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Evaluation of the Scottish Government's Export Promotion Support

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Final report

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Executive summary

The Enterprise Research Centre (ERC) and the Centre for Business Prosperity (CBP) at Aston University were commissioned by the Scottish Government to undertake the evaluation of Scotland's export promotion support provided by its delivery partners. The Scottish Government provides funding to delivery partners to deliver the customer facing export promotion support and services offered to businesses. These delivery partners are Scottish Development International (SE/SDI) (being Scottish Enterprise's international delivery arm), Highlands and Island Enterprise (HIE), South of Scotland Enterprise (SoSE), and Scottish Chambers of Commerce (SCC) that deliver trade missions.

The evaluation consists of two complementary strands:

- Business survey and interviews with supported beneficiaries in the period of 2018/19 to 2020/21 intended to identify and assess the following: impact of the support, mechanisms of how impact was achieved, which support types work best, and lessons learned for the delivery of export support;
- Business survey with exporting firms in Scotland that have not received any delivery partner support since 2015 to serve as a control group to create a counterfactual for beneficiaries that export. Data from both surveys was analysed econometrically using a number of methods to estimate the effects of support or 'treatment';

The evaluation employed a mixed-methods approach consisting of online/telephone surveys, interviews, desk review of Management Information data (i.e., customer relationship management data) and econometric modelling of the policy evaluation. The key performance metric for export promotion is the value of export sales.

The key findings from the evaluation are:

- In the financial years 2018/19 – 2020/21, the Scottish Government delivery partners provided export and wider business development support to 3,053 businesses. Of these, 2,329 opted into the beneficiary evaluation survey, which received 463 responses. Additionally, 23 in-depth interviews were carried out.
- Sixty per cent of responding supported businesses are exporters, largely exporting to priority markets and countries defined by the Export Growth Plan "Scotland: a Trading Nation". Typically, their largest market is USA, which was also their largest market prior to the support.
- Of the companies that do not export, about 7 in 10 have never exported, mostly because of organisational constraints, additional paperwork or because exporting was not relevant to their businesses at that time. Those firms that used to export, mostly stopped in 2020-2022, which can indicate impacts of the COVID-19 pandemic or the EU-exit.
- Nearly all responding firms are small to medium enterprises (SMEs) with on average 21 employees and £3.1m turnover. They represent a variety of business sectors with about a third being in manufacturing.
- Seventy-nine per cent of beneficiaries received support from SE/SDI, followed by HIE (10%), multiple delivery partners (7%) (i.e., across more than one delivery partner) and SCC trade missions (4%). About 7 in 10 firms accessed international support only. The latter is focused on three phases of activity: raising awareness and building ambition (A), developing capacity and capability (C) and supporting businesses to expand into new markets and to exploit new

opportunities (E) (broadly categorised as the A-C-E model). According to this model, international support that firms accessed mostly spanned several categories or could be classed as intended to improve the capability to export. Beneficiaries on average accessed four support activities.

- Beneficiaries rated the delivery of the support quite highly at 7 out of 10. Among the areas for improvement, firms mentioned a desire for greater and/or more intensive support, better engagement and communication with delivery partners, and higher quality advice.
- Interestingly, a quarter of businesses reported not accessing any specific export or wider business development support in 2018-2021. This rather counterintuitive finding might be due to a combination of personal or institutional recall issues, different perceptions around what constitutes specific support and the complex nature of the support landscape.
- Beneficiaries reported a number of impacts that the support had on their export activity:
  - 58% of exporters reported that the support positively affected their export sales (including value of sales and achieving sales sooner);
  - 47% reported that the support helped them to enter or re-enter export markets;
  - 27% reported entering new markets as a result of the support;
  - Nearly half of exporters reported that their exporting activities increased their firms' R&D investment, capital spending or productivity, which indicates that the support indirectly influenced business growth and productivity.
- The key objective of the export promotion support is to increase export sales. Using survey data, we estimated that supported exporters increased their export sales by approx. £1.6 billion as a result of the support. This equates to £764k per firm across all supported firms. Furthermore, 46% of all beneficiaries and 57% of exporting beneficiaries anticipated increasing their export sales as a result of the support over the next three years. For exporters, this is expected to bring an additional £2.7 billion in sales. Beneficiaries that accessed support earlier in the evaluation period were more likely to report an impact on their export sales, which indicates that the full impact of the support is yet to materialise at the time of this evaluation.
- Econometric impact analysis using survey data with 135 non-beneficiary exporting firms as a control group supports the self-reported findings from the beneficiaries that the support increased export sales. Overall, we estimate that the export promotion programme has led to an increase in firms' value of exports of 140%. This result that the support had positive effects holds in all but one of the seven different estimation techniques and when the yearly cohorts of supported firms are analysed separately.
- Majority of exporters (84%) reported experiencing numerous export challenges in the evaluation period 2018-2021. Over 9 in 10 firms considered the COVID-19 pandemic and the EU-exit to be the main causes of their export challenges. Sixty-eight per cent of firms reported that these challenges negatively impacted their export sales by, on average, 38%.
- Impacts from the support are not limited to export performance. About half of all beneficiaries reported that the support helped them create or safeguard jobs and improve or introduce new products and processes. Product and process innovations contributed to making products and services that are being sold to Scotland and the rest of UK, as well as to export markets. In interviews businesses provided numerous examples of what they took away from the support and how they applied this to their business, highlighting exporting outcomes in particular.
- Among specific support activities, firms reported travel/accommodation support to access international markets, funding for international business development, one-to-one exporting

advice, R&D grants, innovation grants, and International Recovery Programme (IRP) grants as useful or most useful for their exporting and business purposes. Businesses that accessed a greater number of support activities tend to report higher impacts, especially if multiple activities were categorised as different Awareness-Capability-Exploitation (A-C-E) model categories. The econometric analysis shows that the support activities classed as helping firms to gain internationalisation capability (C in the A-C-E model) and its combinations show the most statistically significant and positive effects.

- Over 8 in 10 businesses, both beneficiary and non-beneficiary, expect to face challenges to exporting in the future, which presents further opportunities for the delivery partner support. There is also an opportunity of engaging firms that did not access the delivery partner support as over 4 in 10 of them reported not being aware of the available support.

The structure of this report is as follows: introduction; export promotion support (background & objectives); methodology; findings from the beneficiary survey; findings from beneficiary interviews; assessment of self-reported export sales outcomes; findings from the non-beneficiary survey; counterfactual analysis using non-beneficiary firms as a control group; and conclusions & recommendations.

1. Introduction

1.1. The Scottish Government provides funding to delivery partners to provide the customer facing export promotion support and services offered to businesses. These delivery partners are Scottish Development International (SE/SDI) (being Scottish Enterprise's international delivery arm), Highlands and Islands Enterprise (HIE), South of Scotland Enterprise (SoSE) and Scottish Chamber of Commerce (SCC).

1.2. Enterprise Research Centre (ERC) and the Centre for Business Prosperity (CBP) at Aston University were commissioned by the Scottish Government to undertake the evaluation of Scotland's export promotion support over the period of 2018/19 to 2020/21 (three financial years). The evaluation employs a mixed-method approach consisting of a detailed business survey and in-depth interviews with beneficiaries.

1.3. ERC and CBP were additionally commissioned to undertake two research projects to supplement the beneficiary evaluation. The first one is a data matching project which consists of linking beneficiary firms with non-treated Scottish firms to estimate impacts of the support between 2015-2021 using UK business datasets in the Secure Research Service environment (SRS) by the Office of National Statistics (ONS). This element is the subject of a separate report. The second project is a business survey with Scottish exporting firms that did not receive any support from the delivery partners (non-beneficiaries) that serves as a control group in econometric analyses, as presented in this report.

1.4. The commissions were steered by a working group on which the delivery partners set out above were represented.

1.5. This report sets out the findings and conclusions of the evaluation of the export promotion support, including the control group analysis.

2. Export promotion support

2.1. This section provides an overview of desk research carried out for the export promotion evaluation, including the Theory of Change (Logic Model).

Context and rationale

2.2. It is widely accepted that there is a positive link between a country's openness to international trade and its economic growth.[1] Over the last half a century, international trade globally, including UK and Scotland, increased significantly. Scotland's international exports have increased by 43% in nominal terms since 2010.[2] At the same time international trade has become more complex, particularly with relation to supply chains: intermediary goods or services, as opposed to final products or services, have played an increasing part in exports and imports.

2.3. Trade is an important part of Scotland's economy: the value of international exports in 2019 was £35.1 billion (latest available data), similarly divided between the EU (£16.4b) and non-EU countries (£18.7b).[3] However, exporting activity is uneven: three per cent of Scottish businesses export the majority of all exports (60%), these being predominantly large

[1] UK Government, "International trade: the economic benefits", Published 1 October 2018
[2] Export Statistics Scotland 2019. Note this is not adjusted for inflation.
[3] Ibid.

companies.[4] Additionally, despite the increasing value of exports over the years, the share of exports as part of GDP has remained relatively stable.[5]

2.4. The importance of promoting international trade has been recognised in Scotland at the highest policy level and encapsulated in the following documents: "Scotland's Vision for Trade" (January 2021) and the Export Growth Plan "Scotland: a Trading Nation" (May 2019), also referred to as ATN 2019. "Vision for Trade" sets out the key principles and values of Scotland as a nation to base international trade on, which are inclusive growth, wellbeing, sustainability, a just transition to net zero, and good governance.[6] It aims to deliver these principles in partnership with businesses while balancing and mitigating conflicting priorities. Meanwhile, ATN 2019 focuses on evidence-based priority areas, such as sectors and markets, expected to maximise the impact of export promotion efforts.

2.5. These Scottish Government policy documents recognise implications of the EU-exit for Scotland in terms of losing access to the Single Market. The impact of EU-exit on exports are expected to be negative and it, unfortunately, coincided with the COVID-19 pandemic that adversely affected the world economies in 2020 and subsequent years. The Scottish economy contracted by 19% in the second quarter of 2020.[7] Though it has since showed signs of recovery, in 2022 the COVID-19 pandemic was still affecting many businesses, exacerbated by the implementation of the EU-UK Trade and Cooperation Agreement and global supply chain disruption.

2.6. The UK as a whole experienced a sharp decrease in trade with the EU in 2021, relative to its trade with the rest of the world, and in the context of its recovery from the pandemic.[8] In 2021, Scotland's trade in goods with the EU was lower by about 12% than it would have been under continued EU membership.[9] The recovery has also been uneven with trade in services recovering to a lower extent than trade in goods, and smaller firms being disproportionally more negatively affected.[10] Overall, the effects of both EU-exit and COVID-19 are yet to be fully understood and estimated.

2.7. Looking forward, new business developments and policy levers are expected to affect international trade, most notably increasing digital adoption and net zero practices by businesses, something that can be thought of as a "triple transition of digitalisation, moves towards net zero, and productivity upgrading".[11] Scotland's international trade will also be affected by policies resolved under non-devolved powers, such as UK trade deals.

Aims and objectives

2.8. The key aim of the Scottish Government with regards to international trade is to increase exports to 25% of the country's GDP by 2029, i.e., by approximately £25 billion.[12] To achieve

[4] A Trading Nation – a plan for growing Scotland's exports, 2019
[5] Ibid.
[6] The Scottish Government Vision for Trade, 2020
[7] Scottish Government, Scotland's Wellbeing: The Impact of COVID-19, 2020
[8] ERC, The State of Small Business Britain 2021, 2022
[9] Scottish Government, "How has Scotland's trade in goods been affected by the new EU-UK trade agreement?" Technical Paper for Synthetic Control Analysis, Office of the Chief Economic Adviser, May 2022
[10] ERC, The State of Small Business Britain 2021, 2022
[11] Ibid.
[12] A Trading Nation – a plan for growing Scotland's exports, 2019

this target, ATN 2019 export promotion plan identifies a number of priority markets and sectors (see Table 1).

Table 1. Scotland's priority markets and sectors in order of export share (adapted from ATN)

Priority market	Priority sector
1. USA	1. Food and Drink
2. Germany	2. Engineering and Advanced Manufacturing
3. France	3. Life & Chemical Sciences
4. Netherlands	4. Energy
5. Switzerland	5. Technology, Digital & Media
6. Norway	6. Financial and Business Services
7. Poland	7. Education
8. Belgium	8. Tourism
9. China	
10. Ireland	
11. Denmark	
12. Sweden	
13. Italy	
14. Canada	
15. Spain	

2.9. Of the 346,000 Scottish business, 11,000 exported.[13] ATN identified business segments based on their export performance and expected requirements for export support as presented in Table 2.

Table 2. Business segments by export performance (adapted from ATN)

Business segment	Current exports	Government support needs
"Top 100 performing exporters" - over 70% of them large companies	Export around 59% of all exports	Unlikely to need export support services; may require tailored "economic diplomacy" and bespoke export support
"Solid performers" - approx. 400 businesses, 74% of them SMEs	23% of all exports	Likely to need a blend of intensive export support services and, economic diplomacy interventions as needed. Potentially have limited internal resources.
"Sleeping giants" - show good performance of selling internally and in the rest of UK in sectors where their products are likely to be in demand internationally - next 500 companies	500 companies out of 10,500 who together export 18%	Likely to need access to business support to grow their business, innovate their products and, when a strong opportunity arises, access to export support. Government will seek to provide them with focused mentoring support to improve the business and soft landing in markets. Potentially have management capabilities to support export activity.

[13] Pre-pandemic data

Business segment	Current exports	Government support needs
"Global by birth" – creative and technology businesses	-	Provision of access to enterprise agency business support services and export support services as needed (focused SDI support). Potentially internationally focused from the start and likely to be on enterprise agency scale-up programmes.
"Potential performers" - majority of businesses that export or aspire to, but typically at a smaller scale	-	General business support to grow, supplemented by one-to-many/one-to-few /1-2-1 global trade support provided by public and private sector (including enterprise agencies, SCC and DBT)

2.10. The Scottish Government provides funding to delivery partners to provide customer facing export promotion support to businesses across Scotland. The delivery partners are Scotland's three economic development agencies, that is, Scottish Enterprise (SE), Highlands and Islands Enterprise (HIE) and South of Scotland Enterprise (SoSE) plus the Scottish Chamber of Commerce (SCC). The partners collectively deliver a range of products and services, including a coordinated approach to international export promotion.

2.11. Scottish Enterprise (SE), through its international division, Scottish Development International (SDI), provides a Scotland-wide export promotion service to businesses. HIE and SoSE provide additional regional support to businesses which focuses primarily on awareness raising of exporting as a business growth opportunity. These companies are then referred to SDI at the appropriate point for more intensive or specialised international support. SCC provide a range of private sector export support to businesses and, in addition, deliver a range of international trade cross-sectoral missions that the Scottish Government grant supports SCC to deliver.

2.12. Export promotion support is focused on three distinct phases of activity:[14]

- Raising awareness and building ambition (A)
- Developing capacity and capability (C)
- Supporting businesses to expand into new markets and to exploit new opportunities (E)

2.13. These activities reflect the stages an individual business needs to go through in order to build a sustainably successful export base, with businesses often progressing from initial awareness of a new market opportunity, then developing the capacity to respond to the opportunity followed by achieving export sales. The support delivered to businesses at various stages of their export journey can therefore be broadly categorised as A-C-E or as a combination of these. The precise delivery format varies across sectors and markets being considered while broadly following the stages of the A-C-E model.[15] It is important to recognise that businesses may not always require support to be delivered sequentially or in a linear way, in which case support may target a particular phase of the A-C-E model.

2.14. This evaluation covers the international work of the three agencies: SE/SDI, HIE and SoSE, plus the cross-sectoral mission work of SCC.

[14] A Trading Nation – a plan for growing Scotland's exports, 2019

[15] Slow, J and Fletcher, M "Increasing the number of Scottish exporters: the A-C-E framework and its application by Scottish Enterprise, 2017

Evaluation framework

2.15. ATN included a commitment to develop the evaluation framework which would ensure that the evaluation of the support is consistent and robust. In the development of this framework, consultations and discussions with a variety of stakeholders resulted in the decision to adopt a mixed-methods approach. The mixed-method approach combines quantitative analysis with complementary qualitative research and consists of four components:

- Understanding what impact is being achieved through the support provided;
- What the relative contributions are of different types of support ("what works"), how resources can be reallocated where appropriate in order to maximise impacts;
- What is the context and the mechanisms through which impacts are being achieved (the "how");
- What can be learned in order to improve delivery or working with companies.

2.16. The key focus of the evaluation is on assessing the increase of export sales. The development of the overall evaluation objectives was informed by the Logic Model for Export Promotion Support that includes increasing export sales as a key outcome (presented in Appendix 1).

3. Methodology

3.1. This section presents a brief overview of the evaluation methodology.[16]

3.2. The export promotion supported 3,053 companies in financial years of 2018/19 – 2020/21. This includes companies that received export support and started exporting and those that did not start exporting. This also includes a number of companies that received wider business development support as part of their plan to increase their international exports.[17] Businesses could seek support from multiple delivery partners and multiple support activities.

3.3. The beneficiary evaluation used a mixed-methods approach of surveying (by email and/or by telephone)[18] and in-depth qualitative interviewing. Of the 3,053 supported companies, 2,329 opted in and/or were included in the evaluation survey (76%),[19] and 463 responded to the survey, which is a response rate of 22% (see Table 3). This represents the margin of error of four per cent, which means that survey findings are representative of the firms that opted into the evaluation. Companies that agreed to a follow-up in the survey, were invited to participate in qualitative interviews, resulting in interviews with 23 companies.

Table 3. Beneficiary businesses by evaluation stage

	Delivery partner				
	SE/SDI	**HIE**	**SCC**	**Multiple******	**Total**
All supported firms	2,311*	-	-	-	3,053**
Firms that opted in	1,833	290	95***	111	2,329

[16] There is a separate more detailed methodology note to accompany this final report.
[17] Companies that received wider business development support contributed to SDI's planned international sales measure.
[18] HIE and SCC beneficiaries could be contacted by email only as no phone numbers were provided; SDI/SE beneficiaries could be contacted by either.
[19] In addition to opting out, some firms were excluded from the evaluation by SDI operational decisions, for example, when a company was subject to legal sanctions.

	Delivery partner				
	SE/SDI	**HIE**	**SCC**	**Multiple******	**Total**
Post-survey adjustment	1637	285	90	106	2,118
Responding firms	366	45	18	34	463
Response rate[20]	22%	16%	20%	32%	22%

*Possible overlap with other delivery partners; ** Scottish Government's collation of delivery partners' management information data. Population of all supported firms was not available from HIE and SCC; *** SCC supported firms included all firms registering for a trade mission, unspecified time period; All but two firms supported by HIE and SCC were also supported by SE/SDI

3.4. Based on data provided by the SE/SDI Management Information system (i.e., customer relationship management data), the profile of all supported firms is very similar to that of firms that opted into the evaluation. However, SE/SDI Management Information did not include data on business characteristics (e.g., size) and motivations to opt out were unknown, so it is not possible to assess differences based on every key characteristic. This means that survey findings should only be inferred to those firms that opted into the evaluation. The profile of survey respondents is also very similar to all firms that opted-in, which indicates that there is no noticeable response bias.

3.5. For the control group evaluation, a telephone survey was conducted with exporting Scottish firms that have not received export or wider business development support from delivery partners since 2015, that is, non-beneficiaries. The sample for non-beneficiary firms was drawn from the most current HMRC list of exporters of goods and the Inter-Departmental Business Register extracts (IDBR) (goods and/or services). This survey achieved a response from 135 firms. Data from the non-beneficiary survey was analysed alongside data from beneficiary exporters who completed the survey in full (175 firms) using a variety of treatment effect estimations.

3.6. See the Methodology Note for more detail on evaluation methods and the beneficiary sample representativeness.

4. Beneficiary survey responses

4.1. This section presents findings from the beneficiary survey of 463 supported firms.

Exporting activity

4.2. Sixty per cent of responding businesses were current exporters (i.e., exported goods and/or services outside of UK in the last 12 months). The majority of businesses (52%) started to export in the period of 2000-2017, and nearly all (89%) exported in every year since they started. These regular exporters have been exporting on average for 14 years (varying from one to 61 years).

[20] Response rate is calculated on the basis of post-survey adjustments to 2,118 firms that opted into the evaluation and could be reached. See the Methodology Note for more detail.

4.3. Firms who were not continuous exporters (10%), exported on average for seven years.[21] Most of them (65% or 13 firms) restarted exporting in the evaluation period of 2018-2021, largely in 2018 and 2019 (85%, or 11 firms).

4.4. Firms tended to export to one industrial market (74%). Most of them (65%) exported to at least one industrial market specified as a priority market in ATN, though about a third (35%) export to a non-priority market (full list can be found in Appendix 2). Of ATN markets, most commonly beneficiaries exported to the Food & Drink market (21%) and Technology, Digital & Media (18%) (Figure 1).

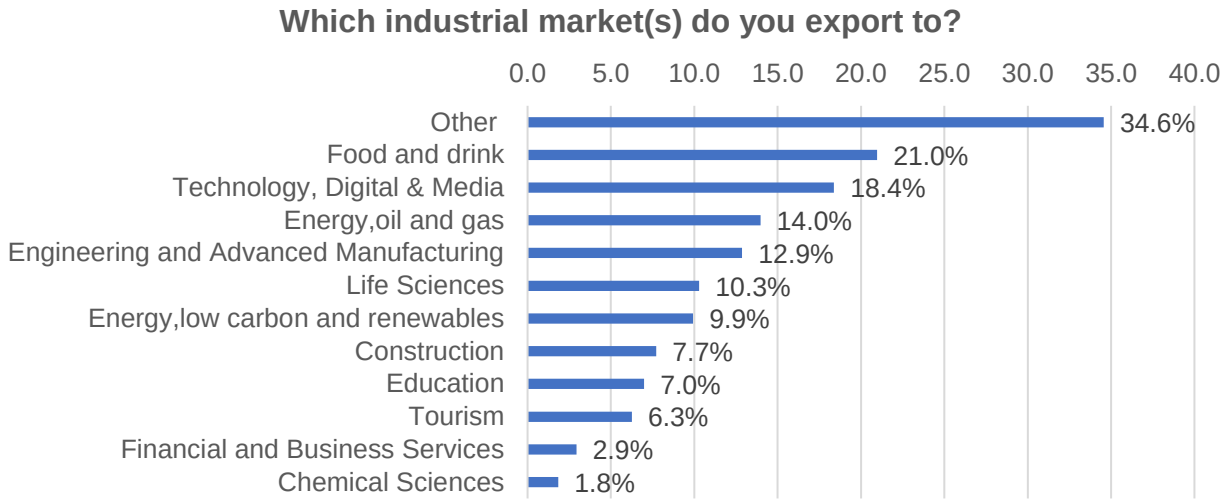


Figure 1. Percentage of exporting firms, multiple selection allowed (N=272)

4.5. Forty-nine per cent of businesses exported goods, 30% exported services and 21% exported both. The majority of goods exporters export finished goods (81%, see Figure 2). Meanwhile, among firms that exported services, digital services[22] were the most common (33% of service exporters), followed by construction and engineering services (27%). Twenty-seven per cent of firms exported "other" types of services which vary greatly (Appendix 3).

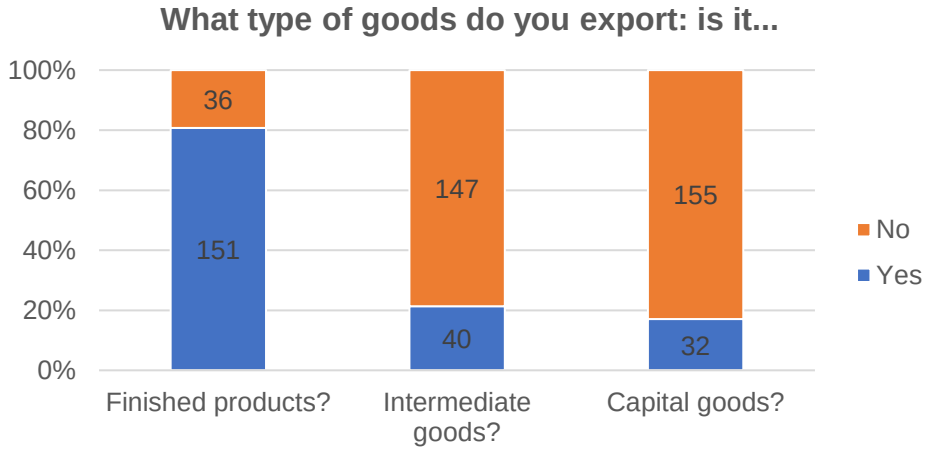


Figure 2. Share and count of firms, exporters of goods only (N=187). Whisky and laptops are examples of finished products, intermediate goods are used as parts to produce other goods (e.g., car parts, and raw materials such as grain), capital goods are used in the production (e.g., machinery, tools, equipment).

[21] One per cent did not know if their company has been continuously exporting or not.
[22] For example, online consultancy, cloud computing.

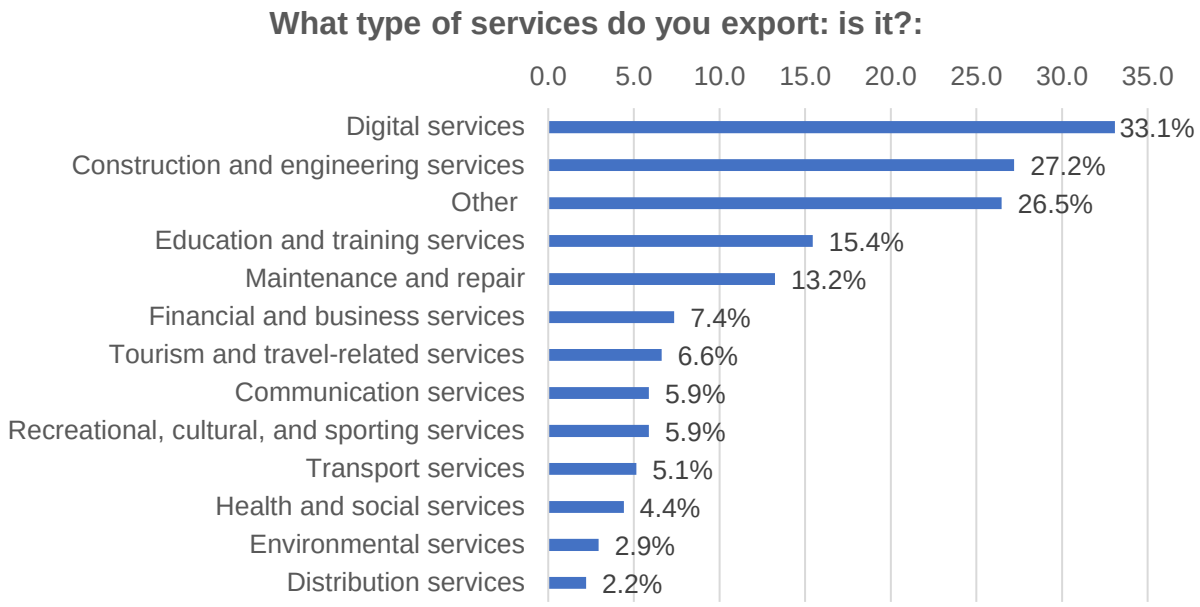


Figure 3. Percentage of firms, service exporters only; multiple selection allowed (N=136)

4.6. Forty-four per cent of firms exported exclusively to the countries identified as 15 priority markets by the ATN 2019. They most commonly exported to USA (61%), followed by Germany, France, Netherlands, Canada and Ireland (approx. 40% each, Figure 4). Over half of firms (56%) also exported to other countries outside of ATN15. Of this 77-country list, the most common export markets were Australia (28%), New Zealand (15%) and United Arab Emirates (15%) (the full list can be found in Appendix 4).

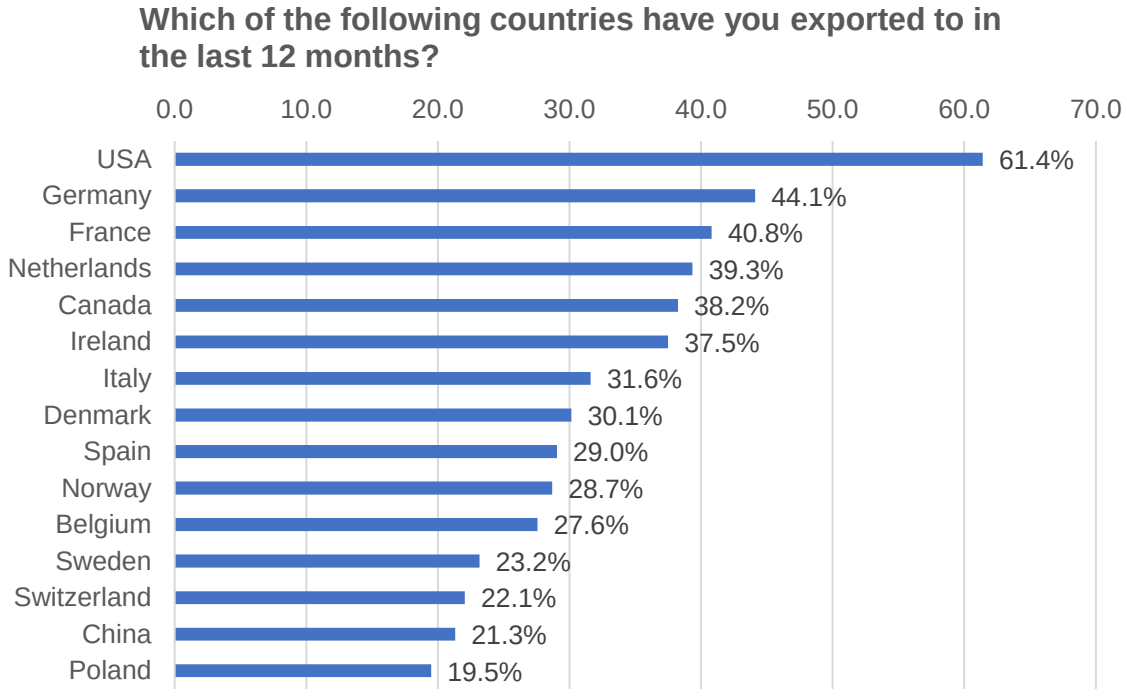


Figure 4. Percentage of exporting firms (N=272)

4.7. USA was the largest market by export value for beneficiaries both in 2017 (before the support) and 2021 (after), with other ATN markets experiencing small changes in importance

between these periods (Figure 5). Overall, an ATN15 country was the largest market both in 2020 (80%) and 2021 (75%). Among other countries, Australia was typically the largest market in both years.

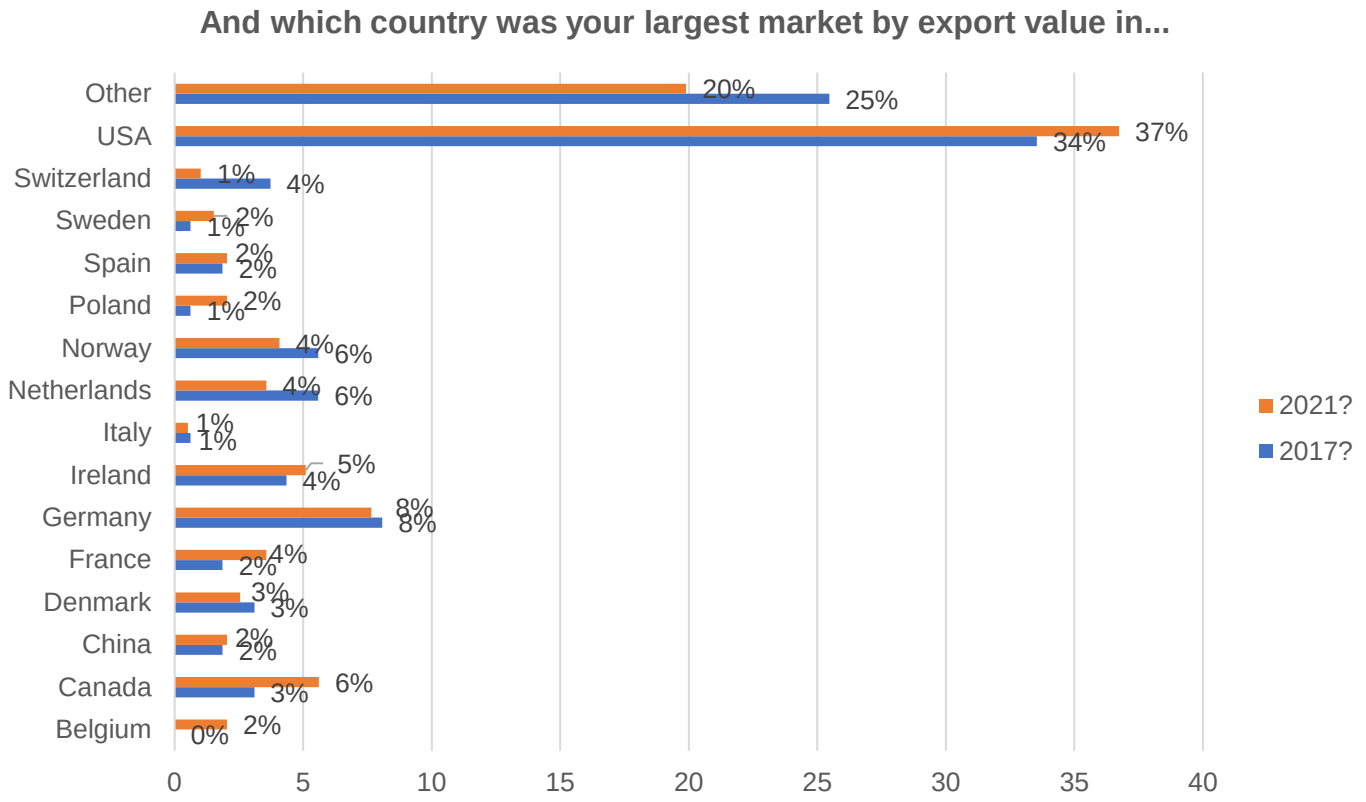


Figure 5. Percentage of exporting firms (N=161 in 2017, N=196 in 2021)

4.8. Exporters reported average export sales of about £2.5m per firm in 2021, an increase from £2m in 2017 prior to the support (Figure 6). The total value of export sales also increased (£472.6 mil), though that can be partly attributed to a change in the number of firms exporting (and reporting export sales) in each year.

