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SCUOLA DI INGEGNERIA INDUSTRIALE
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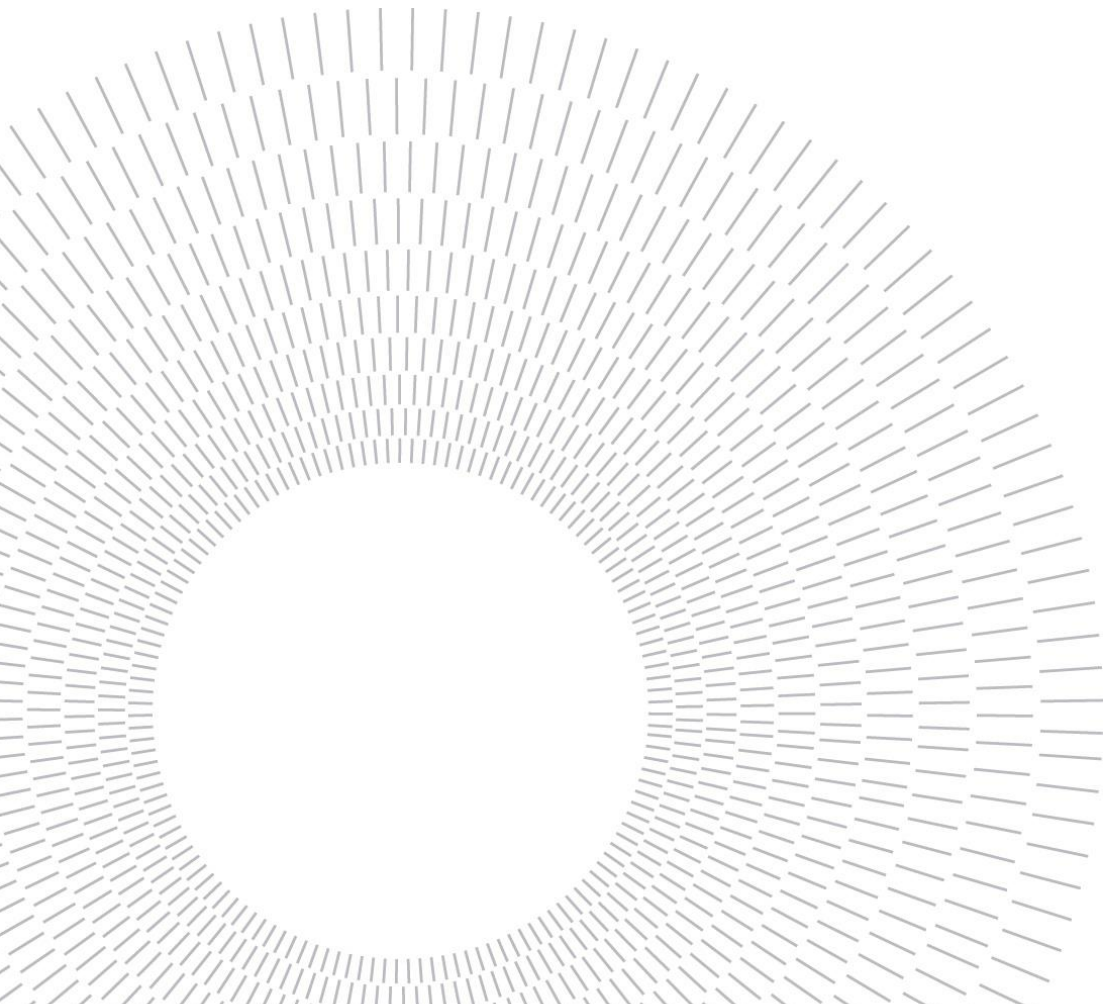
E-Internationalisation of SMEs: an empirical study on the results and the effectiveness of *"Bando E-Commerce 2020"*

MASTER'S THESIS IN
MANAGEMENT ENGINEERING

Authors: **Simone Porta, Ferdinando Tenconi**

Student ID:	10530315, 10531131
Advisor:	Lucia Piscitello
Co-advisor:	Tommaso Vallone
Academic Year:	2020-2021



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EXECUTIVE SUMMARY OF THE THESIS

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1. Introduction

This research focuses on three important elements of the European and Italian economies: e-commerce, companies' internationalisation, and SMEs. After a steady growth recorded in recent years, e-commerce finally exploded during the COVID-19 pandemic. Export and the consequent process of internationalisation of companies assume for the Italian economy, whose export value reached $ 481 billion in 2020 (OEC, 2020), a fundamental role in overcoming the economic crisis caused by the pandemic. Finally, the micro, small and medium-sized enterprises in Italy represent the vast majority of the total number of companies and employ 78.1% of the population, therefore they are the backbone of the country's economy. Hence, it is fundamental for the economy that these three elements are perfectly interconnected. Yet, the COVID-19 pandemic made this entire process difficult to happen.

For this reason, the State may intervene by providing a set of measures to help SMEs. In June 2020, *Regione Lombardia* launched "*Bando E-Commerce 2020*", a state aid aiming at supporting micro, small and medium-sized enterprises in developing their internationalisation process through digital channels. This was the starting point of our thesis, which aspires to analyse the public tender results and assess the effectiveness of state aid. Our research starts with a detailed analysis of the literature on SMEs' internationalisation.

2. The phenomenon of SMEs' Internationalisation: a conceptual framework

2.1. Main topics in research

Even if it is impossible to establish a comprehensive conceptual framework to explain SMEs' internationalisation process, the academic literature focuses on drivers and barriers influencing the choice of the entry modes.

Scholars identify internal and external enablers that affect the phenomenon. Internal factors include managerial knowledge, technical

innovation, ICT, R&D and networking. Whereas external factors relate to the macroeconomic context in which enterprises operate. An environment that encourages competition and investment will increase the probability of a company engaging in industrialisation.
Barriers have drawn the academic world's attention to direct policymakers in providing support to SMEs. Since engaging in the internationalisation process brings the company different risks, it is mandatory to identify failure factors, because prevention or elimination could provide SMEs with an impetus to enter foreign markets.

2.2. SMEs' Internationalisation Models

Analysing the drivers that push companies to choose an international strategy, scholars identify the following pathways to access global markets:

- traditional pattern;
- "*Born global*" pattern;
- "*Born-again global*" pattern;
- global value chain participation.

Engagement in internationalisation is considered an incremental process: firms enter "psychologically close" markets and gradually increase commitment to international markets through a series of evolutionary stages. The traditional incremental model views the internationalisation process as a gradual development in distinct stages. This internationalisation pattern was studied by two schools of thought, which defined the models referred to as Uppsala Models (U-M) (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977) and innovation-related International-Models (I-M) conceptualised by Cavusgil (1980). The U-M postulates a direct relation between market knowledge and the market itself. The I-M considers each next stage as an innovation for the firm establishing an analogy between companies' internationalisation process and the evolution of the life cycle phase of a product.
However, the incremental stage approach does not explain the accelerated internationalisation of the so-called *born-global firms*, which operate in international markets soon after being founded. They are smaller firms with limited tangible resources that face numerous barriers in internationalisation, such as insufficient economies of scale and lack of financial resources. Nevertheless, they are usually endowed with distinctive intangible resources and capabilities. Their founding and growth are supported by distinctive entrepreneurial prowess championed by managers who have previous experience in international markets. Newness and small size are seen as enabling factors rather than restraining.
In addition, there is evidence of well-established small and medium-sized enterprises firms, which have focused on the domestic market for many years before starting rapid and dedicated internationalisation as a result of a strategic change, regardless of their age, size and industry sectors. These "born-again" global firms appear to be influenced by critical events that provide them with additional human or financial resources. Researchers argue that this radical shift in strategy is due to "critical incidents" or "triggers" for internationalisation, which can be clustered into three groups: change of ownership or management, acquisition and client followership.
Finally, the "global value chain approach" offers SMEs new opportunities to integrate global value chains by exporting directly or indirectly through large exporting firms.

3. Main barriers and drivers to SMEs' Internationalisation

SMEs' participation in international trade remains limited despite their contribution to economic growth. This evidence is explained by the relationship between productivity, size and export experience: the most productive firms are larger and find it easier to access foreign markets and grow even further through exporting.

3.1. Trade barriers to SMEs' participation in global markets

Engaging in international markets is expensive. All trade costs, whether fixed or variable, adversely affect the ability of SMEs to participate in trade to a greater extent than large enterprises.
International literature agrees that SMEs perceive high tariffs as a more significant obstacle to trade than large firms, because SMEs' trade flows are more sensitive to tariff changes and are more concentrated in sectors facing higher tariff barriers

than large firms. Trade barriers giving rise to fixed costs are particularly burdensome for SMEs with limited financial, human and technological resources. They would benefit most from further trade opening and policy coordination, including non-tariff measures.

3.2. Facilitators to SMEs' Internationalisation

SMEs can partially overcome constraints to internationalisation thanks to the diffusion of ITCs and Internet-based business applications, which provide, besides sales and communication channels, a wide range of services that reduce entry and trade costs. However, although the ICT revolution and cross-border e-commerce can act as facilitators in the process of SMEs' internationalisation, available evidence does not show clear signs of an increase in SMEs' participation yet, suggesting that some of the constraints identified offline persist also online (Elia et al., 2019).

Mainly, SMEs find it harder than large firms to respond to technological change, notably because they employ fewer technical specialists and the financial resources needed to constantly upgrade technology.

Improved export competitiveness can be achieved through broader policy measures that recognise the upstream role played by SMEs. Adequate trade policy measures, reducing the cost of importing through liberalisation of goods and services and sustained support for trade facilitation and connectivity, will help SMEs exploit new opportunities. Critical SMEs internationalisation barriers regarding access to information, skills, technology, or finance underscore the need for support programmes provided by national governments. Global challenges require global solutions to provide an international operating environment where SMEs can flourish. By increasing the quality of digital infrastructure and decreasing the cost of access, promoting digital connectivity will empower smaller firms to take full advantage of the digital trade revolution (OECD, 2019).

4. The growth of Cross-Border E-Commerce and the impact of the COVID-19 pandemic

E-commerce has grown exponentially in the last decades, enabling even SMEs, which lacked the necessary resources to engage in international trade, to connect with consumers in foreign markets in ways not previously possible.

The COVID-19 pandemic has dominated global economic development during 2020, altering trade patterns considerably, at least in the short term. One impact has been an uptake in e-commerce resulting from the need for many activities to move online. Since more people have been using e-commerce more often, businesses with an established online presence and traditional firms with sufficient resources to upgrade their online marketing and sales could benefit from this.

4.1. CBEC Barriers

Despite the growth of e-commerce and the new opportunities for small businesses, new trade barriers hamper cross-border e-commerce. Barriers affecting traditional trade are more burdensome for e-traders because they sell to many markets simultaneously and are seldom physically established in the markets they are selling to. Finally, they often send many small consignments rather than single larger ones. These challenges confirm long-standing problems that have affected prospects for e-commerce during the past decade and more.

The COVID-19 pandemic has reinforced the importance of addressing barriers to e-commerce to leverage the benefits that can be derived from it and to cope with the potential downsides of digital transformation

On the other hand, the possibility of citizens to shop online or use online commercial services depends on the availability of reliable communications networks, the affordability of suitable hardware and data packages, the existence of relevant online platforms and services, the presence of attractive digital payment mechanisms, and individuals' capabilities and digital literacy. Policies have to bridge barriers and build trust and confidence in online business. Despite the investment in digital transformation forced by the pandemic, SMEs continue to lag behind larger firms in adopting more advanced

digital technologies. This is why policy efforts should aim to close this gap by strengthening SMEs' use of the digital economy.

5. How to overcome internationalisation barriers: State Aids and Export Promotion Programs

5.1. State Aids and Export Promotion Programs: a general overview and some examples

An Export Promotion Program (EPP) is a specific typology of state aid, and it is defined as "a program implemented by public entities, trade associations, and other organisations to help firms, especially SMEs, overcome limitations on internationalisation and reduce the negative effects of export barriers" (Mota et al., 2021). Since state aid can threaten free-market competition, they must be approved by the European Union according to certain requirements:

- they have to make it possible to achieve objectives of common interest (services of general economic interest, social and regional cohesion, employment, research and development, sustainable development, promotion of cultural diversity, etc.);
- they have to be the right instrument to correct certain "*market failures*".

5.2. Effectiveness of EPPs

After presenting two examples of European EPPs, a review of the available literature regarding the effectiveness of the programs has been performed. According to Dvouletý, Srhoj and Pante (2021) which analysed 30 studies on state aid for SMEs, in most of the cases the grants have a positive impact on the firm survival rate, the employment, the growth and the financial performances of the firm, while there are no evidences that they positively impact firms' productivity. Freixanet (2012) analysing the effectiveness of EPPs, identifies different typologies of public policies, and defines five different stages of export involvement along the internationalisation process. He shows how the aid's effectiveness depends on the relationship between the type of support and the internationalisation stage of the companies. Lastly, Catanzaro and Teyssier (2021), assessing 147 internationalised French SMEs that availed of EPPs, state that EPPs positively affect the SMEs' export capabilities and international risk management practices, which in turn have a positive effect on the SME's international performance.

6. *"Bando E-commerce 2020"*

6.1. Overview

"Bando E-Commerce-2020" was launched by *Regione Lombardia* and *Unioncamere Lombardia-Camere di Commercio della Lombardia* in June 2020 to help MSMEs develop and consolidate their presence in foreign markets during the difficult period generated by the COVID-19 pandemic. The total resources allocated were € 2,618,000, and the total number of applicant companies 1,642, which could receive a financing up to € 10,000. The potential beneficiaries are the micro, small and medium enterprises with an operating office in Lombardy region.

6.2. The results

The available database allowed us to analyse the features of the overall applicant companies. This analysis highlights the difficulties of micro and small enterprises and companies belonging to the third sector: those were the categories most present among the applicant companies.

The second part of the analysis on the *Bando "E-commerce 2020*" allowed us to identify the factors and characteristics that can help succeed in a public tender. We used as a supporting tool for our analysis a Revealed Comparative Advantage Index (RCA). This index is often used in international economics to assess the relative advantage or disadvantage for a specific good or sector based on the trade data. The first evident result is the difficulty of the micro and small enterprise in being funded, mainly related to the scarce availability of resources.

On the other hand, medium enterprises obtained financing in a higher proportion. Furthermore, the analysis reveals that the age, both of the company owner and of the company itself, gradually increase together with better performances obtained in the evaluation of the application.

Likewise, also startup companies poorly performed in the assessment. These facts led us to state that established companies are more likely to obtain the funds in public tender with respect to younger companies and startups.

7. Empirical analysis of the state aid effectiveness

As a last step of our research, we analysed the results obtained by the funded companies, in comparison with the ones that did not receive the financing, to assess the effectiveness of the state aid. A survey has been submitted to all the 1,642 applicant companies, with different questions related to:

- type of e-commerce initiative;
- company's performances;
- market(s) of expansion;
- managerial structure;
- e-commerce experience;
- barrier faced in the internationalisation process;
- possible public tender improvements;
- the result obtained in the public tender (i.e. funded or not funded).

We obtained a response rate equal to 9.7%, with a total of 160 answers, 97 from funded companies and 63 from not funded companies.

According to our analyses, funded companies recorded better averages performances with respect to the not funded ones: 3.38 vs 2.99. This result is obtained comparing the overall performance index (computed with a weighted average of the 7 items available in Question 2 of the survey) of the funded companies and the not funded companies; this analysis is reinforced by a t-test whose p-value equals 0.05%. Additionally, 83% of the not funded companies could not expand or improve their presence abroad, while 50.5% of the funded companies did. These two results give a first indication on the effectiveness of state aid.

More deeply investigating the survey results, it emerged that the state aid resulted more effective for a single channel strategy through a proprietary e-commerce website rather than e-commerce projects that included a two-channel strategy (proprietary e-commerce website and marketplace or online retailer). The data also confirm that a solid managerial structure (in terms of export manager and e-commerce manager) helps companies expand abroad. When neither an export manager nor an e-commerce manager is present, the financing is necessary but not sufficient to help companies in their internationalisation.

As far as the barriers to the internationalisation are concerned, the most common barrier encountered by the companies along the internationalisation process is the lack of digital skills. In case neither an export nor an e-commerce manager is present, or in case the company's project was the first international experience, the state aid has been a necessary condition for the abroad expansion, since these companies were not fully able to overcome the lack of digital skills barrier without the financing.

In case a managerial figure dedicated to the export is present, the state aid was effective in helping the abroad expansion: many more funded companies were able to expand with respect to not funded companies. The same result is obtained for companies with experience in internationalisation. This outcome highlights the importance of skills and resources in leveraging the possibilities offered by the state aid.

On the other hand, there are no concrete evidences demonstrating the effectiveness of the funding in helping the companies to overcome the logistics barrier.

8. Conclusions

In the last chapter of our thesis, we summarise the results obtained, and we present the main limitations of the research, which leave space for further developments.

8.1. Summary of the results

Our analyses are related to two main topics: the analysis of the results of "*Bando E-Commerce 2020*" and the analysis of its effectiveness.

For what concerns the first analysis, it shows that medium enterprises demonstrated significantly higher chances of being financed with respect to micro and small enterprises. These results may be mainly due to a resource-scarcity problem. Another important result concerns companies' age and the age of companies' owners: older ages lead to significantly higher chances of being financed with respect to startups and companies with young owners.

Regarding the state aid effectiveness analysis, we can state that the funded companies recorder

considerably better results than the not funded ones, both in terms of new foreign markets expansion and in terms of performances. More detailed analyses show that state aid has been more effective in the case of a single-channel internationalisation strategy through a proprietary website rather than a two-channel strategy, including sales through a marketplace (or an online retailer). We can also state that in the absence of a solid managerial structure (export manager or e-commerce manager), the fund is not enough for the companies to expand abroad. Moreover, the most common barrier to internationalisation companies' lack of digital skills can be more easily overcome in companies with a solid managerial structure or previous internationalisation experience.

8.2. Limitations and further developments

The time horizon of the analysis represents the first and main limitation of our research. The results obtained by the companies, which we used for our analysis, are related to a period of 8-12 months, since they were collected in November 2021, and the funds have been spent between November 2020 and March 2021. Some investments made by the companies may require more time to generate a tangible return. For this reason, it would be very interesting to run a further analysis on the same sample of companies a year after. This would allow to compare the results of the two analyses, and verify the effectiveness of the state aid in the medium-term.

The second limitation of our research concerns the fact that much information of the companies available in the original database used for the preliminary analysis on "*Bando E-commerce 2020*" could not be used for the analysis of the state aid effectiveness. This happened due to privacy reasons and limitation in the number of possible questions of the survey. For this reason, further research could be made considering more detailed information about the companies, to assess whether the state aid has been more effective for companies with specific characteristics (for example, for a specific sector).

Finally, even if we obtained a good response rate (9.7%) and a good distribution of answers between funded and not funded companies, for some specific analyses the absolute numbers of answers may be considered a bit low, and therefore it would be important to obtain a higher number of responses to strengthen the analysis.

9. References

Catanzaro, Alexis, and Christine Teyssier. (2021). 'Export Promotion Programs, Export Capabilities, and Risk Management Practices of Internationalized SMEs'. *Small Business Economics* 57 (October). https://doi.org/10.1007/s11187-020-00358-4.

Dvouletý, Ondřej, Stjepan Srhoj, and Smaranda Pantea. (2021). 'Public SME Grants and Firm Performance in European Union: A Systematic Review of Empirical Evidence'. *Small Business Economics* 57 (1): 243–63. https://doi.org/10.1007/s11187-019-00306-x.

Elia, Stefano, Maria Giuffrida, and Lucia Piscitello. (2019). 'Does E-Commerce Facilitate or Complicate SMEs' Internationalisation?' *ICE, Revista de Economía*, no. 909 (August). https://doi.org/10.32796/ice.2019.909.6901.

Freixanet, Joan. (2012). 'Export Promotion Programs: Their Impact on Companies' Internationalization Performance and Competitiveness'. *International Business Review* 21 (6): 1065–86. https://doi.org/10.1016/j.ibusrev.2011.12.003

Mota, Jorge, António Moreira, and Alexandra Alves. (2021). 'Impact of Export Promotion Programs on Export Performance'. *Economies* 9 (3): 127. https://doi.org/10.3390/economies9030127.

OEC. (2020). 'Italy (ITA) Exports, Imports, and Trade Partners'. The Observatory of Economic Complexity. https://oec.world/en/profile/country/ita.

Abstract

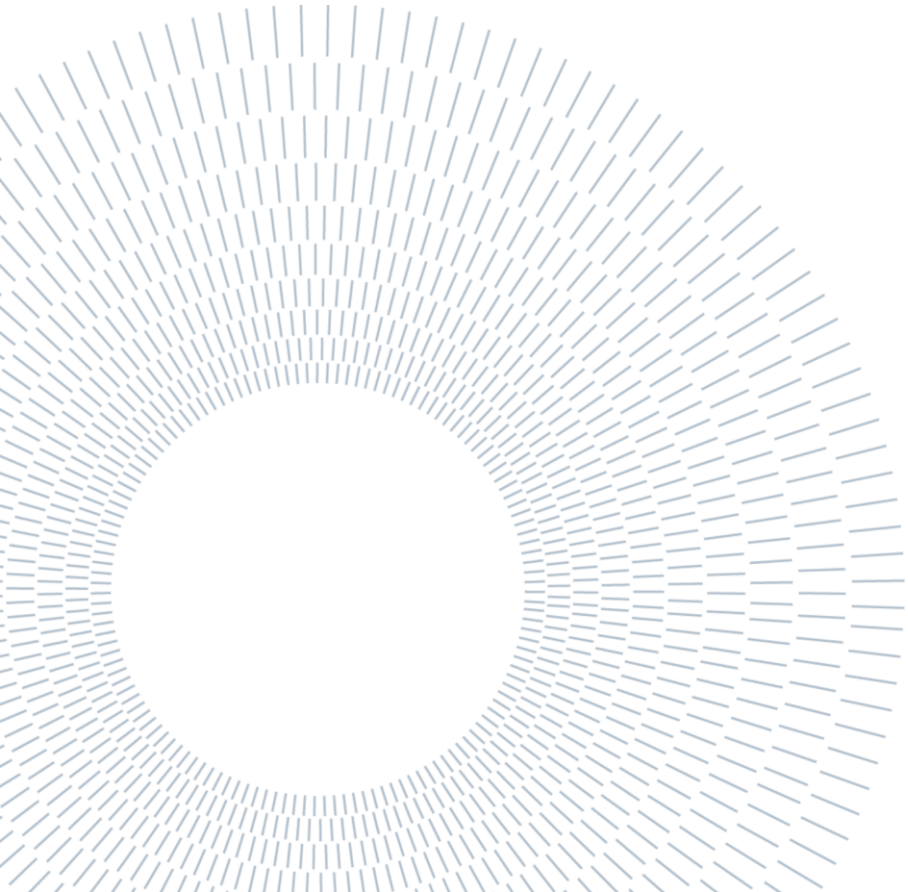
E-commerce, internationalisation, SMEs: three important elements that cover a primary role in the nowadays European, and especially Italian, economy. The use of the e-commerce channel covers for micro, small and medium-sized Italian enterprises a role of fundamental importance to increase and strengthen their presence abroad. In 2020, the COVID-19 health and economic crisis has destabilised the entire Italian, European and global economy, creating many difficulties for these companies. This is why the State stepped in: in 2020, Regione Lombardia launched a public tender to support the internationalisation of micro, small and medium-sized enterprises through the e-commerce channel. The tender gave the possibility to the winning companies to receive a funding to invest in a digital internationalisation project. This research aims, firstly, at studying the results of this tender: the applicant companies' characteristics, and afterwards, a comparison between the characteristics of the winning and losing companies. As a second objective, this research aims at assessing the effectiveness of the state aid: a survey has been sent to the applicant companies, and the answers have been analysed, comparing the results of the funded and not funded companies and investigating the effects of the state aid, examining whether it has enabled to overcome any specific barrier to the internationalisation and for which specific companies. These two analyses are preceded by a careful and detailed review of the present literature on SMEs, barriers to internationalisation, e-commerce and government incentives. The main outcomes are then gathered in a conclusive chapter, also containing suggestions for future development of the research.

Key-words: e-commerce, internationalisation, state aid, barriers to internationalisation, SMEs.

Abstract in lingua italiana

E-commerce, internazionalizzazione, PMI: tre elementi importanti che ricoprono un ruolo primario nello scenario economico europeo e, soprattutto, italiano. È di fondamentale importanza per le micro, piccole e medie imprese italiane l'utilizzo dell'e-commerce per accrescere e rafforzare la propria presenza nei mercati esteri. Nel 2020, la crisi economica e sanitaria causata dalla pandemia di COVID-19 ha destabilizzato l'intera economia italiana, europea e mondiale, creando non poche difficoltà a queste aziende. Nel 2020 lo Stato è intervenuto: Regione Lombardia ha lanciato un bando pubblico per sostenere l'internazionalizzazione delle micro, piccole e medie imprese attraverso il canale dell'e-commerce. Il bando dava la possibilità alle aziende vincitrici di ricevere un finanziamento a fondo perduto per investire in un progetto di internazionalizzazione digitale. Questa ricerca mira, in primo luogo, a studiare i risultati della gara d'appalto precedentemente menzionata, le caratteristiche delle aziende richiedenti e, successivamente, un confronto tra le caratteristiche delle aziende che hanno ricevuto il finanziamento e quelle che non lo hanno ricevuto. Come secondo obiettivo, questa ricerca aspira a valutare l'efficacia dell'aiuto di stato. Un sondaggio è stato inviato alle aziende candidate, le risposte sono state analizzate confrontando i risultati delle aziende finanziate e non finanziate. Gli effetti dell'inventivo pubblico sono stati analizzati, esaminando se esso ha permesso di superare le barriere all'internazionalizzazione che le aziende hanno riscontrato durante il loro processo di espansione. Queste due analisi sono precedute da un'attenta e dettagliata rassegna della letteratura sul contesto europeo e italiano delle PMI, barriere all'internazionalizzazione, e-commerce e incentivi statali. I principali risultati sono poi raccolti in un capitolo conclusivo, contenente anche suggerimenti per lo sviluppo futuro della ricerca.

Parole chiave: e-commerce, internazionalizzazione, incentivo pubblico, barriere all'internazionalizzazione, PMI.



Contents

Introduction

Micro and SMEs play a crucial role in the European, especially Italian, economy. Their performances have been soaring persistently within national borders in the last years. More in details, between 2014 and 2018, overall SMEs' value-added rose by 12.4%. In Italy, 66.9% of overall value-added is generated by SMEs, while their contribution to employment is equal to 78.1% (Eurostat).

However, despite these results, the share of SMEs that export is significantly lower than the corresponding share in large firms; more than 90% of large industrial firms export compared to 10%-25% of SMEs. The analyses confirm limited firm resources, mainly financial, and disadvantages in accessing operating and long-term loans as leading barriers to SME internationalisation, with inadequate knowledge of overseas markets and managers' misperceptions. Additionally, information gaps remain a critical challenge to SMEs even in the current era of extensive information availability. Likewise, gaining access to a suitable distribution channel in international markets constitutes another obstacle challenging to overcome.

In this problematic scenario for SMEs, e-commerce has grown exponentially, enabling even SMEs, which lacked the necessary resources to engage in international trade, to connect with consumers in foreign markets in ways not previously possible. Terzi(2016) argued that cross-border e-commerce (CBEC) could reduce trade barriers and promote trade growth. Since CBEC has boomed globally in the last decade, supported by ICTs, growing demand and suitable policy measures, this topic is receiving much attention in the academic world.

In 2020 the COVID-19 pandemic completely altered the European and Italian economies. The pandemic caused a severe deceleration in economic activities for which economies were largely unprepared. Movement restrictions and other government interventions to protect public health have slowed down many sectors, affecting production, distribution and consumption (IMF, 2020). However, the pandemic has resulted in mixed fortunes for some e-commerce companies, overturning the fortunes of firms offering services such as travel and ride-hailing.

The COVID-19 pandemic has considerably altered trade patterns, at least in the short term, and significant shifts have occurred in the scope and scale of e-commerce during

the pandemic. One impact has been an uptake in e-commerce resulting from the need for many activities to move online. Since more people have been using e-commerce more often, businesses with an established online presence and traditional firms with sufficient resources to upgrade their online marketing and sales could benefit from this.

Focusing on the Italian context, data collected by *"Osservatorio e-Commerce B2C-Dipartimento di Ingegneria Gestionale del Politecnico di Milano*" highlight that online retail sales reached € 23.4 billion, growing by € 5.5 billion (+31%) compared to 2019, the highest annual increase ever recorded. The leading sectors are Electronics&Appiances (€ 6.2 billion), followed by Fashion (€ 3.9 billion) and Food&Grocery, which grew by 70%, accounting for approximately € 2.7 billion. According to the research *"Export digitale, Covid ed emergenza: strategie per la ripartenza"*, carried out in 2020-2021 by *Osservatorio Export Digitale – Dipartimento di Ingegneria Gestionale del Politecnico di Milano,* (Perego et al., 2021) CBEC of physical goods, including B2C and B2B2C, grew by 15%, confirming the trend started in 2018 and reached € 13.5 billion in 2020. The weight of B2C CBEC related to export offline jumped by 2% (from 7% to 9%). B2C CBEC growth counterbalanced the disruption in B2B export.

E-commerce changed utterly the way SMEs approach the international scenario. It constituted a boost, helping enterprises reach foreign markets even if many obstacles still persist. Several barriers have been broken down while new ones emerged, making many SMEs unable to expand. Considering the abovementioned situation and the economic crisis generated by the COVID-19 pandemic, *Regione Lombardia* and *Unioncamere Lombardia-Camere di Commercio della Lombardia* launched "*Bando E-Commerce 2020*". It is part of a set of measures aiming to support MSMEs to develop and consolidate their position in foreign markets through the e-commerce channel, encouraging access to cross-border platforms (B2B and or B2C) and or proprietary e-commerce systems (sites and or mobile apps).

This public tender represents the starting point of our research. In the next chapters we will firstly review the available literature on the topic; afterwards, we will expose the results of our analyses, which mainly focus on:

- investigating the characteristics of all the 1,642 companies participating in "*Bando E-Commerce 2020*", trying to assess whether there are standard features helping enterprises to overcome public tenders, and
- assessing the effectiveness of the state aid by analysing the performances of funded and not funded companies after 8-12 months after receiving the financing.

The work is structured as follows:

- Chapter 1 presents the players of internationalisation – MSMEs – and their role in EU economies. The authors propose a detailed literature review regarding the SMEs' Internationalisation process encompassing different models.
- Chapter 2 investigates the main factors that obstacle SMEs' participation in international trade.
- Chapter 3 describes the opportunities offered by e-commerce, focusing on the mutation of the barriers presented in Chapter 2. Moreover, it analyses the new scenarios raised after the COVID-19 pandemic.
- In Chapter 4, the authors examine the Export Promotion Programs' effectiveness and offer an overview of national policy responses to face the repercussions of the COVID-19 pandemic on the Italian economy.
- Chapter 5 analyses the data of all the 1,642 companies that applied for "*Bando E-Commerce 2020*".
- Chapter 6 provides a detailed study of the effectiveness of the state aid analysing the data of funded and not funded enterprises that participated in the tender, and that answered an online survey previously sent.
- Chapter 7 is divided into two parts. The first one summarises the results obtained in Chapter 5 and 6, while the second one illustrates the limitations encountered in carrying out the work and illustrate future research directions.

1. The phenomenon of SMEs' Internationalisation: a conceptual framework

1.1 The players of internationalisation: small and medium-sized enterprises

Aware of the importance of SMEs for economic growth and job creation and to give a univocal definition of small and medium-sized enterprise, valid in each European state, the European Commission introduced a first EU-wide SME definition in its *Recommendation 96/280/EC,* of 3 April 1996 (1996), which was entirely replaced by a second *Recommendation, 2003/361 / EC,* dated 6 May 2003, and published in the Official Journal of the European Union L 124, p. 36 of 20 May 2003.

Considering a company "*any entity, regardless of the legal form covered, which carries out an economic activity*" (European Commission, 2003) the current *Recommendation* states that "*the category of micro-enterprises, small enterprises and of medium-sized enterprises (SMEs) is made up of enterprises that employ fewer than 250 people, whose annual turnover does not exceed € 50 million or whose annual balance sheet total does not exceed € 43 million."* (European Commission, 2003).

Considering that the main objectives of the SME *Recommendation* are to ensure that support measures are granted only to those enterprises that genuinely need them, the SME definition applies to all policies, programmes and measures that the European Commission develops and operates for SMEs. It is also a practical tool designed to help SMEs identify themselves so that they can receive the full support of the EU and its Member States.

As highlighted in the table below (Table 1.1) the macro-category of SMEs has been internally divided into three sub-categories based on a quantitative criterion, that is, the headcount (the number of employees expressed in AWU, working unit-year),

which must be combined with the financial aspects: the annual turnover or the annual balance sheet total (total assets). Whereas meeting the staff headcount criterion is mandatory to be considered an SME, each company may choose to meet either the criterion of turnover or the balance sheet total ceiling (European Commission, 2016).

Enterprise category	Headcount: annual work unit (AWU)	Annual turnover	or	Annual balance sheet total
Medium-sized	< 250	≤ € 50 million		≤ € 43 million
Small	< 50	≤ € 10 million		≤ € 10 million
Micro	< 10	≤ € 2 million		≤ € 2 million

Table 1.1: Thresholds (European Commission, 2020).

However, the current version of the SME Definition is valid only in Europe. Indeed, a global definition of small and medium-sized enterprises has not yet been conceived. Each country adopts its own concerning the various cultural, structural and political factors that characterise its economy.

1.1.1 EU-SMEs' performance (2008-2020)

"*SMEs are the engine of the European economy. They drive job creation and economic growth and ensure social stability*" (European Commission, 2020). As stated in the SBA and Scoreboard 2019, "*across the EU-28 Member States (MS), small and medium-sized enterprises (SMEs) make a significant contribution to the 'non-financial business economy'*[1]"According to data referring to 2018 and reported in the table below (Table 1.2), SMEs made up 99.8% of all EU-28 firms, which generated € 4,357 billion of value-added, providing 66.6% of employment, that is, SMEs accounted for two-thirds of overall employment and 56.4% of overall value-added in the '*non-financial business*

[1] The 'non-financial business economy' refers to the industry, construction, distributive trades and services. As listed below, this includes economic activities covered by Sections B to J and L to N and Division 95 of NACE Rev. 2 and the enterprises or their legal units that carry out those activities.
B: Mining and quarrying; C: Manufacturing; D: Electricity, gas, steam and air-conditioning supply; E: Water supply; sewerage, waste management and remediation activities; F: Construction; G: Wholesale and retail trade; repair of motor vehicles and motorcycles; H: Transportation and storage; I: Accommodation and food service activities; J: Information and communication; L: Real estate activities; M: Professional, scientific and technical activities; N: Administrative and support service activities; 95: Repair of computers and personal and household goods *('Glossary: Non-Financial Business Economy', Eurostat).*

economy', and micro firms were the most common size of the firm, accounting for 93.0% of all firms.

Class size	Number of enterprises		Number of persons employed		Value added	
	European Union		European Union		European Union	
	Number	Share	Number	Share	billion €	Share
Micro	23,323,938	93.0%	43,527,667	29.7%	1,610	20.8%
Small	1,472,402	5.9%	29,541,259	20.1%	1,358	17.6%
Medium-sized	235,668	0.9%	24,670,024	16.8%	1,388	18.0%
SMEs	**25,032,008**	**99.8%**	**97,738,950**	**66.6%**	**4,357**	**56.4%**
Large	47,299	0.2%	49,045,645	33.4%	3,367	43.6%
Total	**25,079,307**	**100.0%**	**146,784,595**	**100.0%**	**7,724**	**100.0%**

Table 1.2: Estimates for 2018 covering the *'non-financial business economy'* – elaboration by DIW Econ, based on 2008-2016 figures from the Structural Business Statistic Database (Eurostat, 2017).

In 2014-2018 EU-28 SMEs followed a solid growth path in the *'non-financial business economy'*. SME value added increased by 16.2, and SME employment increased by 8.2%. In this scenario, micro firms, generating value-added growth of 18.3%, became the main drivers of change in SME value-added. In 2017-2018, SMEs in all EU Member States developed an increase in both value-added and employment, of 4.1% and 1.8% respectively, micro firms grew faster, with a rise of 5.4% in value-added and 2.6% in employment. In 2014-2018, SME value-added growth in the EU-28 was highest in *accommodation and food services*, *construction* and *information and communication*, at 23.3%, 21.1%, and 20.3%, respectively.

Regarding employment growth, SMEs performed best in *information and communication* with an increase of 17.3%, and *accommodation and food services* and *administrative and support services*, both of which generated 14.6% in the same period. Another fast-growing SME sector *was wholesale and retail trade* which increased by 18.6%. Considering the large size of the sector contributed significantly to the increase in SME value added in the *'non-financial business economy'*, amounting to one-quarter of overall SME value-added growth.

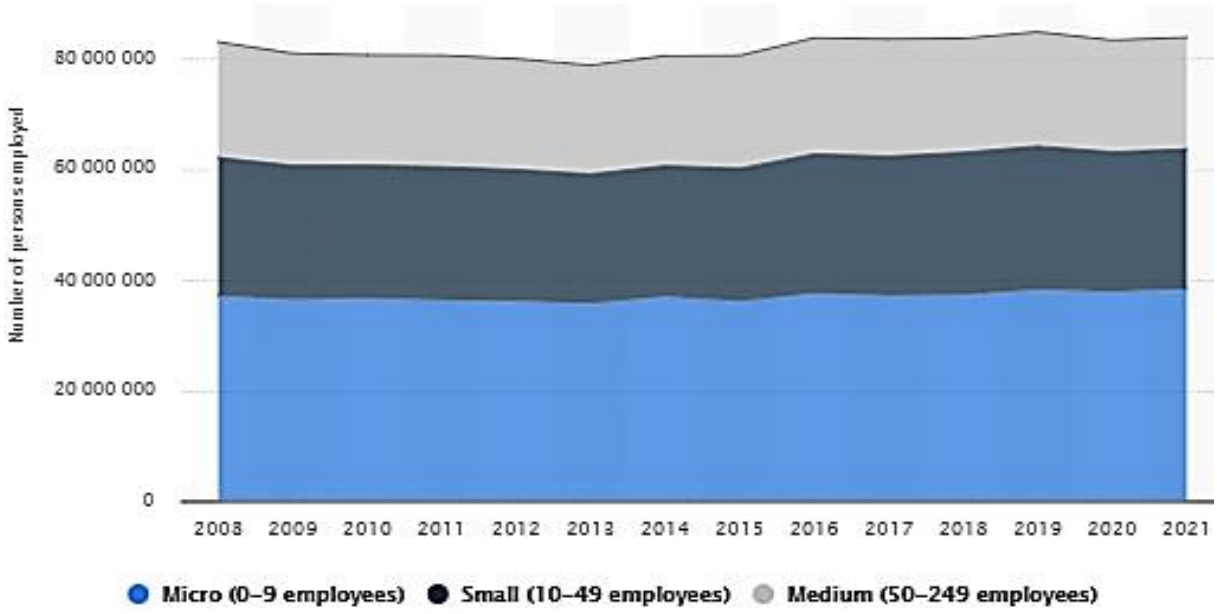


Figure 1.1: Number of people employed by small and medium-sized enterprises (SMEs) in the European Union from 2008 to 2021, by firm size (Statista, 2021).

Focusing on the *'non-financial business economy'* in 2016, the average enterprise birth rate in the EU-28 was 9.8%, and many of these firms have successfully scaled up in recent years. The 10.7% of all firms in the 'non-financial business economy' with at least ten employees were high-growth firms, ubiquitous in *information and communication*, representing 16.5% of firms, and *administrative and support services,* accounting for 14.8% of firms. In 2018, EU-28 SMEs in *knowledge-intensive services and high-tech manufacturing sectors*, both of which are usually R&D-intensive, accounted for 33.0% of SME value added in the manufacturing and services sectors (European Commission, 2019).

1.1.2 Small and medium-sized enterprises: the Italian context

As highlighted in the table below (Table 1.3), focusing on the business scenario in the Italian *'non-financial business economy'*, we can notice that 94.9% of Italian companies are micro-enterprises, 4.5% are small firms, while 0.5% are medium-sized businesses. The same scenario occurs as far as employment is concerned: 44.9% of the workforce is employed in micro-enterprises, 20.7% in small and 21.9% in large enterprises, while 12.5% in medium-sized ones. Regarding overall value-added, 66.9% is generated by SMEs, exceeding the EU average of 56.4%, and the share of employment generated by SMEs is at 78.1%, compared to the EU average of 66.6%. In 2014-2018, overall SME value added rose by 12.4%, but SME employment rose by only 4.7% in the same period,

still 9.3% below its 2008 pre-crisis level. More recently, in 2017-2018, SME employment grew by only 1.1%, while SME value added increased by only 1.8%.

Class size	Number of enterprises			Number of persons employed			Value-added		
	Italy		EU-28	Italy		EU-28	Italy		EU-28
	Number	Share	Share	Number	Share	Share	Billion €	Share	Share
Micro	3,599,695	94.9%	93.0%	6,719,319	44.9%	*29.7%*	208.1	28.4%	20.8%
Small	172,324	4.5%	5.9%	3,088,490	20.7%	*20.1%*	151.8	20.7%	17.6%
Medium -sized	19,226	0.5%	0.9%	1,873,898	12.5%	*16.8%*	131.0	17.9%	18.0%
SMEs	**3,791,245**	**99.9%**	**99.8%**	**11,681,707**	**78.1%**	***66.6%***	**490.9**	**66.9%**	**56.4%**
Large	3,380	0.1%	0.2%	3,270,222	21.9%	*33 4%*	242.5	33.1%	43.6%
Total	**3,794,625**	**100.0%**	**100.0%**	**14,951,929**	**100.0%**	***100.0%***	**733.3**	**100.0%**	**100.0%**

Table 1.3: SMEs – Estimates for 2018 covering the '*non-financial business economy'* – DIW Econ, based on 2008-2016 figures from the Structural Business Statistic Database (Eurostat, 2017).

Between 2014 and 2018**,** SMEs' value added grew by 26.9% in the *wholesale and retail trade subsector, including automobiles* (counting car repair activities). Two growth drivers were, on one side, the general recovery phase in car repair that started in 2014 in the context of strong growth in the overall car market and, on the other, the increase in overall investment in transportation, which rose by 21.9% in 2015. SMEs were most affected by these developments because they primarily perform car repair activities. 0.4% of overall SME value added in the Italian 'non-financial business economy' is generated by SMEs in the *manufacturing sector*. In 2014-2018, SME value added in this sector increased by 9.7%, exceeding its 2008 pre-crisis level by 4.6%. In contrast, SME employment remained 16.2% lower than its 2008 level, rising by only 2.0% considering the same period. This higher value-added growth compared to employment is due to the following factors.

A notable driver has been the Italian government's 2016 "*Industry 4.0"* plan, which has incentivised SMEs to increase innovation by investing in digitalisation. Consequently, most SMEs in the manufacturing sector have introduced new digital systems, such as IT security, connectivity, cloud computing and collaborative robotics. Moreover, SMEs have been substantial contributors to GDP through direct exports. Exporting SMEs generate significantly more value-added than non-exporting SMEs and boost SME employment in particular. SMEs in the high-tech manufacturing sector and knowledge-intensive services, usually R&D-intensive firms, generated 28.6% of SME

value added in Italy's *'non-financial business economy'* in 2018. This is lower than the EU average of 33.0%.

The trend indicated by the graphs in Figure 1.2 related to the employment trend and the added value of Italian and European SMEs, portrays, in a relatively reliable way, the problematic situation that since 2008 (the year of the financial crisis following the bankruptcy of Lehman Brothers) characterises the national market. The above data show that Italian SMEs, unlike their European counterparts, have not yet had the expected recovery. For this reason, one possible solution could be scouting for new market outlets so that internationalisation becomes an increasingly interesting opportunity for local companies. (Directorate-General for Internal Market 2015)

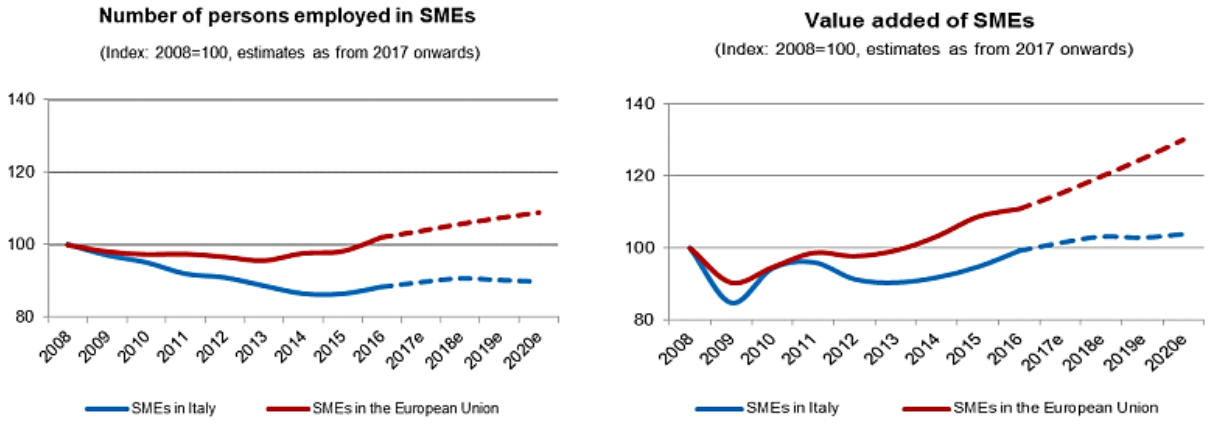


Figure 1.2: Number of persons employed in SMEs and value-added of SMEs in Italy and the EU (European Commission, 2019).

1.1.3 Performance EU-28 Member States in Internationalisation: a comparative analysis

Being internationalisation one of the main topics of our field of study, we will duly analyse the issue in the following chapter. In contrast, we focus here only on the comparative performance of EU Member States in 2008 and 2019. The quadrant chart below (Figure 1.3) highlights the relative position of the EU Member States in terms of:

- performance, compared to the EU average (equal to 0);
- progress over time is expressed as a percentage.

The quadrant chart combines two sets of information. The current performance is measured in the standard deviation of the simple, non-weighted arithmetical average for the EU Member States and is plotted along the Y-axis. Progress over time, i.e. the average annual growth rates from 2008 to 2019 is plotted along the X-axis.

As shown, nearly all EU Member States have improved in internationalisation since 2008; Italy is about one standard deviation below the average in terms of performance, but considering the rate of compound annual growth from 2008 to 2019, there was a 5% progress. The best performing EU Member States are Denmark, Lithuania and Croatia, while the worst-performing ones are Czechia, Greece, and Portugal.

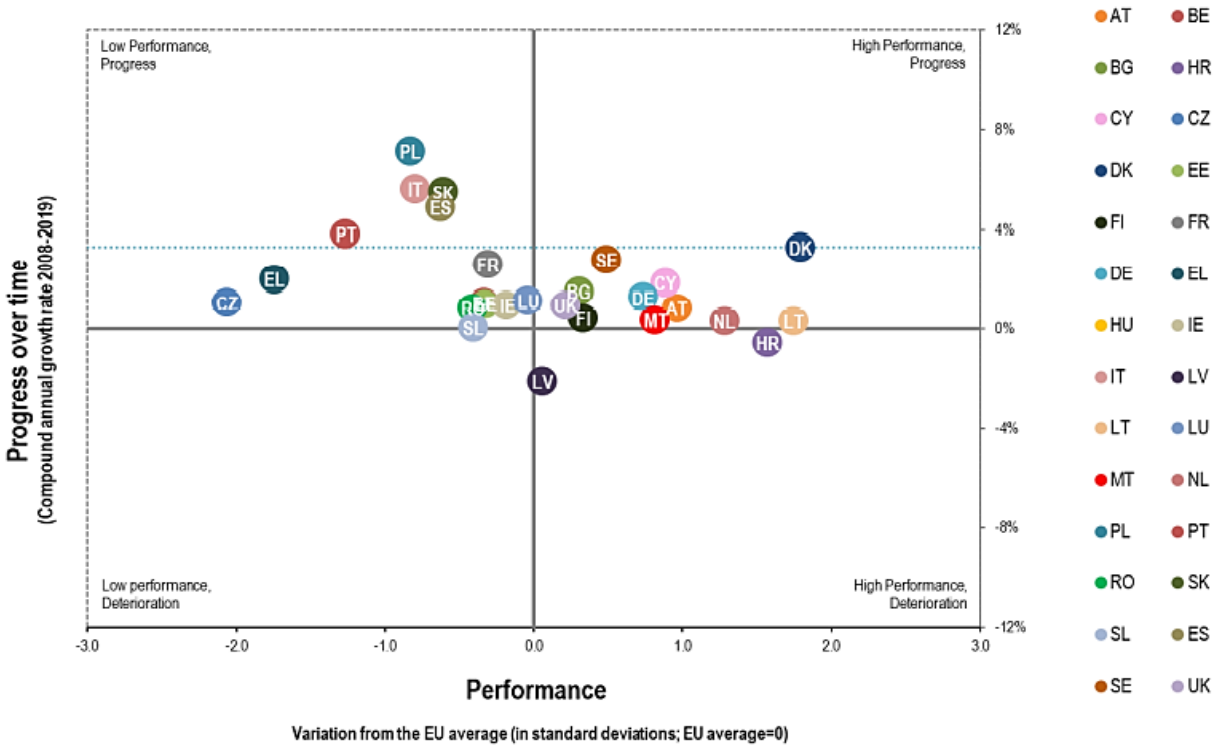


Figure 1.3: Positioning of each EU-28 Member State in terms of their performance and progress over time for internationalisation (2008-2019) (European Commission, 2019).

According to the following figure (Figure 1.4), SMEs' percentage of extra-EU exports and imports of goods in the industry has increased overall since 2008

As represented in Figure 1.5, Italian SMEs are less internationalised than the EU average firms. Most of the indicators on the facilitation of trade — except for advance rulings— are below the EU average. Nevertheless, Italy's share of SMEs exporting outside the EU is above the EU average, as reported in Figure 1.5.

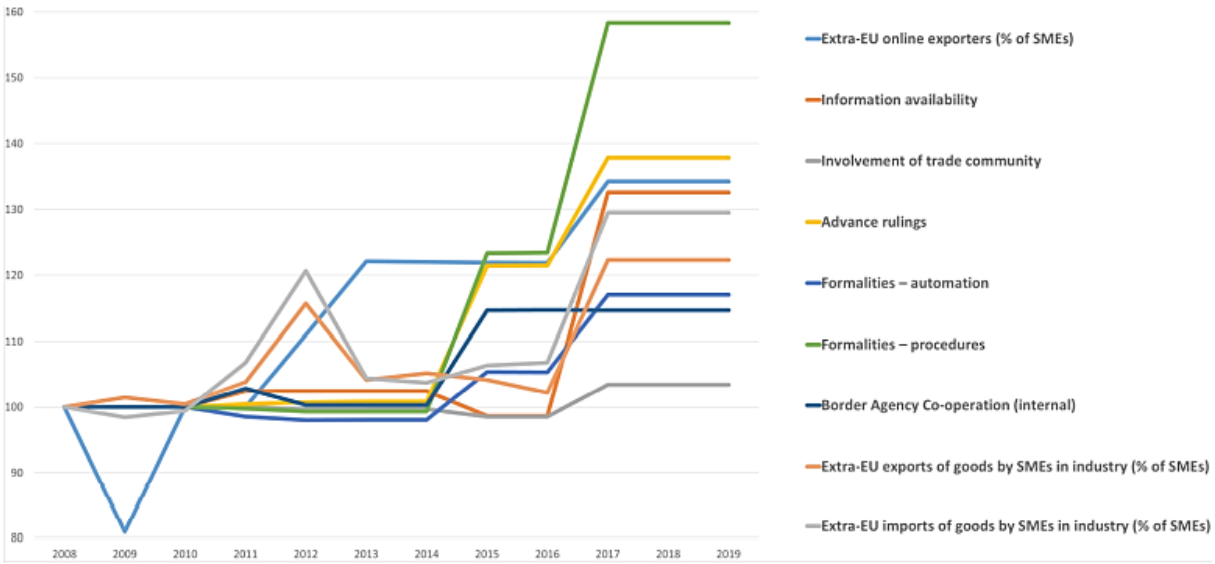


Figure 1.4: EU-28 progress on the internationalisation indicator (European Commission, 2019).

