0,0658	-0,1053
Manufacturing & Automotive & Electronics	-0,007	-0,0031	-0,0607	0,2083	0,0248	-0,0811	0,0196	-0,0898	-0,0174
Cosmetics & Home & Personal Care	-0,0886	0,0357	-0,0939	0,0357	-0,0301	0,0734	0,1699	0,148	0,2025
Food & Beverages	0,0731	-0,0735	-0,0607	0,0674	0,0248	0,0286	-0,1307	-0,0898	-0,1172
Furniture & Home Design	-0,0285	-0,0367	-0,0502	-0,1089	0,2133	0,155	-0,1252	0,1612	0,0994
Services	-0,0249	-0,0764	-0,0939	-0,0764	-0,0301	-0,1012	0,1699	-0,0868	0,0437
Infrastructures & Constructions	0,072	0,1128	-0,0407	0,1128	-0,0693	-0,0439	-0,0301	0,1661	-0,0499
Internal Export Manager	-0,2048	0,0948	-0,0825	-0,1389	-0,0245	-0,0369	0,0994	0,109	0,0408
Temporary Export Manager	-0,1925	-0,1858	0,2281	-0,0126	-0,0988	-0,0626	-0,0429	0,0552	-0,0711
EQUITY	0,0757	-0,12	0,0275	0,0333	0,1736	-0,0727	0,1138	-0,3874	-0,137
DEBT	-0,1053	0,387	0,014	-0,1973	-0,1597	0,2361	-0,0253	0,2926	0,2891
REVENUES	0,6432	0,1023	0,1031	0,4076	0,0745	0,1715	0,1899	0,1328	0,195
EBIT	0,7077	0,0302	-0,0146	0,2817	0,1711	0,1281	0,1644	0,1079	0,222

	Lending Crowdfunding	Fund (VC, PE, Hedge Fund)	Origin Financing Country	Digitallevs	NoCountries	SIZE	Apparel, Fashion & Luxury	Manufacturing & Automotive & Electronic	Cosmetics & Home & Personal Care
Lending Crowdfunding	1								
Fund (VC, PE, Hedge Fund)	0,3991	1							
Origin Financing Country	0,0259	0,0407	1						
Digitallevs	0,1811	-0,093	-0,394	1					
NoCountries	0,0465	0,1076	-0,1132	-0,0571	1				
SIZE	-0,0365	0,0055	-0,1384	-0,0551	0,2926	1			
Apparel, Fashion & Luxury	0,0691	0,0692	0,0612	0,1568	-0,1481	0,1501	1		
Manufacturing & Automotive & Electronics	0,2322	-0,0607	-0,2301	0,1225	0,1148	0,0481	-0,2659	1	
Cosmetics & Home & Personal Care	-0,0596	-0,0939	0,0339	-0,1841	-0,0191	-0,0112	-0,141	-0,1473	1
Food & Beverages	-0,1124	0,0557	0,0639	-0,0943	-0,0361	0,0827	-0,2659	-0,2778	-0,1473
Furniture & Home Design	-0,1076	0,0692	0,0612	-0,1026	0,1357	-0,311	-0,2545	-0,2659	-0,141
Services	-0,0596	-0,0939	0,0339	0,1033	-0,1392	-0,0112	-0,141	-0,1473	-0,0781
Infrastructures & Constructions	-0,0259	-0,0407	0,0147	-0,1048	0,1132	0,1384	-0,0612	-0,0639	-0,0339
Internal Export Manager	0,0497	0,207	-0,1095	0,0017	0,0118	-0,0557	-0,1239	0,0522	-0,0847
Temporary Export Manager	-0,0368	-0,0581	0,021	0,0283	-0,0861	-0,0579	0,1276	-0,0911	0,2849
EQUITY	0,0978	0,1542	-0,0556	0,0034	0,119	0,3419	-0,0537	0,1491	-0,0192
DEBT	0,0978	0,1542	-0,0556	0,0034	0,119	0,3419	-0,0537	0,1491	-0,0192
REVENUES	0,2669	-0,0089	-0,0574	0,2007	0,0785	-0,0577	0,0287	0,1676	0,0019
EBIT	0,2292	0,104	0,2194	0,0387	0,048	-0,2098	0,0671	-0,0415	-0,022

	Furniture & Home Design	Services	Infrastructures & Constructions	Internal Export Manager	Temporary Export Manager	EQUITY	DEBT	REVENUES	EBIT
Furniture & Home Design	1								
Services	-0,141	1							
Infrastructures & Constructions	-0,0612	-0,0339	1						
Internal Export Manager	0,021	0,2525	-0,1343	1					
Temporary Export Manager	-0,0872	-0,0483	-0,021	-0,0176	1				
EQUITY	-0,2439	-0,0192	0,0556	-0,0301	0,0793	1			
DEBT	0,2383	-0,1971	0,1095	0,2971	-0,0176	-0,4144	1		
REVENUES	-0,2658	0,0671	0,0574	-0,0197	-0,019	0,0058	-0,0537	1	
EBIT	-0,022	0,0471	-0,0695	0,0136	-0,099	-0,0205	-0,0945	0,6898	1

Table 7 - Pearson correlation

5.2.2 RESULTS AND DISCUSSION

STATA was used to analyse the Ordered Probit model and the Probit models, and the findings are presented in the following tables. Model A was used to assess the research question and test hypotheses 1a, 1b, 1c and 2. While models B and C were utilized to test hypotheses 3 and 4 respectively.