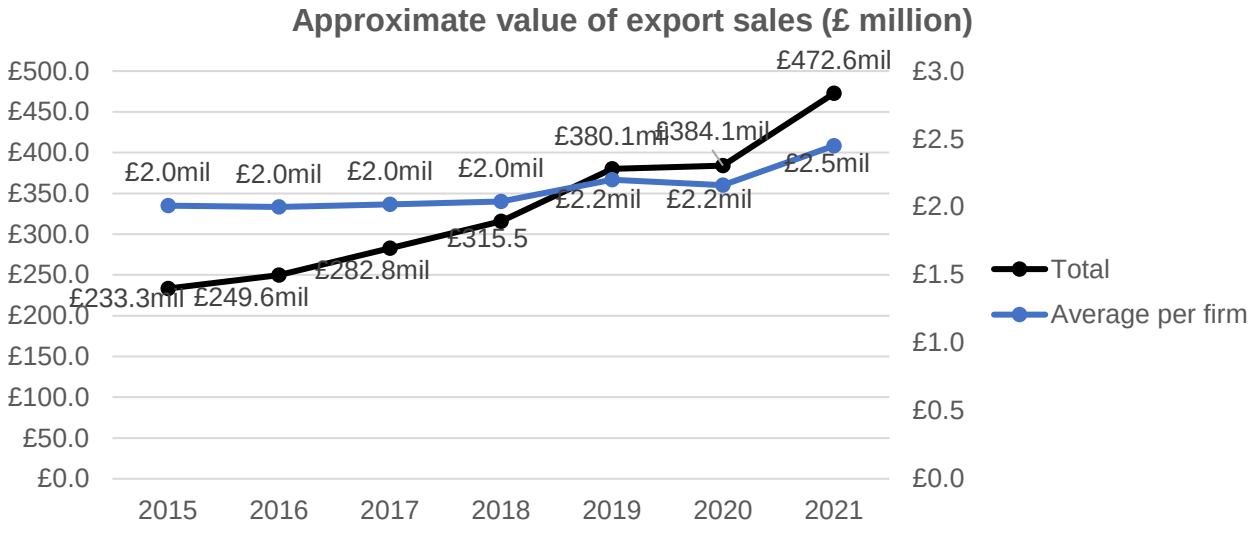


Figure 6. Data from exporting firms with more than £0 in export sales in a given year, counts vary depending on the year.

Firms that do not export

4.9. Approximately 40% of beneficiaries reported that they do not export. Of them, 73% never exported. Those that had exported in the past, typically last exported in 2020-2021 (Figure 7). On average they exported for about three years before stopping.

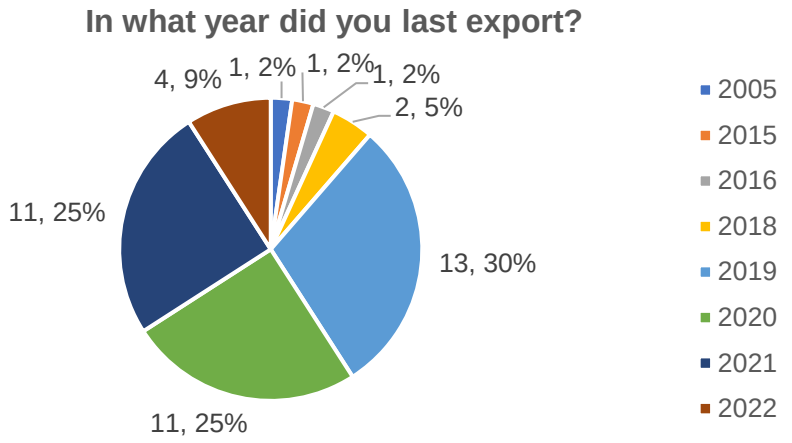


Figure 7. Percentage and count of non-exporting firms that used to export (N=44)

4.10. Non-exporting firms had varying explanations for why they are not exporting. Top three reasons were organisational constraints (e.g., management capacity) (19% of all non-exporters), an explanation that exporting was irrelevant or not applicable to the business (18%) and additional paperwork (15%). More commonly specified "other" reasons were:

- Product-related (12%), e.g., not making products, product shelf-life, not fitting the export market, product still in development etc;
- Stage of business (7%), e.g., being a small company or a start-up, not market ready, focusing on domestic market, expecting to close down etc;
- Business model/preferences (6%), e.g., do not manufacture domestically, contracted to supply domestically, wish to focus domestically first, etc;
- Client-related (4%), e.g., lack of client demand, finding the right customers;
- COVID-19 (4%);
- Costs of exporting (3%);
- Government/support issues (3%), e.g., lack of support from delivery partners fit for a specific industry type.

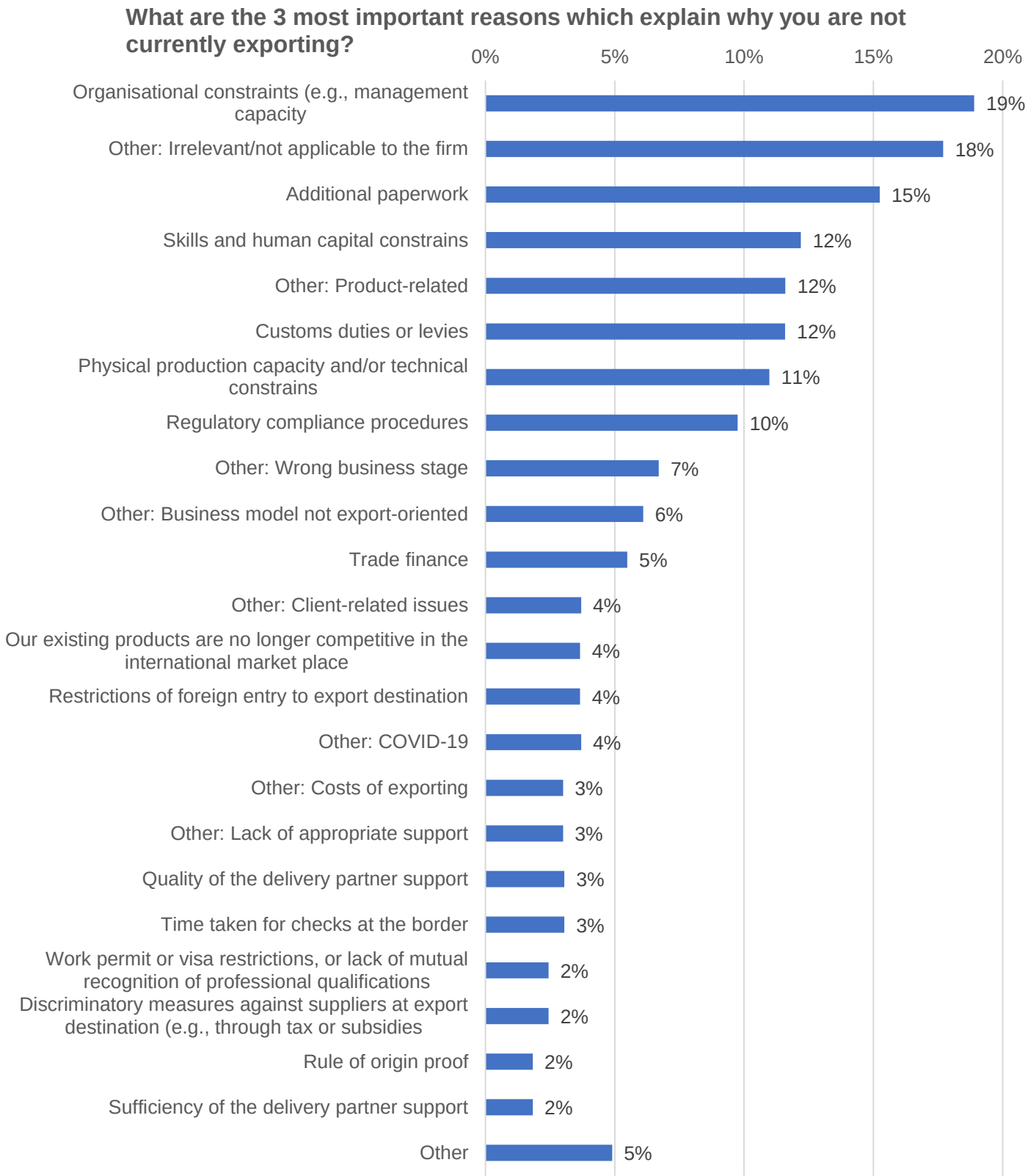


Figure 8. Percentage of non-exporting firms (N=164)

Support received

4.11. The majority of all responding businesses (79%) were supported by SE/SDI, followed by HIE (10%) and SCC trade missions (four per cent). Further seven per cent received support from two delivery partners. Every delivery partner supported some firms that also accessed support from another delivery partner with HIE and SCC having a higher share of such firms (approx. 3 in 10). For HIE and SCC the other delivery partner was SE/SDI.

4.12. Delivery partners categorised their support as international support (all delivery partners) and wider business development support (SE/SDI only). Firms could access either or both of these support types. For evaluation purposes, SE/SDI further distinguished firms that accessed international support and R&D or innovation assistance from the wider business development portfolio, and international support accessed together with other forms of wider business development (aside from R&D/innovation). As per delivery partner records, nearly 7 in 10 of survey respondents received international support only, followed by 17% that received wider business development support and 14% that received both types of support (Figure 9). Of the latter, eight per cent accessed both international support and R&D/innovation support.

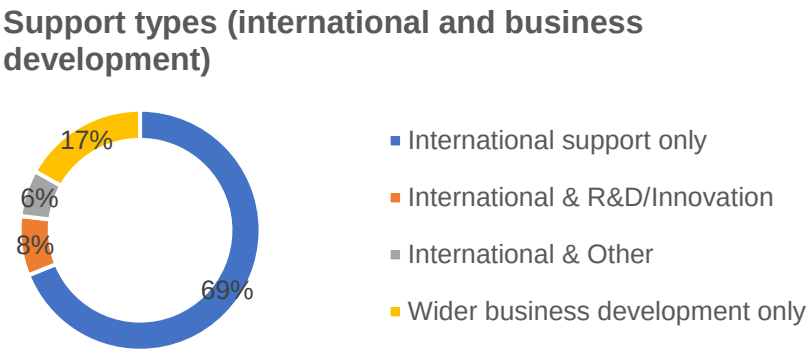


Figure 9. Percentage of responding firms (N=463) matched with delivery partner records on the support types.

4.13. Delivery partners further categorised the international support according to the A-C-E model, which, as a reminder, stands for Awareness, Capability and Exploitation. Since firms could access multiple forms of support, some firms received support from multiple A-C-E categories. Of those firms that received international support, many received multiple activities and therefore multiple A-C-E types, including all of them (40%). Nearly the same proportion (39%) received support classed as Capability (Figure 10).

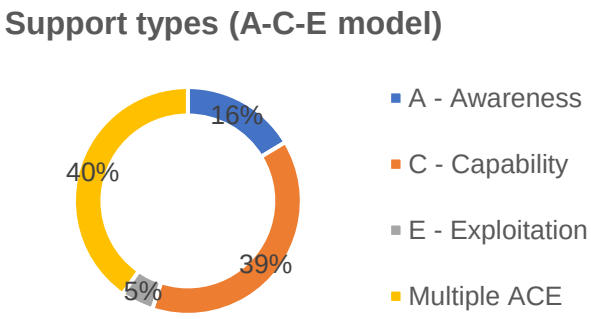


Figure 10. Percentage of responding firms that accessed international support (N=385) as per delivery partner records.

4.14. On average firms accessed four support activities (3.6) across all delivery partners. Forty per cent of firms accessed one support activity and 71% accessed one to three activities. A small share of firms (six per cent) accessed 10 to 20 activities and five firms accessed over 20.

4.15. The majority of businesses (63%) accessed one to two support activities across all delivery partners. Responding businesses received support across all evaluation years: 14% in 2018/19, 26% in 2019/20, 36% in 2020/21 and nearly a quarter (24%) in multiple years. Firms that accessed support exclusively from SE/SDI accessed on average 3.8 support activities.

4.16. In addition to support activities specified in delivery partners' records, the evaluation survey asked firms to specify support they received. Fifty-four per cent of respondents reported receiving export support in 2018/19-2020/21 (equivalent to international support) and 53% received wider business development support. Taken together, 34% of firms reported receiving both types of support (Figure 11).

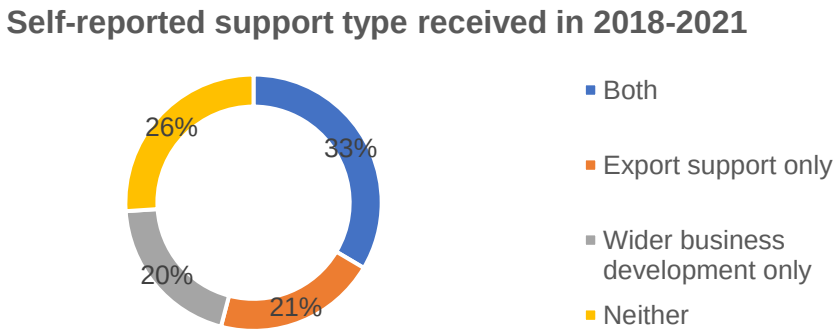
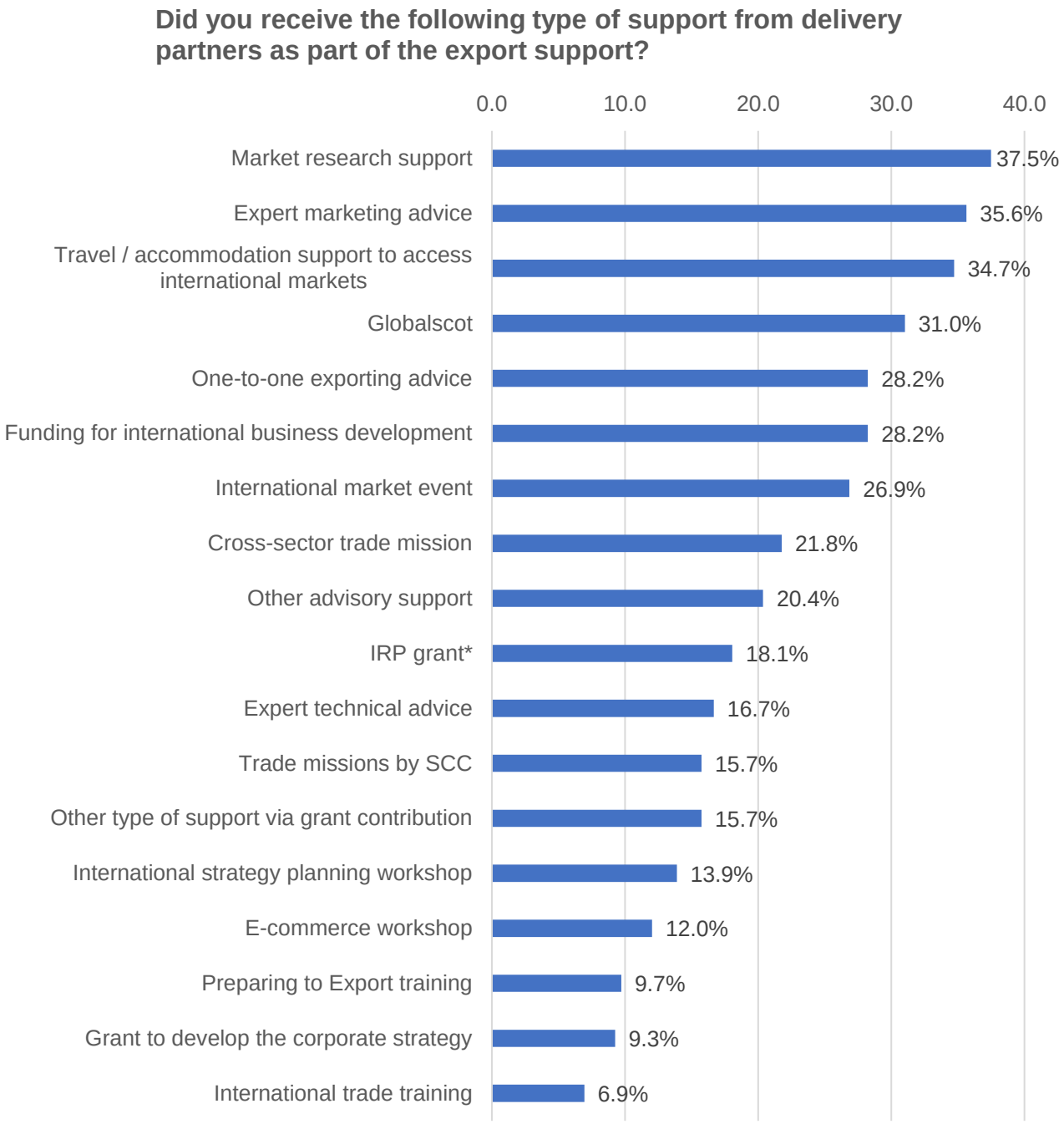


Figure 11. Percentage of firms (N=403)

4.17. In terms of specific export support activities, firms most commonly reported accessing market research support (38%), expert marketing advice (36%) and travel / accommodation support to access international markets (35%) (Figure 12). In wider business development support, firms most commonly accessed intellectual property advice (30%), R&D grants (30%), business strategy planning workshops (28%) and innovation grants (27%) (Figure 13). About 14% to 20% of firms reported accessing other activities by delivery partners: these varied and can be found in Appendix 5.



*IRP grant stands for International scale-up grant / International Recovery Programme (IRP) grant as a response to Covid-19

Figure 12. Percentage of firms that self-reported accessing specific types of export support (N=216)

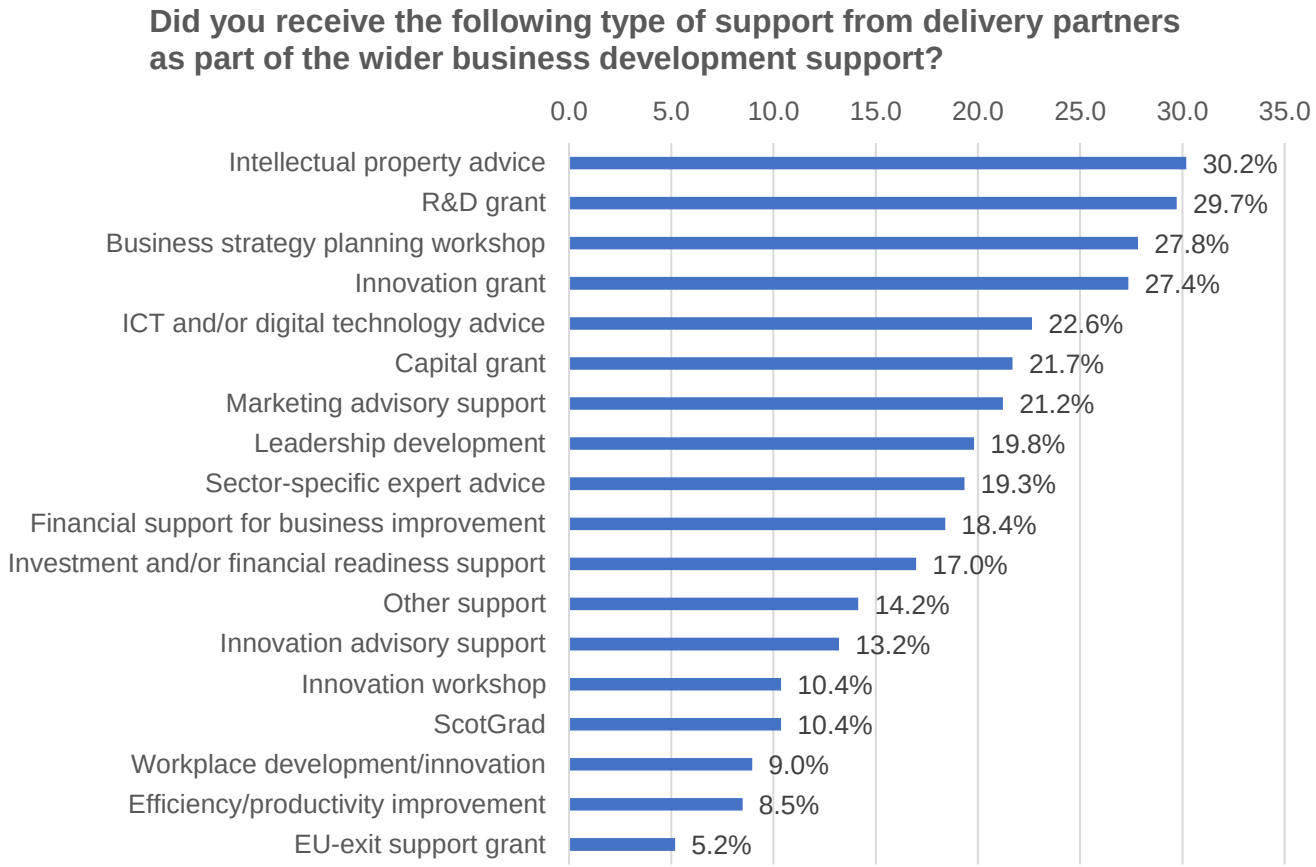


Figure 13. Percentage of firms that self-reported accessing specific type of wider business development support (N=212)

4.18. Interestingly, 26% of beneficiaries reported receiving neither export nor wider business development support in 2018-2021, despite taking the survey that clearly referenced this support by delivery partners. Reasons for such a response are not fully clear. Based on Management Information data,[23] this response is not related to specific delivery partners, financial years, nor support types once the difference in the number of accessed activities is accounted for. In fact, records show that firms reporting no support on average accessed fewer support activities (2.1 vs 3.9), which potentially can indicate recall issues due to accessing "less" support. Alternatively, some firms might not recognise support labels used by delivery partners and/or not categorise assistance received in the same way.

Impact on exporting activities

4.19. This section of the report provides results on impacts the support had on firms' exporting activities. **It applies only to firms that are currently exporting.**

Impact on export entry/re-entry

4.20. Approximately 21% of exporting beneficiaries started/re-started exporting in the evaluation period of 2018-2021. Of them, 47% attributed their market entry/re-entry to the support received: 33% attributed it partially (i.e., progress would have been slower), and 14%

[23] These firms were routed out of the survey because subsequent questions referred specifically to the support, so there is no further self-reported data was gathered.

attributed fully (i.e., they would not have started exporting) (Figure 14). Of those 33% for whom progress would have been slower, the largest share (44%) believed it would have taken them an extra one to three years to start exporting without the support (Figure 15).

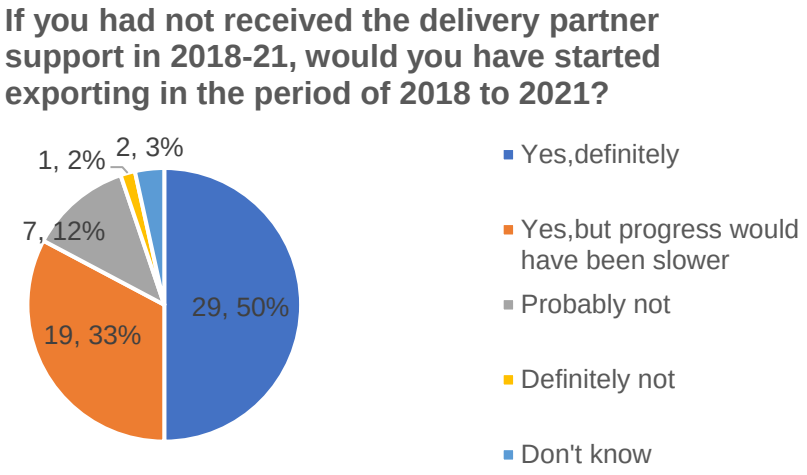


Figure 14. Count and percentage of firms, firms that started/re-started exporting in 2018-2021 only (N=58)

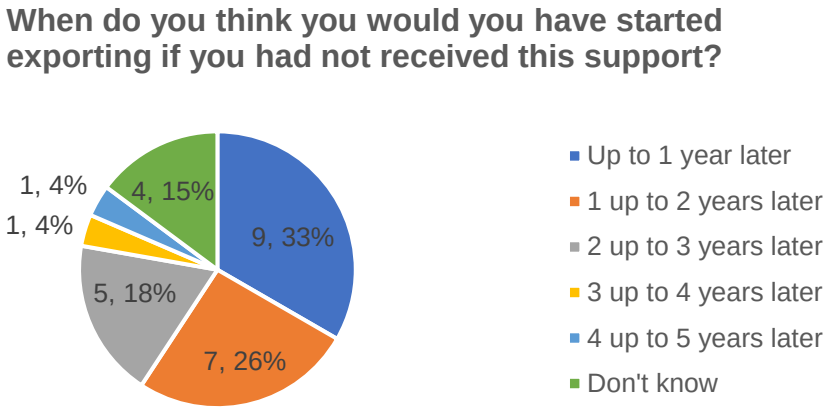


Figure 15. Count and percentage of firms attributing speed of their export entry/re-entry (N=27)

Impact on export sales

4.21. The majority of exporting firms (58%) reported that the support has had an impact on their export sales (Figure 16). Of them, 30% would have not achieved some of their sales while 9% would have not achieved any of their sales. Further 20% would have achieved the same amount of export sales, but later, typically one to three years later (Figure 17).

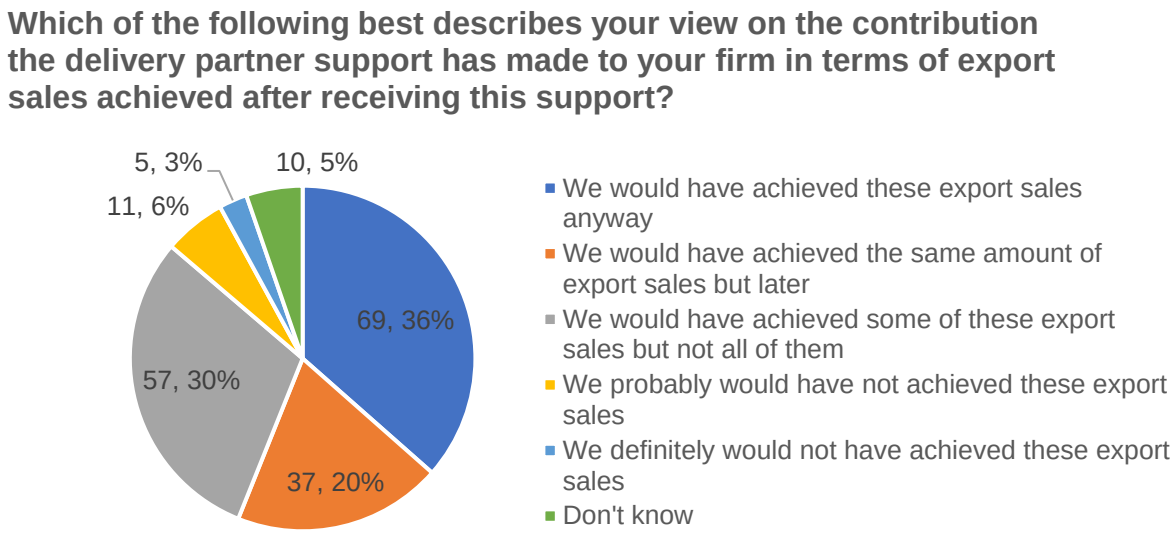


Figure 16. Count and percentage of exporting firms (N=189)

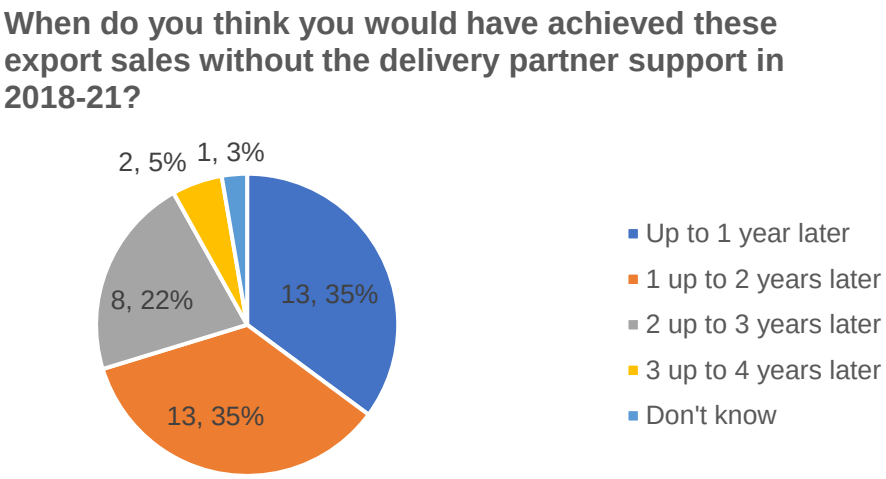


Figure 17. Count and percentage of exporting firms that would have achieved their export sales later without the support (N=37)

4.22. Those firms that reported impact were asked to approximate the percentage of the total value of their exports sales they would have achieved without the delivery partner support. On average, firms reported that they would have achieved 59% of their total value of export sales without the delivery partner support. In other words, they attributed 41% of total value of export sales to the support. For individual firms, of course, this percentage varied with some firms reporting that they would have not achieved any export sales and the others would have achieved 90% without the support. Firms also reported that on average 22% of their competitors are based in Scotland (varying only slightly from 21.4% to 22.02%).

4.23. Survey respondents, both those that export and those that do not, were asked if they anticipated their export sales to increase as a result of the delivery partner support over the next three years: 46% said yes, 37% no and 18% did not know. Those that anticipate that

their export sales would increase, reported that, on average, they anticipate them to increase by 43% over the next three years, ranging from 1% to 300%.[24]

4.24. Though all firms were asked this question as impacts from support might take longer to materialise, current exporters were more likely to anticipate their sales to increase compared to firms not currently exporting (57% vs 23%). Estimates of an anticipated share in export sales are similar between both groups (42% for exporters compared to 49% for non-exporters).

Impact on market access

4.25. About a quarter of businesses (27%) reported that as a result of the support they have started to export to new countries (Figure 18). Nearly half of them (47%, or 24 firms) started to export to at least one new ATN15 country, typically Canada, USA, Belgium, China and Spain (Figure 19). The remaining firms started to export to 29 other countries. This list varies though most commonly mentioned are Australia (by five firms) and Japan (four) (full list can be found in Appendix 6).