According to data reported in March 2019 in *"Export digitale: quanta strada c'è da fare!"* (Perego et al., 2019), Italy, with 33,800 small-sized manufacturing companies (from 10 to 49 employees), has the highest number of exporting SMEs in Europe and the world. The United States account for 24,400 and Germany 23,500.

Among the OECD countries, Italy also records the highest volume of exports generated by small manufacturing companies, with $ 55.7 billion, followed by Germany ($ 28.2 billion) and Spain ($ 20.7 billion).

Even more impressive are the numbers relating to medium-sized manufacturing companies (employees from 50 to 249): Italy ranks third among OECD countries, counting about 7,400 companies, behind the United States (which has about 14,400 companies) and Germany (which has almost 12,000).

After Germany and France, the US represents the third-largest Italian export market. The most promising overseas markets are emerging economies, such as China, Russia, the United Arab Emirates, Mexico, Malaysia, Thailand and Brazil (*School of Management Politecnico di Milano).*

In 2015 the national plan "Made in Italy" was launched, implemented by the Ministry of Economic Development in collaboration with the Italian Trade Agency (ITA-ICE), which aims to increase the number of Italian exporting SMEs and promote globally the "Made in Italy" brand. Supporting measures targeting SMEs include, in addition to vouchers for temporary export managers, roadshows to inform SMEs about

available support schemes (Roadshow Italia per le imprese) and the creation of an e-commerce platform to foster access to foreign markets (European Commission, 2019).

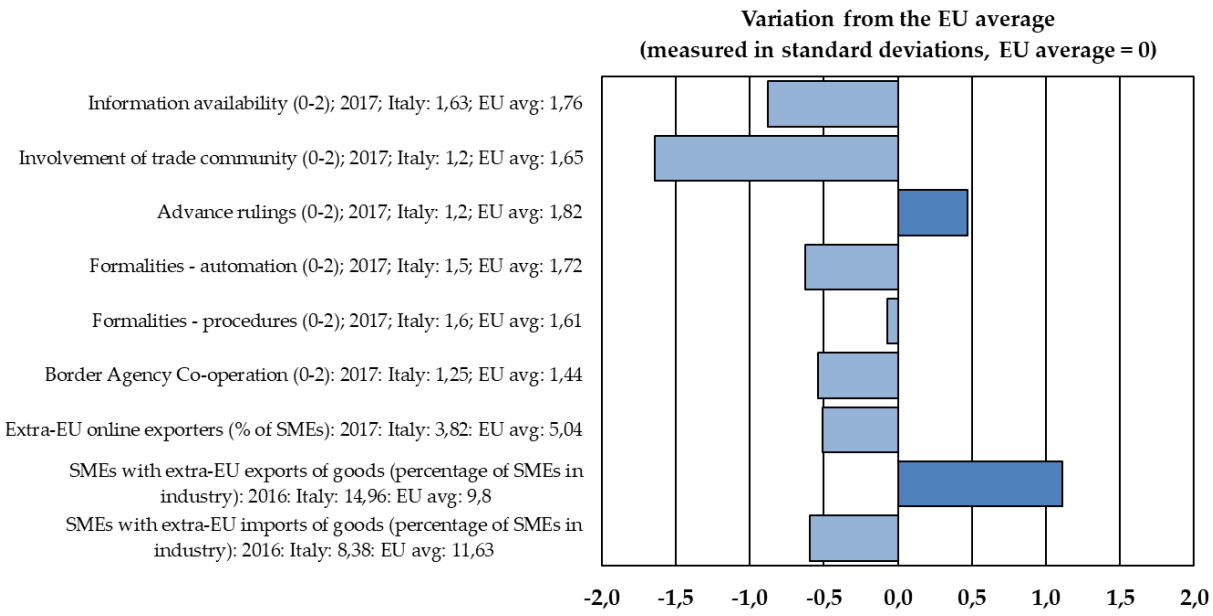


Figure 1.5: Performance Italy in internationalisation (European Commission, 2019).

The Italian export credit agency, SACE, and the Italian company for the internationalisation of companies, SIMEST, which operate under the umbrella of the investment bank Cassa Depositi e Prestiti (CDP Group) and represent the Italian pole for export and internationalisation (SACE SIMEST, 2018) introduced the following measures for start-ups and SMEs:

- The "Education to Export" (E2E) programme: consists of an online, free education and information route for SMEs, which provides an online export kit and classroom training. Interested SMEs may access the online portal and, following a self-evaluation procedure, select one out of four different learning courses focused on: how to start an export activity and better structure the business for exporting; and how to be competitive and grow at the international level.
- "Export UP": a new online tool to help SMEs step-by-step with the process of exporting and with securing export credit insurance.
- The "Global Start-Up programme": financed with funds from the national 'Made in Italy' plan – aims to strengthen innovative Italian start-ups to better deal with foreign markets.

1.2 The theoretical foundations of the Internationalisation process of SMEs

"*Internationalisation and international entrepreneurship among small and medium-sized enterprises is a topic of considerable relevance principally owing to the observed, growth effects of cross-border venturing, and the demonstrated capacity of SMEs to drive economic development at national, regional and global levels"*(Lloyd-Reason et al., 2009).

According to the definition of Welch and Luostarinen, "internationalisation" is "*the process of increasing involvement in international operations*"(Welch and Luostarinen, 1988), and it is viewed as an incremental and orderly evolution that sees the company gradually involved in countries other than those of origin. Later, Calof and Beamish (1995) present it as "*the process of adapting firms' operations (strategy, structure, resource, etc.) to international environments*", eliminating the concept of "direction" to point out that of "adaptation" of the company to the international environment. This is a more realistic definition since internationalisation does not always identify a one-way path as suggested by Welch and Loustarinen, on the contrary, companies can de-internationalise by reducing their commitment at an international level (Chetty and Campbell-Hunt, 2003).

Furthermore, the term "*Internationalisation*" describes the geographical expansion activity undertaken by a company beyond national borders, maturing relationships with companies from foreign countries and giving companies outlets in new markets for their activities. It also implies adjustments to changing conditions within the firm and its environment (Aharoni, 1966) because a company that engages in the internationalisation process is faced with many specific risks associated with the geographic location of the foreign market, the different economic environment and the differences in legislation in the target market. Most significantly, Perlmutter (1969) draws attention to the conjunction of internationalisation and development within the firm, studying the impact of the company expansion across borders on the organisation. Since doing business abroad depends on the firm's size and experience, Perlmutter developed the so-called EPG framework, which defined four different management approaches an organisation can take to engage in international business. The acronym EPG stands for Ethnocentric, Polycentric and Geocentric. It refers to the attitudes among international executives who can draw their firm's profile in ethnocentric (E), polycentric (P) and geocentric (G) dimensions. The model suggests that each attitude mirrors a different internationalisation strategy, and executives must determine and utilise the most suitable one for achieving successful results in overseas markets.

In more recent years, Mathews has focused on the relevance of the environment and surroundings elements as enablers and defines internationalisation as *"the process of the firm's becoming integrated into international economic activities"* (Mathews, 2006). Thus, he emphasises "integration" in an increasingly network-oriented perspective, with the interaction way being a key driver of internationalisation. In the past three decades, a network-based approach has emerged to describe and explain the international behaviour of firms (Coviello and Munro, 1995; Johanson and Vahlne, 2009). These theoretical advancements have been used to explore SMEs' entry and expansion in more detail in foreign markets.

Effective use of networks helps firms overcome resource limitations, small firm size, distance from international markets, and reach the global market (Chetty and Wilson, 2003). SMEs use different network forms to acquire the necessary knowledge for international operations, such as relational resources, experiential learning and market channels (Coviello and Munro, 1995). Through networks, the firm can leverage entrance into global markets and compensate for the lack of international experience and resources. Mathews (2006) found that three forms of networks assisted Asian SMEs in entering international markets: social networks, business networks, and intermediaries. He identified intermediaries as government agencies, social networks based on personal interactions, colleagues and previous employment contacts, business networks as SME owners, managers of large local companies, and foreign and Asian Multinational enterprises (MNEs).

As the accelerated globalisation of world markets has spurred SMEs on to compete in international markets, the understanding of the particular process of internationalisation in SMEs has drawn the attention of the research community and gained relevance, being foreign market entry regarded as an enabler of competitive advantage (Ooi and Richardson, 2019). In this vein, an increasing number of theoretical articles have been published in the last decades, trying to analyse the procedures and approaches focusing on the following issues: specific barriers SMEs have to face, such as the lack of resources and the difficulties to access them, drivers or enablers that help SMEs, and different patterns or pathways to gain access to international markets.

1.3 Main topics in research: enablers, barriers and entry modes

Since the academic debate on SMEs' internationalisation processes focuses mainly on drivers, barriers that influence the choice of the entry mode and different patterns or pathways to international markets, we will deal with these issues. Notably, in the following chapters, besides investigating the criticality of these barriers, we will

analyse support programmes aiming to redress the barriers to SME internationalisation and stimulate international activities among SMEs.

1.3.1 Enablers

Even if it is not possible to establish a comprehensive conceptual framework to isolate the business factors lying behind internationalisation, according to the research community (Leonidou and Katsikeas, 1996; Francioni et al., 2016), the drivers or enablers affecting the internationalisation process in SMEs, can be classified as:

- internal, or "firm-specific";
- external.

Internal factors refer to the firm's main business functions. They include key intangible resources and capabilities, such as learning ability understood as human resources (HR) and managerial knowledge, the entrepreneurial prowess of founders or managers who have previous managerial experience in international markets and global mindset. Further internal drivers are marketing, technical innovation, ICT, production and research & development (R&D), networking, the ability to build networks and clusters and finally firm's size and experience. In contrast, the external drivers are those related to the home country and host country.

Companies operate in macroeconomic, political, legal and social contexts that affect their operations (Cunningham and Meyer-Stamer, 2005); home-country factors are export promotion programmes (EPP) or governmental support, market dynamics from the local business environment cost and time involved in exporting, transport cost indicators in the home country. In this vein, an environment that encourages competition and investment will increase the probability that a company will engage in industrialisation. Concerning the role of the domestic government, studies focus on policies related to EPP, the key set of measures promoted by home governments to support SMEs' internationalisation (Casado-Belmonte et al., 2020).

Wilkinson and Brouthers (2006), relying on a survey of 105 US SMEs, find that United States' support in trade fairs participation influenced SMEs' export performance. Durmusoglu and colleagues' survey of 143 SMEs in Turkey (2012) argues that EPP support measures helped SMEs firms achieve financial, strategic and organisational goals. Sousa and Bradley (2009) confirmed the same findings, their factor analysis of 287 Portuguese SMEs highlighted that export assistance programmes and distributor support are significant determinants of export performance. Moreover, Bonner and McGuinness (2007), surveying data from 324 Northern Ireland SMEs, find that "*marketing assistance is particularly beneficial when targeted towards smaller SMEs and those who are already active in export markets*"(Bonner and McGuinness, 2007 p.377).

Additionally, in the host country, the main factors are tariffs, laws, political risk factors, geographical and psychological distance (D'Angelo et al., 2013).

1.3.2 Barriers

Barriers have been studied to foster the internationalisation process of SMEs and to direct policymakers in providing support to SMEs to overcome the main difficulties. Since engaging in the internationalisation process brings the company different risks, it is mandatory to identify failure factors because prevention or elimination could provide SMEs with an impetus to enter foreign markets. Barriers to internationalisation are regarded as "*the restrictions which prevent undertakings in the initiation, development or maintenance of business operations in foreign markets*" (Fliess et al., 2006) and can be divided into two groups:

- internal barriers related to corporate resources and capabilities viewed as lack of skills and abilities to capture business opportunities;
- external constraints resulting from the business environment of domestic and foreign markets.

As highlighted by a survey conducted by the OECD in 2009 (Lloyd-Reason et al., 2009), external barriers to internationalisation are perceived as less important than internal barriers among SMEs surveyed. However, we will analyse this topic in the following chapter aiming to identify the key risk factors, and the main barriers affecting SMEs' decision to internationalise.

1.3.3 Foreign market entry mode choice

Companies have to work out a suitable organisational structure when entering a foreign market to manage overseas activities (E. Anderson and Gatignon, 1986).

They can choose among several foreign market entry modes, including contractual agreements (e.g., licensing), exporting, joint venturing, acquiring an existing company, and establishing a wholly-owned greenfield investment from scratch (Pan and Tse, 2000). The entry mode choice determines the firm's degree of resource commitment to the foreign market, the level of control a firm can exercise over its foreign activities and the risks the firm will bear in the host country (Hill et al., 1990), and the (E. Anderson and Gatignon, 1986).

According to Laufs and Schwens (2014), the entry mode choice is influenced by SMEs' specific features such as limited financial and personnel resources (Brouthers and Nakos, 2004) that can prevent SMEs from choosing high commitment foreign market entry modes like complete acquisitions (Bose, 2016). Other SMEs' characteristics are

heightened sensitivity to external influences (Pu and Zheng, 2015); therefore, firms must find an entry mode that allows them to face the risks in the host country and the ownership and management structure (Pinho, 2007). Since many SMEs are family-owned and or owner-managed, they are often less willing to share control with a partner in an equity joint venture (Fernández and Nieto, 2005).

Some entry modes, like establishing a wholly-owned foreign greenfield investment from scratch, for instance, require a significant commitment of resources to the host country. Indeed, the internationalising firm has to face all costs of establishing a new firm and serving the foreign market (Hill et al., 1990). On the contrary, contractual agreements like licensing limit a firm's resource commitment to monitoring the personnel in their new work environment (Hill et al., 1990). The level of resource commitment required in a joint venture lies somewhere between these two extremes, depending on the type of joint venture: minority, majority, or equity joint venture (Hill et al., 1990).

Focussing on explaining the SMEs' entry modes choice, Laufs and Schwens (2014) identify four dominating theoretical frameworks:

- Transaction Cost Economics;
- Eclectic Paradigm;
- Institutional Theory;
- Network Theory.

According to Transaction cost economics (TCE), companies choose a specific organisational structure to minimise controlling and monitoring costs.

The foreign market entry mode choice depends on the degree of the foreign investment's asset specificity. A general notion is that the higher the specificity of an investment, the higher the firm's commitment in terms of entry mode that allows the SME to internalise the investment risk (Williamson, 1998).

Dunning's *Eclectic Paradigm* (1988) states that firms choose the most appropriate entry mode by considering advantages, referring to three factors that make up the framework: ownership (O), location (L), and internalisation (I). Ownership advantages relate to firm-specific competitive advantages such as differentiating a product or service. Location advantages refer to country-specific advantages of the international market. Internalisation advantages benefit a firm by choosing a high-commitment entry mode (Dunning, 1988). Studies have found that SMEs' perceptions about the host country's risk significantly influence their entry mode regarding the OLI framework. Firms can internalise host country-related risks through high-commitment entry modes (Brouthers and Nakos, 2002). Finally, some studies conclude that locational

advantages enhance SMEs' propensity to choose entry modes with higher levels of commitment (Shi et al., 2001).

The new institutional theory (Scott, 2014) emphasises the influence of rules, laws, social values, culture and norms embedded in national environments and decision makers' cognitive constraints on SMEs' foreign market entry mode choice. Studies suggest that enterprises when entering a foreign market, conform to the regulative settings of the host-country environment (Yiu and Makino, 2002).

The Network theory refers to firms' ability to acquire and exploit resources from business networks (Chetty and Henrik, 2007). Social capital helps the firm establish itself in the new market, reducing external uncertainties, as social ties are based on trust (Prashantham, 2011) Social capital reduces barriers to internationalisation. Network-based studies also confirm that SMEs can employ social capital to learn about conditions in the host country to overcome the challenges in the foreign market and make higher-level commitments abroad (Prashantham, 2011). A survey of 102 Indian software SMEs indicates that higher stocks of cross-border ethnic social capital facilitate the adoption of higher-commitment entry modes by micro multinationals (Prashantham, 2011).

To conclude, internationalisation is a complex and multi-dimensional phenomenon approached in different research contexts, investigated and explained by different schools of thought. The fragmentation in the literature confirms that the strategies underpinning SMEs' decisions to pursue specific internationalisation strategies are heterogeneous. Nevertheless, no theory can universally clarify how and why SMEs internationalise (Coviello and McAuley, 1999).

Although so much research in marketing, business management and international economics has deeply analysed SMEs' internationalisation, there is no unified explanation. Indeed, the internationalisation decision is the most complex decision a firm could undertake (Fernández and Nieto, 2005).

1.4 Main SMEs' Internationalisation Models

In recent years, the study of patterns has gained prominence in the academic world, encompassing different models, from the traditional Uppsala model to born-global and born-again global internationalisation patterns. This process is viewed as a gradual development taking place in distinct stages by two primary schools, which defined the models referred to as Uppsala Models (U-Models) (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977) and the innovation-related International-Models (I-Models) conceptualised by Cavusgil (1980). According to

these models, internationalisation is an incremental process: firms enter "psychologically close" markets and increase commitment to international markets gradually, stepwise, through a series of evolutionary stages. Internationalisation is thought of as an evolutionary path followed by the company, which, with different timing, becomes more and more a player in a global economy.

Nevertheless, the incremental stage approach does not explain the accelerated internationalisation of the so-called born-global firms, which operate in international markets soon after they are founded. Typically, these are smaller entrepreneurial firms that internationalise from inception or go international shortly after. Their main source of competitive advantage is often related to a more sophisticated knowledge base. In addition, to this "born global" pattern of behaviour, there is evidence of firms that suddenly internationalise after a long period of focusing on the domestic market. These "born-again" globals appear to be influenced by critical events that provide them with additional human or financial resources, such as changes in ownership/management, being taken over by another company with international networks, or themselves acquiring such a firm.

The process of internationalisation in SMEs is extremely different from the process experienced by large companies so theories valid for multinational companies cannot be applied to SMEs. To achieve a better understanding of internationalisation processes in small businesses, scholars identified the following pathways to gain access to international markets, considering the drivers that push companies to choose an international strategy:

- traditional pattern;
- "*Born global*" pattern;
- "*Born-again global*" pattern;
- global value chain participation.

Such patterns are thought of as a guide because, as argued by Bell, *"the internationalisation process of individual firms is situation-specific and unique"*(Bell et al., 2003 p. 339-362), and it is influenced by the network in which the company acts.

1.4.1 The Traditional pattern of Internationalisation

According to the *Stage Theory*, internationalisation is related to the gradual awareness by the company of the opportunities reserved by foreign markets; this theory points out the strategic role played by resources, in particular, the know-how acquired over time by the company: *"... firms progress from limited exploration of international markets through various stages of increasing commitment as they learn and gather resources*" (Kuivalainen et al., 2012).

Regarding the study by Leonidou and Katsikeas (1996), the various contributions to the *Stage Theory* articulate the process of internationalisation in the following three macro-phases:

- the preliminary phase, referring to companies traditionally operating on the domestic market which, either is not interested in exporting, or begin to evaluate the export business; or companies which used to export in the past, but have stopped this activity;
- the initial phase, including companies potentially suitable, that export only sporadically, since they do not yet have the productive and organisational structure to satisfy foreign demand;
- the advanced phase, regarding companies that export regularly having extensive experience in foreign markets, which allows them to consider a greater commitment at an international level.

The Stage Theory is influenced by two schools of thought represented by the Uppsala Internationalisation Model and the Innovation-Related Internationalisation Model, based on Vernon's *Product Life Cycle Theory* (1979). The Uppsala Internationalisation Model (U-M) concerns the studies by Johanson, Wiedersheim-Paul and Vahlne in the late 1970s, focusing on the path followed by Swedish companies. The export development process occurs according to the so-called establishment chain based on the U-M. The whole process is seen as a sequence of stages, small incremental steps with extended commitment and a higher degree of commitment for every new step.

In 1975 Johanson and Wiedersheim-Paul identified four different stages :

- non-regular export activities;
- exporting via independent representatives (agent);
- establishing an overseas sales subsidiary;
- establishing overseas production or manufacturing units.

Johanson and Vahlne (1977) refined this model and described the process of internationalisation as "*a gradual acquisition of knowledge about foreign markets and operations, and a […] successively increasing commitment to foreign markets*".

Moreover, firms usually enter new markets with successively greater psychic distance and, in most cases also greater geographical distance. The psychic distance is defined as: *"…the sum of factors preventing the flow of information from and to the market. These include differences in language, education, business practices, culture, and industrial development"*(Johanson and Vahlne, 1977). Consequently, firms enter markets where they can see opportunities and low perceived uncertainty. As postulated in the model, experiential knowledge minimises the perceived uncertainty and helps identify

business opportunities. That is mainly acquired through personal experience in the specific market. Hence, this is the reason for the incremental steps and the sequential engagement in foreign markets. The experience/knowledge-based Uppsala-Model shows the internationalisation process as slow development, beginning with local representatives in culturally close markets. Commitment will gradually increase after the initial steps abroad prove to be successful. The authors mentioned state that the company follows a singular process of foreign expansion, which is determined by the acquired level of market knowledge, and the ability of the company itself to manage the changes affecting the internal and external environment and to interpret new problems and or opportunities that lie ahead. The knowledge of the market impacts investment decisions abroad and market commitment, intended as the number of resources invested abroad and their relative specificity.

However, integration in a foreign market occurs gradually due to the fact that knowledge cannot be easily acquired unless operating abroad, which implies investments of resources, especially temporal ones: "*at the time of entry to a market the experience may not even exist. It has to be acquired through a long learning process in connection with current activities. This factor is an important reason why the internationalisation process often proceeds slowly*" (Johanson and Vahlne, 1977 p.29). Throughout this process, the company builds its expertise and, thanks to its activities abroad, gains greater awareness of needs and opportunities to exploit.

All this impacts the decisions relating to further investments in the foreign market: it generates a causal cycle so that *"Market knowledge and market commitment are assumed to affect decisions regarding the commitment of resources to foreign markets and the way current activities are performed. Market knowledge and market commitment are, in turn, affected by current activities and commitment decisions"* (Johanson and Vahlne, 1990), as shown in the figure below (Figure 1.6).

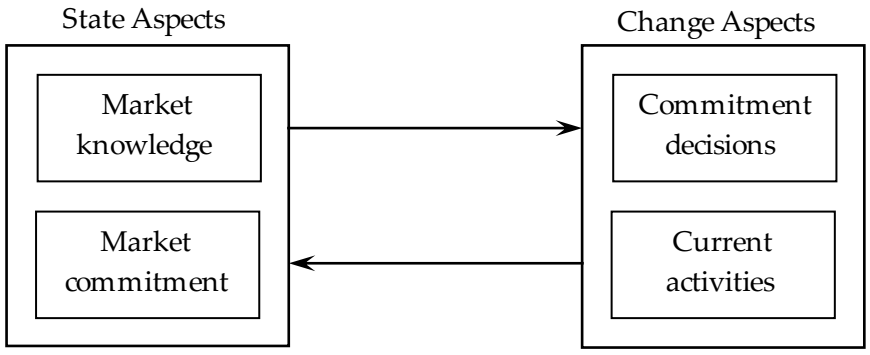


Figure 1.6: Uppsala Internationalisation process model (Johanson and Vahlne, 1977).

Concerning the State Aspects, the market knowledge concept can be divided into two sub-concepts:

- general knowledge;
- market-specific knowledge.

The general knowledge concerns marketing methods and the typical characteristics of certain customers. Market-specific knowledge concerns characteristics of the specific national market expressed as: *"…its business climate, cultural patterns, the structure of the market system, and, most importantly, characteristics of the individual customer firms and their personnel"* (Johanson and Vahlne, 1977).

Both general knowledge and market-specific knowledge are needed when entering and making commitments to a market. The latter kind of knowledge can mainly be acquired through experience in the specific market, whereas general knowledge can be taught and transferred from one market to another. The Uppsala Model postulates a direct relation between market knowledge and market commitment. Knowledge is considered a human resource, and the better knowledge a firm has about a market, the more valuable the resource is. Consequently, the firm will have a stronger commitment to the specific market. The amount of resources is described as the size of the investment including marketing, organisation, personnel, and other areas. The degree of commitment becomes higher the more the resources are integrated with other parts of the organisation, and when their value is derived from this integration (Johanson and Vahlne, 1977).

To summarise, the Uppsala model is based on four core concepts: market commitment, market knowledge, current activities and commitment decisions, which are then divided into state aspects and change aspects but they are linked to and affect each other. Market knowledge and market commitment are assumed to affect the commitment decisions and how these activities are performed. These activities will in turn influence market knowledge and market commitment at later stages. Relying on these four core concepts, we can assume that the firm starts to invest in one or a few neighbouring markets, the physical distance will increase successively with every new market and that the investment in a market is carried out cautiously in a step-by-step pattern. With this investment, a learning process starts (Forsgren, 2002).

Although the Uppsala Model is the most used model to explain the internationalisation process engaged by companies, the *Stage Theory* also considers the Innovation-related Internationalisation Model (I-M), which includes the studies conducted by Bilkey and Tesar (1977) Cavusgil (1980) Reid (1981) and Czinkota (1981). The I-M views internationalisation of a firm to be an adoption process analogous to the stages of product adaptation according to Rogers's study (1962), later taken up also

by Vernon's *International Product Life Cycle Model* (1979). As Madsen and Servais (1997) observe, unlike the Uppsala Model, which views internationalisation processes "*as involving time-consuming organisational learning processes*", the I-M "*tends to analyse the process as an innovative course of action and hence a question of adoption of new ways of doing business*" and considers each next stage as an innovation for the firm. The model establishes an analogy between companies' internationalisation process and the evolution of the life cycle phases of a product and related technology.

As Vernon (1979) argued, firms relocate production activities according to the degree of innovation of their product: the production and sale of new goods are first concentrated on the domestic market, where firms exploit the competitive advantage created through innovation. Later, when the product has reached maturity phase, they open up to new geographical areas where they start production: "*the product cycle hypothesis begins with the assumption that the stimulus to innovation is typically provided by some threat or promise in the market. But according to the hypothesis, firms are acutely myopic; their managers tend to be stimulated by the needs and opportunities of the market closest at hand, the home market*" (Vernon, 1979).

Based on Vernon's *Product Life Cycle model* (1979), various models have been developed respectively by Bilkey and Tesar (1977), Cavusgil (1980), Reid (1981) and Czinkota (1981). Each of them describes internationalisation as a sequence of stages of gradual learning "*learning sequence in connection with adopting an innovation. In other words, the internationalisation decision is considered as an innovation for the firm*" (Andersen, 1993). The differentiating aspects concern the stages that articulate the path followed by the companies focusing on push factors. Bilkey and Tesar (1977) and Czinkota (1981) detect a "push- mechanism" or, better to say, an external change agent, whereas Cavusgil (1980) and Reid (1981) describe the firm as more interested and active in the early stages of the process abetting a "pull-mechanism" thanks to an internal change agent.

Concerning the models mentioned above, Cavusgil's model (1980) is considered more complete, easier to read, and empirically demonstrated (Gankema et al., 2000). The characterisation of the various stages of the I-Model is operationalised by the export involvement by the export/sales ratio, which is defined as the ratio of export sales to total sales, and it highlights a firm's involvement in export as explained in Table 1.4. In this regard, Gankema, Snuif and Zwart (2000) in order to verify the validity of Cavusgil's staged theory from a multi-year perspective, considered a period of transition of two years between one stage and the next.

Stage 1: Domestic Marketing	The firm is only interested in the domestic market and does not perform export activity. It is not willing to experiment with exporting, as it is too busy with other tasks on the traditional market and it does not have the skills to handle an export order. The export/sales ratio = 0.
Stage 2: Pre-Export Stage	The company seeks information to assess the feasibility of foreign trade activities. Basic information about costs, currency risks, distribution, etc. is still lacking. The export/sales ratio = 0.
Stage 3: Experimental Involvement Stage	The firm starts exporting on a small basis. Physical and cultural distances are limited. The involvement of an experimental exporter is marginal and discontinuous. The export/sales ratio varies from 0 and 9%.
Stage 4: Active Involvement Stage	There is a systematic effort to increase the level of sales through exports, also increasing the number of destination countries. An adequate organisational structure is applied. The export/sales ratio varies from 10% and 39%.
Stage 5: Committed Involvement Stage	The firm depends significantly on foreign outlets. Managers are continually faced with choices regarding the allocation of limited resources to either domestic or foreign markets. Many firms will be engaged in licensing agreements or direct investments. The export/sales ratio is 40% or more.

Table 1.4: Cavugil's conceptualisation of the internationalisation process – Adapted from "*The internationalisation process of Small and Medium-Sized Enterprises: An Evaluation of the Stage Theory*" (Gankema et al., 2000).

To sum up, Stage Models view firms' commitment in domestic market as a necessary condition for engaging in the internationalisation process (Bell et al., 2003). This approach is due to the decision maker's limited global vision of the market, which acting as a barrier, widens the perception of the geographical distance of potential markets. Furthermore, according to the network approach, companies with a local or national network adopt a slow and incremental internationalisation path because they have a high perception of uncertainty and low market-specific knowledge.

Firms that follow a traditional internationalisation path are pushed abroad in case of unsolicited orders, or when occur specific market conditions such as:

- changes in the exchange rate between the currency of the company's country of origin and foreign countries;
- growth of the segments of international demand already considered its targets on the local market;

- the maturation of domestic demand and the consequent increase in competition and reduction of economic margins;
- the emergence of opportunities to reduce production costs.

Among the internal causes is the generational change in favour of younger members with greater international preparation; however, these changes do not occur immediately because of inertia problems due to the adoption of a new organisational structure mandatory to implement the development of internationalisation. Therefore, a firm that has always been active on the national market engages in the internationalisation process to survive or grow through the increase in turnover, the acquisition of foreign market shares or the extension of the product life cycle. Objectives that can only be pursued if there are adequate internal conditions and the effective possibility of exploiting the competitive advantages gained in the domestic market aspects that are not always granted. To this end, international expansion is carried out gradually in terms of timing and geographical coverage. Traditional firms tend to focus first on the domestic market and then gradually expand by gravitating around "psychologically close" markets (Bell et al., 2003).

The *Stage Theory* has been the subject of criticisms that weaken its validity. For instance, the analysis conducted by Andersen (1993) highlighted the incompleteness of the models and the lack of explanatory power, "*why or how the process takes place or how to predict the movement from one stage to the next are not properly addressed*". Moreover, numerous researchers such as Turnbull (1987) for British companies, and Hedlund and Kvemeland (1985), studying Swedish companies in Japan, demonstrated that stages do not predetermine the entry mode. Still, it results from a strategic choice based on foreign market conditions, managerial philosophy and firm resources (Gankema et al., 2000).

In conclusion, the slow internationalisation model described by the *Stage Theory* may prove unsuitable and anachronistic, considering the greater integration of markets and progress in ICT. Therefore, the Australian study by Rennie (1993) and the one carried out by Knight and Cavusgil (2004) identify a new approach SMEs show towards foreign markets.

1.4.2 "Born global" pattern

Since the early 1980s, empirical research has begun to cast doubts on the validity of the Uppsala internationalisation model. The criticism derives from the observation that many small businesses do not follow the typical phases described in the *Stage Theory*. Still, they are already born international, thus profiling a model of international expansion that follows a logic diametrically opposite to the traditional one. Thus, the

term "born-global enterprise" (BG) emerges, according to a definition first given by Welsh and Loustarinen (1988), to indicate those companies "... *that intended to export immediately upon inception*". A born-global firm (BG) can be described as a company which, *"from or near its founding, seeks to derive a substantial proportion of its revenue from the sale of products in international markets*" (G. A. Knight and Cavusgil, 2004).

It is a definition of BGs that emphasises young companies in contrast with International new ventures (INVs), which are defined by Oviatt and McDougall (1994) as "*business organisations that, from inception seek to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries"*, including those launched in older, established multinational enterprises (MNEs) and a broader range of value chain activities and entry strategies (G. A. Knight and Liesch, 2016).

The term *"born globals"* was first coined in a survey conducted by McKinsey consultants for the Australian Manufacturing Council (Rennie, 1993). It refers to a small or a medium-sized business model that engaged in internationalisation in the first three years of its founding, realising at least 25% of its revenues from outside its national market (Bell et al., 2003). However, in other literature, they are also called "*International New Ventures*" (Oviatt and McDougall, 1994) "*Instant Exporters*" (Coviello and McAuley, 1999) "*Instant International*" (Fillis, 2001) or "*Global Start-ups*" (Oviatt and McDougall, 2005). The need for a coherent definition of born-global enterprise led Bader and Mazzarol (2009) to provide the following definition, which is intended to be the starting point for all research on the subject: *"A born-global Firm is: a new firm that makes at least one international sale to any new market within two years of formation".*

Thus, despite the limited resources that usually characterise new businesses, BGs achieve international sales from an early stage in their development (Cavusgil and Knight, 2009). Their number increased around the world in the 1990s fostered by globalisation, the Internet and other communication innovations which have reduced the cost of internationalisation, boosting the foreign expansion of smaller, resource-poor companies (Cavusgil and Knight, 2009) and surprisingly they are increasingly commonplace in economies with large internal markets, such as the United States. They are smaller firms with limited tangible resources that face numerous barriers in internationalisation such as insufficient economies of scale and lack of financial resources. Nevertheless, they are usually endowed with distinctive intangible resources and capabilities, their founding and growth are supported by distinctive entrepreneurial prowess championed by managers who have previous managerial experience in international markets (Rialp and Knight, 2005). Newness and small size are seen as enabling factors rather than restraining. According to scholars (Cavusgil and Knight, 2009) the emergence of BG firms is due to three main reasons:

- consumers were asking for personalised, non-standardised products giving rise to market niches;
- niches were seen as a new business opportunity and as a way to get a competitive advantage from differentiation;
- the spread of information technologies and the changes related to technologies in the manufacturing sector allowed smaller companies to compete in the market with the larger ones.

The early and rapid Internationalisation of BGs represents a new form of internationalisation expansion driven by a logic of profit, opportunity creation and resourceful innovativeness (Zander et al., 2015) "*The phenomenon has become associated with international entrepreneurship, which describes the process of creating, discovering and exploiting opportunities that lies outside a firm's domestic market in pursuit of competitive advantage"*(G. A. Knight and Liesch, 2016).

Moreover, while SMEs generally tend to approach international development starting from the culturally closest countries, "born globals" firms favour the more strategic ones. This model of geographical expansion is typical of sectors such as luxury and high technology characterised by a business structure and value creation centred on an international scale. Even if the diffusion of this type of business is made possible by technology, such as the internet and modern forms of communication, which allow global niches to broaden their range of action, a key role is played by the entrepreneur who, thanks to his skills and relationships, has an aptitude for capturing the most interesting opportunities for the sector of expertise at a global level.

Oviatt and McDougall (1994) identify different typologies of BGs as highlighted in Figure 1.7 depending on the scale and scope of their international activities different aspects become important.

Global start-ups depend on a very proactive and internationally experienced management to succeed in the international market. These are the most radical manifestation of INVs because they derive*" significant competitive advantage from extensive coordination among multiple organisational activities, the locations of which are geographically unlimited. Such firms not only respond to globalising markets, but also proactively act on opportunities to acquire resources and sell outputs wherever in the world they have the greatest value*"(Oviatt and McDougall, 1994).

Baum (2012) also argues that this kind of BG comes along with a *"high scale and scope of international activities"*, which means that global start-ups are higher committed to the foreign markets than other types of BG, and hence they face higher risks. However, once successfully established, they show the most effective competitive advantage of all born global firms.

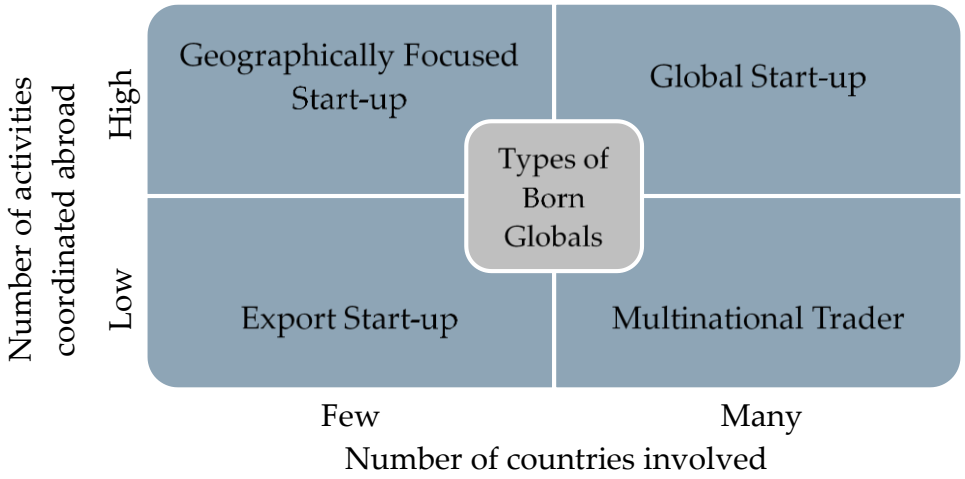


Figure 1.7: Typologies of "Born-global" Firms.

Geographically focused start-ups usually trade with knowledge-intensive products and services. They have a high knowledge base since they handle highly specialised needs and only focus on a special geographical area using foreign resources, as Oviatt and McDougall (1994) highlighted.

Multinational traders, who pursue a low-scale internationalisation strategy, require managers with high capabilities in coordinating multiple country operations. Their success relies on identifying and reacting to upcoming opportunities right before the company faces increased competition. Finally, according to Oviatt and McDougall (1994), export start-ups are focused on trading in only a few markets that the entrepreneur is familiar with. Therefore, a strong learning orientation is relevant for this kind of "born globals" (Baum et al., 2012).

As highlighted, BGs are examples of successful international SMEs across industry sectors (G. A. Knight and Cavusgil, 2004) in high-tech and low-tech industries (Rennie 1993). These firms entering directly in global markets at or near their founding (Oviatt and McDougall 1994) challenge conventional internationalisation theories and the belief that the strategic options of small firms are constrained by resource scarcity (Welsh et al., 1982). Nevertheless, relatively little research has dealt with the factors leading to BGs' accelerated internationalisation despite widespread academic investigation. "*Moreover, current research lacks a cohesive conceptual framework* "(Weerawardena et al., 2007).

Scholars have examined the role of firm variables, such as international entrepreneurial orientation and market knowledge, to conceptualise the born global firm internationalisation process (Oviatt and McDougall, 2005). Notably, the international entrepreneurial orientation of the founders is viewed as one of the prime

factors that determine the speed of international involvement (G. A. Knight and Cavusgil, 2004; Oviatt and McDougall, 1994).

In addition, knowledge is considered a driver in early internationalisation. In this vein, scholars focus on the role of the entrepreneur's prior international experience (Autio et al., 2000; Madsen and Servais, 1997; Oviatt and McDougall, 2005), suggesting that owner-managers previous business experience leads to greater absorptive capacity in the firm (Cohen and Levinthal, 1990), which fosters the acquisition of additional knowledge required for speedier international market entry (Oviatt and McDougall, 2005).

Innovation fosters BGs' early internationalisation (Knight and Cavusgil, 2004; Madsen and Servais, 1997; Rennie, 1993). It requires external learning, including market learning and network learning for new technology acquisitions, and internal experimental learning, which includes R&D. Thus, learning and knowledge acquisition should be positioned at the pre-internationalisation stage as an antecedent to the development of knowledge-intensive and leading-edge products (Weerawardena et al., 2007).

The concept of learning includes both marked-focussed learnings to create a marketing capability for accessing niche markets and building market positioning and internally focussed technological and non-technological learning on producing knowledge-intensive products. The firm is viewed as an *"organisation which embodies a collection of resources and competences that it uses to fashion a set of capabilities put to creating, if possible, unique positioning in its markets. How these dynamic capabilities take form is shaped by the individuals within the firm who bring all of their worldly guile to the task, drawing upon assets internal to the firm and assets that can be leveraged from outside the firm that these persons somehow have access to*" (Weerawardena et al., 2007). The dynamic capabilities view stresses the importance of the dynamic processes of capability building in gaining competitive advantage and suggests that the firm has to develop new competences to catch new opportunities and to respond quickly to them (Jarvenpaa and Leidner, 1998).

In sum, "*the central proposition is that small firms aspiring to accelerated internationalisation must develop a strategic set of dynamic capabilities. The proposed conceptual model is therefore knowledge-based, and firm capabilities are knowledge-based"* (Weerawardena et al. 2007, p. 298). The dynamic capabilities view assigns a prominent role to the entrepreneurial decision-makers in formulating and implementing competitive strategy. The capability-building process in a born global firm is driven by entrepreneurial owner-

managers with a global mindset, prior international experience and learning orientation (G. A. Knight and Cavusgil, 2004).

Three learning capabilities are instrumental to early internationalisation in born global firms: market-focused learning capability, internally focused learning capability, and networking capability. Their combination produces accelerated internationalisation and possibly outstanding subsequent international market performance.

Market-focused learning capability focuses on the ability integrating market information into actionable knowledge that management can use for its goals in international markets (G. Knight and Liesch, 2002). Consistent with organisational learning theory (Huber, 1991), market-focused learning capability is defined as the firm's capacity, relative to its competitors, to acquire, disseminate, unlearn and integrate market information to create value activities.

Internally focused learning capability is characterised by the acquisition and dissemination of technological and non-technological information generated within the firm. This suggests that they require distinctive internally focused learning capabilities to capture all the experimental learning of the firm (Weerawardena, 2003), including technological learning (Zahra et al., 2000) and non-technological learning that engenders innovation and enables the firm to respond to evolving conditions in its external environment (McEvily and Chakravarthy, 2002).

Networking capability is crucial in providing information that lower risks and uncertainty inherent in international operations (Aldrich and Zimmer, 1986). BGs are relatively vulnerable because they possess fewer financial and other resources directed to their internationalisation efforts and cushion market fluctuations. Many firms are frequently dependent on a single product they commercialise in lead markets first, regardless of where their markets are geographically. (Oviatt and McDougall, 1994).

To survive and earn economic rents, a BG must be at the leading edge of its product market (Madsen and Servais, 1997). As implied in the organisational learning approaches to innovation (Dewar and Dutton, 1986)the degree of innovation reflects the level of knowledge embedded in creation. These highly innovative, knowledge-intensive products enable positional advantages in global markets. Market focused learning capability, characterised by a deep knowledge of the market and existing products coupled with a close relationship with customers, allows the BGs to perform particular activities well. The close' learning from' the market allows the development of knowledge-intensive products to satisfy customer needs in a niche market (G. Knight et al., 2004).

To conclude, the conceptual model presented by Weerawardena and colleagues (2007) is based on the dynamic capabilities view of competitive strategy, drawing on organisational learning theory to provide a conceptualisation of the antecedent factors leading to the accelerated internationalisation of born globals.

1.4.3 "Born-again global" pattern

The notion of "born-again global" (BAG) firm was introduced to literature by Bell (2003), referring to well-established small-and-medium-sized enterprises, which have focused on the domestic market for many years before starting rapid and dedicated internationalisation, as a result of a strategic change, regardless of their age, size and industry sectors. These organisations do not fulfil the criterion of going international within a short period after their inception. To define "born-again globals" Kuivalainen and colleagues (2012) rely on qualitative and quantitative dimensions.

They assert that "born again globals" go for several years without any international activity and realise at least 25% of their revenues from overseas markets within three years of their founding. These firms later choose a path of radical internationalisation and derive significant competitive advantage from both the use of resources and the sales of outputs in different countries.

In contrast to the "born global" theory, BAG theory applies to mature organisations. This approach is based on Oesterle's (1997) findings, pointing out that organisations pass through epochs of growth and internationalisation depending on different conditions, such as favourable exchange rates and economic situation. Bell and colleagues (2003) added that the internationalisation process is affected by new technologies or governmental changes that can transform a well-established domestic organisation into a BAG. Moreover, they suggested that this radical shift in strategy is due to "critical incidents" or "triggers" for internationalisation, which can be clustered into three groups:

- change of ownership or management;
- acquisition;
- client followership.

The most common critical incidents are a change in ownership and/or management, a management buyout, a takeover by another firm or an administrator, which then triggers the internationalisation process. In addition, domestic or overseas clients, or network partners may exert such a force on the firm that it has to adjust its internationalisation activities significantly (Schueffel et al., 2014).

Another force that may activate foreign expansion is represented by the so-called "*client followership*". When companies operate as suppliers or sub-suppliers of medium

or large companies located in the downstream phases of the supply chain, the international development of these operators has a strong impact on the relationships with supply chain partners, who have to act as international suppliers not to lose orders also on the domestic market. Consequently, the foreign expansion of commissioning companies drives a similar internationalisation of supplier companies that follow an already acquired customer. On the other hand, this process may not be easy to follow if the supplier company does not have the necessary skills or the financial as well as managerial resources.

Finally, new information and communication technologies, especially those related to the Internet, make significant changes to the company's business organisation and strategic orientation. As Bell and colleagues (2003) point out, "*though not "Episodic" in nature, embracing such technologies can facilitate these "born-again" firms to embark on an "epoch" of internationalisation*". The adoption of ICT impacted not only the internal activities of the company but also on the relationships with external economic subjects, allowing the company to effectively and efficiently reach new markets and new consumers, and thus contributing to the expansion or diversification of the company's business (Spinelli, 2005; Sinkovics et al., 2013).

However, according to Schüffel's study (2014) on five Swiss companies, critical incidents that determine the internationalisation process of mature companies differ from those listed by Bell (2003): mergers and acquisitions or a domestic client that internationalised. These differences can be explained by different structural markets since Bell and colleagues conducted their research in larger markets such as the UK and Australia or more isolated ones (New Zealand), which show different barriers to Switzerland. Schüffel identified two main reasons that turned mature SMEs into "born-again global" firms: on one side external factors imposed by the environment, such as the need to guarantee long-term profitability considering the small domestic market, the changing demographical environment and increasing competition and, on the other, "soft factors" such as risk-taking proclivity, entrepreneurial thinking, professional experience and curiosity. No coincidence the internationalisation process was launched after a generational change.

As suggested by Bell (2003) and Schüffel (2014) internationalisation of born-again globals is not a linear stepwise process. The Swiss companies studied by Schüffel and colleagues proved to be able to tackle internationalisation as "born globals" do. Indeed, they were flexible in adapting to the new environment and adjusting their products to local cultures and market conditions, even if traditional corporations are more people-driven than knowledge-intensive "born globals". Even if the body of literature on born-again globals is small, Schuelffel's study suggests that established companies can show the same innovative, proactive and risk-seeking behaviour

(Oviatt and McDougall, 1994) across borders as BGs do. BAGs' internationalisation path was "*never exactly planned, nor was the process a clear strategic procedure; instead, the approach was a fairly ad hoc, opportunistic and trial-and-error one, largely reflecting an effectuation rather than causational posture*"(Schueffel et al., 2014). Therefore, the markets and entry modes choice were not the result of extensive research. On the contrary, it was taken to follow intuition or, sometimes, based on coincidences.

However, networks do not play the same role as in "born-globals". Contacts must be established and partners should be found before venturing abroad, even if they are loose connections rather than networks. The main challenge for companies is to adapt quickly to international expansion, as this is a crucial factor in an international environment. This outcome mirrors Weerawardena and colleagues' ideas (2007) who suggest that accelerated internationalisation should be considered as a dynamic capability built by internationally oriented entrepreneurs. Therefore, from a practical perspective, it is critical to involve employees in this process to avoid tensions. Most of the Swiss companies analysed by Schüffel soon offered their staff language courses. They invited their main international business partners to visit to let their employees know foreign customers to increase appreciation of the new situation. On the one hand, not all employees were prepared or able to work in the new, more challenging environment; on the other hand, an internationally active company will attract a new, highly skilled and specialised workforce. Finally, according to literature, "born-again globals" are particularly innovative and flexible since they can quickly adapt to changes, which makes it easier for them to launch their products in new markets.

1.4.4 Global value chain participation

According to the studies by Gabrielson and colleagues (2008), the "*global value chains approach*" refers to SMEs able to integrate into global value chains (GVCs). Global value chains consist of interrelated tasks or activities involved in the design, production, marketing, transport and support of a product or service. A lead firm characterises them, often larger than other involved firms, supplied with components and or services by several other firms, including SMEs (Kalinic and Forza, 2012). In this way, SMEs integrate into segments of global production chains, specialising in specific production segments rather than master all processes required to produce finished goods.

Integration may occur on the "output" side, through direct cross-border exports to large firms located overseas, or indirectly, through upstream suppliers to larger firms located in the home country, overcoming trade-related costs and challenges. In particular, backward value-chain links through local sourcing can stimulate the demand for more and better inputs from local suppliers, including SMEs. The lead

firm may also assist local suppliers through knowledge and technology sharing, fostering knowledge and technology innovation (OECD, 2019). On the whole, participation in enterprise linkages facilitates information flows, which can place SMEs in a better position to enter into international markets in a more direct way (Gumede, 2004). SMEs can also benefit from GVCs on the "input" or buying side (González and Jouanjean, 2017). They can increase their productivity in different ways:

- by drawing on cheaper and more sophisticated imports;
- by exploiting new technologies embodied in new and more affordable capital products;
- by accessing new technologies from engagement with internationally-oriented firms.

All these channels can help target specialisation in parts of the value chain, where SMEs have comparative advantages and can foster upgrading (OECD, SME Ministerial Conference, 2018).

However, the benefits from GVC participation depend on the degree of integration and on the position within global production networks and the characteristics of other participants in the value chain. Firms positioned at the centre of complex production networks have access to a greater variety of foreign inputs and potentially a broader range of technologies than those at the periphery. SMEs with integrated global value chains as low-tier suppliers are often volatile, as competition is particularly high and new suppliers can replace them by proposing better comparative advantages, such as lower costs (Abonyi and Van Slyke, 2010).

Finally, another SMEs' international pattern discussed in the literature is "inward-outward connections" (World Trade Organization, 2016). "Inward-outward connections" are closely linked to the concept of global value chains, but they do not necessarily involve a lead firm. They refer to SMEs that start their internationalisation process by engaging in inward international business operations, on one side importing goods (such as raw material, parts and components or machinery), on the other involving in investment and technology transfer through non-equity agreements, such as licensing and franchising, and equity agreements, such as foreign direct investment and joint venture. Thanks to the experience gained from these inward operations, particularly the relationship and experience with foreign suppliers, forwarding agents and distributors, these SMEs may choose to expand their outward international business operations and start exporting directly (Korhonen et al., 1996).

1.5 Synthesis

In this chapter, after presenting the players of internationalisation and their role in EU economies, we outlined a conceptual framework of the SMEs' Internationalisation process, focusing on the most influential theories explaining SMEs' Internationalisation, considering procedures, approaches, drivers, barriers and entry modes, alongside with different pathways to gain access to the international market.