Number of observations = 69 Wald chi2(20) = 658.00 Prob > chi2 = 0.0000 Pseudo R2 = 0.2682		
ROI	Coefficient	P> z
Own Capital Generated	.9952061 (.3613998)	0.006***
Subsidised Loans By Public Bodies	1.692489 (.6088932)	0.005***
Capitalization By Public Bodies	-.6773233 (.5806643)	0.234
Origin Financing Country	6.138826 (.8976142)	0.000****
Destination Financing Country	1.525701 (.7618241)	0.045**
Capital Increase	-.163578 (.420015)	0.697
Equity Crowdfunding	-.4979797 (.8171825)	0.542
Bank Loan	.2684208 (.44058135)	0.508
Business Angels	1.247283 (.579836)	0.031**
Lending Crowdfunding	-.5126448 (.8686481)	0.555
Fund_VC_PE_Hedge	-.7272776 (.5257319)	0.167
Digital levels	.3843002 (.2008854)	0.056*
N °of Countries	.276732 (.1155478)	0.017**
SIZE	-.3508612 (.1816876)	0.053*
Apparel Fashion Luxury	.575049 (.7619367)	0.450
Manufacturing Automotive Electronics	-.0583781	0.932

	(.6813001)	
Cosmetics Home Personal Care	-.5485967	0.360
	(.5989606)	
Food Beverage	.2520385	0.693
	(.6380341)	
Furniture Home Design	-.0502165	0.947
	(.7597145)	
Services	.5452792	0.620
	(1.099113)	
Internal Export Manager	-.3180308	0.401
	(.3783001)	
Temporary Export Manager	-2.354636	0.002**
	(.7443469)	
EQUITY	.8365495	0.168
	(.6068618)	
DEBT	-.0941478	0.842
	(.4729861)	

*Table 8 - Model A Note. Significance levels: *p < .1, **p < .05, ***p < .01, ****p < .001. Standard error is in brackets*

Model A aims to evaluate the impact of different financing solutions on financial performance. In particular, in this exploratory phase, the best financing solutions according to significance and correlation coefficient have been identified. The first would appear to be subsidised loans by stated-owned credit institutions (coefficient 1.692489; p-value 0.005), the second is the financing solution through business angels and strategic investors (coefficient 1.247283; p-value 0.031), while the third is represented by own capital generated (coefficient 0,9952061; p-value 0.006).

However, these results would seem to be in contrast with the Pecking Order Theory, which states that companies prioritize their sources of funding, placing internal capital in first place, debt in second place and, as the last source, the market by increasing capital. In fact, subsidised loans which are debt source seems to be better than internal capital. This is also due to the fact that subsidised loans offer extremely low interest rates. Therefore, in the pecking order theory, it is possible to disaggregate the source of debt by distinguishing forms of subsidised finance, in this case, specific to exports.

Hypothesis 1a is verified and therefore own capital generated positively influences performance, with a coefficient of 0,9952061 and a significance level of 0.006.

Hypothesis 1b is verified, hence subsidised loans by stated-owned credit institutions have a great positive influence on performance, with a coefficient of 1.692489 and a significance level of 0.005.

Hypothesis 1c is not verified given that its level of significance is 0.243 and therefore not relevant for statistical purposes. The high p-value is mainly due to the few responses received, given that only 8 companies selected this method, which can be explained by the simple fact that this method, particularly in Italy, is still new and not widely used.

As far as hypothesis 2 is concerned, it is verified by Ordered Probit regression.

In fact, receiving financing from the country of origin has a positive and significant effect on performance, as well as receiving it from the country of destination.

However, comparing the two results, the variable Origin Financing Country has a coefficient of 6.138826 with a p-value of 0.000, while the variable Destination Financing Country has a coefficient of 1.52570 with a p-value of 0.045.

These results are consistent with our hypothesis and emphasize that obtaining financing from the country of origin positively affects performance much more than obtaining financing from the destination country.

Number of observations = 69		
Wald chi2(20) = 29.25		
Prob > chi2 = 0.0150		
Pseudo R2 = 0.4329		
External Fianancing	Coefficient	P> z
Digital levels	.7940156	0.004***
	(.2757955)	
SIZE	.4424977	0.071*
	(.2454899)	
Own Capital Generated	.3115276	0.525
	(.4902447)	
Capital Increase	-1.594661	0.017**
	(.6681146)	
Capitalization By Public Bodies	1.923858	0.012**
	(.765929)	

Bank Loan	1.255518	0.021**
	(.5458391)	
Subsidised Loans By Public Bodies	-.4408044	0.498
	(.65105)	
Business Angels	.2838167	0.749
	(.8665723)	
Fund_VC_PE_Hedge	1.47114	0.069*
	(.8081478)	
N° of Countries	-.3847383	0.030*
	(.1774456)	
REVENUES	-.0720541	0.844
	(.3651016)	
EBIT	.1539826	0.705
	(.4067147)	
Internal Export Manager	-.1782079	0.698
	(.4590246)	
EQUITY	.4751855	0.410
	(.5769968)	
DEBT	1.906018	0.001***
	(.5765981)	

*Table 9 - Model B. Note. Significance levels: * $p < .1$, ** $p < .05$, *** $p < .01$, **** $p < .001$. Standard error is in brackets*

Model B aims to test whether as the level of digitalization of the exporting company increases, access to external financing is facilitated.

