

Future of manufacturing
**Born globals and their
value chains**



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Eurofound (2018), *Born globals and their value chains*, Publications Office of the European Union, Luxembourg.

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Eurofound project: Future of Manufacturing in Europe

Acknowledgements: This overview report is based on findings from seven born globals' value chains and 28 policy measures across 16 countries in Europe and beyond in the framework of the project Future of Manufacturing in Europe (FOME).

Luxembourg: Publications Office of the European Union

Print ISBN 978-92-897-1777-9 doi:10.2806/689377 TJ-01-18-972-EN-C

PDF ISBN 978-92-897-1778-6 doi:10.2806/751260 TJ-01-18-972-EN-N

Web: <http://eurofound.link/fome18005>

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This is a publication from the Future of Manufacturing in Europe (FOME) project.

FOME is a Pilot Project proposed by the European Parliament and delegated to Eurofound by the European Commission (DG GROW).

More information on the FOME project, including available and forthcoming publications and events and relevant data, can be found on the FOME page of the Eurofound website.

Website: <http://eurofound.link/fome>

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Contents

Executive summary	1
Policy context	1
Key findings	1
Policy pointers	2
1 Introduction	3
1.1. Objectives and scope of the study	3
1.2. Key concepts	3
1.3. Methodology	4
2 Born globals in global value chains	9
2.1. Description of the born globals analysed	9
2.2. Internationalisation activities of the analysed born globals	13
2.3. The global value chains of born globals	16
2.4. Main obstacles to international cooperation and their solutions	24
2.5. Support for born globals and their value chain partners	28
3 Policy measures supporting born globals and SMEs in their global value chains	33
3.1. EU level	33
3.2. Illustrative examples of national policy measures	35
4 Conclusions and lessons learned	55
4.1. Key findings from the born global case studies	55
4.2. Support instruments addressing the challenges of internationalisation and international cooperation	56
4.3. Challenges related to the internationalisation policy process	60
4.4. Policy pointers	60
References	63
Annexes	69
Annex 1: Description of global value chain partners	69
Annex 2: Providers of national contributions	71

List of tables

Table 1:	Overview of the born global case studies analysed	5
Table 2:	Overview of the 28 analysed policy measures	7
Table 3:	Product or service specialisation of the born globals under study	10
Table 4:	Main international activities of the analysed born globals	14
Table 5:	Main activities of the analysed born globals in global value chains	16
Table 6:	Brief overview of the main roles assumed by the born globals and associated global value chain partners under study	19
Table 7:	Examples of prizes and awards received by the born globals analysed	30
Table 8:	Main EU programmes and instruments promoting SMEs' internationalisation	35
Table 9:	Types of internationalisation support offered by public and private sector organisations in the EU27	37
Table 10:	Summary of outcomes and impact of the 28 investigated measures	48
Table 11:	Examples of challenges to internationalisation and international cooperation and solutions applied by born globals and their global value chain partners	57

List of abbreviations

AWEX	Walloon Agency for Export and Foreign Investment (Belgium)
B2B	business to business
B2C	business to consumer
BMWi	BMWi-Markterschließungsprogramm (Germany)
CCIR	Chamber of Commerce and Industry (Romania)
COSME	Competitiveness of Enterprises and SMEs programme
DG GROW	Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
DHI	Grant Scheme for Demonstration Projects, Feasibility Studies and Investment Preparatory Studies (Netherlands)
EC	European Commission
EEN	Enterprise Europe Network
EU	European Union
FDI	foreign direct investment
GVC	global value chain
GVK	Global Growth Competencies (Denmark)
HVO	High Value Opportunities (UK)
ICDK	Innovation Centre Denmark
ICT	information and communication technology
IPO	Intellectual Property Office (UK)
IPR	intellectual property right
JETRO	Japan External Trade Organisation
NACE	European Classification of Economic Activities
NGO	non-governmental organisation
NHS	National Health Service (UK)
OTE	Open to Export (UK)
R&D	research and development
RIT	Regional Industry Tied-up (Japan)
SBA	Small Business Act for Europe
SME	small and medium-sized enterprise
SOWAT	System Open Water Advanced Technology
STC	Spain Tech Centre (Spain)
UAE	United Arab Emirates
UK	United Kingdom
USA	United States of America

Executive summary

Globalisation, that is the trend of undertaking economic activity that transcends national boundaries, has enhanced the speed and scope of internationalising small and medium enterprises (SMEs), including so-called ‘born global’ firms. These firms are often described in the literature as young, innovative and growth-oriented enterprises with strong networking capabilities. Hence, they are likely to outperform their counterparts in terms of export speed, intensity and scope, and contribute significantly to economic development and job creation. However, although there is evidence of globalisation and theories to explain it, there is a lack of knowledge about the ways in which born globals negotiate their internationalisation pathways, acquire and manage their resources, construct their networks and seek support in this process.

This project, therefore, aims to examine how born globals establish, participate in and manage their global value chains (GVCs) and how existing support for internationalising SMEs, and particularly born globals, could be improved. More specifically, the research seeks to identify the born globals’ motivation and challenges in engaging in internationalisation, and how international cooperation affects their performance. At the same time, the report analyses policies across European and non-European countries to examine the extent to which previous action has addressed the needs of internationalising SMEs/born globals and to offer policy pointers.

The study was carried out in the period 2016–2018 as part of the Future of Manufacturing in Europe pilot project proposed by the European Parliament and delegated to Eurofound by the European Commission (DG GROW). The research involves the investigation of seven born globals’ value chains and 28 policy measures across 16 countries in Europe and beyond.

Policy context

The European Commission has identified internationalisation as one of the main focuses of the EU’s strategies. This has been reflected in the introduction of the Small Business Act for Europe (SBA) since 2008, and the Europe 2020 strategy to reinforce the economy based on smart, sustainable and inclusive growth. As a result, internationalisation support has been prioritised and developed in a variety of forms at both EU and national levels to motivate SMEs to internationalise, not only within the EU but also to third countries. Furthermore, as shown in the annual report on European SMEs (European Commission, 2017a), manufacturing SMEs are seen as some of the key contributors to the economy of the EU28, generating 58% of employment and 42% of total value added in 2016. Their increasing engagement in GVCs is also regarded as a significant accelerator of their international performance and growth. Hence, a number of initiatives have been launched at the European, national and regional levels to support internationalising SMEs either

directly or indirectly. However, the effectiveness of these lines of action appears to be unknown since there is, on the whole, an absence of monitoring and evaluation of how they impact the beneficiaries and the economy. Given this deficiency in policy development, this study also seeks to marshal what evidence is available as well as to collect primary data from born globals and policymakers.

Key findings

The born global case studies show a broad diversity of international engagement in GVCs, in different forms and stages of firm development, ranging from subcontracting and networking to direct export, international technical cooperation and joint ventures. Their incentives to internationalise are a combination of being ‘necessity-driven’ – intended to ensure business survival and sustainability – and ‘opportunity-driven’ – the result of identifying potential international market demand. Overall, internationalisation plays a critical role in the operation of these firms, and it significantly impacts their own, as well as their international partners’ and other stakeholders’, performance. Findings from the born global case studies suggest a number of challenges that push SMEs to internationalise, including:

- the complexity of regulations and administrative burdens
- understanding and meeting certification and product requirements
- uncertainty resulting from fluctuations in exchange rates
- differences in business cultures and language barriers
- finding customers and partners abroad
- managing relationships with international partners
- competition from low-cost producers
- access to financial support
- a negative image on the part of the country of origin
- a lack of in-house resources and competencies
- uncertainty and risk in the overseas market

The common solutions applied by the studied born globals are to enhance their competencies and access to external resources, negotiating, hedging, following certification and technical requirements, networking and adjusting their strategies in terms of price, quality and location focus.

Although governments seek to promote internationalisation, the effectiveness of this is questionable. The perceived value of external support remains controversial amongst all seven cases analysed. While some firms value external support in relation to areas such as R&D, access to finance, new premises support and business networking, others strongly criticise the benefits of existing measures.

European and national measures exhibit vast diversity in terms of the objectives and types of support for SME internationalisation. The majority of the 28 support measures investigated here involve access to finance, networking, advice and information or the regulation and promotion of access to foreign markets. However, only a few measures provide tailored support to meet firms at different stages of internationalisation (for instance, born globals) or in different sectors, contexts or locations. The research also found that some firms seeking to internationalise benefited indirectly from accessing domestic support measures that sought to promote firm growth and innovation.

The main factors associated with policy success are related to the flexibility and comprehensiveness of policy measures, having tailor-made support adapted to 'real business needs' and low administrative burdens. As regards the content of service provision, networking facilitation and access to finance are both in high demand. Nevertheless, challenges in the operation and administration of certain measures do arise, because of either a lack of resources or problems with cross-institutional partnership management. Monitoring and evaluation of the impact and outcomes of the majority of these measures remains weak. While a few measures provide clear indicators, others have no structured and systematic method for monitoring. Most evaluations are conducted internally and informally, which may yield biased results.

Policy pointers

The findings of this study suggest a number of ways in which policy could be developed to enhance the

effectiveness and impact of measures to meet the needs of SMEs/born globals and to promote their internationalisation. These include:

- facilitating access to external resources, and in particular finance and management resources
- providing access to specialised and reliable assistance and advice
- promoting international business cooperation and networking activities
- promoting the image of the country of origin
- providing tailored as well as integrated services to support internationalisation
- developing more specific measures targeting born globals rather than just firms that are internationalising
- enhancing the monitoring and evaluation of outcomes and impacts of policy measures

The absence of robust evidence on the effectiveness of current support measures for internationalisation is a fundamental weakness because of the inability to fine-tune measures in the light of experience and learning. Moreover, the relative absence of measures to help specifically born globals overcome the distinct challenges associated with the speed of their internationalisation (such as higher risks and cash-flow difficulties) is also worthy of attention. Hence, there is room for improvements to be brought to policy measures targeted at born global enterprises that would benefit these companies and improve their ability to contribute to economic development and job creation.

1 Introduction

Small and medium-sized enterprises (SMEs) are the backbone of the European economy and are pivotal in generating economic growth, innovation, jobs and social integration. Recent evidence shows that SMEs account for 99.8% of all enterprises and contribute 67% of total private sector employment and almost 60% of the total value added within the EU (European Commission, 2017b). This contribution has also been growing. During 2011–2016, SMEs generated around 85% of the new jobs and accounted for over two-thirds of total private sector employment in the EU (European Commission, n.d.-a).

Against this backdrop, the internationalisation of SMEs, and particularly their export capability, has received increased attention and is considered as a key growth strategy in many economies. However, the heterogeneity of the SME population in terms of size, age, location, sector, capacity and capabilities is also recognised. This is reflected in their strategic orientation and focus, particularly with regard to their target market, growth intentions and planning of the internationalisation process (Blackburn, 2016). Undoubtedly, their internationalisation behaviour and focus have directly contributed to their role and level of involvement in the GVC (OECD, 2008).

An increase in market competition and the opening up of international markets has encouraged many SMEs to consider and actively participate in the GVC. This grants them access to a wider range and scale of opportunities and resources. Globalisation, therefore, has accelerated the emergence of ‘born globals’ (Cavusgil and Knight, 2015). Born globals are enterprises that, soon after inception, achieve high export shares in several foreign countries. They have been found to be driven by the mindset of their owners and managers and a need to attract more customers than their domestic markets afford (Mandl and Celikel-Esser, 2015). Evidence from Eurofound (2016) suggests that born globals account for 2.5% of all SMEs in the EU, and 12% of young enterprises. They are focused mainly on the manufacturing, services and trade industries. Born globals are also characterised by a high level of engagement in innovation, technology and/or exclusive design. Furthermore, they are embedded in international networks, and well-functioning cross-border relations are an important element for their success (Ciravegna et al, 2014). However, there is a lack of robust evidence on the value chains that born globals are involved in and how policy support has addressed and can address their needs.

1.1. Objectives and scope of the study

This project is a part of the Future of Manufacturing in Europe pilot project proposed by the European Parliament and delegated to Eurofound by the European Commission (DG GROW). It was carried out from 2016 to 2018.

The project aims to deepen the knowledge of how born globals manage their GVCs related to manufacturing and

how existing internationalisation support for SMEs and born globals can be enhanced. The specific objectives of this project are to:

- identify the drivers and obstacles for born globals and their cooperation partners to engage in international activities, differentiating between European and global target markets
- illustrate the role of born globals in GVCs, together with their stages in the supply chain and cooperation models and practices with their partner firms
- illustrate the effects of born globals’ international activities, notably on the economic performance and employment of not only the born globals themselves but also their cooperation partners
- identify success factors with respect to achieving positive economic and labour market effects of the involved firms due to internationalisation and international cooperation
- provide policy pointers about how public policymakers can (better) support born globals (or, more generally, SME internationalisation)

The report is structured in three main parts. Chapter 2 analyses seven case studies of born globals and their GVC partners, looking at internationalisation activities, GVCs, drivers of and obstacles to internationalisation, the effects of such activities on the born globals’ performance and the external support for internationalisation from which these firms benefited.

Chapter 3 gives an overview of the key policy measures supporting SMEs’ internationalisation which are promoted at the EU level as well as a cross-country analysis of 28 selected measures regarding types of support, objectives, operation and administration, delivery mechanisms, monitoring and evaluation, and assessment of the outcomes and impact of the support.

Finally, Chapter 4 brings together the main findings of both sets of case studies (born globals and policy measures) and discusses the lessons learned about ways in which policy can enhance the internationalisation of manufacturing born globals and SMEs.

1.2. Key concepts

1.2.1. Born global enterprise

SME internationalisation has been discussed in a variety of theories over the last 40 years (Lu and Beamish, 2001; Love and Roper, 2015; Emontspool and Servais, 2017; Sozuer et al, 2017; Nummela, 2018). Traditional internationalisation theories such as the stage model (or Uppsala model) (Johanson and Vahlne, 1977, 1990, 2006), network theory (Johanson and Vahlne, 2003; Sharma and Blomstermo, 2003) and the innovation-related model (Ruzzier et al, 2006) are often used to describe and analyse firms’ internationalisation behaviour.

According to the stage model, firms often internationalise by focusing initially on their home market and then enter a foreign market which is geographically and culturally close to it (Johanson and Vahlne, 1990). After having gained international experience, they expand to more distant markets, which often entails increased uncertainty. This evolution is also reflected in the selection of the market entry modes (Johanson and Wiedersheim-Paul, 1975), often starting with ad hoc exporting activities and exporting through intermediaries, then moving towards direct exports and, eventually, outward foreign direct investment (FDI).

The traditional internationalisation theories were challenged by the identification of ‘born global’ companies (Bell et al, 2001, 2003). As a result of globalisation and technological advances, these firms start exporting within a couple of years of their inception (Cavusgil and Knight, 2009), skipping some of the steps characterising the traditional stage model of internationalisation. According to data from the Global Entrepreneurship Monitor (GEM, 2011), born globals represent 2.5% of all SMEs and 12% of young enterprises (Eurofound, 2016).

Born globals’ market selection is often reactive in nature, meaning that they initially enter the markets where they have identified an existing, or potential, demand for their products or services, by using their existing network connections and previous experience (Coviello, 2006; Jones et al, 2018). Usually customer-oriented, born globals define their product offering and marketing strategies according to the dynamics of their target market (Gabrielsson et al, 2012).

There is empirical evidence that born globals’ entry modes tend not to follow conventional stage models (Leonidou and Samiee, 2012), although they are expected to adopt less resource-intensive entry modes as a reaction to their resource constraints (Cavusgil and Knight, 2009). Born globals are often innovative and tend to expand in foreign markets more quickly than other companies, confirming the observation that firms with highly sophisticated knowledge bases are likely to internationalise much more rapidly than those with more basic capabilities (Bell et al, 2001).

The literature has not as yet provided a universal definition of born globals. This leads to a wide range of terminology (some synonyms being ‘international new ventures’, ‘global start-ups’, ‘infant multinationals’, ‘micro multinationals’, ‘born internationals’ and ‘innate exporters’) and data collection methods and varying degrees of comparability and relevance for policy. As recent research has stressed (Cesinger et al, 2012; Eurofound, 2012; Madsen, 2013), a single definition would be useful. To that end, Eurofound (2012) recently put forward a first step towards a European definition of born globals.

The definition of ‘born globals’ (Box 1) used for the current study builds on and slightly adapts the suggestion provided in Eurofound (2012).

1.2.2. The global value chain

As part of the promotion of globalisation amongst SMEs, the concept of the GVC is significant as it takes

into account a number of features that have specific ramifications for SMEs (OECD, 2014, 2015). These include the increasing dispersion and fragmentation of the value chain phases across countries, countries’ enhanced specialisation in particular tasks, the role of the different actors within this process as well as the relevance of networks and cooperation as mechanisms in global production (OECD 2013a, 2013b).

Born global enterprises are firmly embedded in international networks and GVCs, where open innovation and public–private research and development cooperation are supported. In this sense, these well-functioning cross-border relations are an important factor in their success (Coviello et al, 2011; Schweizer, 2013).

A value chain refers to the whole range of activities that firms undertake to bring a product or service from its conception to its end use by final consumers (Porter, 1985). Within the context of this project, two main types of GVCs can be identified:

- **input value chain:** the born global enterprise’s own value chain, where the born global enterprise acts as the main beneficiary of the supply chain (the born global enterprise as ‘client’)
- **output value chain:** where the born global enterprise participates in GVCs (the born global enterprise as ‘seller’)

In this regard, the GVC partner of the born global enterprise can be either an international client of the born global enterprise or an international supplier or distributor of services/products to the born global enterprise. Examples of supplying activities may include, amongst others:

- raw materials/machines, (semi-)finished manufacturing supplies, etc.
- transport and logistics services (e.g. logistics, courier, transport, storage and warehouse services)
- technological/innovation-related services (R&D services, technical testing, data analysis services, etc.)
- other services that constitute part of the GVC (for example, legal, consultancy, advertising, recruiting, design, marketing, security services, promotion activities, maintenance and repair services, etc.)

GVC partners may include private firms and other actors (e.g. universities, research institutes, NGOs).

1.3. Methodology

1.3.1. Case studies of born globals’ value chains

The first part of this study analyses seven in-depth case studies, each of which consists of one born global enterprise and two or three of its associated GVC partners. These born global enterprises are located in seven EU Member States (Denmark, Estonia, Germany, the Netherlands, Romania, Spain and the United Kingdom – UK); whereas the value chain partners are located in different EU Member States (Belgium, Finland, Germany, Sweden and the UK) and third countries (Hong Kong,

India, Japan, Malaysia, Taiwan, the United Arab Emirates and the United States of America – USA).

The starting point for selecting potential case studies was the identification of 40 born global enterprises in accordance with the definition in Box 1. The born globals had to have at least two value chain partners that were located in a different country from the born global. At least one of the cooperating companies (either the born global enterprise or one of the two GVC partners) had to be a manufacturing company (European Classification of Economic Activities – NACE C). While the born global had to be an SME, the international partners could be of any size. From the 40 identified cases, 7 were selected, bearing in mind a need for some variety of firm size, age, location, type of international activities, number of foreign markets and role in the value chain.

Table 1 provides an overview of the seven chosen case studies.

Between February 2017 and January 2018, interviews were conducted with the managers/owners of the born global enterprises and representatives of their GVC partners. These followed a half-standardised qualitative interview guideline to ensure comparability across cases while at the same time allowing the specificities of the individual cases to be considered. The gathered information was summarised in stand-alone case studies¹ and a comparative analysis was carried out (see Chapter 2).

1.3.2. Analysis of policy instruments

The second part of the report analyses 28 internationalisation support instruments from 16 countries in Europe and beyond. The investigated measures offer support to internationalising SMEs either directly (by promoting international activities) or indirectly (when the measure indirectly enhances the firm's internationalisation by supporting aspects such as firm growth, access to finance, start-up support, innovation or

Box 1: Definition of 'born globals' used for this study

A born global is a business organisation that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries.

The main criteria defining a born global for this study are:

- it is an independent, individual company or belongs to a group with fewer than 249 total employees
- its headquarters are based in any of the EU country clusters selected in the inception phase of the study (see Table 3)
- it was founded within the last seven years
- it is actively involved in any type of internationalisation (e.g. export, import, technical cooperation, partnership, subcontracting, FDI) in at least two foreign markets and generates at least 20% of its turnover abroad
- it is an SME with a maximum of 249 employees

Source: Authors' elaboration building on Eurofound (2012) (adjusted to the requirements of this specific study)

Table 1: Overview of the born global case studies analysed

Born global	Founded in	Original location of headquarters	Sector	Number of employees at the time of interview	Global value chain members interviewed
Blue Ocean Robotics	2013	Odense (Denmark)	NACE Rev. 2 code 72.19 (Other research and experimental development on natural sciences and engineering)	110 worldwide, 45 at headquarters in Denmark	<ul style="list-style-type: none"> ○ Suitable Technologies (USA) ○ Blue Ocean Robotics Sweden (Sweden)
COMODULE	2014	Berlin and Tallinn (Estonia and Germany)	NACE Rev. 2 code 26.51 (Manufacture of instruments and appliances for measuring, testing and navigation)	15	<ul style="list-style-type: none"> ○ Materflow (Finland) ○ AVS Electronics (HK) (Hong Kong, China)
Frog Bikes	2013	Egham (UK)	NACE Rev. 2 code 30.92 (Manufacture of bicycles and invalid carriages)	48 employees	<ul style="list-style-type: none"> ○ Tektro (Taiwan) ○ Shimano (Japan) ○ Jagwire (Taiwan)

(Continued)

1 Available at <http://eurofound.link/fomeef18005>

Table 1: Continued

Born global	Founded in	Original location of headquarters	Sector	Number of employees at the time of interview	Global value chain members interviewed
Graphenea	2010	San Sebastián (Spain)	NACE Rev. 2 code 20.59 (Manufacture of other chemical products)	22	<ul style="list-style-type: none"> ○ AIXTRON (UK) ○ Graphit Kropfmühl (Germany) ○ GroWater (USA)
Khar & Partners	2013	Sibiu (Romania)	NACE Rev. 2 code 72 (Scientific R&D)	7	<ul style="list-style-type: none"> ○ Pipeco (Malaysia) ○ ProEdge (India)
KristallTurm	2010	Lenggries (Germany)	NACE Rev. 2 code 25.1 (Manufacture of structural metal products)	34	<ul style="list-style-type: none"> ○ HPS Middle East (United Arab Emirates) ○ Fusser Enterprises (USA)
Recornect	2013	Eindhoven (Netherlands)	NACE Rev. 2 code 32.50 (Manufacture of medical and dental instruments and supplies)	5	<ul style="list-style-type: none"> ○ Telerex (Belgium and Netherlands) ○ Britplas (UK)

Source: Authors' own elaboration

networking). While the project's main focus was measures targeted specifically at born globals, policy measures supporting SME internationalisation more generally were also considered.

Relevant policy measures may provide support at any stage of the internationalisation process and may be provided by the public sector (governments or their authorities) or the social partners. Private initiatives (such as support from business consultants) are not considered.

Based on these criteria, a typology of support instruments was developed to guide the selection process. The categories of instruments considered are as follows:

- **awareness raising:** stressing the benefits of internationalisation
- **advice:** including recommendations and information provision on target markets, public support and investors abroad, as well as negotiation assistance
- **information databases:** portals, market intelligence and operational information on internationalisation processes, barriers and access to foreign markets
- **one-stop shops for internationalisation:** platforms combining information and/or providing an overview of all or the main support measures available for internationalisation
- **networking:** support in identifying and approaching potential business partners (including individual suppliers and customers, but also alliances and clusters) and investors abroad; providing contacts to exporters searching for business partners; other support for international collaborations
- **access to finance:** subsidies, loans, guarantees, liaising with potential investors; crowdfunding; support with funding applications; tax incentives
- **international business incubators:** organisations located abroad that provide a supporting environment for the development of new firms (Chan and Lau, 2005)
- **education and training** for staff and management on internationalisation-related matters, promoting staff exchanges and experiences abroad and support related to international recruitment and human resource management
- **trade missions:** support for businesses participating in overseas trade missions
- **certification:** support in the process related to a product's certification abroad, namely legal or administrative procedures related to standardisation or product or service registration or recognition
- **business registration:** legal or administrative procedures related to registering a business, subsidiary or economic activity in another country
- **image campaigns:** enhancement of the reputation of national products, services or companies abroad
- **legal or administrative initiatives** related to aspects such as the free movement of workers across borders and the removal or reduction of national tariff barriers where non-EU countries are involved
- **protection of intellectual property rights (IPRs):** including, for example, a reduction in registration and protection costs and/or the duration of procedures
- **business environment and inter-country cooperation support:** governmental and diplomatic support for businesses with international trade relations

- **R&D, innovation and sectoral programmes:** financial support and advice for innovative SMEs in their international expansion
- **integrated support services:** combining several of the above
- other types of support

Based on the above criteria and typology, a total of 103 policy instruments were initially identified; of these, 28 were selected, bearing in mind the need for a variety of types of support, geographical location and type of provider/administrator.

Information on the 28 instruments was gathered through desk research and interviews with the policy implementers between April and September 2017, following a half-standardised interview guideline to ensure comparability across instruments while at the same time allowing the specific features of each individual measure to be considered. The gathered information was summarised in stand-alone case studies, and a comparative analysis of these is offered in Chapter 3.

An overview of the 28 policy measures is provided in Table 2.

Table 2: Overview of the 28 analysed policy measures

Policy measure	Country	Initiator/administrator	Type of support
Incubator Support	Australia	National government	Advice, international business incubators, networking
Go Silicon Valley	Austria	Business organisation	Advice, education and training, networking
Communication Support	Belgium	Government agency	Access to finance
Global Growth Competencies (GVK)	Denmark	Education provider	Education and training, networking
Innovation Centre Denmark (ICDK)	Denmark	National government	Advice, education and training, networking, R&D, innovation and sectoral programmes
VITUS	Denmark	National government	Advice
Development of Clusters	Estonia	National government	Access to finance, education and training, networking
Startup Estonia	Estonia	National government	Integrated support services
BMW-Markterschließungsprogramm (BMW)	Germany	National government	Advice, information databases, networking, trade missions
Start Alliance	Germany	Regional development agency	Advice, networking, provision of education and training
100% Made in Italy	Italy	Regional government	Image campaigns
FINEST SpA	Italy	Regional government	Access to finance, advice, networking
Regional Industry Tied-up (RIT)	Japan	National government	Advice, information databases, networking, trade missions
SMEs' CEO Network Enhancing Project	Japan	National government	Advice, education and training, information databases, networking, trade missions
Foreign Investment Ombudsman	Korea	Government agency	Legal or administrative initiatives
Foreign Investment and One Window Policy	Nepal ²	National government	Access to finance, legal or administrative initiatives
Grant Scheme for Demonstration Projects, Feasibility Studies and Investment Preparatory Studies (DHI)	Netherlands	National government	Access to finance, advice, information databases

(Continued)

2 While the other 27 policy measures will be published separately and will be available on the FOME website, the analysis of the Foreign Investment and One Window Policy will not be published due to the limited available information.

Table 2: Continued

Policy measure	Country	Initiator/administrator	Type of support
Matchmaking Facility	Netherlands	National government	Access to finance, advice
Chamber of Commerce and Industry (CCIR)	Romania	National government	Awareness raising, education and training, information databases, legal and administrative initiatives, networking, trade missions
Global Lehian	Spain	Regional government	Integrated support services
ICEX Next	Spain	National government	Advice, access to finance, information databases, IPR protection, networking, trade missions
International Mobility Law	Spain	National government	Business registration, legal or administrative initiatives
Spain Tech Centre (STC)	Spain	National government and public corporation	Advice, networking
Born Global	Sweden	Education provider	Education and training, networking
High Value Opportunities (HVO)	UK	National government	Advice, information databases, networking
IP Attaché Network	UK	National government	Advice, IPR protection
Open to Export (OTE)	UK	National government	Advice, image campaigns, information databases, networking, trade missions
Startup Global	USA	National government	Awareness raising, information databases, networking

Source: Authors' own elaboration

2 Born globals in global value chains

2.1. Description of the born globals analysed

2.1.1. Age and location

Most of the born global enterprises in this study were set up in 2013, with the exception of the German and Spanish entities (which were founded in 2010) and the Estonian case study (2014).

Several of the born globals in the study sample are located in urban but not central metropolitan areas (**Blue Ocean Robotics Group** in Odense, **Graphenea** in San Sebastián, **Khar & Partners** in Sibiu, **Reconnect** in Eindhoven), whereas others are located in large urban areas (**COMODULE**, originally set up in Tallinn, and **Frog Bikes**, located in the Greater London area) and one is in a small rural town (**KristallTurm**, located in Lenggries, southern Bavaria). The born globals' headquarters are still located in the area in which they were originally set up with the sole exception of **COMODULE**, whose headquarters moved from Tallinn to Berlin in 2015 for a number of reasons, including overcoming the poor image associated with being an eastern European company and better access to its main target market and external investors.³

In addition to their headquarters, most of the selected born globals (with the exception of **KristallTurm** and **Reconnect**) have other premises, sometimes located in the same country of origin but often in other EU and non-EU countries.

2.1.2. Main product or service specialisation and clients

The seven born globals in the sample specialise in the production of very different products or services, as can be seen in Table 3.

All products offered by these born globals are highly innovative in the sense that they represent new products with innovative features in their respective markets.

For instance, in the case of **COMODULE**, no connectivity technology had previously been offered on bikes when this company's product went to market.