Relying on the vast SMEs Internationalisation literature, we outlined the most discussed patterns of internationalisation which encompass different models: the traditional slow incremental model, with firms passing through stages of greater involvement abroad; the "born-global" pattern, according to which firms "leapfrogging" internationally, challenge the previous theories; the "born-again global" pathway, in which domestically focused mature companies transform into globally-focused ones, after undergoing a strategic change. Finally, we conclude presenting the "global value chain approach", which offers SMEs new opportunities to integrate global value chains by exporting directly or indirectly through large exporting firms.

For each model, we reported internal and external antecedents of international expansion, the objectives of the company, the entry modes and the possible criticalities.

The theoretical foundations defined so far are functional to the next chapters. After gaining a better understanding of the barriers to internationalisation faced by SMEs, particularly in OECD economies, we share knowledge of government programs aimed at addressing barriers and helping SMEs access international markets.

2. Main barriers and drivers to SMEs' Internationalisation

2.1 SMEs' participation in trade

As highlighted in the previous chapter, internationalisation may take different forms: SMEs can export directly to distributors or final consumers located in foreign markets or opt for an indirect internationalisation strategy by providing parts and components or services to other domestic firms participating in regional or global value chains. They may sell products or services to export intermediaries, such as wholesalers, or to export buying agents and brokers situated in their own countries, which export to international markets. Another possibility is to choose non-equity contractual modes, such as franchising, licensing or more structural alliances such as export consortia. Finally, SMEs can engage in FDI through greenfield investment, mergers and acquisitions and co-investment with other firms, such as joint ventures, with different control levels (World Trade Organization, 2016).

However, as SMEs experience more significant financial, human and management constraints than large companies and are more adversely affected by higher market barriers, trade, direct or indirect, is often considered the first step towards engaging in international markets. Exporting is viewed as less risky than a contract or investment-based internationalisation strategy. It requires a smaller commitment of organisational resources, entails fewer financial and commercial risks, and allows greater flexibility and managerial discretion (Lages and Montgomery, 2005). Furthermore, indirect export modes including local and foreign intermediaries or subsidiaries of international firms are considered the least risky entry mode since it enables SMEs to gain access to international markets without bearing the upfront costs, including "sunk" costs, associated with searching for new customers and negotiating contracts. In contrast, other forms of internationalisation, such as non-equity contracts and FDI, entail higher fixed costs, which are more challenging to recover, particularly for SMEs. That is why SMEs, that have chosen in recent years to expand their research and development (R&D), production and distribution into foreign markets, choose

contractual arrangements, such as outsourcing, and minority share investment positions, rather than full ownership of foreign affiliates (Hollenstein, 2005).

"Stronger participation by SMEs in global markets creates opportunities to scale up, accelerate innovation, facilitate spill-overs of technology and managerial know-how, broaden and deepen the skillset and enhance productivity" (OECD SME Ministerial Conference, 2018). International exposure is associated with more productive firms paying higher wages and generating more jobs, and internationalisation can play a pivotal role in the economic development of firms (Wagner, 2012) However, relative to their share of overall activity and employment, SMEs account for only a tiny proportion of exports (González and Jouanjean, 2017). In addition, Micro, Small and Medium Enterprises (MSMEs) accounting for 93% of all firms and 20% of value-added (Eurostat, 2020) and being a significant source of job creation and economic growth, are under-represented in their share of international trade flows.

As reported in Figure 2.1, in most OECD economies, SMEs account for around two-thirds of total employment and over half of the business sector value-added; their contribution to overall exports is significantly lower: 20% to 40%.

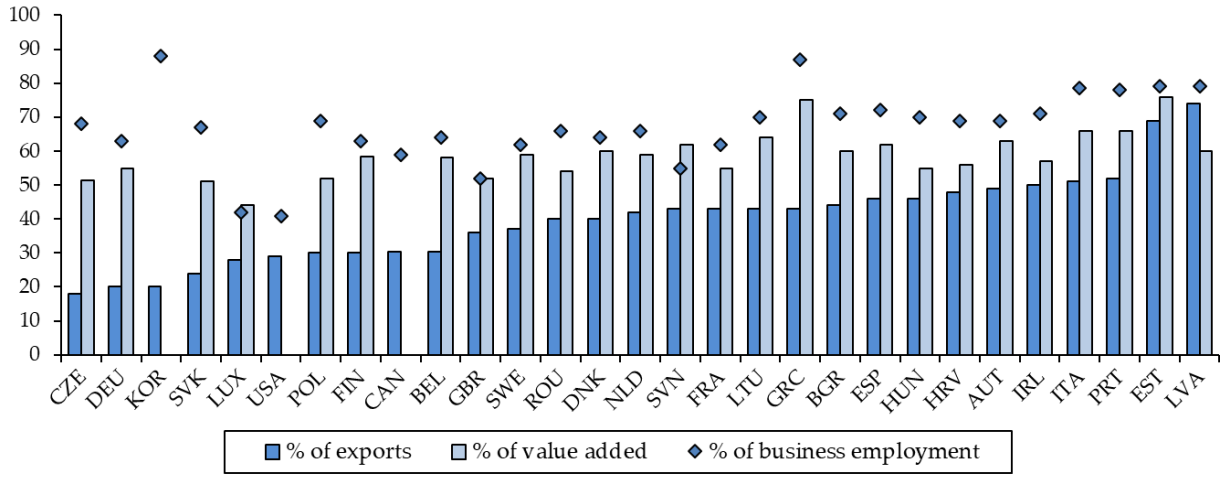


Figure 2.1: SME Export activity, value-added and employments shares, as a percentage (OECD, 2013).

Even within the industrial sector, the share of SMEs that export is significantly lower than the corresponding share in large firms. As illustrated below, more than 90% of large industrial firms' export, compared to 10-25% of SMEs.

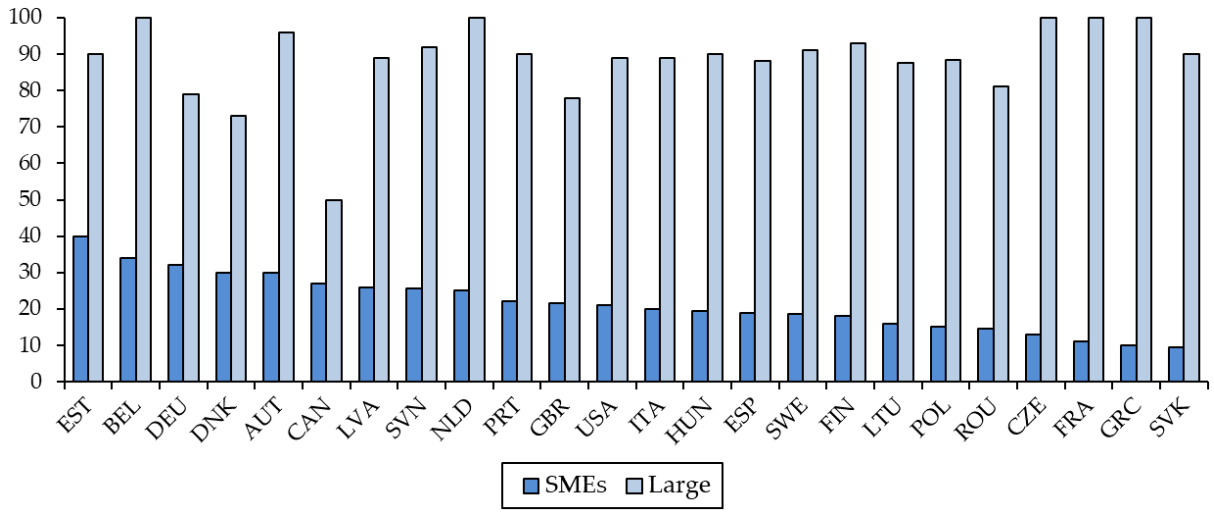


Figure 2.2: Industrial firms engaged in exports, as a percentage of total firms by size class (OECD, 2013).

In selected developed economies SMESs represent a low share of imports, an average of about 40%, relative to the number of SMEs with notable differences across countries as shown in Figure 2.3 (González and Sorescu, 2019).

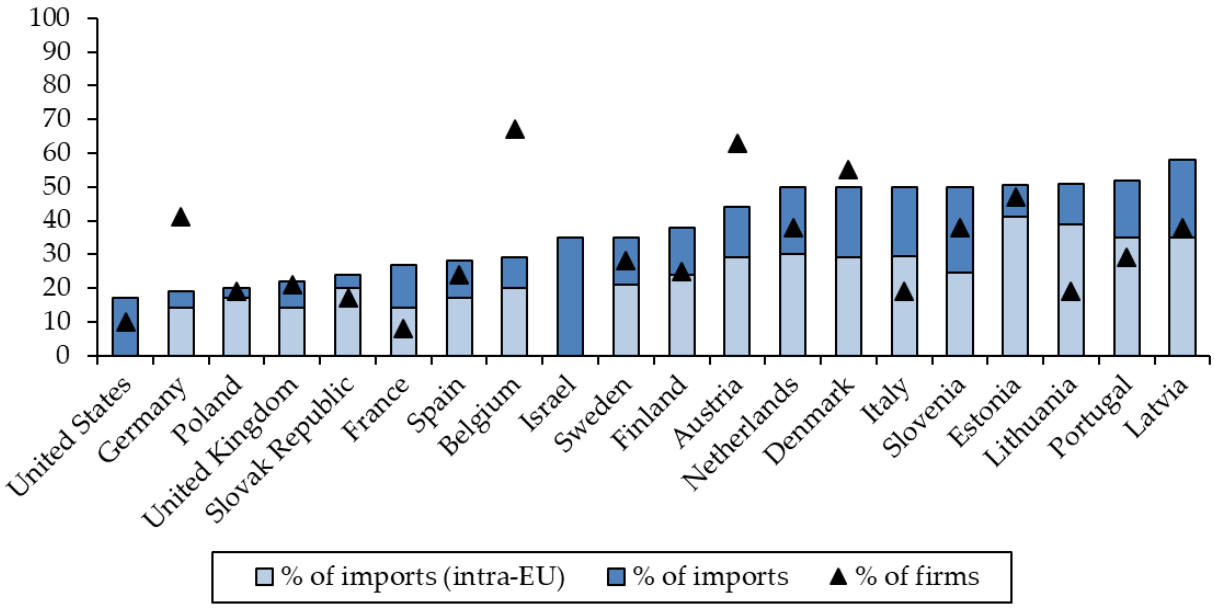


Figure 2.3: SMEs' participation in imports in selected developed economics. Shares in imports and number of firms (OECD, 2014).

Considering World Trade Report 2016, the shares of SMEs trading with OECD economies are below 50% in every country on the export side and in all but one country

on the import side. Whereas export shares for MSMEs with 0-9 employees exceed 50% in a small number of EU-countries such as Estonia (69%), Cyprus (61%) and Ireland (57%). Still, shares of most countries remain below 50%, as reported in Figure 2.4.

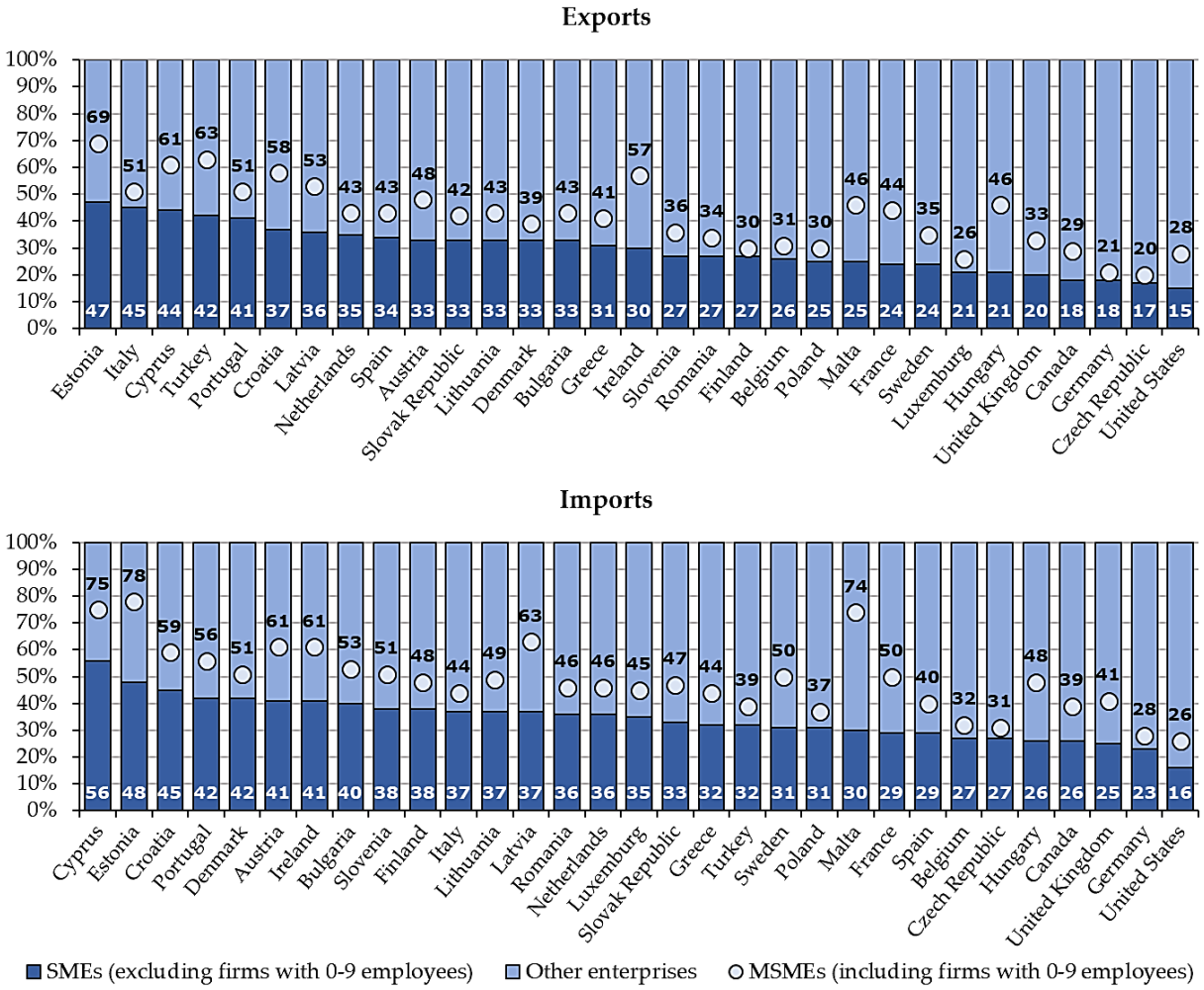


Figure 2.4: SME and MSME shares in the dollar value of exports and imports of selected developed countries (OECD, 2013).

In gross imports, shares of MSMEs are more prominent than their shares in exports, and the most significant shares belong to small countries such as Estonia 78%, Cyprus 75%, Malta 74% and Latvia 63%. However, in 2013, the percentage of MSMEs of developed countries in the Trade by Enterprise Characteristics (TEC) database scores 34% on the export-side and 38% on the import-side.

As illustrated in Figure 2.5, SMEs and micro firms, in particular, represent the large majority of trading firms in most developed economies. On the whole, SMEs account

for more than half of exporting and importing firms in most countries and MSMEs account for 78% on the export side and 76% on the import side. However, in 2013, MSMEs accounted for 99% of exporting and importing firms in the Netherlands and more than 95% in Sweden.

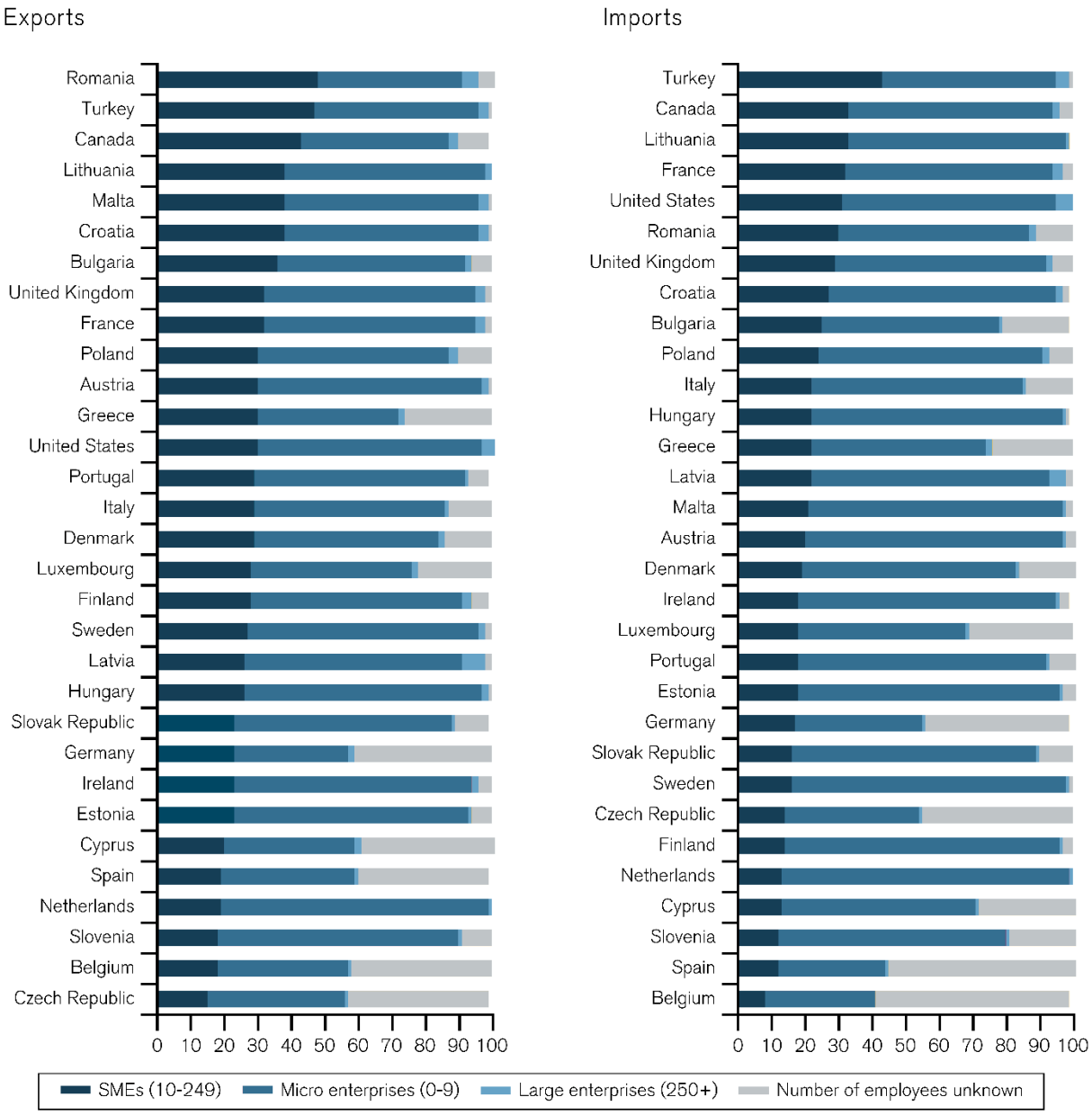


Figure 2.5: Percentage of exporting and importing firms in selected developed economies by enterprise size (OECD, 2013).

Focusing on industrial enterprises, we can see a positive relationship between the size of SMEs and participation in international trade; micro-enterprises show the lowest

rates, 9% on the export side and 12% on the export side. Small, medium and large enterprises have average shares ranging from 38% to 66% on the export side and 40% to 70% on the import side. Export and import participation rates for medium-sized enterprises approach large enterprises, while participation rates for small and micro enterprises are considerably lower.

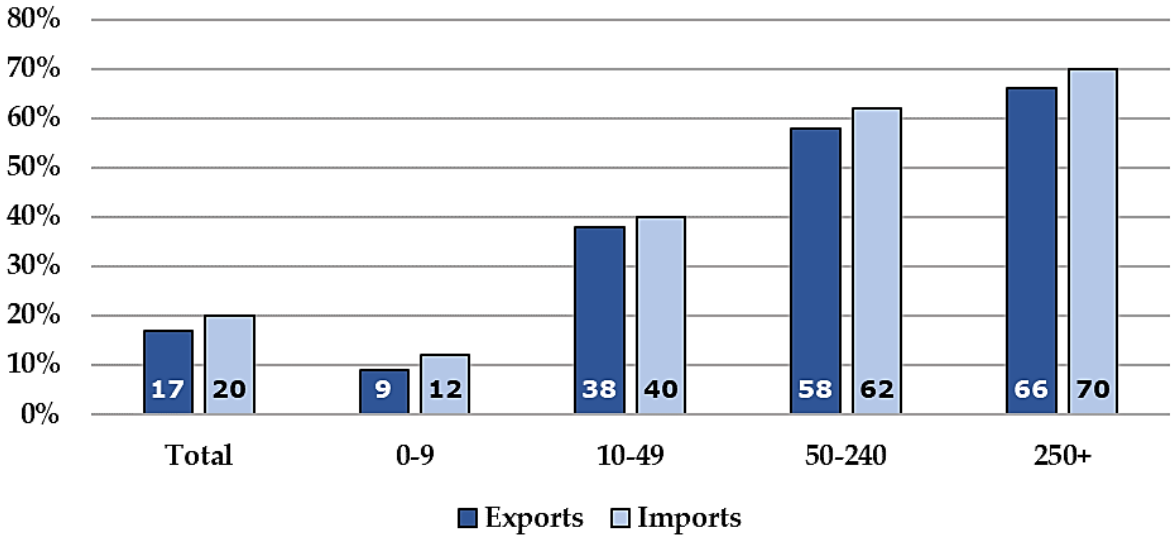


Figure 2.6: Percentage of industrial firms that are exporting and importing by enterprise size (OECD, 2013).

Statistical evidence on the participation of micro, small and medium-sized enterprises in international trade emphasises that they are significant contributors to economic activity and employment in developed countries. Nevertheless, the share of exporting SMEs is small compared to that of large firms, and that the contribution of SMEs to total exports and imports is low. Indeed, despite representing the majority of enterprises, SMEs are responsible for an average of 33% of exports and 40% of imports in selected developed countries (World Trade Organization, 2016).

2.2 Trade barriers to SMEs' participation in global markets

Given the relatively weak participation of SMEs in trade, it is relevant to investigate the significant finding that engaging in international markets is expensive. All trade costs, whether fixed or variable, adversely affect the ability of SMEs to participate in trade to a greater extent than large enterprises. On the other hand, since SMEs are more sensitive to trade barriers than large firms, removing obstacles to trade significantly

benefits SMEs. Moreover, when allowed to enter new markets, SMEs tend to respond more swiftly and flexibly than large firms, and they can play a key role in creating new exports (World Trade Organization, 2016). Several studies have highlighted that SMEs would benefit most from further trade opening and policy coordination, including non-tariff measures.

Current literature explains the limited participation of SMEs in international trade, referring to the Melitz theoretical framework (Melitz, 2003), which assesses that only the most productive firms can afford market entry costs. Entry costs are fixed costs, relative to expenses a firm has to incur to access a market - such as starting a distribution network, complying with regulations, and obtaining brand recognition, patents and licences - regardless of the level of trade and they entail higher costs per unit for lower trade volumes. Therefore, they may be more burdensome for smaller firms. To trade costs also belong variable costs, such as *ad valorem* tariffs, which increase in proportion to trade volume. Melitz (2003) models these trade costs jointly and shows that a reduction in both variable and fixed costs lowers a firm's productivity threshold and allows more firms to become exporters, with the effect of increasing the size and market share of the most productive and larger firms.

To summarise, only firms with a productivity level above a certain threshold can cover market entry costs in the domestic and foreign markets and sell products in both of them. At the same time, sales overseas allow the most productive firms to further expand in size, confirming the observed pattern that the most prominent producers are likewise the most productive firms and account for a large part of a country's exports (World Trade Organization, 2016).

As highlighted, fixed trade cost reductions can have different impacts on different-sized firms, unlike reductions in variable costs, which impact all firms equally, independent of the output level. The theoretical literature argues that changes in tariffs affect particularly the smaller and less productive firms in the Melitz framework, which produce at relatively higher costs and export smaller trade volumes (Gopinath and Neiman, 2014; Spearot, 2013). Moreover, tariffs can involve bureaucratic hurdles and extensive paperwork, which entail an important fixed cost component, particularly burdensome for SMEs to overcome (Henn and Gnutzmann-Mkrtchyan, 2015).

Gopinath and Neiman's (2014) empirical work has proved that for firms at the "extensive margin", trade cost reductions may present an immediate opportunity to grow by building new trading relationships in foreign markets. As SMEs make up a large part of this "extensive margin", they are supposed to react more strongly to measures of trade opening, whereas long-time market participants, i.e. larger firms trading on the "intensive margin", are less sensitive to changes in trade (Fitzgerald and

Haller, 2014; Berman and Héricourt, 2010). because the latter have already committed time and resources to create relationships within foreign markets, and they are likely to maintain such relations rather than pursuing new trading opportunities at first sight.

To conclude, SMEs are more strongly affected by barriers to foreign market entry and therefore participate less in international trade than larger firms because of the lack of resources to face them. At the same time, researchers point out that SMEs embody an enormous potential for further export growth and may benefit disproportionately from trade opening (World Trade Organization, 2016).

2.3 SMEs' perceptions of barriers to access the international market

In this section, we aim to identify the barriers to trade that firms perceive as main challenges for their access to international markets, to better understand the constraints to internationalisation faced by SMEs. According to Fliess and Busquets (2006), barriers to internationalisation can be "*defined as all those constraints that hinder the firm's ability to initiate, to develop, or to sustain business operations in overseas markets"*. Onkelinx and Sleuwaegen (2008) divide the internationalisation barriers into internal barriers, related to issues such as lack of scale or experience, low productivity and lagging adoption of technology, and external barriers, related to the environment firms face when selling products to foreign markets. These barriers encompass a range of factors relating to the business environment, logistics and regulations, many of which can be trade-related (González and Sorescu, 2019).

The main findings of the study "*Top Barriers and Drivers to SME Internationalisation*", carried out in 2007-2008 by the OECD Working Party on SMEs and Entrepreneurship in the framework of its activity on SME Internationalisation, and published in 2009 (Lloyd-Reason et al., 2009) corroborate that the top-ranked barriers are mainly consistent with the conclusions of the OECD-APEC 2007 study "*Removing Barriers to SME Access to International Market"*, as highlighted in Table 2.1and Table 2.2 (OECD, 2008).

Rank – Weighted factor	Description of barrier
1	Shortage of working capital to finance exports
2	Identifying foreign business opportunities
3	Limited information to locate/analyse markets
4	Inability to contact potential overseas customers
5	Obtaining reliable foreign representation
6	Lack of managerial time to deal with internationalisation
7	Inadequate quantity of and/or untrained personnel for internationalisation
8	Difficulty in matching competitors' prices
9	Lack of home government assistance/incentives
10	Excessive transportation costs

Table 2.1: Barriers ranked by SMEs using the top ten ranking method (OECD-APEC 2007).

Rank – Weighted factor	Description of barrier
1	Shortage of working capital to finance exports
2	Limited information to locate/analyse markets
3	Inability to contact potential overseas customers
4	Lack of managerial time, skills and knowledge
5	Administrative and technical difficulties: exchange rate, documentation and payment problems
6	Foreign market competition

Table 2.2: Top-ranked barriers to the internationalisation of SMEs as identified by the OECD 2009 study.

Analysis results confirm limited firm resources, particularly of a financial kind, and disadvantages accessing operating and long-term loans as leading barriers to SME internationalisation, along with inadequate knowledge of overseas markets and managers' misperceptions. Additionally, information gaps remain a critical challenge to SMEs even in the current era of extensive information availability. Crick (2007)

highlighted the difficulty of obtaining adequate representation in target export markets, while Barnes and colleagues (2006) identified finding an appropriate foreign market partner as a critical impediment to the internationalisation of the SMEs studied. A survey of Swedish exporters by Rundh (2007) also reported the difficulty of gaining access to a suitable distribution channel in international markets.

These barriers are primarily internal, as they mainly reflect the limitations of the investigated firms regarding the essential resources and capabilities they need to internationalise. All these barriers seem to be perceptual or psychological, as their overall incidence decreases as firms develop further experiential knowledge in international markets. This confirms the dominant theories explaining SME internationalisation behaviour, in particular the experience/knowledge-based Uppsala-Model, which shows the internationalisation process as slow development (Johanson and Vahlne, 1977), and the resource-based viewpoint (Ibeh and Wheeler, 2005).

On the whole, a majority of SMEs surveyed considered "*problems' internal' to the firm to be more important barriers to access to international markets than barriers stemming from the home and foreign/host environment within which firms operate, including policy barriers such as tariffs and regulations"* (Fliess and Busquets, 2006 p.5). In addition, firms that are already exporting prioritise issues related to the overall business environment, including trade barriers. In contrast, non-active exporters are more concerned with financial and entry barriers, pointing out that firms that already internationalise focus mainly on constraints outside the firm's control. These issues suggest that SMEs undergo a learning process as they get involved with foreign markets. Once firms overcome internal obstacles, they become more aware of other challenges in their business environment, including tariffs and other trade regulations, as reported in *Background Draft Report of the OECD-APEC Joint Project on "Removing Barriers to SME Access to International Markets"* (Mughan and Lloyd-Reason, 2006).

The Facebook-OECD-Future of Business Survey confirms these findings carried out among SMEs with a digital presence, as highlighted in the graph below (Figure 2.7). As argued, SMEs are especially vulnerable and need an open and transparent environment to operate. They face considerable challenges in accessing finance for new investment, information, skills and technology, reducing their international competitiveness and their ability to meet trade costs (OECD, 2019): therefore, they are disproportionately affected by tariff and non-tariff barriers to trade (World Trade Organization, 2016).

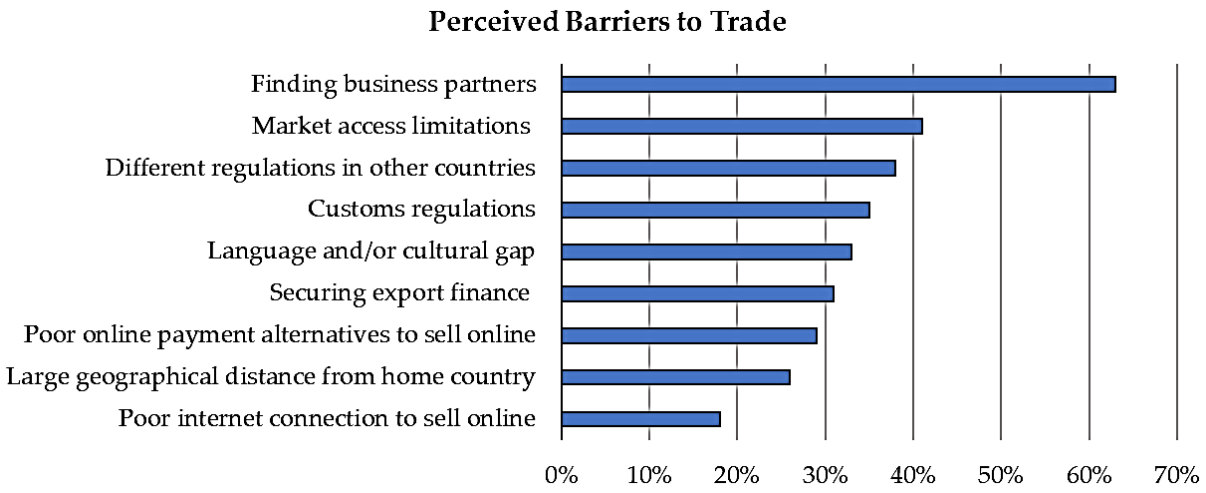


Figure 2.7: Perceived barriers to trade (OECD, 2017).

2.3.1 Tariff barriers matter more for SMEs

Although the overall response results highlighted by both surveys of SMEs did not rank trade barriers as high as internal barriers, tariff and non-tariff trade barriers may prevent SMEs from internationalising.

The theoretical literature states that the impact of trade policy depends on firm characteristics, such as size and productivity. Focusing on the manufacturing sector, the fact that high tariffs are more important obstacles for SMEs than for large firms can be explained as follows: firstly, higher tariffs in destination markets make it more difficult for firms to profitably export, and only the most productive ones will export in such an environment; smaller and less productive firms will progressively enter in the market as tariffs are reduced. Secondly, small firms benefit more from tariff reductions because they produce goods whose demand is more sensitive to price changes and they would pay lower costs to reach additional consumers than large firms. According to Spearot (2013), low revenue goods exhibit a higher demand elasticity. The traditional negative effect of higher trade costs on trade flows is amplified for low-revenue varieties, and the opposite is true when tariffs are cut.

Another study (Arkolakis, 2011) explains the different impacts of higher tariffs between small and large firms considering differences in market penetration costs. The additional costs firms face in reaching more consumers are large for large firms and small for small firms, so exports of small firms grow more following tariff liberalisation than those of large firms. Vice versa, large firms respond less to tariff increases because for each unit of export reduction, they spend less than small firms in terms of the costs to reach consumers. Finally, non-*ad valorem* tariffs, i.e., trade costs independent from

the unit price of the good, such as "per unit tariffs" and "tariff-rate quotas" - through the imposition of a quota licence price - act as additive trade costs, which affect in different ways firms that produce low-priced goods and firms that produce high-priced goods. If the firms producing low-priced articles are small firms, additive trade costs are perceived as a significant barrier to trade.

Figure 2.8 shows the weighted average of the effectively applied tariff that SMEs face in their export markets for a subset of OECD countries. In order to calculate the average tariff faced by firms by size, data on firm-level trade flows from the TEC database were combined with tariff data from UNCTAD's Trade Analysis Information System (TRAINS). Trade weighted averages by firm size are calculated aggregating sectoral (firm-size) tariffs across sectors using the firm-size level's export distribution across sectors. For EU countries, tariff figures refer to tariffs faced in non-EU markets.

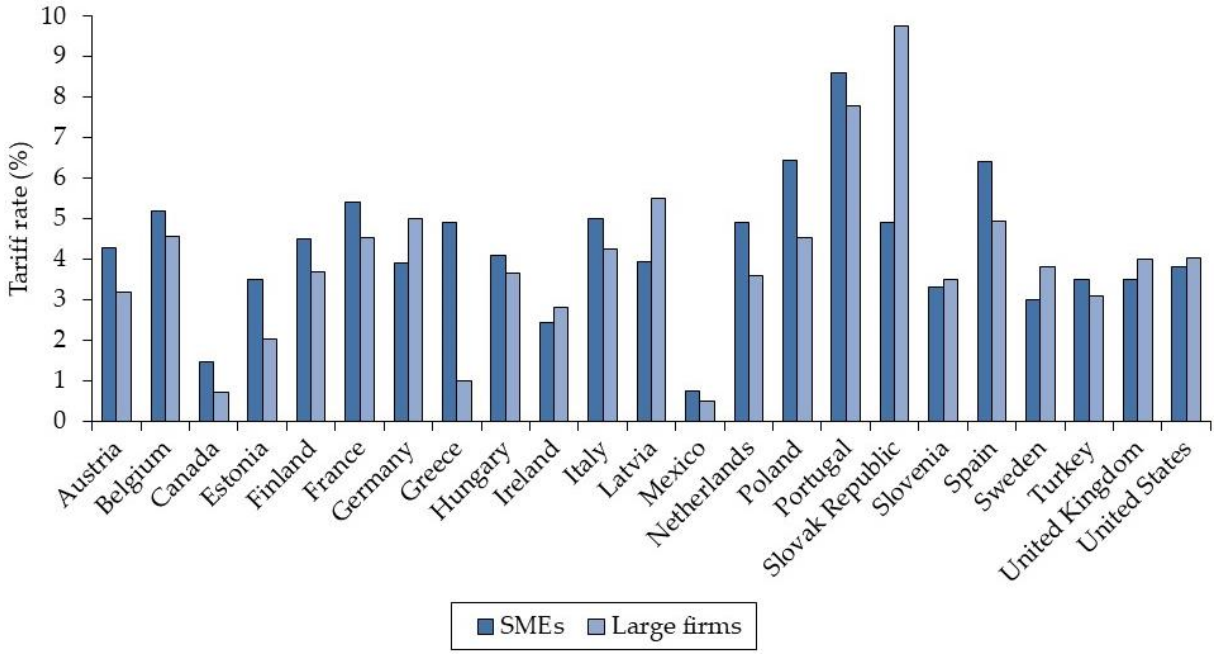


Figure 2.8: Average applied tariff faced by firm size (excluding intra-EU trade) (UNCTAD, 2011).

Figure 2.8 illustrates that in 17 out of the 23 countries of the sample, large firms face lower average tariffs than SMEs, consequent with small firms' perception that taxes affect them disproportionately (World Trade Organization, 2016).

2.3.2 SMEs and non-tariff barriers

Non-tariff measures (NTMs) are mainly regulatory barriers for goods and services - such as costly requirements, tighter technical barriers (TBT), sanitary and phytosanitary (SPS) measures, burdensome customs procedures - that have a crucial fixed cost component, which significantly differentiates them from tariffs and is supposed to affect small-sized firms disproportionally. As mentioned above, fixed costs, independent of the volume/value of trade, are relatively more burdensome for SMEs because they represent a higher share of their affairs volume. Since changing regulations, lack of clarity and unpredictability often hamper exports, despite market research firms conduct before targeting new markets.

As depicted in Figure 2.9, non-tariff measures are perceived as a significant obstacle to trade by small to medium and large firms and appear to be the most relevant obstacle for EU firms wanting to access the US market. In this vein, Schaap and Hekking (World Trade Organization, 2016) point out the importance of the predictability and transparency of standards and regulations to foster exporting SMEs.

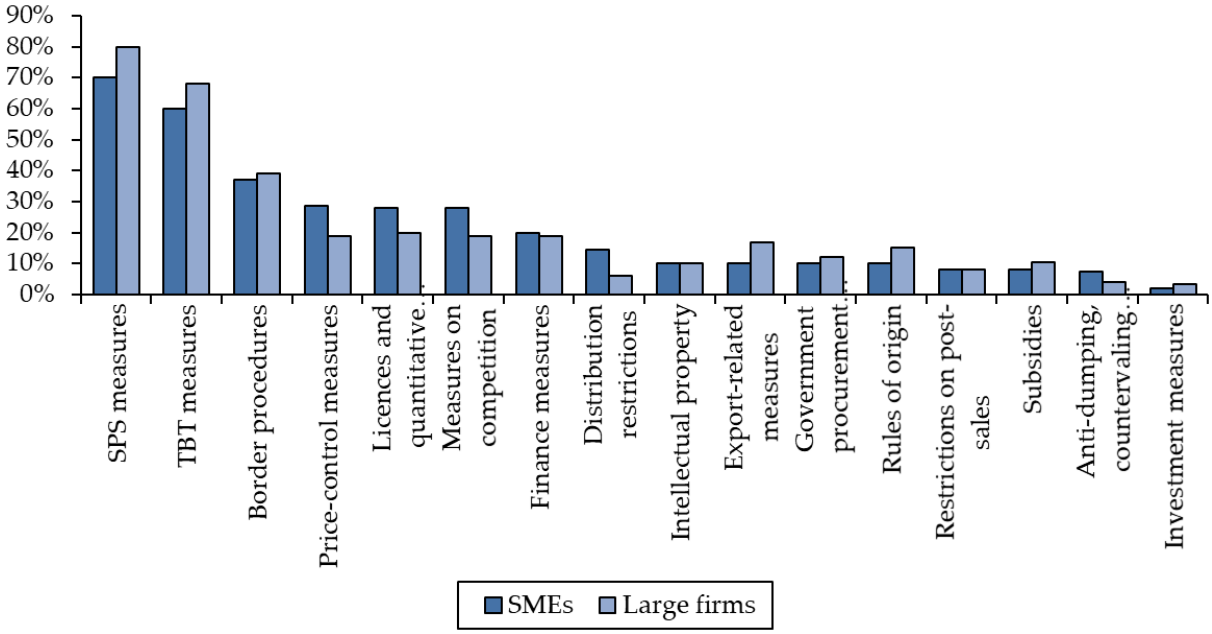


Figure 2.9: Trade barriers in accessing US goods markets reported by EU firms by firm size.

Empirical evidence suggests that TBT and SPS measures are particularly costly for smaller firms, as Reyes's (2011) study confirmed. He investigates US manufacturing firms operating in the electronics sector that must harmonise with European product standards. Harmonisation negatively impacts US firms exporting to the EU in general,

especially on US firms that already export but not to the EU, which are smaller than the former.

Similarly, smaller exporting firms exit or lose more trade volumes when a new restrictive SPS measure is introduced in a foreign market. The study by Fontagné and colleagues (Fontagné et al., 2016), relying on French firms' export data points out that restrictive SPS measures negatively affect small firms' participation in trade and decrease value of exports, the intensive margin, approximately by 18%. However, this negative impact of restrictive SPS is reduced for more prominent players with higher market shares and lower demand elasticities, which are more likely to efficiently comply with more stringent requirements and transfer less of the cost increase to the consumers.

Focusing on service-exporting SMEs, they mainly face barriers regarding regulations, affecting both their ability to establish in a foreign market ("establishment" measures) and to operate once they are present in the target market ("operation" measures). Since the former implies fixed costs and the latter variable costs, it may be assumed that "establishment" measures impact more relatively on SMEs (Deardorff and Stern, 2003).

Figure 2.10, based on the OECD Services Trade Restrictiveness Index (OECD STRI) illustrates that the steepest "establishment" barriers are found in professional services, followed by audio-visual, transport and financial services

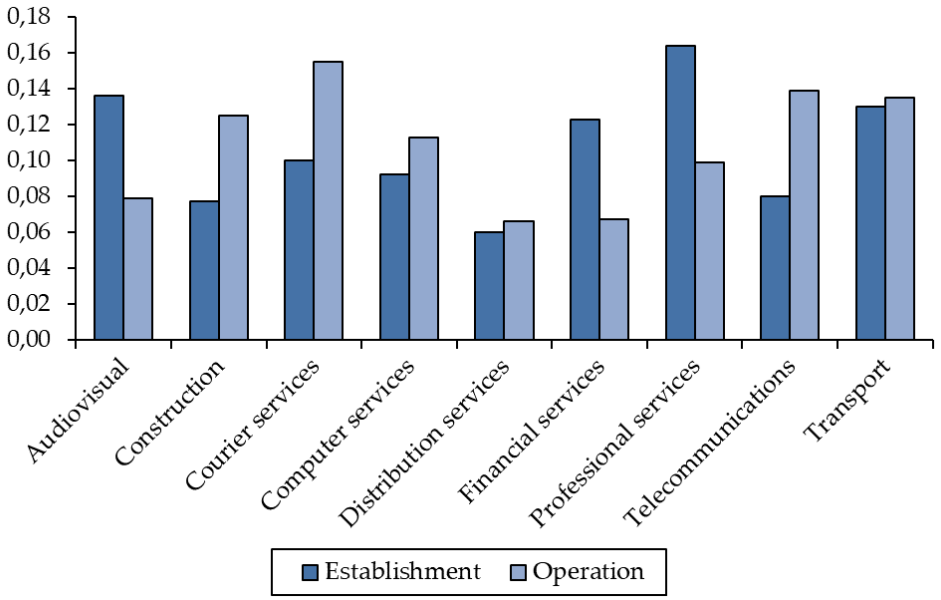


Figure 2.10: Average OECD STRI by type of measure, by sector – based on the OECD STRI data for 2015 (OECD, 2015).

In particular, SMEs are impacted by measures that prescribe commercial presence in the form of a subsidiary in the host market to supply cross-border services and involve requirements to be locally incorporated, such as minimum capital requirements, training obligations, residency requirements and the granting of subsidies to domestic SME suppliers only. Finally, all barriers to the movement of independent professionals impose a burden on MSMEs, especially crucial for the micro-ones, which may be contracted to supply services internationally. We refer to measures to quotas or economic needs tests and relevant discriminatory measures such as residency requirements, non-eligibility under subsidy schemes, discriminatory tax treatment or obligations to train domestic workers.

To conclude, other services measures that, although not trade barriers per se, do not fall under the six measures defined as market access limitations under the General Agreement on Trade in Services (GATS) and do not violate the GATS national treatment disciplines may restrict trade opportunities for SMEs. Amongst these are licensing, qualification requirements, technical standards, lack of recognition of foreign work experience, education or qualifications to the extent that these are particularly costly or administratively complex to fulfil and increase the fixed cost of entering a foreign market.

2.4 Further constraints

Firms must face additional costs beyond market access and regulatory barriers for goods and services. This section discusses trade costs arising from the services needed to trade, such as distribution costs, transportation costs, and costs to finance trading activity and innovation, which are largely independent of how much a firm will export.

2.4.1 Information and distribution channels

Limited information and understanding about target foreign markets may hinder the ability to customise products to the diverse needs of consumers and to meet product requirements and standards under local regulatory environments. Information costs do not depend on the amount of firm's export and affect especially small firms that are less capable than large firms of spreading information costs across the output.

Besides producers and consumers of goods and services, intermediary companies build up the distribution network structure; distribution channels can take various forms:

- direct sales to clients;
- sales through a retailer;
- sales through wholesalers and retailers;
- sales using an agent working on a commission basis.

In addition, to be efficient, a distribution network must be supported by additional functions such as marketing, logistics or after-sales services. As assessed by the high proportion of responses citing trade-related barriers for SMEs highlighted in Table 2.1 and in Table 2.2 (*"Limited information to analyse markets"* and *"Inability to contact potential overseas customers"*) as well as in Figure 2.7 (*"Finding business partners"*), reaching clients in foreign markets may be challenging for SMEs without access to relevant distribution channels and related functions.
Furthermore, if the product does not comply with the importing country regulations, it will be rejected at the border of the target country. Hence, they need to face the cost of gathering market information and regulatory information about target foreign markets.

2.4.2 Transport and logistics

Delivery and logistical aspects are also an issue in trade, particularly for SMEs. Trade logistics covers a wide range of services from the pick-up of goods, consolidation of shipment, procurement of transportation, customs clearance, warehousing and distribution to the delivery of goods to final consumers. Logistics costs impact SMEs more than large enterprises because SMEs trade smaller quantities than big enterprises, and fixed trade costs, including logistics costs, make up a more significant share of the unit cost than rivals exporting larger volumes. Hence, reducing logistics costs is crucial for improving SMEs' trade opportunities (World Trade Organization, 2016).

Moreover, geographical distance affects SMEs' participation in export. Evidence shows that, compared to large firms, SMEs are discouraged from entering distant markets. For instance, research conducted on French firms indicates that small firms export on average 3.7% less to export destinations 10% further away from France (World Trade Organization, 2016). According to a study undertaken by the USITC (USITC -The Year in Trade, 2017), the low reliability and high shipping costs represent significant barriers for US-based SMEs' exporting to the European Union. Shipping costs are also the main obstacle for EU SMEs' exports to the United States; costs and reliability problems of EU postal systems have forced companies to use private couriers for shipping, which results in higher costs that are harder for small businesses to absorb. *"Because of the distance to the US market, business owners are concerned that the cost of*

transportation will increase the price of their products to a point where they can no longer compete with products manufactured locally" (UPS, 2014). To reduce logistics costs, big manufacturers or big retailers outsource logistics functions: transport, warehousing, inventory management, freight forwarding, etc., to specialised providers, i.e. providers of "third-party logistics" (3PL) accessing to advanced logistics services and supply chain management.

Advanced logistics services are ICT-intensive and adapt quickly to new technologies, which often require the integration of supply chain management platforms with customers' internal systems. SMEs face disproportionally high logistics costs (Handfield et al., 2013). Due to resource constraints, SMEs often lag in adapting to technological advances and are reluctant to tap into the 3PL market. The small size is also a disadvantage for SMEs wishing to negotiate affordable contracts with 3PL. SMEs face disproportionally high logistics costs (Handfield et al., 2013). In this regard, it is worth mentioning that well-established 3PL providers such as FedEx, UPS, DHL have launched small business logistics solutions which may provide export assistance to SMEs.

For manufacturing firms with less than 250 employees, their logistics costs account for 14.7% of their overall revenue. Conversely, firms with more than 1.000 employees state that the logistics costs only account for 6.7% of their total revenue. This figure is similar for firms with 250 to 1.000 workers, which report that logistics costs account for 6.4%of their total revenue. The research includes 113 industrial firms worldwide, and the break-up figures on regional or national levels affirm the above findings. For example, in China, SMEs reported spending 15% of their overall revenue on logistics costs, whereas large firms (more than 1.000 workers) reported spending only 5.2%. In South America, SMEs reported spending 15.3% of overall revenue and large firms reported spending 9.4% (World Trade Organization, 2016).

2.4.3 Financing difficulties

Difficulty in accessing affordable trade finance is one of the most cited constraints for SMEs engaging in international trade, affecting small businesses in developed and developing countries. The OECD-APEC 2007 study "*Removing Barriers to SME Access to International Market"* and the research "*Top Barriers and Drivers to SME Internationalisation*", surveying SMEs' perception of the barriers to their internationalisation (Lloyd-Reason et al., 2009), ranked the shortage of working capital to finance exports as the number one constraint to the internationalisation of SMEs.

Specific challenges limit access to finance by SMEs. These are largely related to lenders' greater difficulties in assessing and monitoring SMEs relative to large firms, leading

to higher transactional and informational costs. This is especially the case for traditional bank lending, which represents the main source of external finance for SMEs (OECD, 2019). Nevertheless, trade finance instruments (e.g. factoring, letters of credit, guarantees, export credit and credit insurance) have become increasingly important to mitigate risk related to cross-border transactions (OECD, 2019).

Even market failures in financial markets fall disproportionally on SMEs, resulting in more credit rationing, higher "screening" costs and higher interest rates from banks than for larger enterprises (Stiglitz and Weiss, 1981; Beck and Demirgüç-Kunt, 2006). Therefore, SMEs rely more on trade credit and informal sources and less on equity and formal debt than large firms (Beck and Demirgüç-Kunt, 2008). Figure 2.11 illustrates the degree to which SMEs can access formal financial systems.

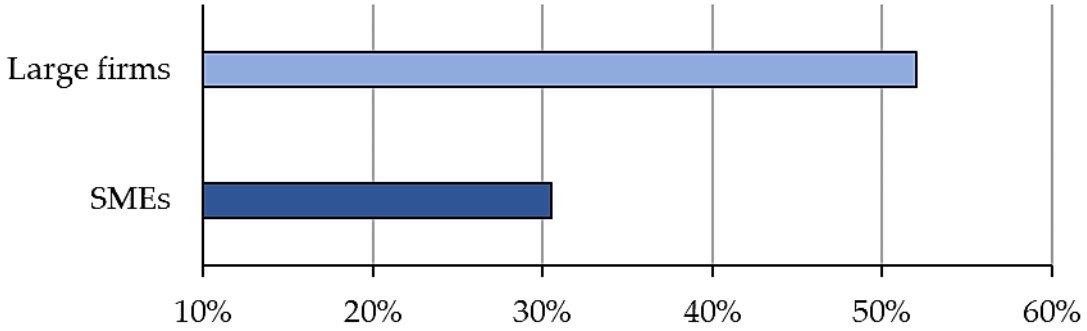


Figure 2.11: Firms with a bank loan/line of credit (World Trade Organization, 2016).

In addition, the high concentration level of global trade finance markets may damage SMEs either. About 40 globally active banks supply about 30% of international trade finance (DiCaprio et al., 2014) whose condition influences the trade finance conditions offered to companies and hence their export chances (Amiti and Weinstein, 2011). As reported by Bricongne and colleagues (2012) covering data on 50.000 French exporters, during the financial crisis of 2008-09, credit constraints on smaller exporters were much higher than on larger firms, to the point of reducing the range of destination for business or of leading the SME to stop exporting altogether.