Hypothesis 3 is verified. In fact, the variable Digital levels positively impacts with a coefficient of 0.7940156 access to funding and is significant since it has a p-value of 0.004. Therefore, it can be stated that the increasing level of digitalisation of a company operating on multiple international markets facilitates access and consequently the obtainment of external financing.

In this model have been excluded some variables because being few in number they perfectly predict the success or failure of the dependent variable, in fact it is just STATA to suggest to exclude these variables.

Number of observations = 69		
Wald chi2(20) = 330.05		
Prob > chi2 = 0.0000		
Pseudo R2 = 0.6285		
Destination Financing Country	Coefficient	P> z
Digital levels	2.120118	0.014**
	(.8600124)	
SIZE	.8669537	0.106
	(.5357499)	
N° of Countries	.0406755	0.877
	(.2636391)	
REVENUES	.3873692	0.335
	(.4016651)	
EBIT	-.5661354	0.145
	(.3879881)	
Apparel Fashion Luxury	9.1140021	0.000****
	(2.502758)	
Manufacturing Automotive Electronics	4.868486	0.009***
	(1.852192)	
Food Beverage	8.850517	0.001***
	(2.600254)	
Furniture Home Design	8.847511	0.003***
	(2.956433)	
EQUITY	-.9597248	0.437
	(1.235909)	
DEBT	-.5300348	0.649
	(1.164816)	

*Table 10 - Model C. Note. Significance levels: *p < .1, **p < .05, ***p < .01, ****p < .001. Standard error is in brackets*

With Model C another aspect related to the level of digitalisation of an exporting company is to be checked. As the company gets more digitalized it will be easier to obtain financing from the target country of the export strategy.

Hypothesis 4 is verified given that the Digital levels variable positively impacts the obtaining of financing from the destination country. In particular, this independent variable has a positive coefficient of 2.120118 and is significant with a p-value of 0.014.

Also of note are the high coefficients and low p-values relative to the industries in which the companies operate. These are mainly due to the high level of aggregation and above all because companies belonging to these industries have often been able to obtain financing from the country of destination. Moreover, being part of these industries probably facilitates obtaining this type of financing. These data, although interesting, are not relevant to this research.

The same reasoning made for the model B regarding the exclusion of some variable has been applied to the model C.

The reasons that led to the results described above are set out in more detail in section 5.3 where, in order to draw conclusions regarding this thesis project, the tested hypotheses are highlighted; for each of them the justifying factors are set out, combined also with any relevant findings in the literature.

5.2.3 ROBUSTNESS CHECK

In this paragraph the test of robustness is presented that was performed to see how solid are the regressions of the models presented in the previous sections.

In particular this control is defined as “a common exercise in empirical studies, where the researcher examines how certain core regression coefficient estimates behave when the regression specification is modified by adding or removing regressors. If the coefficients are plausible and robust, this is commonly interpreted as evidence of structural validity” (Lu & White, 2014).

In this regard the EBIT was chosen to test model A, while since there are no variables similar to the dependent variables of models B and C and they are not evaluating financial performances, for the latter two it was therefore impossible but also not necessary to perform a robustness test.

With regard to the choice of EBIT, this was selected due to its importance and ability to represent operational performance. While ROI is a ratio that also includes the results of financial management, EBIT, being one of the first margins of the income statement, aims to identify operational ability. The reasoning underpinning this decision is that if some financing or variable is positive or negative but nevertheless significant for both ROI and EBIT, then its influence on performance in general can be considered valid.

Number of observations = 69 Wald chi2(20) = 588.39 Prob > chi2 = 0.0000 Pseudo R2 = 0.1547		
EBIT	Coefficient	P> z
OwnCapitalGenerated	.6279047	0.050*
	(.3206239)	
SubsidisedLoansByPublicBodies	.8314698	0.184
	(.6262176)	
CapitalizationByPublicBodies	-.1463886	0.820
	(.6445582)	
OriginFinancingCountry	5.823961	0.000****
	(.9500292)	
DestinationFinancingCountry	.3370842	0.700
	(.8748074)	
CapitalIncrease	.3397541	0.395
	(.3994013)	
EquityCrowdfunding	-1.033901	0.173
	(.7588054)	
BankLoan	-.1850346	0.680
	(.4482867)	
BusinessAngels	.7266226	0.344
	(.7676468)	
LendingCrowdfunding	.9395598	0.429
	(1.187534)	
Fund_VC_PE_Hedge	-.1661594	0.787
	(.6155119)	
Digitallevels	-.025228	0.921
	(.2077847)	
NofCountries	.2246429	0.062*
	(.1203347)	
SIZE	-.2990381	0.108
	(.1862697)	
ApparelFashionLuxury	.8671583	0.194
	(.6669957)	
ManufacturingAutomotiveElectro	.0535341	0.933

	(.6381596)	
CosmeticsHomePersonalCare	.5681591	0.395
	(.6673281)	
FoodBeverage	.3977633	0.526
	(.6268973)	
FurnitureHomeFesign	.1031244	0.879
	(.6746477)	
Services	.7425341	0.490
	(1.076141)	
InternalExportManager	.3088596	0.411
	(.3754992)	
TemporaryExportManager	-.9154341	0.156
	(.6456556)	
EQUITY	-.0453372	0.942
	(.6210471)	
DEBT	-.23498	0.550
	(.393138)	

*Table 11 - Model A-EBIT. Note. Significance levels: * $p < .1$, ** $p < .05$, *** $p < .01$, **** $p < .001$. Standard error is in brackets*

As a result, the used model demonstrates to be valid almost for all the hypotheses.