Although the evidence on the causality between innovation and internationalisation is not unequivocal, the empirical studies suggesting that innovation fosters exporting are significantly more numerous than those reporting the reverse effect (Love and Roper, 2015). Firms that are internationally active tend to be more innovative; at the same time, internationalisation can foster further innovations in parallel to the increase in the firm's foreign marketplace knowledge (Falk et al, 2014). In some cases, internationalisation as a process is seen as an innovation in itself (Eurofound, 2012). Data on European SMEs consistently show a positive correlation between productivity levels, technological innovation, R&D activities and skill intensity on the one hand and export levels on the other (Falk et al, 2014), and combining internationalisation and innovation seems to support sales growth, performance and productivity (Golovko and Valentini, 2011).

Both product and process innovation can drive a firm's internationalisation, and product innovation is observed to be particularly closely linked to internationalisation in the case of young ventures, as it tends to occur at early stages in the product life cycle (Cassiman et al, 2010; Lamotte and Colovic, 2013). This can act as a stimulus for internationalisation, especially when the firm relies on a unique product, or when it is aiming to exploit its innovation before it has been imitated or replicated by competitors (Oviatt and McDougall, 1995).

R&D activities, knowledge capture and business intelligence take on particular relevance, especially in highly competitive international environments (Raymond et al, 2014). Not surprisingly, some of the case study companies devote substantial efforts to R&D and continuous innovation. Protection for SMEs' intellectual property and knowledge base – through, for instance, direct protection (patents or copyright), secrecy (trade

Box 2: Examples of additional premises amongst analysed born globals

Blue Ocean Robotics has nine joint ventures as part of the **Blue Ocean Robotics Group**, located all around the world (Australia, Germany, Hong Kong, Lithuania, the Netherlands, Norway, Sweden, Turkey and the USA). The Estonian **COMODULE** combines its headquarters in Berlin with a development and engineering office in Tallinn (Estonia), and **Graphenea** has an additional research facility, also located in San Sebastián, as well as a branch (**Graphenea Inc.**) in the Cambridge area (Massachusetts) in the USA. **Frog Bikes** has additional manufacturing premises in South Wales in addition to its headquarters in Egham (UK). **Khar & Partners** has a research facility in Cristian, a commune on the outskirts of the Romanian city of Sibiu; its headquarters are located in the same city.

3 In February 2015, a German company COMODULE GmbH was established and transformed into the parent enterprise in order to receive investment from High-Tech Gründerfonds, the biggest German investor in start-ups, and one that invests only in German-registered companies.

Table 3: Product or service specialisation of the born globals under study

Born global	Description
Blue Ocean Robotics	Development, creation and commercialisation of robotic solutions and services for different sectors (manufacturing, healthcare and welfare, education, construction, agriculture and fisheries, safety and security, and offshore activities: wind, oil and gas).
COMODULE	Development and production of specific information and communication technology (ICT)-based monitoring platform solutions combining hardware and software for light electric vehicles (e-bikes and e-scooters) and for different uses (control and collection of data on vehicles' technical performance and user behaviour, vehicle tracking, management of warranties and direct engagement with customers via smartphone applications).
Frog Bikes	Design and manufacturing of top-quality lightweight children's bikes and accessories at affordable prices.
Graphenea	Production of high-quality graphene in different formats for R&D and industrial applications.
Khar & Partners	Engineering and biology, including the development of several products, although only one (System Open Water Advanced Technology – SOWAT) is already in the commercial phase. SOWAT is a water filtration system that can filter water from any natural source to produce drinking water for 500 to 5,000 people.
KristallTurm	Production and construction of highly customisable high-rope courses for leisure and sports purposes. They are suitable for indoor as well as outdoor sites, including urban spaces. The company also offers a complete service package for its high-rope courses (site analysis on project feasibility, financing and leasing options, project visualisation for presentation to sponsors and decision makers, delivery and assembly at the site of operation, training of on-site and maintenance personnel, delivery of safety equipment, inspection and maintenance activities, and advice on permits and insurance).
Reconnect	Production of interactive media walls combining specialised software (GRASP) and hardware for use in the healthcare sector, specifically in the area of psychiatry and mental healthcare. Reconnect also provides a number of services, namely the GRASP Community (where users of the GRASP platform can obtain updates and support for their GRASP software) and interior design consultancy services for mental healthcare institutions and isolation rooms within them.

Source: Authors' own elaboration

Box 3: Innovative nature of born globals' products: Frog Bikes

Frog Bikes' product innovation derives from its efforts to design a product based on the anatomy of the child rather than merely a scaled-down version of an adult bike, which is what other children's bike manufacturers offer. This new design, the fruit of the company's cooperation with Brunel University, reduces the Q-factor (the space between the pedals), allowing children to push more directly down when cycling, thus converting more of their energy into motion. Furthermore, bikes feature a light but strong aluminium frame (offering lightness without compromising performance) as well as several high-quality cycling components imported from top international manufacturers. **Frog Bikes** devotes 5% of its turnover to R&D activities on average.

secrets) or licensing – influences their success in foreign markets (Falize and Coeurderoy, 2012). Compared to larger companies, SMEs and born globals may be in a disadvantaged position as regards property rights given the costs related to registration and protection (Blackburn, 2016). Nevertheless, a few of the analysed born globals have some experience with patents. For instance, **Graphenea** owns eight patents, primarily in relation to the development of a number of techniques to produce graphene adapted to the customers' needs. The **KristallTurm** construction system is a registered trademark and protected by a patent, and **KristallTurm** has also been continuously enhancing this to improve production and assembly efficiency as well as enlarging the portfolio of add-ons.

All the born globals in the sample are involved in business-to-business (B2B) relationships as opposed to business-to-consumer (B2C) ones. Thus, examples of main clients include public and private business clients (in different sectors for **Blue Ocean Robotics**, and leisure facility owners/operators in the case of **KristallTurm**); industry leaders (in the manufacturing of light electric vehicles – e-bikes and e-scooters – in Asia, Europe and the USA in the case of **COMODULE**); local or regional authorities and humanitarian NGOs (engaged in areas deprived of drinking water, particularly in developing countries and in conflict zones in the case of **Khar & Partners**); universities, technology centres and large companies' research services in the most advanced countries in the world (**Graphenea**); European public and private institutions (offering

mental and psychiatric care and treatment – psychiatric institutions and hospitals – in the case of **Recornect**); or supplying independent retailers in different countries (**Frog Bikes**). In spite of this, some of the born globals are also entering into B2C relationships. **COMODULE**, for example, offers end users the option of extending the licence for several connectivity solutions integrated into their e-vehicles by paying renewal fees directly to **COMODULE**. **Frog Bikes** also sells its products online through its website.

2.1.3. Employment

The seven analysed born global enterprises range from micro enterprises such as **Recornect** and **Khar & Partners** (with 3 and 7 employees, respectively) to medium-sized ones like **Blue Ocean Robotics** (with 45 staff in its headquarters in Denmark and 110 employees worldwide including its joint ventures and spin-offs) (these figures do not include the owners).

The innovative nature of the analysed born globals is reflected in the make-up of their employees, who are usually highly educated, with backgrounds that vary according to company specialisation. **Blue Ocean Robotics**' employees have a background in the natural sciences, engineering and ICTs, although it also employs highly educated individuals with a business school or a law background. **COMODULE** employs 15 experts in digital media, marketing, wearables, connected vehicle technology, software and hardware development. Three-quarters of **Graphenea**'s employees are in the R&D and production section, where they all hold a university degree, primarily in chemistry and physics; several also have PhDs. Most of **Khar & Partners**' employees have a background in the biochemical sciences.

An exception to this is **KristallTurm**, which employs mainly mid-level skilled staff members (metalworkers and welders for manufacturing steel components, carpenters and joiners for producing wood components, and administrative staff).

The workforce of some of the analysed born global enterprises is international and young. This is in line with extant literature stressing that recruiting staff with an international background, especially for key positions in the company, can help counter the disadvantages faced by born globals, especially their newness and their lack of a knowledge base (Fernandes Crespo et al, 2015).

Blue Ocean Robotics employees are of 12 different nationalities, and the **COMODULE** team includes employees from Germany, Greece and Singapore in

addition to Estonia; the oldest employee is 31. **Frog Bikes**' employees come from a number of different countries, including Brazil, Canada, Germany, India, Pakistan and the USA (although 80% of the team originate from European countries).

By way of contrast, the workforce of the Dutch, German, Romanian and Spanish born globals is of national origin, although this is compensated for by a high level of international experience and the ability to speak foreign languages (usually English).

The workforce of the German and Spanish born globals is quite young (most of the German born global companies are under 40 years of age, while in the Spanish case the average age is 30).

Finally, it is worth emphasising that two of the analysed born global enterprises (namely, **Graphenea** and **Khar & Partners**) have access to an international scientific committee that helps the companies to find scientific and technical solutions to specific problems.

2.1.4. Characteristics of the founder(s)

The founders of the analysed born global enterprises are characterised by two main traits. On the one hand, with the exceptions of **KristallTurm** and **Graphenea**, they comprise a group of co-founders who decided to set up the company (two founders in the case of **Recornect**, **Khar & Partners** and **Frog Bikes**, three in the case of **Blue Ocean Robotics** and four in the case of **COMODULE**). In some cases, the co-founders have known each other for a long time, since university, for example (that is, the Danish and Estonian born globals) or through previous work experience (the Dutch and Romanian cases).

On the other hand, the academic background and the personal and professional experience of the born global founders is usually linked to their company's specialisation: expertise in robotics and artificial intelligence in the case of **Blue Ocean Robotics**' co-founding team, engineering expertise in the case of **COMODULE**'s founders, experience of the carpentry business in the case of **KristallTurm** and a complementary combination of technical and psychiatric nursing backgrounds in the case of **Recornect**'s founders. However, in other cases, the founders' academic and professional background is not directly related to the sectoral knowledge, but rather to business and internationalisation skills and competencies. Good examples of this are the founder of **Graphenea** and one of the founders of **Frog Bikes**, both of whom had successful

Box 4: Examples of existing links amongst founders

The three founders of **Blue Ocean Robotics** have known each other since the late 1980s, when they studied together at university. The founders of **COMODULE** met at the Tallinn University of Technology (Estonia) on an engineering and product development project where they developed and built fully electric racing cars and competed against other universities around the world. The two founders of **Recornect** met during a pilot project in mental healthcare being carried out by Philips in a Dutch hospital. The two co-founders of **Khar & Partners** used to work together in France, one of them being the supervisor of the other in their work as consultants for food supplement projects. The two co-founders of the British born global **Frog Bikes** are married.

careers in multinational companies behind them. In both these cases, the experience and relationships gained from their professional networks were very helpful in setting up and expanding their born globals, particularly in international markets.

These findings are in line with extant literature showing that founders' and managers' experience and characteristics strongly influence a firm's internationalisation process (Ciravegna et al, 2014; Fernandes Crespo et al, 2015). Younger founders seem to be more likely to become exporters (Falk et al, 2014). Specific risk attitudes and perceptions of the effects and costs of international activities, the recognition of new opportunities (Madsen and Servais, 1997), a global mindset and international orientation (Cavusgil and Nevin, 1981; Ciravegna et al, 2014; European Commission, 2014b), an entrepreneurial orientation, managerial talent (Knight and Cavusgil, 2004; European Commission, 2015a) and an international profile and previous international experience on the part of the firms' directors (Zucchella et al, 2007) foster the international orientation of businesses.

In all the born globals studied here, the founders' identification of a business opportunity that had not yet been fully exploited in the market and was often linked to the founders' previous personal and professional experiences led to the start of the (international) business activities.

2.1.5. Ownership and management structures

In more than half of the analysed born globals (**KristallTurm**, **Khar & Partners**, **Reconnect** and **Frog Bikes**), the company belongs entirely to its founder(s), although it is not necessarily equally shared amongst them (**Khar & Partners'** ownership is divided 60:40). In the three other born globals, ownership is shared between the company founders and other entities, such as external public and or private investors or employees. In addition to facilitating access to external capital and finance to consolidate the company's development and growth, these external investors play other key roles for the company such as bringing expertise and specific knowledge to the company or strengthening its product portfolio.

The born globals with a higher number of employees are characterised by more complex and formalised organisational structures. In the case of **COMODULE**, the business responsibilities are distributed amongst the three co-founders (CEO and hardware/firmware, sales/product

development and software development) and other employees are organisationally associated with these, though these responsibilities can change and overlap over time. **KristallTurm** is managed by the owner, who acts as the CEO, assisted by a second CEO who does not hold shares in the business. The CEO, a business development director and a scientific director compose **Graphenea's** management board. **Frog Bikes'** management board consists of the founding couple plus three managers (finance, marketing and R&D). All key decisions on business management are discussed by this team.

Most of the born globals have a business plan that includes, amongst other elements, international business targets and plans for how to achieve these. Such business plans are usually drafted by the company founders/CEOs (**COMODULE**), by the founders/CEOs in collaboration with key staff members and collaborators (usually other company management board members, as in the cases of **Graphenea** and **Frog Bikes**) or by the founders with the support of an external enterprise organisation (**Reconnect**). They are usually updated relatively frequently, essentially to keep up with changes in the market and clients' needs (for instance, **COMODULE's** product road map was changed 10 times between the fourth quarter of 2016 and the first quarter of 2017, and **Frog Bikes** updates its business plan every six months).

2.1.6. Recent evolution

The available data show that the born globals have been thriving in recent years, and enjoy positive prospects for the future. For example, in 2015, **Blue Ocean Robotics'** annual turnover grew by approximately 120% year on year. **Graphenea** has also experienced rapid growth since its creation, with its turnover increasing from approximately €130,000 in 2012 to €1,280,000 in 2016. **Frog Bikes** has grown fast from its inception, with average annual revenue growth of 85% and profitability growing by four to five percentage points annually, generating an annual turnover of more than GBP 5 million (€5.69 million as at 9 October 2018) as of February 2017 and a five-fold increase in the number of employees.

The literature also confirms a mainly positive relationship between born globals' internationalisation and their performance after start-up (Zahra and Garvis, 2000). Nonetheless, less evidence is available regarding born globals' evolution after their first few years of existence (going beyond the initial stage and encompassing maturation, survival and overall growth) (Almor et al, 2014;

Box 5: Ownership structures in the sample of born globals

In the case of **Blue Ocean Robotics**, 66.7% of the company is owned by the three original founders, 28.3% is owned by a group of external investors and the remaining 5% is owned by employees. In **COMODULE**, the Estonian founders hold a majority share of the company's corporate capital, and this is complemented by a minority interest on the part of several private investors (including one of its main value chain partners) and a German public-private venture capital investment fund. The ownership of **Graphenea** is divided amongst several local business angels, the company's CEO and a large Spanish energy-related multinational. A small stake was expected to remain in the hands of several regional and local public institutions (via a public risk capital company) for the first five years (but this was handed over even earlier than this).

Hagen and Zucchella, 2014). Studies report a non-linear evolution over time on the part of born globals; they must strike a delicate balance between stability and openness in terms of management knowledge and innovation (Hagen and Zucchella, 2014), and operational and financial aspects increasingly come to the fore over time, leading them away from the company's overall effectiveness (Trudgen and Freeman, 2014).

2.2. Internationalisation activities of the analysed born globals

2.2.1. Going global

The very concept of the born global implies that the company is deeply involved in internationalisation activities from a very young age. Indeed, all born global enterprises analysed here launched their internationalisation activities as soon as they were founded. For example, **COMODULE** presented its first prototype product at an international event in Spain soon after its establishment, and it was subsequently admitted to a business accelerator in Berlin (Germany). **Khar & Partners** engaged in scientific research cooperation with international partners from its founding. **Frog Bikes** began to internationalise just three months after it was founded, and within a few months the company was already exporting to 12 countries. **KristallTurm** and **Graphenea** engaged in international activities about two years after start-up.

In general, this confirms the observation that born globals – often operating in niche markets – need to internationalise quickly, unlike other companies, whose international expansions and accumulation of knowledge of foreign markets usually occurs more gradually (Torkkeli et al, 2012).

The literature shows that the motives for companies' decision to internationalise can be both internal and external and both proactive and reactive. The internal aspect relates mainly to differential firm advantages, networks, available production capacity, accumulated unsold inventory and economies resulting from additional orders. The external ones correspond to foreign country regulations, the availability of foreign market information, increased competition, value chain advantages, export promotion programmes, profit and growth opportunities and serendipitous events including the receipt of unsolicited orders, amongst others (Crick, 2007).

Meanwhile, proactive motives derive from firms' internal decisions and their identification of and interest in specific competencies or market opportunities, based on their available mix of resources (Kubíčková et al, 2014). They consist mainly of profit and growth objectives, managerial initiatives, technological competencies, the uniqueness of the product, foreign market opportunities, market information, economies of scale and tax benefits (Hollensen, 2008). By contrast, reactive motives derive from pressures or threats in the domestic or foreign markets, and even within the business, such as competitive pressure, overproduction or excess capacity, unsolicited foreign orders, an opportunity to extend sales

of seasonal products, and proximity to international customers or psychological distance (Hollensen, 2008). Most of the included born globals referred to the small size of their national markets, which made it necessary for them to engage internationally in order to ensure business viability. Thus, in the cases of **COMODULE**, **Graphenea**, **Khar & Partners**, **KristallTurm** and **Recornect**, internationalisation appears to have been largely necessity-driven: there was limited domestic demand for their specific products and in some cases local component suppliers were lacking.

By contrast, **Frog Bikes'** decision to go international appears to have been more opportunity-driven. Although its original business plan was to focus on the domestic market in the first year after start-up and launch its products to foreign markets in the second or third year, the company identified a major opportunity to generate sales in foreign markets when clients from Scandinavia approached it. This motivated it to change its business plan and begin exporting immediately. Finally, the case of **Blue Ocean Robotics** demonstrates the interaction of opportunity- and necessity-driven factors in internationalisation, as its international activities are closely related to the two other elements in its business model, namely product development and commercialisation. The company cooperates internationally to develop new robots and generates new market opportunities in the process.

The need to be physically present in the target market is also mentioned. **Blue Ocean Robotics** believes that it needs to be present in the markets where potential customers are located. For this purpose, the company stresses the importance of having a joint venture led by a CEO who speaks the local language, knows the local customs, rules and laws and has a large network and great knowledge of robotics.

In some cases, this firm international orientation has been boosted by specific events. For **Khar & Partners**, product expansion was made possible through the firm's participation in international fairs and international start-up competitions. **Graphenea** suggests that becoming a partner of the European Commission's Graphene Flagship Initiative gave the company the opportunity to access a very large network of key European universities, research centres and companies.

2.2.2. Main international activities

The born global enterprises examined in this study are actively engaged in a variety of types of internationalisation-related activities, and several modes of internationalisation are conducted in parallel (see Table 4). The most common type of internationalisation involves international commercial cooperation activities with a network of international distributors, sales agents or retailers (**Blue Ocean Robotics**, **COMODULE**, **Frog Bikes**, **Graphenea**, **Khar & Partners**, **KristallTurm** and **Recornect**), followed by exporting and international subcontracting activities (**COMODULE**, **Frog Bikes**, **Graphenea**, **Khar & Partners**, **KristallTurm** and **Recornect**) and international R&D and technical cooperation (**Blue Ocean Robotics**, **COMODULE**, **Frog Bikes**, **Graphenea**,

Khar & Partners and **Recornect**). Other less common international activities include the establishment of international joint ventures (**Blue Ocean Robotics**), international investors in the company (**COMODULE**), foreign investment activities (**Graphenea**) and, finally, international licensing agreements (until 2016, **KristallTurm** had a licensing arrangement with a Canadian partner for manufacturing components and assembling them in its USA and Canadian target markets).

2.2.3. Importance of internationalisation activities

The literature emphasises that born globals are more proactive about internationalisation than other

businesses, and likely to exhibit better performance in terms of export speed, intensity and scope (Madsen and Servais, 1997; Kuivalainen et al, 2007; Crick, 2009). They tend to generate most of their sales through international activities and to operate in multiple markets from inception (Leonidou and Samiee, 2012).

All of the companies under study agree that internationalisation plays a key role in their business.

The contribution of exports to overall turnover range from 20% in the case of **Blue Ocean Robotics** (a figure that is expected to increase sharply in the future) to 85% for **KristallTurm** and nearly 98% for **Graphenea**, with intermediate cases such as **Frog Bikes**, with 40%.

Table 4: Main international activities of the analysed born globals

Born globals	Type of internationalisation activities
Blue Ocean Robotics	International joint ventures International R&D and technical cooperation, usually in the framework of EU-funded R&D projects International commercial cooperation (with a network of international sales partners, as a reseller of its partners' products to international customers and users)
COMODULE	Exporting activities International subcontracting (components and hardware) International commercial cooperation with strategic partners International cooperation and partnerships (R&D activities, joint product development) International investors
Frog Bikes	Exporting activities International subcontracting (components and materials) International technical cooperation with suppliers and foreign manufacturers International commercial cooperation with international retailers
Graphenea	Exporting activities International subcontracting (components, materials and specialised equipment) International R&D and technical cooperation, often through EU programmes International commercial cooperation with a network of international distributors Foreign investment activities, via the opening of a branch abroad
Khar & Partners	Exporting activities International subcontracting (components) International cooperation (R&D activities with international subcontractors) International commercial cooperation with a network of international distributors
KristallTurm	Exporting activities International licensing activities International commercial cooperation with a network of international sale agents and distributors
Recornect	Exporting activities International subcontracting (hardware) International R&D and technical cooperation International commercial cooperation with international distributor

Source: Authors' own elaboration

Box 6: Importance of internationalisation activities amongst the born globals under study

Internationalisation is one of the core elements of **Blue Ocean Robotics'** business model, as the company operates around the world to scale up successfully commercialised robots and to pursue product development opportunities based on local partnerships and local strongholds in technology and markets. The company operates directly through local joint ventures and local sales partners. The company is particularly focused on developing a more efficient internationalisation strategy, the so-called 'Joint Venture strategy 2.0', which includes a greater focus on finding local partners with sufficient capital to finance the difficult initial years.

Internationalisation activities are an integral part of **COMODULE's** ability to gain access to FDI, to produce hardware cost-effectively and quickly, to reach its customers located around the world and to implement effective sales projects. **COMODULE** is constantly developing its strategic alliances, partnerships and cooperation networks at the international level.

For **KristallTurm**, engagement in international activities inspires innovation in the company in that the requirements, requests, preferences and suggestions received from a diverse range of clients and environments result in new ideas and technological developments for the company's product portfolio. The company also reports that its strong international orientation has increased its reputation as an attractive employer in the rural region where it is located.

2.2.4. Main international markets and reasons for the specific market selection

The characteristics of both home and foreign markets influence companies' internationalisation choices and entry modes. The context – which includes the environmental, economic, political, sociocultural, geographical, institutional and technological characteristics of the home and foreign market and industries, along with related dynamism and hostility and existing demand – influences firms' internationalisation choices and paths.

No homogenous evidence for why born globals choose the markets they do is reported in the literature (Eurofound, 2012). In some cases, their choices are based on market potential, access to networks and managers' previous international experience, rather than on geographic or cultural proximity, as is often observed in the case of traditional internationalisation (Lehmann and Schlange, 2004; Pock and Hinterhuber, 2011). In other cases, born globals are observed to privilege, at least at the beginning, common language markets (Fan and Phan, 2007).

Some of the analysed born globals are particularly active in European countries. For instance, **Frog Bikes** imports materials and components from 25 different countries and exports to 35 countries worldwide, but an estimated 95% of its total foreign sales are in the European market. Similarly, **Blue Ocean Robotics** is present in approximately 40 countries through its joint ventures and local sales partners, but its main market in terms of turnover is still Denmark. **COMODULE** mainly serves Europe (more than 90% of its revenue originates there), and **Recornect's** main markets are Belgium, France, Germany, Luxembourg, Switzerland and the UK. All of these companies are interested in expanding their activities beyond the European continent in order to reach wider markets and develop their sales. **Frog Bikes** has identified opportunities in international markets through market research, its active involvement in trade shows and international exhibitions, its sponsoring of Team Sky (a well-known international racing team) and networks in the cycling industry.

For some of the other born global companies analysed, however, the European countries are not their main markets. Product characteristics appear to strongly determine the target market of these firms. **Khar & Partners** manufactures and sells a specific water filtration system designed for use in areas deprived of drinking water; it is sold in India, Africa and south-east Asia. Similarly, **Graphenea**, a producer of high-quality graphene, sells mainly in the countries with the highest R&D expenditure, as graphene is still at a research stage.

Linked to this, one of the main reasons for geographical market selection is the positive identification of demand and market opportunities. **COMODULE's** target markets are inevitably defined by a mix of sales of electric bikes and established partnerships with manufacturers of high-quality electric bikes and scooters (primarily German ones). It is interesting that Chinese e-bike manufacturers are not regarded as a priority for this firm, as the e-bikes they produce are considered very simple and hence unsuitable as premium **COMODULE** products. **KristallTurm** believes that European markets for high-rope courses and climbing facilities are already quite saturated, resulting in limited growth prospects and a need to look for non-European markets, especially in North America and Asia. **Recornect** selected Germany and the UK as its biggest export markets as they are front runners in the field of mental healthcare and show large market opportunities for their product.

There are also some other practical reasons determining geographical market selection, such as the existence of contacts and networks in these markets. For **KristallTurm**, the quality and effectiveness of local partners also determines the international focus of the company, as they facilitate access to clients, understand local business practice and help to generate international business opportunities. According to **Blue Ocean Robotics**, having competent CEOs in joint venture companies and identifying the right local partner is essential when selecting target markets. **Khar & Partners** mentioned the founders' previous professional relations or the existence of local suppliers of certain components as key factors for

making such a decision. This need for relevant networks and the information (in terms of market knowledge and existing opportunities) is also stressed in the literature as one of the key ways for born globals to face the liability of newness and smallness (also implying a lack of economies of scale) with which they are confronted when approaching a new competitive environment, especially as compared to larger, more established multinational enterprises (Kahiya, 2013).

2.3. The global value chains of born globals

2.3.1. Involvement of the born globals in global value chains

All analysed born global enterprises actively participate in different GVCs, where they usually play a dual role. On the one hand, they act as clients for other international companies, whereby partners supply different products and services to the born global (production of prototypes, intermediary key components, equipment, commercial distribution agreements and quality checking services, amongst others). On the other hand, the born globals act either as suppliers of products or services, usually to other

companies (B2B), or as international cooperation partners of other companies (joint R&D/product improvement activities and joint commercialisation efforts, amongst others). Table 5 provides an overview of the roles of the analysed born globals in global supply chains, while Annex 1 describes the international partners interviewed for this project. Specifically, the analysed born global enterprises cooperate with selected GVC partners.

2.3.2. Initiating cooperation and identifying partners

According to the available information, the born globals studied here and their value chain partners started collaborating at different stages. In some cases, this cooperation was initiated very shortly (less than two years) after the foundation of the born global; in other cases, it was initiated two or more years after the born global was set up.

In some cases (**Blue Ocean Robotics** and its two value chain partners **Suitable Technologies** and **Blue Ocean Robotics Sweden**, **Frog Bikes** and its two value chain partners **Shimano** and **Tektro**), the cooperation was initiated by the born global based on the founders' own knowledge and personal contacts. In other cases (**Khar & Partners** and **Pipeco**, **Reconnect** and **Telerex**, **COMODULE**

Table 5: Main activities of the analysed born globals in global value chains

Born global	Role in the global value chain
Blue Ocean Robotics	Blue Ocean Robotics acts as a supplier of new robotics solutions and services to different business customers and as a reseller of new advanced third-party robots to private and public sector customers, making use of its joint ventures and sales partners to reach countries around the world. In addition, Blue Ocean Robotics is a research partner in a number of international consortia working on different R&D projects.
COMODULE	COMODULE subcontracts other companies to manufacture hardware production and production of prototypes, where these suppliers are located in China, Estonia, Finland and Taiwan. COMODULE's main clients include manufacturers of light vehicles, particularly electric bikes and scooters located in Asia, Europe and the USA.
Frog Bikes	Frog Bikes sells children's bikes to 35 countries worldwide. For this purpose, the company works with independent retailers in the different countries, in addition to having an online sales channel. Frog Bikes also deals with international suppliers from 25 different countries who manufacture some of the 150 components that typically form a bike.
Graphenea	Graphenea acts as a supplier of graphene to different international clients, including universities, technology centres and large companies' research departments. Furthermore, Graphenea has a network of international suppliers that are part of the company's supply chain (supply of raw materials, key specialised equipment or the provision of strict quality control mechanisms). The company is also very active in international research cooperation activities, mainly through support from EU programmes. Finally, Graphenea has a network of international distributors.
Khar & Partners	Khar & Partners collaborates with different partners within the framework of the SOWAT product, including a French-owned manufacturer based in Romania and responsible for the manufacturing of the product, several suppliers of intermediary components (such as water tanks and ultra-filtration systems) and distribution firms for several markets overseas.
KristallTurm	KristallTurm subcontracts major inputs of steel and wood/timber materials from German suppliers. Occasionally, an Italian company helps with on-site assembly. KristallTurm also participates in the value chain of leisure and tourism clients as a supplier of high-rope courses, either directly (sometimes with support from sales agents) or indirectly via resellers (leisure park developers).
Reconnect	Reconnect has a small network of global supply chain members, including one supplier of hardware (touchscreens) and sale partners engaged in the promotion and sale of Reconnect's products in international markets.