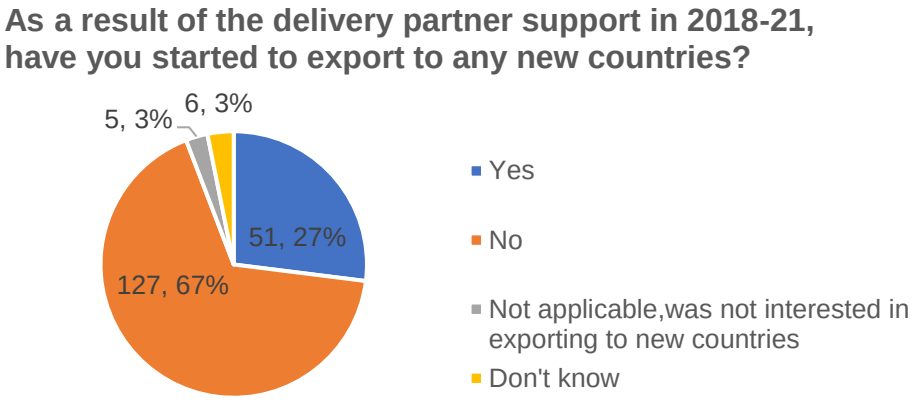


Figure 18. Percentage and count of exporting firms (N=189)

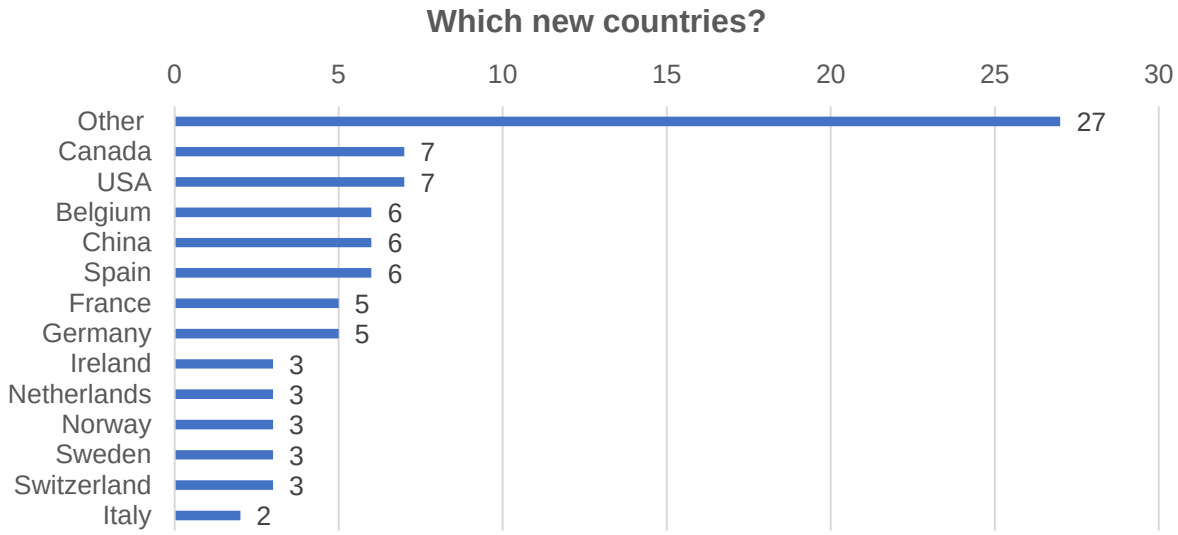


Figure 19. Count of exporting firms

[24] This excludes four outliers that anticipated an increase of 999% or more.

Other export impacts

4.26. Nearly a third of exporters (29%) reported that the support impacted the type of product categories they export: mostly they started to export new services and new related goods (Figure 20).

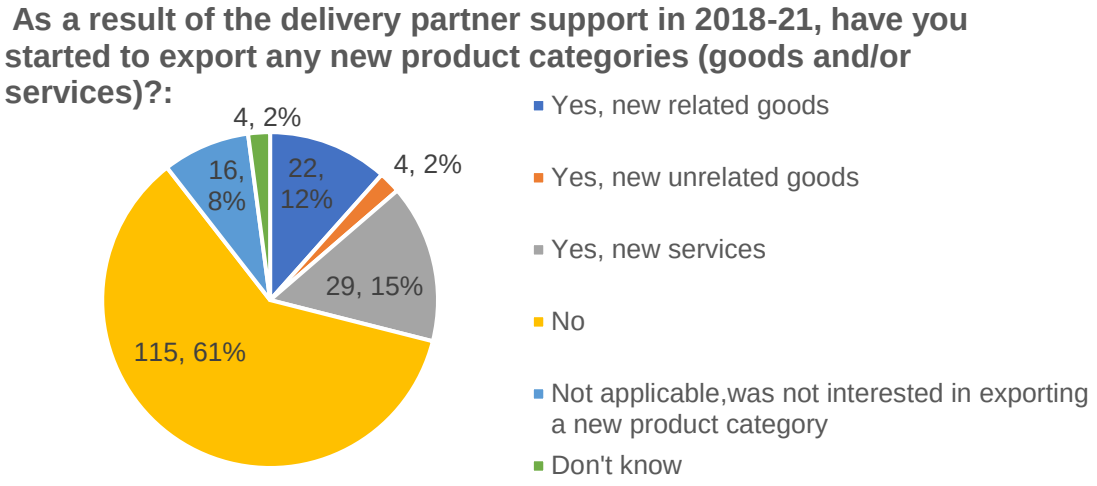


Figure 20. Percentage and count of exporting firms (N=188)

4.27. Furthermore, 41% of exporters reported that they started to export more continuously as a result of the support (Figure 21).

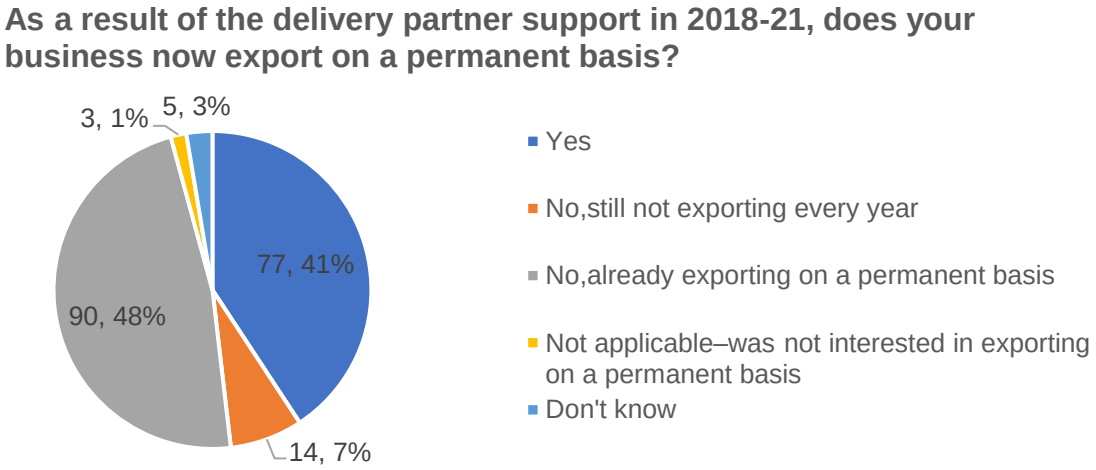


Figure 21. Percentage and count of exporting firms (N=189)

4.28. A small share of exporters (6%) reported receiving external finance for exporting activities as a result of the support (Figure 22). This funding was similarly split between grants (six firms), equity (five firms) and debt funding (four firms) from mostly business angels (five firms), other sources of funding (five firms, e.g., bank), venture capitalists (three firms), public sector (three firms, Innovate UK, local council, HIE), and a clearing bank (one firm). Both equity and debt finance came from UK based institutions, mainly Scotland (e.g., four Scottish-based institutions and three based elsewhere in the UK for equity finance).

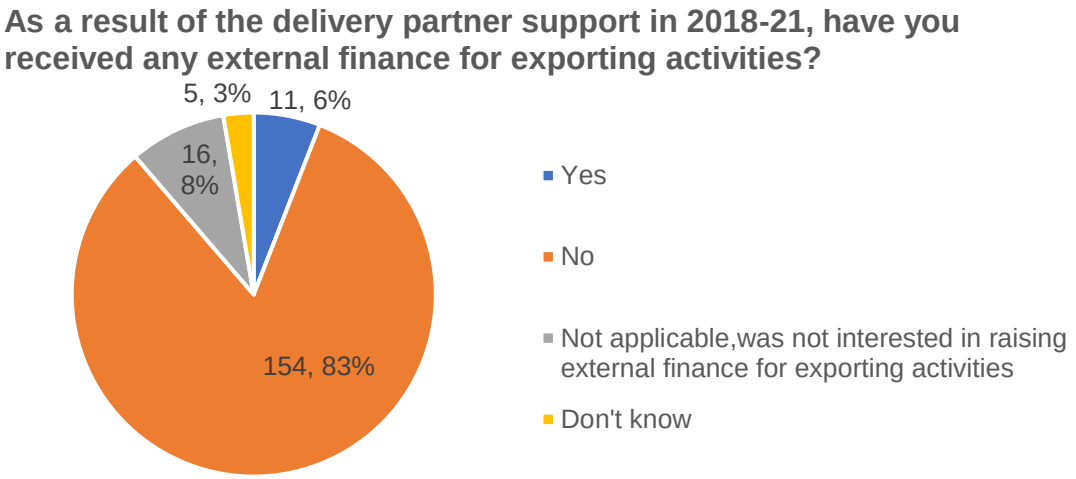


Figure 22. Percentage and count of exporting firms (N=186)

Results of exporting activities

4.29. Those firms that currently export were asked a series of questions on how their exporting activities affected their businesses. Nearly half (45%) of firms report that their exporting activities increased their firm's R&D investment in 2018-2021 (Figure 23). These companies further specified that their R&D investment increased on average by 45% (varying greatly from 1% to 400%, though 60% of firms increased it by up to 35%).

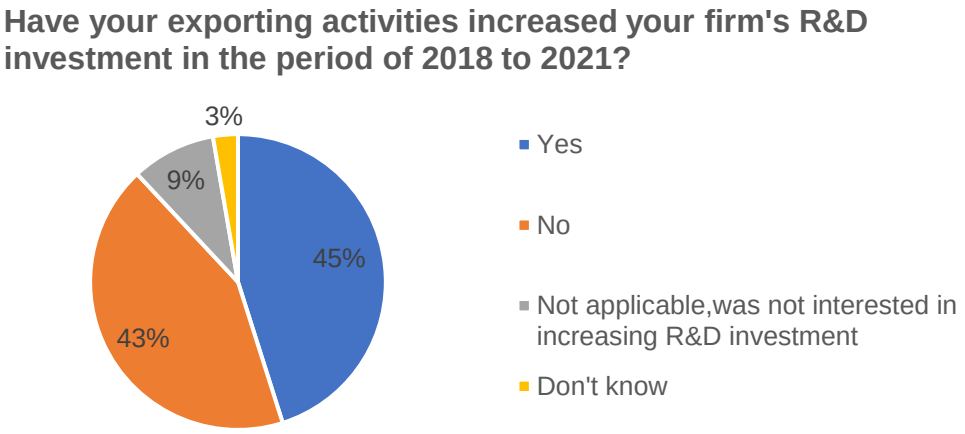


Figure 23. Percentage of exporting firms (N=184)

4.30. Similarly, for 46% of firms exporting activities increased their firm's capital spending in 2018-2021 (Figure 24). On average capital spending increased by about 62% (ranging from 1% to 1000%, or up to 30% for majority – 65% - of firms).

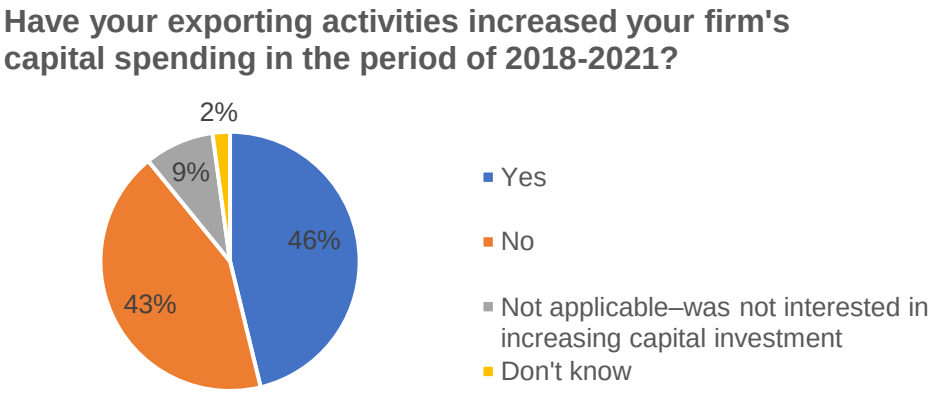


Figure 24. Percentage of exporting firms (N=184)

4.31. Furthermore, 42% of firms reported that their supported export activities in 2018-2021 positively affected their firm's GVA[25] per employee and 51% reported that they positively affected their firm's revenue per employee (Figure 25).

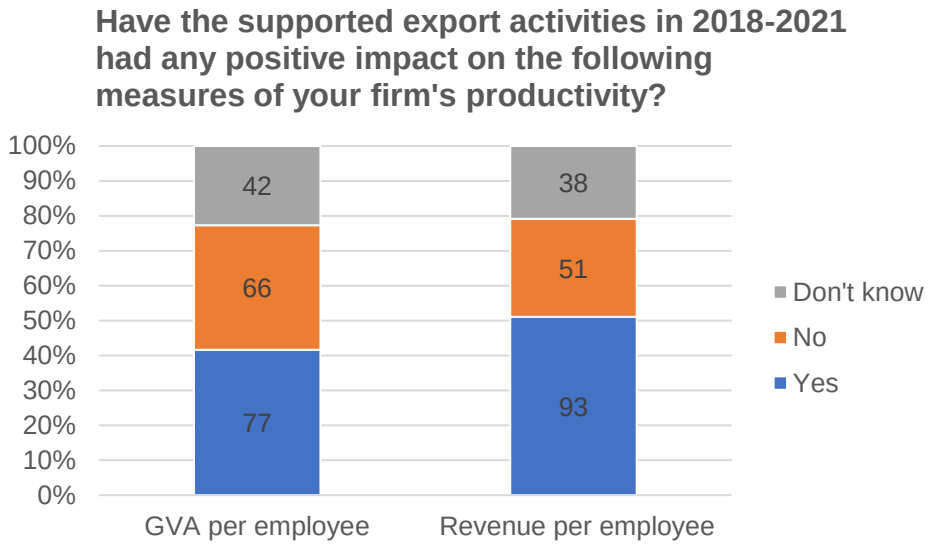


Figure 25. Share and count of exporting firms that accessed export support (N=185 (GVA), N=182 (revenue))

4.32. For a smaller proportion of firms, 15%, exporting activities resulted in their firm receiving external finance in 2018-21.

[25] Gross Value Added is the value of goods and services produced by the firm. It is the total value of output produced, without including the intermediary costs that went into producing them.

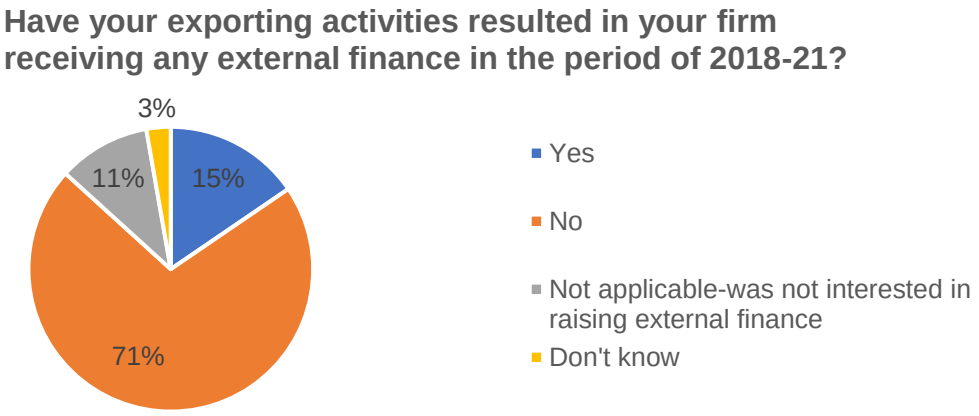


Figure 26. Percentage of exporting firms (N=181)

Impact on employment

4.33. Firms that self-reportedly accessed export support were asked how it affected their employment. Just over half of firms that received export support (53%) reported that they created or safeguarded jobs as a result of this export support (Figure 27). On average firms reported creating four new jobs (ranging from 1 to 30) and safeguarding eight jobs (ranging from 1 to 75) as a result of export support.[26]

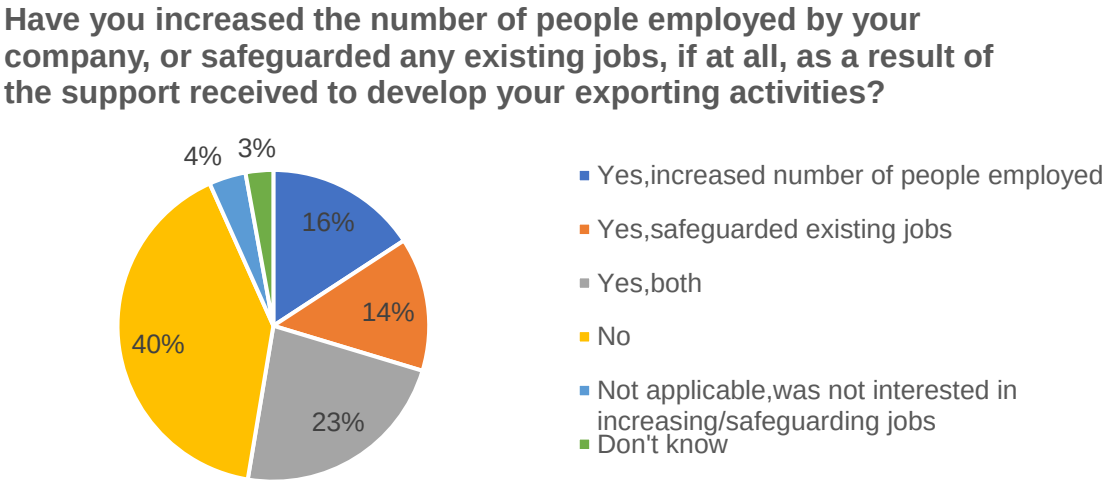


Figure 27. Percentage of firms that self-reported receiving export support (N=209)

Impact on products and processes

4.34. **The following sections apply to all beneficiaries regardless of exporting status.** They were asked how the support affected their product and process development.

Product impacts

4.35. Just over half (51%) of all beneficiaries reported that the support positively impacted their product development (Figure 28), often by helping firms to introduce new and to improve existing products. Most of the firms that introduced new products as a result of the support

[26] These estimates account for "don't know" estimates: variation is marginal between firms that estimated and firms that provided exact numbers.

(58%) reported that the new products are both new to the market and new to the company (Figure 29). New and/or improved products as a result of the support benefited both the domestic UK market and the export markets: 77% of firms sold them to Scotland, 79% to the rest of UK, 65% to the EU and 70% to the rest of the world.

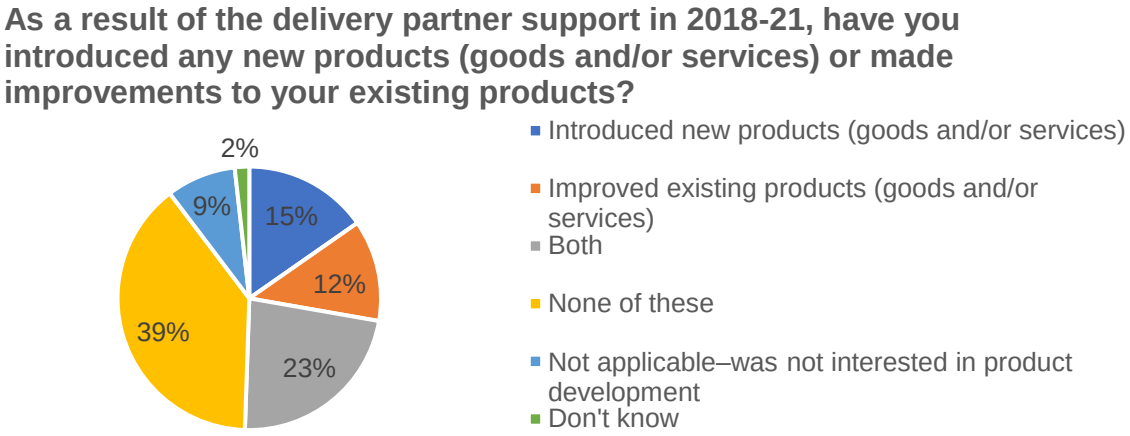


Figure 28. Percentage of firms (N=281)

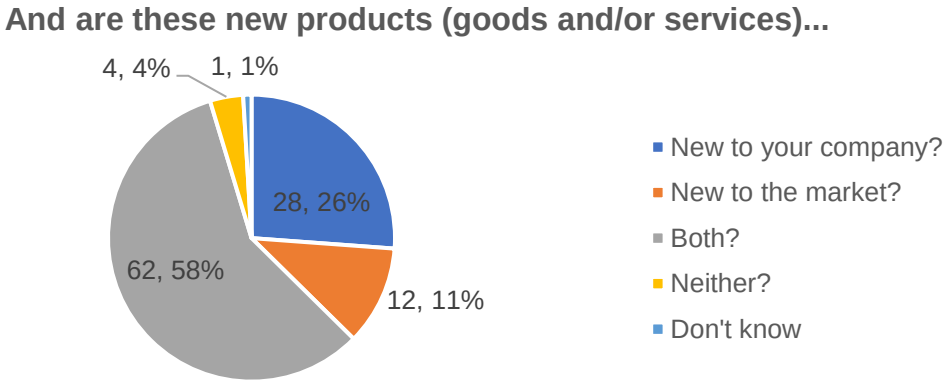


Figure 29. Percentage and count of firms that introduced new products as a result of the support (N=107)

Process impacts

4.36. Forty-one per cent of beneficiaries introduced new business processes or made improvements to existing processes as a result of the support, typically both (Figure 30). Forty-four per cent of these new and/or improved processes were automated. These process improvements were somewhat more likely to benefit the UK market: 82% and 81% of firms said that these processes contributed to making products sold to Scotland and the rest of UK respectively, compared to 64% selling to the EU and the rest of the world (each).

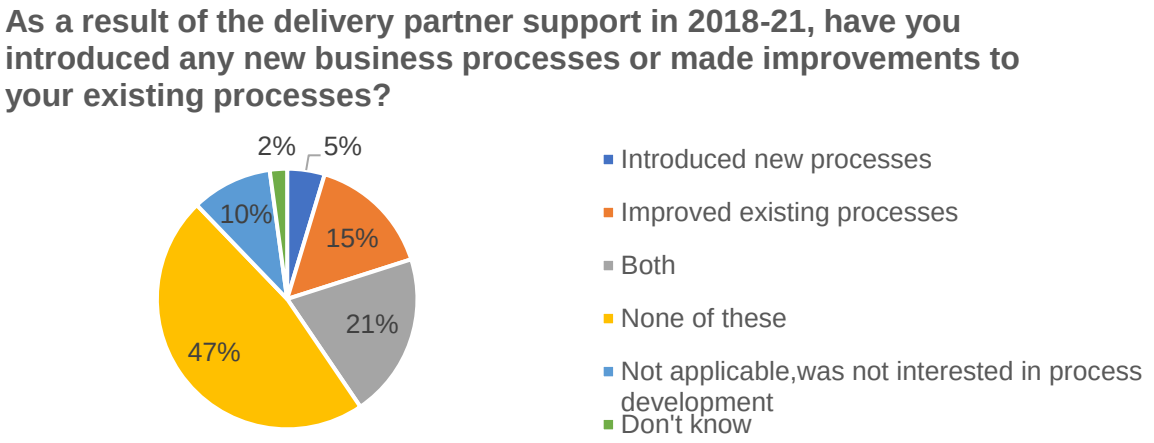


Figure 30. Percentage of firms (N=279)

Other benefits

4.37. 142 firms specified other benefits that they received as a result of the support. These varied, but typically beneficiaries reported the following:

- Receiving useful advice, expert support or guidance (cited by 35% of firms), especially with regard to exporting and overseas markets;
- Developing contacts and networks (19%), especially with potential international customers;
- Financial support (8%) and its value to the business;
- General business growth and improvement (8%); and
- Product development (7%).

Export challenges

4.38. Eighty-four per cent of exporters reported experiencing challenges with exporting goods and/or services in 2018-2021. The most commonly experienced challenges that affected over half of exporters were additional paperwork (63%), change in transportation costs (61%), customs duties or levies (57%), and disruption at UK borders (51%) (Figure 32). Firms reported experiencing multiple challenges: seven on average. Over 9 in 10 firms considered that the COVID-19 pandemic and end of EU-exit transition, together or separately, were the main causes of challenges they experienced (Figure 31).

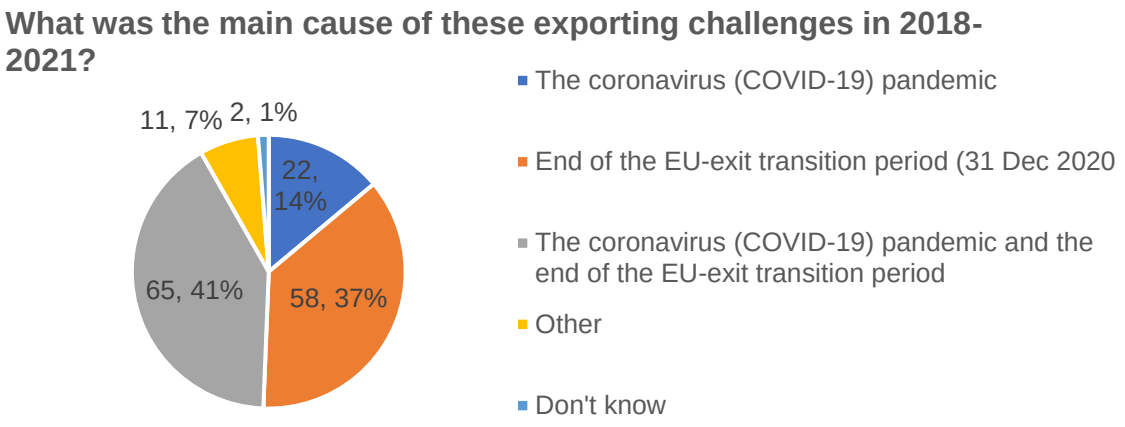


Figure 31. Percentage and count of exporting firms who experienced exporting challenges (N=158)

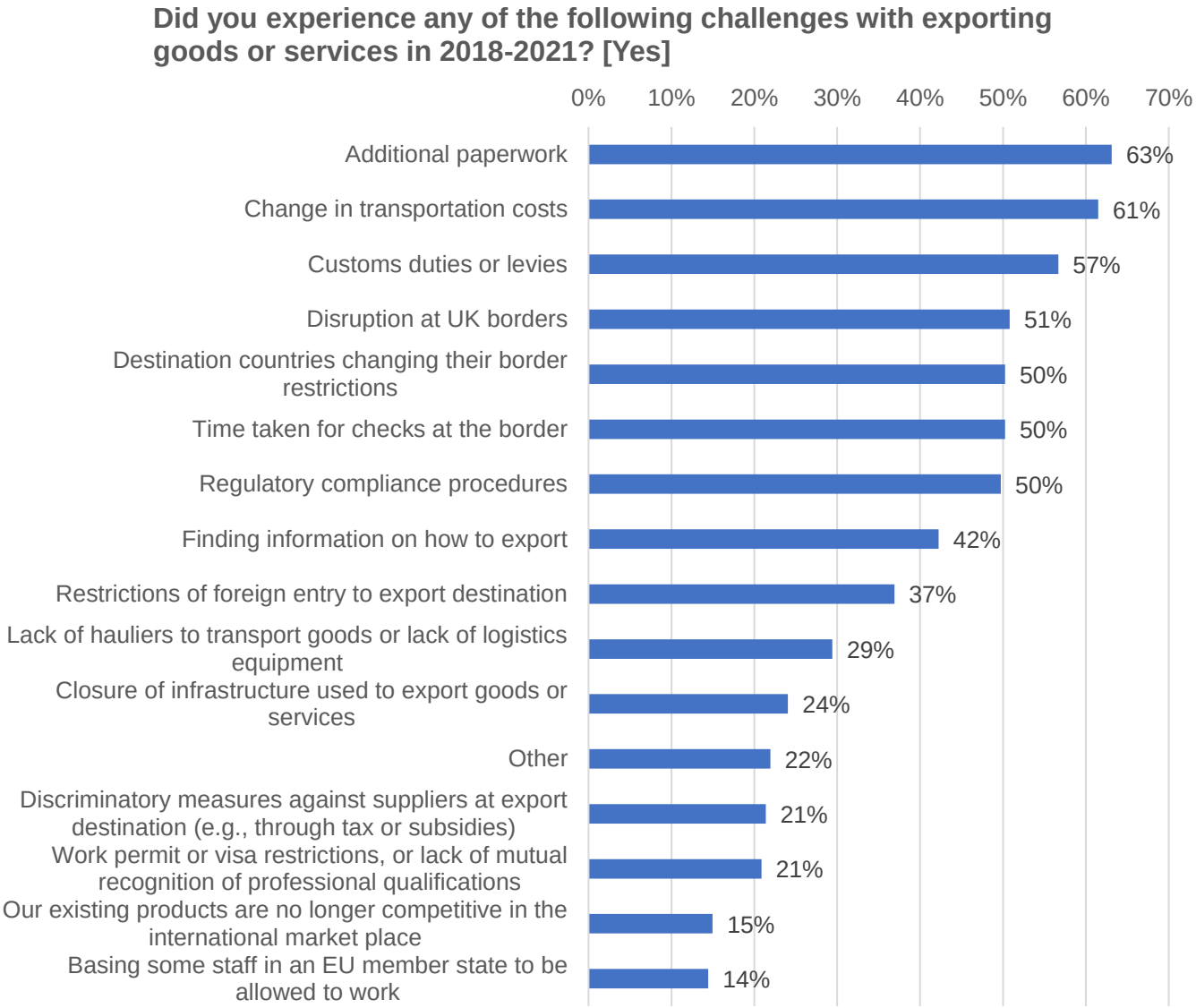


Figure 32. Percentage of exporting firms (N=187)

4.39. Further, 68% of firms that experienced export challenges in 2018-2012 reported that these challenges decreased their export sales. Firms estimated that on average their export sales decreased by 38% since receiving the support as a result of the challenges.

4.40. Over half of firms experiencing challenges (63%) reported that the delivery partner support was useful in helping them to overcome them to a varying degree (Figure 33).

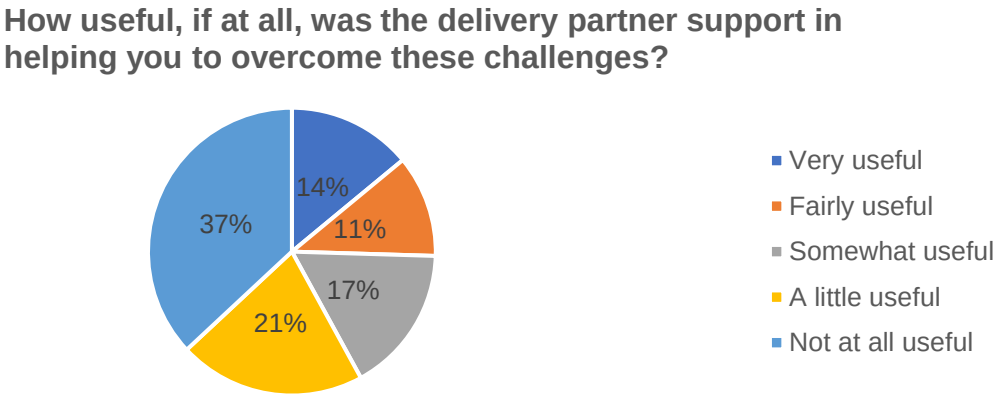


Figure 33. Percentage of exporting firms that experienced exporting challenges (N=157)

Satisfaction

4.41. Beneficiaries on average rated their satisfaction with the way the support was delivered at 7 out of 10 (varying from 0 to 10), with about half of firms (53%) rating it above 8. This rating is the same for beneficiaries receiving export or business development support, and typically the same regardless of delivery partners (but a bit higher for firms that received support from multiple partners at 7.7).

4.42. If they rated the delivery of support below 8, firms were asked what could have been improved. Eighty-nine beneficiaries specified areas for improvement, most typically:

- Sufficiency/intensiveness of the support (cited by 21 firms), e.g., not receiving enough (or any) support, the support being focused on different businesses (e.g., larger ones, from different sectors);
- Communication/engagement issues (17), such as lack of communication & engagement, different contacts engaging the same company at different times;
- Issues around knowledge, expertise and quality of advice (14), e.g., being given wrong advice, delivery partner staff not having the right or sufficient expertise to help;
- Funding (8), e.g., not receiving it, not receiving enough or on time;
- Administrative burden (7), e.g., burdensome form filling;
- Lack of awareness and signposting to other available support (7).

Usefulness of specific support types

4.43. For each specific support activity that respondents reported accessing, they were asked if it was useful or not for achieving a certain outcome. If respondents identified two or more activities as useful, they were then asked which one of them was the most useful. **Because of this, a number of firms assessing each activity varies, which should be kept in mind when comparing usefulness of different activities.**

4.44. In terms of helping to achieve export sales, majority of beneficiaries typically found all export support activities and most of the wider business development activities useful (Figure 34,

Figure 35). With variation, the most useful activities in helping to achieve export sales were travel / accommodation support to access international markets (cited by 43% of firms), funding for international business development (32%), and one-to-one exporting advice (26%) (Figure 36). Among business development support activities and accounting for how frequently they were accessed, the most useful activities were capital grants (33%), R&D grants (31%) and innovation grants (29%) (Figure 37).