In particular hypothesis 1a and 2 are valid and robust while 1c is not significant. In addition, the hypothesis 1b loses its significance during the robustness test.

The fact that the hypothesis 1b, which slightly contrasted the Pecking Order Theory, is no longer significant during the robustness check endorses the theory by pointing out how the internal capital is the preferred choice. Indeed, it allows to neglect the information asymmetries.

These uncertainties, however, leave room and increase the necessity for future research on this topic

5.2.4 SUMMARY OF RESULTS

In the table below there is a summary of the hypotheses tested, in a more straightforward format in order to more effectively and quickly understand which hypotheses have been validated in this thesis.

Hypothesis	Variable	p-value	Test Result
Model A			
Hypothesis 1a: <i>The use of own generated equity capital to finance export activities correlates positively with financial performance.</i>	Own Capital Generated	0.006	Supported
Hypothesis 1b: <i>The use of external financing from state owned credit institutions to finance export activities is positively correlated with the financial performance obtained.</i>	Subsidised Loan by Public Bodies	0.005	Supported
Hypothesis 1c: <i>The use of third-party capitalisation from state owned credit institutions to finance export activities is negatively correlated with financial performance.</i>	Capitalization by Public Bodies	0.234	Not Supported

Hypothesis 2: <i>The use of loans granted in the company's home country to finance export activities positively and more significantly influences financial performance than financing obtained in the foreign country.</i>	Origin Financing Country	0.000	Supported
Model B			
Hypothesis 3: <i>Digital export facilitates access to external finance.</i>	Digital levels	0.004	Supported
Model C			
Hypothesis 4: <i>Adoption of digital exporting increases the possibility of receiving funding in the foreign target countries of one's exports.</i>	Digital levels	0.014	Supported

Table 12 - Summary of results

5.3 CONCLUSION

Nowadays, exporting, and in particular digital exporting, is a very fascinating and relevant phenomenon in the field of internationalisation and expansion of a company's economic activity.

Consequently, the impact of exporting on firms' performance has been studied in the literature over time highlighting its benefits.

However, managing an export is a difficult task, requiring often different skills and preparations than those needed in the domestic market.

In general, there are many aspects that need to be analysed and managed in order for the results of one's export activity to be positive, including the management and choice of financing.

This study aimed to investigate in depth the financing pillar for exporting companies. In particular, this research intends to analyse how different modes of financing impact export performance, and how digital can affect access to external financing.

In order to achieve these objectives, it was first necessary to define the characteristics of export and how the advent of digital has revolutionized them. Then it was essential to take an overview of the different modes of financing in order to explain them and define the intrinsic properties of each alternative.

After that, it was critical to do a review of the existing literature on the subject, to understand the topic and figure out which gaps to investigate. The literature on this subject does not seem to be uniform and in fact presents contrasting opinions. Three main topics were reviewed. Firstly, academic articles describing the impact of exports on financing. Then the second line of research concerned the impact of digital technology on the relationship between financing and exporting. While the last topic was to investigate the effect of financing on exporting.

After analysing the academic articles present, four interviews were conducted. These were utilized, along with the literature, to develop the hypotheses of this research.

After the generation of the hypotheses, the questionnaire was constructed and used to collect the data necessary to verify them. In fact, through an econometric analysis of the data collected, the hypotheses were verified.

In addition to the hypotheses, this study was aimed at answering the research question: "*assessing the impact of different types of financing used to finance export activities on financial performance*". Unfortunately, this exploratory analysis could not be completed for all funding methodologies due to the low number of responses to the questionnaire. The following hypotheses are those validated by this thesis:

Hypothesis 1a: *The use of own generated equity capital to finance export activities correlates positively with financial performance.*

Hypothesis 1b: *The use of external financing from state owned credit institutions to finance export activities is positively correlated with the financial performance*

obtained.

Hypothesis 2: *The use of loans granted in the company's home country to finance export activities positively and more significantly influences financial performance than financing obtained in the foreign country.*

Hypothesis 3: *Digital export facilitates access to external finance.*

Hypothesis 4: *Adoption of digital exporting increases the possibility of receiving funding in the foreign target countries of one's exports.*

The first hypothesis underlines how exporting companies are more profitable and more solid as they often use only their own generated capital to finance their projects, thus obtaining superior performance. This is in line with previous literature and in particular with Ayob, Ramlee and Rahman (2015) which sustained how exporters enjoy a more efficient internal finance which is indispensable for their international aims.

This also confirms the theory of Kraus, Mitter, Eggers, and Stieg (2016) that exporters that primarily use internal capital are perceived as more promising.

The relevance of own capital generated is also linked to the fact that, being an internal financing, it is not subject to repayment according to specific contractual time constraints. Therefore, it can be used to finance investments necessary for the success of one's export activity but not directly linked to the generation of short-term profits needed to repay a hypothetical loan. In some markets it sometimes happens that the company's entry into the market does not coincide exactly with the best time to maximise profits through sales. In fact, it may be necessary to enter a foreign market in order to acquire skills, competitive advantage in terms of access to resources, agreements and partnerships with other local economic actors if it is believed that in the future this market could be relevant. In this way the exporting company could wait for the most suitable moment to sell and generate profits, but already starting from a solid position created in previous years. Obviously, in order to use equity in this way, it is important that the costs incurred by the company in this preliminary phase of market entry are not excessive and are commensurate with the company's resources.

In addition, the own capital generated, if available, is a form of financing that allows to receive capital to invest in one's own activities with usually much shorter timeframes than external sources of financing; this allows one to take advantage of sudden opportunities that may arise in a foreign market.