Source: Authors' own elaboration

Box 7: Initiation of the cooperation between born globals and global value chain partners

Blue Ocean Robotics and **Suitable Technologies**' cooperation was initiated in 2013 by one of the CEOs who knew **Suitable Technologies** from his previous role where he had developed a large network within the global robotics industry. The two CEOs of **Blue Ocean Robotics** and **Blue Ocean Robotics Sweden** had known each other professionally for many years when the former asked the latter if he wanted to co-found and become the CEO of a new **Blue Ocean Robotics** in Sweden. **Frog Bikes** approached **Shimano** and **Tektro** because of their well-known brand and hi-tech involvement in manufacturing cycling components. **COMODULE** initiated its cooperation in February 2016, when it identified **Materflow** via Google search. In the case of **Recornect** and **Telerex**, one of the CEOs of **Recornect** did some market research into various potential companies across Europe and requested samples from various manufacturers, including the one manufactured by the UK company **Zytronic** and its legal representative in the Netherlands (**Telerex**).

and **Materflow**), the born global approached the value chain partner as the result of a market research process.

In other examples, the born global requested the collaboration of a third party in order to identify a suitable partner. This is the case of **COMODULE** and **AVS Electronics (HK)**, for instance, whose initial contact was mediated by an external mentor of the Berlin business accelerator Startupbootcamp, in which **COMODULE** was involved. **Fusser Enterprises** and **KristallTurm** were introduced to each other by a German sports product manufacturer with which **Fusser Enterprises** was collaborating. **Graphenea** and **Graphit Kropfmühl** got in touch through a Spanish specialised distribution company which knew that **Graphenea** was looking for a reliable supplier of natural graphite.

In other cases, the cooperation was initiated on an 'unintended' basis, as the result of an unexpected event. This is the case of **Recornect** and **Britplás**, for instance, which crossed paths at a mental healthcare conference in Helsinki and realised they shared a mutual interest that could lead to collaboration. Similarly, the CEOs of **Khar & Partners** and **ProEdge** met at the Startup Istanbul competition in 2016 and developed a commercial relationship. Finally, and in a very limited number of cases, the value chain partner was the one to contact the born global to initiate cooperation. This is the case of **HPS Middle East**, for example, which approached **KristallTurm** as it needed a high-rope course provider for its 'IMG Worlds of Adventure' project, the world's largest indoor theme park, situated in Dubai. Meanwhile, **Jagwire** approached **Frog Bikes** to propose a business relationship for supplying different company products (cables, brakes, etc.).

Overall, the available information shows that once initial contact has been made, the agreement to start collaborating does not take long to be set up. For instance, it took less than half a year for **Blue Ocean Robotics** and **Suitable Technologies** to begin cooperating after initial contact was made.

2.3.3. Reasons for initiating cooperation

The reasons for initiating a specific line of global cooperation relate to access to sourcing networks, key suppliers and complementary product and knowledge providers, amongst others. Various types of sourcing networks exist for born globals and they have different

degrees of importance in terms of their roles and contribution to the overall business concept, depending on their replaceability and geographic location (Partanen and Servais, 2012). Often, the greater the complexity of the product or service, the greater the degree of cooperation between firms (OECD, 2008). Subcontractors, complementary product providers and raw material and standard component suppliers often can be replaced easily (Partanen and Servais, 2012). On the other hand, key suppliers can be key to both the born globals' and the partners' success in the market, since the collaboration gives both parties access to a greater number of customers. Finally, complementary product providers are also valuable, as they provide born globals' resource pool with products which are outside the born globals' competency domain (Partanen and Servais, 2012).

In light of this, the selection of the 'right' partner is fundamental to partnership establishment (Cavusgil and Evirgen, 1997) and business development. Some of the key elements highlighted in the literature refer to complementary capabilities, unique competencies, industry attractiveness, capability to produce quality products, managerial skills, financial assets, special skills to learn from the partner, intangible assets, willingness to share experience, previous alliance experience, market knowledge and access, the cost of alternatives, the partner's ability to acquire skills, and technical capabilities (Haskell et al, 2016).

The analysed case studies show several reasons to initiate the cooperation. In some cases, price considerations and a lack of suitable cooperation partners at a national level play a very important role in the identification of partners. For instance, **COMODULE** began cooperating with **Materflow** because no Baltic companies could supply small batches of high-quality 3D printed parts at low prices and at short notice. In other cases, the main reason for initiating the cooperation relates to ensuring access to a reliable supplier of components, raw materials or specialised equipment that may increase the general quality, competitiveness and/or image of the products.

Another reason relates to the companies' desire to access new markets and business opportunities. This is the case of **Blue Ocean Robotics** and **Suitable Technologies**, for instance, whose cooperation was initiated to discuss opportunities for **Blue Ocean Robotics** to act as a sales partner representative for **Suitable Technologies** in

Box 8: Born globals' reasons for cooperating with global value chain partners

HPS Middle East initially approached **KristallTurm** to explore the possibility of integrating the latter's high-rope course in a very large indoor theme park project developed by the former.

The interest of **Graphenea** to work with **Graphit Kropfmühl** derives from the desire of the Spanish born global to have access to a reliable supplier of raw materials. **Recornect** collaborates with **Zytronic** because of its expertise as a supplier of reliable and high-quality touchscreens to be incorporated into **Recornect's** products (which incidentally resulted in the need to work with **Telerex** as a distributor of **Zytronic's** products in the Netherlands). Finally, **Frog Bikes** is interested in collaborating with **Shimano** to incorporate high-quality components that may enhance the brand image and quality of **Frog Bikes' products**.

Europe. **Britplas** saw a business opportunity in marketing some of **Recornect's** products in the UK.

It is also worth stressing that the reasons for engaging in cooperation may differ from one partner to another. **AVS Electronics (HK)** identified the cooperation with **COMODULE** as an opportunity to diversify its package of products, whereas **COMODULE** saw it as an opportunity to expand its business to new target markets in Asia. While **Graphenea's** interest in working with **AIXTRON** related to ensuring access to a reliable supplier of specialised equipment for the production of graphene, **AIXTRON** was primarily interested in future business opportunities. These derived from having access to knowledge of graphene production-related needs, a small but likely growing new market of interest for the company.

2.3.4. Roles of the cooperation partners

Notwithstanding the initial reasons for initiating cooperation, the analyses of the company case studies show that born globals and GVC partners play different roles within the identified GVCs.

Some of the analysed born globals participate in the value chains of other international partners ('output value chain'). For instance, **Blue Ocean Robotics** acts primarily as a promoter, distributor and post-sale service provider of new and advanced third-party robots to private and public sector customers around the world (for instance, the Beam product developed by **Suitable Technologies**). **KristallTurm** is a specialised supplier of high-rope courses to both leisure facilities operators (such as **Fusser Enterprises**) and resellers (such as **HPS Middle East**). **Graphenea** acts as a specialised graphene supplier to the American company **GroWater**.

With regard to the born globals' own value chains ('input value chains'), these companies are responsible for different activities, including design and product development, production and/or distribution and commercialisation of their product portfolio. **Khar & Partners** is responsible for the design and commercialisation of the SOWAT system, but not for manufacturing it (which is done by another Romanian company). **Recornect** is responsible for the design and production of its products, whereas **COMODULE**, **Graphenea**, **KristallTurm** and **Frog Bikes** are primarily in charge of the design, production and commercialisation of their respective products. **KristallTurm** also performs some additional activities, including on-site assembly, provision of specialised staff training and after-sales

services. An overview of the roles played by the born globals and their GVC partners can be seen in Table 6.

Specifically within input value chains, GVC partners play different roles.

First, they may act as specialised suppliers to the born globals, providing components, raw materials or even specialised manufacturing equipment. **Suitable Technologies**, for example, acts as the manufacturer and supplier of a special product (Beam, a telepresence solution that combines user-controlled mobility and telepresence or video conferencing) to **Blue Ocean Robotics** and its associated partners. In the Estonian case study, **Materflow** is responsible for producing various mechanically durable 3D printing parts to **COMODULE**, including several additional services such as polishing, colouring and dyeing and different types of surface treatments of the supplied parts. In the Romanian case, **Pipeco** is responsible for providing water tanks to **Khar & Partners**, based on agreed rates and technical specifications. In the Spanish **Graphenea** case study, **AIXTRON** acts as a supplier of equipment for producing CVD graphene and **Graphit Kropfmühl** is a supplier of natural graphite to **Graphenea** (which is still at the testing phase). In the Dutch case, **Zytronic** represents the main supplier of the touchscreens that are used as key components of the **Recornect** product. The three GVC members of **Frog Bikes** interviewed (**Tektro**, **Shimano**, **Jagwire**) are primarily involved in providing different bike components for the born global (brakes, gear shifters, cables and small parts required for these cables).

Second, GVC partners may act as suppliers of specialised technological or innovation-related knowledge and services. This is the case of **Graphit Kropfmühl**, which advises **Graphenea** on the possible use of natural graphite as an alternative raw material. **Zytronic** has been actively involved with **Recornect** in researching and developing the different touchscreens used in **Recornect's** products.

Third, GVC partners are responsible for the co-production and joint development of some specific products. This is the case of **AVS Electronics (HK)** and **COMODULE**, whereby the latter is responsible for software, connectivity and design, while **AVS Electronics (HK)** produces the physical display parts. **Zytronic** has been actively involved in the co-development and co-design of the final **Recornect** products, whereas **Frog Bikes** and **Jagwire** engage jointly in the design of some specific bike components that are integrated in the final bikes.

Table 6: Brief overview of the main roles assumed by the born globals and associated global value chain partners under study

Case study	Design, product development	Supplier of components/ raw materials/specialised machinery	Production	Distribution and commercialisation	Other
Case Study 1	COMODULE AVS Electronics (HK)	Materflow	COMODULE AVS Electronics (HK)	COMODULE AVS Electronics (HK)	AVS Electronics (HK)
Case Study 2	Frog Bikes Jagwire	Tektro Shimano Jagwire	Frog Bikes	Frog Bikes	
Case Study 3	Graphenea GroWater	AIXTRON Graphit Kropfmühl Graphenea	Graphenea GroWater	Graphenea	Graphit Kropfmühl
Case Study 4	Khar & Partners	Pipeco		Khar & Partners ProEdge	
Case study 5	KristallTurm		KristallTurm	HPS Middle East Fusser Enterprises	KristallTurm HPS Middle East
Case Study 6	Reconnect Zytronic	Zytronic	Reconnect	Telerex Britplas	Zytronic
Case Study 7	Suitable Technologies	Suitable Technologies		Blue Ocean Robotics Blue Ocean Robotics Sweden	

Source: Authors' own elaboration

Fourth, GVC partners act as distributors or traders of different products manufactured or designed by the born global. Thus, **Blue Ocean Robotics Sweden** is a joint venture of the **Blue Ocean Robotics Group** and responsible, amongst other things, for finding customers and selling the parent company's robot solutions and services to local customers in Sweden. In addition to other roles, **AVS Electronics (HK)** acts as **COMODULE's** official contact in the Asian market, including negotiations and network development with Asian companies. **Fusser Enterprises**, in addition to its role as a client of **KristallTurm**, also acts as its sale agent in the USA. **Khar & Partners** has signed a formal agreement with **ProEdge** to promote SOWAT in India, as well as to represent the company there. **Telerex's** main role in **Reconnect's** GVC is to distribute the products manufactured by **Zytronic** and it therefore plays a role in passing orders for **Reconnect's** products to **Zytronic**. In the same way, **Britplas** acts as a promotion and sales channel for **Reconnect** by promoting **Reconnect's** products together with its own products, primarily on the UK market. For instance, **Britplas** houses a demo of **Reconnect's** products to showcase the products for potential clients and interested parties.

Finally, GVC partners play other key roles for the born globals. **AVS Electronics (HK)**, for example, has invested in **COMODULE**. **HPS Middle East** is not only a reseller of **KristallTurm** but also uses its own staff to carry out

assembly at the construction site, as well as training for operators and regular maintenance activities.

2.3.5. Governance

According to the literature, the collaboration between born globals and their value chain partners is conducted through connections – local and foreign relationships and networks – that take on specific forms, mainly consisting of formal relationships, personal (non-business) and informal relationships, and networks of employees and intermediary relationships, amongst others (Coviello and Munro, 1995, 1997; Oviatt and McDougall, 2005; Julkunen et al, 2015).

Amongst the case studies selected here, there are limited examples of relationships based on formal cooperation agreements between born globals and GVC partners, but one example of this is **HPS Middle East** and **KristallTurm**, where orders are placed on the basis of a long-term framework of standard prices (with a specific sales contract concluded for each order).

In other cases, the cooperation between the born global and its GVC partner is primarily based on a commercial client-supplier relationship that encompasses other cooperative elements in different fields (manufacturing, commercialisation and sales, etc.). Thus, **COMODULE** and **AVS Electronics (HK)** have reached a non-formalised geographical policy agreement for invoicing (for instance,

Box 9: Formal cooperation agreements between Blue Ocean Robotics and global value chain partners

The cooperation between **Blue Ocean Robotics** and **Suitable Technologies** is formalised through an ad hoc contract which describes the guidelines of the cooperation in detail, including that **Blue Ocean Robotics** represents **Suitable Technologies** on European and other markets. The cooperation between **Blue Ocean Robotics** and its joint venture **Blue Ocean Robotics Sweden** is formal and power-unbalanced, in the sense that **Blue Ocean Robotics Sweden** is obliged to comply with an ownership agreement and statutes drafted by **Blue Ocean Robotics**. Amongst other elements, these statutes establish the obligation to follow **Blue Ocean Robotics**' overall mission and strategy and the agreement that **Blue Ocean Robotics Sweden** may not replace **Blue Ocean Robotics** as a partner. Furthermore, the contractual agreement foresees that, if necessary, **Blue Ocean Robotics** has the right to close the joint venture company if the CEO of the joint venture does not follow the overall mission and strategy of the parent company. Notwithstanding this, **Blue Ocean Robotics Sweden** has a great deal of freedom to act on the market opportunities it detects, including the development of a new robot with great commercial potential.

if the customer is located in Asia, most of the invoicing goes through **AVS Electronics**). Moreover, this relationship has been reinforced with **AVS Electronics (HK)**'s investment of €100,000 in **COMODULE**. Along the same lines, the commercial relationship between **Khar & Partners** and **Pipeco** is governed by contracts specific to each purchasing order, although this relationship has expanded beyond a mere client-supplier one to include advice on how to best create synergies between **Pipeco**'s offer and the SOWAT system. In addition to the supply of touchscreens by **Zytronic/Telerex** for **Reconnect** which are based on formal purchasing contracts, **Zytronic/Telerex** and **Reconnect** are informally collaborating on the redesign of the screens to make them cheaper and to add functions. The relationship between **Frog Bikes** and its two GVC partners **Jagwire** and **Tektro** is intended to be long-term, entailing, for example, collaborative efforts to enhance the design of **Jagwire**'s components or special financing agreements with **Tektro** (**Frog Bikes** pays a deposit of only 20% when placing any order with **Tektro**, and the balance is paid when the orders are shipped).

In all these cases, cooperation is based on a relatively equal and fair relationship between the two parties, probably explained by the relatively similar size of the companies involved, the irreplaceability of the partnership or the parties' perception of the results as balanced and positive. The literature on cases involving high technological content and experience reports a similar scenario, where cooperation between the born globals and other multinational enterprises often requires collaborative relationships allowing for the rapid transfer and generation of new knowledge, process development, creation of a shared research competence and technology transfer. This can enhance competitiveness and speed and create co-dependency between the partners while yielding mutual benefits. This collaboration is often determined by both parties' willingness to engage in a long-term relationship (Coviello and Munro, 1995).

In other cases, the cooperation between the born global company and its GVC partner is limited to a purely commercial client-supplier relationship, with no other joint activities, and is regulated by conventional purchasing agreements.

In all the cases studied here, the larger, more influential partner dominates the interfirm relationship. A born global may establish cooperation with a large company to help bring a new product quickly to market where a high level of specialisation is required. While this may strengthen the born global's position at first, the large company may become more demanding of the born global over time (for instance in terms of the diversification of tasks to be performed). Other situations that can prove challenging for born globals arise when large institutional buyers purchase specialised products or services directly from born globals, for instance requesting bulk discounts that the born global cannot always provide (Eurofound, 2013). Additionally, in some instances, more established partners may act opportunistically, for example creating predatory alliances with young high-technology start-ups, aiming at absorbing their technological know-how (Oviatt and McDougall, 1994).

In the particular case of **COMODULE** and **Materflow**, **COMODULE** dominates the relationship as it is **Materflow**'s principal client. In the case of **Frog Bikes** and **Shimano**, the relationship is dominated by the latter because of its size and status in the industry combined with the fact that **Frog Bikes**' orders account for a very small share of **Shimano**'s total turnover.

Finally, there are also some examples of cooperation between born globals and GVC partners that can be labelled as 'informal' and not based on any specific commercial relationship. A good example of this is the unwritten regular cooperation between **Graphenea** and **AIXTRON** within the framework of the Graphene Flagship Initiative (**AIXTRON** is leading the so-called 'Production' work package, in collaboration with **Graphenea** and other partners, focusing on technology development to enable cost-effective and large-scale production in the future with a strong industry focus). **Graphit Kropfmühl** sends free small natural graphite samples to **Graphenea** for initial R&D testing purposes, although if the cooperation between both companies became more regular (for instance, if **Graphit Kropfmühl** began supplying larger natural graphite quantities), an agreement might be signed to regulate it. Finally, the cooperation between **Britplas** and **Reconnect** is highly informal, although it may become more formalised if **Reconnect** continues to grow

and expands in the future. In all these cases, the power relationships between both parties seem to be balanced.

2.3.6. The role of ICTs, logistics services and trust

ICT-based communications (emails, web pages, phone and video call tools) play a very important role in sustaining international cooperation as continuous communication between the two partners is important. In some cases, ICTs are particularly relevant in the initial stages of the cooperation or when partners are jointly developing new business ideas or products.

Particularly relevant is the use of web pages and social media amongst the analysed born globals. For instance, **KristallTurm**'s website is geared towards an international market and available in English, German and Spanish (in addition, product brochures are also offered in French, Italian and Chinese). Another example is **Graphenea**, which, since its foundation, has developed a website (only in English) to interact with clients and potential collaborators that includes a blog with key news items on graphene-related issues. For **Frog Bikes**, social media is important to maintain its network in the bike industry. Both companies also sell their products online through their websites to facilitate both national and (particularly) international sales.

This is supported by the literature, which stresses that born globals use the Internet to communicate with value chain partners, perform marketing communication activities and manage customer relationships and sales transactions (Loane and Bell, 2006). Born globals seem to rely on the Internet more intensively than other types of company. If this reliance is to be fruitful, it requires cautious alignment with the company's strategy (Pezderka et al, 2012).

However, face-to-face meetings and contact between individuals still play a key role in initiating and sustaining business relationships between value chain partners.

According to **Khar & Partners**' CEO, trust is a decisive factor for sustaining successful cooperation amongst companies, since partnerships and cooperation agreements are often based on unwritten gentlemen's agreements that require time and frequent face-to-face interaction to consolidate. Similarly, the **Graphenea** interviewee stresses that a strong trust and confidence base has been developed between **Graphenea** and **AIXTRON** in recent years, where the role of individuals is crucially important. Indeed, the **Graphenea** interviewee suggests that if certain key people were to leave, the relationship between **Graphenea** and **AIXTRON** would be negatively affected (at least in the short term) due to the existing links of trust and confidence between these individuals.

In some cases, elements such as previous knowledge of each other, fluency in common languages or shared national backgrounds facilitate this trust and cooperation amongst people. In the case of **Blue Ocean Robotics** and **Blue Ocean Robotics Sweden**, the CEOs had known each other professionally for many years when the first one asked the second one if he wanted to co-found and become the CEO of a new **Blue Ocean Robotics** in Sweden while he was still working for another company. The fact that the head of the purchasing team within **Frog Bikes** speaks fluent Chinese is a significant advantage in developing and enhancing the relationship between **Frog Bikes** and **Tektro**, where weekly contacts via different means (Skype, phone and emails) sustain this cooperation. In the case of **KristallTurm** and **Fusser Enterprises**, a common language and business styles due to the founders'

Box 10: Role of ICTs in international cooperation

Khar & Partners and **Pipeco** established their first contact via an online purchasing enquiry sent by the born global to its supplier. In 2017, **AIXTRON** was supplying new production equipment for **Graphenea** for its new pilot plan. For this purpose, both parties were developing a complex process of communication, including email exchanges and extensive phone and Skype calls in order to develop and fine-tune the new prototype to the demands of **Graphenea**. For **Reconnect** and **Telerex/Zytronic**, the use of email greatly facilitated the exchange of ideas about the prototype design and development, enabling drawings and sketches with precise component sizes, lengths and materials to be exchanged quickly, examined and sent back.

Box 11: Role of face-to-face, personal contacts in sustaining cooperation

The strategic alliance between **COMODULE** and **AVS Electronics (HK)** is reinforced by regular face-to-face meetings (held every two to three months) between company CEOs and other employees, either in Europe (mostly Estonia or Germany) or Asia to discuss different topics. **KristallTurm** organises an event at its headquarters every two years where all sales agents and resellers, as well as interested operators and potential clients, gather to receive information and exchange new developments and experiences. The initial physical encounter between **Khar & Partners** and **Pipeco** allowed the two firms to gain more trust in one another, and to facilitate future commercial transactions. The sales team from **Jagwire** Europe visits **Frog Bikes** twice a year and the partners often meet at bicycle shows in order to sustain cooperation.

shared German origins have done much to facilitate the collaboration between the companies.

Logistics services also play a significant role in some lines of cooperation. Difficulties with finding suitable distribution channels, reliable distributors and adequate representation in foreign markets – together with high delivery costs – represent major barriers to young and small companies' internationalisation (European Commission, 2015a). The role of the partners has proved relevant in this respect for some of the analysed born globals. For instance, **Suitable Technologies** ships containers to **Blue Ocean Robotics** for supplying its products. Transportation and logistics are particularly relevant for **KristallTurm** when shipping construction components and tools abroad in standard containers. **Graphenea** makes extensive use of courier services for sending the clients' orders to any part of the world, which requires careful packaging of the products.

2.3.7. Results of cooperation

The analysed case studies show the significant positive results derived from the existing business relationships for both the born globals and their GVC partners. The perceived positive results for all parties involved (win-win situations) sustain these lines of cooperation, and can relate to economic performance, production, knowledge or learning and, finally, other areas such as reputation and employment effects.

Positive economic results are the first to be identified. For instance, **Blue Ocean Robotics** has increased sales of **Suitable Technologies'** main product (Beam), which is gaining popularity outside the USA. Similarly, **Suitable Technologies** is granted a local presence through a trusted partner in Asia, Europe and the Pacific region, resulting in revenues and (new) relationships with customers for both sides. The same can be said of its cooperation with **Blue Ocean Robotics Sweden**, which has resulted in the acquisition of an increasing number of customers in that country – a valuable result for both parties.

The cooperation between **COMODULE** and **AVS Technologies** has improved **COMODULE's** position in Asian markets, reducing entry obstacles. **KristallTurm's** development and commercial success depends very much on its foreign sales agents and resellers. For instance, **HPS Middle East's** excellent global network in the leisure industry has helped **KristallTurm** to increase its client base, and positive expectations are looking to **Fusser Enterprises'** local contacts in Florida (Florida is a global hotspot for the adventure park industry) to expand future business possibilities for **KristallTurm**.

The cooperation between **Khar & Partners** and **ProEdge** has facilitated the expansion of the born global's product in India and Southern Asia even though this was not initially envisaged by the Romanian company. Cooperation with **Britplas** has allowed **Reconnect** to showcase its product in the UK, a key European market in terms of psychiatric and mental healthcare products.

Finally, **Jagwire** has opened up a new market for bike components for the children's market as a result of its

cooperation with **Frog Bikes**, resulting in a 5% increase in sales and a 3% increase in production volumes.

In other cases, knowledge- or learning-related results are helping important product improvements to be made. The cooperation with **Materflow** has allowed **COMODULE** to improve the quality of its prototypes, which also has a positive impact on **COMODULE's** sales. In turn, the feedback provided by **COMODULE** about the items produced has allowed **Materflow** to improve its products, facilitating future business opportunities in national and international markets. The capitalisation on **AVS Electronics (HK)'s** knowledge of producing displays has allowed **COMODULE** to jointly develop a new type of display for electronic bikes and scooters and thereby to find new customers who have already placed orders. In turn, the partnership with **COMODULE** has enabled **AVS Electronics (HK)** to acquire new knowledge about Internet of Things technologies in the bicycle industry.

For **Graphenea**, the main result of the cooperation with **AIXTRON** relates to the development of unique machines which are fine-tuned to the specific needs and requirements of **Graphenea**. **Graphenea** has also accumulated a significant body of knowledge about the specificities and characteristics of well-running manufacturing equipment as a result of its cooperation with **AIXTRON**, and this may be used by **Graphenea** for the potential selection of alternative equipment suppliers in the future. In parallel, from its cooperation with **Graphenea**, **AIXTRON** has developed very specific and specialised knowledge on graphene production-related needs, a small but likely growing new market segment that is interesting for the company. The cooperation with **GroWater** is resulting in an interesting source of knowledge for **Graphenea** on the graphene-related needs of graphene-based membrane platform technology developers. For **Reconnect**, one of the main results of international cooperation with **Zytronic/Telerex** has been the development of a unique product (touchscreens) with some very specific and unique attributes in terms of durability and sensitivity that, incidentally, has made it possible for **Reconnect** to become an innovative, export-driven enterprise. **Zytronic/Telerex** has developed significant expertise in the field of touchscreens as a result of its collaboration with **Reconnect**.

Frog Bikes and **Tektro** have shared their knowledge and technology for the design and development of several special children's bike-related products for **Frog Bikes**, resulting in an increase in sales for both companies.

Finally, in some cases, other positive (and sometimes unexpected) results can be identified, particularly in terms of reputation- and employment-related effects. For instance, the possibility for **HPS Middle East** to have access to **KristallTurm's** high-rope courses has enhanced the reputation of its leisure parks, especially in the Middle East region, where trustworthy products are greatly appreciated. **Britplas** has gained a strong reputation from its collaboration with **Reconnect** as a specialist in the field of communication windows and walls in the mental healthcare sector, resulting in increased sales. Similarly, the cooperation between **Frog Bikes** and **Shimano** has helped to raise **Frog Bikes'** international profile, indirectly

resulting in an increase in the born global's sales on international markets.

Related to employment effect, the cooperation between **COMODULE** and **AVS Electronics (HK)** has enabled **AVS Electronics (HK)** to employ more people to work on joint projects (for example, new employees will be hired in design in Taiwan and in a factory in Shenzhen in China) and to extend the factory's production line to enable it to produce products for **COMODULE**. Other unforeseen results can be identified. For instance, **HPS Middle East** has benefited from **KristallTurm's** network, through which it was able to find a new international supplier of self-rescue systems. Finally, **Graphit Kropfmühl** is using some state-of-the-art equipment and scientific personnel from a specialised Basque technology centre, and **Graphenea** facilitated this cooperation. In some cases, these results are not yet visible, but they are expected to materialise in the (near) future. For instance, **Materflow** has identified significant future business opportunities in the Baltic countries and Poland as a result of its cooperation with **COMODULE**, due to the small number of competitors there. **Graphit Kropfmühl** could become a key and highly specialised supplier for **Graphenea** in the future, provided that the current testing phase of different samples of natural graphite produces positive results for **Graphenea**.

2.3.8. Evolution of cooperation over time

Generally, the cooperation between the born globals and their GVC partners has been reinforced with the passing of time, benefiting both sides.

The cooperation between **Khar & Partners** and its GVC partners regarding the SOWAT system has gradually increased over time, partially as the result of increased sales, a broader international expansion and several improvements in product technology. Cooperation between **KristallTurm** and **HPS Middle East** has increased since their initial business relationship in 2013, in the sense that **HPS Middle East** has developed four additional leisure park projects in the region using **KristallTurm's** rope courses.

The cooperation between **Graphenea** and **AIXTRON** has developed smoothly over time, with regular briefings on the functioning of the equipment, which have also enabled the exchange of ideas and suggestions for improvement. This has been reinforced with the new graphene-manufacturing equipment, and reflected in regular weekly communications and information exchanges as well as regular face-to-face meetings. Similarly, the cooperation between **Graphenea** and **Graphit Kropfmühl** has evolved and developed quite well, although it has only focused

on scientific cooperation so far. In order to reinforce this cooperation, **Graphit Kropfmühl** has visited **Graphenea** facilities several times since 2015, with the aim of deepening the existing relationship between both parties.

The cooperation between **Zytronic/Telerex** and **Reconnect** was very intense in the initial stages while discussing the design and manufacturing characteristics of the touchscreens, as well as more recently, when **Reconnect** was trying to redesign the products to make them cheaper and to add new functions. The cooperation between **Frog Bikes** and **Tektro** has also developed successfully since its establishment, evolving from a pure supplier-buyer relationship to more of a partnership approach, including agreements to co-design and manufacture tailor-made components for **Frog Bikes' products**.

In some cases, the presence of a specific element reinforces this cooperation. For instance, the cooperation between **Graphenea** and **GroWater** has been reinforced with the opening of a **Graphenea** office nearby in the area where **GroWater** is located (Boston, USA) that facilitates exchange and interaction between both companies.