Moreover, since the leading trade finance banks are also dominant in other financial services segments, financial crises originating in different sectors, changes in prudential rules and any recalibration of their balance sheets directly impact the provision of trade finance globally and locally. Hence, the availability of trade finance is influenced mainly by the strength of international banks at any point in time (DiCaprio et al., 2014).

To conclude, lack of or insufficient access to finance can also strongly inhibit SMEs' development since product and process innovation along with new technologies require considerable up-front investments. Thus, financial barriers hampering R&D and technological investment (Hall and Lerner, 2010) inhibit firm productivity, making it harder to access foreign markets and compete.

2.5 SMEs' participation in international e-commerce

At the beginning of the 21st century, scholars suggested that the diffusion of ITCs and Internet based-business applications reducing entry costs and some trade costs could boost SMEs' internationalisation (Piscitello and Sgobbi, 2001). As corroborated more recently by Elia and colleagues, "*the diffusion of Internet applications and, more generally, information and communications technologies provide smaller businesses with new tools and opportunities to expand their presence in foreign markets, as both exporters and producers. Indeed, by using e-business, firms may reduce the costs of information-intensive activities, such as communications management and sales and marketing. These opportunities may especially favour the international activities of SMEs by downsizing some of their historical shortcomings when compared with larger businesses*" (Elia et al., 2019).

Digital technologies have lowered the entry barriers into global markets enabling SMEs to internationalise at a fraction of the costs. Online platforms such as Amazon, eBay, Alibaba and others provide cheap services that reduce the cost and speed of finding trade partners and obtaining relevant market information, connecting buyers and sellers globally, thus allowing SMEs to supply customers anywhere in the world getting a global presence that was once reserved for large multinational firms (OECD, 2019).

As argued by Lendle and colleagues (2012) analysing exports of goods traded through eBay, e-commerce reduces the costs associated with the physical distance between sellers and consumers by providing both confidence and information cheaply through online platforms, so that even smaller and less productive businesses can connect with distant customers. The effects of distance are reduced on average by 65% on eBay. Such percentage increases when trade partners speak different languages or when corruption in the exporting country is high because online technology raises importer trust in exporters through seller rating mechanisms (Lendle et al., 2012).
In addition, online platforms offer services that simplify international payments, provide warehousing/shipping/logistics services and market research decreasing trade-related costs. Indeed, E-commerce marketplaces have developed their payment systems for cross border e-commerce transactions bypassing the corresponding

banking infrastructure, which results in quicker processing times and no processing fees (World Trade Report, 2018).

2.6 Synthesis

As highlighted in this chapter, the participation of SMEs in international trade remains limited despite their contribution to economic growth. Among exporting firms, SMEs are usually strongly represented in terms of numbers but account for only a tiny share of a country's overall exports and often export only a few products to a narrow range of destinations. This evidence is explained by the relationship between productivity, size and export experience: the most productive firms are larger and find it easier to access foreign markets and grow even further through exporting.

Internal and external factors, especially trade barriers giving rise to fixed costs, are particularly burdensome for SMEs which generally have limited financial, human and technological resources and would benefit most from further trade opening and policy coordination, including non-tariff measures. International literature agrees that SMEs perceive high tariffs as a more significant obstacle to trade than large firms, because SMEs' trade flows are more sensitive to tariff changes and are more concentrated in sectors facing higher tariff barriers than large firms.

SMEs can partially overcome constraints to internationalisation thanks to the diffusion of ITCs and Internet-based business applications, which provide, besides sales and communication channels, a wide range of services that reduce entry and trade costs. However, although the ICT revolution and CBEC can act as facilitators in the process of SMEs internationalisation, available evidence does not yet show clear signs of an increase in SME participation, suggesting that some of the constraints identified offline persist online as well (Elia et al., 2019).

Mainly, SMEs find it harder than large firms to keep up with technological change, notably because they employ fewer technical specialists and the financial resources needed to constantly upgrade technology (World Trade Report, 2018). Improved export competitiveness can be achieved through broader policy measures that recognise the important upstream role played by SMEs. Adequate trade policy measures, reducing the cost of importing, through liberalisation of goods and services as well as sustained support for trade facilitation and connectivity, will particularly help SMEs better exploit new opportunities. Critical SMEs internationalisation barriers regarding access to information, skills, technology, or finance underscore the need for support programmes provided by national governments.

From traditional standards to new regulatory issues in the digital age, global challenges require global solutions to provide an international operating environment where SMEs can flourish. By increasing the quality of digital infrastructure and decreasing the cost of access, promoting digital connectivity will empower smaller firms to take full advantage of the digital trade revolution (OECD, 2019).

3. The growth of Cross-Border E-Commerce and the impact of the COVID-19 pandemic

3.1 What does e-commerce mean?

Today we are living in the digital revolution age. The term "e-commerce" is one that we have all become familiar with in recent years. The pandemic we are experiencing has only accelerated this process, bringing into the daily lives of millions of people this word that was perhaps still unknown to a few. Given the importance of this topic in our work, we are devoting this chapter to analysing this phenomenon. We will examine its history, growth and development, focusing on the impact of the pandemic, which has substantially altered trade patterns, shifting a significant transfer of market share from offline to online businesses.

"E-commerce" comes from the words "electronic" and "commerce" and defines the transaction and exchange of goods and services through telecommunications and information technology (Bloomenthal et al., 2021). According to WTO's working definition, "*the term' electronic commerce' is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means*" (1998). In other words, whenever someone buys or sells something through a website, it falls under the concept of e-commerce.

Although the exponential growth of e-commerce has mainly taken place in the last decade, its history dates back some 40 years. The first attempts to sell something through telecommunications or an IT channel dates back to the late 1970s/early 1980s. Michael Aldrich invented the prototype of e-commerce. He experimented with e-commerce for the first time connecting a domestic television to the grocery store's computer using Videotex technology through a telephone line. A couple of years later, in 1982, in France, the PPT (Postes, Télégraphes et Téléphones) used the same technology to launch MINITEL. It was a videotex online service accessible through

telephone lines that enabled the users to make online purchases, make train reservations, check stock prices, search the telephone directory (Rospigliosi, 2017).

The development of e-commerce is, by definition, closely linked to the development of the Internet. That's why the substantial growth of e-commerce took place in the 90s, with the birth of massive tech companies like Amazon (1994), eBay (1995), and Alibaba (1999). These companies gave an essential boost to the growth and diffusion of this phenomenon, representing the first e-commerce platforms of history.
Therefore, since the early 2000s, there has been an incredible growth of this phenomenon, initially in the United States, until it reached a global dimension, as we can see in the following two charts.

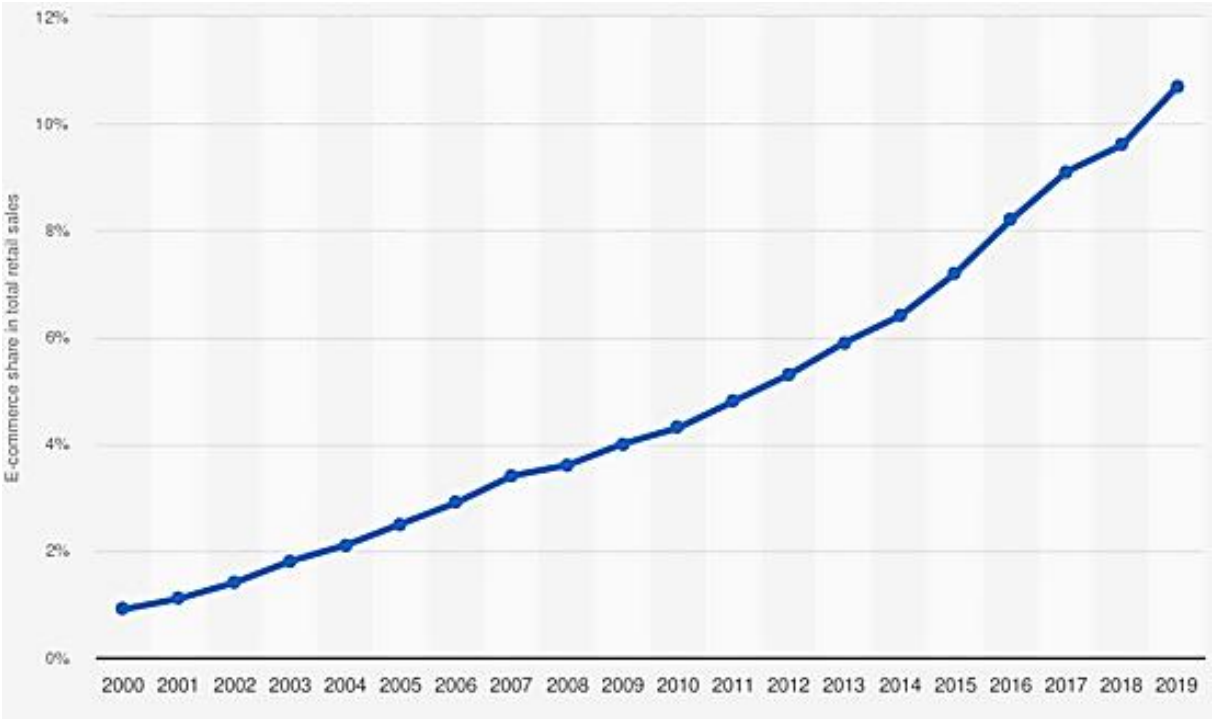


Figure 3.1: E-commerce as a percentage of total retail sales in the United States from 2000 to 2019 (Statista, 2021).

In Figure 3.1, we can see the whole development of e-commerce in the US. The chart shows the constant growth in the two last decades with just one almost stable period in 2008, due to the global financial crisis.

3.2 The development of cross-border e-commerce

Digitalisation and ICTs have been reshaping consumer habits over the two last decades. "*The Internet has changed how businesses and consumers compare, buy and sell both products and services and how they search and manage information, deal with payments, and collect data*" (Sverige and Kommerskollegium, 2012). All these developments have changed international trade. E-commerce has grown exponentially, enabling even SMEs, which lacked the necessary resources to engage in international trade, to connect with consumers in foreign markets in ways not previously possible. Terzi(2016) argued that cross-border e-commerce (CBEC) could reduce trade barriers and promote trade growth.

CBEC refers to *"the process of selling goods to a consumer located in a foreign Country by means of online channels, either directly through a proprietary website (i.e. B2C) or through a digital intermediary such as online retailers or marketplaces (i.e. B2B2C) can be referred to as Cross Border E-commerce (CBEC)* (Giuffrida et al., 2017). Since CBEC has boomed globally in the last decade supported by ICTs, growing demand and suitable policy measures, this topic is receiving much attention in the academic world. More studies have investigated barriers and challenges behind a CBEC initiative in recent years

In a broad sense, cross-border e-commerce is almost equal to cross-border e-retailing (iResearch Services, 2022). It means online trade between a business (retailer or brand) and a consumer (B2C), between two companies (B2B), or between two private people (C2C) (Whistl, 2021). However, CBEC integrates the activities along the logistics value chain. The transaction is often from an overseas supplier via a domestic retailer to a consumer, a business-to-business-to-consumer (B2B2C) process. Finally, B2C e-commerce is often an umbrella term referring to online marketplaces and the growing direct-to-consumer (D2C) e-commerce and paid content markets (Statista - The Statistics Portal, 2021).

ICTs play a pivotal role in producing, consuming and exchanging most goods and services. As mentioned above, e-commerce has become an indispensable part of the global retail framework over the two last decades. Indeed, the retail landscape has undergone a substantial transformation following the transition towards a digital economy.

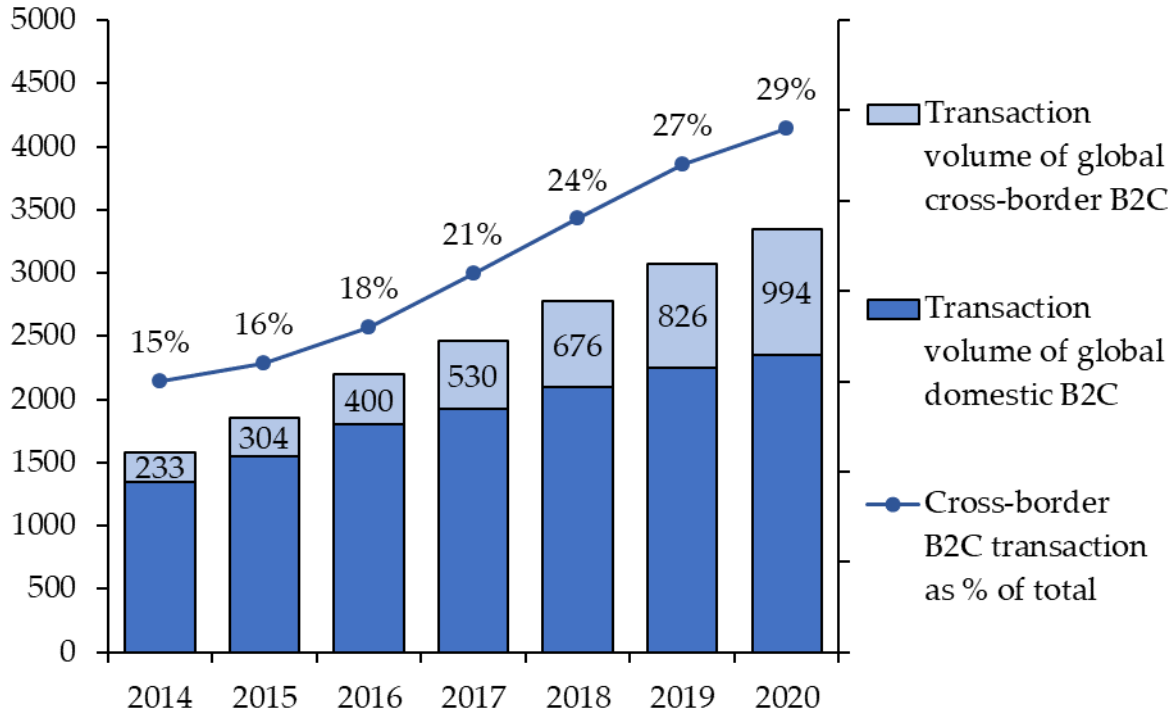


Figure 3.2: The global cross-border B2C volume (in $ billions) (Statista, 2021).

Statistics show a relatively steady increase of e-commerce's share of retail sales from 2013 until 2018; the global B2C CBEC market reached over $ 230 billion in 2014 and was expected to increase to $ 1 trillion in 2020. By that year, nearly 1 billion people worldwide were supposed to be shopping online across the borders, and their transactions would account for one-third of all global B2C transactions (Accenture, 2015).

At first, CBEC revenue was concentrated in developed countries (Alyoubi, 2015); then, after overcoming information technology limitations, a leapfrog development occurred in developing countries. In China, the Gross Merchandise Volume of CBEC contributed over 20% of total foreign trade volume in 2017 (WTO -Trade Statistics - World Trade Statistical Review, 2020).

UNCTAD estimated that the global value of e-commerce sales (B2B and B2C) accounted for nearly $ 26 trillion in 2018, increasing by 8% from 2017 and $ 26.7 trillion in 2019 by 4% from 2018 ($ 25.6 trillion), representing 30% of GDP. In 2019, the value of global B2B e-commerce was $ 21.8 trillion, accounting for 82% of all E-Commerce, encompassing sales over online market platforms and electronic data interchange (EDI) transactions. B2C e-commerce sales were estimated at $ 4.9 trillion in 2019, up 11% over 2018. The top three countries by B2C e-commerce sales remained China, the

United States and the United Kingdom. *(Estimates of Global e-Commerce, 2019* and *Preliminary Assessment of Covid-19 Impact on Online Retail, 2020*).

Economy	Total e-commerce sales ($ billions)	Share of total e-commerce sales in GDP (%)	B2B e-commerce sales ($ billions)	Share of B2B e-commerce sales in total e-commerce (%)	B2C e-commerce sales ($ billions)
United States	9,580	45	8,319	87	1,261
Japan	3,416	67	3,238	95	178
China	2,604	18	1,065	41	1,539
Korea (Rep.)	1,302	79	1,187	91	115
United Kingdom	885	31	633	72	251
France	785	29	669	85	116
Germany	524	14	413	79	111
Italy	431	22	396	92	35
Australia	347	25	325	94	21
Spain	344	25	280	81	64
10 above	**20,218**	**36**	**16,526**	**82**	**3,691**
World	**26,673**	**30**	**21,803**	**100**	**4,870**

Table 3.1: E-commerce sales: top ten countries (UNCTAD, 2019).

Asia has the largest B2C e-commerce market, followed by the equally robust but smaller North American markets. Amazon follows the Chinese competitors Taobao and Tmall, both platforms operated by the Alibaba Group, the leading online commerce provider worldwide (Statista, 2019).

The ten leading B2C e-commerce companies are based mainly in East Asia and North America, and they accounted for almost $ 2 trillion in Gross Merchandise Value (GMV) in 2018. Alibaba is in top position with a GMV of $ 866 billion, followed by Amazon with $ 277 billion. However, JD.com (China) and Amazon were ahead of Alibaba, considering revenue. Among the world's top ten rank services-based companies, mainly travel-related, such as Expedia and Bookings Holdings (properties include

Booking.com, Kayak and Agoda) and Uber's ride-hailing company. More than half of the companies earned income primarily from goods sold over their platforms.

UNCTAD estimates that cross-border B2C E-Commerce sales amounted to $440 billion in 2019, representing 9% over 2018. This is based on sales for the top ten economies by merchandise exports in Table 3.2. Cross-border deals are estimated to be 9% of total B2C E-Commerce sales.

Country	Cross border B2C e-commerce sales ($ billions)	Share of cross border B2C e-commerce sales in merchandise exports (%)	Share of cross-border B2C sales in total B2C e-commerce sales (%)
China	105	4.2	6.8
United States	90	5.5	7.1
United Kingdom	38	8.2	15.2
Hong Kong (China)	35	6.2	94.3
Japan	23	3.3	13.2
Germany	16	1.1	14.7
France	12	2.2	10.6
Korea (Rep.)	5	0.9	4.4
Italy	5	0.9	13.9
Netherlands	1	0.2	4.3
10 above	**332**	**3.4**	**9.0**
World	**440**	**2.3**	**9.0**

Table 3.2: Cross border B2C e-commerce sales: top ten merchandise exporters (UNCTAD, 2019).

UNCTAD estimates that 1.48 billion people, or a little over one-quarter of the world's population aged 15 and older, made purchases online in 2019, as reported in Figure 3.3. This is 7% higher than in 2018. While most online shoppers mainly buy from domestic suppliers, some 360 million online shoppers made cross-border purchases in 2019—around one in four of all online shoppers. The share of cross-border online shoppers to all online shoppers rose from 20% in 2017 to 25% in 2019 (UNCTAD, 2021a).

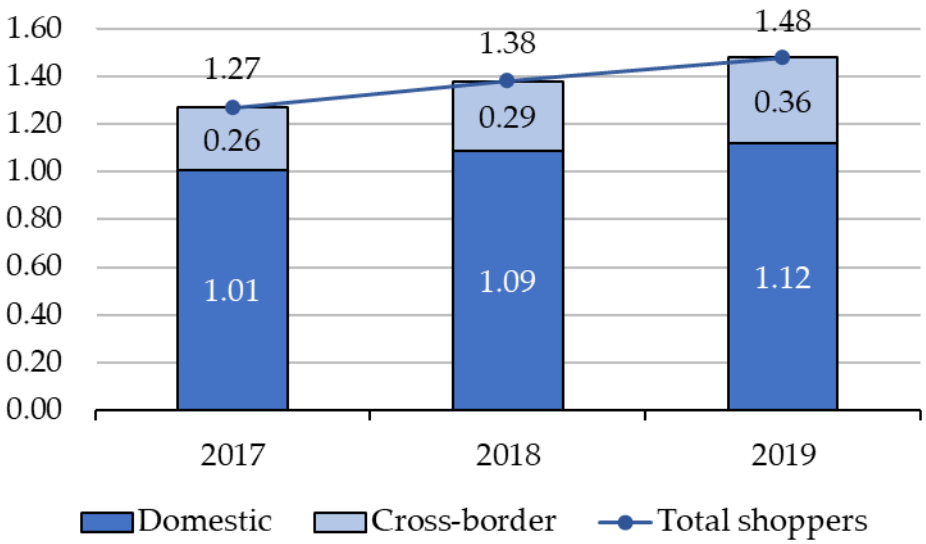


Figure 3.3: Global online shoppers (billionsUS $), 2017-2019 (UNCTAD, 2021).

3.3 The traditional "Gravity Trade Model" and the Role of Distance

Considering the constant growth of Cross-Border E-Commerce, in this section, we will identify and evaluate the main determiners and obstacles by briefly overviewing academic papers on the use of gravity models in international trade, offline and online.

To quantify the importance of the most significant drivers and impediments to online cross-border transactions by EU consumers, scholars apply the "gravity model" of cross-border international trade, which is the standard tool used to explain international trade flows in the offline economy (Deardorff, 1998; J. E. Anderson and van Wincoop, 2003) *"This model is rooted in the Newtonian idea that much of the observed patterns of international trade flows can be explained by the economic size of the trading partners and their physical distance"* (Martens and Turlea, 2012).

The gravity model explains the value of bilateral trade (Q_{ij}) between two countries i and j as a function of the product of the size of the two economies (proxied by *GDP)* and the distance *(D)* between them. This approach reflects Newton's gravity theory from physics:

$$Q_{ij} = \frac{a\,(GDP_i \times GDP_j)}{D_{ij}}$$

Putting this model in log-log format, the coefficients become elasticities. The value of b is the percentage change in cross-border trade Q_{ij} induced by a one per cent change in GDP_i.

$$\log Q_{ij} = \log a + b \log GDP_i + c \log GDP_j + d \log D_{ij}$$

"Distance" is a crucial variable in the gravity model. Beyond transport costs directly due to geographic distance, it may also include import tariffs, costs linked to regulatory differences between countries, financial transaction costs, and information costs to connect the trading partners. The higher the trade costs, the more home-biased trade patterns. In a traditional brick and mortar economy, information retrieval is costly.

In contrast, the Internet and, more generally, digital communications technology have led some researchers to believe that geographic distance between countries would soon no longer hinder international transactions (Cairncross, 2001) and to state the so-called "death of distance" (Cairncross, 2001; Blum and Goldfarb, 2006). It does not matter how far buyers and sellers are since information is only a mouse click away and no longer constrained to physical distances. On the other hand, other scholars (Lendle et al., 2016) still find cross-border distance effects for online trade but to a lesser extent than for offline transactions.

Blum and Goldfarb's research (2006) shows that "distance" still influences website visits. The study, focusing on online digital information products transported across the Internet at zero trade cost, tries to explain international clickstream patterns using a gravity model. Considering international purely digital transaction patterns, their findings suggest that geographical distance plays a relevant role if the digital products traded depend on what the authors call "taste". Distance will probably matter between "taste-dependent" and "cultural-dependent" products even if transportation costs go zero. This is because it proxies for taste similarity. "*Distance decreases the likelihood of a shared cultural context"* (Blum and Goldfarb, 2006). As demonstrated by the researchers, in this case, internet surfing behaviour follows the well-established empirical finding in the trade literature that bilateral trade decreases with distance.

In other words, even for a product with zero shipping costs, people are more likely to visit websites from nearby countries than from faraway lands. This relationship between distance and website visits is driven by taste-dependent categories of products such as music or games. Still, it does not matter in non-taste-dependent categories such as software. Distance has no statistically significant effect on their findings for less taste and culture-dependent products.

3.3.1 "Gravity Model" performance in explaining online cross-border trade flows in the EU

Since e-commerce transactions require the movement of goods within countries or across borders, some scholars (Martens and Turlea, 2012; Lendle et al., 2012) assume that transport costs remain important in online trade and suggest that new sources of trade costs might emerge specific to online cross-border transactions.

Martens and Turlea, in their study *"The divers and Impediments for Online Cross-border Trade in Goods in the EU"*, published in 2012, aim to define the drivers and impediments of online cross-border trade in the EU. Their analysis uses a dataset on the value of cross-border e-commerce in goods in the EU generated by an online consumer survey in the 27 EU Member States (Seybert, 2011).

Previous research on online trade (Blum and Goldfarb, 2006; Lendle et al., 2012) applies the traditional gravity model for online and offline cross-border trade as an analytical tool. To explain the bilateral trade data, they build a 27 x 27 bilateral online trade matrix for the EU 27. They also create an offline trade matrix between the same trading partners and the same types of goods to compare online and offline trade patterns**.**

Their work investigates three sources of trade costs in online trade. Focusing on goods that still need to be physically transported and sometimes cross borders between different regulatory regimes to reach the buyer, they aim to assess whether the shift from ordinary offline transactions to internet-enabled online trade has broken down the importance of geographical distance-related trade costs. Additionally, the paper evaluates the importance of cultural and institutional factors, such as language and the quality of legal institutions, as determinants of online trade. It analyses the significance of two essential online trading platforms: flexible online payments systems and cost-efficient parcel delivery systems. Finally, their analysis examines how offline to online trade shift affects home bias or home markets' "natural" preference.

To the standard Newtonian gravity variables, GDP and distance, Martens and Turlea add more specific e-commerce related explanatory variables:

- Cultural and institutional variables: shared language between trading partners is considered an explanatory variable. The authors aim to capture the trade costs related to "cultural distance", signalled by Blum and Goldfarb (2006). Language may be the most crucial measure of cultural distance, especially in a B2C trading environment where a shared language is essential. However, the importance of language may vary by type of good. It may matter more for cross-border trade in books, for instance, than for electronic goods that are

more standardised across the world. To measure the role of institutions in online trade, they add an indicator that will capture the differences in expected trade costs related to dispute settlement between importers and exporters in online trade. One peculiar aspect of online B2C is that consumers can choose the legal regime for their online transactions (Martens and Turlea, 2012).

- Quality of the online enabling environment: consumers need easy access to online means of cross-border payments to settle a transaction at the lowest possible transaction cost. The researchers introduce two explanatory variables explicitly related to the overall enabling environment for online trade in goods to capture the maturity of online payment systems. First, the market share of cash payments on delivery indicates the relative underdevelopment of payments systems, combined with an absence of trust in online payments and high transaction costs (the transport of money). It is a costly and risky system compared to credit or debit card payment systems. It involves the transportation of large amounts of cash, and transporter and consumer need to be available at the exact location and same point in time. Second, the market share of PayPal is taken as a proxy of the maturity of online payment systems whereby consumers trust a non-bank financial intermediary. However, it may also point to deficiencies in the local banking system so that PayPal helps consumers circumvent these deficiencies.
- Finally, an efficient parcel delivery system must physically ship the goods from their warehouses to the consumer and minimise physical transport costs and delivery time. As argued above, the shift from offline to online trade does not reduce the physical transport cost; on the contrary, because of diseconomies of scale in parcel delivery compared to bulk cargo, material transport costs may increase.

Findings highlight essential changes in the coefficients when trade is switched from offline to online platforms. The most apparent difference is that the coefficient of the distance variable is about three times higher for offline (elasticity of -1.328) than for online (elasticity of -0.450) transactions, as confirmed even by Lendle and colleagues' eBay study. Distance matters far less for online trade, corroborating the "death of distance" associated with the increase of digital information technology and the Internet and the corresponding decline in information costs (Lendle et al., 2016).

To sum up, the standard gravity model performs well in explaining online cross-border trade flows. The core gravity model variables (GDP and distance), combined with variables related to the specific sources of trade costs in an online B2C environment (language, governance and delivery infrastructure indicators), explain

most observed online trade patterns. The model assesses the strong reduction in geographical distance-related trade costs compared to offline trade owing to a significant reduction in information costs in the digital economy that allows consumers to search a much wider area to satisfy their wishes and place their buying orders.

However, results show an increase in the trade costs associated with crossing linguistic borders when moving from offline to online trade. The gravity model indicates that the domestic to foreign online shopping ratio will not change notably because it is hampered by linguistic fragmentation in the EU market. Online retailers aiming to expand their business abroad should have a range of language versions of their websites. Additionally, the quality of legal governance, the cost of parcel delivery and the efficiency of online payments systems play a relevant role in explaining cross-border online trade in the EU.

Finally, the results indicate that home bias is not significantly different in online markets and traditional offline trade. Even though reduced information costs widen the market for consumers and facilitate buying abroad, consumers still tend to buy at home. This leaves a vital policy margin for regulators to boost cross-border online trade and indicates that EU policies that aim to raise competition in parcel delivery and online payment systems are a step in the right direction (Martens and Turlea, 2012).

3.3.2 Is the world "flatter"?

The role of distance in international trade remains a problematic issue.

In their research *"There goes gravity: How eBay Reduces Trade costs"* (2012), Lendle and colleagues study the role of technology in reducing trade costs using data on eBay trade flows. They compare the impact of distance on trade flows on eBay and offline, considering the same set of countries and goods. Their dataset covers all eBay transactions, disaggregated into 40 product categories, between 62 developing and developed countries representing 92% of world trade over 2004-2009. To create the best-possible counterfactuals, they focus on firm exports through set-price mechanisms, dropping years 2008 and 2009, the crisis years of the Trade Collapse, and all transactions concluded via auctions and sold by consumers.

The marketplace eBay has drastically reduced the search and matching costs highlighted by Rauch (1999) and Chaney (2011) as essential impediments to trade by allowing sellers to upload their products online and simply wait for buyers. Search costs are limited to a simple internet search uncorrelated with how remote markets are. Sellers no longer need to attend trade fairs and networking events, make multiple

phone calls, write emails. Lendle and colleagues (2012) argued that "*the main benefit of the Internet as a trade facilitator is to reduce search costs"*. Nevertheless, distance still matters significantly. Hortaçsu and colleagues (2009) attribute the remaining effect to trust, arguing that people trust their neighbours more than people further away.

To examine as precisely as possible the effect of distance Lendle and colleagues (2012) use a gravity framework and control for other gravity trade costs such as the absence of a common language, a common legal system, a border, colonial links, or a free-trade agreement and bilateral shipping costs, including in their eBay dataset. They note that the effect of distance declines online after introducing these trade-cost variables. In contrast, the relative importance of distance online and offline is unchanged, with distance mattering 63% less online than offline.

The elasticity of distance is almost three times lower online than offline. Introducing additional trade costs, the coefficient on distance declines both online and offline, but it remains around three times smaller online. This validates Chaney's (2011) hypothesis that a large part of what drives the distance coefficient in the gravity framework is associated with search costs, which vanish on a platform such as eBay. Lendle and colleagues' research (2012) highlights that common legal systems, trade agreements, colonial links, and borders matter much more offline. In contrast, the absence of a common language seems to matter more online than offline.

However, the latter evidence is no longer valid nowadays because the availability of software performing real-time interpretation, such as Skype Translator, which performs near real-time interpretation on online calls, reduces the importance of language barriers.

To understand what is driving the *"world-flattening*" (Lendle et al., 2012) brought by eBay, the researchers interact the distance coefficient online and offline with the level of corruption and information at the country level. The more significant the level of corruption in the exporting or the importing country, the higher the difference of the distance coefficient between online and offline flows. Likewise, the lower the degree of country information, the larger the difference of the distance coefficient between online and offline flows. Therefore, the reduction in the distance coefficient is higher when the importer and/or the exporter are situated in countries with high levels of corruption and little information available.

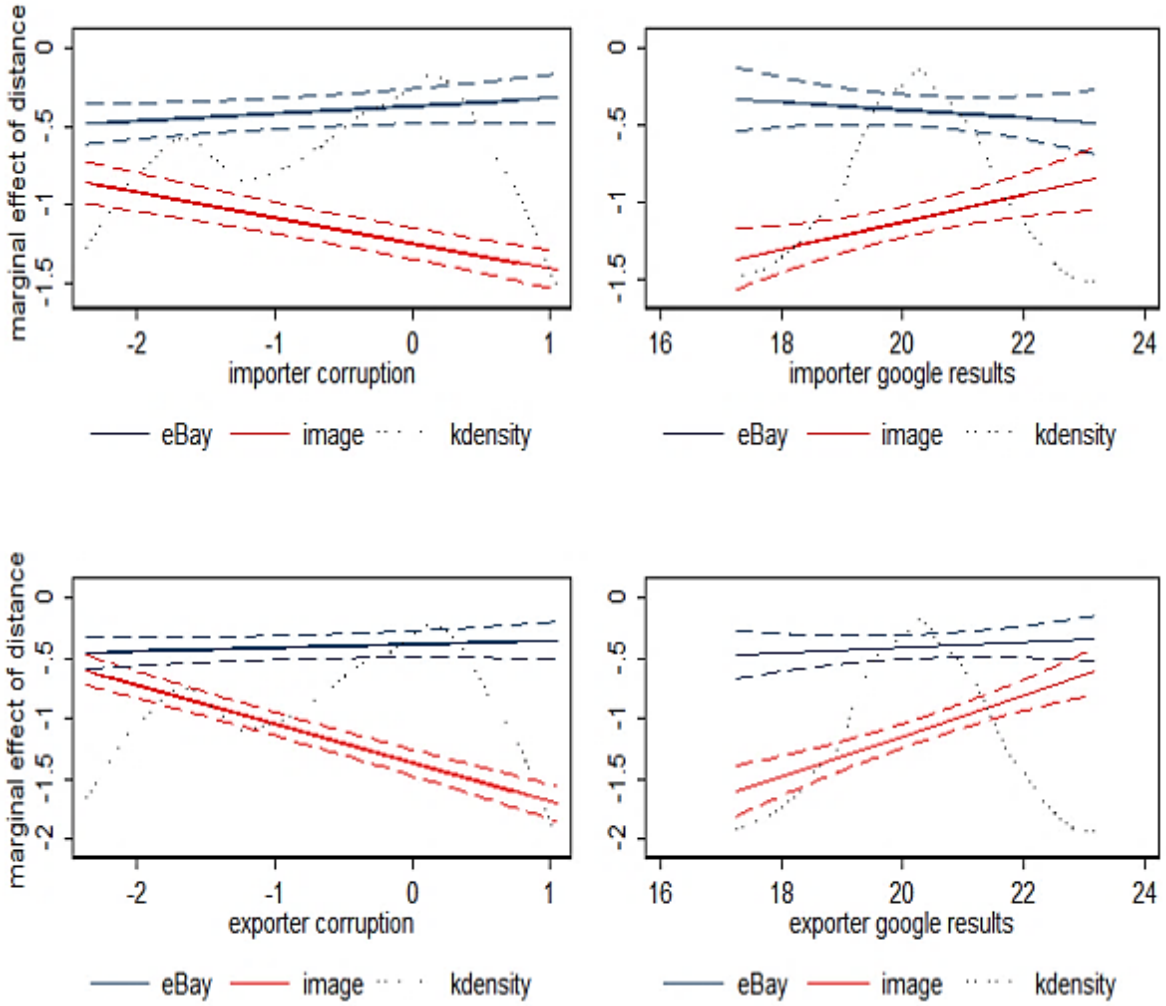


Figure 3.4: Corruption, Google popularity and the distance effect on trade. *"These marginal effects are estimated, the dotted lines give the kernel density estimate of the x-axis variable. The dashed lines are the 95% confidence interval."*(Lendle et al., 2016).

To summarise, eBay reduces the effect of distance on trade flows. Online market platforms' reduction in trade costs helps overcome market and government failures while bringing the global economy towards frictionless trade. The loss of gravity is more significant for remote countries with larger information asymmetries associated, for example, with higher levels of corruption.

3.4 Main cross-border e-commerce enablers

The development perspectives in cross-border sales are high, both in markets with lower online shares and in mature e-retail markets (J. E. Anderson, 1979), cross-border e-commerce is considered the key to accelerating growth of online retail in Europe

(Gomez-Herrera et al., 2014) and globally (Kuah and Wang, 2016). Therefore, in the following paragraphs, we will focus on the most significant cross-border e-commerce enablers.

3.4.1 Advanced Technology

The development of e-commerce is driven by various factors such as Internet penetration rate, the intensity of investments in the mobile telecommunication industry, the feasibility of electronic payments, education level, and spillover effects from neighbouring countries' (Ho et al., 2007).

Mainly, telecommunication services, including Internet, mobile telephony, and data transmission services, provide the basic infrastructure and transmission capacity that make it possible to connect producers, sellers and consumers across the borders and allow goods and services to be offered and purchased through these networks. Cross-border data flow, boosted by data processing and "cloud" computing, and data storage, enables companies to find innovative ways of reaching their consumers, trade goods and services, and coordinate all the steps of the commercial transaction across the globe (World Trade Report, 2018).

A salient aspect of the adoption of digital technology by consumers at the global level is the worldwide trend towards buying goods and services online. Underlying this behavioural shift to online shopping is the widespread use of internet-enabled devices such as smartphones, tablets and laptops, which provide consumers with direct access to online markets and real-time information about a wide range of available goods and services. These devices have revolutionised how people identify, compare and pay for their selected products.

Data contribute to organising goods and services flows, enable control and coordination and international production networks, simplify working with contractors and suppliers and make electronic payments feasible. Data flows are viewed as a means of production, an asset through which some services are traded, GVCs are organised, and some trade facilitation measures are implemented.

As argued by González and Jouanjean (2017), data flows provide a means of sharing information and help reduce market failures. They help match supply and demand; furthermore, they solve issues arising from asymmetric information and finally reduce hold-ups in trade transactions. Mortensen, Diamond and Pissarides (Shimer, 2010) had stated that real-world transactions involve frictions because buyers and sellers incur search costs to match supply and demand. Search costs lead to price dispersion for similar products, to inefficient market outcomes.

Considering their contributions to the theory of information, González and Jouanjean (2017) assess that digital platforms, as conduits of information, reduce market failures such as search frictions or adverse selection, bringing the real economy closer to the early academic ideas based on the free flow of information. In other words, digital platforms allow the creation of more efficient markets and more markets.

Furthermore, e-commerce platforms facilitate the breakdown of language and communication barriers, reducing the importance of language in two ways. First, they minimise the need for one-on-one interactions between buyers and sellers, making translation redundant. Secondly, they allow customers to search for goods in their language, irrespective of where the seller is located. Empirical studies corroborate this impact. Brynolfsson and colleagues (2018) found that introducing a machine translation system on eBay increased export by 17.5%.

To conclude, digital technologies and the Internet may decrease the relevance of distance - be it geographical, linguistic or regulatory-facilitating searches for products. Thanks to the availability of software performing real-time interpretation (such as Skype Translator, which performs near real-time interpretation on online calls), this opens up trade opportunities, especially for small businesses with less developed language skills. ICT development can help SMEs participate in global e-commerce, access new markets and improve their performance. However, to benefit from the opportunities linked to digitalisation, individuals, businesses, and governments must have the possibility to access digital networks and services, which requires broad coverage of digital networks and targeted measures for disadvantaged people, firms and regions

3.4.2 Lower trade costs

As highlighted above, digital technologies, reducing the cost of sharing information across borders and connecting different actors along the value chain, are lowering the entry barriers into global markets, thus overcoming the lack of knowledge and fostering SMEs' participation in international trade. In other words, digital platforms such as Amazon, eBay or Alibaba have substituted traditional physical intermediaries to connect supply and demand.

To overcome asymmetric information about quality and trustworthiness, digital marketplaces have developed alternative mechanisms to building a brand. The most common tool is an online rating system, in which past buyers and sellers post rates for future market participants to see. Another essential application is to provide information on product quality. Rather than enhance knowledge about a particular seller, ratings can inform consumers about the best products available within a

platform. Moreover, these online marketplaces help reduce informational asymmetries and search frictions. They address the constraints posed by thin markets, allowing firms to upscale production and bear the costs of exporting (González and Jouanjean, 2017).

In this subsection, we will examine the potential of digital technologies to reduce trade costs and outline the possibilities for further efficiency gains.

Recent technological advances such as telecommunications, vehicular technologies, electrical engineering and computer science for vehicle, container and trailer tracking and fleet management significantly impact transportation and logistics costs. For example, the combination of vehicle telematics robotisation and artificial intelligence optimise cargo shipment and logistics. The main benefits come from cargo and shipment tracking because it increases operational efficiency, enables real-time adjustments and makes logistics systems more secure. Internet of Things (IoT) sensors can reduce global trade costs by increasing the efficiency of shipping and transport. Firstly, they reduce the number of goods lost in transport. Secondly, shipment tracking systems enable companies to efficiently optimise routes using shipping containers. On average, shipping containers have utilisation rates of only 20% because companies often ship merchandise to many locations. (Lund and Manyika, 2016).

Digital innovation should further foster the adoption of cargo tracking technologies in the coming years. Moreover, using radio-frequency identification technology, it will be possible to track each product, helping reduce inventory costs by up to 70% and loss in transit by 11 to 14% (Inter-American Development Bank, 2017).

Since small firms trade smaller quantities than big enterprises, this suggests that fixed trade costs, such as logistics costs, often make up a more significant share of the unit cost of their goods compared to their rivals that export larger volumes. A decline in logistics costs determines MSMEs' participation in international trade. Therefore, new technologies reduce trade costs by reducing transportation and storage costs and reducing both times to transport and the uncertainty of delivery time due to better logistics.

Finally, new technologies can save time and resources spent on customs procedures. Streamlining procedures using basic ICTs can help reduce the costs of crossing borders. The two main tools are the Electronic Data Interchange (EDI) system and the Electronic Single Window (ESW). The EDI allows transferring trade-related documents. At the same time, the ESW is more extensive and enables trade stakeholders to submit documentation and other information through a single point of entry to complete customs procedures. Firms whose exports were processed under ESW saw an increase of 22.4% in the number of foreign buyers, and their average

exports to each buyer increased by 43.5% (Inter-American Development Bank, 2017). Research carried out by the World Bank also found significant gains for economies with fully operational electronic systems for customs clearance (World Bank Annual Report, 2017). When customs declarations can be submitted and processed online, time spent in border compliance falls by more than 70% for imports and exports. Therefore, even simple technologies can go a long way to reduce trading frictions and boost countries' competitiveness.

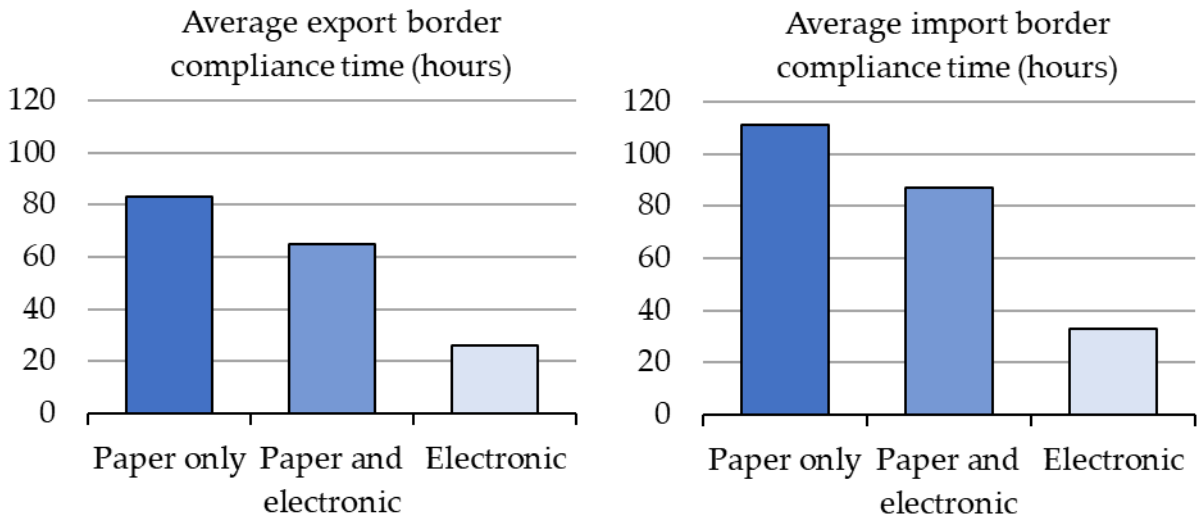


Figure 3.5: Gains from the digitalisation of customs documentation (World Bank Annual Report, 2017).

New technologies, such as blockchain, promise further reductions in the costs related to crossing borders. Ganne (2018) argues that distributed ledger technology could allow single windows to be administered more efficiently, transparent, and securely. Blockchain could help streamline customs formalities by eliminating redundant processes, accelerating customs procedures and customs clearance, reducing costs and fraud, enhancing transparency, and improving coordination between the various agencies, authorities and stakeholders involved in cross-border trade. Additionally, smart contracts can automate specific processes, such as paying duties. Therefore, since cumbersome customs procedures are especially harmful to SMEs, their simplification would foster the entry into the export market of small firms that would otherwise only sell in their domestic markets (World Trade Organization, 2016).

3.5 Assessment of the impact of COVID-19 crises on e-commerce transactions

The COVID-19 pandemic has dominated global economic development during 2020. The pandemic caused a severe deceleration in economic activity for which economies were largely unprepared. Movement restrictions and other government interventions to protect public health have reduced economic activity in most sectors and most countries, affecting production, distribution and consumption (IMF Annual Report, 2020). However, the pandemic has resulted in mixed fortunes for some e-commerce companies, overturning the fortunes of firms offering services such as travel and ride-hailing.

The COVID-19 pandemic has altered trade patterns considerably, at least in the short term, and significant shifts have occurred in the scope and scale of e-commerce during the pandemic. One impact has been an uptake in e-commerce resulting from the need for much activity to move online. Since more people have been using e-commerce more often, businesses with an established online presence and traditional firms with sufficient resources to upgrade their online marketing and sales could benefit from this. However, CBEC has been adversely affected by government restrictions on cross-border transit to constrain virus transmission (UNCTAD, 2021b). Border lockdowns – common in most countries during the pandemic – have restricted shipping and transportation, causing substantial disruptions in supply chains for all trade, both traditional and e-commerce.

Since most cross-border e-commerce consists of goods ordered digitally and subsequently delivered over traditional transit routes through ports, airports and border crossings, disruptions to supply chains disrupt e-commerce. Shortage of staff and enhanced requirements for additional safety precautions have slowed trade processes, such as border inspections. Uncertainties and poor information exchange regarding new protective measures or rules about restrictions have led to significant delays in transit and, in some cases, the exhaustion of storage capacity (UNECE, 2021).

There is evidence that e-commerce businesses have taken the opportunity to compensate for the disruption to traditional trading arrangements. The consultancy McKinsey, for example, reports that CBEC volumes picked up from the second quarter of 2020 as soon as economies adjusted to pandemic realities and initial logistical challenges were addressed. UPS and PayPal reported considerable growth in the second quarter on cross-border shipment volumes and values (McKinsey&Company, 2020). E-commerce is unevenly distributed globally, with most transactions in the Asia-Pacific region, that is, also, the most populous. The eMarketer's 2020 *Global E-*

Commerce Report estimated that 62% of global retail e-commerce transactions by value occurred in that region in 2020, with North America and Western Europe responsible for the remainder (eMarketer, 2020). The Middle East, Africa and Latin America accounted for just 3% of total e-trade, as illustrated in Figure 3.6.

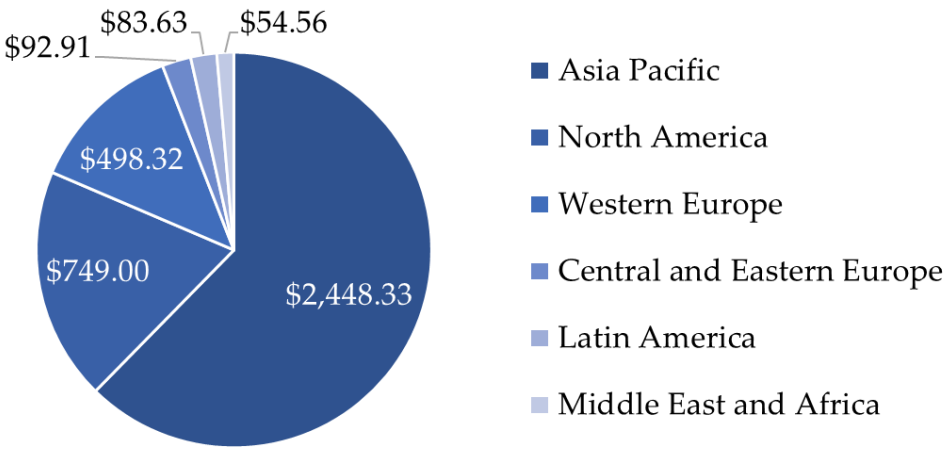


Figure 3.6: Global Share of retail e-commerce sales by Region, 2020 (billion US $).

One of the most remarkable trends is the unprecedented usage of mobile devices. In 2021, smartphones accounted for almost 70% of retail website visits worldwide. This device is prevalent across Asia, with South Korea generating up to 65% of its total online transaction volume via mobile traffic. Mobile devices are used, especially in regions that lack other digital infrastructures. Nevertheless, as reported in the paper "*E-Commerce B2C: la chiave per ripartire*"(Perego et al., 2020) edited by *Dipartimento di Ingegneria Gestionale del Politecnico di Milano* (DIG), in 2020, evidence confirms that 51% of purchases online were carried out using a smartphone in Italy. Considering the top product compartments, the incidence of this device reaches 59% for Food & Grocery, 57% for Fashion, 55% for Electronics and 54% for Media (Perego et al., 2020).

3.5.1 COVID-19 boosts online retail sales

In 2020, over two billion people ordered goods or services online, and during the same year, e-retail sales overcame $ 4,200 billion worldwide, as shown in Figure 3.7.

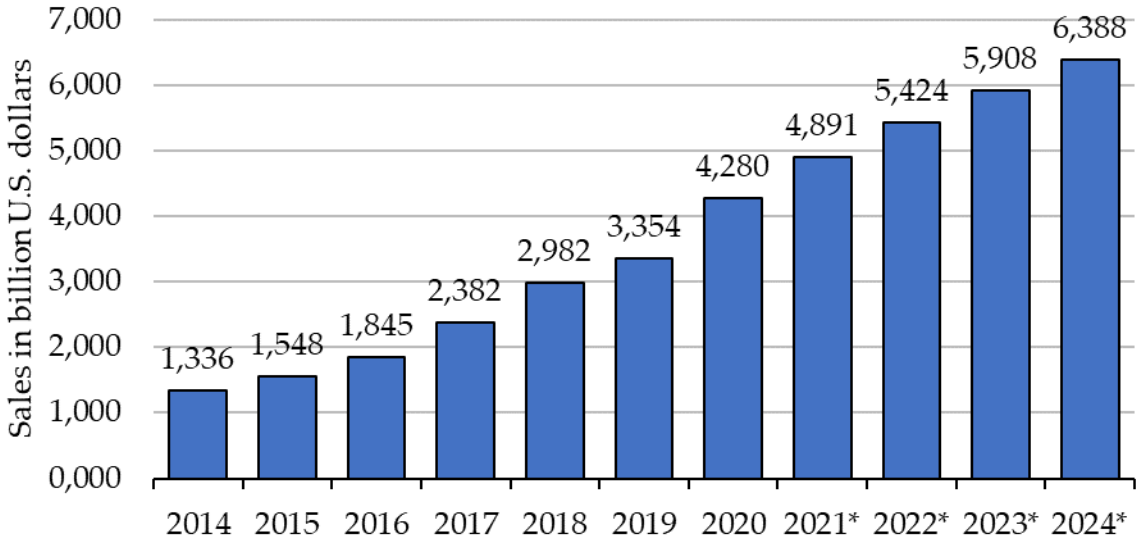


Figure 3.7: Retail e-commerce sales worldwide from 2014 to 2024 (billion US $) (Statista, 2022).

Figure 3.7 highlights the outstanding growth outlook of retail e-commerce sales from 2014 until 2024, boosted by the COVID-19 pandemic in 2020. The pandemic has substantially impacted retail, including a significant transfer of market share from offline to online businesses. National lockdowns, restrictions on movement, public anxiety about infection, and mandatory closures of non-essential retail stores have markedly impacted consumer behaviour patterns, encouraging B2C online shopping at the expense of traditional retail worldwide (UNCTAD, 2021b).