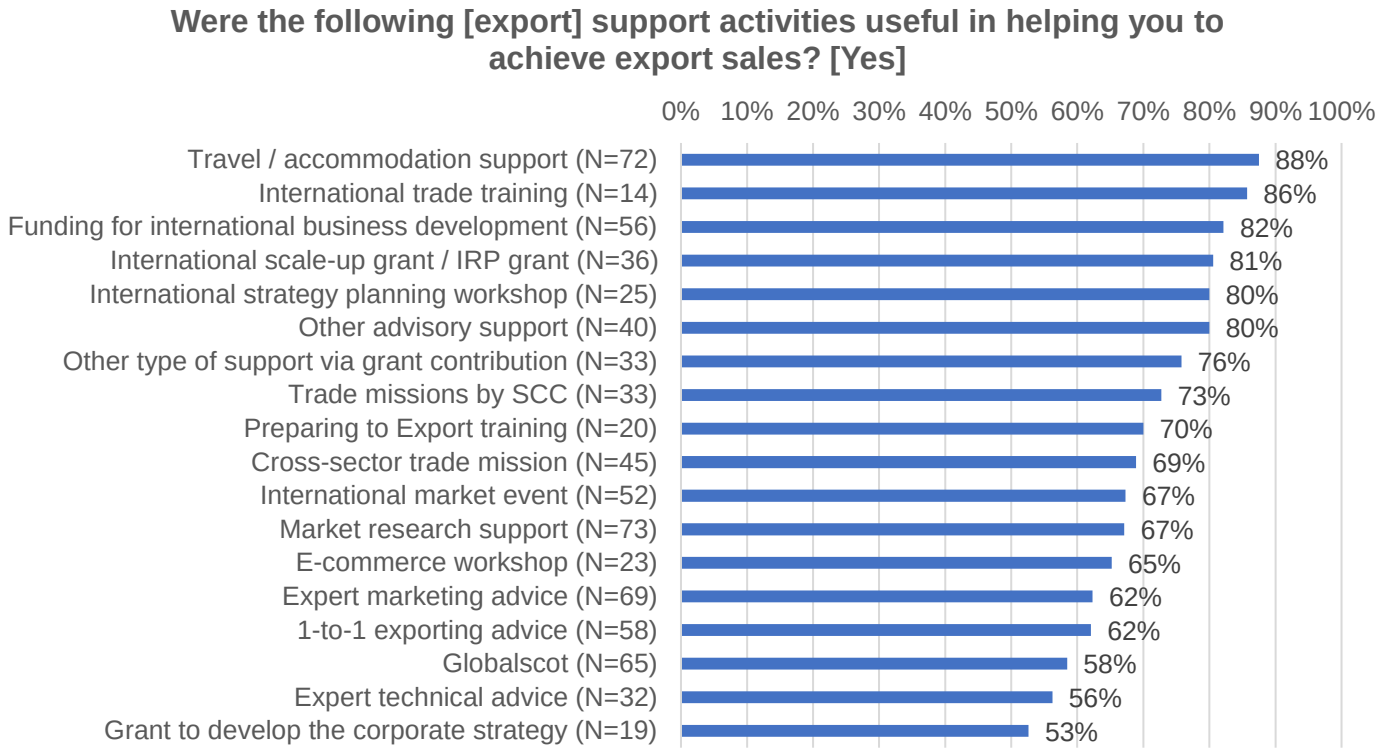


Figure 34. Share of firms that accessed a specific support type (count in brackets)

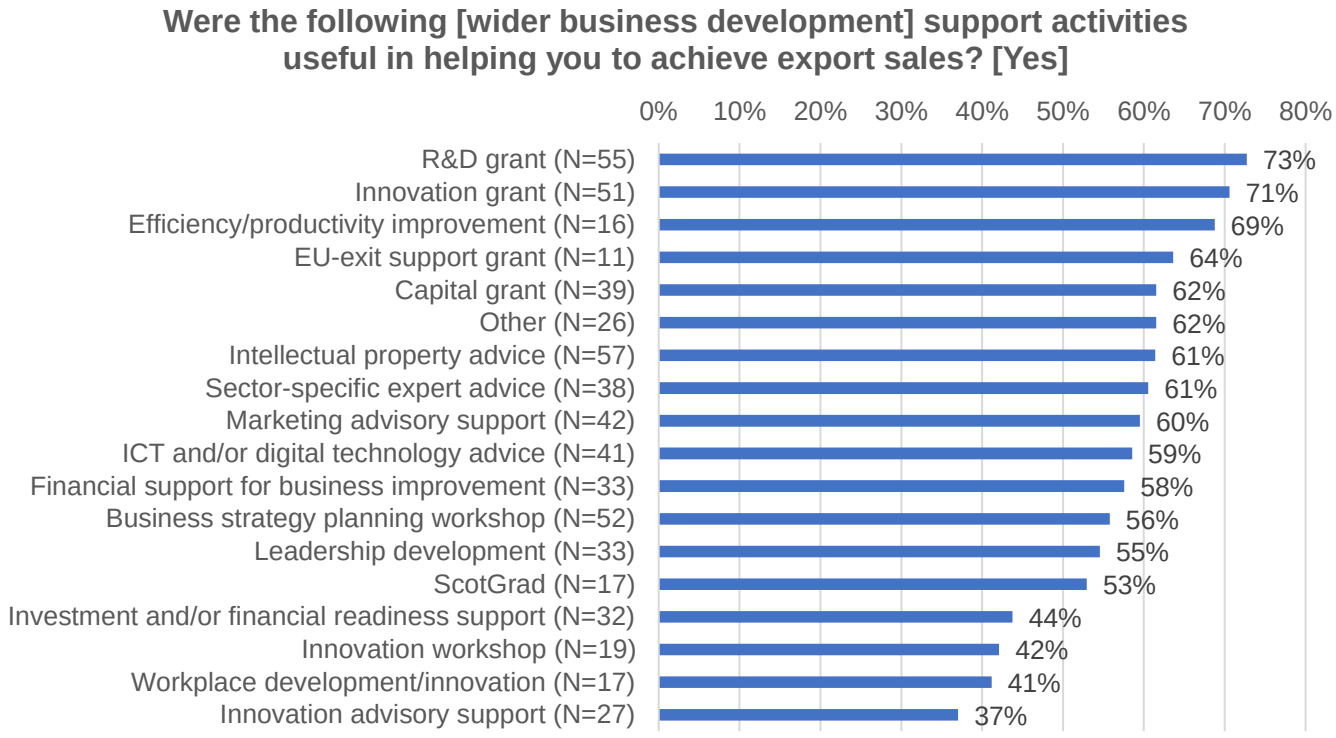


Figure 35. Share of firms that accessed a specific support type (count in brackets)

Figure 36. Share of firms considering s specific activity useful among other useful activities (count in brackets, applies to respondents with min. 2 activities chosen as useful)

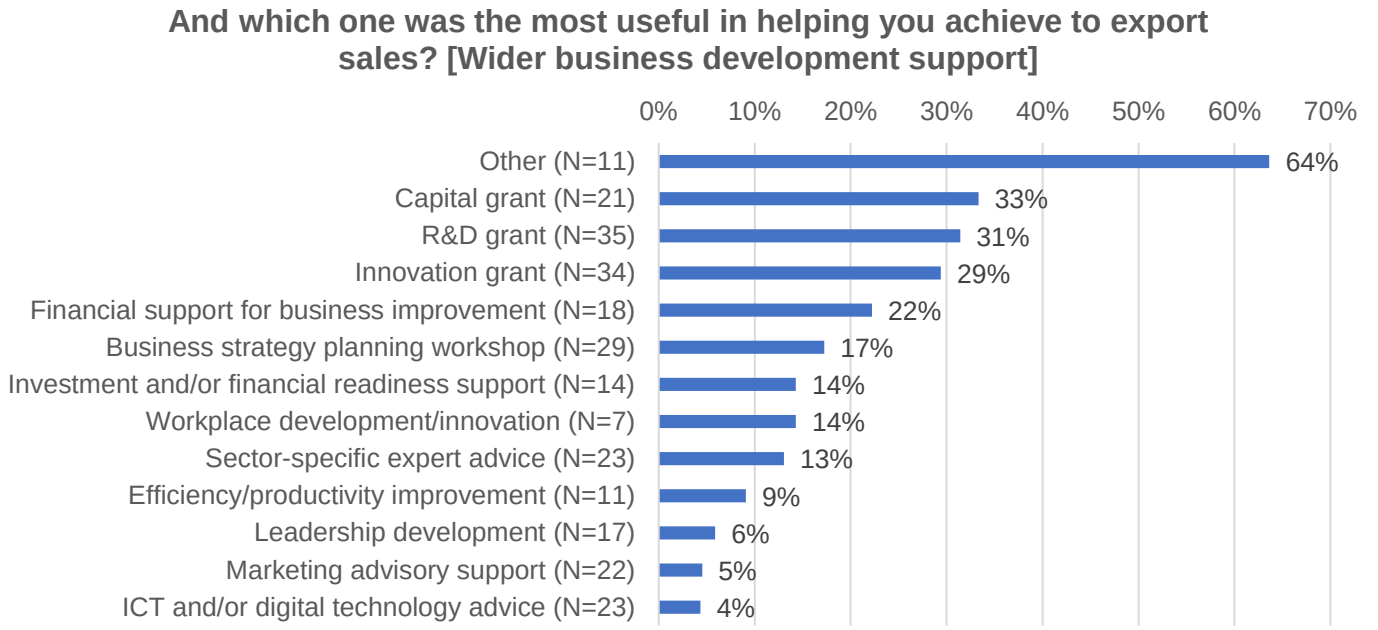


Figure 37. Share of firms considering a specific activity useful among other useful activities (count in brackets, applies to respondents with a minimum 2 activities chosen as useful)

4.45. From here on, only firms that reported impacts from the support (as per Impact sections) were asked to assess usefulness of various support types.

4.46. In terms of helping to introduce new products or make improvements to existing products that firms export and/or wish to export, activities considered to be useful most often were IRP grants, funding for international business development, R&D grants, innovation grants and capital grants (Figure 38, Figure 39). R&D grants were considered the most useful by most businesses for this purpose (cited by 65%, Figure 63).

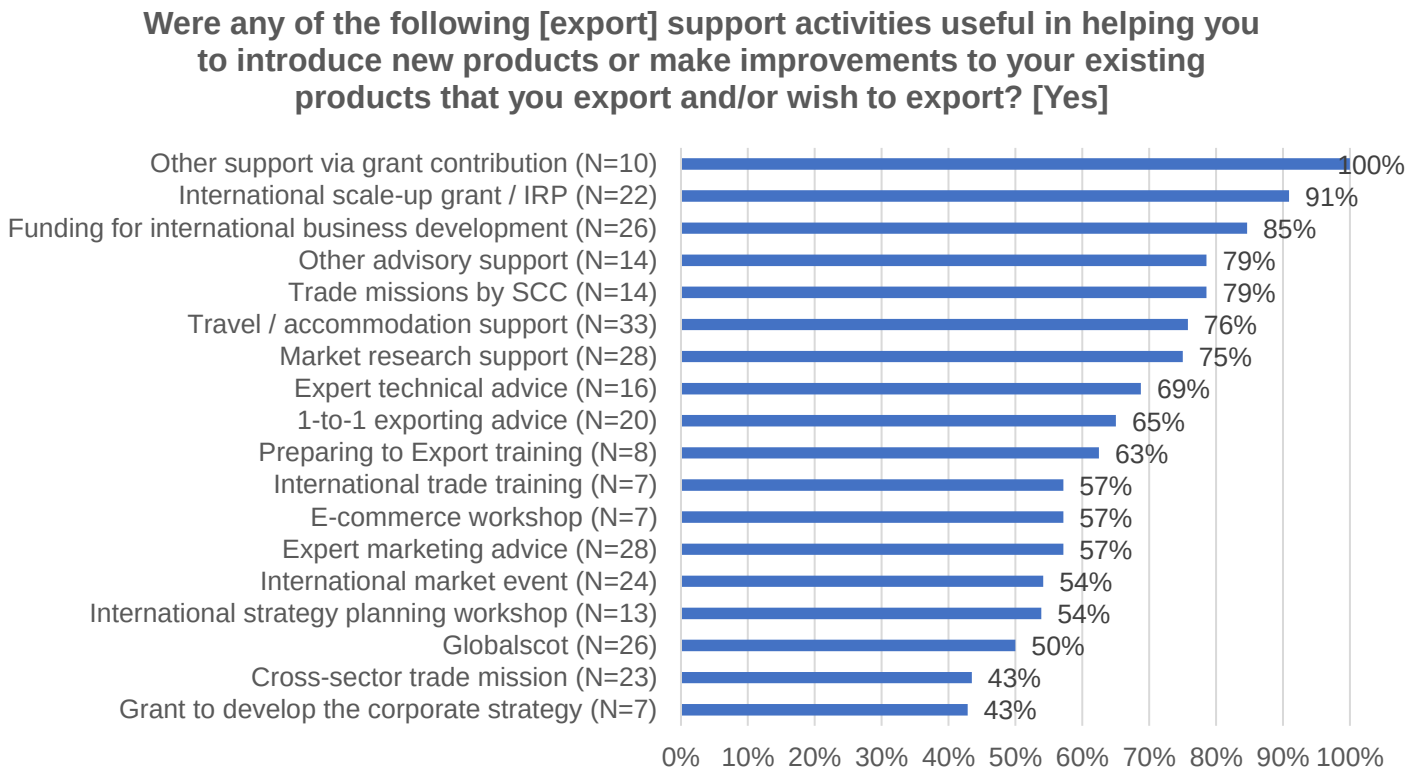


Figure 38. Share of firms that accessed a specific support type and reported a respective impact (counts in brackets)

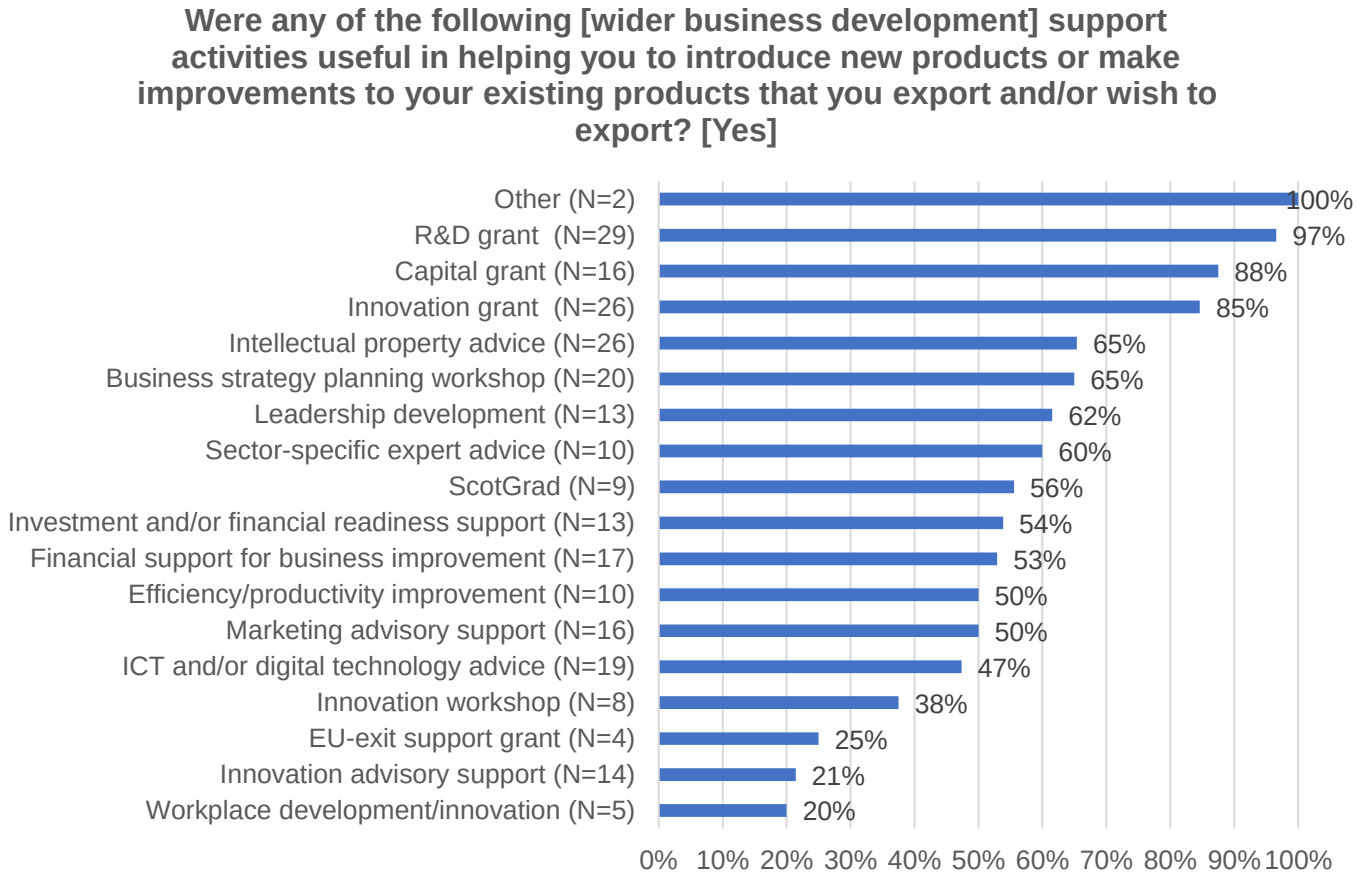


Figure 39. Share of firms that accessed a specific support type and reported a respective impact (count in brackets)

4.47. In terms of helping firms to introduce new business processes or make improvements to

existing processes of relevance to exporting, IRP grants were again cited as useful most often, as well as one-to-one exporting advice, capital grants, innovation grants, and ICT and/or digital technology advice (Figure 40; Figure 41). However, decreasing sample sizes make it harder to identify the most useful support type as all support activities have few firms that considered them the most useful (Figure 64).

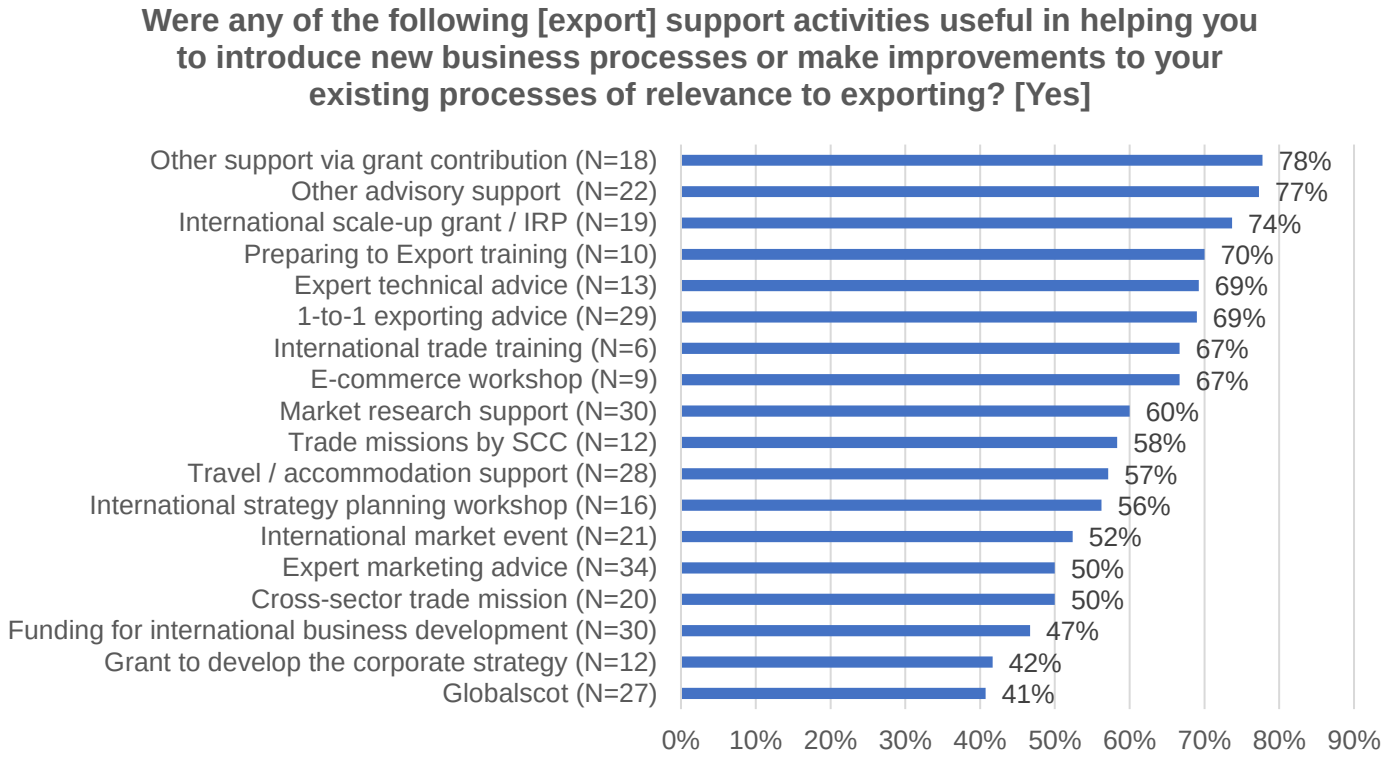


Figure 40. Share of firms that accessed a specific support type and reported a respective impact (count in brackets)

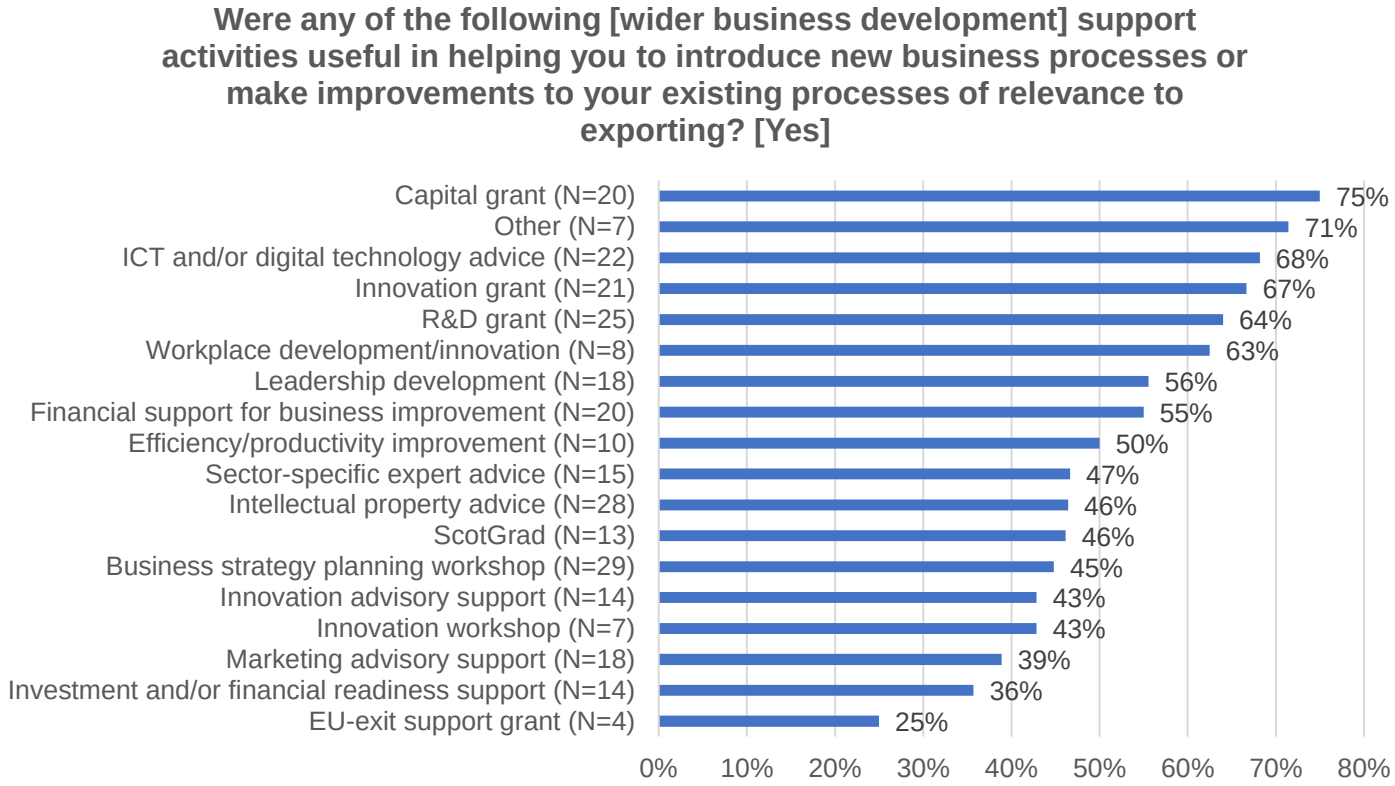


Figure 41. Share of firms that accessed a specific support type and reported a respective impact (count in brackets)

4.48. For exporting to new countries and exporting new categories of products, firms typically were less likely to identify business development activities as useful (Figure 43, Figure 45). Meanwhile in export support, travel / accommodation support to access international markets, funding for international business development and Globalscot were considered useful by majority of firms in helping them export to new countries (Figure 42, Figure 44). However, there are no trends in which activities are the most useful (Figure 65, Figure 66).

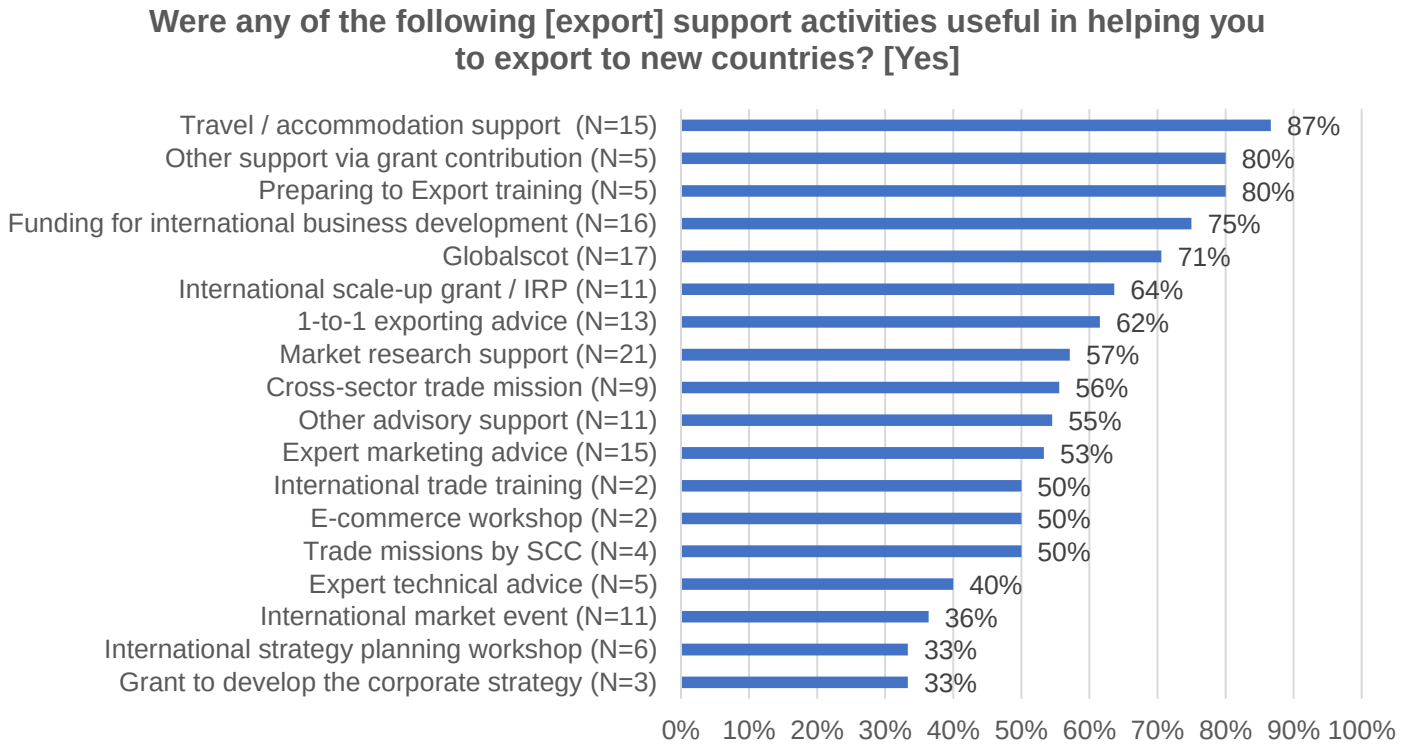


Figure 42. Share of firms that accessed a specific support type and reported a respective impact (count in brackets)

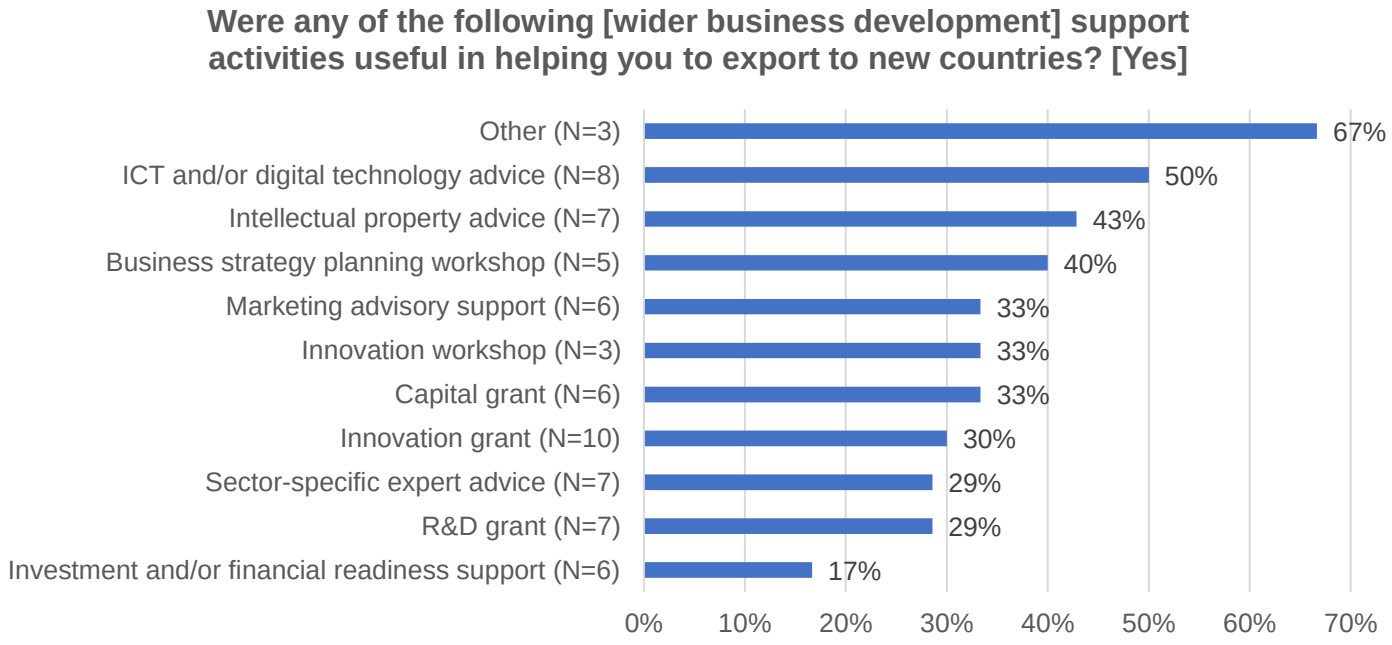


Figure 43. Share of firms that accessed a specific support type and reported a respective impact (count in brackets); 0% share omitted