In contrast, there is one example where cooperation has not been reinforced with the passing of time. The relationship between **Frog Bikes** and **Shimano**, although positive, has not been strengthened despite **Frog Bikes' interest** in this. The unbalanced power relationship between the enterprises may be one reason for this.

Looking to the future, cooperation between born globals and GVC partners is likely to be reinforced in a number of cases. For instance, if sales continue to increase, **Blue Ocean Robotics** plans to set up a spin-off company with the purpose of focusing exclusively on scaling up sales of Beam in Europe, Asia and the Pacific Region, which would benefit both **Blue Ocean Robotics** and **Suitable Technologies**. **KristallTurm** and **Fusser Enterprises** are particularly interested in reinforcing their collaboration in the coming years in order to further develop the high-growth USA market. It is expected that the cooperation between **Graphenea** and **Graphit Kropfmühl** may increase in the future if **Graphenea** decides to rely much more on natural graphite as a raw material instead of synthetic graphite. **Frog Bikes** and **Jagwire** have several plans to establish a long-term relationship.

In some other cases, future cooperation is less certain. For instance, the cooperation between **Blue Ocean Robotics** and **Blue Ocean Robotics Sweden** has developed positively since it began in 2015, although it cannot be considered stable until **Blue Ocean Robotics Sweden** achieves positive cash flow.

Box 12: Evolution of cooperation between **COMODULE** and **AVS Electronics (HK)**

The partnership between **COMODULE** and **AVS Electronics (HK)** started slowly but then became relatively successful in terms of finding different cooperation possibilities. It proved mutually profitable, not only in the Asian market (which was facilitated by **AVS Electronics**) but also through enhancing the co-development of products for all **COMODULE's** current and potential markets. A significant change in the partnership was a small but strategic investment by **AVS Electronics (HK)** in **COMODULE** in the summer of 2016 that changed the role of **AVS Electronics (HK)** from a partner to an investor, and this facilitates their long-term strategic cooperation.

2.4. Main obstacles to international cooperation and their solutions

2.4.1. External barriers and solutions adopted

A number of barriers that are external to the company make the engagement of the analysed companies (the born global enterprises and their associated value chain partners) in international cooperation difficult. These specific challenges are beyond the company's control, and can lead to a considerable degree of uncertainty that is associated with potential risks.

According to the literature, the characteristics of and differences between the legislation and regulations on the home and host markets, as well as disproportionate regulatory burdens, stringent regulatory requirements and large amounts of bureaucracy (such as compliance-related documentation or permits and registration efforts) and the cost of the legal advice needed to face them (Eurochambres, 2015) can act as entry barriers for born globals (Kahiya, 2013; Nesta et al, 2015; European Commission, 2015a, 2015c).

This is confirmed in the case studies. For instance, **Blue Ocean Robotics** found it very easy to set up a joint venture company in Hong Kong but very resource-consuming and slow in two EU Member States (Germany and Spain). In Germany, one of the founders and two employees had to travel to Munich for a short meeting with a notary to be able to set up a joint venture company as, under German law, a physical presence is required to set up a company. In Spain, anyone living and working outside Spain must be registered as an expatriate Spaniard and have a personal identification number to establish a company. **AVS Electronics (HK)**, one of **COMODULE's** GVC partners, feels that there are too many regulations in Europe, which can be confusing, as it is sometimes difficult to know whether a specific requirement is mandatory or recommended, or whether an EU regulation has been adopted in all of the EU Member States. Indeed, the literature highlights that the fragmentation of the Single Market in national markets

(with different national regulations) involves additional efforts for born globals to market their products or services in Europe and beyond and that regulatory efficiency has not yet been completely achieved in the EU (European Commission, 2015a).

Furthermore, private contract laws differ across countries (this is particularly relevant for the USA with respect to liability regulations), resulting in an added burden for **KristallTurm** when adapting contracts to national contexts.

In several non-EU countries, firms encountered difficulties associated with customs-related issues, including additional customs checks, delays in supply and extra duties or difficulties related to sending personnel abroad. For example, **KristallTurm** requires specific visas or evidence of adequate wage payments and insurance for assembly teams posted abroad, as well as information on local work safety requirements that assembly workers have to respect. **Frog Bikes** attracts massive import duties to access the Russian market in particular.

The above is consistent with existing studies observing that European countries' trade is affected by border measures applied by other countries – such as tariff increases, quantitative restrictions, import licensing and outright trade bans (European Commission, 2016a). This is worsened by so-called 'behind-the-border measures', intended as countries' internal measures and protectionist trends affecting foreign competition, such as restrictions on public procurement and discriminatory taxes and provisions that tend to favour local businesses (European Commission, 2016a).

National certification and product requirements in the target countries, including within the EU, are an important issue for the born globals interviewed here. This problem, which particularly affects those companies whose products have specific features linked to safety standards, quality criteria or significant technology requirements, implies important costs and time requirements for the companies. For example, **KristallTurm** has to respect the existing technical standards and regulations (for instance, technical standards for stairs, the height of

Box 13: External support to overcome difficulties with regulations

Blue Ocean Robotics makes use of three different Danish law firms in order to deal with national regulations and laws in different countries and to make sure that it complies with the principles required.

Box 14: Establishing premises in other countries to streamline administrative and customs procedures

Graphenea has set up a branch in the USA to avoid administrative difficulties related to customs issues as well as to overcome the tendency amongst USA clients to buy local products. In addition to this, **Graphenea** has signed distribution agreements with a network of international distributors located in the main country destinations in order to facilitate and solve local administrative procedures. The Taiwanese **Jagwire** (one of **Frog Bikes' GVC** partners) has opened a small European branch in Belgium to facilitate serving the EU market and avoid additional administrative procedures for its EU clients.

handrails or minimum load weights) when constructing its ropes courses abroad so that operators can be granted a permit for their facilities. Dealing and complying with the manifold and ever-changing national technical standards and specifications is also extremely time-consuming for **HPS Middle East** (a client of **KristallTurm**), although the company also reports that this can offer a competitive advantage over others as long as the company is competent in this area.

Khar & Partners identifies certifying products as its main obstacle, in the sense that the procedures necessary to participate in product certification schemes can prove difficult and costly for small firms to comply with (for instance, it is estimated that obtaining CE certification costs close to €100,000). However, the firm also considers that the advantages deriving from certification outweigh the costs and long waiting times involved, particularly in terms of enhancing the product's credibility and facilitating exports. **Pipeco** (a member of **Khar & Partners'** value chain) stresses that it took it one year and a large amount of money to obtain French ACS certification. **Reconnect** had to conduct a specific test for the UK to show that its product was safe in order to obtain a particular certification. In the case of **Frog Bikes**, the fact that the USA ISO standard is different from the EU one requires much testing (it costs USD 20,000 – equivalent to €17,401 – to test a bike), which increases the total cost of production. Similarly, Australia and New Zealand require a slightly different standard, which means that **Frog Bikes** had to conduct many tests to ensure its products matched the technical requirements in those countries.

In line with the above, existing studies identify as key barriers non-tariff measures such as foreign technical standards, licensing procedures and certifications, especially for smaller companies, because of the fixed compliance costs which are not proportional to the volumes traded and the related difficulty for smaller companies to spread these costs over large export values (Cernat et al, 2014).

Technical barriers can also hamper internationalisation activities. For **COMODULE**, the main one is differences between the wireless telephone technologies (2G, 3G or 4G) applied in different countries, as their product can be connected only to a 2G network.

Some countries (for instance, China) are also perceived as particularly 'dangerous' for high-tech companies. This is the case of **COMODULE**, which is not expanding to China as it is afraid of possible unfair competition (for instance, unlicensed copying of electronic products and selling at much lower prices) and possible obstacles to protect intellectual rights in the Chinese legal environment. **Jagwire** (a GVC partner of **Frog Bikes**) also stresses the tough competition from countries where manufacturing is cheap, which could take away existing and potential clients.

Some countries have different payment practices that involve important financial difficulties for companies, especially the smallest ones. A good example of this is given by **Reconnect** and its experience with the UK National Health Service (NHS), a key client for the company. The NHS usually has the policy of paying

Box 15: Solutions for meeting national certification and product requirements

In order to avoid any risks related to national certification procedures, **KristallTurm** stipulates in its contracts that the foreign client is responsible for making available all relevant technical standards (and translations if needed) before component planning and production begins. **Frog Bikes** tries to manufacture products which meet the most common standards, and then adapts them to different markets. This requires a high level of collaboration and increases the burden on the company in terms of time and cost. Similarly, **Tektro** (one of **Frog Bikes'** GVC partners) bases its product design on European and US standards, as these cover their main international export markets.

Box 16: Solution adopted by COMODULE to cope with different national technical conditions

COMODULE has adapted its product to the different technical conditions of the target countries. Thus, the born global is working on an updated version of its hardware that should be able to connect to a 3G network.

Box 17: Solutions for overcoming tough competition from low-cost manufacturers

COMODULE suggests that the Chinese market requires a strong local partner, as well as clear and specific business goals, before entering it. **Jagwire** (a GVC partner of **Frog Bikes**) focuses on improving the quality of its products while keeping prices stable as well as offering value-added or 'extra' services to customers (for instance, keeping sufficient stock to be able to respond to unexpected demand from clients). **Jagwire** also plans to expand its warehouse in Belgium to respond to client demand more successfully.

after delivery, which was a real challenge for **Recornect**, because as a start-up enterprise it had very little financial leeway to begin the production process and pre-pay its suppliers. For **Fusser Enterprises** (a client of **KristallTurm**), the pre-financing of goods to be imported constitutes a significant challenge, especially for US-based organisations (which are usually very reluctant to make advance payments to other countries).

Concerning the features of the domestic market or the country of origin, two main barriers can be identified: difficulties in accessing finance with good conditions and the existence of a poor national image and national support structure in the country of origin. Having experienced both in Estonia, **COMODULE** moved its headquarters from Tallinn to Berlin in 2015.

Finally, the companies analysed also suggest the important negative effects of difficult national political situations, which often increase the degree of uncertainty when seeking to internationalise. For instance, both the UK born global **Frog Bikes** and the UK subsidiary of **AIXTRON** (a GVC partner of **Graphenea**) stress that Brexit (and particularly the uncertainty associated

with it) is an emerging challenge for its international activities. Examples of areas of uncertainty include future participation in EU-funded R&D projects, the specific conditions under which products will be sold in the EU markets and existing fluctuations in exchange rates and the depreciation of sterling (resulting in higher input costs for UK companies). Similar risks associated with foreign exchange rate fluctuations are also suggested by **Fusser Enterprises** (client of **KristallTurm**) when working with Europe-based attractions suppliers.

One of the most important external difficulties is that of finding clients and suitable teams with the abilities and knowledge required for collaboration. For instance, **COMODULE** complains that there is no pan-European association of electronic producers that would save time to find suppliers. **Graphenea** feels that for any new technology-based company, the opportunity to become known in the market and to develop a network of relevant clients or collaborators is complicated but crucial in the initial stages, particularly in the international domain.⁴ **Frog Bikes** found it difficult to find a Polish team with strong English that could help it access local market knowledge. It was even more challenging for the company

Box 18: Solutions adopted for accommodating different payment practices

Recornect was able to solve the problem of late payment by negotiating with the NHS and staying firm, stressing the fact that an advance payment was important to get the production process going. **Frog Bikes** (like **Tektro**) uses insurance to cover the risks of late payment from clients.

Box 19: Solutions for overcoming Brexit-related challenges of internationalisation

Frog Bikes has taken several decisions in order to minimise the problem of exchange rates. On the one hand, the born global hedges its foreign exchange in order to eliminate the risks associated with global transactions. On the other hand, it is diversifying its destination markets, particularly in those countries that use 'strong currencies', in order to minimise the risk from foreign exchange rate fluctuations. **AIXTRON** will elaborate a contingency plan in order to evaluate and minimise possible risks associated with Brexit once it has clearer information on the specific conditions under which the process will be agreed between the EU and the UK government.

Box 20: Solutions for improving access to international clients

Materflow (one of **COMODULE**'s GVC partners) is improving its website to reach and serve (potential) customers better. **KristallTurm** regularly attends relevant international fairs and exhibitions around the world in order to become visible and find (new) international clients. Another important acquisition method for the company is a global network of sales agents who actively explore and canvass potential clients in their regions, as well as extensive use of word-of-mouth in the industry as another key tool for finding new clients.

Khar & Partners has joined different national and international business networks and participated in international events and trade fairs to find potential clients and partners, and has used certifications to increase its product's credibility. **Graphenea** set up a modern website only in English, including relevant information on the sector. This includes an online store that facilitates international sales (strongly supported by very agile courier services).

Finally, most of the analysed born globals see prizes and awards as an excellent tool for gaining credibility and visibility in the eyes of third parties, particularly clients and external investors.

⁴ Interestingly, the company is now a world reference in its sector and receives many proposals for scientific and business collaboration, not all of which are of interest to the company.

to connect with potential Polish sales representatives in the biking industry.

Along the same line of reasoning, the analysed born globals underscore that it takes a long time to build trust amongst partners and establish long-standing relationships. For **Blue Ocean Robotics**, finding the right local partner to become a co-founder and CEO of a joint venture is an important challenge, as it requires the local partner to comply with a number of specific characteristics (knowledge, experience, network, financial resources).

Khar & Partners suggests that it normally takes a very long time to formalise a commercial relationship, and it sees trust as a necessary pre-condition for fluent international cooperation.

Finally, big geographical or time zone distances can pose a challenge for international cooperation. For instance, both **Blue Ocean Robotics** and **Suitable Technologies** (a value chain partner of **Blue Ocean Robotics**) suggest that finding times for phone or video call meetings during normal working hours when cooperating with partners in very different time zones is a major challenge. Transportation and logistics are particularly costly for **KristallTurm** when shipping construction components and tools abroad in standard containers. For **Khar & Partners**, one of the main challenges involved in engaging in internationalisation activities is the large geographical distance separating the various companies involved in the project, as well as the distances between it and its clients.

2.4.2. Company-internal barriers and solutions adopted

Despite deriving positive effects in terms of flexibility, internationalisation challenges are systematically higher for smaller companies than for larger ones (Falk et al, 2014). While the latter can typically exploit economies of scale to overcome barriers, smaller companies need to overcome the ‘liability of smallness’ (Oviatt and McDougall, 1995; Nummela, 2018). These stem mostly from limited financial resources, negotiation possibilities or human capital resources. For instance, **Khar & Partners**

stresses that its limited financial resources affect its ability to engage in different activities such as expansion or product quality certifications, which can have an indirect effect on its international expansion.

A small company like **Frog Bikes** has experienced significant difficulties negotiating an attractive payment agreement with one of its key suppliers (**Shimano**, a very large brand supplier in the sector). Nevertheless, and in other cases, **Frog Bikes** has been successful in negotiating good terms with other (large) suppliers.

Concerning human capital limitations, **COMODULE** feels that it would be able to develop technology and products faster if it had more employees, which would also help it to set more ambitious goals, an aspect that at least indirectly affects its internationalisation process. Labour skill shortages and difficulties attracting a skilled workforce are likely to be higher for small than large firms, which can typically afford to offer more attractive employment conditions and career prospects (Falk et al, 2014). The current limited language capabilities of **KristallTurm** (the staff can work in English and German only) are a key factor constraining the company’s international business activities. In addition, **KristallTurm** points out that staff members are not always readily available to go on missions abroad for several weeks. For **Frog Bikes**, the team’s limited language skills, together with their limited familiarity with target markets, makes it more difficult to approach and develop successful international cooperation activities with foreign clients and establish a foothold abroad. **Jagwire** and **Tektro**, value chain partners of **Frog Bikes**, have experienced similar language-related problems in dealing with different markets.

Born globals typically face the liability of outsidership from the markets and related networks, which can provide opportunities for learning, trust-building and commitment (Sullivan-Mort and Weerawardena, 2006; Freeman et al, 2010; Stoian and Ghauri, 2015). The absence of networks can hamper market expansion (Sullivan-Mort and Weerawardena, 2005), but building and nurturing them can be challenging and demanding. Moreover, given the

Box 21: Solutions for overcoming large geographical distances

Blue Ocean Robotics is very active in travelling around the world to meet partners face to face. The company also strongly relies on different forms of ICT-based communication to overcome physical distances with partners and clients, as well as on employees’ flexibility when communicating with partners on different continents. **KristallTurm** shares risks and responsibilities for shipment with the client, which is organised on a case-by-case basis depending on the destination. **Khar & Partners** and its associated manufacturing partners have taken steps to streamline the initially centralised process of production and delivery, rendering the distribution model more efficient.

Box 22: Negotiation of advantageous payment agreements to cope with limited financial resources

In international businesses, **KristallTurm** always requests 100% pre-financing by the client in order to reduce the risk of payment defaults. **Frog Bikes** has reached an agreement with some of its suppliers, not having to pay them a deposit before the shipment of their order. In the case of **Tektro**, **Frog Bikes** has to pay only 20% of the total value of its order as a deposit, which is lower than usual practice with other enterprises.

Box 23: Solutions to overcome human capital-related limitations

Blue Ocean Robotics is aware of the importance of using local languages to facilitate local business. Accordingly, it boosts local joint ventures and sales partners in many countries with employees who speak the local language to overcome language and business culture barriers. **KristallTurm** recruited an employee speaking both Russian and Spanish and another speaking Chinese to support the marketing and sales team. In order to deal with and gain better access to non-English-speaking markets, **Frog Bikes** is looking for French and Italian and French native speakers. According to the CEO, it is essential to have native speakers to access new markets and to build international sales teams in those countries. This also enhances trust with existing clients in foreign countries and generates more opportunities to approach potential clients. **Jagwire** (supplier of **Frog Bikes**) also has a strategy of recruiting different native speakers to its international team. **Tektro** (a supplier of **Frog Bikes**) has improved its staff's communication skills also.

KristallTurm, in order to reduce the burden for workers going abroad for assembly tasks, changes the assembly team from project to project, and sometimes even during one project. The option of using local assembly workers in the destination country has not proved to be successful so far, mainly because they lack the required experience and skills, coordination is more difficult and assembly takes much longer as a result.

evolution of the information needs at different stages of internationalisation, managers typically address different sources and establish several network relationships. According to **Blue Ocean Robotics**, creating successful international cooperation is a very resource-demanding, expensive and time-consuming challenge, not only for the co-founders of a **Blue Ocean Robotics** joint venture who struggle to create a successful business, but also for **Blue Ocean Robotics Denmark**.

2.5. Support for born globals and their value chain partners

2.5.1. Support needs

The analysed born globals identify two main areas in which they need external support to compensate for their lack of internal resources and competencies. It is important to stress that these support areas are 'general' in nature (access to finance and external capital, specialised advice), although they do indirectly impact on these companies' internationalisation efforts. The first area relates to the need to raise and have access to external capital, in either the initial or the expansion phases of the business project, and for different purposes (e.g. developing new products/markets, financing R&D activities, growing the business and covering product certification costs).

For instance, **Blue Ocean Robotics** stresses the need to raise capital to finance its business activities when developing a new robot for new markets, including the development stage, the commercialisation of the robot and the creation of a spin-off company. Meanwhile, securing start-up capital was one of the main challenges faced by **Reconnect** and **Graphenea**. According to **AVS Electronics (HK)**, **COMODULE's** value chain partner, access to finance is the main problem for small companies as banks tend to be reluctant to support start-ups and born globals. The less favourable conditions banks tend to offer to born globals typically relate to the need for specific financing products which take into account the risks involved in young companies' exporting activities (OECD, 2009). **KristallTurm**

also reports that raising finance is not only a problem for born globals themselves but also for many international clients, and many projects fail for that reason.

A second area of external support needs relates to access to specialised assistance and advice within different fields, including internationalisation-related activities. For instance, **Blue Ocean Robotics** regularly needs legal advice from lawyers for different purposes, particularly when establishing new companies abroad, including joint ventures and spin-offs, in order to be sure that this is done correctly and in line with national legislation. In its initial stages in particular, **Reconnect** identified a need for specialised external assistance and advice focused on drafting and constantly updating a sound business plan as well as an external need to map out the requirements for selling the company's products abroad (including product certifications, tax obligations and different general business practices in foreign countries). More recently, the company has been particularly interested in receiving specialised support that may help it to grow and scale up (for instance, extending its network of potential clients). **Khar & Partners** identifies a need for external assistance in handling different administrative requirements, at both national and international levels. Finally, **Frog Bikes** suggests that it takes considerable resources and time for it to work out how to enter new markets and identify new clients without external support.

In relation to the main needs identified by the GVC partners, the limited information available shows that they also relate to areas such as access to finance (to invest in new advanced equipment in the case of **Materflow**), tax relief for internationalisation activities (**Jagwire** and **Tektro**) or access to specialised consultancy and advice services on various internationalisation-related issues in the case of **Materflow** (that is, information on countries, sectors and rules and regulations, procedures and trade barriers; identification of international potential of products and services; information on market opportunities; search and identification of potential foreign suppliers and business partners; facilitation of business cooperation and networking activities with international partners; and support for protecting IPRs).

2.5.2. Use of external support

In general, the analysed born globals show a high capacity for using different sources of external support for various purposes and from private and public actors at different levels (EU, national, regional and local). These are often linked to the 'general' support areas identified in the previous section and, therefore, often only indirectly support the companies' internationalisation activities.

Most of the analysed born globals are particularly active in using external support to raise capital and access to finance. As stressed in the literature, some of their most common sources of funding are private investors, venture capitalists and government support (Murremäki, 2010). A good example of financial support from private investors is given by **Blue Ocean Robotics**, where a group of private investors provided external finance in 2016 to consolidate the global growth of the born global and strengthen its robot portfolio. In other cases, this financial support comes from public sources or from a combination of public and private agents. This is the case of **COMODULE**, which has been very successful in accessing several investment rounds from both private investors (particularly Estonian, German and US business angels as well as its own value chain partner **AVS Electronics (HK)**) and one German public-private venture capital investment fund (the largest investor in start-ups in Germany).

Similarly, **Graphenea** launched its activities thanks to several rounds of public sector regional short-term financial support and a number of regional private sector business angels, and other external private investors have been added in subsequent life phases of the company. In both cases, most of these private business angels were found through personal contact networks of the company founder(s). **Reconnect** successfully made use of various public support measures available for technology- and technical-related start-ups in the region.

Particularly in relation to R&D and IPR activities, some of the analysed born globals are extremely successful in securing public funding from different sources (EU, national and local). For instance, **Blue Ocean Robotics** has many years of successful experience in accessing funds from different R&D public funds, such as the EU Horizon 2020 and Seventh Framework Programme or Danish innovation-related funds. **COMODULE** received funding via an innovation voucher from an Estonian public institution for conducting patent-related research. **Graphenea** has participated in several key EU programmes (as either a coordinator or a project partner). Finally, **Frog Bikes** benefits from an existing UK national tax incentive in terms of R&D and patenting.

In addition to R&D activities, the analysed companies use external public sector financial support to undertake other activities. For instance, **Graphenea** has benefited from several national and regional measures specifically aimed at supporting the internationalisation of the company in different domains (that is, participation in international business meetings, trade fairs and exhibitions). **Reconnect** received a public subsidy from the regional development agency to help develop first-stage prototypes, and **Frog Bikes** has benefited from a Welsh Government support

scheme to build a new factory in Wales, which involved a commitment to create at least 50 new jobs in the local area in the three years after the factory opened.

Access to specialised external advice and counselling on different topics is another area where most of the analysed born globals are particularly successful. In some cases, private agents provide these external advice activities (for instance, **Blue Ocean Robotics** uses external lawyers when establishing new companies abroad as well as in relation to new share subscription agreements and share issues). In other cases, the analysed born globals use their business angels' and external private investors' expert knowledge. A good example of this is **COMODULE**, whose financial plan was drafted in collaboration with one of the company's external private investors.

COMODULE's participation in a three-month international accelerator programme enabled the company, amongst other things, to receive mentoring from business and technology specialists. In other cases, public agents provide or facilitate this advice. Thus, **COMODULE** benefits from specialised assistance and advice for start-ups from professionals of the already quoted German public-private venture capital investment fund.

Since 2016, **KristallTurm** has been working with German foreign trade chambers (Außenhandelskammern) to select interesting target markets as well as identifying potential local business partners and obtaining information on different legal regulations in the selected countries. **KristallTurm** also benefited from a Bavarian support programme called 'Go International' which aimed to give financial support for costs related to trade fairs or external information services, amongst other expenses. **Reconnect** has successfully collaborated with the local chamber of commerce with support from the Enterprise Europe Network (EEN) to start up and scale up (primarily via the development and updating of a detailed business plan). It has also benefited from a regional public 'knowledge voucher', used by the company to contract some external experts to map the German market.

The role played by prizes and business competitions deserves particular attention as an effective way for born globals to enhance their visibility and reputation, as well as attracting the attention of private investors. Most of the analysed born globals have received several national and international prizes and awards since their establishment (see Table 7).

Finally, the analysed born globals use external support that facilitates (international) business cooperation and networking activities (such as participation in conferences, trade fairs, business clubs). For instance, **COMODULE** actively participates in different national and international conferences related to its core competencies. **Graphenea** participated in the EU's Graphene Flagship Initiative, whereas **Khar & Partners** stresses its active participation in the Francophone Business Club in Sibiu, where participating companies exchange experiences and knowledge with other entrepreneurs on various export markets, export requirements and business development strategies, sometimes resulting in further business opportunities for the participants. The Romanian born

Table 7: Examples of prizes and awards received by the born globals analysed

Case study	Examples of prizes and awards
COMODULE	<ul style="list-style-type: none"> ◦ Eurobike Gold Award in 2015 ◦ The co-founder and CEO of the company was awarded as one of the top tech entrepreneurs of the future in 2016 (listed in the Forbes '30 under 30')
Frog Bikes	<ul style="list-style-type: none"> ◦ Export Business of the Year Award, November 2015 ◦ Finalist in the National Business Awards for New Business of the Year 2013 and 2014 ◦ Nominated as Bike Brand of the Year by Bike Biz (UK) in 2014
Graphenea	<ul style="list-style-type: none"> ◦ Listed in Global Cleantech 100's 'Ones to Watch' 2014 ◦ In 2015, considered to be one of Europe's top scale-ups/fast-growing start-ups, presented at Silicon Valley's 'SEC2SV European Innovation Day'
Khar & Partners	<ul style="list-style-type: none"> ◦ Participation in Startup Istanbul and in the Franco-Romanian Chamber of Commerce (Ccifer) in 2016 ◦ Innovation Prize of the Franco-Romanian Chamber of Commerce in 2016 ◦ Finalist of the Chivas Venture 2017
KristallTurm	<ul style="list-style-type: none"> ◦ Bavarian Export Award 2017, 'crafts' category ◦ Global Connect Award 2016, 'newcomer' category ◦ Bavarian State Award for Innovation in 2011
Recornect	<ul style="list-style-type: none"> ◦ Dutch SME Export Award in 2016 ◦ Selection of Recornect in the Dutch 'SME Innovation Top 100'

Source: Authors' own elaboration

global suggests that the expansion of the company's products has particularly benefited from the company's participation in international fairs (such as the Morocco Meknes International Agriculture Fair in 2015, or the Brussels Expo in 2016).

In the case of the GVC partners, the limited available information shows that **COMODULE**'s two GVC partners (**Materflow** and **AVS Electronics (HK)**) have benefited from various external support measures for their internationalisation and international cooperation activities. Thus, **Materflow** has benefited from several public national support measures, partially covering different elements such as the costs of purchasing two new 3D printing machines and market research on the potential of **Materflow**'s business in the Baltic states and Poland. **AVS Electronics (HK)** has benefited from a national public support measure compensating it for the costs of participating in different trade fairs. As regards **Frog Bikes**' GVC partners, **Tektro** obtained government support to open a distribution centre in Portugal, whereas the Belgian government sponsored the European branch of **Jagwire** to attend some international trade shows.

2.5.3. Assessment of external support by born globals and their value chain partners

Most of the analysed born globals value the external support they have received, with the exception of **Khar & Partners**. Significantly, the most valued sources of external support tend to correspond to areas not exclusively related

to internationalisation (such as R&D, access to finance and new premises support).

Blue Ocean Robotics particularly values the external support received from the Horizon 2020 programme and the Innovation Fund Denmark for developing its R&D activities. **COMODULE** expressed satisfaction with the different sources of external support received, particularly in relation to valuable consultations with the business angels and the services provided by the international business accelerator (professional advice, feedback on all aspects of its business and knowledge about various types of financing and financing methods during the early stages of its business). **COMODULE** also values the funding received from the German public-private venture capital investment fund, as it was the first significant investment in the company, which enabled it to hire a sufficient number of new employees to further develop the product. **KristallTurm** very much appreciates the quality of information received from the German foreign trade chambers.

Similarly, **Graphenea** believes that the external support measures used by the company have been important for its development. The company identified its three most valued sources of external support as the initial short-term financial support provided by the regional or local authorities, its participation in the EU's Graphene Flagship Initiative (which granted it first-hand access to the community of key European players in the graphene area) and its being selected for the EU Horizon 2020

programme's SME Instrument (used to install a new production pilot plant of high-quality graphene for industrial applications, supporting the company to consolidate its position as one of the global leaders in the graphene industry).

Recornect stresses that its pace of development benefited strongly from a supportive policy environment and the measures available in the Netherlands, and in Eindhoven especially, particularly in relation to its main areas of need (such as the initial elaboration and updating of a business plan and external support in relation to export-related product certifications and tax obligations).