Finally, a further reason for the importance of own capital is linked to the profile of the companies that make up the majority of the sample; in fact, as SMEs, they are more prone to the phenomenon of asymmetric information, which entails more unfavourable terms in accessing external financing.

The hypothesis 1b emphasizes the importance of subsidised finance by government bodies and, although little known, it is effective for export strategies. This hypothesis is in line with the claim of Chies, Podrecca, & Rossi (2020) who argue how exporters are more likely to obtain government subsidies and underlines the importance of these solutions as stated by Vincenzo Apicella in the third interview. There are three main reasons for the positive performance of this type of financing. The first relates to the minimal or even zero interest rates imposed on the loans granted; in fact, the objective of state credit institutions is not to get rich and generate profits but rather to guarantee the development of a solid and internationally competitive economic and entrepreneurial fabric. Moreover, some state-owned credit institutions, such as ICE, SACE and SIMEST in the Italian case, also offer some advisory services to support the exporter, ranging from operational support to the development of knowledge about the target market. Finally, the third factor is linked to the methods of access to financing; in fact, as Dr. Apicella also pointed out, the approval of a request for financing is the result of a careful assessment of the export project, which must be presented in a structured manner, indicating milestones and expected results. This process of analysis and planning therefore implies a forced detailed evaluation of one's project, showing potential criticalities before they become apparent during the operational phase.

The hypothesis 2 is a consideration of the country of origin of the financing. It is more profitable to obtain financing from the country of origin.

From a logical point of view, this is consistent with Aschoff's thinking, which points out that it is easier to obtain funding from the country of origin if the company has already obtained it in the past. So, applying for funding in one's home country is easier and more effective, stressing that, on the one hand, there is an economic and political interest on the part of origin country to support the outward economic development of their companies, while, on the other, companies prefer domestic creditors, probably for cultural reasons or because of a lack of information. This is in line with Dr Ignjatov's assertion that the tendency to prefer domestic

financing is also linked to companies' willingness not to expose themselves to too many different risks and contractual obligations.

The hypotheses 3 and 4 are aimed at underlining how the use of digital export can facilitate access to external financing and financing from the country of destination.

The third hypothesis seems to confirm the ideas of Qi, Chan, Hu and Li (2020) and Ying Wang and colleagues (2020), who express how through the use of a CBEC or digital solutions it is possible to break down information asymmetries, increasing the levels of trust on the part of borrowers. This could improve financial and fiscal management of the company by increasing transparency and the amount of historical data available (Whyte, 2000).

The fourth demonstrates how the use of digital technology can allow for greater scalability of export projects, thus creating more developments and future opportunities that can benefit the exporting company and the country in which it operates by increasing local economic flow. Thus, making financing institutions in destination countries more willing and interested in lending.

Moreover, the validity of the latter two hypotheses confirms the ideas expressed by Dr Ignjatov and Dr Vincenzo Apicella regarding the use of digital solutions as funding facilitators.

From a theoretical standpoint, this research contributes to two theories.

The first one is the Pecking Order Theory; this research is in line with the theory itself and confirms the choices of companies in prioritizing the different sources of financing. In particular the contribution that this thesis offers is the possibility to disaggregate the sources of debt considering the traditional ones and the more targeted solutions for exports such as subsidised loans.

In fact, in addition, proving to be in line with the theory, underlining that exporters prefer their own capital, it also highlights how debt solutions facilitated by state-owned credit institutions are significant.

The second is Information Asymmetries Theory. The contribution that this research has made to the theory is twofold.

The first focuses on the role that the level of digitization can play. In fact, through the use of digital exports and, in particular, e-commerce, it is possible to mitigate the imbalance of information between lender and borrower, resolving the blockage and permitting economic

development. The second contribution, on the other hand, derives from the fact that through more structured and frequent collaboration, for example with a partnership between exporters and state-owned credit institutions, it is possible to be more transparent and not be rationed by the supply of credit.

The contribution of this work is double. First of all, it is a collection of all the existing analyses in the literature and the qualitative opinions of the database created through the survey. In this way it is possible to make an overview of the information already analysed in past articles and through descriptive analysis it is possible to extract the opinions and behaviours of exporters. Secondly, the econometric analysis has made it possible to provide a quantitative contribution to the link between financing and export. In fact, the same database created through the survey provides statistical evidence that contributes to the development and deepening of the financing pillar for traditional and digital export.

5.4 RESEARCH & MANAGERIAL IMPLICATIONS

This section analyses the implications of this research and determines whether it has succeeded in filling some of the gaps in the literature.

First of all, through a detailed literature review, it was pointed out that there were multiple conflicting theses regarding the most suitable funding to finance an export activity. In addition, there were no papers in the literature that were completely dedicated to assessing the relationship between exporting and the different types of financing; what was selected from the available literature came mainly from multiple articles that, while describing the characteristics of some type of financing, also analysed its use in the case of export activity. Instead, this research aims at assessing, by offering a broader picture in terms of the financing modes taken into consideration, which is the most suitable type of financing to finance an export, evaluating its characteristics mainly in relation to its use in this activity.

Consequently, although this thesis focuses on a research question arising from literature analysis and interviews rather than the validation of a pre-existing theory, it extends the research regarding access to and use of finance with references to Information Asymmetry Theory and Pecking Order Theory.

In addition, by examining the use of different types of finance and related performance, this study attempted to address a gap in the literature caused by the lack of analysis of external variables influencing the link between export, particularly digital export, and performance.