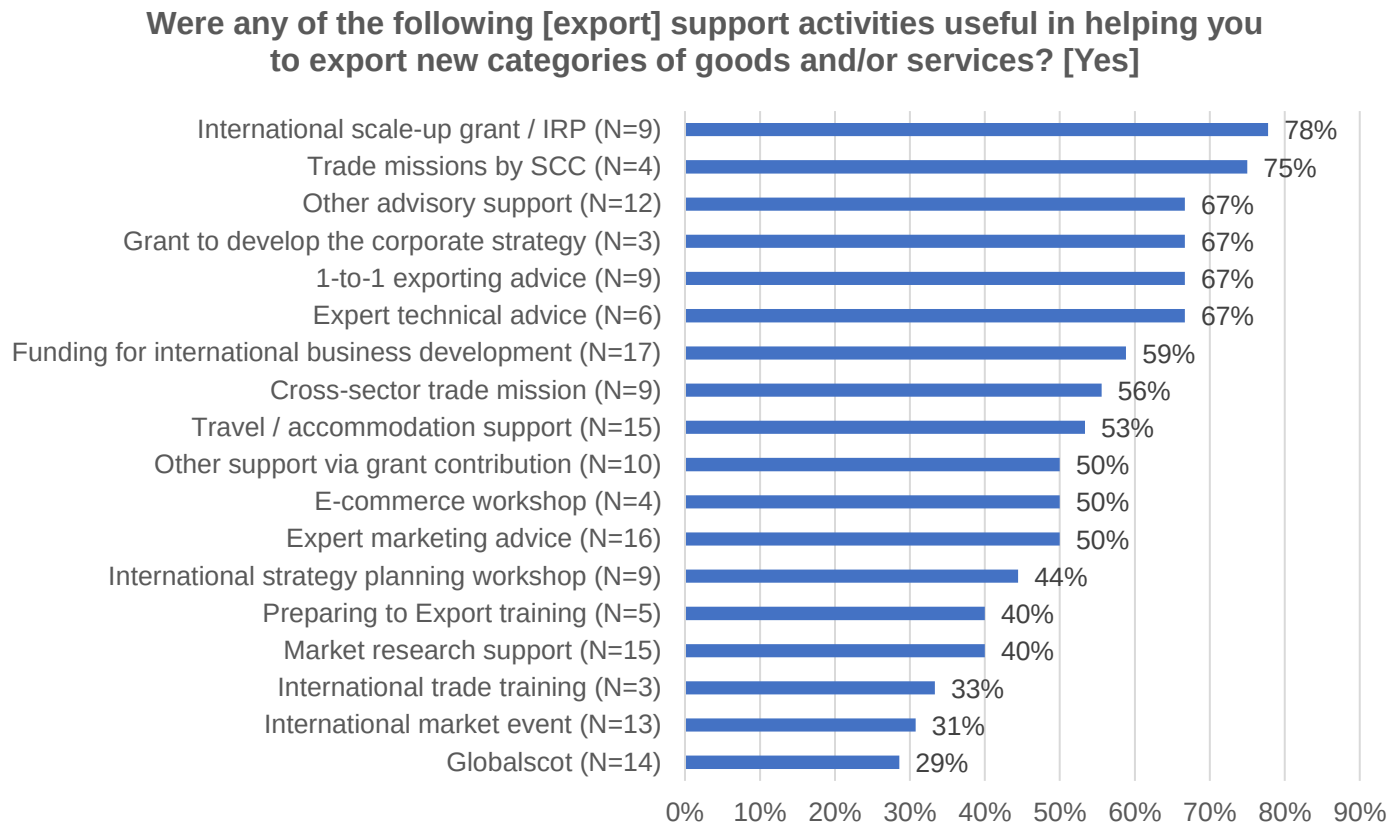


Figure 44. Share of firms that accessed a specific support type and reported a respective impact (count in brackets)

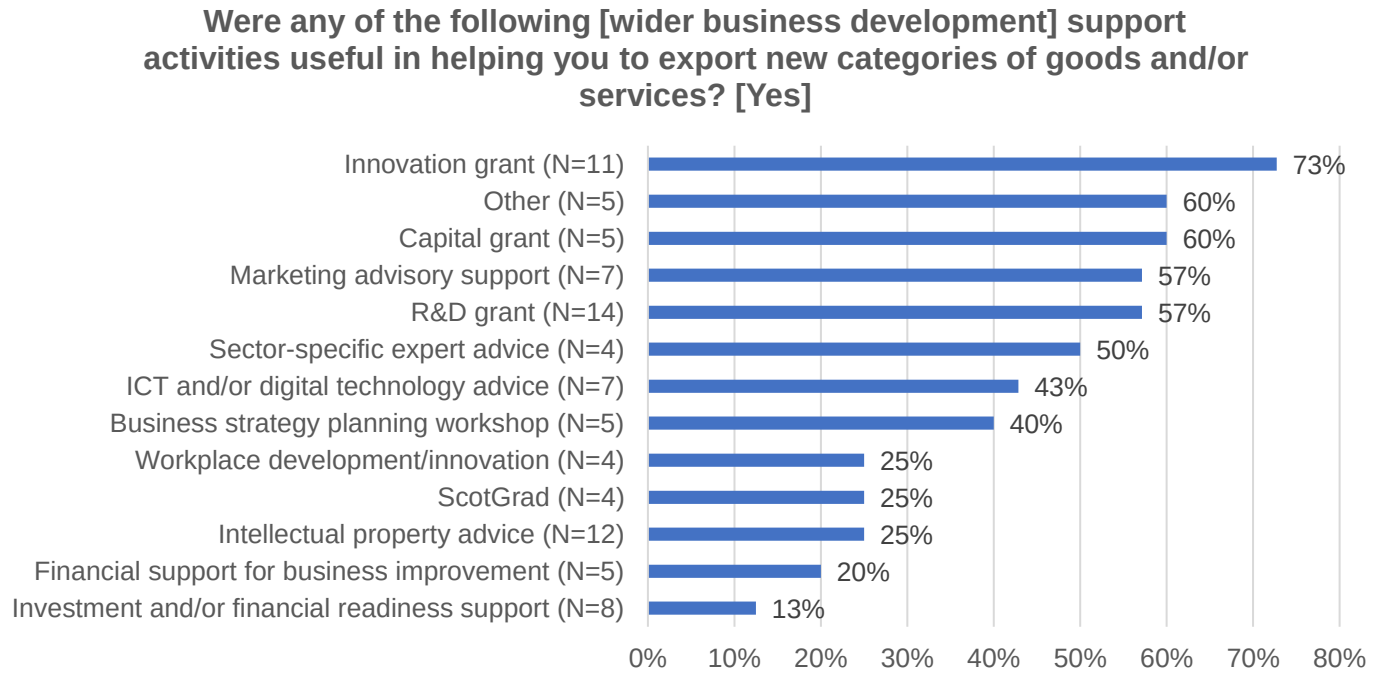


Figure 45. Share of firms that accessed a specific support type and reported a respective impact (count in brackets); 0% share omitted

4.49. In terms of helping to export on a permanent basis, beneficiaries tended to consider travel / accommodation support to access international markets and funding for international business development useful, as well as leadership development and innovation grants (Figure 46, Figure 47). Travel/accommodation support somewhat stood out in regard to being

considered the most useful activity for this purpose, as cited by 55% of beneficiaries (Figure 67).

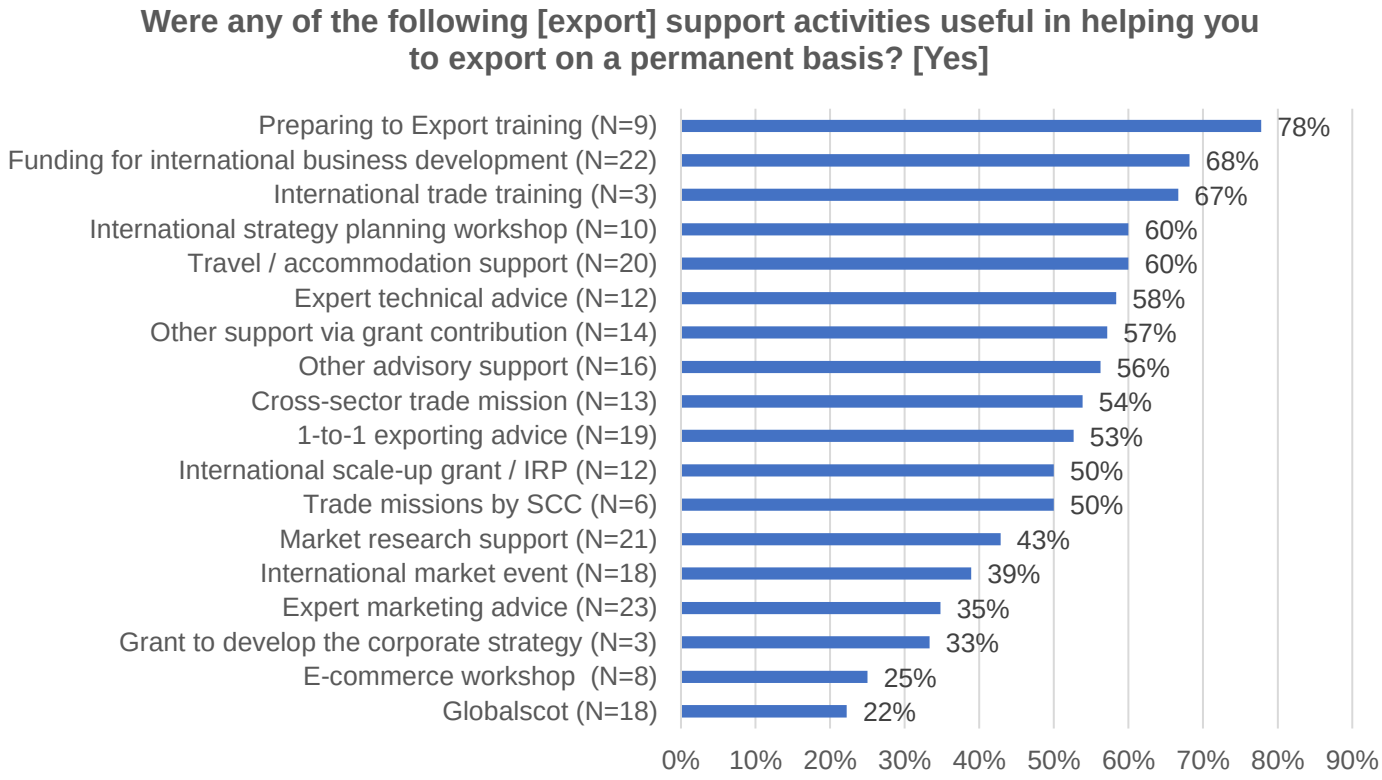


Figure 46. Share of firms that accessed a specific support type and reported a respective impact

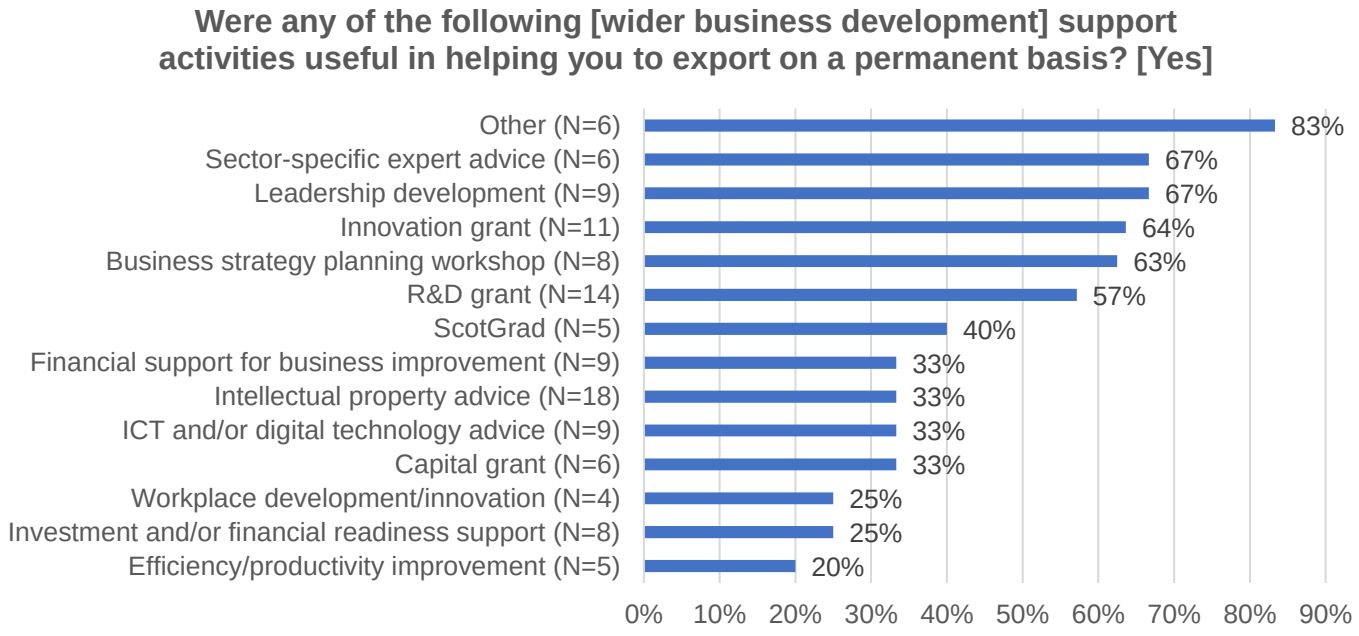


Figure 47. Share of firms that accessed a specific support type and reported a respective impact; 0% share omitted

4.50. With variations based on the objective, the following support activities were considered the most useful by most firms: travel/accommodation support, R&D grant, funding for international business development, one-to-one exporting and innovation grants. Beneficiaries provided a number of reasons for why these are the most useful for them, as

summarised in Table 4. The full list of activities considered the most useful at least once and their reasons can be found in Appendix 8.

Table 4. Support activities perceived the most useful and reasons for this.

Support Type (firm count)	Reasons for being the most useful (overlap possible)
Travel / accommodation support to access international markets (23)	Exposure to new markets; meeting clients; market access; help with expensive costs, esp. for SMEs; knowledge about new markets; travelling results in being taken more seriously
R&D grant (19)	Enabled/accelerated product & process development; ready for market, incl. international; increased competitiveness; enabled R&D that could not do themselves due to size; level of financial contribution; restructured business and relaunched product; enabled to work with more advanced companies; feasibility study; enabled to invest more; customer acquisition via product improvement; freedom to innovate;
Funding for international business development (14)	Increased sales; increased marketing activity; produced visible results to business; took company to the next level; Created contacts for market access and maintenance; allowed work to continue despite COVID-19 restrictions; key in testing a new country & re-targeting if needed; Learning about different markets; contacts and connections in new markets; direct targeted support to access international market; product developed for different markets; product improvement and customer acquisition; allowed to test new product;
One-to-one exporting advice (13)	Extra help; tailored to business and product needs; market knowledge; shaped strategy; market opportunities; clarified questions about exporting; helped to develop a unique service adaptable to clients in different countries; knowledge of customer requirements
Innovation grant (12)	Product development incl. that wouldn't have happened otherwise; enhanced and expanded product rate; level of financial contribution; improved service; Addressed the key challenge of insufficient financing that could not be addressed with venture capital; improved business process and reduced cost;

Support gaps

4.51. Around a quarter of firms (26%) specified that, had they not received export support from delivery partners, they would have sought export support from some other organisation(s) in 2018-21. Some firms specified a variety of organisations or stakeholders, mainly private actors, UK Government (esp. DBT, formerly DIT), Innovate UK, Chambers of Commerce etc.

4.52. Furthermore, 84 firms specified the type of support they wish they had received that would have been useful in helping them to achieve export sales. Most commonly this was:
- Financial support (cited by 23 firms), in itself or for various business purposes;
- Advice on a variety of topics (18), e.g., legal advice, regulatory, administrative, market access;
- Development of contacts and networks (12), incl. with potential customers, trade shows.

Future outlook

4.53. Majority of all beneficiaries (91%) expected to experience barriers to exporting in the future. Top three barriers are customs duties or levies (28%), skills and human capital (25%) and regulatory compliance procedures (24%) (Figure 48). Twenty-seven per cent of firms also cited "other" barriers:
- EU-exit or EU-exit related (6%), e.g., increased red tape, British suppliers being dropped, lack of clear guidelines;
- Costs (5%), e.g., transportation or shipping costs;
- Financial, incl. access to capital or funding (3%), e.g., resources needed to tackle different healthcare markets, cashflow issues;
- Legal or regulatory (3%), e.g., customs regulation changes in China, taxation with USA, product approval differences between countries;
- Economy or policy-related (3%), e.g., risk of Scottish independence, economic uncertainty;
- Exchange rates (2%);
- Other transport challenges (1%), e.g., UK port strikes, lack of international air transit;
- Red tape (1%), e.g., border control;
- Marketing (1%), e.g., ability to market one's services.

4.54. Nearly 8 in 10 of firms considered that the support as provided by delivery partners would be to various degrees effective in addressing these barriers in the next three years (Figure 49).

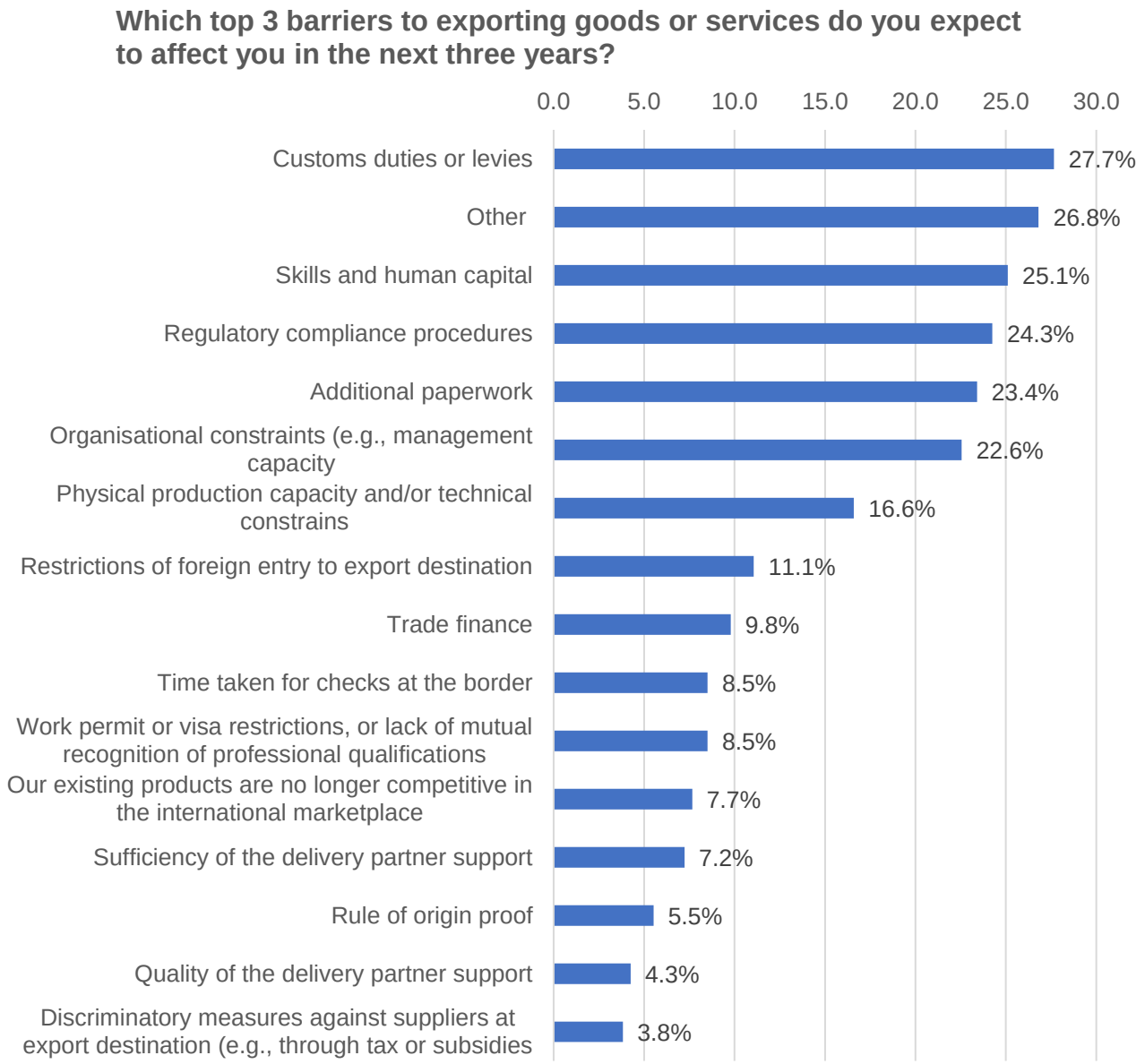


Figure 48. Percentage of firms expecting export barriers in the future (N=235)

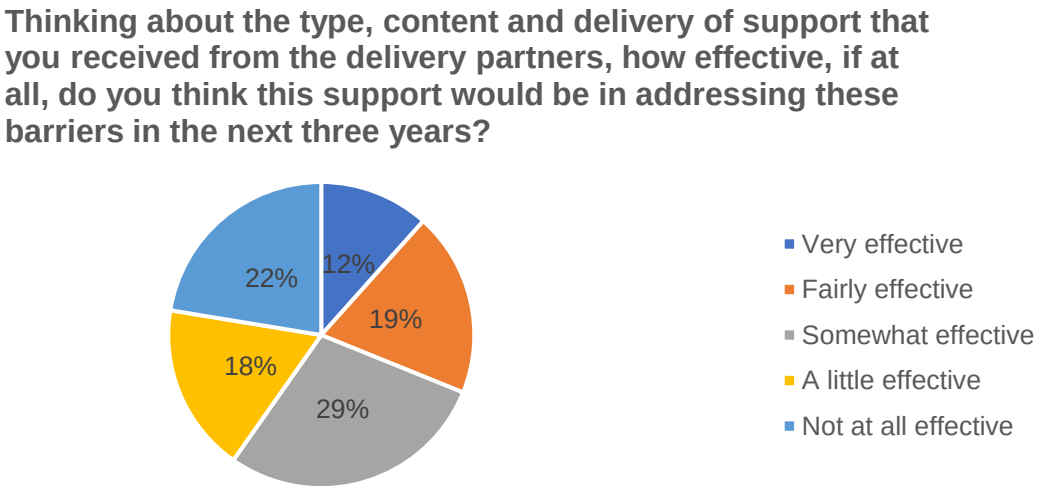


Figure 49.Percentage of firms expecting exporting barriers in the future (N=241)

4.55. In terms of gaps, most firms consider finding new overseas contacts or customers critical in helping them to address export barriers in the future (Figure 50).

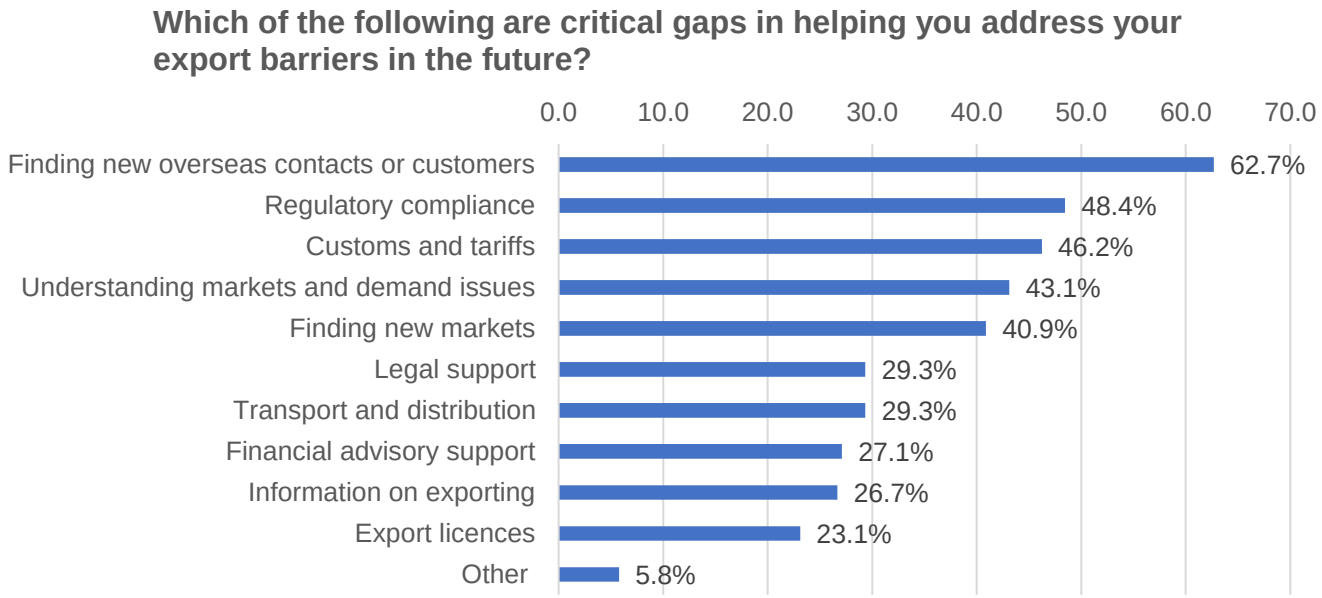


Figure 50. Percentage of firms expecting exporting barriers in the future (N=225)

4.56. Over half of firms (55%) plan to export to new market sectors in the next three years. While "other" category makes up the largest share of all responses, when analysed separately these sectors do not make up a substantial share of all firms (see Appendix 9 for the full list). Thus, the most common new sectors that firms plan to export to are energy-low carbon and renewables (22%), Technology, Digital & Media (19%) and Food & Drink (16%).

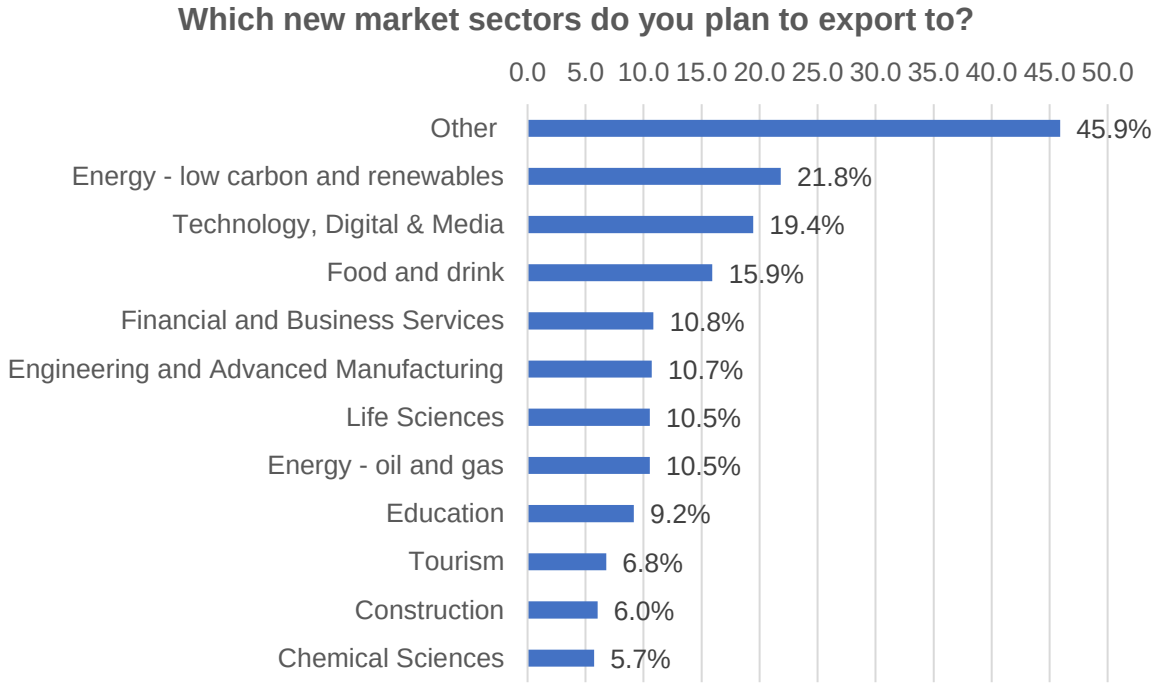


Figure 51. Percentage of firms that do not export to a specific sector (N varies)

4.57. Lastly, 62% of firms plan to export to new countries in the next three years (Figure 52). The full list can be found in Appendix 10, with top five countries being USA (cited by 40 firms), Canada (23), Australia (17), France (16) and India (16).

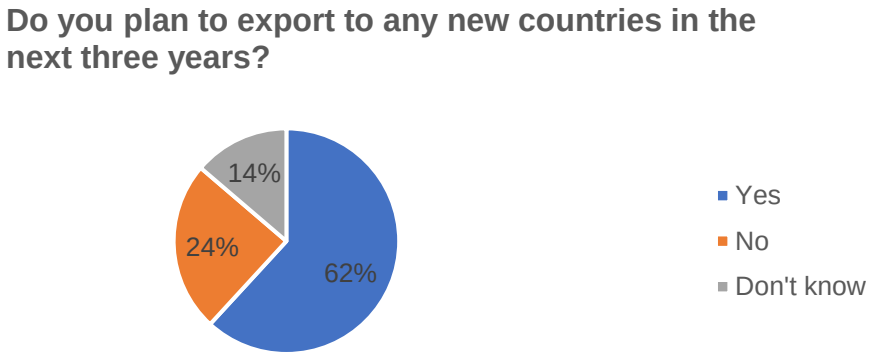


Figure 52. Percentage of firms (N=262)

Business characteristics

4.58. On average responding firms were 20 years of age, employed 21 people and had an average turnover of £3.1 mil. Majority of firms, 96%, were headquartered in Scotland. Supported businesses came from a variety of business sectors, most often manufacturing (34%, see Table 5). Sectoral breakdown by delivery partners is very similar with an exception that 10% of SE/SDI supported firms were in Information and communication sectors compared to none from other delivery partners (which might be due to sample sizes).

Table 5. Business sector of beneficiaries, ILOSTAT ISIC rev. 4 classification (N=264)

Business sector	% of firms
Manufacturing	33.7%
Professional, scientific and technical activities	11.7%
Information and communication	8.7%
Wholesale and retail trade; repair of motor vehicles and motorcycles	8.7%
Electricity; gas, steam and air conditioning supply	8%
Education	4.2%
Agriculture, forestry and fishing	4.2%
Human health & social work activities	3.8%
Arts, entertainment and recreation	3%
Administrative and support service activities	1.9%
Construction	1.9%
Transport and storage	1.9%
Accommodation and food service activities	0.8%
Public administration & defence; compulsory social security	0.4%

Activities of extraterritorial organisations and bodies	0.4%
Water supply; sewerage, waste management and remediation activities	0.4%
Other service activities	0.4%
Other (varies)	6.1%

4.59. Firms reported that their number of employees mostly stayed the same or increased compared to prior to receiving the support, while turnover somewhat increased (Figure 53).

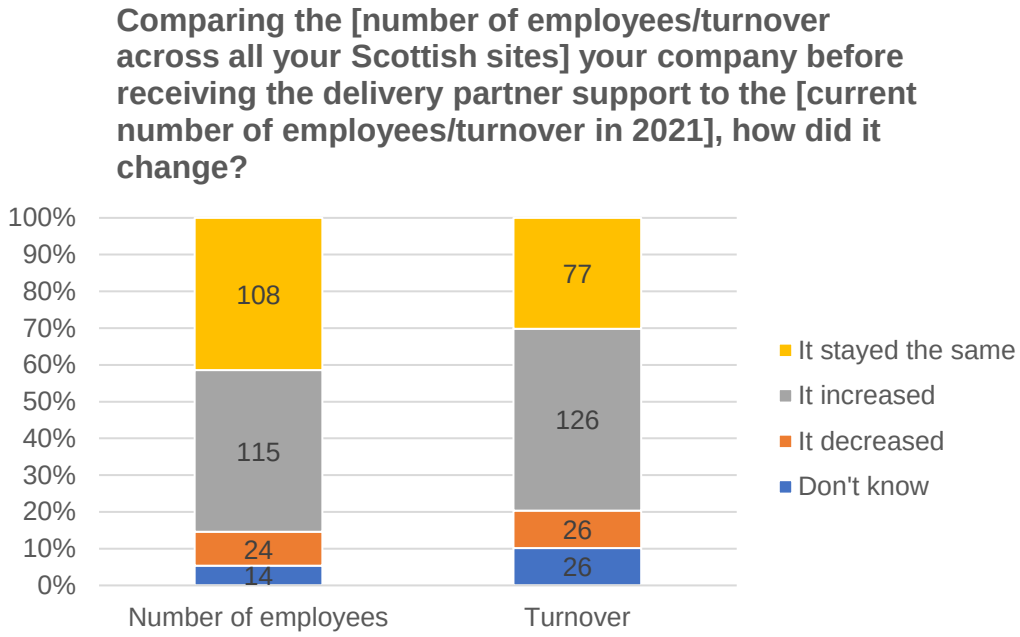


Figure 53. Share and count of firms (N varies)

4.60. About half of beneficiaries (50%) imported goods and/or services. Respondents tended to be business-to-business firms within the global supply chain (Figure 54).