Finally, **Frog Bikes** believes that the government-funded scheme to build the new factory in South Wales has significantly enhanced its internationalisation in terms of both financial support and the professional consultancy received. Feedback on the UK government's tax incentive support for patenting and R&D activities is also positive.

Despite these positive assessments, some of the born globals have identified gaps in the available support, such as a lack of legal advice (particularly in relation to EU directives and foreign market administrative and regulatory requirements) (**COMODULE**, **Recornect**) or a high level of reluctance on the part of banks to provide credit or loans to new companies (**Recornect**, **Frog Bikes** and **KristallTurm**). **KristallTurm**'s experience is that the conditions for accessing export-financing instruments from private banks or the German government, including credit insurance and export guarantees managed on behalf of the latter, are not sufficiently financially attractive.

Frog Bikes believes that national authorities offer poor public support to help firms access new markets (in particular, the company approached the UK Department for International Trade to seek information on entering the Polish market, but this public entity did not help them to make any progress).

In the case of Estonia and Romania, the existing supply of public national support measures for start-ups is regarded

as poor. **COMODULE** suggests the need to develop the Estonian start-up ecosystem further to make it more attractive for national start-ups, particularly in relation to the availability of venture capital funds. Indeed, this company has compensated for this lack of national provision by successfully gaining access to international public and private sources of support.

Similarly, **Khar & Partners** identifies several important gaps such as the existence of very few export support instruments, a lack of suitable public instruments supporting entrepreneurship (government-funded incubator programmes, prizes, suitable tax incentives for innovation expenses and so on) and the high regulatory burden imposed upon new enterprises aggravated by a 'punitive rather than proactive' approach to companies on the part of the authorities (companies risk large fines if they do not comply with requirements, rather than the state encouraging compliance via some sort of benefit).

Significantly, several interviewed born globals (**COMODULE**, **Khar & Partners** and **Frog Bikes**) suggest that they are not aware of all existing public support schemes because of the limited information and the lack of promotion of the different types of support available. For these companies, the large amounts of paperwork involved in securing support as well as the lack of practical support on how to fill in the many documents needed for an application aggravates this problem. Some of the born globals also regard the response of the national support authorities as being too slow. The constant and rapid change of the market context in which start-ups operate requires quicker access to financial support. In short, the administrative processes of public organisations do not meet the born globals' expectations.

Finally, the limited information available shows that the GVC partners offer a positive assessment of the support measures used, both in terms of their effectiveness and their ability to meet the different companies' needs. In the specific cases of **Tektro** and **Jagwire**, both companies hope to secure further support in terms of tax incentives to support their internationalisation efforts.

3 Policy measures supporting born globals and SMEs in their global value chains

3.1. EU level

Internationalisation is a primary focus of the EU's strategies, aiming at achieving smart, sustainable and inclusive growth (European Commission, 2010). EU SMEs' internationalisation support is also one of the objectives of the European Commission's Communication SBA (European Commission, 2008). For Europe and Europeans, globalisation has boosted economic growth, helped Europe to stay competitive and created multiple opportunities for people and companies of different sizes.

3.1.1. Internationalisation in Europe 2020

The Europe 2020 strategy focuses on how the EU can overcome the financial crisis and become a smart, sustainable and inclusive economy ensuring high levels of employment, productivity and social cohesion.

Of the seven flagship initiatives identified by this strategy to boost innovation and growth, one is specifically focused on SMEs. The communication 'An integrated industrial policy for the globalisation era' stems from Europe 2020 and highlights the key role of industry for EU's competitiveness and sustainability while capitalising on globalisation (European Commission, 2014d). It recognises the challenges that SMEs face in internationalisation and the need to provide them with relevant support for markets outside the EU as a key priority of action.

3.1.2. The SBA and related actions

The SBA, adopted in 2008, is a reflection of the European Commission's recognition of the key role of SMEs in the EU economy. It focuses on the improvement of the entrepreneurship approach in Europe, the simplification of the regulatory and policy environment for SMEs and the removal of the barriers to their development.

The Act defines a policy programme aiming at promoting entrepreneurship, applying the 'Think Small First' principle in policymaking (this represents a response to SMEs' liabilities of smallness and newness) and promoting SMEs' growth.

The strategy's priorities focus on facilitating SMEs' access to finance and markets, reducing their administrative burden and promoting entrepreneurship. Specifically, market access promotion is oriented at supporting SMEs' access to the Single Market and helping them to do business outside the EU. The 10 principles around which the SBA is built guide the processes of policymaking and implementation at both EU and national levels (European Commission, 2008) and accompany policies on internationalisation (opening up of third and neighbourhood countries' markets, trade facilitation and

coaching of SMEs by large companies in order to bring them to international markets).

As one of its major initiatives, the EC created the EEN in 2008 (financed by the Competitiveness and Innovation Framework Programme and the Competitiveness of Enterprises and SMEs programme – COSME) to help SMEs build business and innovation partnerships outside their home country. The 625+ EEN organisations provide these services to more than 250,000 SMEs every year; this includes internationalisation services, providing specialised advisory services to 70,000 SMEs on access to finance, IPRs, EU regulations and resource efficiency services. About 25,000 SMEs participate in matchmaking events resulting in about 2,500 international partnerships signed between SMEs every year.

After an update in 2011, the SBA's focus shifted to supporting SMEs to cope with the economic crisis (facilitating access to finance, cutting red tape, promoting access to markets and stimulating entrepreneurship). It explicitly recognised the needs for the EU and the Member States to provide assistance to SMEs and encouraged them to take advantage of the growth of markets outside the EU, for example through the provision of market-specific support and business training activities (European Commission, 2014a; Dilger, 2016). The Commission's 2011 communication 'Small Business, Big World: A new partnership to help SMEs seize global opportunities' followed these points around six fields of action: strengthening and mapping the existing supply of support services; creating a single virtual gateway to information for SMEs; making support schemes at EU level more consistent; promoting clusters and networks for SME internationalisation; rationalising new activities in priority markets; and leveraging existing EU external policies (European Commission, 2011).

Following the SBA review, the European Commission also proposed a plan to foster entrepreneurship, the 'Entrepreneurship 2020 Action Plan: Reigniting the entrepreneurial spirit in Europe' (European Commission, 2013). The plan also mentions internationalisation and invites the Member States to establish one-stop shops for entrepreneurs to gather all business support services including mentoring, facilitation and advice on access to conventional and non-conventional finance, access to incubators and business accelerators and support for early internationalisation of young enterprises. This saw the need to adopt a partnership approach, involving all relevant stakeholders, including education and training providers (European Commission, 2013). The public consultation on the SBA was launched in 2014 to review the Act, taking into consideration the expected needs for

2015–2020 (European Commission, 2015e). The review confirmed the need for an integrated Commission strategy to support SMEs' internationalisation outside the EU. Related actions should aim at strengthening the links between EU support programmes and establishing and monitoring SME dialogues with key EU trade partners.

The implementation of SBA is followed up annually by the European Commission through an SME Performance Review, notably referring to monitoring the introduction of new instruments in line with the SBA principle. Creating incentives for companies to support export activities, trade missions and cluster development proved straightforward, cost-efficient for the provider and effective for the companies involved (European Commission, 2017d).

3.1.3. The EU Single Market Strategy

The economic activities of SMEs within the EU are supported by the EU Single Market, which involves 'the EU as one territory without any internal borders or other regulatory obstacles to the free movement of goods and services' (European Commission, n.d.-b).

Despite improvements of aspects such as governance structures, the European Commission (2014c) still identifies the need for further integration of financial markets and infrastructures and a more stable and simpler regulatory framework. Coherently, the 2014 Communication 'For a European Industrial Renaissance' has established 'maximising the potential of the internal market' as a key priority. Related actions foreseen by the European Commission consist of infrastructure development, market surveillance and product safety promotion, and support to the Single Market for services' contribution to industrial competitiveness (European Commission, 2014e).

In order to follow up on the EU Single Market Strategy's implementation, the European Commission has designed the 'Single Market Scoreboard', a tool which, as of June 2018, is still a work in progress and aims to assess Member States' performance in that field (European Commission, 2017d). Key indicators include trade in goods and services and FDI. According to the 2017 Single Market Scoreboard, most Member States are performing in line with or above the average in terms of trade in goods and services and FDI.

The European Commission's commitment to upgrade the Single Market has been translated into practical measures helping SMEs and start-ups to grow and expand, promoting innovation, unlocking investments and empowering consumers, and resulted in the elaboration of a new Single Market Strategy in October 2015 (European Commission, 2015f). These measures complement a number of sectoral initiatives, some of which are relevant to SMEs' international business activities.

- **Company growth**, for instance through the **Start-up and Scale-up Initiative** to improve the environment for European start-ups and fast-growing firms (European Commission, 2016e).

- **Digital economy**, for instance through the European Commission's Digital Single Market Strategy (European Commission, 2015i, n.d.-c) to ensure better access for consumers and businesses to digital goods and services across Europe.
- **Access to finance**, through the **Investment Plan for Europe**, including the use of **EU funding programmes and funds** and initiatives related to the **Capital Markets Union** (European Commission, 2015g).
- **Trade**, for instance through the communication **Trade for All** (European Commission, 2015h), which redesigns the European Commission's trade and investment policy and includes SME-specific provisions, as well as through trade agreements.
- **Rights of employees**, through the **Labour Mobility Package** (European Commission, n.d.-d) fostering the coordination of social security systems to better support labour mobility, and a revision of the rules on posting of workers (European Commission, 2016c).
- **Tax**, through a related Directive (European Council, 2015) to eliminate the possibility of exploiting differences and loopholes in national tax within the Single Market, and the **action plan for fair and efficient corporate taxation** (European Commission, 2015j).
- **Cross-border VAT regulations** foreseen as part of the Digital Single Market Strategy (European Commission, n.d.-c) as well as simplifications to reduce the administrative burdens on SMEs, according to the **Action Plan for a fraud-proof VAT system** (European Commission, 2016f).
- **Collaborative economy**, including a European agenda for the collaborative economy (European Commission, 2016g).
- **Company law**, for instance through the Single Member Company proposal (European Commission, n.d.-e), which aims at reducing the costs of company registration and simplifying procedures, as well as through the analysis of the need to update the existing rules on cross-border mergers⁵ and to complement them with rules on cross-border divisions.
- **Services**, planning for better clarity of the requirements in each Member State that can be applied to the cross-border provision of services, as well as foreseeing a '**European services e-card**', to 'reduce administrative complexity for service providers that want to expand their activities to other Member States' (European Commission, 2017c).
- **Goods**, through an EU-wide action plan (European Commission, n.d.-f) to raise awareness of the principle of mutual recognition, meaning that goods that are lawfully marketed in one Member State enjoy the right to free movement and can be sold in another Member State.
- **Geographically based restrictions**, through legislative proposals to end unjustified geo-blocking

5 See Directive 2005/56/EC on cross-border mergers of limited liability companies.

(public consultation launched in 2015; European Commission, 2016h).

- o **Standards**, through the ‘Joint initiative on Standardisation’ (European Commission, n.d.-g) in order to modernise the European Standardisation System (European Commission, n.d.-h), as well as the creation of an electronic European Single Procurement Document (eESPD) and the accreditation of e-procurement platforms to support SMEs to have a mutual standing in procurement procedures and participation in multiple markets (European Commission, 2017e).
- o **IPR protection**, for instance through a Unitary Patent System (built on the European Patent Convention), whereby the applicant only has to request a unitary effect from the European Patent Office, which will operate as a one-stop shop for all patent applications (European Patent Office, 2017).

3.1.4. Internationalisation outside the EU

European strategic documents also emphasise the need to support international economic activities outside the EU. Relevant examples include strategies such as the Europe 2020 Communication on Industrial Policy, the EU 2010 Trade, Growth and World Affairs strategy and the 2007 revised Market Access Strategy Global Europe. In a context of shrinking European domestic public and private demand deriving from the financial crisis, trade, third-country market access and continued export performance are recognised as key for Europe’s competitiveness, growth and job creation. Thus, policy focuses not only on export volumes but also on the number of exporting firms to facilitate EU companies’ integration in GVCs, also based

on innovation, trade policies and international activities. Free trade agreements and negotiations on the accession of new countries to the World Trade Organization’s Government Procurement Agreement represent some of the tools to support this process, alongside more specific actions such as the promotion of company missions for growth and market access strategies (European Commission, 2014e). This aims at promoting trade in services, digital trade and the mobility of professionals, addressing regulatory fragmentation, securing access to raw materials, protecting innovation and ensuring the swift management of custom procedures (European Commission, 2015h).

3.1.5. Overview of main EU instruments

A variety of specific support instruments are available for EU companies willing to internationalise, and some of them explicitly target SMEs and/or born globals. Such instruments and policies are provided at EU, national or sub-national level, and the main ones can be seen in Table 8.

3.2. Illustrative examples of national policy measures

3.2.1. Types of support offered

Considering the range of support needs that SMEs have for internationalisation, there is a variety of instruments tackling the issue at national level. According to the European Competitiveness and Sustainable Industrial Policy Consortium in 2013, the types and spread of existing internationalisation support instruments in the EU27 can be summarised, as Table 9 shows (Ecsip, 2013).

Table 8: Main EU programmes and instruments promoting SMEs’ internationalisation

Name	Period	Budget	Objectives
COSME (in charge: DG GROW) (see European Commission, n.d.-i)	2014–2020	€2.3 billion	<p>The main priorities of the programme relate to access to finance, access to markets, creating better framework conditions for competitiveness and encouraging entrepreneurship. It supports internationalisation and access to foreign markets.</p> <p>Examples of measures:</p> <ul style="list-style-type: none"> - EEN (2015–2021) - EU–Japan Centre for Industrial Cooperation - Cluster Internationalisation initiative for SMEs (2014–2020) - Financial instruments (the Equity Facility for Growth and the Loan Guarantee Facility) - IPR SME Helpdesks - SBA - Business Beyond Borders - Ready2GO - Network of European Business Organisations in third countries - Erasmus for Young Entrepreneurs (2014–2020)

(Continued)

Table 8: Continued

Name	Period	Budget	Objectives
Horizon 2020 (in charge: Directorate-General for Research and Innovation and several other Directorates-General, including DG GROW)	2014–2020	€79.4 billion	<p>Key elements of Horizon 2020 include the development of the technologies and innovations that will help European SMEs to grow into world-leading companies.</p> <p>Horizon 2020 promotes cooperation with countries based on common interests and mutual benefit, ensuring access to talent and resources wherever they are located and companies' participation in GVCs.</p> <p>Any European business can use Horizon 2020 as a tool to internationalise by partnering with non-European companies or other actors to carry out joint research and innovation activities, such as joining a technology supply chain, demonstration or piloting a new product, service or technology, accessing facilities, data or services, etc.</p> <p>Examples of measures include:</p> <ul style="list-style-type: none"> - SME-tailored support to stimulate all forms of innovation in SMEs, targeting those with the potential to grow and internationalise across the Single Market and beyond. - A dedicated SME instrument and a Fast Track to Innovation pilot scheme to speed up the time from idea to market, and to increase the participation of industry, SMEs and first-time applicants.
Partnership Instrument (in charge: the European Commission's Service for Foreign Policy Instruments; not attached to any Directorate-General) (see European Commission, n.d.-j)	2014–2020	€954 million	Funding activities that carry forward EU agendas with partner countries, for instance by providing technical assistance such as IPR issues, promoting business cooperation, innovation and knowledge management, as well as underpinning cooperation with international institutions.
Instrument for Pre-Accession Assistance II (in charge: Directorate-General for Neighbourhood and Enlargement Negotiations) (Regulation (EU) No. 231/2014 of the European Parliament and of the Council of 11 March 2014)	2014–2020	€11.7 billion	<p>Via the Instrument for Pre-Accession Assistance, the EU supports reforms in the enlargement countries with financial and technical help. The 'growth and competitiveness' pillar supports socioeconomic development in the region and contributes to creating a better business environment, in particular for SMEs: it aims to attract foreign investments, improves access to finance and promotes clustering, networking and SME internationalisation.</p> <p>The Instrument for Pre-Accession Assistance II finances the technical assistance facility of the Western Balkans regional Enterprise Development and Innovation Facility, which aims at increasing governments' support for strategic investments, particularly in infrastructure, energy efficiency and private sector development.</p>
European Neighbourhood Instrument (in charge: Directorate-General for Neighbourhood and Enlargement Negotiations) (Regulation (EU) No. 232/2014 of the European Parliament and of the Council of 11 March 2014)	2014–2020	€15.4 billion	The European Neighbourhood Instrument promotes enhanced political cooperation and economic integration between the EU and its neighbour countries. Support is especially provided for improvement of business environment and trade development of the southern Mediterranean.

Source: Eurofound's elaboration based on European Commission web pages, Ecsip (2013) and European Commission (2016d)

Amongst the 28 measures analysed in this project, there are four main groups of support, including access to finance, advice and consultancy, networking, and legal and administrative support. While these are discussed separately in the following paragraphs, it is to be noted that hardly any measures offer just one type of support; in most cases, the combination of different services offered presents the particular advantage of the instrument.

The first group of measures focuses on access to finance. One such is **Global Lehian** (Spain), which offers subsidies to Basque SMEs active in any sector that are seeking increased penetration of foreign markets. It differentiates between businesses at three different stages of internationalisation: start-up, consolidation and establishing facilities abroad. The measure offers subsidies

Table 9: Types of internationalisation support offered by public and private sector organisations in the EU27

	Public		Private	
	Support services	Share of total	Support services	Share of total
Seminars, workshops	355	12%	39	10%
Staff training	214	7%	26	7%
Trade missions, trade fairs and matchmaking events	280	9%	33	9%
Information on rules and regulations	286	9%	30	8%
Information on market opportunities	308	10%	45	12%
Identifying and arranging meetings with potential clients	264	9%	34	9%
Advice and consultancy	370	12%	51	14%
Business cooperation and networking	338	11%	45	12%
Sectoral programmes	180	6%	17	5%
Credit guarantee scheme	105	3%	15	4%
Subsidies, grants	133	4%	16	4%
Tax incentives	73	2%	6	2%
Low-interest credits	75	2%	4	1%
Insurance services	69	2%	12	3%
Other	21	1%	2	1%
Total	3,071	100%*	375	100%*

Source: ECSIP (2013)

* rounded percentage

which are provided up to certain ceilings and transferred once the expenditure has been incurred.

Another is **ICEX Next** (Spain). This is intended either to facilitate Spanish SMEs' initial steps towards exporting or to consolidate their internationalisation activities in third markets. The programme lasts for 18 months and is structured around two key pillars, including personalised expert advice carried out by consultants and financial support. This measure provides beneficiary SMEs with up to €10,400 to undertake different international support activities, including representation costs in foreign markets, foreign promotion costs and/or the hiring of specialised personnel. Significantly, according to the interviewee for this measure, many participating SMEs initially approached **ICEX Next** (Spain) looking for financial support but, in the medium term, its expert advice was seen by participating SMEs as being the scheme's most valuable element. In the same vein, **DHI** (Netherlands) facilitates SMEs' access to finance by sponsoring their market assessment costs in the form of demonstration projects (up to €200,000) and feasibility and investment preparation studies (up to €100,000) to access target markets.

Another example within this group is the Japan External Trade Organisation's (JETRO) **RIT** (Japan), which is designed to promote business collaboration between SMEs in different industry clusters in Japan and overseas. This programme represents an opportunity for foreign regions interested in partnering with Japan but lacking the

resources or network contacts to achieve it. Participation can include local business and industry organisations, study groups, chambers of commerce and regional governments. Under this scheme, support typically consists of a contribution to the costs of collaboration between Japanese and foreign regions. Funding is available to contribute to the costs of business matching for networking with foreign companies. The measure also gives information about investment in Japan and contributes to seminars organised by JETRO.

The second group of support comprises advice and consultancy as shown, for example, by **ICEX Next** (Spain), **HVO** (UK), **RIT** (Japan), **FINEST SpA** (Italy) and **ICDK** (Denmark). Support offered through **ICEX Next** (Spain) is structured around one of its two key pillars as described above. This typically involves expert advice offered over a period of between four and six months, part of which includes an analysis of participating SMEs' business model and digital marketing activities. This work is conducted by an external expert in a three- to four-hour session. Not all of these assessments lead to a positive conclusion, which means that some SMEs may be discouraged from taking their business model forward to international markets. Beneficiaries of this measure may receive advice from a consultancy at below-market rates. More specifically, they are able to obtain subsidised translation services and free advice with respect to industrial and IPR issues. Expert advisers are used both within Spain and abroad, and are available in Chile, Colombia, Ecuador, Mexico, Panama,

Peru and the USA. Other personalised ICEX services are available at a 30% discount.

The nature of **ICEX Next** (Spain) clearly illustrates the interconnections between different core services offered through the reviewed policy measures. Although now defunct, the UK's **HVO** also had a strong advisory and consultancy component to support UK businesses in developing and implementing strategies to win high-value contracts. The scheme provided consultation services, facilitated networking and fostered relationships between managers involved in the application process for high-value contracts (above GBP 500 million – equivalent to €569 million). Advisory support available under this scheme included practical support in the application process, in which private sector business specialists were involved.

Although changes in content have been brought in since its inception, the basic format of the **Born Global** (Sweden) programme has remained remarkably consistent over time. Initially, participants are able to visit Silicon Valley in order to benefit from the experience of entrepreneurs and their advisers. On their return to Sweden, the participating businesses go through a six-month process involving several hours of workshops and other networking opportunities.

Denmark's **VITUS** is a further example of a measure centred on high-quality advice and consulting. The programme focuses on specific sales activities in order to help companies secure export orders. The core of this programme is the development and execution of an export strategy. The programme is structured over three phases including a selection, a strategy and an executive phase. High-quality experts from the private sector are involved in running workshops for **VITUS**.

The Italian **FINEST SpA** measure provides tailored managerial consultancy to its business partners for investment projects and strategies for business expansion at all stages of project development. More specifically, it can provide strategic analysis for international investment, project development assistance and local consulting advice.

The third group of measures identified comprises the promotion of networking activity to the participating

business. In this context, **Global Lehian** (Spain) aims to help Spanish managers and entrepreneurs to develop a deeper understanding of what they need to do for their own business development, and it can also help to establish the credentials of Spanish SMEs internationally. Japan's **SMEs' CEO Network Enhancing Project** underlines the importance of entrepreneurs' knowledge of key people.

The final group of measures provide legal or administrative support. Examples include the **Foreign Investment Ombudsman** (Korea), the **International Mobility Law** (Spain) and the **Foreign Investment and One Window Policy** (Nepal). The common features of these measures are to facilitate inward investment and FDI to the country by enhancing the business environment and entry conditions for foreign investors. However, the form of support varies. For example, the **Foreign Investment Ombudsman** (Korea) helps companies to investigate and handle complaints from foreign investors and foreign-capital-invested companies, prepares policy measures for improving foreign investment systems and provides recommendations on the implementation of these to the relevant administrative and public agencies, and deals with other complaints from foreign investors. Meanwhile, the **International Mobility Law** (Spain) simplifies the procedure of visa application for foreign investors and entrepreneurs to attract FDI and international collaboration between foreign partners and Spanish firms. The **Foreign Investment and One Window Policy** (Nepal), on the other hand, provides a tax incentive for industries established with foreign investment, a lower tax on technical and management fees as well as interest income on foreign loans.

3.2.2. Context of the measures and administrative levels of implementation

The support needs of businesses are affected by the historical, economic and institutional context of the country in which they operate and thus have major implications for the contemporary support system. In this respect, the experiences of the central and eastern European countries that are members of the European Union are particularly relevant, as they have been challenged with newly creating a support

Box 24: Impact of the historical context of the country when establishing internationalisation support

In Romania, after the 1989 revolution, chambers of commerce were granted the status of NGOs, which made them one of the main pillars of a market economy dominated by private entrepreneurs. To this end, Romania's **CCIR** has been charged with consolidating Romania's 'external profile', to attract foreign investors by providing integrated support services such as seminars, networking support, tailored advice and database provision. After Romania joined the European Union in 2007 and adapted to the Single Market, the **CCIR** developed activities to better inform Romanian businesses on the opportunities available in non-EU markets and to promote Romanian businesses in extra-European markets. It also diversified the organisation's communication channels to disseminate their integrated support services and promoted the Romanian business environment via social media channels.

The **CCIR** works closely with the Romanian Ministry of Foreign Affairs, Ministry for Business, Trade and Entrepreneurship and Ministry of the Economy. The inter-institutional collaboration is very close and their actions towards promoting the internationalisation of Romanian businesses are complementary.

system for export promotion as well as a wider internationalisation process that is appropriate to a market-based economy.

Hence, the context in which a measure is introduced and applied can affect the level of priority given to it by policymakers, as well as its underlying rationale and objectives.

The majority of the analysed measures were initiated by national governments, either as part of a general economic strategy aimed at facilitating internationalisation or as a way of helping certain types of companies, such as SMEs and start-ups, to overcome the initial challenges of launching or expanding their business and to tackle particular context-based problems.

In such cases, individual instruments are embedded in a broader approach to internationalisation. For example, the **International Mobility Law** (Spain) is part of the Spanish government's attempt to attract highly qualified professionals and entrepreneurs. Similarly, the UK's **OTE** measure is embedded into a wider

national strategy called 'Export Challenge' to enhance internationalisation.

Moreover, other relevant examples refer to measures that support internationalisation in an indirect way, for instance by focusing on broader company aspects.

Measures more explicitly promoting internationalisation for SMEs are launched to meet a call for a national strategy to increase exports and the number of exporters, such as **OTE** and **HVO** (UK). Other instruments, such as the **Foreign Investment Ombudsman** (Korea), **RIT** (Japan) and **SMEs' CEO Network Enhancing Project** (Japan) aim to attract inward foreign investment. This focus might be attributed to the nature of the economy and their priority policies to enhance FDI, compared to other measures in the EU such as **STC** (Spain), **BMWi** (Germany) and **DHI** (Netherlands), which are more outward-oriented.

In terms of administration, some of the national measures included here are organised at the regional level (including regions abroad). For example, **ICDK** (Denmark) is administered by the Danish Ministry of Foreign Affairs,

Box 25: Wider strategic policy considerations driving the establishment of internationalisation support

In Australia, the government has launched its **Incubator Support** measure as a way of overcoming the constraints of the country's geographical context. Australia is a relatively isolated economy, located far from other major world markets, and incubators are seen as a means to assist Australian globally focused start-ups to develop the skills and capabilities required to succeed in international markets.

Another example of a context-driven policy measure supporting internationalisation is the Innovation Centre (**ICDK**) in Denmark. In 2006, a policy review was undertaken, from which it became clear that Denmark was not sufficiently represented in those countries and regions that play an important role in the world economy. As a result, the first **ICDK** was established in the same year in Silicon Valley, California, to build better market relations in that high-tech and start-up ecosystem. A number of other centres gradually opened in other cities, namely in Shanghai (2007), Munich (2008), São Paulo, Seoul and New Delhi/Bangalore (2013) and Tel Aviv (2016).

Box 26: Indirectly supporting internationalisation

Denmark has developed a comprehensive range of support measures designed to promote and facilitate growth. Many firms participating in one of these growth programmes at some point started to consider internationalisation as a growth strategy. The **VITUS** measure was introduced to address the problem of high-growth companies in the country being underrepresented in comparison with the EU average. **VITUS** built on the success of a programme called **Gazelle Growth** and a programme called **Accelerace**. **VITUS** provides intensive support requiring extensive commitment from participating companies in terms of financing and resources. As a result, it is focused on internationalisation while being embedded in Denmark's extensive growth programme.

In Sweden, **Born Global** operated between mid-2012 and late 2016. **Born Global** followed a measure that was essentially about support for high-growth businesses. Given the size of the Swedish economy, a growth programme is inevitably linked to a strategy of internationalisation. In order to get over the constraints of a small domestic market, the programme aimed at businesses in the very early stages of internationalisation, with the main objective of laying the basis for future international growth. The approach was designed to provide training to CEOs, who would often then take this training back and transfer it to colleagues within their business. The support included a study visit to Silicon Valley to exchange knowledge and experience and to motivate the Swedish entrepreneurs to create scalable international companies by introducing them to selected global tech firms, venture capitals, local start-ups, industry experts and business angels. All start-ups in the programme considered they benefited from their participation in some way and regarded the cost of participation fee (SEK 50,000, the equivalent of about €4,785, per participating company) as well invested. The programme was replaced by the **Scale Global** programme in spring 2017, aiming at slightly larger SMEs which are further along on their international journey.

Box 27: Boosting local economies and international collaboration

RIT (Japan) facilitates business tie-ups to develop markets and technical cooperation, boosting local economies and attracting international collaboration and partnerships with foreign regions that lack resources and networking in Japan. The focus goes beyond internationalisation support for SMEs, as it creates mutual support for both local and foreign partners and enhances cooperation and the development of both the Japanese and foreign regions. The objectives of the scheme are influenced by the context, in which the Japanese government prioritises inward investment as part of the 'Japan revitalisation strategy' that promotes the Japanese business environment to attract foreign companies and enhance international collaboration between Japanese companies and foreign partners for new product development and R&D.

Box 28: Regional internationalisation support

Communication Support (Belgium) is carried out by the Walloon Agency for Export and Foreign Investment (AWEX) to support the international communication activities of companies based in the Walloon region of Belgium.