For sure, e-commerce will continue to shape the consumer and retail industries, change shopping behaviour, and contribute to the digital transformation of retail business models. A tremendous increase in e-commerce in the retail sector is expected in the next few years, with global revenues in US dollars growing around 80% until 2025 compared to 2019 (Statista - The Statistics Portal).

The UNCTAD report *"Estimates of global e-commerce 2019 and preliminary assessment of COVID-19 impact on online retail 2020"*, released on 3 May 2021 (UNCTAD 2021a), corroborates the dramatic rise in e-commerce amid movement restrictions induced by the COVID-19 pandemic.

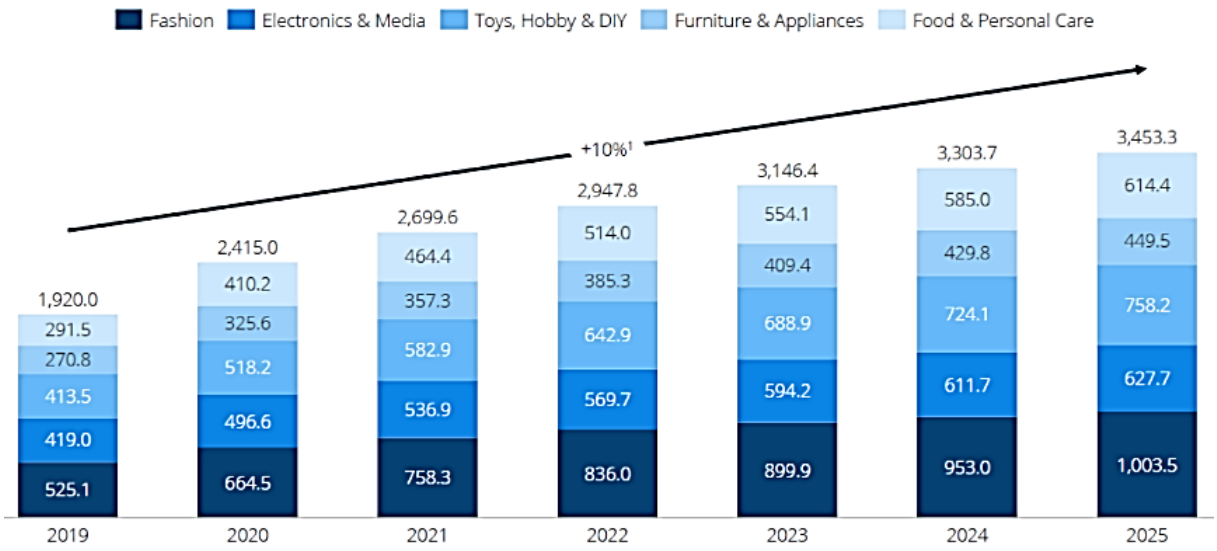


Figure 3.8: The global e-commerce revenue forecast in billion US $ 2019-2025 (Statista, 2020).

Focusing on Italy, data collected by *"Osservatorio e-Commerce B2C-Dipartimento di Ingegneria Gestionale del Politecnico di Milano"* highlight that at the end of 2020, the Italian B2C e-commerce of physical goods and services declined by about 3% compared to 2019, accounting for € 30.6 billion (Perego et al., 2021).

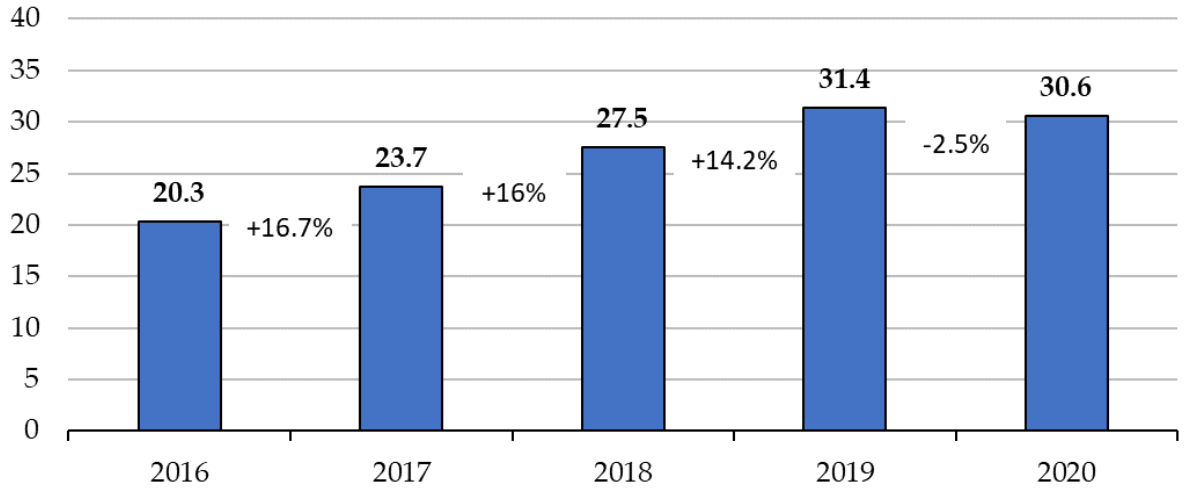


Figure 3.9: Italian B2C e-commerce from 2016 to 2020 (in billion Euro) (Osservatorio Export Digitale, 2021).

Specifically, online retail sales reached € 23.4 billion, growing by € 5.5 billion (+31%) compared to 2019, the highest annual increase ever recorded. The leading sectors are

Electronics&Appiances (€ 6.2 billion), followed by Fashion (€ 3.9 billion) and Food&Grocery, which grew by 70%, accounting for approximately € 2.7 billion.

On the other hand, in 2020, online service sales declined by about 47% compared to 2019 owing to measures to contain the pandemic, particularly movement restrictions. The most affected sectors were Transport and Tourism which recorded minus 56%, the sector "other", included Ticketing, decreased by about 30%. Only The insurance sector increased by 6% (Perego et al., 2020).

According to the research *"Export digitale, Covid ed emergenza: strategie per la ripartenza"*, carried out in 2020-2021 by *Osservatorio Export Digitale – Dipartimento di Ingegneria Gestionale del Politecnico di Milano,* CBEC of physical goods**,** including B2C and B2B2C, grew by 15%, confirming the trend started in 2018 and reached € 13.5 billion in 2020. The weight of B2C CBEC related to export offline jumped by 2% (from 7% to 9%). B2C CBEC growth counterbalanced the disruption in B2B export (Perego et al., 2021).

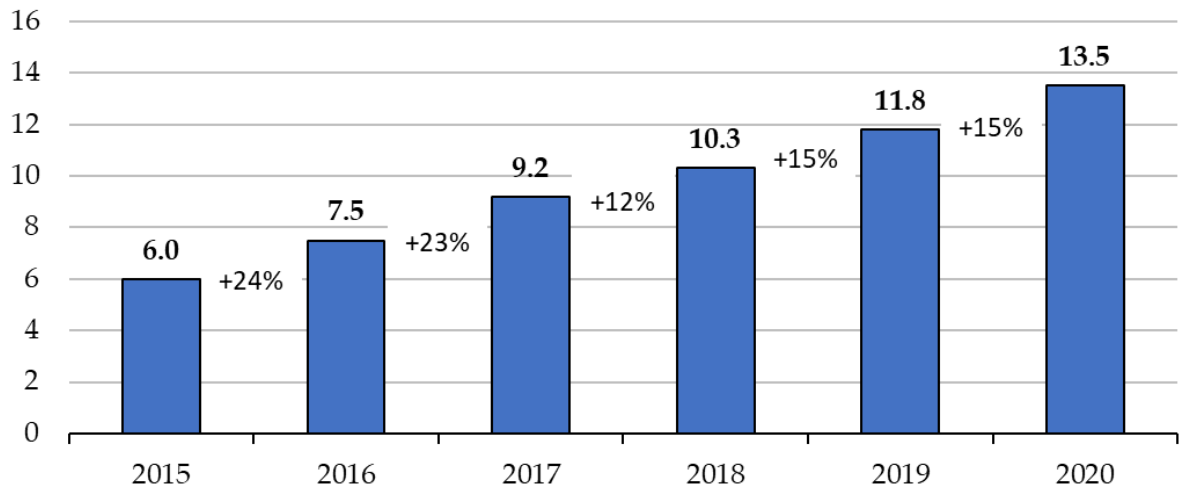


Figure 3.10: Italian CBEC B2C from 2015 to 2020 (in Billion Euro) (Osservatorio Export Digitale, 2021).

The leading sector is Fashion, even if its share decreased, accounting for € 7.1 billion with a share of 53%, followed by Food&Grocery, which increased to 14%, accounting for € 1.9 billion. The third growing sector is Furniture, whose share increased by 8% (€ 1.1 billion) compared to 2019. The other sectors, including Electronics&Media, Cosmetics&Personal Care, Toys, Hobby&DIY, account for 25%. Despite the positive trend registered in the last years, just a minority of Italian companies internationalise.

In 2020 online exports B2B accounts for € 127 billion, decreasing by about 5% compared to 2019. Nevertheless, B2B online exports played a fundamental role in compensating offline Italian export, which fell by 9.7%.

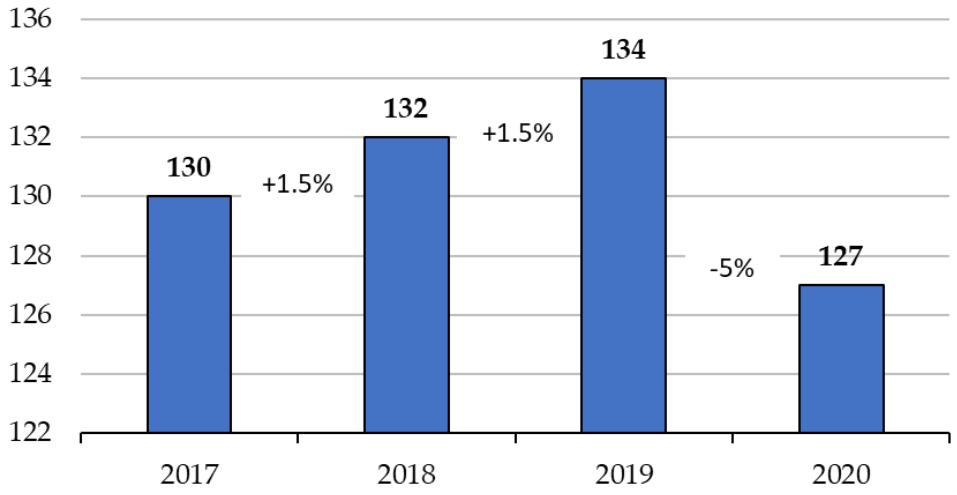


Figure 3.11: Italian CBEC B2B from 2017 to 2020 (in billion Euro) (Osservatorio Export Digitale, 2021).

On the contrary, B2B online exports of consumer goods and pharmaceuticals have increased compared to 2019.

Estimates by the *School of Management del Politecnico di Milano* show that the automotive industry was the most digitalised supply chain for export flows in 2020. In the same year, the automotive sector accounted for € 23.5 billion representing 18.5% of B2B digital exports, Textile and Fashion accounted for € 18.3 billion (14.5%), Mechanics for € 10 billion (11.8%). Finally, Consumer goods represent 8% (€ 10 billion), Pharmaceuticals 4.6% (€ 6 billion) Electrical Equipment 4% (€ 5 billion), Electronics&Media 3% (€ 3.5 billion), and other sectors (for example, Constructions and Chemicals), make up 36% of digital exports B2B (Perego et al., 2021).

The COVID-19 shock has further accelerated online platforms' uptake, with activity shifting towards online marketplaces, at least in those sectors less dependent on physical proximity (OECD, 2020b). This shift to online platforms has enhanced resilience by sustaining production during a shock that severely disrupted traditional economic activities. It also promises to improve productivity growth by reducing transaction costs, information asymmetries and entry costs for new providers (OECD, 2019; OECD, 2021). For example, the services delivered by online platforms, advanced

low-cost logistics, payment services and better communications between buyers and suppliers may be especially beneficial for SMEs.

This may level the playing field between large and small firms. Still, it needs to be balanced against the potential for online platforms to generate winner-take-all dynamics. Indeed, this situation would weaken competition, on one side, and the challenges that the associated "gig-economy" work arrangements imply for traditional social protection regimes (OECD, 2019). Thus, ensuring that online platforms can contribute to inclusive growth is a key policy issue, and policy coordination at G20 levels can play a role starting with supporting the collection of comprehensive cross-country data on online platforms' activities.

3.6 CBEC Barriers

Despite the growth of e-commerce and the new opportunities for small businesses, new trade barriers hamper cross-border e-commerce. Barriers affecting traditional trade are more burdensome for e-traders because they sell to many markets simultaneously; they are small-sized and are seldom physically established in the markets they are selling to. Finally, they often send many small consignments rather than single larger ones. These challenges confirm long-standing problems that have affected prospects for e-commerce during the past decade and more. Alongside growth opportunities in e-commerce, the COVID-19 pandemic has reinforced the importance of addressing barriers to e-commerce to leverage the benefits that can be derived from it and to cope with the potential downsides of digital transformation. Reviewing the latest studies, we identified the following barriers specific to e-commerce.

3.6.1 ICT infrastructure and services

E-commerce relies on infrastructure for connectivity and data communications and the delivery of goods and services. Domestic e-commerce development is constrained by digital devices that leave many people unconnected. Access to fixed and mobile broadband services is almost universal in developed countries, though the usage varies according to social background, age and income.

Even in developed countries, infrastructure constraints affect firms' e-business participation rates. In 2017, for instance, the e-commerce participation rate for SMEs in most OECD countries was less than half that for large firms (OECD, 2019). Low digitalisation levels and difficulties in accessing and adopting new technologies make it more difficult and less cost-effective for smaller firms to change work processes or

introduce an e-shopping channel. All this reduced their flexibility in responding to the present crisis (OECD, 2020b). Connectivity is a human issue as well as one of infrastructure. The importance of ICT infrastructure, connectivity and services to e-commerce has been reinforced by increased demand during the pandemic. Large scale infrastructure investments take time to implement, but network operators have sought to increase capacity in response to this growth in demand. European Union governments and regulators have authorised telecom operators and Internet service providers to take exceptional measures, including reducing online speeds, to prevent network congestion (Szabo and Fabok, 2020).

3.6.2 Lack of digital skills

Infrastructure, services and regulations are insufficient without skills on both supply and demand sides of e-commerce markets. Digital literacy is crucial for the development of the digital economy. Skills required by businesses are not concerned with the effective use of technology but also with marketing, enterprise and innovation for digital markets. E-commerce requires new ways of engaging with international markets and managing relationships with customers who are often unfamiliar with the modalities and the potential benefits of e-commerce. Both start-ups and established firms moving online need personnel with relevant skills.

Small businesses, in particular, find it more challenging to adapt to the need for online presence and services in the absence of such skills. The pandemic has shown that many SMEs have lacked the business and technical skills to leverage e-commerce opportunities.

Older and less digitally engaged consumers, including e-shopping newcomers, are often unaware of the potential benefits e-commerce offers since they are less experienced in navigating apps and websites and more concerned about the risks associated with online transactions. Their difficulties may be exacerbated by literacy and language limitations on those apps and websites. In other words, digital literacy and self-confidence among consumers are essential for the growth of domestic e-commerce.

3.6.3 Cultural barriers

Adapting websites to the local language can be costly and burdensome, especially if the sales volume is small and, in those cases, when firms are not sure of what is permitted by local regulations. Most countries also have restrictions on what can be published on websites. For instance, Saudi Arabia has regulations on how much bare skin on women is displayed on websites, and children's pyjamas with pictures of pigs

cannot be displayed or sold in the country (Sverige and Kommerskollegium, 2012). Such rules may force the company not to reveal its entire range of products on its website. This regulation affects firms' business operations and increases costs and administrative workload.

3.6.4 Consumers and sales laws

As highlighted, e-commerce businesses simultaneously direct their sales to different markets on a global scale, becoming subject to the various consumer and sales laws. They struggle to find adequate information about the relevant laws, regulations, procedures and methods applicable to foreign markets. SMEs find it difficult and costly to understand the several rules and regulations that must be considered. They lack the resources to collect and analyse all the relevant information about the target markets. For these reasons, e-traders may inadvertently violate the laws and regulations of certain countries. For instance, the study *"E-commerce – New Opportunities, New barriers"* carried out by the National Board of Trade in 2012, reports that Swedish companies active in the USA and China complained that information provided by the authorities regarding the labelling of products and the rules on consumer information was unclear (Sverige and Kommerskollegium, 2012).

E-traders have to face costs and administrative problems, and, accordingly, they have to adjust their sales and business operations. For instance, some countries require businesses to register with the local authorities to sell particular articles. These requirements raise the administrative burden for businesses, mainly if they sell products in many different markets. It is easier for companies with a local establishment to manage these problems, as their volumes are usually more prominent, and they can handle the various requirements for each country separately. E-traders, however, rarely have a local establishment. Thus, they find it challenging to deal with this type of problem because regulations are often unclear, and businesses encounter problems obtaining clarification from the authorities.

A related question is the need to efficiently resolve disputes that may arise, especially in B2C trade. Controversies often concern small amounts of money, and, in practice, it is often challenging to take a dispute to a regular court. For this reason, there are currently alternative mechanisms to resolve contentions. However, when trading outside the European Economic Area (EEA), such dispute mechanisms are often difficult to access. Both for the buyer and the seller, the lack of transparency hampers cross-border e-commerce.

3.6.5 Taxes and digital payments

Value Added Tax (VAT) problems within and outside the EU are related to the lack of clarity regarding which country the VAT should be accounted for. A common problem is VAT registration requirements: businesses must be registered in the target markets if they sell over a certain amount. Most companies that do not register locally bypass this by hiring a local VAT representative, bearing additional costs. This issue implies a demand for the establishment, which contradicts the original idea of e-commerce.

This issue becomes particularly problematic for e-traders that accept returns in stores because sales often occur in one state while the customer might return the purchased good in another. Moreover, countries divided into different states, such as the United States, Canada and Australia, may bring up further problems for e-traders because each state has its VAT and tax regulations, thus resulting in additional administrative costs. VAT regulations can also differ between digital and physical sales. In many countries, as in Norway, VAT on digital books is higher than on physical books, negatively affecting the trade in digital books. There are also differences in the VAT applied on movies shown on cinema, DVD and video-on-demand (VOD). Cinema movies usually have the lowest VAT, negatively affecting VOD sales (Sverige and Kommerskollegium, 2012).

The availability and adoption of digital payments systems that effectively function with e-commerce platforms are facilitators in the spread of e-commerce (World Investment Report, 2020). Moreover, it is necessary for consumers to feel secure when carrying out transactions over the Internet. Anxiety about possible fraud inhibits online payments, particularly in countries with inadequate data privacy and consumer protection laws. Many businesses use online payment services such as PayPal and Moneybookers, which, on the other hand, have gained consistent power, leaving e-traders at the mercy of their terms and conditions.

Significant obstacles to the development of CBEC are the requirement to carry out sales in the local currency, on one side – for instance, selling products and services to customers in China or in South Africa – and the difficulty in some countries in getting access to the customers' credit history, on the other. Only banks can access credit reports. Nevertheless, only information regarding missed or late payments is disclosed, while annual income is not, making it difficult for firms to evaluate potential consumers' creditworthiness.

CBEC is highly dependent on the ability of e-traders to transfer funds quickly, reliably and at low commission rates across international borders and between different currencies. Trade facilitation mechanisms, cooperation between national and

commercial banks in trading countries, and established legal and regulatory frameworks governing digital transactions are crucial enablers.

The worldwide growth of online shopping during the pandemic has led to the increased use of digital payment mechanisms for domestic e-commerce. Nevertheless, despite mobile money's growing popularity, UNCTAD assessments report, in many countries, a strong *cash culture*, since consumers trust cash more than cashless options, especially for goods that require delivery (OECD, 2020b). Even in Europe, where digital markets are highly developed, McKinsey reports that 18% of consumers surveyed say they do not use digital channels because of a lack of trust (McKinsey&Company, 2021). The crucial factor inhibiting adoption appears the uncertainty that the goods purchased will be delivered, and data will not be misused.

Digital wallets – software systems that store payment information, enabling expenditure through authenticated devices such as mobile phones – are used by citizens in many countries and have become very popular in some, such as South Korea (Fintech News Honk Kong, 2020). World Bank (2020) notes that digital financial services may lower costs to service providers by maximising economies of scale, increasing speed, security and transparency of transactions, and allowing diversification of services to attract consumers lower down the income scale. Three factors are essential in enabling the realisation of these potential benefits: financial inclusion, the availability of digital payment channels, and consumer confidence.

Cybersecurity, in particular, is essential in enabling trust in, and thereby greater use of, digital payments infrastructure. There is evidence of increased cybersecurity and data abuse as new users adopt technologies vulnerable to fraud in countries with weak legal and regulatory frameworks for cybersecurity and data protection (OECD, 2020b). The Virtual Private Network (VPN) provider Atlas reports that the number of phishing sites more than trebled between January and the middle of March 2020 as the pandemic took hold within the country. Google has reported a surge in phishing sites worldwide, reaching more than two million by late 2020, already more than 19% higher than in 2019.

3.6.6 Cross-border data transfer

Transferring data across borders is a prerequisite for utilising cloud services. Laws and regulations restricting firms' ability to store and transfer data across national borders – mainly in personal details and other confidential information – are crucial problems. Even if it is required to protect individuals' privacy and personal integrity, it must be designed to promote technological innovation and the economic advantages of cross-border data transfer. Servers are often situated in a different country from the cloud

user. Restrictions on cross-border data transfer form an indirect barrier to cloud services' use – and promotion.

3.6.7 Intellectual property

Problems related to intellectual property represent one of the most relevant barriers within and outside the EU since intellectual property rights are often controlled at a national level and are not harmonised across national borders. For example, most countries represent the copyright holder by a national collecting society. Licences to use copyright material, such as music or film, are often restricted to specific locations. The same regards nationally registered trademarks. Since intellectual property rights are usually regulated and protected nationally, businesses that sell to several countries will generally secure the rights in each new country separately.

However, it is burdensome to find information about the intellectual property rights that must be registered – trademarks, patterns and patents – thus, businesses risk violating intellectual property rights unwittingly. This is a problem for traditional trade, but it is more pressing for e-traders who usually sell in many different markets without establishing themselves physically.

Illegal downloading is also expected and affects sales of computer games and mobile phone applications. Users can unlock restrictions and 'jailbreak' their smartphones, thus downloading apps from file sharing sites without paying (Sverige and Kommerskollegium, 2012). It is even suggested that Google's rules for advertising and keywords lead to trademark infringements (Sverige and Kommerskollegium, 2012). If a company name is considered generic, it is not protected, so other companies are allowed to show advertisements when the company name is searched. In addition, competitors may use the name of Italian companies on their products and design them to appear as if they are the original product. These businesses rank to a high position in the list of returned hits and can 'piggyback' their way to the top of the list, exploiting other companies' excellent reputation.

Copyrighted material differs from other intellectual property, as it does not need to be registered; hence there is no register with current copyright regulations. According to many companies, there is a lack of information about how to purchase licences for copyright-protected material; this impedes the development of legal services for downloading and streaming such material, particularly across borders. Mainly, small businesses are also concerned regarding the risk of infringing copyrighted material unwittingly.

Finally, domain grabbing is becoming more and more common. It involves the registration and uses, in a particular country, of a domain name that is identical or

similar to the name of a trademark belonging to someone else. This illegal activity makes the brand owner unable to register the same domain name legitimately in the operating country or abroad. The legal proprietor may be open to accusations of having infringed the trademark that has been reported as a domain name. In China and other Asian countries, it frequently happens that a business chooses to manage domain grabbing registering domain names in countries where it is thought to be the most important. However, this method can be too expensive and complicated for small businesses.

3.6.8 Customs procedures and trade logistics

Cumbersome and inefficient customs and border arrangements present bottlenecks to the growth of international e-commerce through ports, airports and border crossing points. They are particularly problematic for small consignments with relatively low margins, representing the most potential value for e-commerce MSMEs and start-up businesses. Such problems can be addressed and trade facilitation measures can reduce trade costs. The United Nations Centre defines the policies for Trade Facilitation and Electronic Business (UN/CEFACT) as "*the simplification, standardisation and harmonisation of procedures and associated information flows required to move goods from seller to buyer and to make payment*' (UN/CEFACT, 2012). It includes processes such as those at customs and border crossings, digital tracking and consignment management, the introduction of paperless trade and 'single windows' for trade documentation (Buy-Ship-Pay Models). Some countries, mainly developed countries handling large volumes of international commerce, have implemented extensive trade facilitation arrangements, reducing costs and enhancing their competitiveness along trade routes (United Nations, 2020).

E-traders are often small businesses and are more sensitive to the costs incurred due to customs procedures to decide not to enter specific markets (Sverige and Kommerskollegium, 2012). Complicated and overly burdensome customs procedures hamper international trade. However, they can damage CBEC, as they send many small consignments rather than single large ones. Some countries, such as Russia or Ukraine, have outdated and time-consuming customs procedures. Here EDI (Electronic Data Interchange) files are not accepted; each parcel must be declared: contents, dimensions, and weight.

Moreover, the option to return products bought via the Internet is essential for consumer rights. However, the costs incurred and the administrative procedures with cross-border returns prove costly for e-traders who ship their goods over long distances. In Turkey, for example, the seller is responsible for all expenses incurred on returns.

As noted earlier, the pandemic has tended to reduce the value and volume of international e-commerce, but it has increased its share within domestic retail. Most e-businesses surveyed by UNCTAD (World Investment Report, 2020) reported disruption to supply chains due to lockdowns, movement restrictions, business closures and closed borders, reinforcing pre-existing bottlenecks. Poor trade logistics and weak trade facilitation provided a poor starting point for merchants hit by the pandemic and struggling to maintain international sales.

COVID-19 protective measures have added to the difficulties encountered, even where the pandemic has otherwise increased opportunities. The preference of online shoppers for home delivery during the pandemic has emphasised the importance of non-digital infrastructure in enabling e-commerce. In some cases – such as local food deliveries – this need has been met by retailers organising their deliveries or using specialist delivery businesses, such as local firms or international platforms like Deliveroo and Uber Eats.

Another challenge that mainly affects SMEs and businesses seeking to diversify or expand into new international and domestic markets is their difficulty in obtaining information about market opportunities and reaching out to new potential customers. Relevant information resources, platforms, and portals can substantially impact the viability of both e-commerce start-ups and established businesses seeking to move online. These can be provided or supported by governments, business associations or third-party intermediaries.

The pandemic has reinforced the desirability of better trade facilitation and enabled some acceleration of already underway processes. UNCTAD has proposed a range of broad policies and practical measures that governments can take to maintain transport, customs management and associated processes during the pandemic, including promoting paperless systems and standards to expedite customs clearance. One such potential change is the introduction of a *de minimis* threshold to exempt low-value consignments from tariffs in cross-border trade. This can be particularly beneficial for SMEs, many of which rely on smaller consignments in their export trade and informal traders at border crossing points. For the first time in its history, revenue from parcels deliveries has exceeded that from letters for the United Kingdom's postal service, Royal Mail, rising to 60% compared with 47% before the crisis.

Increased demand and COVID-induced shortages of personnel have already compounded poor postal reliability performance, inhibiting merchants from offering online sales and consumers from making online purchases. Global data from UPU shows that the average time for customs and border clearance for inbound parcels worldwide increased by 97% from late January to mid-April 2020, with a spread from 2 to 64 hours. Many packages strand in the logistical 'no man's land between sender

and recipient. Firms that can find ways to solve these problems, such as using express couriers, can gain a competitive advantage.

3.7 Synthesis

Experience worldwide has shown that e-commerce develops and thrives best in an enabling environment facilitated by a coherent policy framework built on a thorough understanding of economic activity and government commitment to support innovation and enterprise (OECD, 2020b). The most effective strategies for e-commerce are built on comprehensive assessments of the national business environment that identify critical gaps requiring intervention (World Investment Report, 2020).

Alongside opportunities for growth in e-commerce, the pandemic has clarified significant barriers to that development. In most cases, these challenges are not new but manifest long-standing problems that have affected prospects for e-commerce during the past decade and more. The extent to which trends experienced during the crisis will continue during recovery is uncertain and will depend on the pace of recovery and the nature and extent of measures taken to facilitate it.

Many consumers expect to continue spending more online after the crisis than before. Experience of online entertainment services and the fact that more people have crossed entry barriers is likely to sustain higher usage levels where they are concerned. E-commerce platforms are likely to retain many, though perhaps not all, of the gains in market share they have made during the pandemic vis-à-vis offline markets. The level of participation in digital technology and the Internet is a powerful indicator of an economy's capacity to leverage e-commerce. The ability of businesses to participate in international markets depends increasingly on the quality of digital connectivity available.

On the other hand, the possibility of citizens to shop online or use online commercial services depends on the availability of reliable communications networks, the affordability of suitable hardware and data packages, the existence of relevant online platforms and services, the presence of attractive digital payment mechanisms, and individuals' capabilities and digital literacy. Policies have to bridge barriers and build trust and confidence in online business.

Despite the investment in digital transformation forced by the pandemic, SMEs continue to lag behind larger firms in adopting more advanced digital technologies. Policy efforts should aim to:

- strengthen SME's use of the digital economy, which requires digital skills as well as skills that complement digital technologies, such as complex problem-solving skills, and SME's digital awareness, through workforce training and the provision of educational materials (OECD, 2019);
- better connect SMEs with digital solutions providers and relieve pressure on digital infrastructure via investments in the deployment of high-speed and new generation broadband;
- increase focus on raising SME capacity for digital security risk management and data integrity protection (G20-OECD, 2015).

To support SMEs to access finance, the *G20-OECD High Level Principles on SME Financing*, (2015) could be implemented to reflect better the post-COVID context for SME financing and recent developments in 'Fintech' and related regulatory aspects, as suggested by G20 Finance Ministers and Central Bank Governors in July 2020.

4. How to overcome internationalisation barriers: State Aids and Export Promotion Programs

4.1 State Aids and Export Promotion Programs: a general overview and some examples

The previous chapter discussed the most common difficulties and barriers enterprises face during internationalisation. These barriers are especially challenging for the micro, small and medium enterprises, given the smaller amount of resources available and the impossibility to leverage on economies of scale concerning large companies. At the same time, SMEs represent the largest part of the overall number of European companies. Indeed, according to Statista, in 2020, enterprises with more than 250 employees amounted to 0.2% of the non-financial European companies. 93.3% were micro-enterprises, 5.7% were small enterprises, and 0.9% were medium enterprises (Statista, 2020). In other words, MSMEs represent over 99% of the total number of businesses in Europe and provide about 66% of workplaces. However, they still represent less than half of imports and exports (European Union, 2021).

Moreover, the distribution of the SMEs varies country by country, as well as their weight on the national exports. For example, in 2019, according to OECD statistics (OECD, 2022), the highest export values in the three different categories (micro, small, medium enterprises) were recorded in:

- Germany for micro-enterprises (worth $ 59.1 billion);
- Italy for small enterprises ($ 80.1 billion, as shown in Figure 4.1);
- The Netherlands for medium enterprises ($ 170 billion).

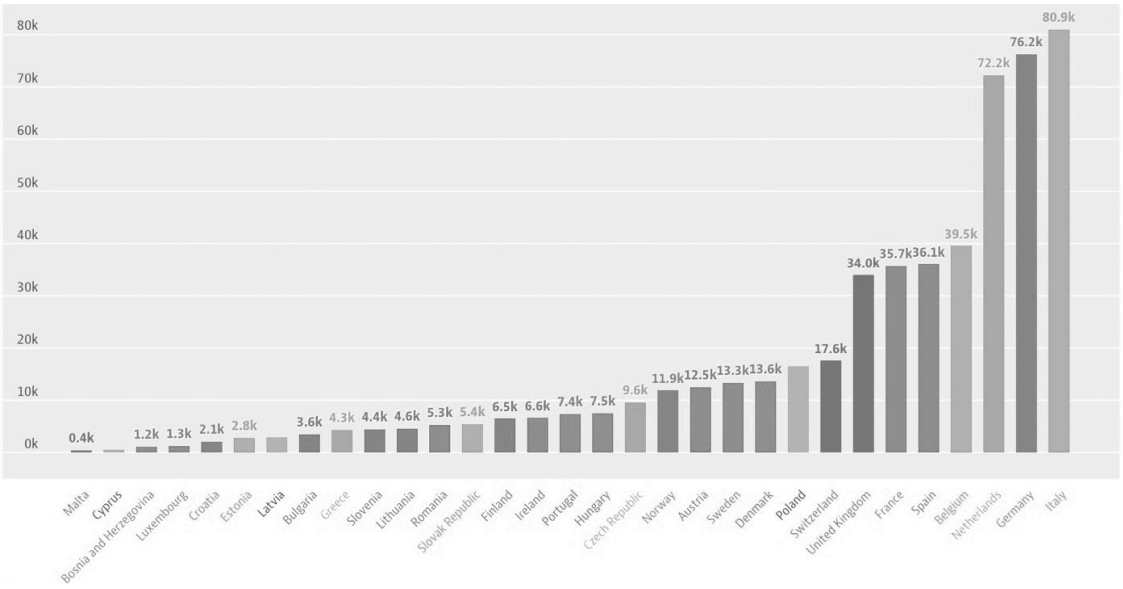


Figure 4.1: Medium enterprises export value by European country, 2019 (OECD, 2022)

These numbers are just a small proof of the importance of SMEs for the European economy. Therefore, it is important to support and provide them with a different type of aid to boost their internationalisation, which the large enterprises nowadays predominate. Indeed, as we can see in Figure 4.2, in which are represented only the most significant European exporters, the export value of large enterprises is still the biggest share of total export in most cases:

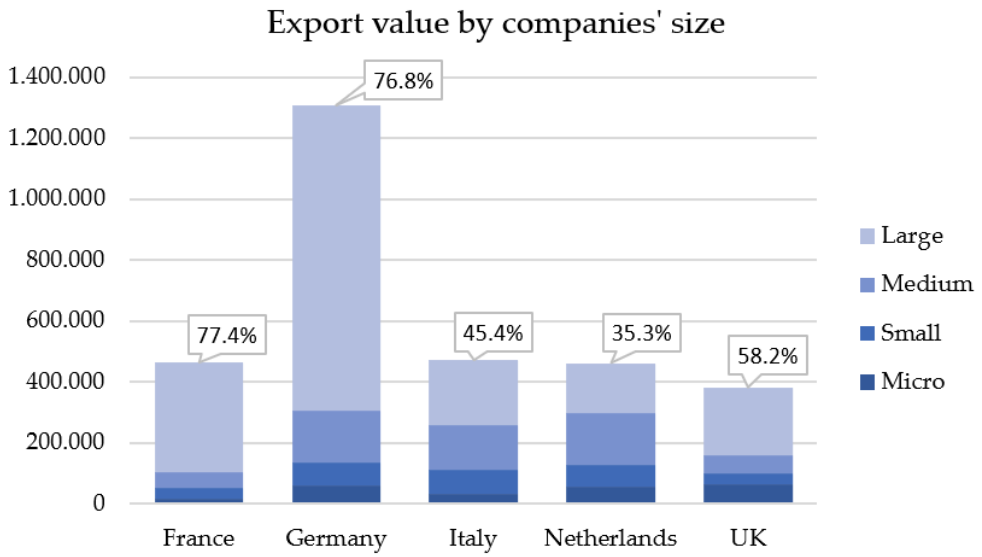


Figure 4.2: Export value in millions US $, divided by companies' size, focusing on large companies (OECD, 2022).

The EU launched many different programs to support MSMEs internationalisation in the last decades (European Union, 2021).

Before going into the details of the internationalisation-related public programs, it is helpful to define the so-called "state aid". According to the Italian government, "state aid" as defined in "*Aiuti di Stato: Proroga del Quadro Europeo fino al 30 giugno 2022"* is "*any transfer of public resources in favour of certain companies or productions which, by conferring a selective economic advantage, distorts or threatens to distort competition"* (Dipartimento per le Politiche Europee, 2022).These programs called Export Promotion Programs (EPPs) may be related to specific goals, such as fostering firms' internationalisation. An EPP *is "a program implemented by public entities, trade associations, and other organisations to help firms, especially SMEs, overcome limitations on internationalisation and reduce the negative effects of export barriers"* (Mota et al., 2021).

In their research Impact of Export Promotion Programs (2021), Mota and colleagues examine the relationship of Export Promotion Programs (EPPs), sponsored by a Portuguese Regional Association for *Development on Trade and Industry*, with firms' export performance. The research contributes to the literature providing evidence on the role of EPP on firms' export performance behaviour promoted by regional development associations. Two models were applied using panel data analyses that relate export performance to variables such as participation in EPPs, age and size of firms. Data on 198 firms for the sampling period 2010 and 2018 was drawn from a Portuguese Regional Development Association and SABI (Iberian Balance sheet Analysis System) database. The results show that participation in EPPs does have a positive influence on the export performance of firms, especially for those firms with previous export experience, demonstrating the importance of using these programs. Findings also document that firm size relates positively export performance, whereas firms age show a negative effect on export performance, suggesting that larger firms with more resources positively influence exports and an increase in firms' age may increase their cultural inertia, inability to change strategies, decreasing their export performance, respectively. Finally, the participation in EPPs seems not to influence export performance for firms without previous export experience.

As we saw in the previous definition, state aid can threaten free-market competition. For this reason, they need to be approved by the European Union commission only under specific requirements. Indeed, they are allowed only if:

- they make it possible to achieve objectives of common interest (services of general economic interest, social and regional cohesion, employment, research and development, sustainable development, promotion of cultural diversity, etc.);
- they are the right instrument to correct inevitable "market failures".

However, the EU commission still allows the single countries with a quite large degree of freedom for what concerns the focus, the type of support used, the financial distribution of the EPP (Dvouletý et al., 2021). An important principle to consider when designing new policies is the "*De minimis*" principle. It declares that: *"De minimis aid refers to small amounts of state aid to undertakings (essentially companies) that EU countries do not have to notify the European Commission about. The maximum amount is € 200,000 for each undertaking over a 3-year period*"(European Union, 2013). The reason is that the European Commission deems this amount of money not to impact the free competition. The state aid subject of our research falls into this category, as the maximum amount that can be transferred to each financed company is equal to € 10,000.

Market failures are the main reasons that drive national governments to design and implement these policies. Some market failures are not specific to companies' internationalisation, such as uncertainty, asymmetric information, indivisibilities, high transaction costs, while some of them are. One of the main difficulties companies may face running an internationalisation plan is the "Liability of the foreignness". This term concerns the additional costs that an enterprise operating in a foreign market will face. These costs are related to low level of local knowledge, discriminatory attitudes that local stakeholders may have, and the difficulties of managing organisations from long distances (Nachum, 2015).

Starting from the 90s, the Export Promotion Programs have constantly increased their number (Freixanet, 2012), which is quite consistent with the ongoing globalisation of our economy.

According to Catanzaro and Teyssier (2021), state aid can be mainly classified into three categories:

- informational support: it includes seminars, meetings, conferences, or training sessions, as well as helpful documentation to support the internationalisation process, such as market studies, knowledge about specific needs of customers abroad;
- operational support: it includes services aimed at involving the foreign market players, such as trade shows abroad, marketing or regulatory assistance, on-site visits, networking services;
- financial support: it includes support in the form of loans, subsidies, guarantees, insurance (e.g. to hedge exchange rate risk).

The state aid of our research falls within the financial support cluster.

After this brief introduction, it is useful to expose some examples of the main European support programs for SMEs above mentioned.

COSME

One of the most important European programs for SMEs is the COSME. COSME stands for *Competitiveness of Small and Medium-sized Enterprises* (European Commission, 2014). Launched in 2014, it covered a 6-year time horizon, until 2020, with a budget of € 2.3 billion. The goal of this program was to increase the competitiveness of European SMEs through four main points:

1. facilitate access to finance throughout the different stages of the company life cycle. The EU facilitates the provision of loans and risk capital investments for SMEs through two instruments: Loan Guarantee Facility (providing guarantees and counter-guarantees to financial intermediaries) and Risk Capital Facility for Growth (providing risk capital to investment funds mainly targeting SMEs in the expansion and growth phase).
2. Support internationalisation and access to markets. This goal is pursued by supporting the access to the European single market, the Enterprise Europe Network (a network of more than 600 offices in over 50 countries helping SMEs with different topics), by financing web tools specifically designed for business development and SME Helpdesks for Intellectual Property Rights (IPR) in the ASEAN regions, China and MERCOSUR (to offer advice and support to European SMEs facing difficulties in intellectual property, standards or public procurement in those geographical areas).
3. Create a favourable environment for competitiveness by reducing, for example, high bureaucracy costs.
4. Encourage an entrepreneurial culture through the Entrepreneurship 2020 Action Plan and the Erasmus for Young Entrepreneurs.

Single Market Programme – SMP

The second example of a European support program for SMEs that we examine in our work is the "Single Market Programme" (European Commission, 2021). The Single Market Programme (SMP) is the EU funding program that supports the single market in reaching its full potential and ensures Europe's recovery from the Covid-19 pandemic. It has a budget of € 4.2 billion over 2021-2027 (European Commission, 2021). It brings together key activities related to several programmes running between 2014 and 2020, including COSME, European Statistical Programme (ESP), Reporting and Auditing, Enhancing consumers involvement in the EU policymaking in financial services, Food and Feed, Consumer Programme. As indicated by the official EU website (2021), the main objectives of the project are:

- help ensure a well-functioning Single Market for goods and services;

- provide high-quality statistics on all EU policies;
- coordinate capacity building for joint actions between the Commission and the Member States.

Additionally, this program focuses on the sustainability of SMEs, including in the tourism sector, which is particularly important for Italian companies.
After this general introduction about the concept and the main features of Export Promotion Programs and the short overview of the leading European initiatives, we will present some results related to the effectiveness of these policies in the past years.

4.2 Are State Aids and EPPs effective?

Assessing the results and the effectiveness of the public policies has always been fundamental for policymakers, even if the difficulties related to this process are not few. Especially in the case of EPPs, it may be challenging to measure and compare the impact of the policies and, therefore, find a direct relationship between the companies' performances and the state aid. According to Freixanet (2012), these are the main difficulties:

- the high number of variables that affect the export performance of the companies and that therefore may counteract programs' effects;
- the necessary time lag between the start of the program and the possibility to observe its impact;
- the difference between the content and the objectives of each program: in this case, a global evaluation can prevent the detection of differences that may result in critical.

Despite the difficulties, many studies have been conducted about the effectiveness of EPPs. Hereafter we will expose the main conclusions provided by three different studies. This first is related to public grants designed for SMEs, without the specific scope of supporting the internationalisation. The second is associated with the general topic of EPPs, with no focus on SMEs. Finally, the third study combines the two characteristics: EPPs specifically designed for SMEs.

State Aids for SMEs

Dvouletý, Srhoj and Pante conducted a study on public SME grants and firm performance in European Union (Dvouletý et al., 2021). They focused on the EU members providing a review of 30 methodologically rigorous studies. The companies' performances were measured according to five different indicators. The findings of the survey are exposed below:

1. Firm survival rate: the subsidised companies obtained higher survival rates concerning the control group.
2. Employment: in 90% of the cases, the effects of subsidies on employment were positive.
3. Firms' growth: the companies' growth is measured considering the growth of tangible/fixed assets. In 90% of the cases analysed, the public grant positively affected the companies. The authors made this choice since the purchase of new equipment, which is the most common usage of public grants.
4. Financial performances: They were measured considering the overall companies turnover concerning the financial performances. Even if the results are not pronounced as for the three previous indicators and the financial performances, the grant brings positive effects: this happened in the 71.4% of cases analysed.
5. Productivity: to measure firm productivity, two variables have been used: labour productivity and total factor productivity. The grants had a more ambiguous result for both cases, bringing positive effects only in the 46.2% and 41.7% of cases.

To summarise, the results obtained show that the grants positively impacted the different indicators in the large majority of the cases. Nevertheless, some areas (such as firm productivity) do not demonstrate to be positively affected by the public grant.

General EPP

Focusing now on EPPs, we will present the results of the work carried out in 2012 by Joan Freixanet *"Export Promotion Programmes: The Impact on Companies' Internationalisation Performance and Competitiveness"*. His analysis considers two main variables: the company's export involvement and the type of promotion program. He argues that different export experiences and company structures are more suitable for specific programs and vice versa. Therefore, the effect of the EPPs will depend on these two variables and their combination.

Regarding the company's export involvement, Freixanet identifies five different stages, from starting exporter to consolidated exporter:

1. starting/passive exporter;
2. regular exporters with little structure;
3. regular exporters with complete structure;
4. consolidated exporters with permanent structure abroad;
5. multinational companies.

On the other hand, the main public policies typologies included in the analysis are:

- promotion programs (trade missions and sponsored trade shows);
- supporting programs for starting to export;
- consultancy programs;
- investment support programs.

After identifying the five stages and the different programs, Freixanet analyses the results obtained by the companies in terms of:

- Economic results: such as export sales, export growth, export profitability.
- Export diversification is measured as the number of export areas and percentage of export outside the EU.
- Intermediate results include opening branch offices or subsidiaries, obtaining export contracts, and improving after-sales service.

Measures of impact	Internationalization stage					Total
	1 ($n = 38$)	2 ($n = 89$)	3 ($n = 74$)	4 ($n = 47$)	5 ($n = 24$)	
Economic results*						
– Export sales	−0.094	−0.243*	0.017	−0.109	−0.264	−0.062
– Export intensity	0.188	0.078	0.074	−0.001	0.129	−0.008
– Export growth (M €, $n-3$)	−0.184	0.016	−0.054	−0.283	−0.262	−0.073
– Export growth (M €, $n-5$)	0.080	−0.088	0.105	−0.282	−0.282	−0.057
– Export profitability	0.131	0.081	−0.002	−0.071	0.443*	0.142*
Export diversification*						
– Number of export areas	0.399*	0.378**	0.338**	0.253	0.449*	0.344**
– Percentage of exports outside EU	0.017	0.082	0.038	0.241	0.430*	0.191**
Intermediate results*						
– Market information gathering	−0.011	0.075	0.196	0.182	0.168	0.203**
– Financing	−0.008	0.137	0.059	−0.006	−0.011	0.096
– Obtaining export contacts	0.228	0.278*	0.233	−0.065	−0.130	0.139
– Improvement of after-sales service	0.119	0.196	0.104	−0.164	−0.272	0.033
– Product adaptation	0.094	0.285*	−0.090	−0.180	−0.525	0.016
– Packaging	0.261	0.044	−0.090	−0.287	0.403	0.065
– Obtaining financial information	0.096	0.033	0.178	−0.343*	−0.245	0.067
– Promotion activities	0.451*	0.168	0.433**	0.000	−0.100	0.319**
– Pricing internationally	0.355	0.049	0.210	−0.037	−0.274	0.170*
– Information on business practices	0.110	0.263*	0.192	0.022	−0.010	0.189*
– Managers' motivation	0.208	0.113	0.086	−0.047	−0.162	0.094
– Creation of an agents/distributor network	0.652**	0.447**	0.289*	−0.017	−0.199	0.297**
– Alliances/cooperation agreements	0.436*	0.350**	−0.028	−0.011	0.158	0.158
– Internationalization planning	0.489**	0.219*	0.137	0.182	−0.167	0.186**
– Opening branch offices or subsidiaries	–	–	−0.011	−0.006	−0.077	−0.012

* Indicates significant differences between groups, $p < 0.10$.
** Indicates significant differences between groups, $p < 0.05$.

Figure 4.3: Correlations between the use of direct promotion programs and the different measures of impact (Freixanet, 2012).

In Figure 4.3 it is possible to see, as an example, the correlations between the use of direct promotion programs and the different measures of impact.

We will now describe the results of the five different clusters more in detail. The highest number of positive relations was found, as predictable, among companies belonging to stage 1 and stage 2. They found most positive relations within the intermediate results, such as creating an agents/distributor network. Direct promotion

programs, information, assistance in starting exporting, and financial aid programs positively affect these companies. On the other hand, companies at stage 3, i.e. regular exporters with a complete export structure, are "*correlated with a higher number of export markets*" and "*positively associated with the creation of a sales network in the foreign markets"*, in case of direct promotion programs (Freixanet, 2012).

The last two stages represent the companies with the largest export experience. Indeed, consolidated exporters with permanent structure abroad and multinational companies had the least number of positive correlations, already internally developed the necessary resources for internationalisation. Instead, the most effective policies for these companies are identified with consultancy and investment support programs.

Generally speaking, this research shows the use of direct promotion programs results in a higher number of export markets for all the different internationalisation stage, while both direct promotion and information programs fulfil their objective by enabling exporters in stages 1 and 2 to improve their promotion activities and the creation of an international sales network.

Focusing now the analysis on the effectiveness of the programs, Freixanet (2012) states that the "*Use of direct promotion programs (trade missions and sponsored trade shows) is positively related to market diversification independently of the internationalisation stage of the firm*". On the other side, the use of programs to enable companies to start exporting has a positive effect only in exporters in stage 1, consistently with their objectives. Investment support programs, are effective with export-mature companies, such as companies in stage 4. Finally, the results regarding consultancy programs did not find any positive relationship between for any stage.

EPP for SMEs

The last research that we will report is the study conducted by Catanzaro and Teyssier (2021). Their research is based on a sample of 147 internationalised French SMEs that benefited from the use of EPPs. It aims to analyse the effect of public EPPs on export capabilities and international risk management practices.

In this study, the EPPs are divided into three categories:

- informational support;
- operational support;
- financial support.

The authors assigned a five-point scale to evaluate how the companies utilised the different support programs in the previous five years.

As a first outcome of the research, the results obtained show that EPPs directly affect companies' performances in most cases. Indeed, the authors identify "*a significant*

influence of EPPs on export capabilities and on international risk management practices" (Catanzaro and Teyssier, 2021).

Furthermore, a very interesting theory of the research is related to the indirect effects of EPPs. Indeed, Catanzaro and Teyssier suggest that EPPs positively affect the SMEs' export capabilities and international risk management practices (H1, H2). These two parameters positively affect the SME's global performance (H3, H4). This idea is represented in Figure 4.4:

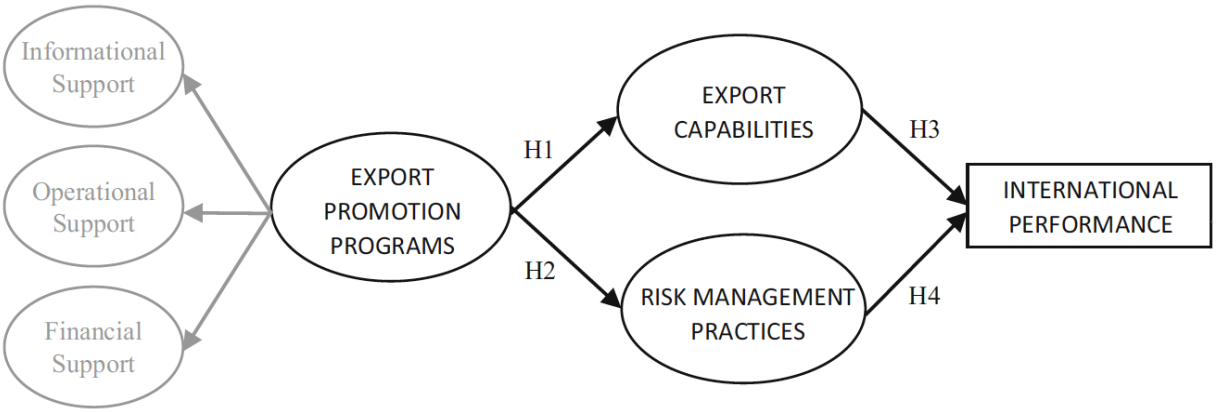


Figure 4.4: Framework developed by Catanzaro and Teyssier on the effects of EPPs (Catanzaro and Teyssier, 2021).