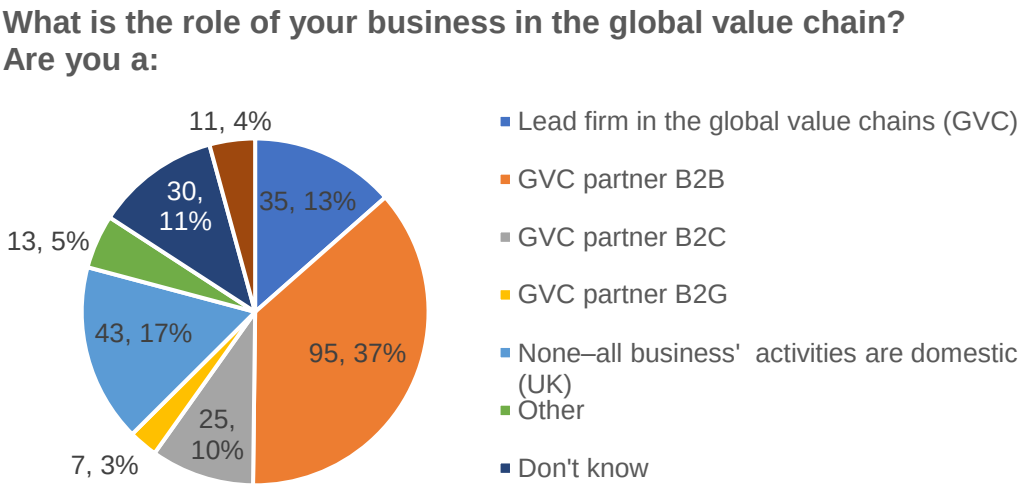


Figure 54. Percentage and count of firms (N=259)

Export Growth Plan

4.61. SE/SDI classified 559 of 2,311 supported businesses according to export performance segments as per ATN. Eighty-seven firms categorised this way responded to the survey. Of them, about a third each were classed as "born global" (38%) and as "sleeping giants" (36%), followed by "solid performers" (23%), "top performers" (2%) and firms "starting out" (1%). Ninety-two per cent of firms were exporters: 88% of "born global" and 90% of "sleeping giants" export; other firms were all current exporters. EGP firms exported on average for 19 years: "born global" firms were exporting the least (11 years), while "solid performers" and two "top performer" firms exported the longest (30 and 31 years respectively), which is related to their business age (Figure 55). Of those seven firms that do not export, four never exported (two "born global" and two "sleeping giants").

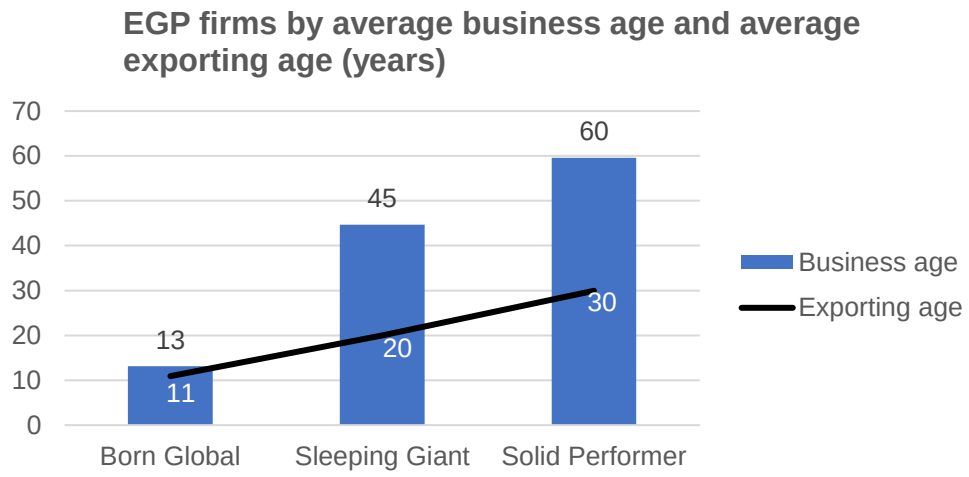


Figure 55. Responding firms categorised by EGP (N=60)

4.62. As shown in Figure 56, "born global" firms reported exporting services somewhat more often than other firms, while "sleeping giants" and "solid performers" focused more on exporting goods. A similar share (about 30%) in each segment exported both goods and services.

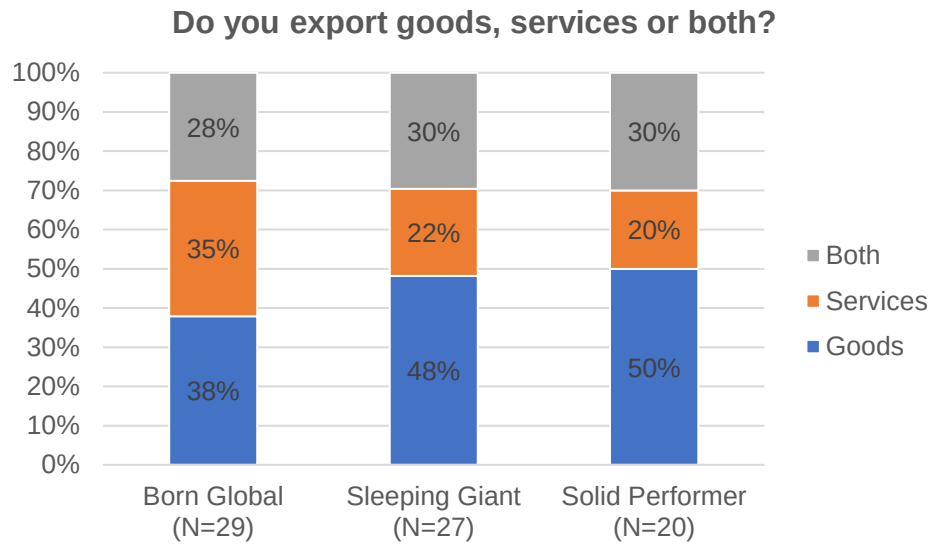


Figure 56. Percentage of responding firms categorised by EGP

Impact by support types as per Management Information data

4.63. One of the aims of the evaluation is to examine which support types work better. To supplement self-reported responses presented in the "Usefulness of specific support types" section, this section presents reported outcomes analysed by support characteristics as recorded in the delivery partner Management Information.

4.64. As a reminder, the support was classified into four categories: international support, international support and R&D or innovation assistance, international support with other forms of wider business development, and wider business development support. International support was further classified according to the A-C-E model: Awareness, Capability and Exploitation (and a fourth category that includes multiple A-C-E classes).

International and wider business development support

4.65. Table 6 presents outcomes attributed to the support by firms accessing different support types (note that some outcomes have applicability restrictions). For most export-specific outcomes applicable to exporters only, there are no obvious or large differences by support type. Variations of about up to 10 percentage points, given different sample sizes depending on the outcome, are expected (e.g., see export entry/re-entry). There are a few notable differences: firms accessing international and R&D/innovation support are more likely to report impact in some cases, for example, in anticipating export sales in the next three years (75% compared to 40% of firms that accessed international support only); firms that received international and other wider business development support report greater impact in process innovation.

4.66. Statistical testing was done to check if we can expect to see these self-reported differences in all firms that opted into the evaluation. The following results are statistically significant when controlling for business characteristics[27]: that firms accessing international and R&D/innovation support and firms accessing wider business development only are less likely to attribute achieving export sales to the support (value only); and that firms on international and R&D/innovation support are more likely to anticipate export sales in the future as a result of the support. Other differences in outcomes between support types are explained by business characteristics: for instance, exporting firms are more likely to report increasing/safeguarding jobs and nearly all firms with international and R&D/innovation support are exporters (95%), which at first glance makes it seem like this support type is associated with job outcomes.

Table 6. Percentage of firms that accessed the support type reporting impact as a result of the support. Large differences between support types emphasised in colour (green for a higher level of impact, orange for lower).

Outcomes as a result of the support (count of responding firms)	**International support only**	**International and R&D / Innovation support**	**International and other wider business development**	**Wider business development only**
Exporters only				

[27] For robustness, statistical testing was done with multiple combinations of available control variables: exporter status (where applicable), business age, size, turnover, and sector (manufacturing or not). Different models and, where applicable, different measures (e.g., numerical values or bands for size) were tested to ensure robustness of findings presented here.

Outcomes as a result of the support (count of responding firms)	International support only	International and R&D / Innovation support	International and other wider business development	Wider business development only
Export entry/re-entry (N=58)	45%	44%	n/a	56%
Export sales (any, i.e., both in timing and sales value) (N=189)	54%	70%	65%	60%
Export sales (sales value only) (N=189)	44%	30%*	47%	20%**
Exporting to new countries (N=189)	28%	31%	24%	23%
Exporting new product categories (N=188)	29%	35%	24%	23%
Exporting more permanently (N=189)	43%	35%	41%	37%
Export-support only (self-reported access)				
Jobs (created and/or safeguarded) (N=209)	48%	75%	64%	51%
All firms				
Product innovation (N=281)	46%	61%	63%	56%
Process innovation (N=279)	39%	43%	56%	40%
Anticipated export sales (N=281)	40%	75%**	58%	46%

** statistically significant at 5% level, * statistically significant at 10% level compared to International support only

A-C-E model

4.67. Table 7 presents outcomes attributed to the support by firms accessing support categorised according to the A-C-E model. The A-C-E model applies to international support. It is noticeable that firms accessing support activities across multiple A-C-E categories are more likely to report impact for a number of outcomes. After statistical tests, this result holds for the higher export sales impact (when combining both timing and sales value impacts), exporting new product categories and anticipating export sales in the future. While Exploitation firms report much lower impact for exporting to new countries and the highest impact in anticipating export sales in the future, as mentioned before, it is accessed by a small number of firms (five per cent or 18 firms), so does not hold after statistical testing.

Table 7. Percentage of firms that accessed the support type (A-C-E model) reporting impact as a result of the support. Large differences between support groups emphasised in colour (green for a higher level of impact, orange for lower).

Outcomes as a result of the support (count of responding firms)	A – Awareness	C – Capability	E - Exploitation	Multiple
Exporters only				
Export entry / re-entry (N=49)	33%	44%	n/a	52%
Export sales (any, i.e., both in timing and sales value) (N=159)	44%	46%	46%	71%**
Export sales (sales value only) (N=159)	35%	33%	27%	52%
Exporting to new countries (N=159)	30%	25%	9%	32%
Exporting new product categories (N=158)	18%	31%	27%	32%*
Exporting more permanently (N=159)	22%	43%	55%	45%
Export-support only (self-reported access)				

Outcomes as a result of the support (count of responding firms)	A – Awareness	C – Capability	E - Exploitation	Multiple
Jobs (created and/or safeguarded) (N=174)	48%	38%	44%	65%
All firms				
Product innovation (N=231)	44%	45%	42%	55%
Process innovation (N=229)	41%	35%	46%	45%
Anticipated export sales (N=231)	44%	32%	58%	55%*

** statistically significant at 5% level, * statistically significant at 10% level compared to A category

Number of support activities

4.68. Intensiveness of support, in terms of number of support activities accessed, is an important aspect that tends to be associated with higher outcomes. However, it cannot be assumed that those firms accessing a higher number of support activities necessarily received "more" support as intensity of support activities varied. Additionally, support types and the number of activities are significantly related. For instance, firms that accessed international and wider business development support (R&D/innovation or other) on average accessed nine support activities compared to three in international support only and two in wider business development only.

4.69. Outcomes analysed by the number of support activities are summarised in Table 8. It shows that firms that report impact as result of the support tend to have accessed a higher number of support activities on average.[28] Most of these differences are statistically significant.

4.70. It is worth noting that this relationship is not always linear: when the number of activities is categorised into groups of 1, 2, 3 – 8 and 9 – 20,[29] firms that accessed three support activities and more are more likely to report impact compared to firms that accessed two or just one activity.[30] This is most clear in outcomes of exporting new product categories and export sales (value only). For exporting new product categories, statistically significant results are detected in firms that accessed 9+ activities only (at 10% level), while for export sales (value only) firms that accessed 3 to 8 activities show the highest statistical significance (at 5%).

Table 8. An average number of support activities accessed by firms reporting impact and reporting no impact. between support groups emphasised in colour (green for a higher level of impact, orange for lower).

Outcomes as a result of the support (count of responding firms)	Average # of support activities - No outcome	Average # of support activities - Reporting outcome
Exporters only		
Export entry/re-entry (N=58)	3.5	4.4
Export sales (any, i.e., both in timing and sales value) (N=189)	3.3	4.9**
Export sales (sales value only) (N=189)	3.9	4.9*

[28] This is true with and without outlying firms that accessed a much higher number of activities than the rest.
[29] This grouping is based on data: most firms accessed one or two activities with a small share accessing nine and more.
[30] There were no differences between firms accessing one and two support activities with one exception: in export sales (any outcome) firms accessing two activities were also statistically significantly different from those that accessed one activity at 10% level (those with 3+ activities were significantly different at 5%).

Outcomes as a result of the support (count of responding firms)	Average # of support activities - No outcome	Average # of support activities - Reporting outcome
Exporting to new countries (N=189)	4	4.7
Exporting new product categories (N=188)	4	5*
Exporting more permanently (N=189)	2.9	4.7
Export-support only (self-reported access)		
Jobs (created and/or safeguarded) (N=209)	3.3	5.4**
All firms		
Product innovation (N=281)	3.2	4.6**
Process innovation (N=279)	3.2	5**
Anticipated export sales (N=281)	2.7	4.7**

** statistically significant at 5% level, * statistically significant at 10% level

Delivery partners

4.71. Analysing outcomes by delivery partners shows many differences. In particularly, those firms supported by two delivery partners report higher outcomes while HIE and SCC only supported firm at times report much lower impact (Table 9). However, HIE and SCC firms make up a small share of responding firms (10% and four per cent respectively), so their results are not representative, which is also evidenced by significance tests not detecting differences. In few cases when tests return significant results (e.g., SCC firms are less likely to report product and process innovation impacts), they could not be verified by using controls due to a small sample size.

4.72. On the other hand, firms that received support from two delivery partners report statistically significant results for job and process innovation outcomes compared to those firms that received support from one delivery partner (any). In most cases, however, differences are not significant, most likely due to being more similar to SE/SDI only supported firms.[31]

Table 9. Percentage of firms reporting impact as a result of the support broken down by delivery partner. Large differences emphasised in colour.

Outcomes as a result of the support (count of responding firms)	SE/SDI	HIE	SCC	Multiple
Exporters only				
Export entry / re-entry (N=58)	49%	0%	0%	57%
Export sales (any, i.e., both in timing and sales value) (N=189)	58%	44%	25%	72%
Export sales (sales value only) (N=189)	37%	44%	25%	56%
Exporting to new countries (N=189)	28%	22%	0%	28%
Exporting new product categories (N=188)	27%	22%	0%	44%
Exporting more permanently (N=189)	41%	11%	0%	61%
Export-support only (self-reported access)				
Jobs (created and/or safeguarded) (N=209)	52%	39%	38%	78%**
All firms				
Product innovation (N=281)	52%	37%	27%	63%
Process innovation (N=279)	41%	37%	9%	54%**

[31] Margin of error for firms that received support from multiple delivery partners is also higher at 14%

Outcomes as a result of the support (count of responding firms)	SE/SDI	HIE	SCC	Multiple
Anticipated export sales (N=281)	47%	26%	36%	50%

** statistically significant at 5% level, * statistically significant at 10% level compared to one delivery partner (any)

Time dimension

4.73. Lastly, it is worth noting that any impact takes time to materialise. We examine if firms that received support earlier (in case of multiple support, in their earliest year) report higher outcomes.[32] At the time of the survey, it was on average three years since the first support for responding firms, i.e., most commonly they first received support in 2019 (naturally varying from 2018 to 2021).

4.74. There are no noticeable or statistically significant differences in any outcomes based on year of the support with one exception. Firms that received support earlier are more likely to report impact on export sales value: on average it was 3.3 years since first support for them compared to 2.9 years for firms reporting no export sales impact. The distribution of firms illustrates this difference better as 85% of firms reporting export sales impact first received support in 2018/19 compared to 66% of those that did not report impact.

4.75. To circumvent the confounding issue of multiple support activities being accessed across multiple years that is related to higher impact reporting, we analyse only the firms that received support in a single financial year (this equalled to 76% of responses). As previously, there are no differences in outcomes except for export sales value: 55% of firms who received support in 2018/19 report export sales value impacts, compared to 38% of firms in 2019/20 and 27% of firms in 2020/21.

5. Qualitative interviews with beneficiaries

5.1. This section summarises the 23 qualitative in-depth interviews with companies that also took part in the survey.

Companies

5.2. The twenty-three interviewed companies received support from every delivery partner, incl. multiple, and covered every evaluation year. They were a mix of both current exporters and non-exporting companies (16/23 exporting), with a few non-exporting companies having exported in the past. Interviewed companies covered a variety of sectors and product type, for example, engineering consultancy, renewable energy provision, software development and services, manufacturers of heavy machinery, textile and consumer goods, music equipment retail etc.

Reasons for seeking delivery partner support

5.3. In line with survey responses, most interviewees accessed multiple forms of support: export, wider business development and both. They accessed and through their interviewees referred to a variety of support activities, ranging from travel/accommodation support to access international markets, GlobalScot, market research support, investment and/or financial readiness support, R&D grants, capital grants, IRP grants, innovation grants, and

[32] Note that this analysis excludes SCC firms as information on support years was not provided.

other innovation-related support, marketing advice, one-to-one exporting advice, trade missions and so on.

5.4. When asked about their reasons to seek the support, firms typically focused on (with some minor overlap):

- Needs, business or export-related, that encouraged them to seek support (mentioned by 17/23 firms); these needs were financial (because some firms did not have funding/resourcing) and expertise/knowledge related (e.g., never exported before or were exporting "sporadically"). A number of firms (6) specifically highlighted that their needs stemmed from being small and/or early-stage start-up businesses with limited capacity for businesses activities, product development and exporting;
- Previous experience/contact with delivery partners or being recipients of the support (mentioned by 5/23 firms): that is, seeking support because they had sought and/or received it before the evaluation period, incl. being account managed by SE or being referred by another organisation;
- Other reasons, e.g., received enquiries from different markets that prompted the firm to consider potentially exporting there (1 firm), new product development (1 firm), seeking assistance as part of doing business (1 firm).

5.5. When queried about specific purposes they sought the support for, firms focused on product development (10/23 firms), expanding into new markets (5 firms), general business support (2 firms), marketing internationally (2 firms), identifying export markets (1 firm), business growth and/or improvement (2 firms), funding (1 firm), examining feasibility of manufacturing domestically (1 firm), business strategy development (1 firm).

5.6. While the evaluation covered only the supported activities in 2018-2021, five firms mentioned receiving support or engaging with delivery partners prior to that, sometimes intensively, for instance, by receiving multiple grants for product development, sometimes with negative experiences (e.g., because they could not access the support). At times, these past or continuous experiences were reflected in these firms' interviews.

Satisfaction with the support

5.7. The majority of firms (20/23 firms) considered that the support was relevant to their exporting or business objectives (latter if the business was not exporting). Two firms that did not consider it relevant explained it through the lens of absence of exporting results. For instance, one firm received product development support but did not produce the product (for other reasons than the support itself) and thus did not export it, for another firm EU-exit severely affected exporting. For one firm a certain advice they received was too "basic" and not bespoke enough to be of relevance.

5.8. In terms of quality of the support, more than half of interviewed firms were positive (14/23 firms) noting the quality was "good", "very good", "great", or "excellent". They cited such factors as availability of funding and support, understanding of their needs, clarity of the process, developing connections and market opportunities as a result or generally the support working well, feeling supported, high level of expertise, etc.

5.9. For five firms the quality varied and/or depended on specific support activity. The pros of the support for them were similar to those of the positive firms above, cons were typically related to insufficiency of support levels, for example: not receiving marketing support, not receiving introductions to other businesses in the delivery partner network, partial funding preventing

them from applying (cannot cover their part), lack of continuous support afterwards, not as much support as wanted, limitations on what support could be accessed. Two firms also noted that delivery partner staff varied in skills/expertise.

5.10. Finally, four firms evaluated the quality of the support more or entirely negatively for such reasons as exporting advice not being sufficiently useful (to their sector/business), delays in support decision for travelling/accommodation that cost the business money (due to missed options for less expensive travel), online training being insufficient and no other support being provided, getting wrong advice for the sector.

5.11. Those interviewed firms that accessed multiple support activities, were asked how different support activities work together, if at all. The responses varied. Nine firms out of the total 23 firms thought activities worked together, for instance, because they engaged with one person or multiple persons who worked together, support was sequential, delivery partner staff had good understanding/expertise, support was focused on specific area (e.g., COVID-19, business growth-related, business strategy) etc. Four firms, meanwhile, did not think different activities worked together: they were not coordinated, there was no cohesive account management, they were unrelated or undertaken by different people.

5.12. Four other firms were unsure about the complementarity, or it depended on the activity. For example, three firms accessed different support at different points in time, so they did not see the question about them fitting as applicable.

Impact of the support

5.13. Interviewees were asked what they took away from the support, if anything, and how they applied this to their exporting/business objectives (as applicable based on exporting status). As could be expected due to a variety of businesses and different support they accessed, their responses presented many examples of outcomes based on specific support activities or support as a whole (Table 10). While exact outcomes varied, 10 firms of the 23 mentioned export-related results such as accessing new markets and increasing export sales.

5.14. None of the interviewees specified that they took away "nothing" from the support. This included respondents who assessed the quality of the support negatively and were generally dissatisfied with the support (or lack of it) provided. Only one business indicated that their take-away from the support was not applied to exporting/business objectives due to other reasons not related to the support received that prevented product development and thus exporting.

5.15. All companies that could provide an answer indicated that outcomes and their application from the support were for the original purposes that they sought the support for.

Table 10. What interviewed firms took away from the support and how they applied it; mentioned by one firm unless stated otherwise.

What firms took away from the support	How this was applied to exporting/business objectives
Better understanding of the business challenges / obstacles Better product design Better business processes / strategy (mentioned by 3 firms)	Started exporting Exporting outside of EU Grew international sales

What firms took away from the support	How this was applied to exporting/business objectives
Helped to understand support application process / support landscape / contacts for other bids (mentioned by 3 firms)	Received a large grant elsewhere Accessing other support
Product development (mentioned by 2 firms)	Proof of concept Received a patent Will export the developed product
New contacts and introductions (mentioned by 2 firms)	Leads to be used when and as needed, incl. in new markets
Helpful IP advice	Tidied up IP portfolio, moved IP business overseas
Funding Brainstorming ideas	Developed the product
Grew business	Got close to commercialising the product
Contributed to product development	Wasn't – another issue prevented product development and thus exporting
Export strategic framework highlighted opportunity markets	Targeted marketing which worked well in some export markets
Developed contact networks abroad	Used connections to develop partnership in another EU country and are currently tendering there
Successful international marketing campaign	Helped to export in a new market
Could hire a new employee that expanded international presence	Expanded into many new international marketers
Developed product and took it to market	[confidential]
Prototyped product Understood that can't manufacture in UK (due to price)	Started manufacturing product (abroad)
Reconsidered and formalised business strategy / processes	Using marketing materials in exporting
Business processes streamlined	Made exporting quicker

Impact on exporting

5.16. **The following questions applied to firms that were exporting**. First they were asked to provide more context to their survey answer on why the support helped or did not help them to achieve export sales (nine and seven firms respectively). Nine firms that reported that the support helped them achieve export sales explained this through:

- Developing contacts/networks/opportunities with potential buyers/other stakeholders that helped with sales (5 firms): in this group, two firms had additional explanations of better product design and spending time in the abroad market that also helped;
- Market access in North America (1 firm);

- Identifying key areas where marketing was then prioritised (1 firm);
- Intensive support, incl. financial, enabling the firm (early-stage start-up) to exist (1 firm);
- Generally helping (1 firm);

5.17. Of seven firms that reported that the support did not help with export sales, three firms adjusted their survey response to say that it helped them achieve (some) sales indirectly. For example, two firms built new contacts as a result of the support that contributed to export sales (for one firm, these were not of high volume); and one firm was able to employ a staff member abroad who expanded international reach.

5.18. The remaining firms for whom the support was not helpful explained it by:

- None/insufficient support opportunities for their sector (agriculture, services) (2 firms);
- Not exporting the product (1 firm);
- Perceiving no direct link between the innovation support to prototype a product that they accessed and exporting (1 firm).

5.19. Firms that were supported by SE/SDI were also asked to clarify the difference between their planned export sales and actually achieved export sales as reported in the survey. Six firms achieved lower than planned export sales and nine firms - higher (out of 15).[33]

5.20. For those with lower than achieved export sales, the main explanations centred on COVID-19 restrictions that affected their business sector and/or limited contact with potential clients (3 firms): one firm in this group expected that they achieved the planned sales compared to when the survey was taken (the difference was small). The other firms provided the following explanations:

- Still growing international sales, expecting to achieve export sales in the future;
- Product development taking time;
- Not being able to afford marketing which affected customer acquisition.

5.21. Firms that reported achieving above their planned export sales largely explained it by better business performance (four firms). One firm further clarified that it was a result of continuous work with international contacts over nine years, while another specified that they focused on EU suppliers to mitigate EU-exit issues. Remaining firms provided the following explanations for higher export sales:

- Successful international marketing campaign that brought in many sales from one customer;
- Capitalised on opportunities provided by support;
- Different way of calculating (separating out UK and international revenue);
- COVID-19 positively contributing (online training firm);

5.22. Lastly, one firm achieved export sales against £0 planned: it reported that there was not a direct link between the innovation support they accessed and exporting.

5.23. When asked to elaborate what would have happened to their export sales/activities had they not received the delivery partner support, firms typically confirmed their survey responses. For most firms (12) this meant lower export sales and/or achieving them over a longer period of time. Firms explained the reasons fairly uniformly: because they would have been more constrained (financially and expertise/knowledge-wise) without the support and would not

[33] A few firms did not report the figures in the survey but clarified during the interview if they had achieved export sales.

have received its benefits such as contacts that led to export sales. Most firms believed they would have got there eventually themselves, but it would have taken them longer.

5.24. Lastly, all firms were asked to add to their survey response on whether the support would/would not help them to achieve sales in the future. Ten firms reported that they anticipate the support to help in the future, mainly because the support helped them, as described earlier, so they expected the results to carry on, esp. with regards to contacts and leads increasing export sales (mentioned by 6 firms). The remaining four firms explained it in terms of generally business growing and/or continuing to work and the product being ready for exports.

5.25. Of those six firms that did not expect the support to help, two cited COVID-19 negative effect on business recourses and international contacts. The others had varying explanations:

- Did not launch the product;
- Generally unsure about future;
- Product at the development stage;
- Could not see a direct link from the innovation support to exporting.

5.26. Finally, six firms were unsure if the support would help or not in the future, largely because of uncertainty about the future, esp. with the economic downturn, post-COVID and the EU-exit (four firms). Of them, one firm was also unsure if delivery partner support would continue.

Export support gaps

5.27. In the survey, eight firms specified types of support they would have liked to receive that would have been useful to them in helping to achieve export sales. These were numerous and various, and the interviewees were asked to explain how not having this support affected the firm's ability to achieve these sales. In summary, impacts were largely centred on missing out on potential export sales and markets, for example:

- Financial support to establish offices abroad could allow to establish other new markets (mentioned by 2 firms);
- Financial business support would help with business growth and thus exports;
- Product development support around animal trials would allow to produce compliant product in UK (without which the EU market access is more difficult);
- R&D support could develop product for selling and exporting;
- Marketing support could lead to higher awareness of the product and thus exports;
- Overseas business development support "to establish presence" could bring in more sales;
- Any support that could increase export sales.

5.28. Only three firms reported receiving exporting support from organisations other than the delivery partners during the evaluation period. All of them were from the UK Government: Department of International Trade (DIT, now Department for Business and Trade (DBT)) and UK Export Finance. This support was limited to advisory and preliminary discussions/talks.

5.29. Firms reported that this support did not have substantial impact, because, for example, it was very advisory and not pursued further (export credits), introductions to potential funders abroad did not result in further opportunities, or not yet but possibly in the future (as one firm was featured in DIT's, now DBT, Investment Atlas).

Future outlook

5.30. Interviewed companies were typically optimistic about their future exporting plans, generally focusing on continuing to grow internationally (9 firms) and/or expanding into new countries and markets (8 firms). Four firms specified further plans for expansion and growth: by improving/modifying product which would help to sell in new markets, establishing a distribution centre in the EU, adding more brands to the retail side of business, and improving export sales check-out processes.

5.31. When specified, firms mentioned the following new markets they were interested in: Australia, other European countries, South East Asia, USA, South America, Japan, and new African countries.

5.32. Three firms (two of them not currently exporting) were focusing on domestic growth first before they are in a position to export: of them one was continuing to develop their product. Finally, one firm had global plans and ambitions but could not "afford yet" to put them in place.

5.33. With regard to how the Scottish Government and/or delivery partners could support businesses with their export plans, firms reported the following (with some minor overlap):

- Continue the current support offering (mentioned by 4 firms);
- Provide grants/funding (4 firms): for product development, marketing, staff, business growth;
- Support with specific markets of interest such as South America (which was affected by a lack of trade agreements due to the EU-exit), North America, Far East, South East Asia etc. (4 firms);
- Provide market research and advice (e.g., on areas to set up, employment law in markets of interest) (3 firms);
- Build/introduce contacts/networks (2 firms): into new markets abroad, with other supported firms as potential clients;
- Organise/support trips/visits to other countries (2 firms);
- Signpost to subject experts, advice (2 firms);
- For local representatives abroad to raise awareness about the firm (1 firm);
- Provide direct help with export sales from abroad "on the ground" (1 firm);
- Change perception about growth industries (i.e., what is a growth industry) and tweak support eligibility for firms that "do not fit the box" (1 firm);
- Tax credits for film and TV sector.

6. Outcome Assessment

6.1. This section assesses the outcomes of export support promotion, drawing on monitoring data and primary research. As indicated in the Logic Model, and consistent with the overall aims and objectives of export promotion, increasing export sales is the principal anticipated outcome.

6.2. Detailed monitoring data was available on the number of planned export sales at a firm level (incl. £0, i.e., none planned) for SE/SDI supported firms only; however, data on actual export sales achieved was not available. It was therefore not possible to assess the characteristics of firms who were more or less successful in increasing export sales for the supported business population. We used survey evidence on whether export sales associated with the

support were realised in practice, providing an estimate of the total export sales achieved in the evaluation period.

6.3. The survey responses could be extrapolated to the population of supported businesses that were approached to take part in the evaluation survey (N=2,329). In the post-survey adjustments, 211 firms were removed: 134 because a business was no longer trading or because a contact no longer worked for the company, 77 because they could not be reached by any means (email/telephone) – these counted towards non-coverage. We thus used 2,118 firms to provide an estimate of the actual export sales outcomes.

6.4. The survey indicates that most firms were exporting (59%),[34] therefore we can estimate approximately 1,249 firms to be exporting in the supported population (ranging from 1,164 to 1,334). From survey responses we can estimate that the majority of exporting firms were positively impacted by the support (on average 58%, est. range of 53% - 64%). Among them, 39% of firms would have achieved lower export sales if not for the support (est. range 33% - 44%).[35] This equates to approximately 482 firms (varying from 388 to 586).

6.5. Businesses attributed about 41% of their export sales value to the support (est. range of 35% - 46%). Applying these findings to the export sales values reported in the survey over the evaluation period 2018-2021 (cumulative across four years), results in approx. £1.6 billion of export sales achieved as a result of the delivery partner support, varying from £1.1b to £2.2b (see Table 11).

6.6. Of note is that planned export sales (SE/SDI only) were meant to materialise over the period of three years since receiving the support. At the time of writing, only firms that received support in 2018/19 were within that timeframe, meaning that 86% of firms were still working towards their export sales targets.

6.7. In the survey, 46% of firms, both exporters and not, anticipate their export sales to increase as a result of the delivery partner support over the next three years. To estimate by how much, we look at exporting firms as they provided their export sales data. Of them, 57% of firms anticipate their export sales to increase over the next three years (est. range 51% - 62%).[36] By our estimates, supported exporters thus anticipate increasing their export sales by approximately £2.7billion over the next three years. Taken together with estimated achieved export sales, this equates to approx. £4.3 billion in export sales as a result of the support (Table 11).

6.8. To put this differently, the support contributed to achieving on average **£764k per supported firm in export sales** and to **£1.3m per firm** in anticipated export sales, for the total of **£2.0m per firm**.[37]

[34] "Exporting activity" section indicates 60% of firms export, that is because few firms that skipped this question were removed from the count.
[35] The remainder of impacted firms reported that they would have achieved the same amount of export sales but later as a result of the support – export sales of these firms are not added to the analysis.
[36] We are using a margin of error of the survey in place of the margin of error specific to exporters as exporting status data at the time of the support was not collected.
[37] Firms that opted into the evaluation and could be contacted (2,118).

Table 11. Export sales by firms as a result of the support in 2018-2021 and as anticipated over the next three years.

Total value of export sales	Average estimate	Lowest estimate	Highest estimate
Achieved	£1.6b	£1.1b	£2.2b
Anticipated over three years	£2.7b	£1.9b	£3.6b
Total	**£4.3b**	**£3.0b**	**£5.9b**

Source: ERC-CBP analysis of primary and secondary data. Total figures are rounded up.

6.9. SE/SDI supported firms had planned to achieve £3.7b in export sales over three years.[38] Taking anticipated export sales into account, SE/SDI exporters expect to achieve approx. £4.0b in export sales over the next three years.

Table 12. SE/SDI firm export sales: planned, achieved and anticipated.

	Planned	**Achieved** (range of estimates)
Export sales	£3.7b	£1.5b (£1.0b - £2.2b)
Anticipated	-	£2.4b (£1.7b - £3.4b)
Total		**£4.0b (£2.7b - £5.6b)**

Source: ERC-CBP analysis. Total figures are rounded up.