The **Global Lehian** (Spain) initiative is complementary to a series of measures developed by different regional and provincial authorities in Spain. This measure is not narrowly focused on export activity but also includes the establishment of foreign subsidiaries abroad. It particularly supports production facilities and encourages cooperation between companies, helping to enhance the internationalisation of Basque SMEs.

Another example is **FINEST SpA** (Italy), which facilitates the development of economic activities and international cooperation for SMEs located in the Friuli Venezia Giulia region, the Veneto region and the autonomous province of Trento – the Triveneto area. In particular, **FINEST SpA** supports the economic cooperation between Triveneto SMEs and countries of the former Soviet bloc, especially those bordering countries of the former Yugoslavia. This approach derives from the geographical location of the Friuli Venezia Giulia region. Being the easternmost region of northern Italy and sharing a border with the former Yugoslav republic of Slovenia, it is uniquely positioned to capitalise on economic cooperation with eastern Europe.

Other regional-level examples include support for establishing subsidiaries abroad and forms of cooperation at the regional level that are designed to attract foreign businesses, such as the **SMEs' CEO Network Enhancing Project** in Japan, which facilitates contacts between Japanese SMEs and companies from other selected Asian countries to develop their international cooperation.

which is one of the measure's initiating bodies. The central Copenhagen-based office administers the budget and coordinates meetings and relevant information. However, each individual **ICDK** centre, such as the one in Palo Alto, California, is administered locally by an executive director who carries out the daily management tasks. Similarly, **ICEX Next** (Spain) is administered by ICEX itself. There are regional offices of **ICEX Next** throughout Spain which deal with the daily management of activities, such as interactions with SMEs and the promotion of the measure, while the funds are managed centrally.

Some of the 28 measures presented have been developed and implemented at the regional rather than national level, reflecting differences in governance between countries.

Not all analysed measures are initiated by governments. **Start Alliance** (Germany), for example, has been developed by Berlin Partner for Business and Technology with a group of experts from the private sector. This measure hinges on the collaboration between business agencies, workspace providers and local incubators (both private and public) in technology hubs all over the world. Besides private sector partners, the programme involves city administrations and public development agencies.

In many cases, a measure is a successor to a previous scheme, relaunched with some adaptations. **GVK**

(Denmark), for example, builds on the experiences from the former Innovative Globalisation Agent (IGA), which ended in March 2015. IGA's goal was to contribute to exports and growth of SMEs in southern Denmark through the supply of skilled labour for companies to hedge the company's globalisation potential and to upgrade the skills of existing employees. Because IGA was very successful, the **GVK** measure was designed in a similar setting by the same partners. The main difference between the measures is in their target groups: while IGA targeted only unemployed academic graduates, **GVK** mainly addresses the employees of SMEs and unemployed academic graduates.

Changes in context can result in variations in the measure itself. These relate mainly to either the range of activities covered (for example, **STC** (Spain) has been moving from a pure space provider to a provider of services including the organisation of summer camps and immersion programmes), the scope of the project, which is broadened to target a wider group of firms (for example, **Born Global** (Sweden)), or the range of industry focus (for example, **100% Made in Italy** (Italy) and **Go Silicon Valley** (Austria)). Amongst the analysed measures, there is one example of a programme that underwent administrative restructuring without any major disruptions to its operations. **Startup Estonia** (Estonia) was developed by the Estonian Ministry

of Economic Affairs and Communications in partnership with Enterprise Estonia, where the latter functioned as the measure's implementing agency from 2011 to 2014. However, there was a need for a bigger team to administer the measure and in 2014, the Estonian Development Fund was appointed as the implementing agency. More specifically, implementation functions were split between Enterprise Estonia and the Estonian Development Fund, with the latter acting as the implementing agency in practical terms, while financial aspects of the measure remained Enterprise Estonia's responsibility. In mid-2016, as a result of the subsequent closure of the Estonian Development Fund, the measure's implementation was transferred to KredEx, a government foundation providing financing facilities to Estonian enterprises in the form of loans, state guarantees and credit insurance. Meanwhile, Enterprise Estonia continued to perform its technical and administrative role.

3.2.3. Beneficiaries targeted

The overwhelming majority of analysed measures focus on SMEs and/or larger businesses, rather than on born globals. For example, **DHI** (Netherlands) focuses on Dutch SMEs from all sectors and with international ambitions (export and foreign investment), while **Go Silicon Valley** (Austria) targets Austrian SMEs, including spin-offs of larger companies, that have a minimum of two employees and an innovative business idea, technology or business model that is market-proven or for which there is a prototype available. **ICEX Next** (Spain) is focused on all types of Spanish SMEs that wish either to initiate their internationalisation activities or consolidate their initial international business activities, while **BMW i** (Germany) targets self-employed persons and SMEs with fewer than 500 staff and less than €50 million of annual turnover.

Start-up firms and entrepreneurs are another target group. **Startup Estonia** (Estonia), for example, targets people or teams interested in start-up entrepreneurship who have an idea or a business concept. It also targets start-up entrepreneurs who, in addition to knowledge and contacts, need capital to develop their business concept systematically, and focuses on start-up ecosystem actors who are directly involved in developing start-up businesses and who provide contact networks and capital to start-ups (such as business accelerators or business angels). Although Estonia is the target country, foreign start-up entrepreneurs can obtain e-residency and, as a result, gain access to the measure.

Start Alliance (Germany) also targets start-ups, namely those based in one of the participating partner cities, but especially those which are beyond the idea or prototype stage and have successfully launched in their domestic market, as well as those that have a scalable product or service. Another example of a measure targeting start-ups is **Startup Global** (USA), which focuses on start-ups looking to expand their business internationally and investors interested in engaging with them.

A measure can also target specific actors beyond internationalising SMEs. For example, Spain's **International Mobility Law** targets foreign skilled and highly skilled non-EU nationals who plan to carry out

an economic activity within Spain that is regarded as relevant for the country in terms of economic growth and job creation. As another example, the **Foreign Investment Ombudsman** (Korea) policy is aimed at all foreign investors and all companies registered as foreign-invested companies in Korea. To be eligible for **Incubator Support** (Australia), an applicant must be an incubator that already exists or is in the process of being established and can foster and facilitate the development of innovative start-ups focused on international trade, as well as other organisations, such as entities incorporated in Australia, incorporated trustees on behalf of a trust, not-for-profit organisations or publicly funded research organisations, excluding government departments or agencies which undertake publicly funded research.

Firms' support needs may also be affected by the composition of industry and commerce in a country, which can lead to the development of sector-specific support; one example is the fast-growing ICT sector, with its inherent internationalisation potential. Though the majority of the analysed measures do not target a particular sector, instead offering support to companies in all sectors, there are some measures that specialise in one or more sectors. **VITUS** (Denmark), for example, has had several rounds with a sector-specific focus, one of which was 'E-VITUS' (focused on e-commerce). As another example, **STC** (Spain) supports the internationalisation activities of Spanish ICT-based SMEs in the USA, as well as being the default hub of Spanish ICT companies in Silicon Valley. The measure's sectoral focus has ensured that Spanish ICT entrepreneurs going to the USA are provided with training opportunities relevant to the ICT sector and given access to a network of local US experts and mentors. This helps participating companies overcome a number of the most important barriers to internationalisation, such as lack of familiarity with the local market and the market players (including institutions and regulations). Another ICT-focused measure is **Go Silicon Valley** (Austria), which offers Austrian SMEs participation for a period of one to three months at a business accelerator in Silicon Valley. Initially, **Go Silicon Valley** focused on two industries: ICT and renewable energy. However, it turned out that accelerators based in Silicon Valley are perfect in the ICT field but less useful and effective in that of renewable energy. Therefore, the target group was later limited to the ICT industry.

The renewable (or sustainable) energy sector is often grouped with health technology, social innovation and other emerging sectors. **GVK** (Denmark) is an example of a measure that targets SMEs in those particular areas. Meanwhile, the **Startup Estonia** (Estonia) measure uses the umbrella term 'smart growth areas' for the same emerging sectors. These growth areas were identified in the Estonian Development Fund's 2013 analysis as economic areas with above-average growth and value-adding potential, as well as being likely to achieve a competitive advantage through R&D investment (Arengufond, 2013). The focus on growth sectors has enabled **Startup Estonia** to generate activities for start-ups' internationalisation by focusing on sector-specific market issues and facilitating informal business networking within the target sectors (as in the case of the IT start-up ecosystem). Another Estonian measure that

targets the same ‘smart growth’ sector is **Development of Clusters**. Rather than focusing on individual SMEs like **Startup Estonia**, **Development of Clusters** supports cooperation between companies in order to increase the international competitiveness of cluster partners through joint marketing and business development activities in the smart growth sector. This has had a positive impact on Estonian SMEs and born globals, since clusters as cooperation networks are expected to conduct joint international marketing activities and develop cooperation in order to help primarily SMEs gain a stronger position outside the country.

The example of the **SMEs’ CEO Network Enhancing Project** (Japan) shows that the target sector of a measure does not necessarily need to be fixed. Instead, it can be adjusted according to the current priorities of a given national economy, reflecting the needs of its SMEs. Therefore, the **SMEs’ CEO Network Enhancing Project**, which aims to promote Japanese SMEs’ overseas business expansion through collaboration with overseas companies, focuses on whichever sectors are of the highest importance to the Japanese economy at a given time. In practical terms, these often consist of competitive sectors of the Japanese manufacturing economy (for example, transportation equipment, electronic and electrical equipment, aircraft parts, industrial machinery, medical equipment, food processing, infrastructure, building materials and ICT).

Another example of a measure that targets ‘strategic sectors’ is the **International Mobility Law** (Spain). The strategic focus of the measure reflects its main growth objective. Statistics show that what is referred to as ‘strategic sectors’ has in practice mainly been translated into the services sector: 69% of permits were issued for that sector, while 14.7% were issued for industry, 3.3% for the construction sector, 0.8% for the agricultural sector and the remaining 12.2% for unclassified activities. Despite its focus on large enterprises, the law is also relevant for some groups of SMEs and born global companies. For instance, Article 71 of the Law facilitates the hiring of ‘highly qualified professionals’ by SMEs demanding skilled workers, provided that they belong to a so-called ‘strategic’ sector.

3.2.4. Target market orientation

Another element of targeting can relate to the markets that support internationalisation. For example, **BMW** (Germany) supports German enterprises in developing foreign markets. **Start Alliance** (Germany) shows that a geographical focus does not need to be restricted to a single location. Instead of targeting a particular region of a country, this measure connects a number of international geographic ‘technology hubs’. The programme focuses on selected cities in the world that are able to offer outstanding ecosystems and interesting markets to foreign start-ups. By targeting major cities rather than whole countries, the measure creates a business exchange which is based on reciprocity rather than being one-directional. Such a reciprocal approach offers clear benefits to SMEs aiming to internationalise, since it enables them to offer or exchange their services in partner cities directly to other participating SMEs, thus expanding their client base.

3.2.5. Forms of internationalisation supported

The majority of the analysed measures are focused on export activity rather than on internationalisation processes more generally. For example, **OTE** (UK) specifically aims to help SMEs export their products to new markets, mainly by providing them with information, contacts and networking opportunities.

Nevertheless, there are cases of measures that include, for example, internationalisation modes such as FDI, joint ventures, subcontracting, technical cooperation or importing, or that indirectly support exporting – for instance, by emphasising firms’ growth and innovation.

3.2.6. Stages of internationalisation targeted

Regarding stages of internationalisation, the 28 measures analysed in this report fall under three categories: those specialising in early stages of internationalisation, those supporting companies in late or more advanced stages of the internationalisation process and those targeting all stages of internationalisation.

The majority of the measures here focus on businesses in their early stages of internationalisation, offering support to companies with little or no experience of foreign

Box 29: Support for the early stage of internationalisation

The **VITUS** programme (Denmark) is focused on early-stage companies that have the potential and desire to internationalise. The objective of the measure is to promote Danish SMEs’ internationalisation process to maximise the commercial potential in export markets. The programme’s primary goal is to enable each participating company to achieve a concrete order on the market it targets within 12 months of the time the company is accepted into the programme.

Startup Global (USA) aims to enhance start-up exporters’ knowledge awareness of global opportunities as well as develop strategic partnerships of start-ups with relevant stakeholders. The programme offers a variety of seminars and events that provide information on topics vital to start-ups and other companies in their early stages of internationalisation. This includes information on product certification, IPR protection, designing an international business strategy, finding customers, distributors and agents, export regulations, e-commerce and digital marketing, and accessing support programmes that encourage exports.

Box 30: Measures focusing on all stages of internationalisation

Global Lehian (Spain) financially assists the promotional and operational activities of Basque SMEs through subsidies to improve their penetration of foreign markets. The measure covers three distinct successive stages of internationalisation. First, the start phase, which includes any company with very limited internationalisation activities (those with total exports representing less than 5% of their total turnover) but interested in developing their internationalisation activities. In this phase, with a maximum duration of one year, the beneficiary has to initiate some internationalisation activities. Second, the consolidation phase, in which the beneficiary is supported in implementing the internationalisation plan in order to become a regular exporter (with total exports representing between 5% and 50% of its total turnover), consolidating and increasing a portfolio of export clients and diversifying its target markets. Third, the establishment of facilities abroad covers both companies with a consolidated international presence and those interested in opening facilities abroad. In addition, the measure foresees a ‘talent activation and adaptation of organisations to the global market’ phase, supporting the hiring of an internationalisation technician or consortium manager for each participating company. Any SME in the above three phases can apply for talent activation funding anytime.

The German **BMWi** is composed of different types of support, including information events in Germany on certain target countries and industries such as railway technology in Italy, market exploration (for example, study tours, workshops and visits to potential partners in foreign countries), symposiums in target countries focusing on a particular industry, business initiation trips to individual target clients, importing agencies or other potential partners, buyer visits to Germany and other pilot projects. The various modules cover different phases of market development, following the logic of ‘inform–explore–contact’.

markets. This is particularly relevant to SMEs, including young companies, that are new exporters. However, it does not exclude more established companies that are looking to export their products or services for the first time and/or to identify and exploit new foreign markets.

Amongst the analysed measures, there is also an example of a policy that targets businesses in early stages of internationalisation in an indirect way. **Incubator Support** (Australia) is primarily focused on incubators, but since incubators have their own set of target groups, which primarily includes start-ups, it can be said that **Incubator Support** indirectly supports firms in their early stages of internationalisation.

Only a small number of surveyed measures specialise exclusively in the later stages of the internationalisation process. One example is the **Foreign Investment Ombudsman** (Korea). The aim of this measure is to provide tailored post-investment and grievance-settlement services for foreign investors and enterprises doing business in Korea.

In contrast, a significant number of programmes also encompass different stages of internationalisation.

An example of a measure which, although ostensibly focused on start-ups in early stages of internationalisation, also simultaneously manages to assist established companies in more advanced stages of internationalisation is **Start Alliance** (Germany). Its main goal is to internationalise and scale up start-up businesses faster. More specifically, it aims to help businesses enter new markets, develop international relationships and collaboration, achieve scaling effects, adapt their business models to international requirements and raise international capital. At the same time, the programme works with large corporations, assisting them to scout out innovation opportunities and find partners for innovation projects amongst start-ups. In this way,

the measure offers value to companies at any stage in the internationalisation process.

3.2.7. Promotion of the measures

The analysed measures were promoted in a variety of ways. The main means for businesses to find out about the kinds of support available was through the provider’s website. In other cases, the measure was also advertised through partner organisations’ websites and, in a few cases, business associations’ websites. The second most common approach was to recruit participants via the intermediaries’ events such as workshops, seminars, conferences and international trade shows organised by third parties. The third most common method was via personal contacts via registered mailing lists, embassies and word of mouth.

Not all support providers were equally active in promoting their measure. For example, ICEX promoted **ICEX Next** (Spain) throughout the year. This is often in collaboration with local institutions, such as chambers of commerce, sector organisations and regional authorities. In addition, social networks such as LinkedIn, Twitter and Facebook were utilised. Another Spanish measure, the **International Mobility Law**, was also promoted through a wide range of organisations (mainly in the public sector), as well as conferences and information events.

In other cases where the measures are user- and innovation-driven, the proposals were sent by the companies who wished to be considered for the programme following the announcement of the measure, for example, **BMWi** (Germany), **Development of Clusters** (Estonia), **RIT** (Japan) and **GVK** (Denmark).

3.2.8. Application and selection processes

The majority of the application and selection processes employed by the measures fall into one of two categories: measures using a single-step, usually online, application

process and measures whose application and selection processes are complex, multistep procedures that often combine several elements, such as online applications, face-to-face interviews and, in some cases, assessment by a panel of judges.

Some of the simplest and most straightforward one-step application processes are provided by measures focused mainly on offering information and consultancy services. **OTE** (UK), for example, which is an online platform set up in order to encourage more small firms to internationalise, has a very simple application process that is conducted entirely online. To use the measure's online services, including webinars, discussions and online Q&A sessions, businesses need to sign up for the website by providing company details such as name, address, website, number of employees, turnover, sector and contact details. Although the measure targets SMEs, it does not exclude large firms. Therefore, all subscriptions are approved, regardless of firm size, sector or legal form, within three days of application.

Similarly, the **IP Attaché Network** (UK) provides an application process whereby any UK-based company can gain access to the measure by emailing or calling a member of staff. There is no application form or joining fee for businesses and the eligibility criteria are straightforward and easily verified. Hence, to be eligible for the measure's support, a company needs to be based in the UK and actively trading abroad in one of the pre-defined target markets.

Other examples of measures with simple application processes are **Startup Global** (USA), where interested local companies simply register via the website of the Global Innovation Forum, and **Communication Support** (Belgium). To apply for the latter, businesses have to fill in an online form and send this to AWEX, the measure's supervising body, which then checks it and indicates to the applicant whether additional information is needed. Once AWEX has made a decision regarding an application, it sends a formal letter by post to the participating company. The criterion for being eligible for **Communication Support** is that the applicant's communication activities have yet to begin.

Application and selection processes for support tend to be less simple and involve stages in the cases of measures whose services go beyond advice, especially if a financial contribution is involved. For example, the application for the **Incubator Support** programme (Australia) consists of an initial online application form which details how the incubator's project would assist start-ups, what services would be delivered, which market gap is to be addressed and what value the project is expected to deliver. The applicant must be able to provide evidence that the proposed project has support from the applicant's management board, and that the applicant can complete the project and meet any associated costs not covered by grant funding. The preliminary assessment of projects is undertaken by customer service managers at AusIndustry, the measure's administering body, against the eligibility criteria. Only eligible applications proceed to the merit assessment stage, which is conducted periodically by the Committee of Innovation and Science Australia. After

considering the application, the Committee proposes a list of applications for funding to the minister, which then decides which grants to approve, taking into account the Committee's recommendations and the availability of grant funds. If the application is successful, the applicant receives a written offer. The process may take up to six weeks from the date the application is received.

Another example of a measure with a multistep application and selection process is **Go Silicon Valley** (Austria), a programme that enables Austrian SMEs in the IT sector to enter the US market. The selection procedure is carried out by a US-based panel consisting of industry and finance experts including angel investors and incubator CEOs. As a first step, following an annual call, an application is submitted by email; it includes a registration form and an executive summary of the case featuring details such as the descriptions of the company's competitive advantage, current clients, market opportunities, possible sources of funding and a financial forecast of costs and revenues. In a second step, shortlisted applicants are required to participate in a pitching workshop in Austria to present their business ideas to the jury.

There is also a link between the complexity of the selection process and the stage of internationalisation of the applicant: the less advanced the internationalisation of the participating SME, the more rigorous the selection criteria. This is because the administering bodies of the measures need to ascertain that their investment has the best possible chance of being returned.

Application and selection processes contain a higher level of complexity when the measure in question includes an immigration element. For example, foreign founders taking part in the 'Estonian Startup Visa programme', a service offered by **Startup Estonia** (Estonia), are required to apply for either a start-up visa or a temporary residence permit in addition to applying for the measure itself. The initial application, which is submitted via an electronic system, is reviewed by a committee of Estonian start-up community members and the committee then decides whether the applicant company qualifies for the start-up visa. If the application is approved, the participant has to go through the usual visa application process at an Estonian embassy or Police and Border Guard Board service point.

Another major distinguishing characteristic of the application and selection processes employed by the analysed measures is the set of selection criteria used to assess the quality and potential of the applicants to determine their suitability for the programme. In some cases, such as **Communication Support** (Belgium), the main selection criterion is that the applicant has not already commenced activities in the measure's focus area. In most other cases, however, the selection criteria are far more exacting, requiring candidates to provide a clear idea of the commercial viability of their business or to demonstrate the marketability of their products. For example, businesses applying for **VITUS** (Denmark) need to show that their product is scalable, that the company is ready for internationalisation and that the company has the necessary financial and human resources to participate in the programme. Meanwhile, the assessment of applicants for the **Development of Clusters** (Estonia)

follows a number of selection criteria, including the project's impact in achieving the objectives of the measure, the merits of the project, the cost-efficiency of the project and the capability of the applicant and the cluster partners to implement the project. The assessment of the application normally takes about 45 days from the date the application is received.

3.2.9. Delivery mechanisms

It has been suggested that the effectiveness of a public policy measure is influenced as much by the method of delivery as by the contents of the policy itself (Karlsson and Anderson, 2009; Bennett, 2014; Hoffman and Storey, 2018). Essentially, policymakers can choose between two delivery models: direct delivery and indirect delivery through contracted third parties.

An example of direct delivery is **Communication Support** (Belgium), whose sole deliverer of services is AWEX, the measure's administering body. AWEX has close ties with the national government and reports at the federal level, but acts autonomously as an authority at the regional level. Its main delivery-related task is transferring money to participating businesses and requesting invoices from participants to check that the funds provided by the measure are being used in a proper way. Another direct delivery example is **OTE** (UK), which provides its services through its website. **OTE's** in-house consultants and advisers respond to all queries and provide any relevant information regarding the exporting/importing process, such as documentation, administration, import/export taxation, regulations, foreign market opportunities, international exhibitions, networking opportunities and access to resources.

Amongst the analysed measures, there are many examples of delivery mechanisms that involve third parties. **BMWi** (Germany), for instance, performs the final selection of proposals for its events with the help of the federal trade agency German Trade and Invest. Public tender procedures are then launched by an organisational unit of the Bundesamt für Wirtschaft und Ausfuhrkontrolle to select promoters for the **BMWi** events or proposals. The final award decision is taken by a procurement committee consisting of representatives of the Bundesamt and **BMWi**.

The involvement of a third party in the delivery mechanism is to be particularly expected in cases where the purpose of the measure is to provide training and networking opportunities with actors in a foreign country. Therefore, in the case of **Go Silicon Valley** (Austria), services and support are directly delivered by California-based business accelerators where the measure's networking and training opportunities are hosted. The measure uses the assistance services, expertise and contacts of the Californian institutions and the costs are covered by the Austrian programme budget. Furthermore, the Los Angeles office of the foreign trade organisation Advantage Austria, the part of the Austrian Federal Economic Chamber which is the initiator of the measure, assists participating Austrian companies during their stay in Silicon Valley, as well as conducting entry, progress and exit meetings with the participants to monitor achievements.

Another example of a delivery mechanism that involves third parties is the **Matchmaking Facility** (Netherlands), set up by the Netherlands Enterprise Agency. The **Matchmaking Facility**, which helps enterprises in developing countries to find export and import markets in the Netherlands, works together with the Dutch embassy in the country of the applicant in delivering the measure to beneficiaries. The embassies promote the measure by hosting information events, and are the recipients of applications from foreign entrepreneurs. If the application is approved by the **Matchmaking Facility**, suitable Dutch business partners are identified with the expert help of Dutch consultants working for the measure on a freelance basis.

3.2.10. Monitoring and evaluation

About half of the analysed measures have some form of formal or informal monitoring. In the remaining cases, either there is no monitoring at all (for example, **100% Made in Italy** (Italy), **STC** (Spain), **Born Global** (Sweden)) or the measure has not been operating for long enough for the effects to be seen (for example, **Startup Global** (USA) and **Incubator Support** (Australia)). In other cases, the information is not publicly available (for example, **ICEX Next**, Spain) or the monitoring remains internal and methods or indicators cannot be ascertained; this is the case with **Start-up** (Estonia), **SMEs' CEO Network Enhancing Project** (Japan), **HVO** (UK) and **VITUS** (Denmark).

If available, monitoring data generally refer to the number of participating firms (for example, **GVK** (Denmark), **SMEs' CEO Network Enhancing Project** (Japan) and the **IP Attaché Network** (UK)), users' reported satisfaction with the provided services (such as **Start Alliance** (Germany) and integrated support services from the **CCIR** (Romania)), the number of workshops and conferences held, the number of innovation projects carried out, the number of science- and higher-education-related tasks solved for researchers and science and higher education institutions, yearly earnings, and strengthened networks (for example, increased number of new partners or contacts for collaboration).

The most common methods of data collection for monitoring are surveys, questionnaires and interviews with participants or service users which are conducted either after each meeting or monthly or quarterly.

The weakness of monitoring can be linked to the unclear nature of the targets set when the measure is launched. This is not a new problem, and it is consistent with the literature, in which Storey (1998) suggests the fundamental principle of evaluation according to which 'its prerequisite is the specification of the objectives of policy. Unfortunately it appears to be a characteristic of governments in all developed countries to be, at best, opaque about the objectives of small business policy'.

Only about a third of the investigated policy measures engage in evaluation. This may be due to a lack of transparency, a lack of resources to perform evaluations or a limited evaluation culture. The majority of the externally evaluated measures are large-scale projects

Box 31: Monitoring procedure of the IP Attaché Network (UK)

Launched in 2011, this measure has been operated by the government-backed Intellectual Property Office (IPO), to raise IPR awareness and solve IPR-related problems for UK businesses operating in emerging markets. Monitoring is based on three main indicators: the number of businesses that the IPO deals with, the number of businesses that acquire general intellectual property awareness (for example, general knowledge about the significance of IPRs, how to register and how to protect their IPRs) and the monetary value of the intellectual property or the revenue lost due to stolen intellectual property such as trademarks and copyright.

The IPO conducts the monitoring internally by calculating the above three indicators on a monthly basis. Besides this, the IPO team monitors the variety of firm sizes and how the businesses approach IPO. The data collection aims to help formulate the operationalised target for the programme. In the past, the monitoring report was delivered monthly for ministers' information but, as of November 2018, the monitoring report on the operation of the **IP Attaché Network** is conducted every six months to inform the relevant minister of the results, successes and impact of the programme. This document is only partly available to the public due to confidentiality agreements with participating companies, such as the commercial value of their lost intellectual property.

Box 32: Changes based on outcomes of monitoring and evaluation

HVO in the UK brought significant changes in light of its monitoring and evaluation. Recognising the difficulty of tracking the follow-up progress of the beneficiaries after the HVO contracts were successfully secured, the scheme was discontinued in November 2016 and transferred into another scheme which offers sector focus to better allocate resources for monitoring and evaluation.

Development of Clusters (Estonia) has broadened its range of supported activities and now offers more training to future managers of clusters and participating enterprises before applying for funding; these adjustments were made in light of the results of the interim evaluations of the cluster programme. The changes also include the increase of the level of self-financing and the inclusion of a reference to the group exemption regulation as part of the regulation for the development of clusters.

ICDK (Denmark) has moved to a greater emphasis on the promotion of the measure, advertising events and ministries contacting companies in Denmark, and has also enhanced collaboration with the Trade Council, focusing on specific projects with innovation-related services. This change reflects the response to the external evaluation conducted in 2015, which showed a lack of home-based support and visibility of the ICDKs in Denmark.

Following the results of its monitoring and evaluation, **Communication Support** (Belgium) reduced the administrative burden for participants. Instead of submitting all the invoices and receipts relating to communication activities for funding, participants use a proof of payment system. The administering authority periodically examines a sample of 30% of the companies; these enterprises are asked for their receipts and proof of payments.

Similarly, following the 2012–2015 evaluation, as of 2017, Germany's **BMWi** has simplified the definition and categorisation of some types of events, extended the briefings for promoters before starting the events and introduced the possibility of continual submission of proposals instead of setting submission deadlines. This enhances flexibility and efficiency for participants while reducing the administrative burden.

In response to the participants' feedback on the programme, **DHI** (Netherlands) modified its application process by turning it into a tendering system, in addition to enabling SMEs to submit applications twice a year. Even though there is no clear evidence of how far the change has responded to the results of the monitoring and evaluation, this has significantly helped to reduce administration burdens in the above measures.

or government-backed programmes, such as **OTE** (UK), the **IP Attaché Network** (UK), and **BMWi** (Germany). In other cases, evaluation was conducted in the form of self-completion questionnaires to obtain participants' feedback, such as **VITUS** (Denmark) and **Communication Support** (Belgium), or just conducted internally. In other cases, evaluations are available but they refer to general internationalisation policies rather than a specific measure. This can be seen in the case of **RIT** (Japan), where no formal specific evaluation was conducted, but it was included as part of the evaluation of SME support

activities by JETRO (Small and Medium Enterprise Agency, 2016).

Since the monitoring and evaluation within the examined policy measures remains limited, very little evidence of any changes following the monitoring and evaluation can be gleaned.

3.2.11. Relevance to SMEs and born globals

Many of the analysed measures explicitly address the various challenges specific to SME internationalisation,

such as access to finance, skills and market knowledge or enhancing the business environment for foreign investment. In addition, a number of measures directly or indirectly assist SMEs in overcoming some of the less tangible challenges they face when seeking to internationalise, such as smallness and 'foreignness'.