This reasoning implies that, among "*two companies with the same level of export capabilities and risk management practices, the one which EPPs will support should have in the future better capabilities and, then, a better international performance*"(Catanzaro and Teyssier, 2021) Indeed, a public grant doesn't just mean an increase in the resources that can be invested, but it also motivates the firms to go international, "*by helping it to better understand foreign markets, identify opportunities, meet key players, and better identify risks*"(Catanzaro and Teyssier, 2021). This idea is very important since it highlights the importance that EPPs for SMEs may represent in the short term and in the long term.

4.3 Policy responses of the Italian government to foster SME resilience in the context of the COVID-19 pandemic

Since the beginning of March 2020, the Covid-19 virus outbreak impacted directly SMEs, which had to face an interruption of the supply chains and a drop in demand.

The most affected sectors were:

- transport (98.9%) due to the demand downfall;
- tourism (89.9%);
- fashion (79.9%).

Compared to larger companies, SMEs showed less resilience and flexibility in dealing with unpredicted costs. In addition, given the fewer resources of SMEs and existing obstacles in accessing capital, the period over which SMEs could survive the shock was supposed to be more limited than for larger firms (OECD, 2020a).

On 17 March 2020, known as the "*Cura Italia"* Decree (Gazzetta Ufficiale No.70, 2020), which entered into force on the same day, provided a set of measures aiming to support SMEs.

- Micro-enterprises and SMEs of all types, including freelancers and sole proprietorships, could benefit from a moratorium on a total volume of loans estimated at around € 220 billion. Current account credit lines, loans for advances on securities, short-term loan maturities, and loans' instalments were frozen until 30 September 2020.
- € 1.5 billion was earmarked to The National Guarantee Fund for SMEs to renegotiate existing loans.

On 6 April 2020, the Council of Ministers approved the so-called *"Liquidity Decree"* (Gazzetta Ufficiale No.94, 2020), which included:

- State guarantees through SACE: public guarantees amounting to € 200 billion were granted by SACE on bank loans to companies of all sizes. € 30 billion were reserved for SMEs including sole proprietorships and freelancers.
- Enhancement of the National Guarantee Fund for SMEs: this fund granted new loans for a maximum duration of 6 years to SMEs and freelancers, for a maximum amount of € 25,000 and in any case not exceeding 25% of the beneficiary's income, with 100% coverage and without a credit merit evaluation.
- Export support: the Decree also introduced a co-insurance system under which the State assumed 90% of the commitments deriving from SACE's insurance activity and the remaining 10% by the company itself. The aim was to enable SACE to meet the growing demand to ensure operations of strategic interest to the national economy, which the company would not have the financial capacity to cover. In this way a further € 200 billion of resources were available

to be allocated to boost exports (Ministero dell'Economia e delle Finanze (MEF), 2020).

Italy has been severely affected by the COVID-19 pandemic and was exposed to its economic repercussions earlier than any other EU country, making its responses of particular interest for policymakers worldwide. Regions play a relevant role in economic development matters and SME policies within the Italian institutional setting (OECD, 2020a).

General trends in regional SME policy responses can be divided into six policy macro-areas (OECD, 2020a), as reported in Table 4.1:

1. Access to bank credit (29 measures in 16 regions): this macro-area includes all interventions to facilitate access to credit guarantee funds (national or regional), the reduction of interest on credit, the suspension of instalments of loans or the rescheduling of amortisation plans over longer periods.
2. Public financing (65 measures in 17 regions): the introduction or remodelling at more favourable conditions of any funding subsidised for SMEs provided by regional public institutions, such as interest-free loans, non-repayable loans, and other financial instruments.
3. Simplified procedures (59 measures in 19 regions): actions to streamline bureaucratic procedures for SMEs – such as the deferral of deadlines for submitting applications for public funding programmes or for reporting on investment plans subject to public incentives – and regulatory simplifications (including in the field of public procurement.
4. Labour and welfare (41 interventions in 21 regions): policies to maintain employment levels and support temporarily unemployed workers in SMEs, such as incentives for smart working and out of-work benefits, including regional allocations to supplement the national redundancy fund.
5. Tax relief (17 interventions in 13 regions): measures aimed at reducing or postponing the tax burden for SMEs, such as the deferral of tax deadlines, exemption from tax advances, advance payment of public contributions and the like.
6. Planning and budgeting (18 interventions in 11 regions): this category includes establishing multi-stakeholder coordination and dialogue task forces to design

policies and regulatory provisions to reprogram and reallocate budgets to deal with the emergency.

Region	Access to bank credit	Public funding	Simplified procedures	Work and welfare	Tax relief	Planning and budgeting
Abruzzo						
Aosta Valley						
Apulia						
Basilicata						
Bolzano-Bozen						
Calabria						
Campania						
Emilia-Romagna						
Friuli-Venezia Giulia						
Lazio						
Liguria						
Lombardy						
Marche						
Molise						
Piedmont						
Sardinia						
Sicily						
Tuscany						
Trento						
Umbria						
Veneto						
Total regions	16	17	19	21	13	11

Table 4.1: Regional breakdown of policy responses by macro-area of intervention (OECD, 2020a)

Regional responses reveal a high level of consistency with central government and, in the following cases, the link is explicit:

1. The establishment or strengthening of regional sections of the National Guarantee Fund for SMEs is a clear example of a complementary, multi-level policy. National regulations allow regions to set up and finance special sections of the Fund reserved for companies located in their territory using European funding. In this way, a regional action makes use of a national instrument and enhances its effects.

2. The above-mentioned "*Cura Italia*" Decree regulates the distribution of resources among regions, entrusting them to stipulate an institutional agreement with the social partners to disburse the subsidy effectively.

3. The "*Credit Agreement*" signed on 6 March 2020 by the Italian Banking Association and business associations to encourage moratoria on loan repayment by companies enables regions to encourage the involvement of local banks.

4.4 Synthesis

In this chapter, after a general overview of the Export Promotion Programs, which represent an essential part of our research work, we analyse the effectiveness of these programs, reviewing some literature focusing on general programmes for SMEs, general EPPs, and finally EPPs for SMEs. The examined papers report, generally speaking, good effectiveness reached by the public programs, even if it is essential to distinguish the type and the objective of the program to assess its impact consistently.

Additionally, we provide an overview of national policy responses to face the repercussions of the COVID-19 pandemic on the Italian economy. We point out the role regions play within Italy's institutional setting regarding economic development, particularly SME policy, and present the general trends in regional SME policy responses to foster SMEs resilience.

In the next chapter, we will enter the core of our work, presenting the main features of the public program "*Bando E-Commerce 2020*" launched by *Regione Lombardia* and *Unioncamere Lombardia-Camere di Commercio della Lombardia.* Finally, in Chapter 6, we will assess its results and effectiveness.

5. "Bando E-Commerce 2020"

5.1 *"Bando E-Commerce 2020"* overview

"*Bando E-Commerce 2020*" was launched by *Regione Lombardia* and *Unioncamere Lombardia-Camere di Commercio della Lombardia* after the first prevention and containment measures dated 8 March 2020 due to the epidemiological emergency from Covid-19 (Gazzetta Ufficiale No. 60, 2020). The main goal of this tender was to help MSMEs develop and consolidate their presence in foreign markets during the difficult period generated by the Covid-19 pandemic. Indeed, the health crisis has made it difficult for Italian companies to grow in the international scenario since all trade fairs, one of the main opportunities, Italian MSMEs had to enter new markets and find new customers, were cancelled. For this reason, *Regione Lombardia* and the *Unioncamere Lombardia-Camere di Commercio della Lombardia* promoted this measure aimed at supporting MSMEs to develop and consolidate their position in foreign markets through the e-commerce channel, encouraging access to cross-border platforms (B2B and or B2C) and or proprietary e-commerce systems (sites and or mobile apps).

In the following pages, we will briefly expose the features and regulations of the tender to draw a general introductive picture.

Resources allocated

The total resources allocated were € 2,618,000, divided into funds from the General Direction of Research, Innovation, University, Export and Internationalisation of *Regione Lombardia*, and funds from the *Camere di Commercio* of the different provinces. The table below reports how the resources were split.

The financing characteristics are the following: it allows each company to receive a non-repayable grant, corresponding to the 70% of the expenses indicated in the application, up to a maximum of € 10,000. To be admissible, the company's expenses for its project must be equivalent to a minimum of € 4,000.

Province	Funds by Regione Lombardia	Funds by Camere di Commercio
Bergamo	1,810,000.00 €	€ 90,000.00
Brescia		€ 90,000.00
Como – Lecco		€ 74,000.00
Cremona		€ 31,000.00
Mantova		€ 31,000.00
Milano – Monza Brianza – Lodi		€ 330,000.00
Pavia		€ 100,000.00
Sondrio		€ 12,000.00
Varese		€ 50,000.00
Total	**€ 2,618,000.00**	

Table 5.1: Total resources allocated for "*Bando E-Commerce 2020"*, divided by provider.

Beneficiaries

The eligible company of the tender must satisfy the following main requirements:

- it has to be a Micro, Small, or Medium enterprise following the EU definition;
- it must have an operating office in the Lombardy region;
- it cannot be receiving other funding at the regional or national level aiming at the same objective.

The application and the evaluation criteria

Each company had about three months to apply (from 25 June until 11 September). In particular, each company had to submit three main documents:

- *Attachment A*: it is the document containing the core of the application, in which the applicant has to set forth its project and ideas to export its products or services through e-commerce;
- *Attachment B*: it is a survey that aims to assess whether the company is ready to export at the moment of the application;
- *Attachment C*: it is an expenses prospectus, divided into 12 cost items (if the company will be funded, the amount of money received is computed based on this document).

After the due date, 11 September 2020, all applications were examined to check the formal eligibility. Applications that were not in line with the indications in the tender were excluded (for example, missing or wrong documents, mistakes in the compilation, companies not meeting the requirements). After this first control, 1,642 companies were admitted to the technical evaluation phase, and their applications all were analysed and evaluated. This process was an integral part of our research, and to carry it out, we respected precise criteria given by *Unioncamere Lombardia*. In particular, there were two main criteria, which were subdivided into more specific ones, as shown in the following table:

Evaluation criteria	Evaluation parameters	Score
A. Consistency in defining objectives	A1. Level of clarity in the presentation of the project proposal with particular reference to the detailed indication of: - activities - time of realisation - objectives	Up to 25
	A2. The quality level of the project proposal regarding the coherence of the project to the expected objectives: - nature and relevance of requested services and planned events - consistency with the company's technical and organisational skills and experience	Up to 25
B. Export readiness of the applicant	B1. Export experience	Up to 15
	B2. Business organisation	Up to 20
	B3. Production capacity	Up to 15

Table 5.2: Applications evaluation criteria.

Criterion A was used to evaluate attachments A and C of each application, while criterion B was used to assess attachment B.

After briefly explaining the public tender features, we will now present the results obtained by the applicant companies. The minimum score required to have the chance to be funded was 65; all the applications with a lower score were classified "not eligible". The "eligible" ones were ranked, and the funds were disbursed following the scores until all the financial resources ran out.

5.2 The results

This section will expose the results obtained by the companies in the tender. Firstly, we will give a general overview of the results, while later, we will dive deeper into their analysis, parameter by parameter.

5.2.1 General results overview

The results of the technical evaluation phase were the following:

- 1,006 companies were not admitted (score lower than 65);
- 636 were eligible (score higher or equal to 65).

636 companies scored higher or equal to 65; 285 were funded, 44.8% of the eligible companies and 17.4% of all the companies that passed the formal eligibility verification phase (1,642).

Firstly, it is interesting to run a detailed analysis of all the applicant companies, to give a general overview of this tender. Secondly, we will investigate the difference between the "winning" companies and the others. This will allow us to highlight some insights related to the features of the companies that received the funds compared to the ones that did not receive them. To give a general overview of the companies applying for the tender, we first divided them into the three standard sectors (primary, secondary and service industry).

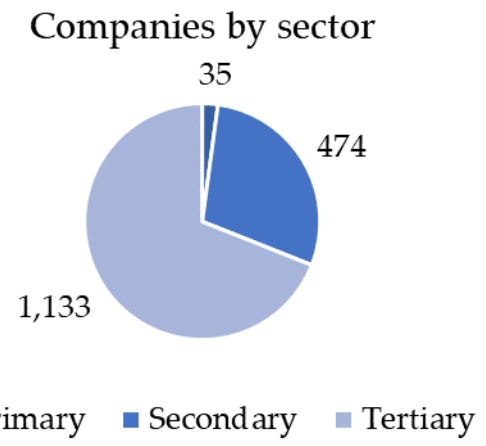


Figure 5.1: Applicant companies divided by sector.

Next, to have a more precise representation of the companies' characteristics, we decided to distinguish two sub-groups within the tertiary sector: the trade sector,

including all the companies selling goods, both retailer and wholesalers, and the service sector, including all the other service companies (such as IT, consultancy, financial services, logistics companies…).

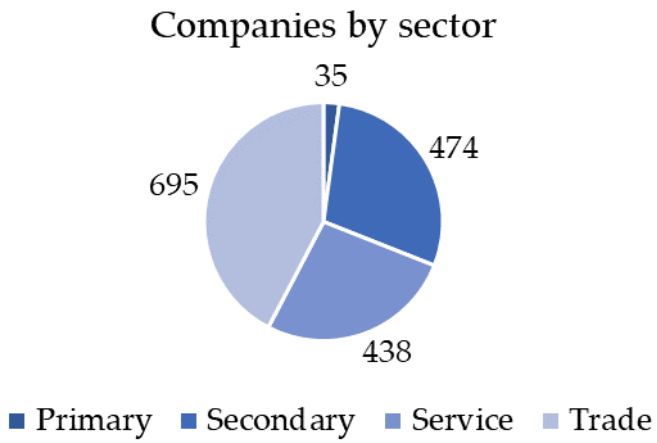


Figure 5.2: Applicant companies divided by sector, with detail on the trade sector.

As we can notice from the chart, 695 companies are active in the trade sector, both as retailers and wholesalers. The second biggest sector is manufacturing (29%), while the smallest one is the primary sector.

Going deeper into this analysis, we also explored each sector's different categories of industries. Concerning the trade sector, the largest number of companies falls in the category of "Apparel and accessories" (19.9%) and "Food & beverage" (14.8%). This outcome fits perfectly with some data regarding Italian export:

- in the first nine months of 2019, the Italian export of fashion articles was worth € 42 billion; Lombardy, and especially Milan, were the largest Italian export areas (ISTAT, 2020);
- in 2020 the apparel and accessories sector represented the most important slice of the Italian e-commerce export (Perego et al., 2021).
- Italian food export (both online and offline) is one of the few categories that grew in 2020 (+3%), given that it has not been heavily affected by the Covid-19 crisis in most of the countries (Perego et al., 2021).

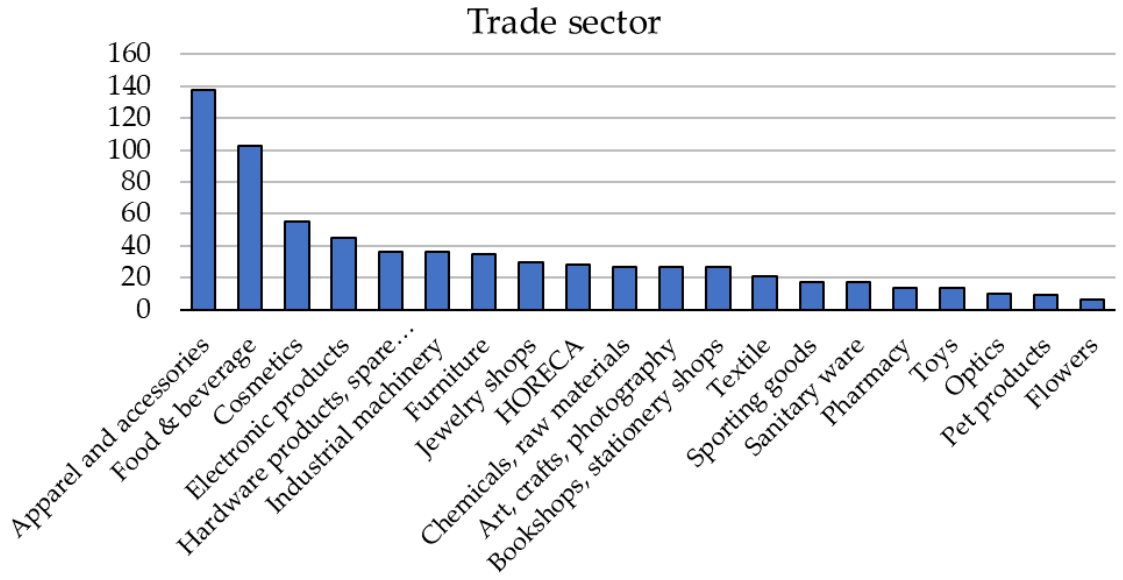


Figure 5.3: Applicant companies belonging to the trade sector, divided by sub-sectors.

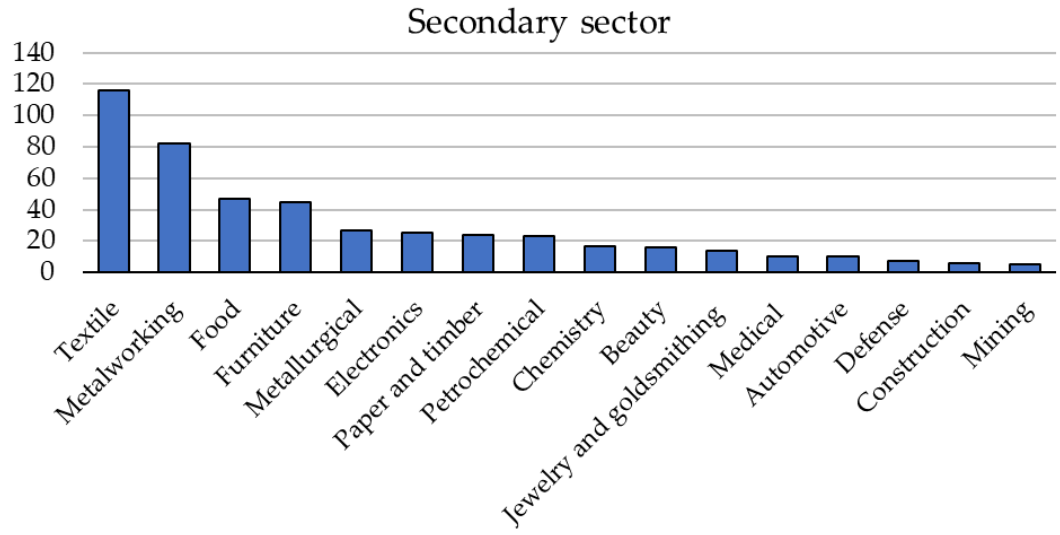


Figure 5.4: Applicant companies belonging to the secondary sector, divided by sub-sectors.

Regarding the secondary sector, we found that the most relevant categories are Textile and Metalworking (24.5% and 17.3% of the total sector). This is perfectly consistent with the Italian export tradition: in fact, Textile and Metalworking represented two of the five largest categories of Italian export in 2019 (OEC, 2020). Other significant categories are Food and Furniture, recognised as Italian excellence globally and ranking third and fourth in this tender.

The service sector is mainly represented by companies operating in IT and consultancy. Notably, many applying companies belong to the touristic sector since Lombardy, as the totality of the Italian regions, is well known for its touristic attractions.

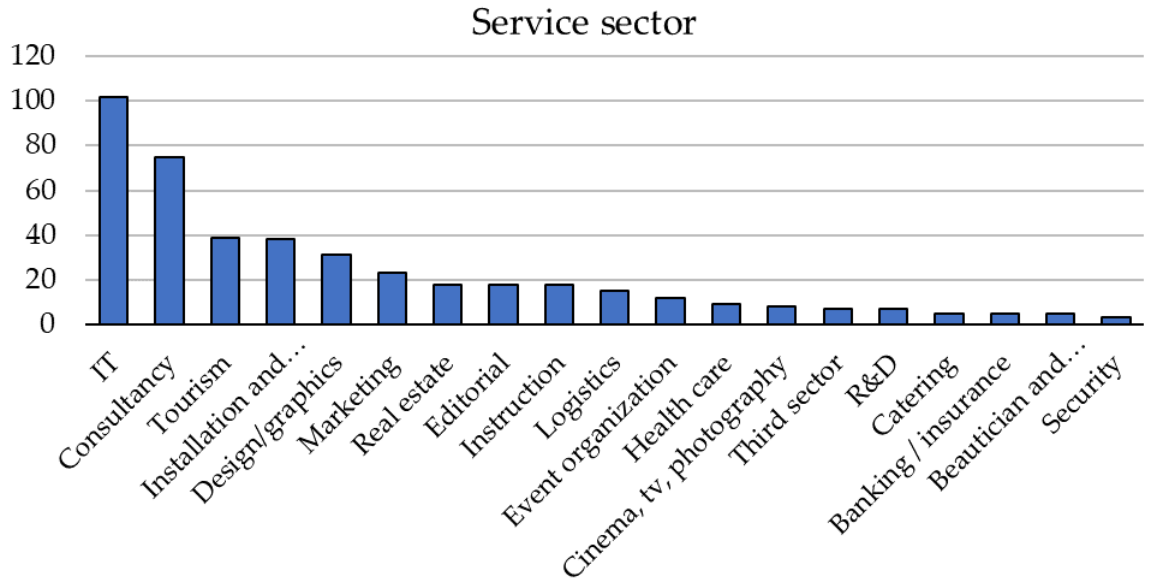


Figure 5.5: Applicant companies belonging to the service sector, divided by sub-sectors.

Finally, the primary sector is the least represented in this tender. Its two categories are agriculture (33 companies) and breeding (only two companies).

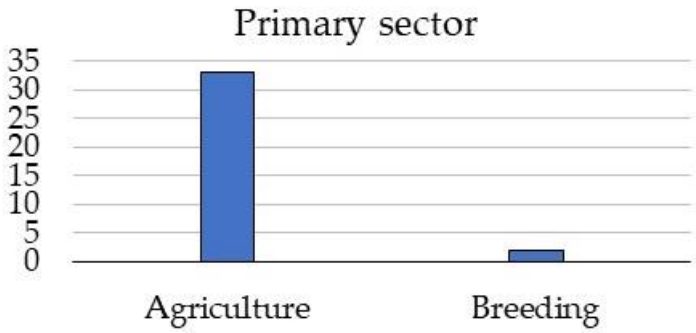


Figure 5.6: Applicant companies belonging to the primary sector, divided by sub-sectors.

To better understand the geographical distribution of companies, we divided them into the 12 provinces that compose the Lombardy region. Noting that 48 companies

were not officially headquartered in Lombardy, even if they could participate in the tender, here are the results:

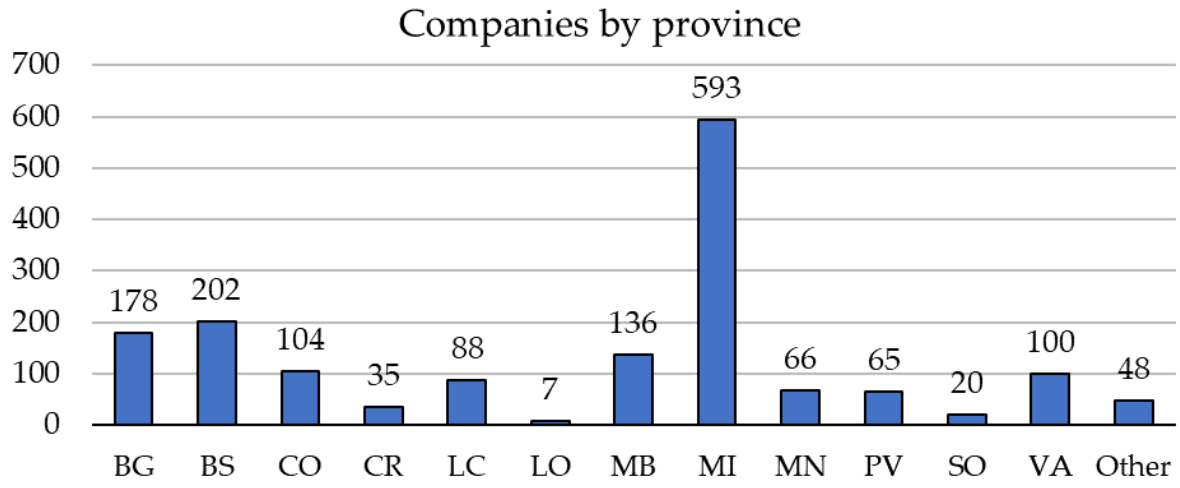


Figure 5.7: Applicant companies divided by province of origin.

As predictable, most of the companies are from the Milan metropolitan area, followed by the provinces of Brescia and Bergamo. These results, are perfectly consistent with the population distribution within the region, as shown in the chart below, which compares the population percentage of each province with the share of applicant companies on the overall number (excluding the companies coming from other provinces):

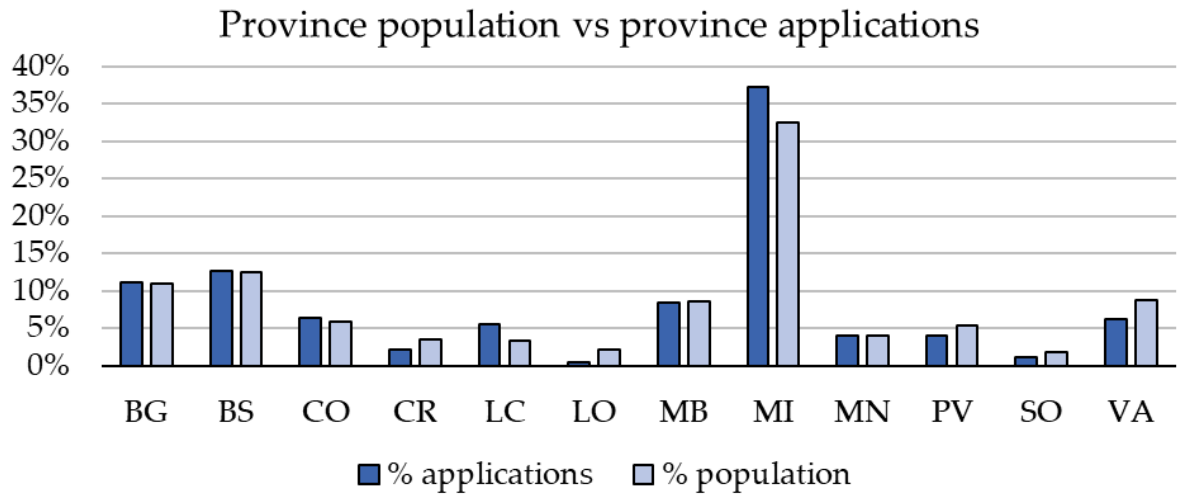


Figure 5.8: Comparison between the percentage of population per province vs percentage of applicant companies per province.

Therefore, as highlighted in the chart, the origin of the applicant companies is relatively uniform all over Lombardy (ISTAT, 2021).

Going on into the analysis, we clustered the companies according to their size, as reported in Figure 5.9.

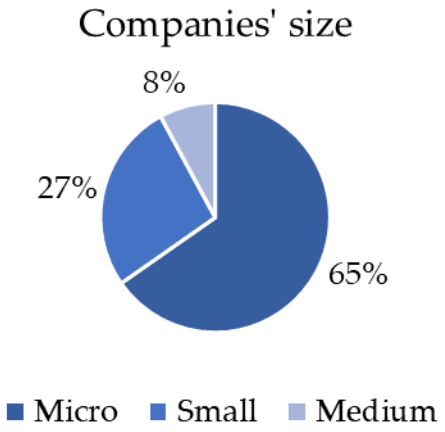


Figure 5.9: Applicant companies divided by their size.

This chart shows that most companies applying for this tender are micro-companies, followed by small and medium enterprises. This result is predictable because most of the active companies in our area are micro and small enterprises. It also suggests that they have been most affected by the Covid-19 pandemic.

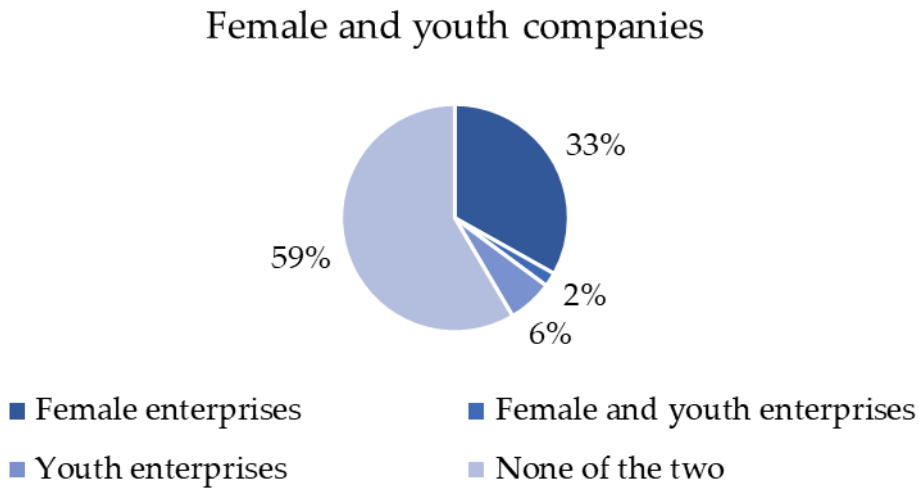


Figure 5.10: Applicant companies divided by Female, Youth, Female and Youth enterprises.

Another significant aspect to consider is whether a woman runs the enterprise and whether the firm is a “youth” company. In particular, we named “Female enterprise” a company whose owner is a woman, and “Youth enterprise” a company whose owner is between 18 and 35. As we can see from the chart above, the number of female and youth enterprises is minimal, but what catches the eye is that almost 60% of the companies are neither youth nor female. This is a reasonably predictable result considering the seniority of the Italian entrepreneurial structure.

The last feature analysed in the sample of companies is whether they are a startup or not. We gave a broader definition of a startup company, considering startups the companies which have begun their activity less than five years ago. According to Italian law, this is a pretty fair assumption, given that it is the first requirement that a company must have to be considered a startup (Ministero dello Sviluppo Economico (MISE), 2012).

The interesting side of Figure 5.11 is that the percentage of startup companies is perfectly consistent with the distribution of Italian startups all over the country. Indeed, at the end of 2019, the total number of Italian SMEs was 148,531 (Salesforce, 2020), while on the 31 March 2020, i.e. three months before the opening of this public tender, a total of 11,206 startups were registered in the country, therefore only the 7.54% of them was a startup. However, Lombardy hosts 27% of all the Italian startups, which is why the percentage of startups companies that applied for this financing was relatively high compared to the national average.

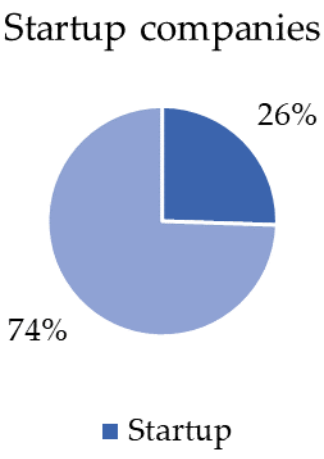


Figure 5.11: Startup companies’ distribution among the applicant companies.

5.2.2 Analysis of the results

In the previous paragraph, we have analysed the general characteristics of the companies applying for this financing without distinguishing between the ones that got funded and those that did not. After providing this general overview, in this chapter, we will deal with some insights regarding the common characteristics of the "winning" companies, some of the "losing" ones, and we will draft some initial conclusions about the relationship between MSMEs, export, and e-commerce.

Please keep in mind that, according to the evaluation process performed by *Regione Lombardia* and the *Camere di Commercio della Lombardia*, export-experienced companies were favoured in the *Attachment B* part of the application.

Revealed Comparative Advantage index

Before jumping into the results, it is useful to explain the methodology we used for our analysis. Using all the parameters available in our database, we assessed the different values they assumed in the three resulting groups – "Admitted and funded", "Admitted", "Not admitted" – and examined the presence of common characteristics in the different groups. As a helpful tool for many of our analyses, we used an index of Revealed Comparative Advantage (RCA): this index is often used in international economics to assess the relative advantage or disadvantage of a country for a specific good or sector based on the trade data (De Benedictis and Tamberi, 2001). We adapted this index to our specific case, defining it in the following way:

$$RCA_{g,i} = \frac{\frac{V_{g,i}}{\sum_{i=1}^{N} V_{g,i}}}{\frac{\sum_{g=1}^{3} V_{g,i}}{\sum_{g=1}^{3}\sum_{i=1}^{N} V_{g,i}}}$$

Where:

- V: number of companies;
- g: group index, with $1 \leq g \leq 3$ and specifically:
  - $g = 1$ for Admitted and funded companies;
  - $g = 2$ for Admitted companies;
  - $g = 3$ for Not admitted companies;
- i: variable index, with $1 \leq i \leq N$; it represents the number of the possible value that the parameter can assume. N is equal to 3 in two cases, to 4 in two cases, and to 2 in all the other cases of our analysis.

Hereafter, the explanation of this index through an example.

We start considering the parameter: *"The company has an export office"* and the $RCA_{1,1}$. In this case, $1 \leq i \leq 2$, i.e. $N = 2$, given that the parameter *"The company has an export office"* can assume only two values: YES ($i = 1$) or NO ($i = 2$). Therefore, the $RCA_{1,1}$ value will refer to the "Admitted and funded" companies ($g = 1$) that have an export office (i=1). To get to the result, we start from the numerator. It represents, for each group, the percentage of companies with a specific value assumed by the parameter. Indeed, in this case, the numerator is computed through a proportion between the number of "Admitted and funded" companies with an export office ($V_{1,1}$), and the total number of "Admitted and funded" companies $\sum_{i=1}^{2} V_{1,i}$ (both with an export office and without); therefore, it represents the number of companies, among the "Admitted and funded" ones, with an export office.
On the other hand, the denominator represents the percentage of companies with an export office on the applicants' total. Indeed $\sum_{g=1}^{3} V_{g,1}$ is the total number of companies with an export office (both "Admitted and funded", "Admitted" and "Not admitted"), while $\sum_{g=1}^{3} \sum_{i=1}^{2} V_{g,i}$ represents the overall number of applications. The proportion between numerator and denominator gives us the RCA index.
We now examine some different scenarios:

- RCA=1: this is the case in which the two percentages are the same, and it may mean that the parameter is not probably affecting the result of the application.
- RCA=2: the percentage of companies with an export office that has been Admitted and funded is double concerning the overall presence of companies with an export office. This means that having an export office probably helps to get funded in this tender.
- RCA=0.3: the percentage of companies with an export office that have been Admitted and funded is less than half of the overall presence of companies with an export office. Likely, it is not a sign of good performance.

We used this index to analyse some characteristics of the companies we already explained in the previous part and for all the parameters of *Attachment B*.

After this short introduction to the index, we will present the results of our analysis in the following pages. In addition, it is important to say that the following results have been calculated taking into account the data of the 1,642 companies, with some exceptions that will be detailed in the respective paragraphs.

Dimension

We start our analysis with the results regarding the dimension of the companies. Looking at the table, we can see how the distribution of the sizes in the three different categories ("Admitted and funded", "Admitted", "Not admitted") are very different from the overall distribution.

In Table 5.3, it is possible to observe the findings:

	Data not available	Micro: 1-9 employees			Small: 10-49 employees			Medium: 50-249 employees			Total
Admitted and funded	1	87	30.5%	0.47	134	47.0%	1.77	63	22.1%	2.80	**285**
Admitted	5	198	57.2%	0.89	113	32.7%	1.23	35	10.1%	1.28	**346**
Not admitted	28	755	77.2%	1.19	180	18.4%	0.69	29	3.0%	0.38	**978**
Total	**34**	**1,040**	**64.6%**	**1.00**	**427**	**26.5%**	**1.00**	**127**	**7.9%**	**1.00**	**1,609**

Table 5.3: Result groups with RCA index, divided by companies' size.

The index of RCA highlights a significant result: the difficulty of the micro-companies to compete in these types of tenders. Indeed, while in the totality of the companies, 64.6% are micro-enterprises, among the "Admitted and funded", this number falls to 30.5%. The correlation index equals 0.47: the share of micro-enterprises among the "Admitted and funded" ones is less than the half we would expect considering a proportional distribution of the winning companies.

This fact may be due to different reasons:

- participation in these public calls is time-consuming. The effort to write a correct application to get the financing is high. This may suggest that Micro-enterprises have no resources to commit to this activity, or, on the other side, even that these companies do not understand the importance to commit their limited resources in the preparation of the application;
- the competencies required to draft a proper application are specific, and it should not be taken for granted that in an enterprise with less than ten employees, these competencies are available.

On the other hand, as shown in the same table, the medium enterprises reached an index equal to 2.80 in the "Admitted and funded" ones. These companies are more likely to have enough time, resources, and knowledge to prepare proper applications and get funded. Therefore, all the considerations made for the micro-enterprises can be done similarly for the medium ones, and vice versa.

Sector and category

We now look at the results regarding the sector and the category of the companies that received the financing.

Most of the companies "Admitted and funded" belong to the industry sector (154 out of 285), even if the most represented sector in the overall sample is the Trade one (42.3% of all the companies). Indeed, the trade sector slightly dropped its presence in the "Admitted and funded" group to 31.6% (90 companies). However, a bit unexpectedly, the service group recorded the largest drop. Its presence recorded 11.6% despite an overall presence equal to 26.7%; this is testified by a correlation index of 0.43, the lowest in all the analysis. Table 5.4 summarises these results:

	Primary	Industry	Services	Trade
Admitted and funded	1.32	1.87	0.43	0.75
Admitted	1.20	1.22	0.88	0.92
Not admitted	0.84	0.67	1.20	1.10

Table 5.4: RCA index of the result groups, divided by companies' sector.

For the other sectors, there are no significant differences between the overall distribution and the distribution in the three resulting groups; in fact, the correlation indexes remain between 1 ± 0.25.

By grouping the "Admitted" and "Admitted and funded" companies (we call this set "eligible" companies), we developed Figure 5.12, which, in comparison with Figure 5.2, allows us to visualise the results just exposed immediately:

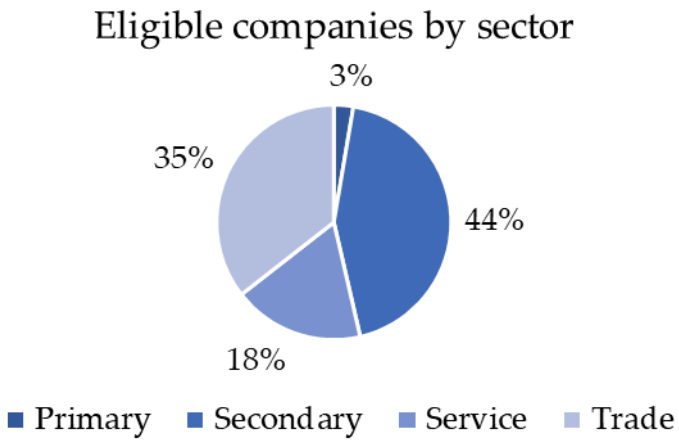


Figure 5.12: "Admitted", "Admitted and funded" companies divided by sector

E-commerce pillars

This part of the chapter addresses a more general topic related to the export via e-commerce: the models of digital exports. There are many variables that each company has to define in case it wants to develop a digital export strategy, and these variables together give shape to the specific export model that the enterprise sets.

The main parameters to take into consideration, according to *Osservatorio Export of Politecnico di Milano*, are the following:

- Commercial channels
- Logistics channels
- Marketing and communication channels
- Legal aspects
- Sources of funding
- Organisational aspects
- Payment systems

We will focus our analysis on three pillars: logistics and marketing channels and payment systems. The commercial channel will be discussed in the following pages, while for the other pillars, we do not have enough information coming from this public tender to develop any conclusions. In addition, the available data enabled us to add one pillar: the presence or absence of any project related to Augmented Reality (AR) in the companies’ applications.

The analysis of these four pillars encompasses two different points of view. On one side, we studied the presence of the specific pillars in the three different resulting groups to understand whether one or more pillars are crucial to succeed in this tender and more in general in the export through e-commerce. On the other side, we analysed the number of pillars touched by the companies in the three different resulting groups to comprehend the importance of including more than one in an internationalisation project.

The following table shows the percentage of companies that mentioned each pillar, divided into the three final groups of the public offer.

As we can see, the results are quite homogeneous, with no great differences among the “Admitted" and the "Not admitted" companies. The marketing is spread all over the companies, given the importance, it is reaching, thanks also to an increase in social media advertising, both desktop and mobile, whose expenditure is expected to grow by 15.0% in 2021, after a growth of 23.7% in 2020, and with an expected CAGR in the time horizon 2021-2025 of 10.6% (Statista Market Forecast, 2021). Digital payments and AR are homogeneous, around 23% for the first and 6% for the latter.

	Logistics	Marketing	Digital payments	AR
Admitted and funded	47.7%	84.2%	23.2%	6.7%
Admitted	49.3%	82.1%	24.8%	4.0%
Not admitted	12.2%	74.0%	22.6%	7.2%

Table 5.5: Percentages of companies that mentioned each of the four pillars, divided by the three result groups

However, the most noteworthy data regards the "Logistics": its percentage in the Non admitted companies is significantly lower, registering 12.2% while the other companies reach almost 50%. From a different point of view, 87.8%, i.e. the significant majority, did not mention the logistics within their project among the companies that did not receive the fund. This is related to a very important concept of an export strategy and, more in general, of the adoption of e-commerce in a business: e-commerce is not just opening a website. This is a critical point that many companies must fix into their business strategy: to implement an export strategy through an e-commerce platform or their website, restructuring all its logistics systems is necessary. For this reason, it is less likely that a project not mentioning logistics can be funded, while almost half of the projects that obtained a score higher than 65 did mention it.

Following the same line of reasoning, we computed the number of pillars mentioned in the project by every company. The following table highlights the results:

	Number of pillars								Total
	0	**1**	**≥ 1**	**2**	**≥ 2**	**3**	**≥ 3**	**4**	
Admitted	17	149	334	145	185	37	40	3	351
	4.8%	42.5%	95.2%	41.3%	52.7%	10.5%	11.4%	0.9%	100.0%
Admitted and funded	9	123	276	121	153	32	32	0	285
	3.2%	43.2%	96.8%	42.5%	53.7%	11.2%	11.2%	0.0%	100.0%
Not admitted	182	494	772	224	278	51	54	3	954
	19.1%	51.8%	80.9%	23.5%	29.1%	5.3%	5.7%	0.3%	100.0%
Total	208	766	1382	490	616	120	126	6	1,590
	13.1%	48.2%	86.9%	30.8%	38.7%	7.5%	7.9%	0.4%	100.0%

Table 5.6: Number of pillars mentioned by each company, divided by the three result groups.

Almost all the companies have mentioned at least one pillar (only 13.1% did not). Indeed, the most significant gap is among the companies that considered at least two pillars in their project. This percentage dropped to 38.7% (against the 86.9% with at least one), and we can also notice large differences among the first two groups and the last one ("Not admitted" companies): more than 50% against less than 30%. We have the same trend considering three pillars, while we find four pillars only in 6 cases out of 1,590, therefore not statistically relevant.

It is clear from this analysis that it is crucial to present a project inclusive of as many aspects as possible to raise the probability of getting funded, i.e. one considering just one or even zero pillars have a low possibility of winning the tender.

E-commerce channel

Another important clusterisation regards the export channel chosen. There are just two possibilities:

- own website;
- e-commerce platform.

89% of companies decided to use their website as the primary (or only) channel of export, while only 11% opted for an e-commerce platform, as reported in the following chart:

Figure 5.13: Companies export channel choice on the overall number of applications.

Going deeper into the tender results, we note that the share of companies that used a marketplace as the main export channel is lower concerning the "Not admitted" companies. In contrast, it is higher concerning the "Admitted" companies.

To simplify, we joined for simplicity the "Admitted" companies together with the "Admitted and funded" ones (the same results and conclusions are confirmed by analysing them separated). These findings may appear a bit controversial at first glance, but they can be explained.

Figure 5.14: "Admitted", "Admitted and funded" companies divided by export channel.

Figure 5.15: "Not admitted" companies divided by export channel.

We shall start from the overall result: the majority part of the companies decided to use their website. This is due mainly to three reasons:

- it allows having better control over the price, the marketing, and the target customers of the products, letting the company have great independence over all these kinds of decisions;
- it appears less costly, excluding the initial set-up costs, given that many marketplaces require a monthly/annual fee to be paid;
- it gives the possibility to keep a higher margin on sales, given that many marketplaces keep a commission of the sale of the products.

These are all positive sides of choosing to export via own website rather than using an e-commerce platform. However, using your website is not always the best choice for an MSME with no experience in exporting and is not well-known abroad. Indeed, an e-commerce platform can be the best choice for different reasons:

- it guarantees visibility, counting millions of daily users;
- it can take charge of the logistics (e.g. Amazon logistics). As pointed out, selling goods is just the first step of exporting. Delivering goods can be as complex as

selling. Therefore, using a platform that manages this activity can be a good solution, especially for micro or small enterprises.
- it requires a smaller investment, considering that there are no costs regarding the development and the maintenance of an own website;
- it guarantees higher flexibility since the investment is lower; it allows to switch e-commerce platforms, add specific target countries, and increase volumes with less time and costs than own website.

More companies willing to use an e-commerce platform have won the bid for these reasons, while their percentage in the “Not admitted” companies is lower.

Company owner's and company's age

Another feature analysed is the one related to the company's age and the age of the company's owner. The results we obtained pinpoint a specific direction, as shown in the following charts.

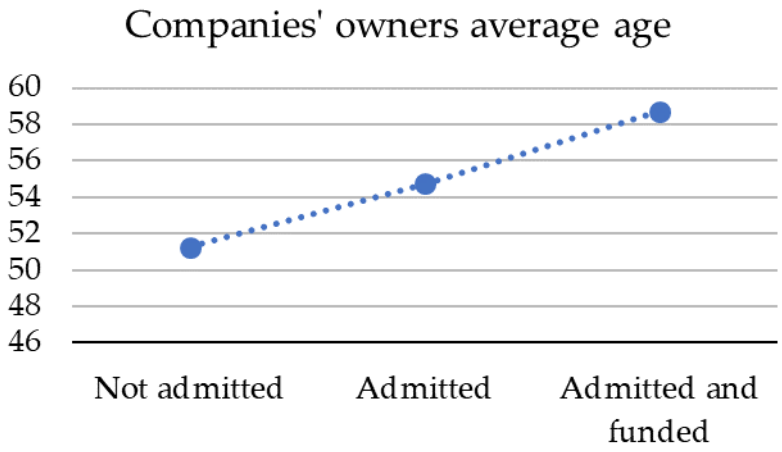


Figure 5.16: Companies' owners' average age, divided by the three result groups.

It is clear that the older the company and the owner, the better the application has performed, and the higher the chances to win the bid. The concept of experience can mainly explain this. As already pointed out, and as we will also see in the following pages analysing previous participation of the companies in public offers, managing the process of delivering a good application requires experience, and the idea of a good project is not enough to win the bid. In addition, an older owner is more likely to have international experience, which helps design an internationalisation strategy.

We remind that these calculations were made considering 1,407 companies for the owner's age, and 1,355 for the company's age, due to unavailable data.

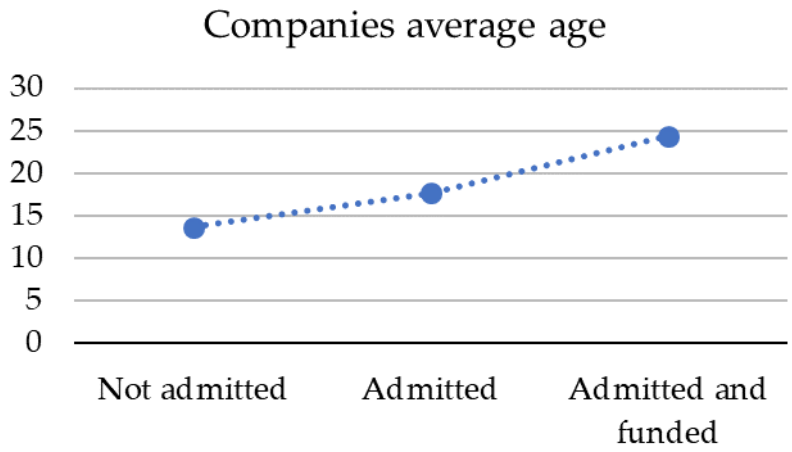


Figure 5.17: Companies average age, divided by the three result groups.

Female, youth and startup enterprises

In the first part of this chapter, we analysed the presence of youth, female and startup enterprises among the ones that applied for this public tender. In the following lines, we will analyse their presence among the winning companies and find if there is some correlation between these parameters. In Figure 5.18 and Figure 5.19 it is possible to observe the results related to female and Youth companies and startup companies.

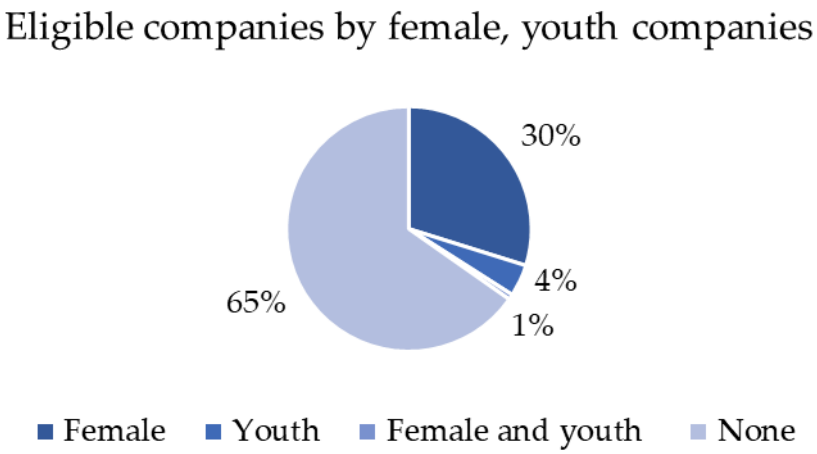


Figure 5.18: "Admitted and funded" companies divided by “Female”, “Youth”, “Female and youth” companies.

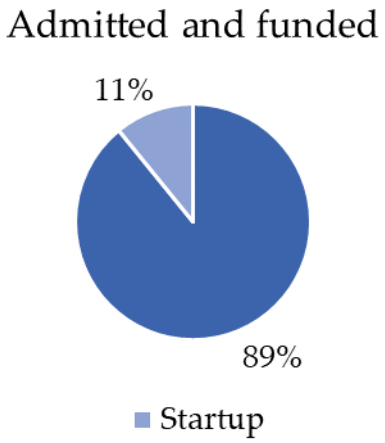


Figure 5.19: Startup companies among "Admitted and funded" companies.

Comparing these results with findings reported in Figure 5.10 and Figure 5.11, there is no positive correlation between the fact that a company is a youth, female, or startup company and a good result in the tender. On the contrary, these features do not help in receiving the fund. In fact, in the first case, the share of neither young nor female companies have decreased among the “Admitted and funded” companies considering the overall sample. In the same way, the percentage of startup companies has dropped from 26% to only the 11%.

Therefore, according to this analysis, being a female, a youth, or even a startup company does not positively affect the probability of winning the financing. Instead, it has a lower rate of success.