6.10. Thirty-six per cent of surveyed exporting firms reported that they would have achieved their export sales regardless of the support, which constitutes its deadweight (i.e., an outcome that would have occurred anyway). However, 32% of these firms anticipate increasing export sales in the future as a result of the support by about 23%, which equals to an estimated £251m in export sales over three years. Accounting for an increase in export sales in the future, we can estimate the support deadweight of £2.2b (£1.8b – £2.6b), or about £1.1m per firm (Table 13).

Table 13. Support deadweight.

	Average estimate (range of estimates)
Achieved export sales deadweight	£2.5b (£1.9b - £3.1b)
Anticipated export sales	£251m (£116m - £471m)
Total deadweight	**£2.2b (£1.8b - £2.6b)**

Source: ERC-CBP analysis. Total figures are rounded up.

7. Non-beneficiary survey responses

7.1. This section presents findings from the non-beneficiary survey with 135 Scottish exporters who served as a control group for exporting beneficiaries in the econometric analysis of evaluation of export promotion programme.[39]

Survey responses

Other public sector support

7.2. A very small percentage of non-beneficiary firms benefited from other public sector export-related support (this does not include the delivery partner support). Of the 135 non-

[38] Those that opted into the evaluation.
[39] In both beneficiary and non-beneficiary surveys, an exporter is a firm that sold its goods and/or services abroad in the last 12 months.

beneficiary firms, only 4% (five firms) reported receiving other public sector support for exporting since 2015. They accessed export support through the Business Gateway (two firms), the Scottish Seafood Association (one), and their local chamber of commerce (not trade mission support) (one).

7.3. Slightly more firms (11%) received public sector support for wider business development, aside from delivery partner support since 2015. These were: Business Gateway (four firms), the Local Council (four), Digital Boost (two), and other (one each): Data lab, Skills Development Scotland (SDS), Innovate UK, COVID-19 grant, and a Scottish Government grant from the digital development scheme.

Business characteristics

7.4. Majority of non-beneficiary firms (93%) were head-quartered in Scotland. A large proportion of them came from the manufacturing business sector (48%), followed by wholesale, retail & repair of motor vehicles and motorcycles (23%). On average companies were 33 years old.

7.5. On average these companies employed 28 employees: 97% were SMEs (with 1 to 249 employees). Their turnover in 2021 was on average £9.4m, ranging from £10k to £160m.

7.6. Majority of firms (76%) reported being a partner in the global value chain,[40] mostly Business-to-Business (B2B) (56%). Those that specified "other", typically reported being a partner across several categories, such as both B2B and business-to-consumer (B2C), or "B2B and [business to government] B2G for local authorities".

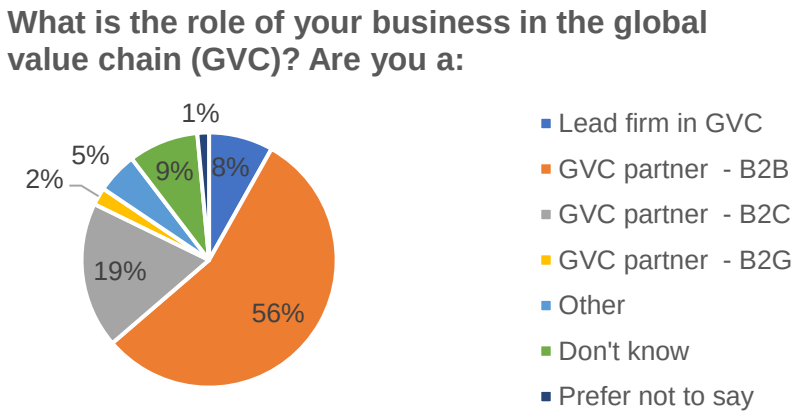


Figure 57. Percentage of non-beneficiary firms (N=135)

Patterns of exporting

7.7. Though a large share of non-beneficiary firms did not know the exact date their firm started to export (21%), the remaining firms typically started to export in year 2000 (ranging from 1930 to 2022). The majority (94%) were continuously exporting since the year they started. They were also primarily exporters of goods (81%): six per cent exported services and 13% exported both goods and services. Majority, 75%, imported goods and/or services.

[40] I.e., when different stages of the production process are located across different countries.

Future outlook

7.8. Eighty-four per cent of non-beneficiaries expected to experience barriers to exporting in the next three years. The three most common barriers anticipated were additional paperwork (39%), customs duties or levies (33%) and time taken for checks at the border (25%) (Figure 58).

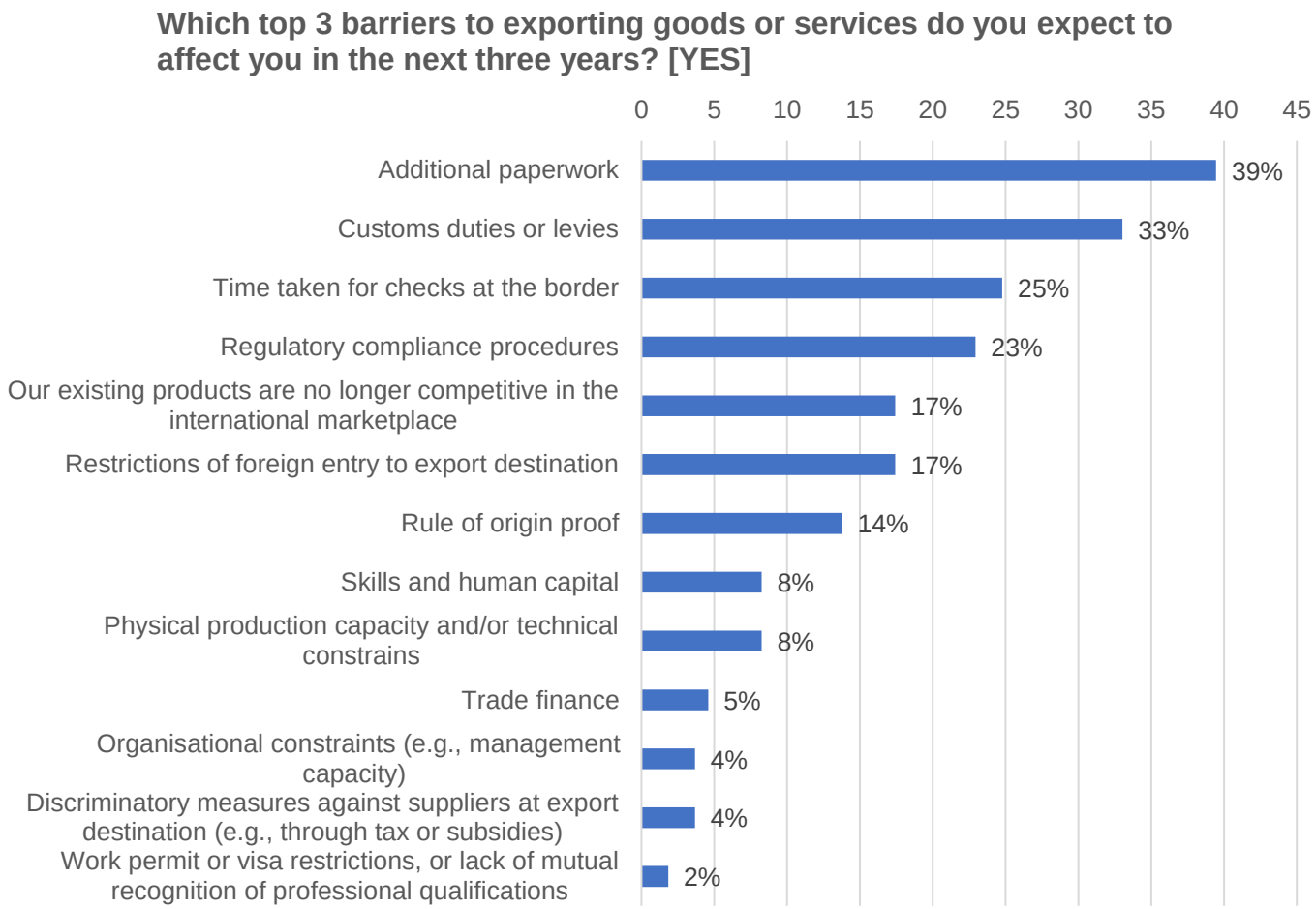


Figure 58. Percentage of non-beneficiary firms expecting exporting barriers in the future (N=109)

7.9. These businesses specified their critical gaps in helping them address their export barriers in the future. Most commonly specified critical gaps were customs and tariffs (70%), regulatory compliance (68%) and transport and distribution (53%) (Figure 59).

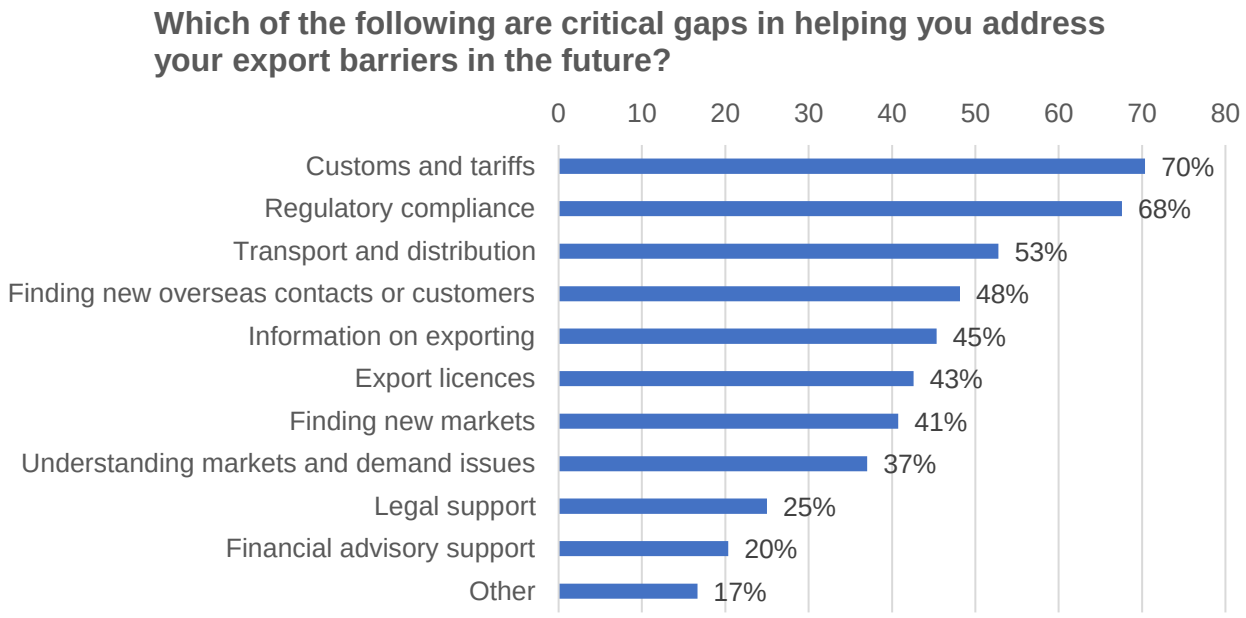


Figure 59. Percentage of non-beneficiary firms expecting export barriers in the future (N=108)

7.10. The majority of non-beneficiaries (84%) had no plans to start exporting to any new market sectors in the next three years (8% did not know). Eleven firms (8%) that had such plans mostly plan to export to Tourism (four firms) and Construction (two) sectors (Figure 60).

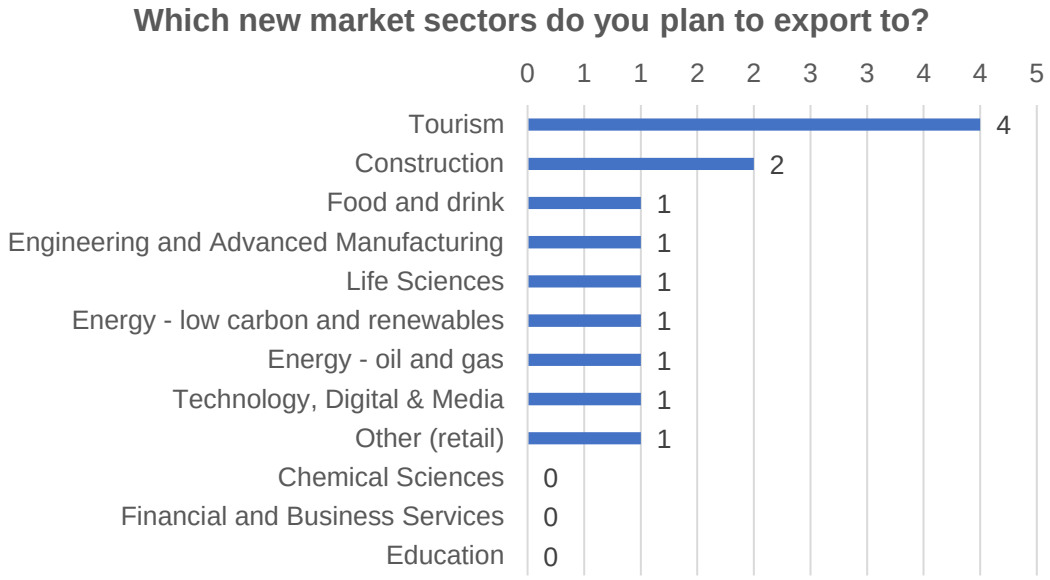


Figure 60. Count of non-beneficiary firms that plan to export to new market sectors (N=11)

7.11. A higher share - 30% - plan to export to new countries in the next three years. Of them, 23% (nine) were not sure of the exact country or reported "anywhere". The remainder specified country(-ies) or continent(s) they plan to export to as presented in Table 14.

Table 14. Countries where non-beneficiaries plan to export to (N=22)

Count each	Countries
4	USA
3	Canada, Spain, France
2	Singapore, South Korea, Italy, India
1	Morocco, South Africa, Israel, Japan, Thailand, China, Germany, Poland, Netherland, Sweden, Denmark, Finland, Norway, Iceland, Switzerland, Australia, New Zealand

Reasons for not seeking support

7.12. Non-beneficiary firms were asked why they have not accessed export or business development support from the Scottish Government delivery partners. Majority of firms (90%) provided a response to this question. Most commonly mentioned reasons, with some minor overlap, are summarised in the Table 15 below. The main reason was lack of awareness of the support and/or delivery partners (42% of those who commented), followed by not needing the support (23%).

Table 15. Reasons why non-beneficiaries did not seek delivery partner support.

% (count)	Reason(s)	Quotes to illustrate
42% (51)	**Was not aware of the support** – numerous businesses mentioned that they did not know about the delivery partners, or available support. 6/51 also mentioned that while they did not know, they also did not need the support.	"We have never had any information that they [delivery partners] existed" "We've managed on our own and didn't realise there was any help. "I was not sure what was on offer or what help I could get?
23% (28)	**Did not need the support –** most firms with this reason reported not needing the support or specified that they could do what they needed themselves. 6/28 also were not aware of the support available	"Familiar with exportation already. No need." "For one I did not know about them and for two I go through an association that points me in the right direction towards people. "We [are] doing okay so we hadn't looked into it.
12% (15)	**Applicability / appropriateness of support** - firms in this group considered their business not applicable/eligible for the support, or that the support was not appropriate or relevant for their business	"Not sure if we are eligible as we are part of a multinational organisation. "We are not setting out to be export business." "We have looked but there was nothing really available or relevant to what we do."

% (count)	Reason(s)	Quotes to illustrate
12% (14)	**Negative experience of engaging with delivery partners and/or Scottish Government –** a small group of firms had attempted to engage with delivery partners and/or Scottish Government in the past, but were not satisfied with that experience for reasons such as slow response times, lack of engagement, or lack of knowledge etc.	"The government take forever to come back to you and if you work at the speed they work at, businesses would be closed down." "Have tried to get advice but not been able to get any in-depth advice or timescales that we need." "We were never provided with any support when we asked for assistance."
10 (8%)	**Administrative burden –** some firms considered or perceived the required process for applying for the support to be too burdensome in terms of form filling, and/or too complex.	"Because it is the complexity and the rigidity of the financing support outweigh the support and benefits." "Done twice many years ago, was painful, easier to pay ourselves, too many forms to fill in (…)"
7 (6%)	**Previously rejected –** another smaller group had been rejected for the support, either after having gone through the process or because they were told they were not eligible to apply.	"At the start of our export drive we produced a plan with [delivery partner], however [delivery partner] would not take our company on (…)" "Simply we have tried previously, and the issue has been we have approached them, and they said we are not dealing with your business sector at the moment"
3% (4%)	**Other –** other reasons	"It's not something in my time we have looked at or considered. "Will probably be looking to things once we get the firm settled as he [new managing director] is still getting a feel of what we do"
2 (2%)	**No capacity –** two firms had no capacity	"We don't have internal sources to handle it" "I have been too busy firefighting."

8. Econometric Estimations of Impact

8.1. In this section, we combine findings from the beneficiary (exporters only) and non-beneficiary surveys using advanced econometric analysis in order to assess impact of the export promotion support when compared to non-beneficiary firms, that is, the counterfactual scenario of what would have happened if firms had not accessed the export support.

Beneficiary survey and assistance

8.2. Examining the survey data shows the composition of exporting beneficiary firms. It is apparent that there are multiple ways to define assisted firms, or the "treatment" group (see the Methodology note for more detail). In the programme evaluation analysis, we differentiate

firms that have been treated from those that have never been treated according to their **status** regarding assistance. We build on the exact year of assistance (as opposed to a financial year or intervention period) and give the value 1 for all periods since the start of assistance (i.e., once a firm has first been assisted). Using this variable (treat), we can split the sample of assisted firms into before- and after-treatment periods (Table 16). **Our following empirical analysis focuses on evaluating the effect of assistance on after-treatment firm-year observations.**

Table 16. Sample structure: treatment status

	No. of firms		
year	**Before-treatment (=0)**	**After-treatment (=1)**	**Total**
2015	175	0	175
2016	168	7	175
2017	159	16	175
2018	102	73	175
2019	45	130	175
2020	7	168	175
2021	0	175	175
Total	**656**	**569**	**1,225**

Merged data for evaluation: summary statistics

8.3. Merging non-beneficiary survey data with beneficiary survey data (exporters only) results in 312 firms in a balanced panel. After excluding two firms without a specific assistance date, there are 310 firms for eight years (2015-2022) in the data, amounting to 2480 firm-year observations. There are 175 beneficiary firms (1400 observations) and 135 non-beneficiary firms (1080 observations), forming the sample of our econometric modelling.

Understanding the differences between beneficiary and non-beneficiary firms

8.4. An initial inquiry in our evaluation pertains to the comparability of the two distinct sets of firms under examination, namely, the beneficiary and non-beneficiary firms. Given that the intervention program is not a natural experiment, it is expected that a perfect control group sample is hard to construct. However, assessing their level of similarity is of importance, as substantial dissimilarities between these groups could pose challenges for our subsequent empirical analysis, particularly when employing matching methods, where finding common support can be a considerable hurdle. The aim here is to understand the statistical differences between the two samples and hence use them for modelling and interpret the evaluation results appropriately. Data in Table 19 in Appendix 11 offers a comprehensive overview of the merged sample's summary statistics for the overall period. Additionally, it provides test statistics highlighting mean differences between the beneficiary and non-beneficiary firms. This comprehensive analysis illuminates an overall similar pair but with some notable distinctions between these groups.

8.5. In particular, the two groups of firms exhibit a certain level of dissimilarity, with some variables demonstrating statistically significant differences between them. Notably, non-beneficiary firms tend to be larger in terms of employment size, boasting a higher headcount.

They tend to be older, on average approximately a decade older than beneficiary firms. Furthermore, non-beneficiary firms are slightly more likely (by about 5%) to be foreign-owned, and so are they more likely to have their headquarters in Scotland compared to beneficiary firms.

8.6. There is no statistically significant difference in the values of exports between the two groups. Comparing export-related attributes, we observe that non-beneficiary firms engage in more substantial export activities, particularly with respect to exporting goods, while they are considerably less involved in the international trade of services. In contrast, beneficiary firms sample exhibits a more balanced mix of goods exporters and services exporters. Non-beneficiary firms tend to possess greater experience in terms of years of exporting, averaging around 14 years in contrast to the 8 years of exporting experience for beneficiary firms.

8.7. Turning to the sectoral composition, both groups share similar representation in sectors such as Food and Drink, Energy, Low Carbon and Renewable, Finance and Business, Education, and Tourism. However, noteworthy distinctions emerge. Non-beneficiary firms dominate in Engineering, Chemical, and Oil and Gas sectors, whereas beneficiary firms exhibit an overrepresentation in Technology, Digital & Media, and Life Science sectors.

8.8. This comprehensive assessment of the differences and similarities between beneficiary and non-beneficiary firms lays the foundation for our subsequent analysis. It is useful to acknowledge these variations as we delve into the empirical evaluation of the export promotion programme's effects on these distinct groups, ultimately enabling a more nuanced and accurate interpretation of our findings.

8.9. We next continue to assess differences between the two samples over early period, as the statistics of later period might be conflated with the effects of intervention. To explore this further, we examine the same summary statistics for the merged sample in the year 2015 in Table 20 and the combined sample of year 2015 and 2016 in Table 21.

8.10. Upon examining these time-specific statistics, we discern a notable trend: the dissimilarity between the beneficiary and non-beneficiary firms (proxied by the statistical significance in the mean differences between the two samples) appears to diminish in the early period, including that of firm size. This may suggest that the beneficiary and non-beneficiary firms are more similar at the beginning of the examined period.

8.11. Building on the statistical tests of the sample characteristics, we further employed a straightforward logit model to investigate the partial effects of the observed variables, presented in Table 22. Our aim was to comprehend which factors could potentially predict the classification of firms into either the non-beneficiary or beneficiary categories, while controlling for other characteristics.

8.12. Our findings indicate that many firm characteristics become less useful in distinguishing between the two groups when other variables are taken into account. What appears to be of greater importance are a firm's export activities and its experience in the export market. Specifically, firms that engage in more extensive exporting activities and possess less export experience appear to be more likely to fall into the beneficiary category. Conversely, firms engaged in trading services internationally are more likely to be supported than not.

8.13. It is important to exercise caution when interpreting these findings. The estimates should not be automatically attributed to a causal relationship of selection. Several factors, including the limited sample size, may influence the statistical outcomes. Additionally, it is worth noting that

the model specifications showing statistical significance in selection effects, particularly in models 3 to 5, could be indicative of both the selection into assistance and the impact of the assistance itself. In summary, our investigation reveals that non-beneficiary firms consistently exhibit certain distinguishing traits when compared to their beneficiary counterparts, regardless of whether we examine a single year or a combination of years. These distinctions encompass factors such as age, size, export experience, and the concentration of their export activities, with non-beneficiary firms appearing as older, larger entities, more seasoned in the realm of exporting, and more focused on the export of goods rather than services when compared to beneficiary firms.

8.14. These insights provide a useful context for our subsequent analysis, emphasising the importance of accounting for these variations when evaluating the impact of the export promotion programme on these distinct groups.

8.15. In summary, overall, these findings lend support to the notion that non-beneficiary firms are a suitable control group for evaluating the effectiveness of the export promotion programme among beneficiary firms. However, it is useful to bear in mind the potential complexities and limitations inherent in drawing causal inferences from the results that are non-natural experiment based.

Evaluation of Export Promotion Programme

8.16. In our pursuit of estimating the impact of the export promotion programme on participating firms, we utilise the extensive literature on econometric methods of business support programme evaluation, or treatment effect estimation. This analytical approach seeks to quantify the effect of a specific treatment variable, in this case, participation in the export promotion programme, on an outcome variable, export performance. It is imperative to conduct this analysis while controlling for potential confounding factors that could influence the cause-and-effect relationship. Given that this is not a natural experiment, where researchers can manipulate the programme's design, our task is to measure counterfactual causality, essentially determining what would have happened if the firms had not participated in the programme.

8.17. Our preferred approach is the staggered difference-in-differences (DiD) method, following Callaway and Sant'Anna (2021).[41] This approach is a state-of-the-art methodology for policy evaluation of interventions occurring at various times over an extended period.

Aggregate results

8.18. This section reports different sets of results for overall effect of the programme using different identification strategies. We start with experimenting the options of more conventional method, those with stronger assumptions, and then move on to more advanced methods. These include Difference-in-Mean regression (by treating intervention as a dummy variable), Control Function regression, Endogenous treatment-regression model, and Propensity Score Matching, which primarily differ in the identification assumptions, model specification and underlying data structure.

[41] Callaway, B. and Sant'Anna, P.H., 2021. Difference-in-differences with multiple time periods. *Journal of Econometrics*, *225*(2), pp.200-230.

8.19. The results of estimated average treatment effect on the treated firms (ATT) or beneficiary firms are reported in Table 17 Column (1) to (5). We find that in four out of five estimates, there is positive and statistically significant effect of entering export promotion programme. However, as explained above, these methods are developed largely to evaluate the treatment of the same timing for all units. When the treatment effects are heterogeneous and the timing of the treatment variable varies across units, these approaches may construct potentially inappropriate comparison, for example by drawing comparisons between later treated units with earlier treated units, as opposed to comparing treated units and never treated units or treated units with not-yet treated units.

8.20. We now turn to the staggered DiD approach of Callaway and Sant'Anna (2021). In particular, we consider the cases in which one would assume that the parallel trends assumption would hold unconditionally, and when it holds only after controlling on observed characteristics. In the main text, we consider the case where never-treated firms are the comparison group and where we do not allow for any anticipation effects. Column (6) in Table 17 shows the model specification with no control (unconditional parallel trends), while Column (7) shows the model specification with control for observed characteristics (conditional parallel trends). We find that there is still positive and statistically significant effect of entering export promotion programme, with the effect of smaller magnitude than the estimates of other conventional methods. Overall, export promotion programme has led to firms' higher export performance measured by log of export value by 1.4% based on Column (7) as an average effect over the period and across all firms. This equals to an increase in firms' value of exports of 140%.

Table 17. Average treatment effects of export promotion

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Variables	Difference-In-Mean	Control function-OLS homogenous response to treatment status	Control function-OLS heterogenous response to treatment status	Endogenous treatment-regression model	Propensity score matching	Staggered DID (unconditional parallel trends)	Staggered DID (Conditional parallel trends)
Average treatment effect on treated (ATT)	2.335***	2.477***	2.725***	6.692**	1.908	1.278***	1.417***
	(0.3)	(0.349)	(0.377)	(2.092)	(0.591)	(0.001)	(0.008)
Controls	No	Yes	Yes	Yes	Yes	No	Yes

Note: The table reports the average treatment effect on the treated firms (ATT). Standard errors are in parenthesis. *** p<0.001, ** p<0.01, * p<0.05, + p<0.10.

Treatment effect heterogeneity

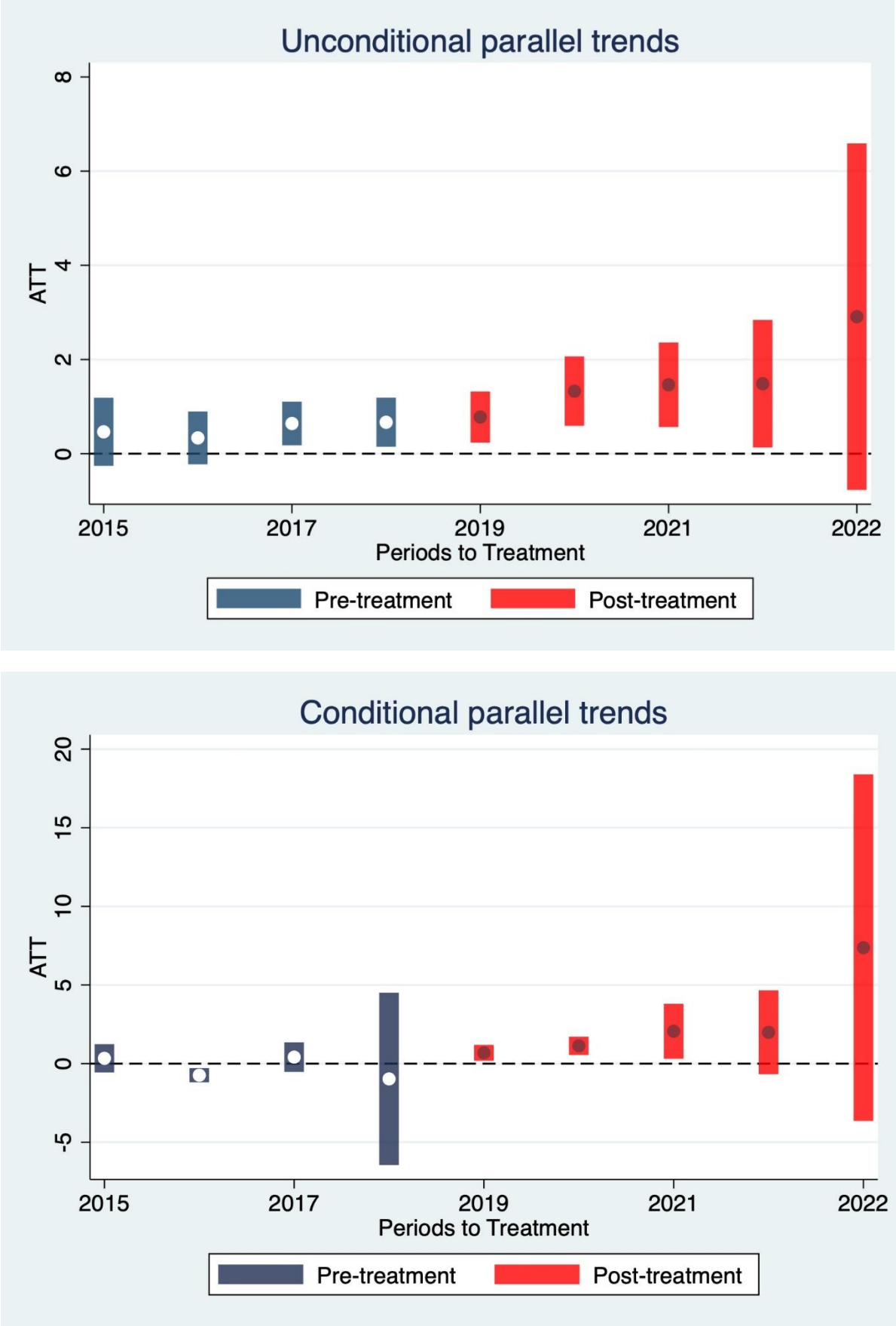
8.21. Examining the composition of beneficiary firms more closely, it becomes evident that there are multiple ways to categorise the assisted firms, or the "treatment" group. Analysing

treatment effect heterogeneity can provide valuable insights into the dynamics of the export promotion programme and its impact on different subsets of beneficiary firms. This is typically carried out by several partial aggregations of the group-time average treatment effects in order to summarise different aspects of treatment effect heterogeneity. In particular, we focus our discussion here on three particular questions: (a) How does the effect of participating in the export support programme vary with length of exposure to the treatment? (b) Do groups that are treated earlier have, on average, higher/lower average treatment effects than groups that are treated later? (c) What is the cumulative average treatment effect of the policy across all groups until some particular point in time?

8.22. The results for group-time average treatment effects are reported in Figure 61 along with a simultaneous 95% confidence band. The plot contains pre-treatment estimates that can be used to ''pre-test'' the parallel trends assumption as well as treatment effect estimates in post-treatment periods. The results show that the plotted pre-treatment estimates are around zero prior to being treated (on the left-hand side of period=0), which suggests the parallel assumption holds. They are slightly positive trend in (a) the no-control model and returns to be about zero in (b) the model with control.

8.23. The group-time average treatment effect estimates provide support for the view that being assisted in export promotion programme led to increasing export value, given both ATTs are positive and statistically significant. The level of the effects is higher in the model with control in (b) than no control (a), suggesting varied effect given differences in firm characteristics that have impact on the effect of the intervention. This shows the usefulness of controlling for firm characteristics in this modelling exercise.

8.24. Further, the positive intervention effects may take time to emerge. Figure 61(b) shows that there is hardly any effect in driving up export performance at the beginning of the intervention. On average, it seems that positive effects may be observable after two years of intervention. At the same time, the confidence interval grows as time moves on. While the point estimates increase in the fourth year, the confidence interval also expands significantly. As a result, the positive effect of the programme is no longer statistically significant. This suggests that the performance effect of intervention varies markedly among treated firms at later time after the intervention.



Note: The dots are the point estimates, and the coloured bars show confidence intervals.

Figure 61. Average treatment effects of export promotion

Notes: The effect of export promotion on firm exports estimated under the unconditional parallel trend assumption (top panel) and the conditional parallel trends assumption (bottom panel). Blue lines give point estimates and simultaneous 95% confidence bands for pre-treatment periods allowing for clustering at the county level. Under the null hypothesis of the parallel trends assumption holding in all periods, these should be equal to 0. Red lines provide point estimates and simultaneous 95% confidence bands for the treatment effect of participating the export promotion programme allowing for clustering at the county level.