The problem of 'foreignness', that is, being perceived as coming from an unfamiliar culture, might be a particular stumbling block for SMEs from certain countries. Hence, measures such as those taken by the **CCIR** (Romania) have sought to address this issue by actively raising the profile of the country in question in international markets. Other measures, such as **100% Made in Italy** (Italy), have turned 'foreignness' into a major marketing asset. Using geography as a brand, **100% Made in Italy** is a collective trademark that communicates the established values of its country of origin (quality, artistry and prestige). Thus, it has managed to turn the geographical origin of products and SMEs bearing the **100% Made in Italy** label into a unique selling point. This certification helps companies, and especially SMEs, to reduce the information gaps of potential foreign buyers, giving them additional credibility in international markets as well as facilitating the marketing of their own company or product. As a result, there has been an increasing interest on the part of buyers and distributors in foreign countries in establishing potential partnerships with **100% Made in Italy** suppliers.

One of the key factors that contribute to a measure's relevance to SMEs is the way it targets their specific needs. However, the support needs of businesses of different sizes vary within the SME population. For example, the needs of medium-sized businesses in seeking access to and developing foreign markets differ from those of micro and small enterprises. Targeting enables policymakers to assist SMEs in a focused, situation-specific way. As shown in the previous section, some measures target only specific groups of SMEs. In many instances, this kind of approach helps the measures address the above-mentioned internationalisation challenges faced by SMEs more effectively.

The majority of measures focus on businesses engaged in, or aiming to engage in, some form of internationalisation, without explicitly targeting born globals. However, this does not mean that born globals are excluded from support. One of the analysed measures, **Born Global** (Sweden), specifically targets born globals. Nevertheless, in line with the previous consideration of firm size, one may wonder whether general SME internationalisation instruments satisfy the specific support needs of born globals.

3.2.12. Evidence of outcomes and impact

Overall, although policymakers talk a lot about evidence-based policy, this study shows that objective policy outcomes and impacts are difficult to ascertain. The majority of the investigated measures show little information regarding the evaluation of their impacts on the beneficiaries and the economy. Out of the 28 measures covered here, 18 either involve no evaluation or the information is not publicly available. A minority of measures, on the other hand, do provide clear evidence of their impact. For example, one of the outcomes of the

International Mobility Law (Spain) has been an increase in the number of foreign nationals linked to the attraction of talent in organisations or companies established in Spain. The 'researchers' category of the law has witnessed a year-on-year increase of 266%, whereas the 'highly qualified professionals' category and intra-corporate transfers increased by 230% and 66% between September 2013 and December 2014.

Another measure that has provided impact information is **Born Global** (Sweden), consisting of its participants' claim to have learned to improve the distinction between pitching themselves to customers and investors, as well as improving their sales psychology and revenue model skills. Apart from the personal development value, the measure has also had a positive impact on the performance of the participating businesses. According to the 2015 performance analysis report, 10 out of 77 participating companies had at that point expanded their business physically overseas since participating in **Born Global** (Sweden). An additional half-dozen companies had secured funding from either international investors or Swedish investors based overseas. In addition, many participating companies reported an increase in revenue.

The visibility of the outcomes is related to the age of the measure. For example, **Incubator Support** (Australia) does not report any clear evidence of its impact, mainly because it is in the early stages of implementation and no impact on the beneficiaries and other actors can be observed as yet. Similarly, **GVK** has no evidence of outcomes due to the young age of the measure. However, older measures do not necessarily demonstrate clear impact either, such as **Startup Estonia** which is over 10 years old.

Other measures such as **Development of Clusters** (Estonia), **ICEX Next** (Spain), the **IP Attaché Network** (UK), **RIT** (Japan), the **Foreign Investment Ombudsman** (Korea) and **BMW i** (Germany) provided evidence of clearer and more specific outcomes. The limited information about outcomes and impact of the investigated measures are described in Table 10.

3.2.13. Success factors and challenges

Success factors can be defined as the characteristics of a measure that have a positive impact on beneficiaries as well as the economy and society as a whole. Success factors vary amongst the investigated measures, including, for example, the integration of service provision, the tailoring of services to different groups of SMEs, comprehensive packages that address different stages of internationalisation, cross-institutional partnership and the reduced administrative burden on the operators of the measures.

Those measures providing integrated services, especially those facilitating access to finance and networking, are more beneficial for SMEs and born globals. These measures can also be seen to have a clearer impact on the performance and development of SMEs' internationalisation activities. This can be discerned in **Development of Clusters** (Estonia), which helped SMEs to achieve broader cooperation, increased international competitiveness and firm development during 2013–2015.

Table 10: Summary of outcomes and impact of the 28 investigated measures

Measure	Outcomes (number of firms assisted)	Budget available and used (last year)	Impact
Incubator Support (Australia)	By the end of April 2017, there were fewer than 50 applicants.	The programme budget is AUD 23 million (€14.14 million) during 2016–2019. No evidence of spending is publicly available.	No information available.
Go Silicon Valley (Austria)	Twenty of these companies established a branch, joint venture or subsidiary in the USA. Eight companies received investment, mainly by US investors.	No information available.	The measure has an impact on the organisational learning and mindset of participating companies. For example, the measure has enabled participating firms to develop new products in a more open and collaborative way, expanding networks and contacts as well as strengthening company cooperation within the US market.
Communication Support (Belgium)	During 2016, 500 applications were accepted.	Communication Support constitutes only a small portion of the total budget of AWEX. The annual budget for Communication Support varies depending on how much AWEX decides to assign to this measure. In 2016, AWEX spent €1.5 million on this measure.	The measure has supported start-ups in receiving more funding and researching more foreign customers. Every €1 AWEX invested brought back €7 to the Walloon region, but this also includes other measures delivered by AWEX.
ICDK (Denmark)	The measure has supported 52 clients in Silicon Valley, 107 in Shanghai, 36 in Munich, 12 in New Delhi/Bangalore, 9 in São Paulo and 37 in Seoul.	The budget for ICDK during 2015–2017 is € 4.42 million. There is no information about the accumulative budget from 2006 to 2017. Due to the decision to establish six new ICDKs, total spending has increased in terms of the money derived from the Danish fiscal budget for 2006–2017 and in terms of the number of employees.	ICDK has successfully linked Danish enterprises with their new partners, cutting-edge research or access to R&D resources in foreign markets. ICDK has also established partnerships and collaborations with different types of actors in the markets, as well as engaged in R&D and innovation systems with national and regional governments, research and education institutions, business clusters and business associations.
GVK (Denmark)	No information available.	The total budget for a period of four years is approximately €3.1 million, 50% of which was funded by the European Social Fund, 0.11% was self-funded and the rest was raised from participating SMEs. There is no evidence of last year's spending, but the budget is often balanced when the measure ends.	No information available.
VITUS (Denmark)	There are no public data on the number of firms assisted. However, the companies are generally highly satisfied with the outcomes of their participation.	Regarding the evolution of the measure's spending, the annual financial amount reserved for VITUS has remained constant at approximately €0.8 million since 2010. However, the general budget for 2016 proposed a significant cut. No further details regarding the budget spending were found.	Companies participating in the first six rounds of VITUS perform better than Danish exporting companies in general in terms of growth, turnover, export and number of employees. The total export contribution of VITUS-participating companies amounts to €80 million overall and the total value added was €111 million from 2010, the year of the programme's launch, to 2013.

Table 10: Continued

Measure	Outcomes (number of firms assisted)	Budget available and used (last year)	Impact
Development of Clusters (Estonia)	<p>During 2009–2014, the measure supported the development of 25 clusters with €9.9 million.</p> <p>The measure reached 350 enterprises, 6 clusters were supported twice and 24 out of 25 clusters achieved the planned targets and expected outcomes.</p>	<p>During 2009–2013, there was an incremental increase in the annual budget from €4.5 million in 2009 to €11 million in 2013.</p> <p>There was no information about the evolution of spending.</p> <p>However, as of the beginning of 2017, €4.5 million was left in the budget (for the period 2014–2020).</p>	<p>The main impact of the measure on the beneficiaries is wider cooperation (42% of respondents in 2013 and 38% in 2015), more contacts (26% of respondents in 2013 and 15.2% in 2015) and increased international competitiveness (11% of respondents in 2013 and 17.7% in 2015).</p> <p>Overall, 88% of respondents in 2013 and 89% in 2015 showed that their companies' contacts increased and more than half of them found the participation contributed to their firm's development.</p>
Startup Estonia (Estonia)	<p>Statistics on the number of firms assisted are not publicly available. However, the targets in general (according to the interviewee) were perceived as achievable (for example, the outcome indicator 'number of potential and active start-up enterprises', the target value for 2023, had been achieved by April 2017).</p>	<p>The planned financial resources of the budget during 2007–2013 were spent in full. During 2015–2018, the planned annual budget was €1.16 million and adjusted depending on the expected cost of activities. For example: €1.183 million (in 2016), €1.208 million (in 2017), €2.808 million (in 2018) and €0.975 million (in 2019).</p> <p>In 2016, the budget was underspent (the spending was just over €600,000) because of delays in procurements.</p>	<p>No information available.</p>
Start Alliance (Germany)	<p>The estimated number of group missions in 2017 is 10. In 2016, there were five group missions.</p> <p>No information about the number of firms assisted was given.</p>	<p>No information available.</p>	<p>80% of participants confirmed the learning effect. The exchanges are a test bed for the products and services of the participating start-ups. They learn what to improve to make their products more successful and match the market. Concrete, tangible cooperation emerges for approximately 10% of participants.</p>
BMWi (Germany)	<p>On average, 1,200 SMEs per year have been participating in the events organised by BMWi. In 2016, about 15% of participating companies used more than one event. The number of events organised in 2016 was 102, covering 71 different target countries.</p>	<p>The budget varies between €4 million and €5 million per year.</p>	<p>The measure has an impact on beneficiaries in terms of information, networking, business effects (for example, enquiries from the target countries) and export effects (21% of participants have additional export sales, which is estimated at €37 million in 2015 and €116,000 per participating firm).</p>
FINEST SpA (Italy)	<p>No information available.</p>	<p>During 2015–2016, FINEST SpA invested €15.386 million, of which €8.521 million was on equity and €6.865 million was on other financial products.</p>	<p>No information available.</p>
100% Made in Italy (Italy)	<p>No information available.</p>	<p>No evidence of spending was found. However, the budget is funded by the certified companies that pay an annual fee of €1,700.</p>	<p>No information available.</p>

(Continued)

Table 10: Continued

Measure	Outcomes (number of firms assisted)	Budget available and used (last year)	Impact
SMEs' CEO Network Enhancing Project (Japan)	The measures supported 56 projects, with a total of 10,285 business meetings from 2012 to 2016.	The annual budget was about €1.8 million (as of 2017) and SME support covers 75–80% of the total, whereas the rest is covered by counterpart organisations from partner countries.	No clear impact. However, according to the interviewee, the measure has helped to provide Japanese SMEs with more chances for business meetings with SMEs from south-east Asia.
RIT (Japan)	On average, RIT sponsors 15 international projects annually. During 2014–2016, JETRO supported international cooperation between Japanese regions and 13 regions of the EU countries, and 5 in Asia.	No information available.	It has enabled the clusters to enhance their capacity and capabilities in new product development, technical cooperation, market expansion and accelerating international activities such as R&D and joint ventures.
Investment Ombudsman (Korea)	This measure supported 462 cases. For example, 12% of cases were related to the investment system, 11% to investment incentives and 11% to taxation.	No information available.	
Foreign Investment and One Window Policy (Nepal)	Permission to establish was granted to 955 industrial projects on a joint venture basis and/or 100% foreign investment. Through the measure, Nepal has registered, up until 2016, 399 foreign investment projects with an overall value of NPR 53.3 billion (approximately €390 million).	No information available.	Employment opportunities were generated by the FDI inflows, with over 40,000 people employed between 2011 and 2014.
DHI (Netherlands)	In 2016, there were 357 applications, but only 101 met the criteria and were entitled to receive the grants (28%).	The available budget for 2016 was €5 million for activities in emerging markets and €4 million for activities in developed countries. In 2017, the budget for activities in developed countries was reduced by 50% but the budget for activities in emerging markets was increased to €7.5 million. However, there was no evidence of actual spending in 2016.	No information available.
Matchmaking Facility (Netherlands)	During 2007–2009, €1.3 million was spent and 277 applicants approved, for which 174 matches were found.	Budget information is available only for 2007–2009. The total budget in 2009 was €859,035, 86.5% of which was spent. In 2008, the total budget was €715,008, of which only 58.3% was spent In 2007, only a third of the allocated budget was actually spent. Actual spending was always lower than the allocated budget because fewer applications than projected were received.	No information available.

Table 10: Continued

Measure	Outcomes (number of firms assisted)	Budget available and used (last year)	Impact
CCIR (Romania)	No information available.		
Global Lehian (Spain)	In 2016, 255 companies and cooperating partners benefited from the programme. In 2015, 465 companies were supported.	In 2016, the allocated budget was €5.6 million, the same as in 2014 and 2015. The actual amount spent in 2016 was €4.4 million because of a decline in the number of applications.	No information available.
ICEX Next (Spain)	Between 2012 and 2016, a total of 1,869 SMEs were supported. 40% of the beneficiary SMEs are engaged in industrial/technology-based products, 31% in tertiary activities, 16% in consumption goods production and 13% in agro-food products.	There is no evidence of the budget used in 2016. The annual budget in 2015 was €4.5 million and €4 million in 2014.	The firms which benefited from the measure in 2012 and 2013 increased their export volume by 50% within a period of less than three years.
STC (Spain)	The measure has supported 500 Spanish companies in 2011–2017.	No information available.	83% of the companies participating in this programme have US customers, and 43% have opened an office in the USA. 80% of participants continued to have a link to the US market after completing the Immersion Programme.
International Mobility Law (Spain)	The quantitative outcomes of the measure for the period September 2013 to January 2017 include: - Investors: 2,346 visas issued - Entrepreneurs: 303 permits granted - Highly qualified professionals: 5,448 permits provided - Researchers: 1,511 permits provided - Intra-corporate transfers: 3,602 permits granted	No information available.	The General Secretary of Immigration and Emigration belonging to the Spanish Ministry of Employment and Social Security estimated that the value of the investment received from all categories was up to €694 million and 33,529 new jobs were created.
Born Global (Sweden)	By the end of 2016, the programme had supported 77 participating companies.	The three-year budget for this programme is about €1.5 to €2.1 million and there is no significant change in annual spending.	The beneficiaries claimed to have learned to improve pitching themselves to customers and investors, to improve revenue models, to expand sales and operations internationally, networking and experience sharing.
HVO (UK)	No information available.		

(Continued)

Table 10: Continued

Measure	Outcomes (number of firms assisted)	Budget available and used (last year)	Impact
IP Attaché Network (UK)	<p>During 2012–2017, the IPO assisted 20,653 UK businesses and helped to protect British intellectual property across the globe worth an estimated €521 million.</p> <p>In 2015 alone, the measure provided one-to-one consultancy to over 200 firms and protected businesses' IPRs worth in excess of €55 million.</p>	<p>There have been no significant changes in budget over time.</p> <p>In 2016, the IPO spent 95% of the planned budget.</p>	<p>The measure has contributed to raising awareness of IPRs and providing consultancy on IPR protection for UK businesses operating in emerging markets including Brazil, China, India and south-east Asia.</p> <p>80% of the businesses found the measure valuable.</p>
OTE (UK)	<p>The number of supported firms increased from 6,194 in 2012 to 14,000 in 2017.</p>	<p>There was no evidence of the budget. However, the budget allocated for 2017 is approximately half of that for 2016.</p>	<p>No clear evidence of impact of this measure was provided. However, there are some successful case studies that demonstrate how OTE supported SMEs via the Export Action Plan, for example, by enhancing the firm's marketing and export strategies to enter a new market.</p>
Startup Global (USA)	<p>Eight seminars have been organised so far. Each event attracted between 50 and 100 participants.</p>	<p>No information available.</p>	

Source: Authors' own elaboration

Similarly, **ICEX Next** (Spain) helps the firms benefiting from it in 2012–2013 to increase their export volume by 50% within a period of less than three years.

As observed both in the literature and in the case studies analysed, networking support is critical to most internationalising SMEs' ability to overcome the liability of smallness, particularly for born globals whose business models are mainly based on networks. Examples of this are **BMWi** (Germany) and **VITUS** (Denmark).

In addition, tailor-made, individualised support, taking into consideration the specific needs of particular types of SMEs within the SME population appears to be important. One factor in the success of the **BMWi** measure (Germany) was said to be its different standardised modules, which aimed to meet companies' needs in different phases or stages of market development, including providing information on the market, exploring the market and, finally, establishing concrete contact with clients in foreign markets. Tailored support is offered in different events considering the specific needs and circumstances of specific industries, and different amounts of financial contribution are requested in accordance with firm size. Similarly, one of the success factors of **GVK** (Denmark) relates to its ability to customise competence-building activities to match participants' international strategies and export goals.

Comprehensive packages offer solutions to the various challenges of born globals by offering a combination of different support activities at different stages of

internationalisation. This can be seen in the case of **Global Lehian** (Spain), which spans support that is tailored to the different stages of internationalisation.

Some measures are based on 'real business needs' and offer flexibility for SMEs or born globals to adapt as they are designed or updated following surveys amongst the SME community. For example, **Startup Estonia** does not provide a package of fixed activities; rather, its offering can be changed to reflect the individual start-up's needs. This is also strengthened by ongoing communication with the start-up community to exchange feedback on **Startup Estonia's** activities. A key success factor for **Start Alliance** (Germany) is its focus on mutuality and reciprocity. In this sense, one city offers assistance and support services to foreign start-ups in exchange for similar assistance and support provided by another city. The exchange missions are organised by local partners in the receiving city, using all their knowledge of the local ecosystem, rather than by support organisations in the sending city. Another example is **Incubator Support** (Australia), which has a high level of flexibility and provides tailored advice through incubators' various services, such as mentoring and the component of 'Expert-in-Residence' (for example, engaging a national or international expert who is knowledgeable in start-up-related technology and international experience to assist start-ups' key challenges during their period in the incubator).

Cross-institutional partnerships were found in the design and implementation of several of the instruments

investigated here. This enables the creation of synergies in terms of knowledge and expertise from both public and private shareholders, and from different perspectives, to attract SMEs or born globals. **FINEST SpA** (Italy), for example, involves a number of shareholders including Friulia group (the regional financial institution), Veneto Sviluppo (a financial institution in the Veneto region), private banking institutions, SIMEST SpA (a corporation) and the Trento provincial authority, which helps to share expertise in operation, promotion and administration. In addition, the private component of **FINEST SpA** makes the programme more attractive by emphasising its profit-oriented and flexible approach to help SMEs adapt to the new market challenges in order to maintain their competitive edge. Another example is **OTE** (UK), which involves the UK Department for International Trade, the Federation of Small Businesses and the Institute of Export and International Trade, which form a team of experts to support SMEs with helpful advice, information and export planning, as well as helping them to liaise with useful networks and utilise the financial grant for export promotion and marketing.

The online services offered by several measures such as **OTE** (UK) save the participants time and money. This programme also enables a broader range of participants by using social networks, with a lower bureaucratic burden.

Some investigated measures experience a number of challenges in administration and implementation. Some of the measures that involve stakeholders from both public and private organisations show a lack of coordination and communication between these parties. This may create potential conflicts between implementers, administrators and initiators in terms of how to achieve the objectives and targets of the measure. For example, the **STC** (Spain) measure was traditionally supported by a public-private partnership between ICEX, Red.es and Santander Bank, where the roles and responsibilities of each partner were regulated by a formal agreement between the three parties. Despite the advantage of having combined resources from different organisations, the measure experienced some difficulties in brokering agreements between them. Since 2017, the measure has been run solely by ICEX and Red.es due to the voluntary withdrawal of Santander Bank.

The administrative burden is still perceived as a common weakness in most measures. For example, grantees criticise the administrative burden involved in the **Development of Clusters** measure (Estonia), such as proving the eligibility of occurring costs, the complexity of expenditure certification, the bureaucratic reporting format and the requirement to follow public procurement procedures.

The majority of the measures studied did not show a transparent budget or information on how this was spent over time, or how the resources were utilised for the measure. Furthermore, the bulk of measures were unable to show a systematic, formal monitoring and evaluation framework. This was found to be associated with the absence of specified targets and objectives. This stifles evidence-based improvements or development.

Finally, a lack of resources and funding remains a challenge for most measures, such as **OTE** (UK). This restricts its ability to expand the range of support activities, as well as impedes any follow-up on the progress of beneficiaries who participated in the programme.

3.2.14. Policy transfer

The most common type of policy transfer is ‘scaling up’, or horizontal transfer, a method that involves expanding the existing initiative demographically or geographically (Blackburn et al, 2007; Blackburn and Smallbone, 2009). This is also the simplest form of policy transfer, since its implementation does not require significant changes in the operation or targeting of the programme. Examples of successful horizontal transfer can be found amongst the analysed measures. **Start Alliance** (Germany) started out by organising its first networking event for start-ups in Tel Aviv in 2015. Since then, it has expanded its programme to other major cities identified as technology hubs, including New York, Paris and London. The measure further enlarged its network of participating cities, with Beijing, Dubai, Vienna and Warsaw (in 2018). Another example is the **ICDK** centre (Denmark), which was initially developed in Silicon Valley in 2006, then followed by another centre in Shanghai in 2007, in Munich in 2008, in New Delhi/Bangalore, São Paulo and Seoul in 2013 and in Tel Aviv in 2016. By opening in multiple locations, **ICDK** has the benefit of simultaneously being geographically widely distributed and locally consolidated, connecting business, innovation and research, which allows for new synergies and partnerships.

An application of the seconding staff method, arguably one of the least disruptive types of policy transfer, can be found in the **Matchmaking Facility** (Netherlands). This measure employs a number of freelance consultants who provide expert help in developing and delivering the programme to its partners in targeted geographical areas, which includes enterprises from 68 developing countries. The success of this system suggests that target-specific tasks can be efficiently outsourced to external associates with expertise in the relevant target areas.

One of the keys to successful policy transfer is the selection of adequate targets in the targeted domain (Mulgan and Albury, 2003). For example, if a certain measure was originally aimed at assisting businesses in a particular sector, it follows that the chances of success of the policy’s transfer to a different country would at least partly depend on whether the transferred policy is oriented towards companies of the same sector in the target country, or whether the sector-based criteria have been modified, or even discarded, within the context of the target country. Similarly, if the original policy targets companies at a certain stage of internationalisation (for example, start-ups), it is likely that the measure’s transferability would have a greater chance of success if the focus were retained in the target country as well.

Another factor that may contribute to the achievability of policy transfer is the measure’s flexibility. Some of the surveyed measures have shown flexibility in terms of application and delivery and are, therefore, perhaps

easier to transfer into different contexts. For example, **Communication Support** (Belgium) provides a subsidy to businesses at various stages of internationalisation in order to help them develop their communication activities. Once an enterprise has received the subsidy, it can use it however it sees fit in order to finance whichever type of communication channel it wishes to develop according to its requirements.

Those measures that were transferred from previous schemes, or were complementary to a range of supporting activities, were found to be easier to transfer as a result of policy learning. **Scale Global** (Sweden), for example, was set up in 2017 after its predecessor, **Born Global** (Sweden),

was discontinued. The new policy has been adjusted in order to correct the shortcomings identified through the application of its predecessor.

However, even when transferable initiatives are identified, the replication of a successful initiative into a different context may not be straightforward. Where policy transfer involves new staff and/or organisations other than those responsible for developing and implementing the original policy, there may be challenges related to the expertise and commitment of the new staff and/or organisations. Therefore, it is important to ensure the continued involvement of the original champions of the initiative to help combat this challenge (Blackburn and Smallbone, 2009).

4 Conclusions and lessons learned

4.1. Key findings from the born global case studies

4.1.1. Main characteristics of the born globals analysed

Most of the analysed born global enterprises are located in urban but, with two exceptions, not central metropolitan areas. They tend to have a strong geographical attachment and their main headquarters are, in most cases, located in the city or urban area where they were originally set up. A large proportion of these enterprises also have a number of additional premises, sometimes located in the same country of origin but also abroad.

Most businesses were launched when the founder(s) identified a business opportunity through their personal or professional experience that they felt had not yet been fully exploited in the market. The products or services provided by the born globals chosen for this study are highly innovative, representing new products with added properties in their respective markets. Some of these companies devote a relatively large number of resources to R&D activities, often resulting in the development of patents and IPR protection.

All the case studies are involved in B2B relationships. The available data show a positive evolution in turnover in recent years, coupled with strong prospects for the future. The born globals are usually small (fewer than 50 employees) or, less frequently, medium-sized (50–249 employees). Understandably, medium-sized firms are characterised by more complex management structures. Born globals' employees are highly educated, with backgrounds that match their specialisation. It is also interesting to note that the workforce of some enterprises is very international and usually young, with international work experience and an ability to speak foreign languages.

In the born globals studied here, the founders are usually a group of co-founders who have known each other for a long time and decided to set up the company together. The founders consider previous work experience and relationships acquired through their professional networks to be very helpful in setting up and expanding their born globals, particularly in international markets.

In approximately half of the born global cases, the company belongs fully to its founding members (though they do not necessarily have an equal stake in it). In the other half of cases, company ownership is shared between the company founders and other actors, such as external public and/or private investors or employees. These external investors usually bring expertise and specific knowledge to the company or strengthen its portfolio.

Most of the born globals have a business plan which sets out international business targets and how they intend to meet them. These business plans are drafted by the company founders or CEOs alone or with others

(key company members and collaborators or external enterprise support organisations) and updated regularly to keep up with changes in the market and with clients' needs.

4.1.2. Internationalisation activities of the born globals analysed

Most of the born globals started their internationalisation activities at set-up or very soon afterwards. The majority of them refer to the small size of their national markets as a key reason to go international in order to ensure business viability ('necessity-driven'), although there are also some examples of 'opportunity-driven' internationalisation, linked to ambitious market strategies, or the notion that the world is the natural marketplace for their company.

The selected born globals are actively engaged in different types of internationalisation activities, often consisting of commercial cooperation (either with a network of international distributors or retailers), direct exporting, international subcontracting, international R&D and/or technical cooperation. Less common activities include the establishment of international joint ventures, the presence of international investors within the company or foreign investment. In most cases, several modes of internationalisation are undertaken simultaneously.

All the born globals agree that internationalisation plays a very important role in their businesses. Some are particularly active in European countries, whereas in other cases non-European markets are the main destination of their international sales. These geographical footprints are influenced by previous networking contacts as well as the identification of market opportunities.

4.1.3. Global value chains of born globals

The born globals in the sample either act as suppliers of specialised products or services or are responsible for the design and/or product development, production and/or distribution and commercialisation of their own product portfolio, and have international partners to support their own value chains.

GVC partners may act as specialised suppliers to the born globals (of components, raw materials, specialised manufacturing equipment, specialised technological/innovation-related knowledge and services), distribution and commercialisation partners for the born global's products and/or jointly responsible partners for the co-production and joint development of some specific products. They also act as financing partners in a few cases.

In some cases, this cooperation is initiated by the born global itself, based on its founder's or founders' own knowledge and personal contacts. In other cases, the born global is the one interested in finding a suitable partner and requests the collaboration of a third party. Alternatively, cooperation can be initiated on an 'unintended' basis (for instance, key persons meet by

chance at an event). Finally, there are some cases where the value chain partner contacts the born global to initiate a possible line of cooperation. Once the companies have made contact with one another, the agreement to start collaborating does not usually take long to be set up.

Born globals initiate international cooperation for a number of reasons. These include a lack of suitable cooperation partners at the national level, access to new markets and business opportunities and access to specialised know-how and technology.

Only a few relationships between born globals and GVC partners are based on formal cooperation agreements. In most cases, cooperation is primarily based on a commercial client-supplier relationship. In a minority of cases, this cooperation is formalised through a conventional purchasing agreement. Finally, there are examples of cooperation that can be labelled as informal and not based on any specific commercial relationship. In all cases, the relationship is usually dominated by the more influential or less replaceable partner.

Logistics services and ICT-based communications play a very important role in sustaining the cooperation between the GVC partners, at all stages in the process. However, face-to-face meetings still play a key role in initiating, sustaining and deepening business relationships between value chain partners. Trust between individuals is a decisive factor in sustaining successful cooperation amongst companies.

Significant positive outcomes can be derived from the existing business relationships for both parties (win-win situations) including economic, production-related and knowledge-/learning-related results as well as reputational and employment effects.

4.1.4. Main obstacles to internationalisation and international cooperation and the solutions adopted

The born globals studied here and their GVC partners identify several company-external obstacles to engaging in international activities. Some of these are related to the target countries (be they EU or non-EU countries), such as local regulations and laws, special national certification and product or technical requirements, and differences in payment practices. Additional difficulties associated with operating in non-EU Member States include customs-related issues (including additional customs checks, delays in the supply or extra duties) and the lack of fair competition in some countries or sectors.

In other cases, these external challenges are related to the features of the country of origin, such as difficulties in accessing external capital and finance on good terms and conditions, a poor national image, the national support structure and difficult internal political situations, often resulting in significant uncertainty (most recently, for example, Brexit).

Other company-external challenges mentioned include finding clients and suitable teams with the right abilities and knowledge to collaborate with, the large amount of time needed to build trust and establish good

relationships amongst partners and large geographical or time zone distances.