Attachment B parameters

In the last part of this chapter, we will expose the most interesting results of Attachment B presented in each application. Before going into the results, it is important to note that these parameters were used to evaluate the application. In particular, the evaluation of Attachment B was set up to benefit the companies that would be most likely to make good use of the funding, i.e. those that were already export-ready (e.g. already had customers abroad or had employees who already spoke a foreign language). *Unioncamere* decided the rule during the development of the programme. For this reason, the results presented in this section have to be interpreted carefully, considering the bias mentioned above.

Nevertheless, we decided to keep this part since *Attachment B* weighted 50% of the overall application result, and the results can still give some relevance. Furthermore, it is essential to note that only 1,541 companies presented this attachment instead of

the 1,642 total. Consequently, our considerations about these data will rely on this number of companies.

We analysed different features presented in Attachment B using the RCA index again. We summarised and kept the most important and insightful ones among all of them.

Participation in export development projects promoted by public institutions

The findings of this tender highlight that to get the financing, it is crucial to have experience in a public offer.

Participation in export development projects promoted by public institutions	**No**			**Yes**			**Total**
Admitted and funded	129	45.6%	0.59	154	54.4%	2.40	**283**
Admitted	255	73.1%	0.94	94	26.9%	1.19	**349**
Not admitted	808	88.9%	1.15	101	11.1%	0.49	**909**
Total	**1,192**	**77.4%**	**1.00**	**349**	**22.6%**	**1.00**	**1,541**

Table 5.7: Result groups with RCA index, divided by previous participation in export development public project.

Having the experience in another public tender may be decisive, and these results perfectly demonstrate it. We can see how the correlation index reaches a score of 2.40, and a score of 0.49 among the not admitted ones. This clearly shows that participation in a previous public offer, especially related to export, really helps the companies perform better in this tender.

Percentage of export revenues

The rate of revenues coming from export is another parameter that significantly impacted the tender. As the table below shows, 57.7% of the winning companies already generated more than 30% of their revenues from abroad, while this percentage drops to 13.4% among the not admitted companies. This result testifies how important it is to have experience in export to implement a new expansion project. A company dealing with multiple foreign markets will probably be more effective to expand its markets than a company only dealing within its domestic one.

% of export revenues	<10%			≥10% e ≤30%			>30%			Total
Admitted and funded	66	23.3%	0.42	54	19.1%	1.09	163	57.6%	2.15	**283**
Admitted	140	40.1%	0.72	82	23.5%	1.35	127	36.4%	1.36	**349**
Not admitted	654	71.9%	1.29	133	14.6%	0.84	122	13.4%	0.50	**909**
Total	**860**	**55.8%**	**1.00**	**269**	**17.5%**	**1.00**	**412**	**26.7%**	**1.00**	**1,541**

Table 5.8: Result groups with RCA index, divided by percentage of export revenues.

Foreign language speaker employees – Employees dedicated to commercial activities

We now focused on the companies' human resources and analysed two different parameters that led to similar results. The first is the presence, in the companies, of employees that can speak at least another foreign language. In contrast, the second is the presence of employees specifically dedicated to commercial activities.

Employees that know at least one foreign language	No			Yes			Total
Admitted and funded	10	3.5%	0.18	273	96.5%	1.20	**283**
Admitted	31	8.9%	0.45	318	91.1%	1.14	**349**
Not admitted	265	29.2%	1.47	643	70.8%	0.88	**908**
Total	**306**	**19.9%**	**1.00**	**1234**	**80.1%**	**1.00**	**1,540**

Table 5.9: Result groups with RCA index, divided by the presence of at least one foreign language speaker employee.

In both cases, the analysis carried out shows that the percentage of companies with a negative parameter is significantly lower than expected among the Admitted and funded (0.18 and 0.23), it is around half for the "Admitted" (0.45 and 0.63), and more or less the 50% more among the "Not admitted" (1.47 and 1.38). Considering the companies with a positive parameter, the values are closer to one, swinging between 1 ± 0.25 (excepting the "Admitted and funded" value, which recorded 1.47).

Employees dedicated to commercial activities	No			Yes			Total
Admitted and funded	24	8.5%	0.23	259	91.5%	1.47	**283**
Admitted	83	23.8%	0.63	266	76.2%	1.22	**349**
Not admitted	473	52.0%	1.38	436	48.0%	0.77	**909**
Total	**580**	**37.6%**	**1.00**	**961**	**62.4%**	**1.00**	**1,541**

Table 5.10: Result groups with RCA index, divided by the presence of employees dedicated to commercial activities.

As predictable, these parameters help implement an export strategy, even if they were not crucial in succeeding in this public offer.

Export office presence

Another important characteristic that may result in a good export strategy is the export office. This is very clear analysing the following results:

Export office presence	No			Yes			Total
Admitted and funded	69	24.4%	0.38	214	75.6%	2.10	**283**
Admitted	196	56.2%	0.88	153	43.8%	1.22	**349**
Not admitted	721	79.3%	1.24	188	20.7%	0.57	**909**
Total	**986**	**64.0%**	**1.00**	**555**	**36.0%**	**1.00**	**1,541**

Table 5.11: Result groups with RCA index, divided by the presence of an export office.

As we can see, the percentage of companies with an office exclusively dedicated to export is more than double the one expected among the "Admitted and funded" ones (2.10).

The main reason behind this result is the crucial importance of the EXPORT MANAGER figure. Indeed, the research made by CONFAPI surveying 35% of the Italian SMEs CEOs suggests that the export manager plays an essential role in the internationalisation process (SACE SIMEST, 2022). Companies trying to penetrate a foreign market for the first time but do not have enough resources to hire or dedicate a single person to this role should be supported by a Temporary Export Manager (TEM), who can direct the company towards the right strategy.

Customer geographic location

The last parameter analysed what was the customers' location when the application was sent. The results summarised in Table 5.12 are perfectly in line with the ones we just exposed, confirming that a previous experience in export, and consequently customers located geographically far away, are factors that facilitate the winning of the bid.

More than half of the customers are geographically located within:	**100 km**			**400 km**			**800 km**			**>800 km**			**Total**
Admitted and funded	12	4.2%	0.24	41	14.5%	0.55	82	29.0%	1.16	148	52.3%	1.76	**283**
Admitted	32	9.2%	0.52	83	23.8%	0.90	94	26.9%	1.08	140	40.1%	1.35	**349**
Not admitted	227	25.0%	1.42	285	31.4%	1.18	210	23.1%	0.92	170	18.7%	0.63	**909**
Total	**271**	**17.6%**	**1.00**	**409**	**26.5%**	**1.00**	**386**	**25.1%**	**1.00**	**458**	**29.7%**	**1.00**	**1,541**

Table 5.12: Result groups with RCA index, divided by customers' geographic location.

Export target countries

To conclude this chapter, we will talk about a fundamental choice of every single export strategy: the target country (or countries).

First, we listed each application's target countries to research a common trend for Italian MSMEs. Secondly, we looked for some common patterns among the winning companies to understand whether some countries are a better destination for Italian exports. For clarity, we used the following rules to group some countries: Iceland and Ireland fell inside the "Nordic" group together with Denmark, Finland, Norway, Sweden and Monaco were grouped with France.

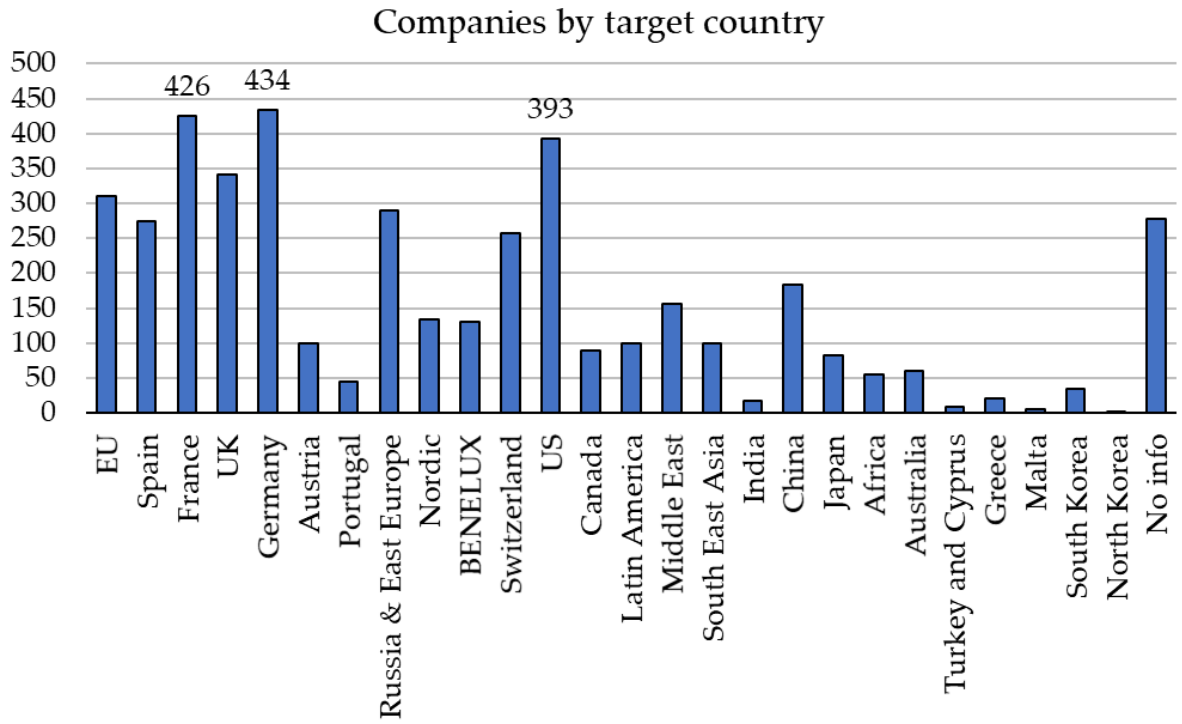


Figure 5.20: Number of target countries in the overall companies' applications.

The most popular target countries are Germany, France, the US, UK and Spain. This is a consistent result comparing it to the export history of Italy. Indeed, in 2019, these were the main destinations of Italian exports in the world (OEC, 2020) :

- Germany: $ 64.5 billion;
- France: $ 54.9 billion;
- US: $ 51.8 billion;
- UK: $ 27.9 billion;
- Spain: $ 26.7 billion.

Other essential target countries are Russia and East Europe, Switzerland, and China outside Europe. These results are in line with the past years too; in fact, Swiss and Chinese exports were worth $ 24.5 billion and $ 14.7 billion.

It is quite difficult to identify a direct correlation between winning companies and a cluster of some specific countries when referring to the single company. As explained previously, different parameters were considered to obtain a high score in the technical evaluation phase. Therefore, choosing a country rather than another may be disconnected by chance to get a high score in the valuation. However, analysing our data, we tried to find some common patterns which are in common among the admitted and not admitted companies.

Many tools are used to evaluate different countries to identify the most attractive ones. The first result is the general target "EU" in the "Not admitted" companies (+39.9%) compared to the "Admitted" and "Admitted and funded". This is definitely linked to the clarity and specificity of an application: a project that declares the whole of Europe as a target export market is more likely to fail, or at least to reach worse results than one project that identifies one, two, or three target countries. This is because the choice of a target market is one of the most important steps of an export strategy and probably the one that requires more attention and time. Choosing "EU" as a target shows little attention to details, leading to negative export results.

The same reasoning can be applied to the companies with no info regarding the target foreign markets: their percentage in the not admitted is more than double (+158%) than among the other companies.

Analysing now some specific countries, many of them do not have statistical significance given the low number of companies that chose them. Few considerations can be made about Germany, whose percentage in the "Admitted" plus “Admitted and funded” is 31.5% higher than among the not admitted, and the US, where the same rate reaches 50.3%.

6. Empirical analysis of the state aid effectiveness

In this sixth part of our research work, we will focus on the analysis of the results obtained by companies participating in the public tender. This is a key part of our work, given that this analysis is essential for the evaluation of the effectiveness of the state aid and for identifying improvement areas.

After a brief introduction to the research tool used, we will do a deep dive into the results and performances that the companies achieved, showing the effects that the financing had on the funded companies compared with the not funded ones.

6.1 Methodology

To collect and analyse the results, we utilised as a research tool a survey. This choice is due to the high number of companies included in the initial sample and the quantitative data needed. Using qualitative interviews would not have been an effective way to retrieve the data, considering it is also a very time-consuming activity.

We drafted a survey developed into eight questions, touching different areas, to obtain the higher response rate possible. The survey was shared with all the 1,642 participants' companies, and it obtained 160 replies, which correspond to a response rate equal to 9.7%. This percentage can be considered a good result (Chung, 2022), also considering that we could not send any additional reminders to the companies; furthermore, it is a good outcome pondering that the answers' distribution was quite homogenous among funded (97) and not funded (63) companies, which is very relevant for our analysis.

These are the questions present in the survey:

1. Which of the following alternatives best describes your e-commerce initiative abroad?

2. How do you think the following performance indicators of your company have changed since last year?
3. Indicate - if any - in which foreign markets you were able to expand or improve compared to last year.
4. Which of the following alternatives best describes the human resources within your company?
5. Which of the following alternatives best describes the experience of your company as regards e-commerce and internationalisation?
6. Indicate - if any - which of the following barriers slowed down or completely blocked the internationalisation plan of your company.
7. Indicate - if considered necessary - what improvements should be made in future public tenders.
8. Did your company receive the funding?

The first question allowed us to cluster the different internationalisation projects. The second and third questions were related to the results obtained by the companies after the public tender. Indeed, they respectively contain information regarding financial and not financial performances and information related to the countries the companies were able to expand to. Then, two questions were related to the companies' specific managerial structure and internationalisation experience. This is a significant piece of information given that it enabled us to assess the importance of these two elements for obtaining good internationalisation results. The sixth and seventh questions were related to the difficulties the companies met in carrying out their internationalisation plan and their difficulties in the overall application process.

The latter question evaluated the critical points of the applications process, receiving direct feedback from the applicants' companies to identify improvement areas. Finally, we ask the question regarding the result of the public tender, which is crucial for our research. Please note that the complete survey is available in the Appendix (p. 180).

In the next pages, we will expose the results obtained by analysing the different items available in the survey, one by one.

6.2 Survey results analysis

Overall performance index

To begin our analysis, the initial step was to create an aggregate performance index (PI), considering the performance results available in the second question of our survey, which was able to depict the overall performance of the company. Considering that, for all the eight parameters included in the survey, the possible answers to the

question "How do you think the following performance indicators of your company have changed since last year?" were:

- Decreased over -20%;
- Decreased among -20% and 0;
- Unchanged;
- Increased among 0 and +20%;
- Increased over +20%.

To calculate this index, we associated a number among 1 and 5 (1 corresponding to "*Decreased over -20%*", 5 corresponding "*Increased over +20%*") to the answers, creating a comprehensive ad hoc index for our specific purpose. This was useful also to carry out all the further analysis on the single performance parameters. Indeed, it is important to remind that the goal of the public tender was to support the internationalisation of the MSMEs through e-commerce. Therefore, some items in the survey play a more important role than others, which is the reason underneath our overall index calculation choice.

Our choice is that, as reminded above, the original goal of the public tender launched by Regione Lombardia was to support the internationalisation of the MSMEs through e-commerce. The objective of our research is to study the effectiveness of this public financing. Given the importance of internationalisation in our research, we decided to give the export turnover the maximum weight, as a 30% of the total. Therefore, this performance must be the one that weighs the most on the overall performance.

The other two financial items, overall turnover and ROA, represent the second and third largest weights in the calculation. We decided to give the financial indexes present in the survey – export revenues, overall revenues and ROA – overall importance of 65%. This choice lies in the fact that the company's internationalisation cannot be the only goal of the public tender. Indeed, the company's solidity and financial performances remain a fundamental objective of every state aid.

Another important indicator is the number of leads with potential foreign customers; we decided to give it a weight of 12.5%. The last three indicators, related to the operations (such as "*Order punctuality*") or the overall size of the companies (such as the number of employees and number of partners) received a weight of 7.5%.

This is the summarising table for the different weights:

Parameter	Weight
Export revenues	30.0%
Overall revenues	20.0%
ROA	15.0%
# Leads	12.5%
# Employees	7.5%
# Partners	7.5%
Order punctuality	7.5%

Table 6.1: Weights used for the overall performance index computation.

The ratio between the export and overall turnover was the last item available in the survey. We decided to exclude this item from the overall index calculation since it can lead to tricky results. For example, if a company keeps its export turnover constant, but its overall turnover decreases, the ratio between the export turnover and the overall turnover will increase, even if this is not good result neither for the company nor for the policymakers. For this reason, this ratio is not included in the calculation of the overall index performance.

After this explanation about the computation of the overall performance index, we will expose all the analyses regarding the survey results. The different items present in the survey have been linked together to achieve relevant insights for our research.

6.2.1 Performance indexes

Our analysis of the survey results begins with the most general and simple result. Indeed, we first analysed the companies' overall performances, using the result they obtained in the public tender as a comparison driver. As a first and general result, we can note that the funded companies obtained an overall performance index average of 13% higher than the not funded companies (3.38 vs 2.99).

We can see this result in Table 6.2:

	Overall performance index average
Funded	3.38
Not funded	2.99
Total	**3.22**

Table 6.2: Overall performance index average, divided by funded and not funded companies.

To assess the statistical relevance of this result, we carried out a t-test on the two samples of results. The t-test is a statistical test that allows comparing the average values of the two data sets. We used a two-tails independent t-test, since the two data sets were not paired and independent one from the other. We obtained a probability equal to 0.05% as a statistical test value, which confirms the statistical relevance of our data samples. We can consider that the two data sets are significantly different with a high degree of confidence.

This is the first simple sign of evidence of the utility of financing for improving the performance of companies, keeping a particular focus on their internationalisation performances.

The following table shows the average results of the seven survey items: six of them benefit from being financed.

Application result	Overall revenues	Export revenues	ROA	# Employees	# Partners	# Leads	Order delivery punctuality
Funded	3.37	3.46	3.24	3.11	3.39	3.71	2.99
Not funded	3.05	2.95	2.92	3.00	3.06	3.03	3.00
Delta	**+10.6%**	**+17.3%**	**+10.8%**	**+3.8%**	**+10.7%**	**+22.4%**	**-0.3%**

Table 6.3: Average performances obtained by the different items available in the survey, divided by funded and not funded companies.

The two areas that have benefited the most from funding, in terms of performances, are:

- Number of leads: the average performance in case of funding is 22.4% bigger than in case of not funding (3.71 vs 3.03);

- Export turnover: the average performance in funding is +17.3% bigger than in not funding (3.46 vs 2.95).

Given the importance of the export for our research, we firstly focused on the export turnover result. It is a significant result of our analysis, showing, even at first glance, how public support has helped Italian SMEs considerably in their goal of expanding abroad. Also, the results in terms of number of leads with potential foreign customers should not be underestimated. Indeed, if on one hand, the increase of export turnover has an immediate impact on the company, on the other hand, this result will lead in the medium term to a further increase in foreign turnover and it will boost the presence of companies in international markets. Therefore, it represents another important result for the purpose of the public tender.

We will now present the results of a more detailed analysis of the single performance areas. There is much evidence that testifies how the funds helped the company to improve their performances.

Overall revenues

With reference to funded companies, the 7.2% of them obtained a reduction of the overall revenues after the participation in the public tender of between 0 and 20%. This percentage is equal to the 19.1% in case of not funded ones. Moreover, the 48.5% of the funded enterprises obtained an increase of between 0 and 20%, against the 33.3% in case of not funded ones.

Overall revenues	**Funded**	**Not funded**
< -20%	10.3%	12.7%
Among -20% and 0	7.2%	19.1%
0	25.8%	27.0%
Among 0 and +20%	48.5%	33.3%
> +20%	8.3%	7.9%
Total	**100.0%**	**100.0%**

Table 6.4: Overall revenues variations, divided by funded and not funded companies.

Export revenues

Considering export revenues, the impact of the funds has been even greater than in the previous case. As we can see from the table, the 55.67% of the funded companies

increased their foreign sales, against the 15.87% of the not funded enterprises. The majority of the not funded companies (almost the 62%) did not improve this specific item, and only two companies out of 63 (the 3.17%) obtained an increase greater than the 20%.

Export revenues	Funded	Not funded
< -20%	8.3%	7.9%
Among -20% and 0	5.2%	11.1%
0	24.7%	61.9%
Among 0 and +20%	55.7%	15.9%
> +20%	6.2%	3.2%
Total	**100.0%**	**100.0%**

Table 6.5: Export revenues variations, divided by funded and not funded companies.

ROA

Regarding Return on Assets (ROA) performances, we can see that the differences between funded and not funded companies were not as pronounced as in the case of the revenues. Indeed, from the results obtained, it is possible to note that the percentage of companies that recorded a decrease greater than 20%, a constant result and an increase of +20% is similar. The only remarkable difference is recorded in the number of companies that decreased their ROA between 0 and 20% or increased it among 0 and 20%: 3.1% vs 14.3% in the first case, and 30.9% vs 19.1% in the second case.

ROA	Funded	Not funded
< -20%	4.1%	7.9%
Among -20% and 0	3.1%	14.3%
0	59.8%	57.1%
Among 0 and +20%	30.9%	19.1%
> +20%	2.1%	1.6%
Total	**100.0%**	**100.0%**

Table 6.6: ROA variations, divided by funded and not funded companies.

Comparing this result with the two previous cases, we draft one main reason. The ROA indicator is hard to increase in the very short period, given that the investments made by the companies (which cause an asset increase, i.e. an increase in the denominator) require time to lead to an EBIT increase (i.e. an increase in the numerator). In the first two cases, the revenues require less time to increase. Therefore, the difference between funded and not funded companies' results were more pronounced, even if the overall performances of the funded companies are still better.

Number of employees

Regarding the number of employees of the companies, we can see that the state aid did not have a big impact: most of them (72.5%) did not record any change in this parameter. At first sight, it is difficult to think that one or more additional employees cannot be financed by state aid which is equal maximum to € 10,000. This consideration is generally confirmed by the data obtained, as shown in Table 6.7:

Number of employees	Funded	Not funded	Total
< -20%	1.0%	3.2%	1.9%
Among -20% and 0	8.3%	9.5%	8.8%
0	71.1%	74.6%	72.5%
Among 0 and +20%	17.5%	9.5%	14.4%
> +20%	2.1%	3.2%	2.5%
Total	**100.0%**	**100.0%**	**100.0%**

Table 6.7: Number of employees variations, divided by funded and not funded companies.

Here we can see how, on average, most of the companies (72.5%) did not record any change in the number of employees; this percentage remains very similar even differentiating among funded (71.2%) and not funded (74.6%) companies.

Going deeper into this analysis, we tried to differentiate the starting situation of each company, taking into account the answers to the fourth question of the survey, related to the company's human resources. Using this additional information, we could get a more precise picture, as shown in Table 6.8 (EM: export manager, eCM: e-commerce manager):

	Both EM and eCM		eCM		EM		Neither EM nor eCM	
	Funded	Not funded	Funded	Not funded	Funded	Not funded	Funded	Not funded
< -20%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.7%
Among -20% and 0	10.0%	0.0%	4.8%	0.0%	7.1%	0.0%	10.7%	17.1%
0	60.0%	77.8%	76.2%	83.3%	75.0%	57.1%	71.4%	74.3%
Among 0 and +20%	25.0%	22.2%	19.1%	8.3%	17.9%	28.6%	10.7%	2.9%
> +20%	0.0%	0.0%	0.0%	8.3%	0.0%	14.3%	7.1%	0.0%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Table 6.8: Number of employees variations, divided by funded and not funded companies, focusing on the presence of export manager and e-commerce manager.

Indeed, regardless of the result obtained in the public tender by the single company (i.e. whether it has been funded or not), for all the four different categories of HR, the most common result was that the number of employees did not change, as this percentage is always around 70%. Focusing on the case of companies without an export manager and e-commerce manager, which we might expect were increasing their number of employees by hiring an export manager and an e-commerce manager, we can see that the fund has had an impact, even if relatively small. In fact, in the case of funded companies, the 10.7% had an increase between 0 and 20% of the number of employees, and the 7.1% had an increase greater than the 20%; instead, in the case of not funded companies, these two percentages are respectively equal to 2.9% and 0%.

Number of partners and order punctuality

The number of partners and the order punctuality indicators are less directly correlated with the companies' internationalisation level. At the same time, they are more related to the operations and company size. Therefore, we expected these two performance indicators to be less affected by the funding of the companies, given that they require more time and different strategies to be improved. As testified by the two tables below, the results obtained are similar between the two categories. It can be observed that only for the number of partners index, among the funded companies, we have more companies that have increased this value relative to the ones who have not (42.27% vs 51.55%) concerning the same two categories among the not funded ones

(22.22% vs 66.67%). Otherwise, the percentages obtained always have a difference whose value is less than 5%.

Number of partners	Funded	Not funded	Total
< -20%	0.0%	4.8%	1.9%
Among -20% and 0	5.2%	6.4%	5.6%
0	51.6%	66.7%	57.5%
Among 0 and +20%	42.3%	22.2%	34.4%
> +20%	1.0%	0.0%	0.6%
Total	**100.0%**	**100.0%**	**100.0%**

Table 6.9: Number of partners variations, divided by funded and not funded companies.

Order delivery punctuality	Funded	Not funded	Total
< -20%	4.1%	1.6%	3.1%
Among -20% and 0	13.4%	14.3%	13.8%
0	63.9%	66.8%	65.0%
Among 0 and +20%	16.5%	17.5%	16.0%
> +20%	2.1%	0.0%	1.3%
Total	**100.0%**	**100.0%**	**100.0%**

Table 6.10: Order delivery punctuality variations, divided by funded and not funded companies.

Number of leads

The number of leads (intended as interactions with potential foreign customers) is another important index related to the capability of the companies to expand their presence into foreign markets. The results obtained for this indicator represent important support to the idea that the funds played an important role in improving the companies' performances.

Number of leads	Funded	Not funded	Total
< -20%	2.1%	4.8%	3.1%
Among -20% and 0	5.2%	15.9%	9.4%
0	24.7%	50.8%	35.0%
Among 0 and +20%	55.7%	28.6%	45.0%
> +20%	12.4%	0.0%	7.5%
Total	**100.0%**	**100.0%**	**100.0%**

Table 6.11: Number of leads variations, divided by funded and not funded companies.

As we can observe from the table above, 68% of the funded companies saw their number of leads increase in the last year. On the other hand, only 28.6% of the not funded ones recorded the same result. As explained at the beginning of the paragraph, this indicator does not necessarily mean a performance improvement in the short term. Still, it is an important step for the companies to pursue their internationalisation plan for the medium/long term.

6.2.2 E-commerce initiative

The second step of our analysis regards the different projects conducted by the companies to pursue their objective of expanding abroad through an e-commerce channel.

	Funded	Not funded	Total
Setting up or improving a proprietary e-commerce site for sales abroad	63	26	89
Digital marketing project supporting export through an online channel	8	10	18
No initiative	2	10	12
Use of advanced technologies (e.g. Augmented Reality, simulators, interactive solutions) to support online sales abroad	4	3	7
Selling abroad through both proprietary e-commerce site and marketplace or online retailer	14	11	25
Selling abroad through marketplace or online retailer	6	3	9
Total	**97**	**63**	**160**

Table 6.12: Companies divided by type of internationalisation initiative.

After a more general overview of the results, we will investigate the relationship between the type of project and the effectiveness of the state aid, focusing on the abroad expansion and the performances obtained by the companies.

To define a general overview of the results, we can see in Table 6.12 the distribution of the different project typologies. We can highlight that, as predictable, most of the companies tried to pursue their internationalisation process through the setting up of a proprietary e-commerce website. The main alternative was using the proprietary e-commerce website and a marketplace or online retailer.

To assess the effectiveness of the state aid on the different types of projects, we analysed which companies were able to expand in at least one new foreign country. We used the survey (Question 3) to identify whether each company was able to expand or improve its presence in one (or more) foreign market; indeed, it represents the ability of the company to break down the internationalisation barriers and expand abroad. After identifying the most common project initiatives in the survey, we considered the two most present – *"Setting up or improving proprietary e-commerce site for sales abroad"* and *"Selling abroad through both proprietary e-commerce site and marketplace or online retailer"* - for a deeper analysis. The results obtained are shown in the table below:

		Setting up or improving proprietary e-commerce site for sales abroad	**Selling abroad through both proprietary e-commerce site and marketplace or online retailer**
Funded	**Internationally expanded**	52.4%	28.6%
	Not internationally expanded	47.6%	71.4%
Not funded	**Internationally expanded**	19.2%	27.3%
	Not internationally expanded	80.8%	72.7%

Table 6.13: Percentage of funded companies able to expand abroad, divided by the three most popular e-commerce initiatives.

We start the analysis of these results from the first column. In the case of projects related to setting up or improving the proprietary e-commerce site, 19.2% of not funded companies failed in expanding abroad. This percentage rises to 52.4 in the case of financed companies, more than double. Following the same reasoning, we can see

that for projects related to selling abroad through both a proprietary e-commerce site and a marketplace or online retailer the results are quite different: the difference between the percentages of expanded companies (for funded and not funded) is almost null (1.3%).

These results highlight an important consideration: the effectiveness of the financing changes according to different characteristics of the e-commerce initiative. In this case, the funds have been much more effective (abroad expansion) for companies trying to set up or improve their proprietary e-commerce site for sales abroad. On the other hand, the financing did not bring any benefit for companies trying to sell abroad through both proprietary e-commerce sites and marketplace or online retailers. Comparing the funded and not funded companies' results, no relevant differences are noticeable.

The reasons behind this result may be of resource-scarcity type. It is important to remind that micro and small enterprises represent 89.4% of the overall applicant companies. For these companies, managing two different channels may be really challenging since the available resources may be scarce. On the other hand, focusing on selling through only their own e-commerce website may be much more effective, at least in the short term.

The same outcome is evidenced by the results obtained by the companies in terms of overall performance index, as shown in Table 6.14. Indeed, funded companies that tried to use their proprietary e-commerce site for sales abroad obtained considerably higher performances than companies trying to sell abroad through both proprietary e-commerce sites and marketplace or online retailers (3.44 vs 3.15).

	Funded	**Not-funded**	**Total**
	Overall PI average	**Overall PI average**	**Overall PI average**
Setting up a proprietary e-commerce site for sales abroad	3.44	3.04	**3.33**
Selling abroad through both proprietary e-commerce sites and marketplace or online	3.15	3.12	**3.14**
Total	**3.38**	**2.99**	**3.22**

Table 6.14: Overall performance index average for the different e-commerce initiatives, divided by funded and not funded companies.

After this analysis specifically related to two particular e-commerce initiatives, we now try to answer the following question: how important is getting the fund to expand abroad? This is a more general and high-level consideration. Still, it can be helpful to understand, at first sight, whether state aid is necessary or not for companies to expand abroad.

6.2.3 Managerial structure

Similarly, to the other sections of this chapter, we start the analysis of the Human company's managerial structure by drafting an overall view of the results. In Table 6.15, we can see the average overall performance index obtained by funded and not funded companies for the four different managerial structures.

	Funded	Not funded	Total
Both EM and eCM	3.45	3.28	3.39
EM	3.46	3.14	3.34
eCM	3.41	3.33	3.39
Neither EM nor eCM	3.23	2.80	2.99
Total	**3.38**	**2.99**	**3.22**

Table 6.15: Average overall performance index obtained with the four different managerial structures by funded and not funded companies.

The table above leads to two evident considerations:

- the importance of having specific figures committed to the export: indeed, companies' performances decrease from the first to the last row;
- The effectiveness of the financing: for all the four managerial structures, companies' performances increase in case the company has been funded.

This outcome already represents an important result of our analysis. Nevertheless, it can be more deeply investigated by taking into consideration whether the company has been able to expand into a foreign country or not. In Table 6.16, we summarised the percentage of companies that were able to internationally expand, considering the two situations mentioned above: in particular, we took into account the two extreme situations, on one side, the presence of both export manager and e-commerce manager, and on the other, the absence of both of them.

		Both EM and eCM	Neither EM nor eCM
Funded	**Internationally expanded**	65.0%	42.9%
	Not internationally expanded	35.0%	57.1%
Not funded	**Internationally expanded**	33.3%	8.6%
	Not internationally expanded	66.7%	91.4%

Table 6.16: Percentage of companies, respectively among the funded and not funded ones, can expand abroad considering two different managerial structures.

This percentage falls to 43% for companies without an export or an e-commerce manager. It means that the effectiveness of the financing increases in case the company already presents an internal structure able to manage and take advantage of it.

This table can be used for some interesting reflections. Firstly, in both cases, we can see how important and effective the financing was for the companies. Indeed, the percentages of companies that did not expand are very high among the not funded companies. This is a recurring outcome throughout all our analyses.

Secondly, we can highlight that the effectiveness of the financing, in terms of expansion, slightly differs for each managerial structure. For companies that have neither an export manager nor an e-commerce manager, the difference among funded and not funded companies is very pronounced: from 8.6% (not funded companies able to expand) to 42.9% (funded companies able to expand). This means that funded companies expanded five times more than companies not funded. For companies with export and e-commerce managers, the difference is less pronounced (33.3% and 65.0%). From these considerations, we can draft two main conclusions:

- a managerial structure that includes both export and e-commerce manager allow companies to expand in a higher number and with a higher facility;
- the financing is more decisive (in terms of expansion) for companies without an export manager or an e-commerce manager: indeed, comparing the funded with the not funded companies, the effect of the financing is more evident with respect to companies with export and e-commerce manager. This means that for these companies, it is almost impossible to expand abroad without the support of the state, while the fund can bring some possibility to overcome the lack of specific managerial figures

6.2.4 Barriers to internationalisation

A crucial segment of our analysis is focused on the barriers specific to CBEC. Regarding the main barriers that emerged in the latest studies and mentioned in paragraph 3.6 of Chapter 3, our study tries to identify the main ones that slowed down or completely blocked the internationalisation plan of the companies are.

We provide, initially, a general overview, while in the following paragraphs, we will analyse more in detail the relationship between the obstacles mentioned, the managerial organisation, the type of initiative, and the e-commerce experience of each company, both in funded companies and not funded ones.

First of all, we examined how often the companies faced each barrier. In Table 6.17, it is possible to observe that the most frequent ones are "*Lack of digital skills*" and "*Logistics*", which were mentioned 56 times and 46 times each.

Proceeding with the analysis, we considered the impact of the barriers on the planned internationalisation project. During its expansion, it could be possible that a company experienced some issues related to a specific obstacle, but it managed to overcome them. Cross-referencing the results presented in the lines above with the results obtained from question number 4 of the survey – *Indicate, if any, in which foreign markets you were able to expand compared to last year* – we understood which companies did not expand abroad and the barriers that blocked their internationalisation plan.

Type of barrier	# Companies	# Not internationally expanded companies	Percentage
Lack of digital skills	56	39	69.6%
Cultural barriers	15	9	60.0%
Compliance with legal requirements	21	15	71.4%
Sale of special products	11	6	54.5%
Limited access to digital payments platforms	6	3	50.0%
Logistics	46	22	47.8%
ICT security and data protection	15	9	60.0%
COVID-19	9	4	44.4%
Marketing	3	1	33.3%

Table 6.17: For each barrier, the number of companies facing that barrier, and the number of companies unable to overcome it.

From the table above, it is possible to notice that the issues related to logistics were overcome more easily than those associated with the lack of digital skills, 47.8% vs 69.6%. "*Compliance with the legal requirement*" was the most blocking impediment. Indeed, it was mentioned by 21 companies, and 15 of them were not able to complete their expansion project. The two other barriers that emerged are "Cultural barriers" and "ICT security and data protection", with 60.0%.

To verify the effectiveness of "*Bando E-Commerce 2020"* in overcoming the barriers, we considered how funded companies and not funded ones performed when the issues emerged. Table 6.18 shows that funded companies had astonishing results compared to those that did not receive the funding. These results are even more pronounced considering the two barriers, "*Lack of digital skills*" and "*Logistics*". As regards the first one, only 11.1% of the not funded companies got over the difficulties and were able to expand their presence abroad. Considering "*Logistics*", 61.3% of the funded companies overcome this barrier against the 33.3% of the not funded ones.

Type of barrier	Funded			Not funded		
	# Companies	# Internationally expanded companies	%	# Companies	# Internationally expanded companies	%
Lack of digital skills	29	14	48.3%	27	3	11.1%
Cultural barriers	11	5	45.5%	4	1	25.0%
Compliance with legal requirements	11	4	36.4%	10	2	20.0%
Sale of special products	10	5	50.0%	1	0	0.0%
Limited access to Digital payments platforms	5	3	60.0%	1	0	0.0%
Logistics	31	19	61.3%	15	5	33.3%
ICT security and data protection	10	6	60.0%	5	0	0.0%
COVID-19	6	5	83.3%	3	0	0.0%
Marketing	1	0	0.0%	2	2	100.0%

Table 6.18: For each barrier, the number of companies facing that barrier, and the number of companies that were not able to overcome it, divided by funded and not funded companies.

Thoroughly investigating the data of the survey, it emerged that the most common barrier – *Lack of digital skills* – was more present when the company has neither an export manager nor an e-commerce manager (52% of the companies) and when the company had no experience as regards e-commerce within national borders and cross border e-commerce (29 companies out of 56).

In the following two paragraphs, the analysis is focused on how the companies, based on their managerial structure and their e-commerce experience, performed when this obstacle arose.

Relationship between "Lack of digital skills" and companies' managerial structure

This section enhances the analysis of paragraph 6.2.3 in which we analysed how the managerial structure of the companies influenced their performances. As mentioned in the lines above, to assess the effectiveness of the state aid, we enriched this analysis by distinguishing funded companies from the not funded ones.

Lack of digital skills		**EM, eCM or both**	**Neither EM nor eCM**
Funded	**Internationally expanded**	61.1%	27.3%
	Not internationally expanded	36.8%	72.7%
Not funded	**Internationally expanded**	33.3%	0.0%
	Not internationally expanded	66.7%	100.0%

Table 6.19: Percentage of funded and not funded companies able to overcome the lack of digital skills, based on their managerial structure.

The table above leads to some important considerations regarding the lack of digital skills. In absolute terms, the lack of digital skills can be more likely overcome by companies with a solid managerial structure (in terms of export manager and e-commerce manager). This result is highlighted because only three companies out of 29 without neither an export manager nor e-commerce ones have expanded. Indeed, these professional figures may identify the most effective ways to overcome this barrier.

The funds helped companies with export or e-commerce managers overcome the lack of digital skills barriers with respect to companies that did not receive the funding: 61.1% of funded companies were able to expand, while 33.3% among the not funded companies. Nevertheless, the fund was not effective, since 36.8% were still unable to expand despite the financing.

On the other hand, receiving the fund for companies without neither export nor e-commerce manager has been a necessary condition for expanding abroad. This is evident since no companies were able to overcome this barrier without financing. Additionally, 27.7% of the funded companies were able to expand. Without a managerial structure focused on export, financing can help companies but cannot be the only solution to overcome the lack of digital skills.

Relationship between "Lack of digital skills" and companies' e-commerce experience

To have more consistent data, we grouped on one side the companies with no experience regarding internationalisation and, on the other, the companies with experience in at least one of the following categories: internationalisation with traditional channels, e-commerce within national borders, and cross border e-commerce. The data obtained are presented in Table 6.20.

Lack of digital skills		**The company already had experience at least as regards internationalisation with traditional channels, e-commerce within national borders or CBEC**	**The project described in the public tender is the first experience of the company as regards internationalisation**
Funded	**Internationally expanded**	52.9%	41.7%
	Not internationally expanded	47.1%	58.3%
Not funded	**Internationally expanded**	30.0%	0.0%
	Not internationally expanded	70.0%	100.0%

Table 6.20: Percentage of funded and not funded companies able to overcome the lack of digital skills, based on their e-commerce experience.

The results summarised in the table above strengthen what was expressed in the previous paragraph. The companies that already had experience at least as regards internationalisation with traditional channels, e-commerce within national borders or CBEC overcome the lack of digital skills thanks to the funding. 52.9% of the funded ones were able to expand compared to the 30.0%

The most interesting evidence emerged considering the enterprises with no experience at all regarding internationalisation. In this case, the funding was a considerable

facilitator helping five companies out of 12 complete their internationalisation plan compared to an astonishing 0.0%.

Relationship between "Logistics" and companies' managerial structure

This section of the analysis of the barriers stresses the relationship between the second most mentioned obstacle – "*Logistics*" – and the company's managerial structure, trying to assess the effectiveness of the state aid. The results are summarised in Table 6.21.

Logistics		**EM, eCM, or both**	**Neither EM nor eCM**
Funded	**Internationally expanded**	65.4%	27.3%
	Not internationally expanded	34.6%	72.7%
Not funded	**Internationally expanded**	50.0%	16.7%
	Not internationally expanded	50.0%	85.7%

Table 6.21: Percentage of funded and not funded companies able to overcome issues related to logistics, based on their managerial structure.

The evidences that emerge are slightly different compared to the previous ones. The funding appears to be less helpful in overcoming the issues related to logistics regardless of the managerial structure.

Regarding the companies with at least one between export manager and the e-commerce manager, 65.4% of them were able to internationalise. In comparison, 50% of them did not expand the presence abroad. Considering the companies without these managers, the results are very similar, 27.3% vs 16.7%.

6.2.5 Analysis of the target countries

The analysis regarding the new markets in which the companies could export allowed us to reach just a high-level result. Chapter 4 pointed out the difficulties of finding a direct relationship between the countries chosen by a company and the results obtained in the tender. In this case, it is difficult to state that it is easier to expand in a specific country than into another one thanks to financial support. On the other hand, we can still find some interesting results related to the countries in which the companies expanded and the effect of the help on the funded companies. In Table 6.22, it is possible to see how many companies succeeded to expand in specific countries, subdivided by funded and not funded ones:

Countries	Funded		Not funded	
EU	9	9%	3	5%
Spain	4	4%	2	3%
France	7	7%	3	5%
UK	3	3%	1	2%
Germany	7	7%	1	2%
Austria	1	1%	0	0%
Portugal	0	0%	0	0%
Russia & East-Europe	6	6%	0	0%
Nordic	3	3%	0	0%
BENELUX	4	4%	0	0%
Switzerland	1	1%	0	0%
US	11	11%	1	2%
Canada	2	2%	0	0%
Latin America	3	3%	0	0%
Middle East	3	3%	1	2%
South East Asia	5	5%	0	0%
China	7	7%	1	2%
Japan	0	0%	0	0%
Africa	2	2%	0	0%
Australia	0	0%	1	2%
India	2	2%	0	0%
Others	1	1%	0	0%
None	48	49%	52	83%
Total of companies	**97**	**100%**	**63**	**100%**

Table 6.22: New markets reached by applicants companies, divided by funded and not funded companies.

From these results, we can draw some interesting considerations. Firstly, we can observe that the main new markets into which the companies have expanded are consistent with the initial targets we presented in chapter 4. The most popular target countries indicated by the companies in the application were Germany, France, and the US. They are also the three countries into which companies have expanded more (excluding EU as a general answer given by the companies in the survey), as shown in Table 6.22. It is worth mentioning the results related to the internationalisation toward the UK. While in the applications, the UK was chosen by the 25% of the companies that gave information regarding the target country, being the fourth most popular country (after Germany, France and the US), according to the results collected, only four companies managed to expand into this market, resulting in the eighth most

popular country. This result may probably be due to the difficulties related to the Brexit situation, which made exporting harder due to higher tariffs, legal requirements, and logistics.

The second important result of this analysis concerns the support given by the funds. Among the funded companies, 49% of them could not expand in any new market. Yet, this value rises to 83% in the case of not funded companies, meaning that more than eight companies out of 10 couldn't accomplish the project they presented in the application. This is a very significant result of the importance of the EPP for the companies.

6.2.6 Public tender improvement

A worth mentioning part of the survey was the one related to the possible improvements that, according to the applicant companies, the public tender should take into consideration. This topic is slightly different from the previously discussed in this chapter, given that it is not related to internationalisation projects, barriers, or the company's performance, but it is limited to how this public tender was developed and made available to the applicants. This is essential feedback that is necessary to the policymakers to analyse and implement improvements for the new tenders developed in the future.

Each company could select one or more improvements among the ones proposed in the survey or add different specific advice. On a total number of 160 companies, the total number of possible improvements indicated by the companies is equal to 260, meaning that each company, on average, pointed out 1.6 possible improvements. "*Having more funding available*" has been the most popular answer. This result is quite predictable, and it is not so relevant given that many factors can bias it. The other two most-chosen improvements are:

- more user-friendly access portal;
- less documentation is required.

These two aspects are related to the companies' difficulties accomplishing all the bureaucratic requirements to apply for the tender correctly. Thanks to our database, we could also notice that many companies have been excluded because they couldn't provide all the documentation required on time due to difficulties in using the access web portal. Another possible improvement indicated a consistent number of times by companies is the possibility of being supported by an expert to help them during the application process, and in case serious problems arise during the internationalisation process. As we saw in the previous pages, this is also reflected in the fact that the companies' lack of competencies was the most common barrier to internationalisation.

To conclude, excluding the amount of funds available, which depends on many complex factors, the first aspect the policymakers should work on, according to this survey, is the application process's simplification concerning the number of documents required and the tool supporting it. This may be especially significant for micro and small enterprises, given the scarcity of resources they are likely to face.

Possible improvement	**Funded**		**Not funded**		**Total**	
Less documentation required	28	19.3%	26	22.6%	54	20.8%
More user-friendly web access portal	29	20.0%	31	27.0%	60	23.1%
More significant funding available for each company	55	37.9%	30	26.1%	85	32.7%
Possibility to be supported by an expert	22	15.2%	24	20.9%	46	17.7%
More characters available in the application form	9	6.2%	2	1.7%	11	4.2%
Other	2	1.4%	2	1.7%	4	1.5%
Total	**145**	**100.0%**	**115**	**100.0%**	**260**	**100.0%**

Table 6.23: Possible improvements indicated by the applicant companies, divided by funded and not funded companies.

7. Conclusions

This seventh chapter is the last of our research work. In the first part we will draw the main conclusion of our analysis. Secondly, we will present the main limitations to the research and we will give some suggestions for further research on the topic.

7.1 Summary of the results

In this section we will summarise all the main results that we obtained from our analysis

7.1.1 Results of "*Bando E-Commerce 2020*" analysis

In Chapter 5 of this research, we presented a detailed analysis on the "*Bando E-Commerce 2020*", The first part of this evaluation included a preliminary study on the companies which applied for this public tender. This study led to two main considerations:

- 1,133 out of 1,642 applicant companies (69%) are from the tertiary sector: this highlights the difficulties that Covid-19 brought to this sector, considering companies operating in the tourism and in the food industry;
- Over the 92% of the applicants are micro or small enterprises. This data represents another consequence of the pandemic: even if micro and small constitute the majority part of the Italian companies, their large presence among the applicants still testifies how the impact of the pandemic has brought many difficulties to these categories of companies.

The second part of the analysis on the "*Bando E-Commerce 2020*" allowed us to identify the factors and characteristic that can help succeeding in public tender like the one assessed. The first evident result is the difficulty of the micro and small enterprise in being funded. The results obtained in Table 5.3 (p. 117) testify that medium enterprises obtained the financing in a very higher proportion with respect to micro and small enterprises. This outcome, as previously discussed, is mainly related to the scarce

availability of resources and, likely, of competencies of micro/small enterprises. Therefore, generally speaking, we can state that, according to our analysis, larger companies demonstrate higher chance to get funded in public tender in which the company's dimension is not a parameter of the application's evaluation.

The last main conclusion related to this part of the analysis regards the age, both of the company owner and of the company itself. The data presented in Figure 5.16 and Figure 5.17 (pp. 123 and 124) clearly shows how companies' owners and companies' average age constantly increase starting from not admitted companies, through the admitted companies, until the admitted and funded ones. Indeed, this last category recorded the highest averages: 58.7 (companies' owners age) and 24.4 (companies' age). We obtained similar results within the analysis of startup companies: Figure 5.11 and Figure 5.19 (pp. 114 and 125) respectively shows that the percentage of startup companies dropped from 26% among the overall applicants to 11% among the admitted and funded companies. For these reasons we can state that, according to this research, established companies are more likely to obtain the funds in public tender with respect to younger companies and startups; furthermore, owner's age may also represent a facilitating factor. This result can mainly be explained by the experience the companies gained during the years, their previous participation in other public tenders (also demonstrate by Table 5.7) and their knowledge of the Italian bureaucracy.

7.1.2 Results of the "*Empirical analysis of the state aid effectiveness*"

In this section, we will present the conclusion related to our analysis on the effectiveness of the state aid, exposed in Chapter 6. This analysis enabled to assess the importance the state aid covered in the possibility of the applicant companies to improve their performances and to expand abroad. The main results obtained are presented in the next paragraphs.

The first and more evident result of our analysis concerns the better performances obtained by the funded companies: the overall performance index average of this group of companies is equal to 3.38, while the correspondent value obtained by the not funded companies is 2.99; these two sample averages have been subjected to a t-test whose p-value equals 0.05%, reinforcing the statistical relevance of the analysis. Furthermore, six out of the seven parameters included in the survey increased the performances when the company has been funded.

Additionally, another simple but relevant result is that 83% of the not funded companies was not able to expand or improve their presence abroad, while 50.5% of the funded companies was.

The results just presented above give, at first sight, an already important overview, in general terms, on the positive results obtained by the companies that received the financing.

The most common project initiative chosen by the applicant companies has been the use of the proprietary e-commerce website for abroad expansion. This may be a risky choice, especially for micro and small enterprises without a brand recognition abroad. Nevertheless, as shown in section 6.2.2, this strategy led to better performances with respect to the choice of a two-channel strategy (proprietary website and marketplace or online retailer). Furthermore, also assessing the effectiveness of the state aid, it resulted more effective for companies trying to sell through the proprietary website. To conclude: a single channel strategy through proprietary e-commerce website resulted more effective, both for the companies (in terms of performances and expansion abroad) and considering the effectiveness of the state aid. A two-channel strategy, indeed, may result too arduous due to the lack of resources of micro and small enterprises, and therefore the state aid may not be enough.

The analysis concerning the managerial structure of the companies revealed some interesting conclusions. Firstly, our data confirm that a strong managerial structure (in terms of export manager and e-commerce manager) definitely helps companies to expand abroad. Moreover, assessing the effectiveness of the state aid, we can conclude that, when neither export manager nor an e-commerce manager is present, the financing is necessary but not sufficient to help companies in their internationalisation, as clearly shown in Table 6.17. Our analysis demonstrates that the presence of a managerial figure able to handle all the export process is crucial for companies willing to expand abroad.

Another important part of our analysis is related to the most common barriers that companies have encountered in their internationalisation process through e-commerce. The data show that the most common barrier faced by the companies is the lack of digital skills. Moreover, further analysis shows that:

- In case neither an export nor an e-commerce manager is present, or in case the company's project was the first international experience, the state aid has been a necessary condition for the abroad expansion: these companies were not fully able to overcome the lack of digital skills barrier without the financing.
- In case a managerial figure dedicated to the export is present, the state aid was effective in helping the abroad expansion: many more funded companies were able to expand with respect to not funded companies. The same result is obtained for companies with experience in internationalisation. This outcome highlights the importance of skills and resources in leveraging the possibilities offered by the state aid.