This study also fills a gap in the literature regarding the use of digitization and the availability of resources to be used during one's export activity; in fact, it highlights how the adoption of a greater level of digital in one's export solutions increases the availability of accessible financial resources both because of the greater scalability of the projects carried out and the possibility of accessing a wider and more easily integrated system of financiers.

As in some markets digital is a relevant driver to be able to access external funding sources more successfully, this information should suggest that, when selecting a market, one should consider the degree to which a digital export is able to benefit more in terms of available financial resources.

Furthermore, this research uses Return on Investment to assess the success of the company in relation to the type of financial resource employed. In fact, according to the literature, financial indicators are one of the most significant performance evaluation systems. In particular, the ROI is the most significant in assessing the goodness of an investment and therefore, in highlighting the performance following the choice of using a certain type of financial resource. Moreover, according to both literature and interviews, there is a rather widespread ignorance about some less traditional financing solutions, especially among medium and small sized companies, where sometimes there is no dedicated figure for export planning and management. This study aims to fill this gap in two ways. First of all, it aims to provide a more complete and detailed picture, based on econometric analysis, of which types of financing are the most suitable for achieving financial improvements in one's export activities, also considering how the degree of digitalisation of exporting may impact on the adoption and exploitation of financial resources. In addition, the objective of this study is also to raise awareness about some more specific and less widespread financing solutions, such as loans dedicated exclusively to exporters received from state owned bodies, such as ICE, SACE and SIMEST in the Italian case, which although, due to lack of awareness or analysis in this regard, are little used, when adopted have a clear positive impact on performance.

The intention is therefore that this study should not only be of theoretical value, but that it can also be used as a framework by companies to make their decisions regarding the financial resources to be adopted during exports.

Finally, the value of this research is not only for companies but also for policy makers and financing bodies; in fact, it confirms the effectiveness of the solutions currently proposed to incentivise economic export activities, however it highlights how, in a fabric of SMEs like the Italian one, with a strong entrepreneurial character, there is a lack of awareness of the real value of these less traditional sources of financing. Therefore, it is important not only to design effective state financing systems as has been done, but also to be able to promote them widely.

5.5 LIMITATIONS

Although the results obtained in this thesis project are valid, some limitations should be highlighted that potentially restrict the absolute applicability of the results found.

First of all, as far as the methodology is concerned, the biggest limitation was represented by the size of the sample. In fact, the percentage of respondents' answers was slightly lower than that usually found in the literature, leading to a smaller sample used in the analysis. It is clear that a larger sample would be more reliable and would allow a better management of the econometric models created.

In addition, the small sample size sometimes made it necessary to combine the various responses obtained into macro-categories, thus reducing the degrees of freedom. This led to the need to develop separate models to avoid multicollinearity problems. Nevertheless, in some models, the small number of observations for some response options led to multicollinearity problems between some variables, which therefore had to be excluded from the model.

A larger sample size would allow for greater heterogeneity in the responses, allowing more unique trends to be revealed for each variable that makes up the company profile.

Furthermore, it is believed that the limited sample size was one of the causes of the lack of significance of the results of some variables. Therefore, a larger sample could reveal more interesting results than those already highlighted by this study.

Another limitation concerns performance: as the values of the performance variables were collected by a survey, they are exposed to subjectivity. Unfortunately, for reasons related to the period in which the survey was carried out, the objective data on performance had not yet been released and therefore it was not possible to verify the alignment between the subjective data collected in the survey and the objective data available.

Finally, some considerations should also be made regarding the profile of the companies that were part of the sample analysed. Since most of them were medium-small sized companies, it was found, through descriptive analysis, that there was both a clear difference in the intensity of use of some financing instruments compared to others, leading to a loss of significance of the results related to the less used variables, and a lack of complete competences about digital export, detected through some sometimes contradictory answers that were given in the questionnaire.

5.6 FUTURE RESEARCH

The results of this research can provide a starting point for future studies on the subject. In fact, there is no general overview of financing related to traditional and digital exporting in the literature. A comprehensive overview of the topic could be obtained using the contribution of this thesis. In fact, it would certainly be interesting to be able to analyse all forms of financing in more detail, trying to create a complete guide for exporters. This could be achieved by repeating the survey trying to get more responses, thus having a larger sample and significant observations for each financing mode.

In addition, given that this field is scarcely debated and with conflicting opinions, it would be interesting to be able to analyse both the perceptions of the companies, but above all to include evaluations based on data extracted directly from the financial statements.

Moreover, a further interesting aspect, which could be analysed with a large database, would be to assess whether and what, if any, correlations exist between the export channels used and the methodologies chosen to finance them.

In future studies, banks, state-owned and privately-owned credit institutions could also be included to provide another perspective. By conducting analyses on the relationships that these institutions have with exporters and how they evaluate different modes of financing.

In addition, a case study of the use of subsidised loans by public bodies could be analysed in more detail, using it as an example to raise awareness of these favourable solutions.

A further idea for future research would be to repeat the survey at a later date, collecting information after companies have used new forms of financing. In this way, it would be possible to analyse whether companies have changed their behaviour and strategy, and therefore the evaluation of a given financing, or whether there have been no changes.