The typically small size of the born globals amplifies these external obstacles, resulting in limited available financial resources, negotiation possibilities or human capital resources (company-internal challenges).

These obstacles were not considered insurmountable, however, and many of the born globals and their value chain partners were able to adopt solutions to overcome them (see Table 11).

4.1.5. External sources of support for born globals and their value chain partners

Analysed born globals and their GVC partners identify two main areas where they need external support. The first area refers to external capital, which needs to be raised and accessed while initiating and expanding the business. A second area consists of specialised assistance and advice on a number of subjects, including internationalisation.

Most of the born globals show a high capacity to use different sources of external support (including prizes and business competition) for a variety of purposes (such as raising capital and access to finance, R&D and IPR activities and other product-/service-related activities). This external support is positively valued by most of the analysed born globals, especially in areas not exclusively related to internationalisation support (such as R&D, access to finance, new premises support). Some of the interviewed born globals particularly appreciate the existing public and private support in their local area or region. The types of support deemed particularly useful include business networking events (conferences, trade fairs, business clubs and business accelerators) as well as prizes and business competitions that increase the visibility and reputation of the born globals amongst private investors.

In contrast, several analysed born globals strongly criticised the existing national or regional support system. Specific problems raised were a lack of suitable instruments, a lack of information or promotion of the already existing instruments, the amount of paperwork involved in applying for support coupled with a lack of practical support on how to fill in the many documents needed for a support application, and the slow responses on the part of the national support authorities.

4.2. Support instruments addressing the challenges of internationalisation and international cooperation

This subsection discusses the barriers identified by born globals and their GVC partners for their internationalisation activities and the solutions offered in the investigated policy measures.

4.2.1. Barrier 1: Access to finance

Access to external finance is seen as one of the main challenges for SME internationalisation in both EU and

Table 11: Examples of challenges to internationalisation and international cooperation and solutions applied by born globals and their global value chain partners

Challenges	Solutions applied
Complex local regulations and laws, administrative difficulties (customs issues)	<ul style="list-style-type: none"> ○ Use support by specialised law firms ○ Adapt contracts to different national practices ○ Establish distribution agreements with local distributors ○ Set up a branch in the target market
Exchange rate fluctuations	<ul style="list-style-type: none"> ○ Hedge foreign exchange ○ Concentrate on countries with strong currencies
Certification and product requirements	<ul style="list-style-type: none"> ○ Carefully follow certification requirements to ensure certification when needed ○ Manufacture products which meet the most common standards and adapt them to different markets
Technical barriers	<ul style="list-style-type: none"> ○ Adapt the product to the technical conditions of the target country
Business-culture-related differences	<ul style="list-style-type: none"> ○ Have a strong local partner ○ Have a good command of local languages and local culture to facilitate local business
Difficulties finding clients and suitable teams to collaborate with, becoming known in the market and establishing long-standing relationships with collaborators	<ul style="list-style-type: none"> ○ Join national or international networks ○ Show certifications and prizes to increase reputation and build trust ○ Participate in international events and relevant international fairs and exhibitions ○ Develop powerful websites and online selling facilities to enable international sales ○ Benefit from word-of-mouth advertising via value chain partners ○ Set the precise criteria for the partner
Difficulties in their relationships with key partners (such as problems with advance payment)	<ul style="list-style-type: none"> ○ Devote time to negotiation processes ○ Take out insurance to avoid risks
Tough competition from low-cost manufacturers	<ul style="list-style-type: none"> ○ Focus on the quality of the product ○ Offer value-added or additional services to customers
Geographical distance	<ul style="list-style-type: none"> ○ Apply different forms of ICT-based communications ○ Foster employees' flexibility ○ Improve or streamline relations between partners
Difficulties accessing financial support	<ul style="list-style-type: none"> ○ Look for investors and business angels
Negative image of the country of origin	<ul style="list-style-type: none"> ○ Set up headquarters in another country
Uncertainty and risks	<ul style="list-style-type: none"> ○ Increase prices ○ Diversify destination markets ○ Elaborate contingency plans
Lack of required skills on the part of employees, lack of willingness to move abroad	<ul style="list-style-type: none"> ○ Hire new staff to cover these needs ○ Improve staff's skills, particularly in terms of language competencies ○ Adopt smart management of human resources to reduce the burden for workers going abroad

Source: Authors' own elaboration

non-EU countries. This is reflected in the findings of the investigated born global case studies as well as the literature (OECD, 2009; EIM Business & Policy Research, 2010; European Commission, 2015a).

Solutions

Almost all countries have some kind of export financing and typically some forms of related guarantees. At EU level, improving access to finance is one of the main priorities of COSME – one of the key EU instruments – to enhance firms' internationalisation and access to foreign markets. At national and regional levels, the support typically involves the public sector in partnership with the private sector and financial institutions. In addition, financial support is commonly linked to other types of support, such as assistance to attend a trade fair or establish a marketing plan (for example, **Global Lehian** (Spain), **Go Silicon** (Austria), **Matching Facility** (Netherlands), **OTE** (UK) and **Communication Support** (Belgium)), while support for an exporting firm's working capital is not so widespread. Nevertheless, a deeper analysis of the nature of the finance problems faced by internationalising SMEs and particularly by born globals finds that the pressure on working capital is both the most widely experienced financial concern and the one that most governments are reluctant to address.

4.2.2. Barrier 2: Regulations in the target market

One of the potential barriers that SMEs experience when entering foreign markets is regulations that may well be different from those experienced at home. A survey of internationalising SMEs by the European Commission (2015c) identified the costs of dealing with regulations in foreign markets as the second most important barrier mentioned by European businesses. Although the nature and extent of regulatory barriers vary considerably across mature market economies, the difference is likely to be greater in the case of non-EU countries – especially developing countries, which may still be developing the regulatory framework. Furthermore, when regulations between the home and foreign markets differ significantly, this is likely to be reflected in higher costs. This is regarded as a barrier by SMEs and born globals who internationalise in non-EU countries, for example in Brazil, China, India, Japan, Russia and the USA. For example, SMEs internationalising in Argentina and Brazil have to deal with discriminatory taxes, the subsidisation of domestic firms and restrictions on the transfer of foreign currencies and dividends. In the same vein, China applies significant restrictions on foreign investment and technology transfer and often imposes local content requirements. SMEs exporting to the USA have to deal with strict technical and safety requirements which differ from European standards, while SMEs doing business in Japan encounter limited public procurement (European Commission, 2015d). The turbulent economies in some world regions (Africa, Asia and South America) and their changing regulatory regimes add to the challenges faced by exporting EU SMEs.

Solutions

To address regulation barriers, some policy measures provide support to internationalising SMEs in the form of legal consultancy (such as the Romanian **CCIR**), facilitation of the business environment for foreign investors, for example by simplifying the process of residence permit application for non-EU national investors (**International Mobility Law** (Spain)), interest income on foreign loans, the lowering of technical and management tax fees, double taxation relief, the elimination of state intervention in price fixing for industry products (**Foreign Investment and One Window Policy** (Nepal)), and grievance identification and resolution for foreign-invested companies (**Foreign Investment Ombudsman** (Korea)). However, the majority of the analysed instruments addressing regulatory barriers aim to enhance the business environment to attract foreign investors rather than facilitating exporting SMEs' legal knowledge of the target markets (except for the **CCIR** (Romania)). Some measures do provide indirect legal support by incorporating some key facts about regulations in foreign markets into their internationalisation information provision portfolio, however.

4.2.3. Barrier 3: National certification and product requirements

Quality certification and the reputation of foreign products can affect customers' confidence in what they are purchasing. As a result, actions that can help to build confidence in a firm's foreign partners are welcome. The issue affects all internationalising businesses with a disproportionate impact on SMEs, and especially born globals because of their more limited internal resource base, newness and lack of track record.

Solutions

Amongst the investigated policy instruments, the Italian measure **100% Made in Italy** is an attempt to provide certification of quality and thereby contributes to building a reputation and brand. The **100% Made in Italy** label is claimed to be the third-best-known brand in the world after Coca Cola and Visa (The Italian Magazine, n.d.). The reasons for this success appear to be based on Italian history, culture and tradition, which enable the **100% Made in Italy** brand to be recognised worldwide as being of high quality.

4.2.4. Barrier 4: IPR protection

Intellectual property issues are a barrier frequently reported by internationalising firms, especially because they do not have the scale or resources to have recourse to their own intellectual property lawyers or, in some cases, even the know-how necessary to develop a strategy of protection (Blackburn, 2003). Intellectual property regulation and processes vary across different markets in terms of both content and operation. Internationalising firms can find it difficult to establish the nature of the system for protecting their intellectual property clearly. This barrier is of more concern to those born globals that internationalise in countries where the intellectual property system is poorly developed or in the process of developing, or where it is perceived as effective, such as in

Brazil, China, India and Russia (Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of the Member States relating to trade marks).

Solutions

Amongst the policies investigated here, the **IP Attaché Network** (UK) provides a good example of intellectual property awareness enhancement and support for internationalising SMEs in dealing with intellectual property issues in emerging markets. By creating different **IP Attaché** centres in Brazil, China, India and south-east Asia, the measure has established different teams of experts to provide advice, information about intellectual property in those markets and networking opportunities with other members targeting the same market, negotiate with foreign authorities to improve the intellectual property system, and find ways for SMEs to deal with problems related to IPRs.

4.2.5. Barrier 5: Differences in cultural practices

Some barriers are grounded in culture and can result in differences in business practices. SMEs entering a new foreign market need to understand new cultures, languages and economic systems, as a lack of related knowledge can lead to failure in foreign markets.

Solutions

One of the keys to success for internationalising firms in understanding and responding appropriately to these differences lies in personal contacts, since communication is the best way of building cultural understanding.

The vast majority of the investigated measures provide support in the form of information, networking, consultancy, seminars and workshops or trade fairs and market assessment. The support can be either general or tailored to specific markets. For instance, **BMW i** (Germany) helps German SMEs to develop markets in foreign countries in the form of information events and workshops, organising study tours to foreign countries to explore the target markets and sponsoring business initiation trips to individual target clients or partners. Similarly, **O TE** (UK) provides market information about target destinations in different geographical areas and consultancy in relation to different business environments, organises events and workshops and helps SMEs to participate in trade fairs.

Other measures provide specific support to SMEs that wish to internationalise in specific markets. For instance, **STC** (Spain) and **Go Silicon Valley** (Austria) focus on SMEs' expansion in the USA and provide related activities such as an introduction to US business habits and conventions, mentoring, finance forums and entrepreneurship workshops, and free access to office and co-working spaces to for SMEs. Similarly, the **SMEs' CEO Network Enhancing Project** (Japan) and **RIT** (Japan) organise networking, business matching events and business trips to help foreign SMEs that lack resources to go to Japan, meet potential partners, enhance their knowledge of Japanese business culture and environment and develop business relationships with local SMEs.

4.2.6. Barrier 6: Reputation of and support in the country of origin

SMEs' successful foreign market penetration typically relies on an effective domestic business support infrastructure. This is often based on one or more export policy measures embedded within a wider policy support framework. To be a successful exporter, a business needs a product or service that enjoys sufficient market demand, a certain profile and a positive reputation. This can influence potential buyers' decisions in ways that the business owner is not always aware of. For example, a Chinese dynamic electronics business employing 20–25 people may be viewed as a highly competitive organisation in the UK. To a Chinese buyer, such a business is typically regarded as too small to be a reliable supplier. In this sense, SMEs and born globals encounter the challenge of how to improve their profile and trustworthiness in a foreign market with a view to establishing a new business relationship, and especially in emerging markets where different business perceptions can exist.

Solutions

SMEs' profiles can be improved if the companies identify themselves using trademarks and brands, integrate into different business clusters, participate in international trade fairs, initiate government-sponsored business trips and events, attend business matching opportunities and events, and participate in competitions and networking events. A clear example of reputation building is **100% Made in Italy** (Italy), which provides opportunities for SMEs to raise their profiles with registered trademarks. This is consistent with the literature, which confirms that trademarks are economically beneficial since they help to solve the issue of information asymmetry between sellers and buyers (Cappelli et al, 2017).

Another example is **Development of Clusters** (Estonia), which supports SME clusters in increasing their international competitiveness via joint marketing and business development activities. By joining clusters, smaller firms gain an opportunity to build their competencies and reputation in the international market. The two measures **SMEs' CEO Network Enhancing Project** and **RIT** (Japan) help to boost the collaboration and trust between overseas SMEs and local businesses. Another example is **CCIR** (Romania), which provides SMEs with integrated support services such as trade missions, training, legal and administrative advice, networking opportunities and an information database.

4.2.7. Barrier 7: Finding clients, partners and staff in the target markets

A critical barrier to internationalising SMEs identified in this study is the difficulty with finding potential clients and partners as well as building human capital in foreign markets. This can be attributed to the lack of networks and resources in the target markets as well as the liability of newness that most SMEs and born globals encounter in a new business environment (European Commission, 2015b; Elo, 2015).

Solutions

This challenge has been addressed in a number of the measures in this study that facilitate networking and

business matching opportunities or pay for SMEs to attend trade fairs and international exhibitions. For example, **BMWi** (Germany) provides a range of support activities such as symposiums in target countries, which financially assists German SMEs to present their products and services to potential clients and partners, or business initiation trips that allow German SMEs to visit individual target clients and attend bilateral meetings. In addition, potential clients from foreign countries are invited to participate in networking events or visit German companies. Similarly, the **Matchmaking Facility** (Netherlands) promotes new business relations between internationalising SMEs in developing countries and Dutch SMEs by sponsoring the cost of meeting. In contrast to the overall lack of support in relation to the recruitment of staff in target markets, **Global Lehian** (Spain) provides partial support to SMEs to help establish facilities abroad, including funding set-up and covering the recruitment costs of specialised technical staff for internationalisation.

4.3. Challenges related to the internationalisation policy process

4.3.1. 'Born global' labelling

Of the 28 investigated policy instruments across 16 countries, only 2 refer to born globals by name, namely **Born Global** (Sweden) and **Startup Global** (USA). The main potential advantage of the use of the born global 'label' lies in marketing. If entrepreneurs and potential entrepreneurs are attracted to a measure that is clearly aimed at an elite business group, it would make sense to extend the use of the term 'born global' into the policy portfolio.

The potential disadvantage of extending the usage of 'born global' labelling could relate to the fragmentation and proliferation of supply of measures, which can become costly. In addition, this may generate confusion amongst entrepreneurs and managers, on the one hand by adding measures on top of those already existing in the marketplace and on the other because entrepreneurs may not be familiar with the concept of born globals and hence not identify their business as such.

On balance, there is currently little evidence to suggest whether a more extensive use of 'born global' labelling would be beneficial.

4.3.2. Operation of the policy measures

The findings of the policy instruments investigated here show that the measures to support internationalisation are implemented and administered by the organisation designing the intervention itself, or in collaboration with other public and private shareholders. Even though collaboration with other parties helps to increase the resources in applying the measure, administrative burdens can arise, as in the case of **Communication Support** (Belgium) and **STC** (Spain) due to the multiple layers of administration and the number of organisations involved. In some cases, reaching a consensus may be difficult for

the parties involved, or a lack of coordination may lead to a change in administration or in sources of funding, as in the cases of **OTE** (UK) and **FINEST SpA** (Italy).

The majority of the measures examined promote their programmes via their websites and through their members, rather than involving third parties such as embassies, chambers of commerce or business associations or taking advantage of social media. This has its drawbacks. For example, **ICDK** (Denmark) was found to experience a lack of consolidation and lost visibility amongst the target companies, which limited its ability to reach a wider group of participants.

4.3.3. Monitoring and evaluation

One of the most striking findings emerging from this study is the low level of monitoring and evaluation to which these measures are subject. Where such evidence was available, the evaluation had typically been undertaken internally, which affected the value and utility of its findings.

In practice, the emphasis tends to be on fairly low-level monitoring, consisting of elementary statistics on activities carried out which often involves merely recording the number of businesses supported and those growing, rather than anything more rigorous or systematic. Storey's so-called Six Steps to Heaven, for example, can be used to describe and assess the methods used, starting with simple monitoring and ending with the sixth step, which involves a more sophisticated approach (Storey, 1998). Although Storey presents a logical and systematic approach to policy evaluation, the approach may be criticised as being entirely quantitative. While governments may state an intention to build evaluation into project design, it is often difficult to obtain the data required for robust evaluations.

The analysis here has shown that, as far as internationalisation support goes, there are many actors and institutions involved, and this makes the collection of objective and accurate data problematic. A combination of qualitative and quantitative methods would be more convincing, and would bring the added bonus of providing some additional insight into the policy process.

4.4. Policy pointers

The analysis shows that access to external resources is one of the critical prerequisites for SMEs and born globals to internationalise. Despite a number of measures supporting access to finance, these mainly relate to the promotion of SMEs' services or products in foreign markets, networking and trade fair participation, rather than providing direct finance for the SMEs' export plans. Hence, public policy interventions need to be reinforced by providing better support to SMEs and born globals (and their value chain partners) to help them reduce the financial risks of expansion. In this sense, public authorities should help these companies to access external capital, either in the initial or in the expansion phases of the business project and for purposes that align with the companies' specific needs (for example, to develop new products or markets, to finance R&D activities, to grow the business, to cover

product certification costs, to gain access to new premises or to perform internationalisation activities).

Second, regarding regulatory barriers, public authorities should facilitate SMEs' and born globals' access to specialised and reliable assistance and advice within different fields, such as legal and tax obligations, product certification and IPRs, business consultancy, internationalisation and access to external markets and the search for and identification of potential foreign suppliers and business partners. In this context, policy support would be crucial to enable information provision on regulations in target markets. This may include both providing general information about the regulatory system and its functioning and building processes to enable internationalising firms to gain up-to-date information about regulations that will affect their specific business activity.

Third, regarding the product requirement barrier and the difficulty of finding clients and partners in foreign markets, public authorities can facilitate (international) business cooperation and networking activities (participation in conferences, trade fairs and business clubs). Special attention should be given to the development of the so-called business accelerators for born globals that help participating companies to benefit from different support areas (mentoring, financial support, advice and consultancy services and training, amongst others) in a very short period of time.

Fourth, it is recommended that the European Commission actively promote measures like the **IP Attaché Network** to all EU Member States as a way of helping European SMEs reduce the barrier effects of IPR issues in foreign markets. It is also recommended that it build on the success of the intellectual property helpdesk in Beijing by establishing similar facilities in other rapidly developing economies where a lack of IPR protection is a major issue.

Fifth, the differences of business practices can be addressed by emphasising the cooperation between domestic and foreign firms, workshops, events, networking and business tours. The Japanese approach to supporting SMEs, which emphasises encouraging (longer-term) cooperation between domestic and foreign firms, is an effective approach that could be adopted by the EU and actively promoted to European businesses.

Sixth, regarding the reputation and support barriers in home markets, the principles that underpin the **100% Made in Italy** trademark should be actively promoted to policymakers throughout Europe. Based on the Italian experience, such a trademark can be regarded by consumers as a guarantee of a product's value, quality and origin, provided that tools are available to ensure that the label means what it says. On a complementary note, policy should create 'technology hubs' that enable smaller

firms to improve their reputation and trustworthiness in the target markets. In addition, public authorities should highlight their roles in sustaining prizes and business competitions for born globals as an effective tool to support them, particularly in their initial stages when they need to increase their visibility and reputation in the eyes of third parties (investors, clients, suppliers and public authorities). National, regional and local authorities can also play a very important role in developing a supportive and proactive policy environment and start-up ecosystem that may facilitate access to both external finance (venture capital funds, business angels and banks) and different services demanded by companies.

Seventh, regarding the labelling and delivery of specific 'born global' measures, there is very little evidence for an informed assessment to be made of the advantages and disadvantages of promoting and extending the use of a 'born global' label. Consequently, it is recommended that Europe's policymakers commission research to undertake such an assessment. In this regard, the methodology for such a study should aim to be global because of the potential role of culture and context in influencing the results.

Finally, the evidence from the monitoring and evaluation of the outcomes and impacts of policy measures remains weak in most of the investigated instruments. It is strongly recommended that policymakers take steps to ensure that robust policy monitoring and evaluation be built into the design of all policy measures used to promote the internationalisation of SMEs. There is a need for a very careful assessment when transferring an initiative from one domain to another, in order to ensure that the structures and processes of the original measure are correctly mapped onto the target institution and its economic context, so as to enable the specific requirements of the target environment to be met. Monitoring can feed back potentially useful information to those running a programme for continuous improvement. Robustly undertaken evaluations can provide important evidence with respect to the cost-effectiveness of particular measures. In addition, systematic monitoring and evaluation can generate data which enable the use of public money to support entrepreneurship and internationalisation to be reviewed in the wider context of public expenditure efficiency. A more systematic approach to monitoring and evaluation – one that includes keeping record of the various effects and impacts, as well as addressing any problems or weaknesses – would enable policymakers to learn from existing experiences and to develop suitable good practices for successful policy transfer. Ultimately, a robust monitoring and evaluation system can help improve SMEs' performance and born globals' internationalisation through the provision of appropriate support measures.

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Annexes

Annex 1: Description of global value chain partners

Born global enterprises	Analysed global value chain members	Brief description of the company
Blue Ocean Robotics (DK)	Suitable Technologies	Suitable Technologies is located in Palo Alto, California (USA). It was founded in 2011 as a spin-off from the robotics studio Willow Garage, and later set up offices in Massachusetts and Missouri (USA). The company is a medium-sized SME, specialised in developing and building remote telepresence technology; its first product is called Beam Smart Presence System. Although its customers are primarily in the business segment, the company also sells to schools and universities and directly to consumers. The USA, Europe and Asia are all strong markets for it.
	Blue Ocean Robotics Sweden	Blue Ocean Robotics Sweden is located in Västerås, Sweden, and is a Blue Ocean Robotics joint venture. It was founded in September 2015. The company has 1.5 employees (one working full-time and another one part-time). Blue Ocean Robotics Sweden is specialised in designing, developing and introducing new generations of robotic solutions, focusing primarily on the healthcare, education and manufacturing sectors in Sweden. Their customers are public and private sector organisations.
COMODULE (EE)	Materflow	Materflow Oy was created in July 2013 and is located in Lahti (Finland). It has five workers. Materflow is an online 3D printing service and manufacturer that prototypes, designs, networks, buys and sells custom 3D-printed products. Clients are engineering companies (both SMEs and large ones) from various sectors. Most of them are Finnish companies, but they have also clients from other EU countries.
	AVS Electronics (HK)	AVS Electronics (HK) was founded in 2008 as a daughter company to MBV Far East, a leader in healthcare products. Its headquarters are in Hong Kong, but it has offices in China, Germany, Taiwan and the UK. There are 14 employees in total. The company focuses on sport-related electronic solutions, telematics applications and consulting and development of services for the car electronics/automotive industry. The major part of the turnover of the company comes from the Australia, Germany and the USA; other important markets are China, Indonesia, Japan, Malaysia, Singapore, Taiwan and the UK.
Frog Bikes (UK)	Tektro	Tektro was founded in 1986. The company's headquarters are in Chang-hua (Taiwan), but it has additional branches in China and the USA. The total employees of all branches add up to over 1,200. Tektro specialised in manufacturing brakes, disc pads and brake pads for bikes and accessories. The company has established a strong international network with distributors in Asia, Australia, the EU, New Zealand, South Africa and the USA. However, its main clients are based in the EU.
	Shimano	Shimano was founded in 1921, and it is headquartered in Sakai (Japan). The company has 53 consolidated subsidiaries around the world in Asia, Australia, Europe, New Zealand and North and South America, , while its primary manufacturing plants are in China, Malaysia and Singapore. The number of employees is over 13,000. Shimano is a manufacturer of cycling components, fishing tackle and rowing equipment. It has a strong reputation for its brand worldwide, especially regarding cycling components. Its Asian and European markets generate the majority of sales, followed by Japan and North America.
	Jagwire	Jagwire was founded in 1984, with headquarters in Taiwan, where it has 80 employees. Additionally, the company has branches in Belgium and China, and offices in Vietnam and the USA. Jagwire is mainly involved in the production and sales of control mechanical cables in the bicycle industry. Its clients are bicycle manufacturers based in China and Europe.

(Continued)

Annex 1: Continued

Born global enterprises	Analysed global value chain members	Brief description of the company
Graphenea (ES)	AIXTRON	AIXTRON is located in Germany, and it was founded as a spin-off from RWTH Aachen University in 1983. Manufacturing sites are located in Germany, the UK and the USA, and the company has selling and service customer points in Asia, Europe, Oceania and the USA. The company has around 750 employees worldwide. AIXTRON manufactures metalorganic chemical vapour deposition equipment. Circa 60% of AIXTRON's revenues come from clients in Asia, around 18% from Europe and the remaining 22% from the USA. Its customers include market-leading companies, well-known institutions and renowned universities around the world.
	Graphit Kropfmühl	Graphit Kropfmühl was set up in 1916 and it has its headquarters in Hauzenberg (Bavaria, Germany), with several subsidiaries in China, the Czech Republic, Mozambique and Sri Lanka. The company has around 480 employees worldwide. Graphit Kropfmühl is specialised in the extraction, processing and refining of natural crystalline graphite. The company exports particularly to EU markets, but also to other markets such as Japan, South Korea and the USA.
	GroWater Inc	GroWater Inc is located in Cambridge, Massachusetts (USA). It was set up in February 2015 and it has three employees. In 2017, the company is developing a transformative graphene-based membrane platform technology with significant applications in different fields. The company expects that in about two years it could start commercial activity.
Khar & Partners (RO)	Pipeco	Pipeco was created in 1984. It is based in Malaysia, but it is also registered in France. The company has 250 employees along the production chain. Pipeco is a manufacturer of water tanks. Its main export markets are Europe and South Africa, whereas its main clients include property developers, public utilities firms, large infrastructure actors (for example, airports and metro systems) and manufacturing firms.
	ProEdge	ProEdge is based in New Delhi, India. The firm was established in October 2015 and it has 21 employees. It is a marketing, representation and franchising firm. The company works with firms such as hotels, spas and retailers that want to develop their loyalty marketing schemes, and it also helps international firms to expand to India via franchising and representation.
KristallTurm (DE)	HPS Middle East	HPS Middle East was established in Dubai in 2008, and offers customised playgrounds and adventure spaces to operators of leisure parks and similar facilities, including hotel chains, in the Middle East region and beyond. The company has a wide portfolio of attractions of a multitude of suppliers (manufactures) from all over the world in its programme (ropes courses, steel slides, climbing walls, freefall devices, trampolines, water play facilities, etc.). In 2017, it had 33 employees.
	Fusser Enterprises	Fusser Enterprises was set up in Orlando, Florida (USA) in 2000. The company is specialised in the leisure and sports business, including consultancy work in the development of leisure park facilities, activities as USA sales representative for a number of German sport-related companies and, finally, running a fitness centre for golfers. In 2017, the company was developing its own adventure park on rented land in Orlando together with a Canadian and a French partner. The company is run by an entrepreneur and his wife (no employees).
Recornect (NL)	Telerex/Zytronic	Telerex is a family company which was set up in the late 1970s. Telerex has two main locations: one in Antwerp (Belgium) and one in Breda (Netherlands). The company has 170 employees. Telerex is a distributor of electronic products and components such as power supplies, card readers and touchscreens, among others, and it mainly serves the Benelux region. The company imports products from different countries such as Taiwan and the UK, and it has exclusive distribution rights for some products in the Benelux region. Zytronic, a UK manufacturer of touchscreens used by Recornect, produces one of these products.
	Britplas	Britplas was set up in 2006. It is located in Warrington (UK) and has around 100 employees. Britplas produces and sells commercial windows for a broad variety of applications. Its clients are healthcare centres, schools and other institutions which use glass and large-scale windows. Britplas works mainly in the domestic market (its main client being the NHS) and international activities represent around 10% of its total turnover.

Source: Authors' own elaboration

Annex 2: Providers of national contributions

Country	Organisation	Author
Austria	Austrian Institute for SME Research	Thomas Oberholzner
Denmark	Oxford Research A/S	Martin Koch Haagensen, Anders Gøgsig Randrup and Morten Larsen
Estonia	Praxis Centre for Policy Studies	Aleksandr Michelson
Italy	VVA Consulting	Francesco Pitton, Madalina Nunu and Marius Dragulin
Netherlands	Panteia	Amber van der Graaf, Paul van der Zeijden and Jacqueline Snijders
Spain	IKEI Research and Consultancy	Iñigo Isusi, Antonio Corral, Jessica Durán and Mikel Muñoz-Baroja
Sweden	Oxford Research AB	Johan Peck and Louise Fabricius
UK	Small Business Research Centre, Kingston University	David Smallbone, Hang Do and Robert Blackburn

This report explores the motivations, opportunities and challenges of born globals and small and medium-sized enterprises (SMEs) in integrating and managing their global value chains (GVCs). The study also investigates the role of selected policy measures in supporting SME internationalisation, including different types of support in Europe and beyond. The analysis shows how such interventions can be improved to better address the needs of born globals and internationalising SMEs.

An in-depth analysis of seven case studies of European born globals and their international partners together with 28 policy measures across Europe, Australia, USA, Japan and Korea was undertaken. The report considers the barriers to internationalisation and offers suggestions for policy development.

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) is a tripartite European Union Agency whose role is to provide knowledge in the area of social, employment and work-related policies. Eurofound was established in 1975 by Council Regulation (EEC) No. 1365/75 to contribute to the planning and design of better living and working conditions in Europe.