- There are no concrete evidences demonstrating the effectiveness of the funding in helping the companies to overcome the logistics barrier to internationalisation

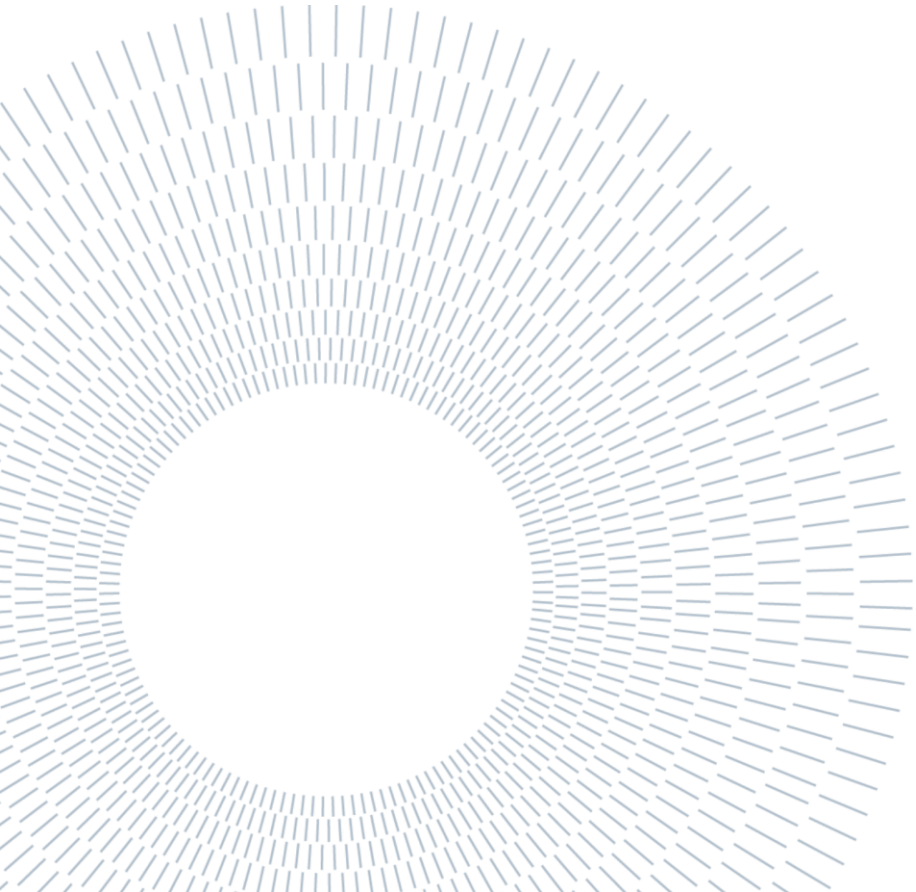
7.2 Limitations and future developments

In this section we will present the main limitations of our research work, which consequently open the possibility to new and further researches.

The first and main limitation of our research is represented by the time horizon of the analysis. The results of the public tender were declared in November 2020, and the and the funds were to be spent no later than 31 March 2021; the data contained in the survey were collected in November 2021. This means that the results obtained by the companies are related to a period of 8-12 months. It is quite a time horizon to run a first analysis on the state aid's effectiveness, but some investments made by the companies may require more time to generate a tangible return. For this reason, it would be very interesting to run further analysis on the same sample of companies a year after. This would allow us to compare the results of the two analyses and verify the effectiveness of the state aid in the medium term.

The second limitation of our research concerns the fact that much information of the companies available in the original database used for the preliminary analysis on "*Bando E-Commerce 2020*" (Chapter 5) could not be used for the analysis of the state aid effectiveness. This happened due to privacy reasons and limitation in the number of possible questions of the survey. For this reason, further research could be made considering more detailed information about the companies, since the availability of this information would have allowed to draw more detailed analysis and to assess whether the state aid has been more effective for companies with specific characteristics (for example, for a specific sector).

The last limitation we point out refers to the number of companies that replied to the survey. Even if a response rate around 10% is acceptable, and there was a good distribution of answers among funded and not funded companies, the absolute numbers may be considered a bit low, especially for some analysis which considered specific parameter of the survey. It would be important to obtain a higher number of responses to strengthen the analysis.



Bibliography

96/280/EC: Commission Recommendation of 3 April 1996 Concerning the Definition of Small and Medium-Sized Enterprises (Text with EEA Relevance) - Publications Office of the EU'://op.europa.eu/it/publication-detail/-/publication/2e3b13c5-c62c-4261-a6c8-57d83549aec5/language-en.

Abonyi, George, and David M. Van Slyke. (2010). 'Governing on the Edges: Globalization of Production and the Challenge to Public Administration in the Twenty-First Century'. *Public Administration Review* 70: S33–45.

Accenture. (2015). 'Report: Cross-Border E-Commerce to Reach $ 1 Trillion in 2020'. *Verizon Small Business Essentials Resources* (blog). 2015. https://www.verizon.com/business/small-business-essentials/resources.

Aharoni, Yair. (1966). 'The Foreign Investment Decision Process'. *The International Executive* 8 (4): 13–14. https://doi.org/10.1002/tie.5060080407.

Aldrich, Howard, and Catherine Zimmer. (1986). 'Entrepreneurship Through Social Networks'. In *California Management Review*, 33:3–23.

Alyoubi, Adel A. (2015). 'E-Commerce in Developing Countries and How to Develop Them during the Introduction of Modern Systems'. *Procedia Computer Science* 65: 479–83.

Amiti, Mary, and David E. Weinstein. (2011). 'Exports and Financial Shocks'. *The Quarterly Journal of Economics* 126 (4): 1841–77. https://doi.org/10.1093/qje/qjr033.

Andersen, Otto. (1993). 'On the Internationalization Process of Firms: A Critical Analysis'. *Journal of International Business Studies* 24 (2): 209–31. https://doi.org/10.1057/palgrave.jibs.8490230.

Anderson, Erin, and Hubert Gatignon. (1986). 'Modes of Foreign Entry: A Transaction Cost Analysis and Propositions'. *Journal of International Business Studies* 17 (3): 1–26. https://doi.org/10.1057/palgrave.jibs.8490432.

Anderson, James E. (1979). 'A Theoretical Foundation for Gravity Equation'. *American Economic Review* 69 (February): 106–16.

Anderson, James E., and Eric van Wincoop. (2003). 'Gravity with Gravitas: A Solution to the Border Puzzle'. *American Economic Review* 93 (1): 170–92. https://doi.org/10.1257/000282803321455214.

Arkolakis, Costas. (2008). 'Market Penetration Costs and the New Consumers Margin in International Trade', 62.

Autio, E., H. J. Sapienza, and J. G. Almeida. (2000). 'Effects of Age at Entry, Knowledge Intensity, and Imitability on International Growth'. *Academy of Management Journal* 43 (5): 909–24. https://doi.org/10.2307/1556419.

Bader, A., and Tim Mazzarol. (2009). 'Defining the Born Global Firm'. A Review of the Literature. Edited by Nicholas Beaumont. *23rd ANZAM Conference 2009 'Sustainability Management and Marketing'*

Barnes, Bradley, Ronika Chakrabarti, and Dayananda Palihawadana. (2006). 'Investigating the Export Marketing Activity of SMEs Operating in International Healthcare Markets'. *Journal of Medical Marketing* 6 (July): 209–21. https://doi.org/10.1057/palgrave.jmm.5050033.

Baum, Matthias, Christian Schwens, and R. Kabs. (2012). 'Determinants of Different Types of Born Globals'. *Handbook Of Research On Born Globals, Mika Gabrielsson, VH Manek Kirpalani, Edward Elgar Publishing*, 36–45.

Beck, Thorsten, and Asli Demirguc-Kunt. (2006). 'Small and Medium-Size Enterprises: Access to Finance as a Growth Constraint'. *Journal of Banking & Finance* 30 (11): 2931–43. https://doi.org/10.1016/j.jbankfin.2006.05.009.

Beck, Thorsten, and Asli Demirgüç-Kunt. (2008). 'Access to Finance: An Unfinished Agenda'. *The World Bank Economic Review* 22 (3): 383–96. https://doi.org/10.1093/wber/lhn021.

Bell, Jim, Rod McNaughton, Stephen Young, and Dave Crick. (2003). 'Towards an Integrative Model of Small Firm Internationalisation'. *Journal of International Entrepreneurship* 1 (4): 339–62. https://doi.org/10.1023/A:1025629424041.

Berman, Nicolas, and Jérôme Héricourt. (2010). 'Financial Factors and the Margins of Trade: Evidence From Cross-Country Firm-Level Data'. *Journal of Development Economics* 93 (November): 206–17. https://doi.org/10.1016/j.jdeveco.2009.11.006.

Bilkey, Warren J., and George Tesar. (1977). 'The Export Behaviour of Smaller-Sized Wisconsin Manufacturing Firms'. *Journal of International Business Studies* 8 (1): 93–98.

Bloomenthal, Andrew, Somer Anderson, and Munichiello, Katrina. (2021). 'Electronic Commerce (e-Commerce)'. Investopedia. https://www.investopedia.com/terms/e/ecommerce.asp.

Blum, Bernardo S., and Avi Goldfarb. (2006). 'Does the Internet Defy the Law of Gravity?' *Journal of International Economics* 70 (2): 384–405.

Bonner, Karen, and Seamus McGuinness. (2007). 'Assessing the Impact of Marketing Assistance on the Export Performance of Northern Ireland SMEs'. *International Review of Applied Economics* 21 (3): 361–79.

Bose, Tarun K. (2016). 'Critical Success Factors of SME Internationalization'. *Journal of Small Business Strategy* 26 (2): 87–109.

Bricongne, Jean-Charles, Lionel Fontagné, Guillaume Gaulier, Daria Taglioni, and Vincent Vicard. (2012). 'Firms and the Global Crisis: French Exports in the Turmoil'. *Journal of International Economics* 87 (1): 134–46.

Brouthers, Keith D., and George Nakos. (2004). 'SME Entry Mode Choice and Performance: A Transaction Cost Perspective'. *Entrepreneurship Theory and Practice* 28 (3): 229–47. https://doi.org/10.1111/j.1540-6520.2004.00041.x.

Brynjolfsson, Erik, Tom Mitchell, and Daniel Rock. (2018). 'What Can Machines Learn, and What Does It Mean for Occupations and the Economy?' *AEA Papers and Proceedings* 108 (May): 43–47. https://doi.org/10.1257/pandp.20181019.

Cairncross, Frances. (2001). 'The Death of Distance: How the Communications Revolution Is Changing Our Lives'. Revised edition. Boston: Harvard Business School Pr.

Calof, Jonathan L., and Paul W. Beamish. (1995). 'Adapting to Foreign Markets: Explaining Internationalization'. *International Business Review* 4 (2): 115–31. https://doi.org/10.1016/0969-5931(95)00001-G.

Casado-Belmonte, María del Pilar, Gema María Marín-Carrillo, Eduardo Terán-Yépez, and María de las Mercedes Capobianco-Uriarte. (2020). 'What Is Going on with the Research into the Internationalization of Small and Medium-Sized Enterprises (SMEs)? An Intellectual Structure Analysis into the State-of-the-Art (1990–2018)'. *Publications* 8 (1): 11. https://doi.org/10.3390/publications8010011.

Catanzaro, Alexis, and Christine Teyssier. (2021). 'Export Promotion Programs, Export Capabilities, and Risk Management Practices of Internationalized SMEs'. *Small Business Economics* 57 (3): 1479–1503. https://doi.org/10.1007/s11187-020-00358-4.

Cavusgil, S. (1980). 'On the Internationalization Process of Firms'. *European Research* 8 (January): 273–81.

Cavusgil, S. Tamer, and Gary Knight. (2009). 'Born Global Firms: A New International Enterprise'. Business Expert Press.

Celex 3/2003/h/0361. https://service.betterregulation.com/sites/default/files/celex_32003h0361_en_txt.pdf.

Chaney, Thomas. (2011). 'The Network Structure of International Trade'. SSRN Scholarly Paper ID 1758451. Rochester, NY: Social Science Research Network. https://papers.ssrn.com/abstract=1758451.

Chetty, Sylvie, and Colin Campbell-Hunt. (2003). 'Paths to Internationalization among Small- to Medium-Sized Firms'. *European Journal of Marketing* 37 (June): 796–820. https://doi.org/10.1108/03090560310465152.

Chetty, Sylvie, and Agndal Henrik. (2007). 'Social Capital and Its Influence on Changes in Internationalization Mode Among Small and Medium-Sized Enterprises'. *Journal of International Marketing - J INT MARKETING* 15 (March): 1–29. https://doi.org/10.1509/jimk.15.1.001.

Chung, Lucia. (2022). 'What Is a Good Survey Response Rate for Customer Surveys in 2022?' *Delighted* (blog). https://delighted.com/blog/average-survey-response-rate.

Cohen, Wesley M., and Daniel A. Levinthal. (1990). 'Absorptive Capacity: A New Perspective on Learning and Innovation'. *Administrative Science Quarterly* 35 (1): 128–52. https://doi.org/10.2307/2393553.

Coviello, Nicole, and Andrew McAuley. (1999). 'Internationalisation and the Smaller Firm: A Review of Contemporary Empirical Research'. *Management International Review* 39 (January): 223–56.

Coviello, Nicole, and Hugh Munro. (1995). 'Growing the Entrepreneurial Firm: Networking for International Market Development'. *European Journal of Marketing* 29 (July): 49–61. https://doi.org/10.1108/03090569510095008.

Crick, Dave. (2007). 'SMEs' Barriers Towards Internationalisation and Assistance Requirements in the UK: Differences Between Exporters and Firms Employing Multiple Modes of Market Entry'. *Journal of Small Business & Entrepreneurship* 20 (3): 233–44. https://doi.org/10.1080/08276331.2007.10593397.

Cunningham, Shawn, and Jorg Meyer-Stamer. (2005). 'Planning or Doing Local Economic Development? Problems with the Orthodox Approach to LED'. *Africa Insight* 35 (4): 4–14.

Czinkota, Michael R., and Wesley J. Johnston. (1981). 'Segmenting U.S. Firms for Export Development'. *Journal of Business Research* 9 (4): 353–65.

D'Angelo, Alfredo, Antonio Majocchi, Antonella Zucchella, and Trevor Buck. (2013). 'Geographical Pathways of Internationalisation for SMEs: Insights from an Italian Sample'. *International Marketing Review* 30 (2): 80–105. https://doi.org/10.1108/02651331311314538.

De Benedictis, Luca, and Massimo Tamberi. (2001). 'A Note on the Balassa Index of Revealed Comparative Advantage'.

Deardorff, Alan. (1998). 'Determinants of Bilateral Trade: Does Gravity Work in a Neoclassical World?' NBER Chapters. National Bureau of Economic Research, Inc. https://econpapers.repec.org/bookchap/nbrnberch/7818.htm.

Deardorff, Alan, and Robert Stern. (2003). 'Empirical Analysis of Barriers to International Services Transactions and the Consequences of Liberalization'. *A Handbook of International Trade in Services*, February. https://doi.org/10.1093/acprof:oso/9780199235216.003.0005.

Dewar, Robert D., and Jane E. Dutton. (1986). 'The Adoption of Radical and Incremental Innovations: An Empirical Analysis'. *Management Science* 32 (11): 1422–33.

DiCaprio, Alisa, James A. Robinson, and Alice H. Amsden. (2014). *The Role of Elites in Economic Development*. WIDER Studies in Development Economics. Oxford, New York: Oxford University Press.

Dipartimento per le Politiche Europee. (2022). 'Aiuti di Stato: proroga del quadro europeo fino al 30 giugno 2022'. https://www.fiscoetasse.com/rassegna-stampa/31562-aiuti-di-stato-proroga-del-quadro-europeo-fino-al-30-giugno-2022.html.

Dunning, John H. (1988). 'The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions'. *Journal of International Business Studies* 19 (1): 1–31. https://doi.org/10.1057/palgrave.jibs.8490372.

Durmusoglu, Serdar, Gerhard Apfelthaler, Dilek Nayir, Roberto Alvarez, and Terry Mughan. (2012). 'The Effect of Government-Designed Export Promotion Service Use on Small and Medium-Sized Enterprise Goal Achievement: A Multidimensional View of Export Performance'. *Industrial Marketing Management*

- *IND MARKET MANAG* 41 (May). https://doi.org/10.1016/j.indmarman.2011.09.016.

Dvouletý, Ondřej, Stjepan Srhoj, and Smaranda Pantea. (2021). 'Public SME Grants and Firm Performance in European Union: A Systematic Review of Empirical Evidence'. *Small Business Economics* 57 (1): 243–63. https://doi.org/10.1007/s11187-019-00306-x.

Elia, Stefano, Maria Giuffrida, and Lucia Piscitello. (2019). 'Does E-Commerce Facilitate or Complicate SMEs' Internationalisation?' *ICE, Revista de Economía*, no. 909 (August). https://doi.org/10.32796/ice.2019.909.6901.

eMarketer. (2020). 'Global Ecommerce 2020'. Insider Intelligence. https://www.emarketer.com/content/global-ecommerce-2020.

European Commission. (2014). 'COSME'. https://ec.europa.eu/growth/smes/cosme_it.

European Commission. (2015). 'User Guide to the SME Definition'. Directorate-General for Internal Market, Industry. https://data.europa.eu/doi/10.2873/620234.

European Commission. (2019). 'Italy - SBA Fact Sheet Scoreboard'.

European Commission. (2019). 'SBA Fact Sheet Scoreboard'.

European Commission. (2021). 'The Single Market Programme'. https://ec.europa.eu/competition-policy/single-market-programme-smp_it.

European Union. (2013). 'EUR-Lex - 0802_2 No 1407/2013'. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3A0802_2.

European Union. (2021). 'Internationalisation of SMEs - A Policy Brief from the Policy Learning Platform on SME Competitiveness'. https://www.interregeurope.eu/fileadmin/user_upload/2021-08-01_Policy_brief_on_SME_internationalisation_TO3.pdf.

Eurostat. (2021). https://ec.europa.eu/eurostat.

Eurostat-Statistics Explained. (2014). 'Glossary: Non-Financial Business Economy'. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Non-financial_business_economy.

Fernández, Zulima, and María J. Nieto. (2005). 'Internationalization Strategy of Small and Medium-Sized Family Businesses: Some Influential Factors'. *Family Business Review* 18 (1): 77–89. https://doi.org/10.1111/j.1741-6248.2005.00031.x.

Fillis, Ian. (2001). 'Small Firm Internationalisation: An Investigative Survey and Future Research Directions'. *Management Decision* 39 (9): 767–83. https://doi.org/10.1108/00251740110408683.

Fintech News Honk Kong. (2020). 'A Review of Hong Kong's Fintech Developments in 2019'. https://fintechnews.hk/10762/various/a-review-of-hong-kongs-fintech-developments-in-2019/.

Fitzgerald, Doireann, and Stefanie Haller. (2014). 'Pricing-to-Market: Evidence From Plant-Level Prices'. *Review of Economic Studies* 81 (2): 761–86.

Fliess, Barbara, and Carlos Busquets. (2006). 'The Role of Trade Barriers in SME Internationalisation'. *OECD, Trade Directorate, Trade Policy Working Papers*, January.

Fontagné, Lionel, Cristina Mitaritonna, and José Signoret. (2016). 'Estimated Tariff Equivalents of Services NTMs'.

Forsgren, M. (2002). 'The Concept of Learning in the Uppsala Internationalization Process Model: A Critical Review'. *International Business Review* 11 (3): 257–77.

Francioni, Barbara, Alessandro Pagano, and Davide Castellani. (2016). 'Drivers of SMEs' Exporting Activity: A Review and a Research Agenda'. *Multinational Business Review* 24 (3): 194–215. https://doi.org/10.1108/MBR-06-2016-0023.

Freixanet, Joan. (2012). 'Export Promotion Programs: Their Impact on Companies' Internationalization Performance and Competitiveness'. *International Business Review* 21 (6): 1065–86. https://doi.org/10.1016/j.ibusrev.2011.12.003.

Gabrielsson, Mika, V Kirpalani, Pavlos Dimitratos, Carl Arthur Solberg, and Antonella Zucchella. (2008). 'Conceptualizations to Advance Born Global Definition A Research Note'. *Global Business Review - Global Bus Rev* 9 (June): 45–50. https://doi.org/10.1177/097215090700900103.

Gankema, H.G.J., H.R. Snuif, and P.S. Zwart. (2000). 'The Internationalization Process of Small and Medium-Sized Enterprises: An Evaluation of Stage Theory'. *Journal of Small Business Management* 38 (4): 15–27.

Ganne, Emmanuelle. (2018). 'Can Blockchain Revolutionize International Trade?'. https://www.wto.org/english/res_e/publications_e/blockchainrev18_e.htm.

Gazzetta Ufficiale n. 60. (2020). 'Decree of the President of the Council of Ministers 8 March 2020, No.11'. https://leap.unep.org/countries/it/national-legislation/decree-president-council-ministers-8-march-2020-further

Gazzetta Ufficiale n. 70. (2020). 'Law Decree No.18, 17 March 2020'. https://www.gazzettaufficiale.it/eli/id/2020/03/17/20G00034/sg.

Gazzetta Ufficiale n. 94. (2020). 'Liquidity Decree No.23, 6 April 2020': Further Measures to support companies'.

https://www.orrick.com/en/Insights/2020/04/Decreto-Liquidita-Ulteriori-Misure-a-Supporto-delle-Imprese

Giuffrida, Maria, Riccardo Mangiaracina, Alessandro Perego, and Angela Tumino. (2017). 'Cross-Border B2C e-Commerce to Greater China and the Role of Logistics: A Literature Review'. *International Journal of Physical Distribution & Logistics Management* 47 (9): 772–95. https://doi.org/10.1108/IJPDLM-08-2016-0241.

Gomez-Herrera, Estrella, Bertin Martens, and Geomina Turlea. (2014). 'The Drivers and Impediments for Cross-Border e-Commerce in the EU'. *Information Economics and Policy* 28 (C): 83–96.

González, Javier López, and Marie-Agnes Jouanjean. (2017). 'Digital Trade: Developing a Framework for Analysis'. 205. *OECD Trade Policy Papers*. OECD Trade Policy Papers. OECD Publishing. https://ideas.repec.org/p/oec/traaab/205-en.html.

González, Javier López, and Silvia Sorescu. (2019). 'Helping SMEs Internationalise through Trade Facilitation'. Paris: OECD. https://doi.org/10.1787/2050e6b0-en.

Gopinath, Gita, and Brent Neiman. (2014). 'Trade Adjustment and Productivity in Large Crises'. *American Economic Review* 104 (3): 793–831.

Gumede, Vusi. (2004). 'Export Propensities and Intensities of Small and Medium Manufacturing Enterprises in South Africa'. *Small Business Economics* 22 (June): 379–89. https://doi.org/10.1023/B:SBEJ.0000022212.08739.54.

Hall, Bronwyn, and Josh Lerner. (2010). 'The Financing of R&D and Innovation'. Handbook of the Economics of Innovation. Elsevier. https://econpapers.repec.org/bookchap/eeehaechp/v1_5f609.htm.

Handfield, Robert, Frank Straube, Hans-Christian Pfohl, and Andreas Wieland. (2013). *Trends and Strategies in Logistics and Supply Chain Management.*

Hedlund, Gunnar, and Adne Kverneland. (1985). 'Are Strategies for Foreign Markets Changing? The Case of Swedish Investment in Japan'. *International Studies of Management & Organization* 15 (2): 41–59. https://doi.org/10.1080/00208825.1985.11656408.

Henn, Christian, and Arevik Gnutzmann-Mkrtchyan. (2015). 'The Layers of the IT Agreement's Trade Impact'. WTO Staff Working Paper ERSD-2015-01. World Trade Organization (WTO), Economic Research and Statistics Division. https://econpapers.repec.org/paper/zbwwtowps/ersd201501.htm.

Hill, Charles W. L., Peter Hwang, and W. Chan Kim. (1990). 'An Eclectic Theory of the Choice of International Entry Mode'. *Strategic Management Journal* 11 (2): 117–28.

Ho, Shu-Chun, Robert J. Kauffman, and Ting-Peng Liang. (2007). 'A Growth Theory Perspective on B2C E-Commerce Growth in Europe: An Exploratory Study'. *Electronic Commerce Research and Applications* 6 (3): 237–59. https://doi.org/10.1016/j.elerap.2006.06.003.

Hollenstein, Heinz. (2005). 'Determinants of International Activities: Are SMEs Different?' *Small Business Economics* 24 (February): 431–50. https://doi.org/10.1007/s11187-005-6455-x.

Hortaçsu, Ali, F. Asís Martínez-Jerez, and Jason Douglas. (2009). 'The Geography of Trade in Online Transactions: Evidence from EBay and MercadoLibre'. *American Economic Journal: Microeconomics* 1 (1): 53–74. https://doi.org/10.1257/mic.1.1.53.

Huber, George. (1991). 'Organizational Learning: The Contributing Processes and the Literatures'. *Organization Sciences* 2 (February). https://doi.org/10.1287/orsc.2.1.88.

Ibeh, Kevin, and Colin Wheeler. (2005). 'A Resource-Centred Interpretation of Export Performance'. *The International Entrepreneurship and Management Journal* 1 (December): 539–56. https://doi.org/10.1007/s11365-005-4777-4.

IMF. (2020). 'Annual Report 2020: A Year like no other'.

Inter-American Development Bank. (2017). 'Annual Report 2016: The Year in Review'. https://publications.iadb.org/en/inter-american-development-bank-annual-report-2016-year-review.

iResearch Services. (2022). https://www.linkedin.com/company/iresearch-services-pvt-ltd-.

ISTAT. (2020). Elaborazione Camera di commercio di Milano Monza Brianza Lodi e Promos Italia su dati 'Moda italiana nel mondo, un business da 42 miliardi in nove mesi'. https://promositalia.camcom.it/area-stampa/comunicati-stampa/moda-italiana-nel-mondo-un-business-da-42-miliardi-in-nove-mesi-ecco-la-mappa-delle-destinazioni.kl.

ISTAT. (2021). 'Popolazione Residente al 1° Gennaio: Lombardia'. http://dati.istat.it/Index.aspx?QueryId=18548.

Jarvenpaa, Sirkka, and Dorothy Leidner. (1998). 'Communication and Trust in Global Virtual Teams'. *J. Computer-Mediated Communication* 3 (June). https://doi.org/10.1111/j.1083-6101.1998.tb00080.x.

Johanson, Jan, and Jan-Erik Vahlne. (1977). 'The Internationalization Process of the Firm: A Model of Knowledge Development and Increasing Foreign Market Commitments'. *Journal of International Business Studies* 8 (February): 23–32. https://doi.org/10.1057/palgrave.jibs.8490676.

Johanson, Jan, and Jan-Erik Vahlne. (1990). 'The Mechanism of Internationalisation'. *International Marketing Review*.

Johanson, Jan, and Jan-Erik Vahlne. (2009). 'The Uppsala Internationalization Process Model Revisited: From Liability of Foreignness to Liability of Outsidership'. *Journal of International Business Studies* 40 (9): 1411–31.

Johanson, Jan, and Finn Wiedersheim-Paul. (1975). 'The Internationalization of the Firm: Four Swedish Cases'. *Journal of Management Studies* 12 (3): 305–22.

Kalinic, I., and C. Forza. (2012). 'Rapid Internationalization of Traditional SMEs: Between Gradualist Models and Born Globals'. *International Business Review* 21 (4): 694–707. https://doi.org/10.1016/j.ibusrev.2011.08.002.

Knight, Gary A., and S. Tamar Cavusgil. (2004). 'Innovation, Organizational Capabilities, and the Born-Global Firm'. *Journal of International Business Studies* 35 (2): 124–41.

Knight, Gary A., and Peter W. Liesch. (2016). 'Internationalization: From Incremental to Born Global'. *Journal of World Business*, The World of Global Business 1965-2015, 51 (1): 93–102. https://doi.org/10.1016/j.jwb.2015.08.011.

Knight, Gary, and Peter Liesch. (2002). 'Information Internalisation in Internationalising the Firm'. *Journal of Business Research* 55 (December): 981–95. https://doi.org/10.1016/S0148-2963(02)00375-2.

Knight, Gary, Tage Koed Madsen, and Per Servais. (2004). 'An Inquiry into Born-Global Firms in Europe and the USA'. *International Marketing Review* 21 (6): 645–65. https://doi.org/10.1108/02651330410568060.

Korhonen, Heli, Reijo Luostarinen, and Lawrence Welch. (1996). 'Internationalization of SMEs: Inward-Outward Patterns and Government Policy'. *MIR: Management International Review* 36 (4): 315–29.

Kuah, Adrian, and Pengji Wang. (2016). 'Fast-Expanding "Online" Markets in South Korea and China: Are They Worth Pursuing?' *Thunderbird International Business Review* 59 (January): n/a-n/a. https://doi.org/10.1002/tie.21779.

Kuivalainen, Olli, Sami Saarenketo, and Kaisu Puumalainen. (2012). 'Start-up Patterns of Internationalization: A Framework and Its Application in the Context

of Knowledge-Intensive SMEs'. *European Management Journal* 30 (4): 372–85. https://doi.org/10.1016/j.emj.2012.01.001.

Lages, Luis Filipe, and David Montgomery. (2005). 'The Relationship Between Export Assistance and Performance Improvement in Portuguese Export Ventures: An Empirical Test of the Mediating Role of Pricing Strategy Adaptation'. *European Journal of Marketing* 39 (July): 755–84. https://doi.org/10.1108/03090560510601752.

Laufs, Katharina, and Christian Schwens. (2014). 'Foreign Market Entry Mode Choice of Small and Medium-Sized Enterprises: A Systematic Review and Future Research Agenda'. *International Business Review* 23 (6): 1109–26.

Lendle, Andreas, Marcelo Olarreaga, Simon Schropp, and Pierre-Louis Vézina. (2012). 'There Goes Gravity: How EBay Reduces Trade Costs'. Policy Research Working Papers. The World Bank. https://doi.org/10.1596/1813-9450-6253.

Lendle, Andreas, Marcelo Olarreaga, Simon Schropp, and Pierre-Louis Vézina. (2016). 'There Goes Gravity: EBay and the Death of Distance'. *The Economic Journal* 126 (591): 406–41. https://doi.org/10.1111/ecoj.12286.

Leonidou, Leonidas C., and Constantine S. Katsikeas. (1996). 'The Export Development Process: An Integrative Review of Empirical Models'. *Journal of International Business Studies* 27 (3): 517–51. https://doi.org/10.1057/palgrave.jibs.8490846.

Lloyd-Reason, Lester, Kevin Ibeh, and Brynn Deprey. (2009). 'Top Barriers and Drivers to SME Internationalisation'. Paris. http://www.oecd.org/dataoecd/16/26/43357832.pdf.

Lund, Susan, and James Manyika. (2016). 'How Digital Trade Is Transforming Globalisation', 16. https://e15initiative.org/wp-content/uploads/2015/09/E15-Digital-Lund-and-Manyika.pdf

Madsen, Tage Koed, and Per Servais. (1997). 'The Internationalization of Born Globals: An Evolutionary Process?' *International Business Review* 6 (6): 561–83.

Martens, Bertin, and Geomina Turlea. (2012). 'The Drivers and Impediments for Online Cross-Border Trade in Goods in the EU'. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2149426.

Mathews, John A. (2006). 'Dragon Multinationals: New Players in 21st Century Globalization'. *Asia Pacific Journal of Management* 23 (1): 5–27.

McEvily, Susan K., and Bala Chakravarthy. (2002). 'The Persistence of Knowledge-Based Advantage: An Empirical Test for Product Performance and Technological

Knowledge'. *Strategic Management Journal* 23 (4): 285–305. https://doi.org/10.1002/smj.223.

McKinsey&Company. (2020). '2020 Year in Review: Highlights from Our Publishing'. https://www.mckinsey.com/featured-insights/2020-year-in-review.

McKinsey&Company. (2021). 'Accelerating Retail Transformation to Win Digital-First Consumers'. https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/accelerating-retail-transformation-to-win-digital-first-consumers.

MEF (Ministero dell'Economia e delle Finanze). (2020). 'Piano Nazionale di Ripresa e Resilienza'. https://www.mef.gov.it/inevidenza/Gualtieri-Un-bazooka-di-liquidita/.

Melitz, Marc J. (2003). 'The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity'. *Econometrica* 71 (6): 1695–1725.

MISE (Ministero dello Sviluppo Economico). (2012). Decreto Ministeriale 23 novembre 2012, 'Approvazione nuove condizioni di accesso al Fondo di garanzia per le PMI'. https://www.mise.gov.it/index.php/it/normativa/decreti-ministeriali/2025666-decreto-ministeriale-del-23-novembre-2012-approvazione-nuove-condizioni-di-accesso-al-fondo-di-garanzia-per-le-pmi

MISE(Ministero dello Sviluppo Economico). (2021). 'Startup innovative'. https://www.mise.gov.it/index.php/it/impresa/competitivita-e-nuove-imprese/start-up-innovative.

Mota, Jorge, António Moreira, and Alexandra Alves. (2021). 'Impact of Export Promotion Programs on Export Performance'. *Economies* 9 (3): 127. https://doi.org/10.3390/economies9030127.

Mughan, Terry, and Lester Lloyd-Reason. (2006). Report of the OECD-APEC Joint Project on 'Removing Barriers to SME Access to International Markets'. https://doi.org/10.13140/2.1.1633.1841.

Nachum, Lilach. (2015). 'The Liability of Foreignness'. In *Wiley Encyclopedia of Management*, edited by Cary L Cooper, 1–1. Chichester, UK: John Wiley & Sons, Ltd. https://doi.org/10.1002/9781118785317.weom060134.

OEC - The Observatory of Economic Complexity. (2020). 'Italy (ITA) Exports, Imports, and Trade Partners https://app-ant.oec.world/en/profile/hs92/spices.

OECD. (2008). 'Removing Barriers to SME Access to International Markets'. https://doi.org/10.1787/9789264045866-en.

OECD. (2015). 'G20-OECD High Level Principles on SME Financing 2015'. https://www.oecd.org/finance/G20-OECD-High-Level-Principles-on-SME-Financing.

OECD. (2018). 'SME Ministerial Conference 2018'. https://www.oecd.org/cfe/smes/ministerial/.

OECD. (2019). 'Fostering Greater SME Participation in a Globally Integrated Economy'. In *Strengthening SMEs and Entrepreneurship for Productivity and Inclusive Growth*, by OECD, 73–90. OECD Studies on SMEs and Entrepreneurship. OECD. https://doi.org/10.1787/400c491d-en.

OECD. (2020a) 'Tackling Coronavirus (COVID-19) - Contributing to the Global Effort-Italian regional SME policy responses', Trento Centre. https://www.oecd.org/dac/development-assistance-committee/daccovid19statement.htm.

OECD. (2020b). 'Turning Hope into Reality'. 2020. https://www.oecd.org/economic-outlook/december-2020/.

OECD. (2022). 'International Trade - Exports by Business Size'. http://data.oecd.org/trade/exports-by-business-size.htm.

OECD, and Korea Development Institute. (2021). 'Case Studies on the Regulatory Challenges Raised by Innovation and the Regulatory Responses'. OECD Publishing.

Oesterle, Michael-Jörg. (1997). 'Time-Span until Internationalization: Foreign Market Entry as a Built-in-Mechanism of Innovations'. *MIR: Management International Review* 37: 125–49.

Onkelinx, Jonas, and Leo Sleuwaegen. (2008). 'Internationalization of SMEs'. Flanders DC.

Ooi, Shir, and Christopher Richardson. (2019). 'The Internationalisation of Service-Sector SMEs in an Emerging Market: Insights from Business Training and Consultancy Firms in Malaysia'. *Review of International Business and Strategy* 29 (March): 44–60. https://doi.org/10.1108/RIBS-02-2018-0023.

Oviatt, Benjamin M., and Patricia P. McDougall. (2005). 'The Internationalization of Entrepreneurship'. *Journal of International Business Studies* 36 (1): 2–8.

Oviatt, Benjamin M., and Patricia Phillips McDougall. (1994). 'Toward a Theory of International New Ventures'. *Journal of International Business Studies* 25 (1): 45–64.

Pan, Yigang, and David K. Tse. 2000. 'The Hierarchical Model of Market Entry Modes'. *Journal of International Business Studies* 31 (4): 535–54.

Perego, Alessandro, Lucia Piscitello, and Lucia Tajoli. (2019). 'Export digitale: quanta strada c'è da fare!' *Politecnico di Milano School of Management*. https://www.som.polimi.it/event/osservatorio-export-digitale-200319/.

Perego et al. (2020). 'eCommerce B2c: la chiave per ripartire'. https://www.osservatori.net/it/prodotti/formato/video/ecommerce-b2c-la-chiave-per-ripartire.

Perego et al. (2021). 'Export digitale, Covid ed emergenza: strategie per la ripartenza'. https://www.osservatori.net/it/eventi/on-demand/convegni/convegno-risultati-ricerca-osservatorio-export-digitale-convegno.

Perlmutter, H.V. (1969). 'The Tortuous Evolution of the Multinational Corporation'. Practicing Manager, 17, 13-18.

Pinho, José. (2007). 'The Impact of Ownership—Location-Specific Advantages and Managerial Characteristics on SME Foreign Entry Mode Choices'. *International Marketing Review* 24 (November): 715–34. https://doi.org/10.1108/02651330710832676.

Piscitello, Lucia, and Francesca Sgobbi. (2003). 'SMEs in the New Economy—Evidence from Selected Italian Districts'. *Competition & Change*, *7*(1), 61–78. https://doi.org/10.1080/1024529032000093370

Prashantham, Shameen. (2011). 'Social Capital and Indian Micromultinationals British Journal of Management - Wiley Online Library'. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-8551.2010.00720.x.

Pu, Hualin, and Yongdan Zheng. (2015). 'The FDI of Small- and Middle-Sized Enterprises: A Literature Review'. *Technology and Investment* 6 (1): 63–70. https://doi.org/10.4236/ti.2015.61006.

Rauch, James E. (1999). 'Networks versus Markets in International Trade'. *Journal of International Economics* 48 (1): 7–35. https://doi.org/10.1016/S0022-1996(98)00009-9.

Reid, Stan D. (1981). 'The Decision-Maker and Export Entry and Expansion'. *Journal of International Business Studies* 12 (2): 101–12. https://doi.org/10.1057/palgrave.jibs.8490581.

Rennie, M.W. (1993). 'Global Competitiveness Born Global. McKinsey Quarterly, 4, 45-52, Scientific Research Publishing'. https://www.scirp.org/%28S%28351jmbntvnsjt1aadkozje%29%29/reference/referencespapers.aspx?referenceid=1411655.

Reyes, Jose-Daniel. (2011). 'International Harmonization of Product Standards and Firm Heterogeneity in International Trade'. Policy Research working paper; no.

WPS 5677. World Bank. https://openknowledge.worldbank.org/handle/10986/3442 License: CC BY 3.0 IGO.

Rialp, Alex, Josep Rialp, and Gary A. Knight. (2005). 'The Phenomenon of Early Internationalizing Firms: What Do We Know after a Decade (1993-2003) of Scientific Inquiry?' *International Business Review* 14 (2): 147–66.

Rogers, Everett M. (1962). *Diffusion of Innovations*. New York: Free Press of Glencoe.

Rospigliosi, Asher. (2017). 'The Digital Transformation of Online Shopping - Michael Aldrich and the Social Good - BBC Interview'. 2017. https://blogs.brighton.ac.uk/digitaltransformation/2017/06/21/digital-transformation-e-commerce-michael-aldrich-bbc-interview-asher-rospigliosi/.

Rundh, Bo. (2007). 'International Marketing Behaviour Amongst Exporting Firms'. *European Journal of Marketing* 41 (January). https://doi.org/10.1108/03090560710718175.

SACE SIMEST. (2022). 'Perché è importante l'Export Manager'. https://www.sace.it/education/dettaglio/importanza-dell-export-manager.

SACE SIMEST. (2018). 'Più Forti Nel Mondo, Più Forti in Italia', Annual Report, 2018'.

Salesforce. (2020). 'State of the connected customer'. https://www.salesforce.com/it/form/pdf/connected-customer-report-2020/.

Schueffel, Patrick, Baldegger Rico, and Wolfgang Amann. (2014). 'Behavioural Patterns in Born-Again Global Firms: Towards a Conceptual Framework of the Internationalization Activities of Mature SMEs'. *The Multinational Business Review* 4 (December): 418–41. https://doi.org/10.1108/MBR-06-2014-0029.

Scott, W. Richard. (2014). 'Institutions and Organizations. Ideas, Interests and Identities.' *Management* 17 (2): 136–40.

Seybert, Heidi. (2011). 'Internet Use in Households and by Individuals in 2011'. *Eurostat Statistics in Focus* 66: 2011.

Shi, Yi-Zheng, Po-Yuk Ho, and Wai-Sum Siu. (2001). 'Market Entry Mode Selection: The Experience of Small Firms in Hong Kong Investing in China'. *Asia Pacific Business Review* 8 (1): 19–41. https://doi.org/10.1080/713999128.

Shimer, Robert. (2010). 'The Diamond-Mortensen-Pissarides Contribution to Economics'. *Chicago: The University of Chicago*.

Sinkovics, Noemi, Rudolf R. Sinkovics, and Ruey-Jer "Bryan" Jean. (2013). 'The Internet as an Alternative Path to Internationalization?' Edited by Olli Kuivalainen, Sanna Sundqvist, Sami Saarenketo, and Rod B. McNaughton. *International Marketing Review* 30 (2): 130–55. https://doi.org/10.1108/02651331311314556.

Sousa, Carlos M.P., and Frank Bradley. (2009). 'Effects of Export Assistance and Distributor Support on the Performance of SMEs: The Case of Portuguese Export Ventures'. *International Small Business Journal* 27 (6): 681–701. https://doi.org/10.1177/0266242609344253.

Spearot, Alan. (2013). 'Variable Demand Elasticities and Tariff Liberalization'. *Journal of International Economics* 89 (1): 26–41.

Spinelli, Riccardo. (2005). 'La e-internationalisation: una rilettura del modello dei vettori di internazionalizzazione nell'ottica dell'e-business'. *Impresa Progetto - Electronic Journal of Management*, no. 2. https://www.impresaprogetto.it/essays/2005-2/spinelli.

Statista. (2021). 'Share of enterprise sizes in EU countries 2020'. https://www.statista.com/statistics/939721/eu-enterprise-size-share/.

Statista. (2021). 'Market Forecast. Social Media Advertising – Worldwide' https://www.statista.com/outlook/dmo/digital-advertising/social-media-advertising/worldwide

Statista. (2021). 'The Statistics Portal'. https://www.statista.com/markets/413/topic/457/b2c-e-commerce//.

Statista. (2022). https://www.statista.com/.

Stiglitz, Joseph E., and Andrew Weiss. (1981). 'Credit Rationing in Markets with Imperfect Information'. *The American Economic Review* 71 (3): 393–410.

Sverige and Kommerskollegium. (2012). 'E-Commerce - New Opportunities, New Barriers: A Survey of e-Commerce in Countries Outside the EU'. Stockholm: Kommerskollegium.

Szabo, John, and Marton Fabok. (2020). 'Infrastructures and State-Building: Comparing the Energy Politics of the European Commission with the Governments of Hungary and Poland'. *Energy Policy* 138: 111253.

Terzi, Nuray. (2016). 'The Impact of E-Commerce on International Trade and Employment'. In *Encyclopedia of E-Commerce Development, Implementation, and Management*, 2271–87. IGI Global. https://openknowledge.worldbank.org/handle/10986/27986.

Turnbull, Peter W. (1987). 'Interaction and International Marketing: An Investment Process'. *International Marketing Review* 4 (4): 7–19. https://doi.org/10.1108/eb008338.

UN/CEFACT. (2012). 'Buy-Ship-Pay Reference Models'. https://tfig.unece.org/contents/buy-ship-pay-model.htm.

UNCTAD. (2020). 'Prosperity for All'. World Investment Report. https://unctad.org/system/files/official-document/wir

UNCTAD. (2021a). 'Global E-Commerce Jumps to $ 26.7 Trillion, Covid-19 Boosts Online Retail Sales'. https://unctad.org/press-material/global-e-commerce-jumps-267-trillion-covid-19-boosts-online-retail-sales.

. (2021b). 'COVID-19 and e-Commerce: A Global Review'. https://unctad.org/system/files/official-document/dtlstict2020d13_en_0.

UNECE. (2021). 'COVID-19 Response'. 2021. https://unece.org/2021-0.

United Nations. (2020). 'Trade Facilitation Implementation Guide. A Tool for Semplifying Cross-Border Trade'. 2020. https://tfig.unece.org/.

United Nations Conference on Trade and Development. (2012). 'Buy Ship Pay Model'. https://tfig.unece.org/contents/buy-ship-pay-model.htm.

USITC. (2017). 'The Year in Trade 2017' https://www.usitc.gov/press_room/news_release/2018/er0821ll995.htm.

Vernon, Raymond. (1979). 'The Product Cycle Hypothesis in a New International Environment'. *Oxford Bulletin of Economics and Statistics* 41 (4): 255–67. https://doi.org/10.1111/j.1468-0084.1979.mp41004002.x.

Wagner, Stephan M. (2012). 'Tapping Supplier Innovation'. *Journal of Supply Chain Management* 48 (2): 37–52. https://doi.org/10.1111/j.1745-493X.2011.03258.x.

Weerawardena, Jay. (2003). 'The Role of Marketing Capability in Innovation-Based Competitive Strategy'. *Journal of Strategic Marketing* 11 (January). https://doi.org/10.1080/0965254032000096766.

Weerawardena, Jay, Gillian Sullivan Mort, Peter W. Liesch, and Gary Knight. (2007). 'Conceptualizing Accelerated Internationalization in the Born Global Firm: A Dynamic Capabilities Perspective'. *Journal of World Business* 42 (3): 294–306. https://doi.org/10.1016/j.jwb.2007.04.004.

Welch, Lawrence S., and Reijo Luostarinen. (1988). 'Internationalization: Evolution of a Concept'. *Journal of General Management* 14 (2): 34–55. https://doi.org/10.1177/030630708801400203.

Welsh, John A., Jerry F. White, and Phil Dowell. (1982). 'A Small Business Is Not a Little Big Business Harvard Business Review, Vol. 59, No. 4, July/August, 1981, Pp.18 (9 Pages'. *European Small Business Journal* 1) (1): 95–95. https://doi.org/10.1177/026624268200100115.

Whistl. (2021). 'What Is Cross-Border e-Commerce?' https://www.whistl.co.uk/news/what-cross-border-e-commerce.

Wilkinson, Timothy, and Lance Eliot Brouthers. (2006). 'Trade Promotion and SME Export Performance'. *International Business Review* 15 (3): 233–52.

Williamson, Oliver E. (1998). 'The Institutions of Governance'. *The American Economic Review* 88 (2): 75–79.

World Bank. (2017). 'The World Bank Annual Report 2017'. Washington DC: World Bank. https://openknowledge.worldbank.org/handle/10986/27986

World Bank. (2020). 'Doing Business 2020: Comparing Business Regulation in 190 Economies'. Washington, DC: World Bank. https://doi.org/10.1596/978-1-4648-1440-2.

World Trade Organization. (2016). 'World Trade Report 2016: Levelling the Trading Field for SMEs'. World Trade Report. WTO. https://doi.org/10.30875/4348b814-en.

World Trade Organization. (2018). 'World Trade Report 2018: The future of world trade: How digital technologies are transforming global commerce'

WorldShip. (2014).'United Parcel Service'. 13https://anyflip.com/rwuf/jsdb/basic.

WT/L/274. (1998). 30 September 1998. https://www.google.com/search?q=WT%2FL%2F274

WTO. (2020). 'Trade Statistics - World Trade Statistical Review 2020'. https://www.wto.org/english/res_e/statis_e/wts2020_e/wts20_toc_e.htm.

Yiu, Daphne, and Shige Makino. (2002). 'The Choice Between Joint Venture and Wholly Owned Subsidiary: An Institutional Perspective'. *Organization Science - ORGAN SCI* 13 (December): 667–83. https://doi.org/10.1287/orsc.13.6.667.494.

Zahra, Shaker, R. Ireland, and Michael Hitt. (2000). 'International Expansion by New Venture Firms: International Diversity, Mode of Market Entry, Technological Learning, and Performance'. *Academy of Management Journal* 43 (October): 925–50. https://doi.org/10.2307/1556420.

Zander, Ivo, Patricia McDougall-Covin, and Elizabeth L. Rose. (2015). 'Born Globals and International Business: Evolution of a Field of Research'. *Journal of International Business Studies* 46 (1): 27–35.

A. Appendix A

Survey A.1: The survey sent to the applicant companies:

1. **Which of the following alternatives best describes your e-commerce initiative abroad?**

- ○ Setting up or improving a proprietary e-commerce site for sales abroad
- ○ Selling abroad through marketplace or online retailer
- ○ Selling abroad through both of both proprietary e-commerce site and marketplace or online retailer for sales abroad
- ○ Digital marketing project supporting export through an online channel
- ○ Use of advanced technologies (e.g. Augmented Reality, simulators, interactive solutions) to support online sales abroad
- ○ No initiative

2. **How do you think the following performance indicators of your company have changed since last year?**

- ○ Overall revenues
- ○ Export revenues
- ○ Export revenues/overall revenues
- ○ ROA
- ○ Number of employees
- ○ Number of partners and/or suppliers
- ○ Number of lead (potential foreign customers)
- ○ Order delivery punctuality

3. **Indicate - if any - in which foreign markets you were able to expand compared to last year.**

4. **Which of the following alternatives best describes the human resources within your company?**

- ○ We have neither an Export Manager (or team) nor an e-commerce Manager (or team)
- ○ We have only one Export Manager (or team)
- ○ We only have an e-commerce Manager (or team)
- ○ We have both an Export Manager (or team) and an e-commerce Manager (or team)

5. **Which of the following alternatives best describes the experience of your company as regards e-commerce and internationalization?**

- ○ The project described/financed in the public tender is the first experience of the company as regards cross border e-commerce
- ○ The company already had experience as regards internationalization with traditional channels, but no or little experience as regards e-commerce
- ○ The company already had experience as regards e-commerce within national borders, but no or little expertise as regards cross border e-commerce
- ○ The company already had both expertise as regards e-commerce within national borders and as regards cross border e-commerce

6. **Indicate - if any - which of the following barriers slowed down or completely blocked the internationalization plan of your company. (Indicate, if necessary, more than one answer)**

- ☐ Lack of skills related to the use of online sales channels
- ☐ Cultural barriers (i.e., problems in communicating effectively with international customers)
- ☐ Issues related to compliance with legal requirements
- ☐ Barriers related to the sale of special products (i.e., fresh foods require temperature-controlled delivery)
- ☐ Limited access to digital payment platforms
- ☐ Issues related to Logistics
- ☐ Issues related to ICT security, data protection or cross border data transfer
- ☐ Other

7. **Indicate - if considered necessary - what improvements should be made in future public tenders (Indicate, if necessary, more than one answer).**

☐ Less documentation required
☐ A more user-friendly web access portal
☐ More significant funding available for each company
☐ Possibility to be supported by an expert who can give support during the application process and in case serious problems arise during the internationalization process
☐ Having more characters available, than the 3000 provided, in the application form to describe the internationalization project
☐ Other

8. **Did your company receive the funding?**

○ Yes
○ No

Table A.1: t-Test analysis on the overall performance index average of funded and not funded companies.

t-Test: Two-Sample Assuming Equal Variances		
	Method A	*Method B*
Mean	3,375	2,9920635
Variance	0,4311068	0,4667707
Observations	97	63
Pooled Variance	0,4451015	
Hypothesized Mean Difference	0	
df	158	
t Stat	3,5472632	
P(T<=t) one tail	0,0002563	
t Critical one-tail	1,6545549	
P(T<=t) two-tail	0,0005126	
t Critical two-tail	1,9750921	

List of Figures

List of Tables

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