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APPENDIX

Appendix A – Survey

Question 1: Please choose the appropriate answer regarding the export activity in your company:

- The company does not export
- The company exports only via offline sales channels
- The company exports both via online and offline sales channels, with prevalence of the offline ones
- The company exports both via online and offline sales channels, with prevalence of the online ones
- The company exports both via online and offline sales channels in equal measure
- The company exports only via online sales channels

Question 2: How is export managed in your company? (multiple selection is possible)

- There is NOT a specific figure (but someone from the top line or from another function takes also choices regarding the export)
- Through an internal export manager
- There is a dedicated business unit
- There is a dedicated team inside another business unit
- Through a temporary export manager
- Relying on third parties/external consultant

Question 3: According to the evaluation scale, choose the best answer to describe the DEMOGRAPHIC features of the team/individual in charge with export decisions:

- How old is the team/individual?
 - 1 = under 30
 - 2 = 30-40
 - 3 = 40-50
 - 4 = 50-60
 - 5 = over 60
- Gender diversification
 - 1 = only men
 - 2 = more men than women
 - 3 = balanced
 - 4 = more women than men
 - 5 = only women
- How much international is your team in terms of nationality of the members?
 - 1 = only Italians

- 2 = more Italians than foreigners
- 3 = balanced
- 4 = more foreigners than Italians
- 5 = only foreigners

Question 4: According to the evaluation scale, choose the best answer to describe the BACKGROUND features of the team/individual in charge with export decisions:

- How many people have 10 or more years of experience in the export field?
- How many people have a background of international studies? (e.g. Erasmus or entire foreign bachelor/master degree)
- How many people worked in a foreign country before joining your firm?
- How many people worked in another sector before joining yours?

Options:

- 0-20%
- 20-40%
- 40-60%
- 60-80%
- 80-100%

Question 5: According to the evaluation scale, choose the best answer to describe the ORGANIZATIONAL features of the team/individual in charge with export decisions:

- What is your company average turnover from one year to the next?
 - 1= no one leaves the team (or the individual in charge is the same)
 - 2= few members leave the team
 - 3= the majority of the members leave the team (or the individual in charge changes)
- How much the strategic (non-ordinary) decisions are shared and agreed?
 - 1=one decision- maker
 - 2=among some members
 - 3= among all
- How much the tasks are split inside the team?
 - 1= no tasks division
 - 2= balance division
 - 3= one task to each member

Question 6: What is the level of soft and hard skills that the team/individual in charge with the export has?

- Effective communication (diversify communication based on the cultural aspects of the other person)

- Critical thinking (rational analysis of potential choices and best route)
- Creativity (creative mindset)
- Network size thanks to international relations (suppliers, customers, other companies)
- IT and digital competences
- Market analysis skills (e.g. usage of analytic tools as PESTEL, SWOT)
- Financial evaluation competences (e.g. business plan, investment feasibility)

Options:

- Low level
- Low-Medium Level
- Medium Level
- Medium-High Level
- High Level

Question 7: How long has the company been internationalized and in which country(ies)?

- Europe
- America
- Asia
- Africa
- Oceania

Options:

- Not present
- Less than 1 year
- 1-3 years
- 3-5 years
- 5-10 years
- More than 10 years

Question 8: Which kind of channels are used in your company for the traditional digital export? (multiple selection is possible)

- Export Trading Company
- Export Management Corporation
- Distributor
- Agents
- Sales Subsidiaries
- Join Venture
- EDI or Web EDi

- Extranet
- Marketplace for B2B
- Marketplace for B2C
- Online retailer
- Own website
- Flash sale website

Question 9: Which are the reasons behind this choice? (multiple selection is possible)

- Profit growth (increasing sales)
- Profitability (increasing price or decreasing costs)
- Brand image
- Competences improvement
- Covid-19 pandemic
- Other (please specify)

Question 10: Please indicate the value of your company performances in terms of:

- Net Export profit / Total company Net Profit
- Cost of export / Total Costs of Operating Activities
- Number of foreign assets / Total number of assets (e.g. subsidiaries)

Options:

- Less than 15%
- 15-30%
- 30-45%
- 45-60%
- More than 60%

Question 11: What kind of funding does your company use the most?

- Equity
- Debt
- Equity and Debt in equal measure

Question 12: According to you, how have the overall performances of the company changed as a result of the following funding types (if you have used them, otherwise select "not used"):

- Own capital generated (net profit)
- Capital increase
- Capitalization by public body (i.e. in Italy ICE, SACE, SIMEST)

- Equity crowdfunding

Options:

- Company's performance has strongly worsened
- Company's performance has worsened
- Company's performance has not changed
- Company's performance has improved
- Company's performance has strongly improved
- Not used

Question 13: According to you, how have the overall performances of the company changed as a result of the following funding types (if you have used them, otherwise select "not used"):

- Bank loan
- Subsidized loans from public bodies (i.e. in Italy ICE, SACE, SIMEST)
- Business angels, strategic investors
- Lending crowdfunding
- Fund (Venture capital, Private equity, Hedge fund)

Options:

- Company's performance has strongly worsened
- Company's performance has worsened
- Company's performance has not changed
- Company's performance has improved
- Company's performance has strongly improved
- Not used

Question 14: How have your performances changed with regard to the indicators below, as a result of the received funding(s):

- Return on Investment (ROI)
- Revenues
- EBIT
- Return on Asset (ROA)

Options:

- Decreased of 10% or more
- Decreased of 5%
- Unchanged
- Increased of 5%
- Increased of 10% or more

Question 15: Which of the funding types selected in question 12 and 13 contributed the most to the results mentioned in question 14?

- Own capital generated (Net profit)
- Capital increase
- Capitalization by public bodies (i.e. in Italy ICE, SACE, SIMEST)
- Bank loan
- Subsidized loans from public bodies (i.e. in Italy ICE, SACE, SIMEST)
- Business angels, strategic investor
- Lending crowdfunding
- Fund (Venture capital, Private equity, Hedge fund)

Question 16: Referring to the type of financing that you believe was best for your performances (marked in question 15), select the alternative (s) with which you are most in agreement. The performances have improved because:

- Access to financing has required to the project in a more detailed way and to perform more precise analyses
- The use of internal capital avoided exposing the company to financial charges
- Access to debt financing made it possible to maintain managerial and strategic control over the company
- Access to financing has allowed the to enter a network that shares experiences and skills
- Access to financing was extremely easy and without excessive guarantees
- Access to financing had more favourable economic conditions than other financing solutions
- Access to financing had more flexible and simple repayment methods than other financing solutions
- Other...

Question 17: Referring to the type of financing that you think has been best for your performance (marked in question 15), did you obtain this financing from the country of origin or the country of destination of your export?

- No external funding
- Funding from the country of origin
- Funding from the country of destination of export strategy
- Both

Question 18: For each of the functions involved in an export process, provide a classification according to the level of need for funding and the ability to improve performance once funding has been received. For each of the rows below indicate the preferred column.

- ICT system
- R&D and Design
- Procurement
- Production
- Sales
- Assembly
- Communication & Marketing
- Finance-Net Working Capital

Options:

- Does not require funding - does not significantly improve performance after obtaining it
- Needs funding - does not significantly improve performance after obtaining it
- Does not require funding - improves performance significantly after obtaining it
- Needs funding - improves performance significantly after obtaining it

Question 19: Express how much you agree with the following statements:

- 'More digital' export projects are more likely to receive funding than 'traditional' export projects
- Digital export allows for greater scalability for the same amount of investment
- Digital export allows a reduction in the time needed to reach break even
- Digital export implies a faster and more intensive use of investment in the early stages than traditional exporting

Options:

- Strongly disagree
- Disagree
- Indifferent
- Agree
- Strongly agree
- My company does not do digital export

Question 20: How do you think Covid-19 has impacted on the following factors related to an internationalisation project:

- Efficiency of public state funding
- Difficulties in accessing finance
- Equity utilisation
- Debt utilization
- Importance of digital among project drivers

Options:

- highly reduced
- reduced
- unchanged
- increased
- highly increased

Question 21: In general, what are the problems encountered in accessing finance?

- Accessibility (lack of funding and market availability)
- Excessive guarantees
- Corporate culture (aversion to using financing for reasons of business continuity / fear of change)
- Risk aversion on the part of the applicant
- Risk aversion on the part of banks/credit institutions
- Adverse selection (failure to obtain financing due to information asymmetry)

Options:

- Strongly disagree
- Disagree
- Indifferent
- Agree
- Strongly agree

Question 22: Please fill this form, if you have any additional comment related to fundings or to the relationships between export and the organizations

Question 23: Please provide the following information:

- Country of origin (open question)
- Company name (open question)
- Role of the interviewed
- Market segment in which the company operates:
 - B2B
 - B2C
 - B2B2C
- Availability for an interview:
 - Yes
 - No

Question 24: Which industry does your company operate in?

- Apparel & Fashion
- Automotive
- Consumer electronics
- Cosmetics
- Food & Beverage
- Furniture
- Home Design
- Health & Wellness
- Luxury Goods & Jewelry
- Other (please specify)

Question 25: Considering all the locations where your company operates, what is the total number of employees?

- <=10
- 11-50
- 51-250
- >250

Appendix B – Company sector

Apparel & Fashion	9	Architectural loudspeaker and sound absorbing panels	1	Processes and products for Metals Industry	1
Automotive	3	Construction	1	Safety	2
Consumer electronics	2	Export managment	1	Stationery	1
Cosmetics	4	Foodtech	1	steel	1
Food & Beverage	14	Home & personal care	1	textile	1
Furniture	10	horeca	1	Transducers	1
Health & Wellness	1	industrial goods (labelling machines)	1	PACKAGING FOR FOOD AND BEVERAGE	1
Home Design	3	industry	1	packaging machine	1
Luxury Goods & Jewelry	5	3d printers	1		

Appendix C – Opinions on different financing solutions

	Company's performance has strongly worsened	Company's performance has worsened	Company's performance has not changed	Company's performance has improved	Company's performance has strongly improved	Not used
Own capital generated (net profit)	4,17%	4,17%	26,39%	38,89%	12,50%	13,89%
Capital increase	1,39%	1,39%	26,39%	20,83%	4,17%	45,83%
Capitalization by public body (i.e. in Italy ICE, SACE, SIMEST)	1,39%	2,78%	18,06%	5,56%	2,78%	69,44%
Equity crowdfunding	1,39%	2,78%	11,11%	5,56%	0,00%	79,17%
Bank loan	1,39%	4,17%	33,33%	27,78%	2,78%	30,56%
Subsidized loans from public bodies (i.e. in Italy ICE, SACE, SIMEST)	2,78%	1,39%	20,83%	8,33%	4,17%	62,50%
Business angels, strategic investors	2,78%	1,39%	9,72%	5,56%	2,78%	77,78%
Lending crowdfunding	2,78%	0,00%	11,11%	2,78%	1,39%	81,94%
Fund (Venture capital, Private equity, Hedge fund)	2,78%	2,78%	11,11%	6,94%	1,39%	75,00%

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