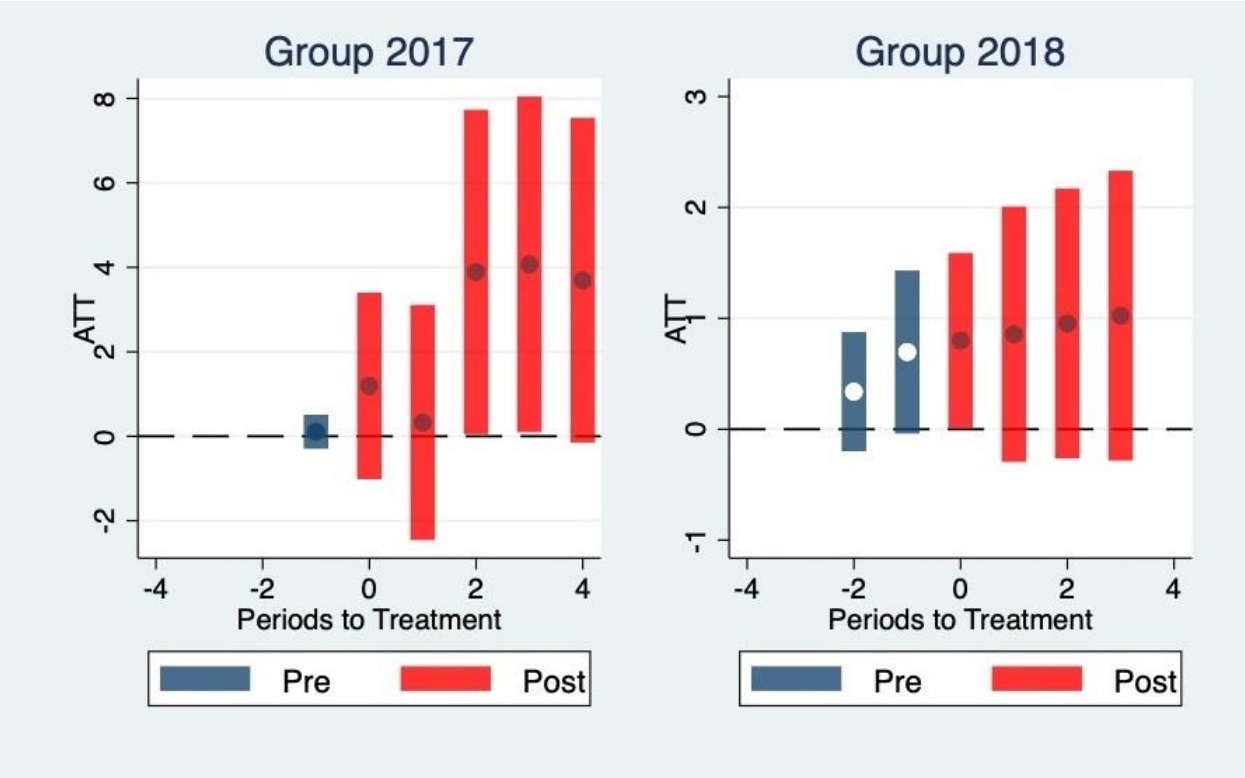
8.25. Figure 62 displays the results of how different groups of cohorts were affected over time by the treatment, using two different model specifications. It also includes a 95% confidence band. Firms that joined the programme earlier tended to be observed for a longer period after the intervention.

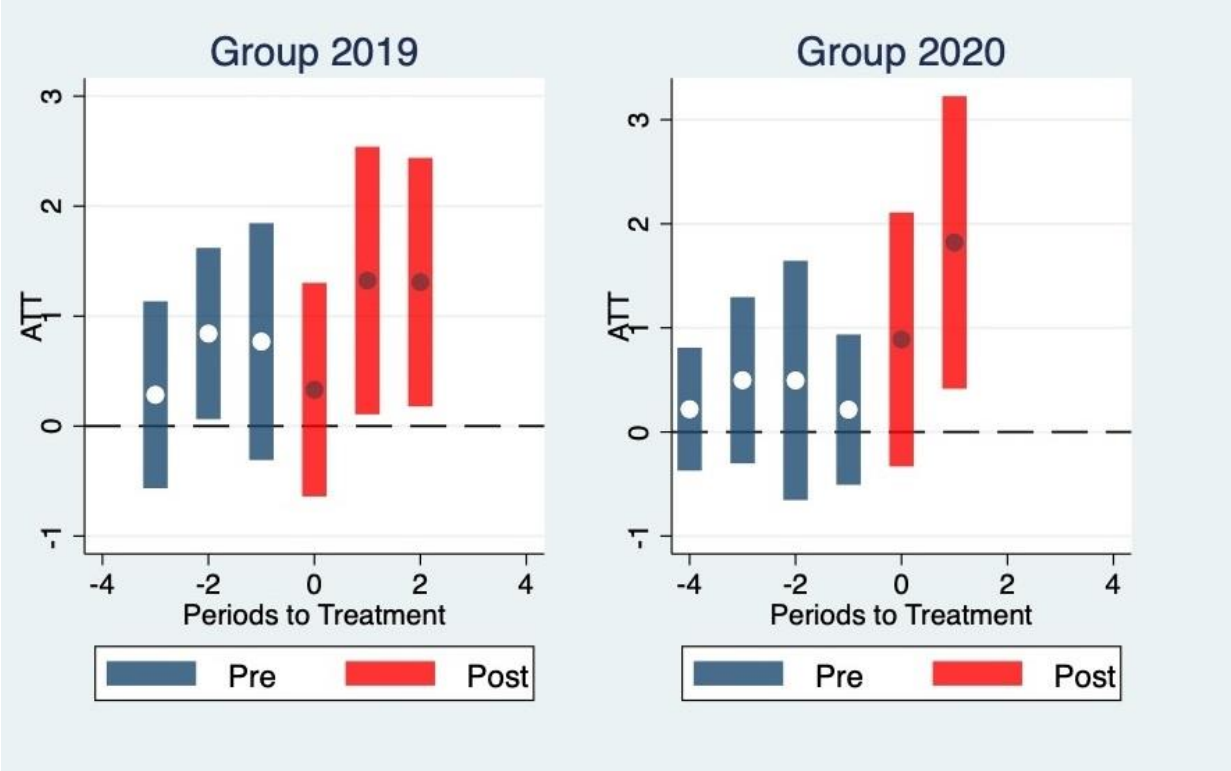
8.26. There's a lot of variation not only between different cohorts that joined the programme in different years but also in how well the assumption of parallel trends holds true. For example, the group 2017 and 2020 show close-to-zero pre-trend, while group 2018 and 2019 have non-negligible pre-trends. This might reflect the distinct implementation of the same programme in different years, including how firms were chosen and assisted.

8.27. In summary, our analysis reveals favourable average treatment effect estimates for export promotion programme across all yearly cohorts, with these effects showing a progressive increase over time. This implies that export promotion assistance plays a role in enhancing firms' export performance, and this impact may extend beyond the initial year of assistance. However, the confidence intervals are quite wide, leading to the statistical insignificance of most point estimates. This is likely attributed to the significant performance variations within a relatively small sample of assisted firms.

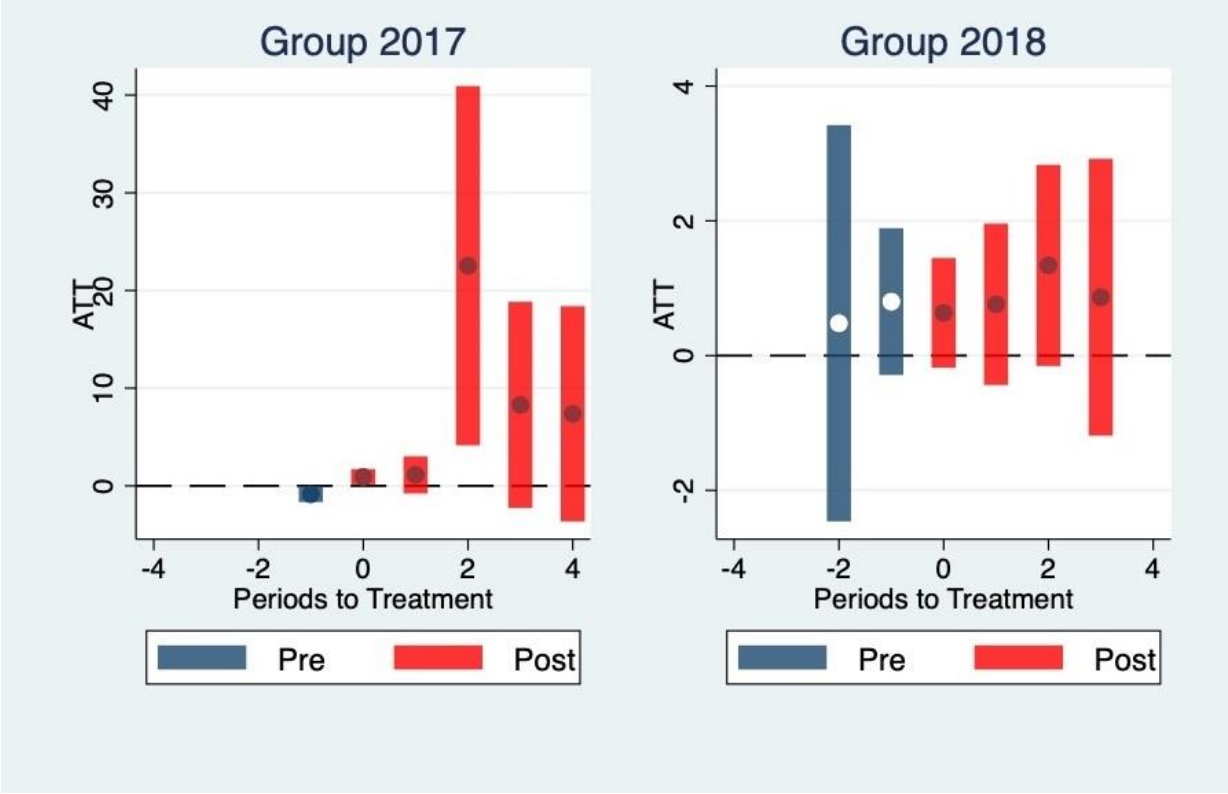
8.28. Additionally, it's clear that the estimates and confidence intervals differ significantly among these cohorts. This suggests that combining all the firms in one analysis might hide the heterogenous impact of the intervention of different groups of firms on outcomes.

(a) Unconditional parallel trends





(b) Conditional parallel trends



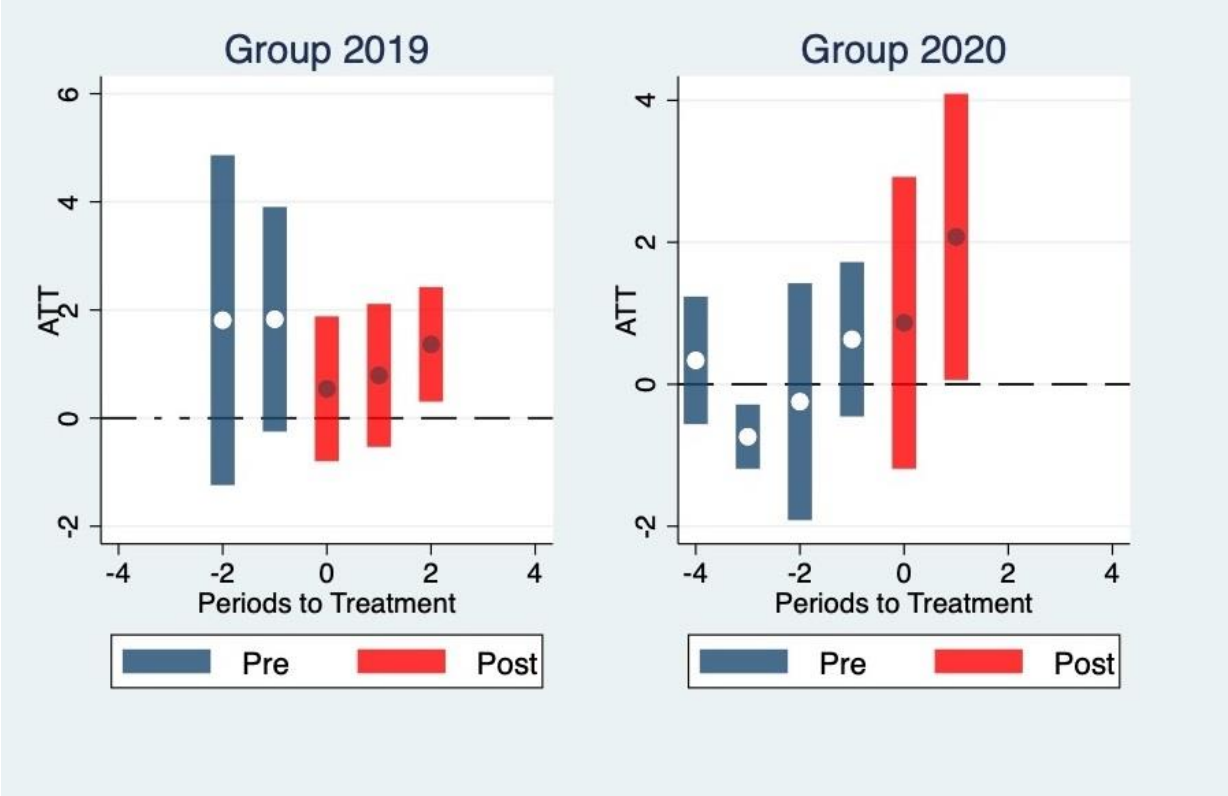


Figure 62. Average treatment effects of export promotion by group/cohort

Notes: The effect of export promotion on firm exports estimated under the unconditional parallel trends assumption (Panel (a)) and the conditional parallel trends assumption (Panel (b)). Blue lines give point estimates and simultaneous 95% confidence bands for pre-treatment periods allowing for clustering at the county level. Under the null hypothesis of the parallel trends assumption holding in all periods, these should be equal to 0. Red lines provide point estimates and simultaneous 95% confidence bands for the treatment effect of participating the export promotion programme allowing for clustering at the county level. The top row reports the (a) the no-control model and bottom row for (b) the model with control. Both rows report firms that entered export promotion programme in the year of 2017-2020.

8.29. Table 18 reports the estimates of treatment effect of export promotion aggregated in various ways. We estimate several partial aggregations of the group-time average treatment effects in order to understand different aspects of treatment effect heterogeneity. Three aggregations are considered here to answer the three questions raised above in 8.21. First, we estimate the group-specific or cohort-specific effects by years of entering export promotion programme. This helps to understand if groups of firms that are treated in a particular year have, on average, higher/lower average treatment effects than groups that are treated later. Second, we estimate the calendar time effects of the export promotion programme. This helps to measure the cumulative average treatment effect of the intervention across all groups until some particular point in time. Finally, to test if the effect of participating in the EP programme varies with length of exposure to the treatment, we estimate the dynamic effects by event study. This allows us to calculate the effects of the overall treatment after being treated for a period, say, one year or three years.

8.30. The results are reported in Table 18 where the simple weighted average ATT corresponds to the Column (7) in Table 17, 1.417. We could think of the following estimates are "decomposed" effects of this overall effect. Despite the group-specific estimates being all positive, they are individually statistically insignificant, as predicted through the figures above.

Apart from small sample of treated firms that might explain the absence of statistical insignificance, aggregating the estimates of each cohort over the whole period may also lead to large variance over time. As we saw from the earlier illustration, the treated firms' performance varies substantially in later years of the examined period. Hence, we cannot conclude that firms treated in a particular year have on average higher/lower average treatment effects than groups treated later.

8.31. Further, the calendar time effects of the export promotion programme show that in most years the cumulative average treatment effect of the policy across all groups are positive and statistically significant at least 10% level in most years (except for 2019). The magnitudes grow over time as well, indicating the accumulative positive impact of the programme over time.

8.32. Turning to the event study, the results show positive and statistically significant effects of export promotion programme start from the first year of intervention (e=0), and in following two years (e=1 and 2). This is consistent with the evidence gathered so far. The estimates of the cumulative average treatment effect of the programme stay positive but lose statistical significance, again suggesting that the performance variance increases substantially large beyond two years of intervention.

Table 18. Aggregated treatment effect estimates of export promotion.

	Partially aggregated					**Single parameters**
Simple weighted average						1.417***
						(0.538)
Group-specific effects	g=2017	g=2018	g=2019	g=2020		
	6.075	0.901	0.903	1.431		1.314***
	(3.805)	(0.613)	(0.551)	(1.017)		(0.389)
Calendar time effects	t=2017	t=2018	t=2019	t=2020	t=2021	
	0.929*	0.704*	1.418	1.425**	1.739***	1.243***
	(0.402)	(0.384)	(0.993)	(0.626)	(0.560)	(0.449)
Event Study: Dynamic effects	e=0	e=1	e=2	e=3	e=4	
	0.685***	1.131***	2.058**	1.991	7.374	2.648*
	(0.259)	(0.297)	(0.893)	(1.360)	(5.621)	(1.431)

Note: This table reports the average treatment effect on treated according to the Conditional parallel trends model and with clustering at the Scottish county level. The row '**Simple Weighted Average**' reports the weighted average (by group size) of all available group-time average treatment effects. The row '**Group-Specific Effects**' summarizes average treatment effects by the timing of the minimum wage increase; here, ***g*** indexes the year that a county is first

treated. The row '**Event Study**' reports average treatment effects by the length of exposure to the minimum wage increase; here, *e* indexes the length of exposure to the treatment. The row '**Event Study w/ Balanced Groups**' reports average treatment effects by length of exposure using a fixed set of groups at all lengths of exposure; here, ***e*** indexes the length of exposure, and the sample consists of counties that have at least two years of exposure to minimum wage increases. The row '**Calendar Time Effects**' reports average treatment effects by year; here, ***t*** indexes the year. The column '**Single Parameters**' represents a further aggregation of each type of parameter, as discussed in the text. The estimates in Panel (b) use the doubly robust estimator discussed in the text.

What kind of assistance matters?

8.33. A key factor is hypothesised to lead to different outcomes is the nature of the support. This is arguably the least understood area in the export promotion literature, as it has rarely been studied before.

Awareness, capability, exploitation

8.34. To investigate the differences between different types of assistance, we categorise them in two ways. The first category is by the intended purpose of assistance – to raise awareness (A), to enhance capability (C), to help exploitation (E) of beneficiaries' international trade/export. As such, the A-C-E model can be tested through four reconstructed samples of comparison, including the three individual types of support and combinations of different supports of A-C-E types with the control group (i.e., non-beneficiary firms).

8.35. To enhance C-Capability is the largest single purpose assistance group, representing one-third of all assisted firms (see Table 23 for the statistics of firms that have been assisted with designed aims over time). The support mainly took place between 2018-2020. Fourteen per cent of firms were supported with the main purpose of raising awareness of international markets and exporting (A), while there were only a handful of firms being supported for helping exploitation (6%) (E). Nearly half of firms were supported with more than one type of assistance (48%). Among these, 21% of firms received assistance covering all three types (21%).

8.36. We now apply the staggered policy evaluation approach on the seven sub-groups. Controlling for observed characteristics in the same way as before, we report results in Table 24. Overall, the assistance of helping firms to gain internationalisation capability (C) shows the most statistically significant and positive effects. The effects seem to be observable concurrently and still statistically significant into the third year after the programme (according to the event study estimate *e*=2). Further, there is some support from the different combination of assistances that include capability building, such as A+C and C+E, which show some positive and statistically significant effects as well. This is evidence to show that the assistance to enhance capability (C) is effective in helping assisted firms to explore more. We do not draw conclusion that other types of assistance are ineffective, as the lack of statistical significance in the estimates of other types alone could be caused by small sample size.

International support vs wider business development support

8.37. International dimension is another perspective to consider different types of support. We can capture the differences in the type of assistance through four categories: international only, international + R&D/innovation, international + other wider business development support, wider business development support only. When we test each type of assistance following

the same approach as the above, the estimates suggest that only international support shows positive and statistically significant results. However, this should be interpreted with caution, as the sample sizes for the other types of assistance are very small (Table 25, Table 26).

9. Conclusions & Recommendations

9.1. This final section of the report summarises the key findings from the evaluation and recommendations for SG and delivery partners. The evaluation used a mixed-methods approach and combined findings from the beneficiary survey, interviews, desk review and the non-beneficiary survey.

Conclusions

Beneficiary evaluation

9.2. In financial years of 2018/19 – 2020/21, the Scottish Government delivery partners provided export and wider business development support for export to 3,053 businesses. 2,329 of these businesses opted into the beneficiary evaluation survey, which received 463 responses. Additionally, 23 in-depth interviews were carried out. The evaluation period of 2018 – 2021 overlaps with expected policy impacts following the Export Growth Plan "Scotland: a Trading Nation" (ATN 2019). Where relevant, analysis with regard to ATN 2019 is included, however, policy impacts typically take several years to materialise, so we expect them in the future.

9.3. The analysis of available management information data showed that all supported firms, those firms that opted into the evaluation and responding firms were very similar based on available data. However, since information on business characteristics was not collected and since we do not know why some firms chose to opt out, the survey results can be extrapolated only to the firms that opted into the survey.

Survey respondent characteristics

9.4. Survey data showed that 60% of supported businesses were exporters, largely exporting to ATN15 priority markets and countries. Beneficiaries exported both goods and services. Typically, their largest market was USA. Of the companies that did not export, majority never exported (73%), mostly because of organisational constraints, additional paperwork or because exporting was not relevant to their businesses at its stage. Those firms that stopped exporting did so in 2020-2022 mostly, which can indicate effects of the COVID-19 pandemic or the EU-exit.

9.5. Nearly all of the responding firms were SMEs (99%) with on average 21 employees and £3.1m turnover. Supported businesses came from a variety of business sectors with about a third being in manufacturing. Among delivery partners, SE/SDI firms and those supported by two delivery partners typically were older and bigger than those supported by HIE and SCC, but of a very similar sectorial profile.

Accessed support and satisfaction

9.6. Seventy-nine per cent of beneficiary respondents received support from SE/SDI, followed by HIE (10%), multiple delivery partners (seven per cent) and SCC trade missions (4%). About 7

in 10 firms accessed international support only. According to the A-C-E model, international support that firms accessed mostly spanned several categories or could be classed as Capability (approx. 8 in 10).

9.7. Business could access multiple support activities and on average accessed four. Exporters accessed more support activities than non-exporting firms (4.3 vs 2.5), but since exporting status data prior to the support had not been collected, it is not clear if this would be true of all supported businesses.

9.8. Beneficiaries rated the delivery of the support quite highly at 7 out of 10, on average, which was largely complemented by interviews. Among things to improve, firms mentioned a desire for greater and/or more intensive support, better engagement and communication, and better-quality advice. In interviews a number of firms specified that not having the support they wished for resulted in missed export sales and markets.

9.9. Approximately a quarter of businesses reported not accessing any specific export or wider business development support in 2018-2021 despite clear communication during the survey fieldwork. While not the focus of this evaluation, anecdotal evidence from communications with businesses, analysis of interviews and survey comments, and analysis of survey data indicate that this might be explained by a combination of recall issues (esp. in case of multiple staff within the firm), different perceptions around what constitutes specific support, and the complexity of support landscape which might make it harder to businesses to pinpoint the support activities received.

Self-reported impacts of support

9.10. Beneficiaries perceived that the support had a number of impacts on their businesses and export activity. For instance, 58% of exporters reported impact on their export sales (including value of sales and achieving sales sooner), 47% reported impact on their export entry/re-entry in 2018-2021, and 27% reported entering new markets as a result of the support. Given that nearly half of exporters reported that their exporting activities increased their firms' R&D investment, capital spending and productivity, these findings indicate that the support can be expected to influence business growth and productivity.

9.11. The key objective of the export promotion support is to increase export sales. Using survey data provided by exporters we estimated that supported exporters increased their export sales by approx. £1,6 billion pounds as a result of the support (est. range of £1.1b - £2.2b). Since export sales are a long-term outcome, we observe that 46% of all beneficiaries and 57% of exporter beneficiaries anticipate increasing export sales over the next three years. For exporters, this is expected to bring additional £2.7 billion for the expected overall total of £4.3 billion. In other words, the support contributed to achieving on average **£764k per supported firm in export sales**, and to **£1.3million per firm** in anticipated export sales, for the total of **£2.0million per firm**.

9.12. For SE/SDI beneficiary firms, analysis indicates that taking anticipated export sales into account means that current exporters are most likely going to achieve and possibly overachieve their planned export sales of £3.7 billion. Further survey data analysis supports these conclusions as at the time of the survey firms that first received support earlier were more likely to report impact on their export sales value.

9.13. Impacts from the support extended to non-exporting businesses as well. About half of all beneficiaries reported that the support helped them create and/or safeguard jobs and

impacted their product and process development. New and improved products are being sold to, firstly, Scotland and the rest of UK, as well as to export markets. In their survey comments, businesses highlighted other benefits of the support, notably receiving advice and guidance and international contacts/networks.

9.14. Furthermore, in interviews businesses provided numerous examples of what they took away from the support and how they applied this to their business, highlighting exporting outcomes in particular. Even the firms that were most critical of the support delivery during the interviews specified some positive outcomes as a result of it. None of the interviewees specified that they took away "nothing" from the support.

9.15. Interview data showed that businesses potentially might be underestimating the impact of the support by, for instance, not considering indirect outcomes. Long-term impacts of support might be also underestimated: firms that do not expect the support to impact their export sales in the future reported that this was due to uncertainties in the business environment as opposed to any issues with the support itself.

External influences

9.16. Impacts the support provided needs to be weighed against the fact that the majority of exporters (84%) reported experiencing numerous export challenges in the evaluation period of 2018 – 2021. Nearly all firms, over 9 in 10, considered main external shocks of the last years – COVID-19 pandemic and the EU-exit – to be the main causes of the exporting challenges. Sixty-eight per cent of firms reported that these challenges negatively impacted their export sales by, on average, 38%. The COVID-19 pandemic was also a predominant reason that SE/SDI firms used to explain lower than planned export sales in interviews.

Impacts by support type

9.17. A number of specific support activities were reported as useful/most useful for a number of exporting and business purposes. These are travel / accommodation support to access international markets, funding for international business development, one-to-one exporting advice, capital grants, R&D grants, innovation grants, and IRP grants. Export support was found to be most useful for exporting objectives, while wider business development support (mainly different grants) was reported to be particularly useful for product development.

9.18. To supplement self-reported responses, we carried out a series of cross-analyses and significance tests examining links between different outcomes and support types / characteristics. Most differences, if any, could be explained by characteristics of firms that accessed different types of support and smaller sample sizes (esp. for firms accessing support from different delivery partners). However, firms that accessed more support activities of any type tended to report higher impacts, especially if multiple activities were categorised as different A-C-E categories. Also, firms that access international and R&D/innovation support are more likely to anticipate increasing export sales in the future as a result of the support.

Future outlook

9.19. The majority of businesses (over 8 in 10), both beneficiary and non-beneficiary, expect to face challenges to exporting in the future, which presents further opportunities for delivery

partner support. In fact, business needs including exporting needs were cited as the most common reason for firms to seek delivery partner support.

Econometric estimations of impact

9.20. To supplement self-reported impact assessment, we carried out econometric impact analysis using survey data with exporting non-beneficiary firms as a control group. This included examining export sales value figures from 175 exporting beneficiary firms and 135 exporting non-beneficiary firms over the period of eight years 2015-2022.

9.21. Survey data showed that beneficiary and non-beneficiary exporters are different across a range of business characteristics. For instance, non-beneficiary exporters are older and larger firms that are more likely to be foreign owned. They are also more likely to export goods rather than services, though this is partially attributable to the source from which non-beneficiary firms were identified (HMRC records goods exporters). However, our analysis showed that when other business characteristics are considered at the same time, these differences become less significant in distinguishing between the two groups. This in turn indicates that non-beneficiary firms are a suitable control group.

9.22. We used a number of methods to identify treatment effects of the export promotion programme. We find that in six out of seven estimates there is positive and statistically significant effect of entering export promotion programme. This includes two estimates using the staggered difference-in-differences (DiD) method, which is our preferred approach due to heterogeneous treatment effects and varying treatment timings across units. Overall, the export promotion programme led to firms' higher export performance by 140%.

9.23. We are able to disentangle heterogeneity treatment effect. There are favourable average treatment effect estimates across all yearly cohorts, with these effects showing a progressive increase over time. The evidence shows that export promotion helps firms to increase value of exports from the first year of intervention and continue to show positive effect into the third year since intervention. At the same time, we found large variation in treatment effect estimates across supported cohorts, which suggests that combining all the firms in one analysis might hide the true impact of the intervention on outcomes.

9.24. Different types of support show varied performance. We found that the assistance of helping firms to gain internationalisation capability (C in the A-C-E model) and its combinations show the most statistically significant and positive effects. International support shows positive and statistically significant results as well, however, sample sizes for the other types of assistance are very small.

Combined findings

9.25. The key aim of export support is to increase export sales value. The beneficiary self-reported assessment and analysis using a control group of non-beneficiaries via survey data show that the support has achieved this goal. The exact size of the impact varies between these methods: exporters self-reported that their exports increased by on average 41% as a result of the support, while econometric estimations using a control group indicated an impact of 140%.

9.26. This is not surprising given the differences in methodology and measurement, and the fact that it is hard for respondents to construct a reliable counterfactual scenario for their

business. We find that firms perceive that the support positively impacted their exporting performance. Non-beneficiary evaluation provides robust and more widely accepted impact estimates and causal effects of the support on export sales compared to self-reported data.

9.27. Importantly, the non-beneficiary evaluation focused on export sales. The beneficiary evaluation also showed that firms, including those that do not export, report a number of outcomes for their businesses that are not directly related to export performance, such as product development and employment. Both beneficiary and non-beneficiary evaluations indicate that impact on export sales lags and can be expected to fully materialise in the future; however, to date other outcomes besides increasing exports have been reported by beneficiaries.

Recommendations

Recommendations	Explanation
Policy Matters	
A-C-E model of support	The econometric work demonstrated that the Capability component of the A-C-E model of export support was positively associated with an increase in export sales. However, the survey evidence and qualitative interviews showed that exporters indicated that more support on the Exploitability component would be welcomed to help overcome the challenges they were currently facing – especially finance. Notwithstanding the positive impact of the delivery partner support on increasing export sales among the beneficiaries we recommend a review of how the A-C-E model of support works in practice.
Raising awareness of SG export support	Evidence shows that some of the surveyed non-beneficiaries of SG export support are using other public sector organisations and agencies to assist with their export activities (e.g., Innovate UK). This would suggest not only an information failure but also a missed opportunity for businesses to engage with the delivery partner support which clearly boosts export sales compared to this control group of non-beneficiaries. We recommend a review of the effectiveness of the channels used to promote awareness of the available export support from SG's delivery agencies.
Indirect effects of export support	Evidence emerged, not surprisingly, of outcomes for the supported businesses not directly related to export support. It is well established that assisting firms to engage in export markets for the first time, or to intensify their exporting activities, can lead to a realisation that they 'need to up their game' to compete more effectively. This has happened in the case of beneficiaries of the delivery partner export support and improved products and processes have been the result for many. We would recommend a review of the strength of the

Recommendations	Explanation
	links between export support and R&D/innovation support across the delivery agencies.
Future export sales	The study concluded that not all of the export outcomes have been realised for the beneficiaries of export support. A substantial number reported that they still expected export sales to rise as a result of the support received in 2018-21. We, therefore, recommend on-going contact and support with those beneficiaries supported earlier in the support cycle.
Evaluation Methodology	
Collect KEY business characteristics, especially export status, on supported firms before and after the support.	Key businesses characteristics (size, age, sector, location) are used to assess survey representativeness to all supported firms. They are primary variables in survey design and design of survey weights. This evaluation made representativeness assessment using the range of available data, mostly on the support characteristics, which could be associated with business characteristics. Having access to business data would allow for a robust assessment of the survey sample, provide higher certainty on survey representativeness and significance testing, and allow to add survey weights if needed. Business data is also needed for robust econometric modelling or analysis involving non-beneficiary samples. This recommendation is of particular relevance to firms' exporting status knowing which would allow to assess how many firms were helped to start exporting and add certainty to any extrapolation involving export outcomes.
Maximise inclusion of supported firms into the evaluation.	A large share of supported firms (24%) was not included in the beneficiary survey due to opt-outs and other operational reasons. In line with GDPR and internal policies, the size of sample that can be approached for the evaluation should be maximised prior to the evaluation, for example by making support conditional on participation in follow-up evaluation or by removing the opt-out option. This can be expected to increase response rates which, while not of an issue in this evaluation overall, would allow for a more varied and representative sub-group analysis.
Harmonise data and contact collection practices among different delivery partners	Some types of information were not equally available from all delivery partners, for example, exact year of support from SCC, business characters from all supported firms and telephone numbers for CATI surveying from SCC and HIE. Having this type of information collected and provided by all delivery partners would result in better survey data and analysis, and improve response rates (e.g., CATI survey as

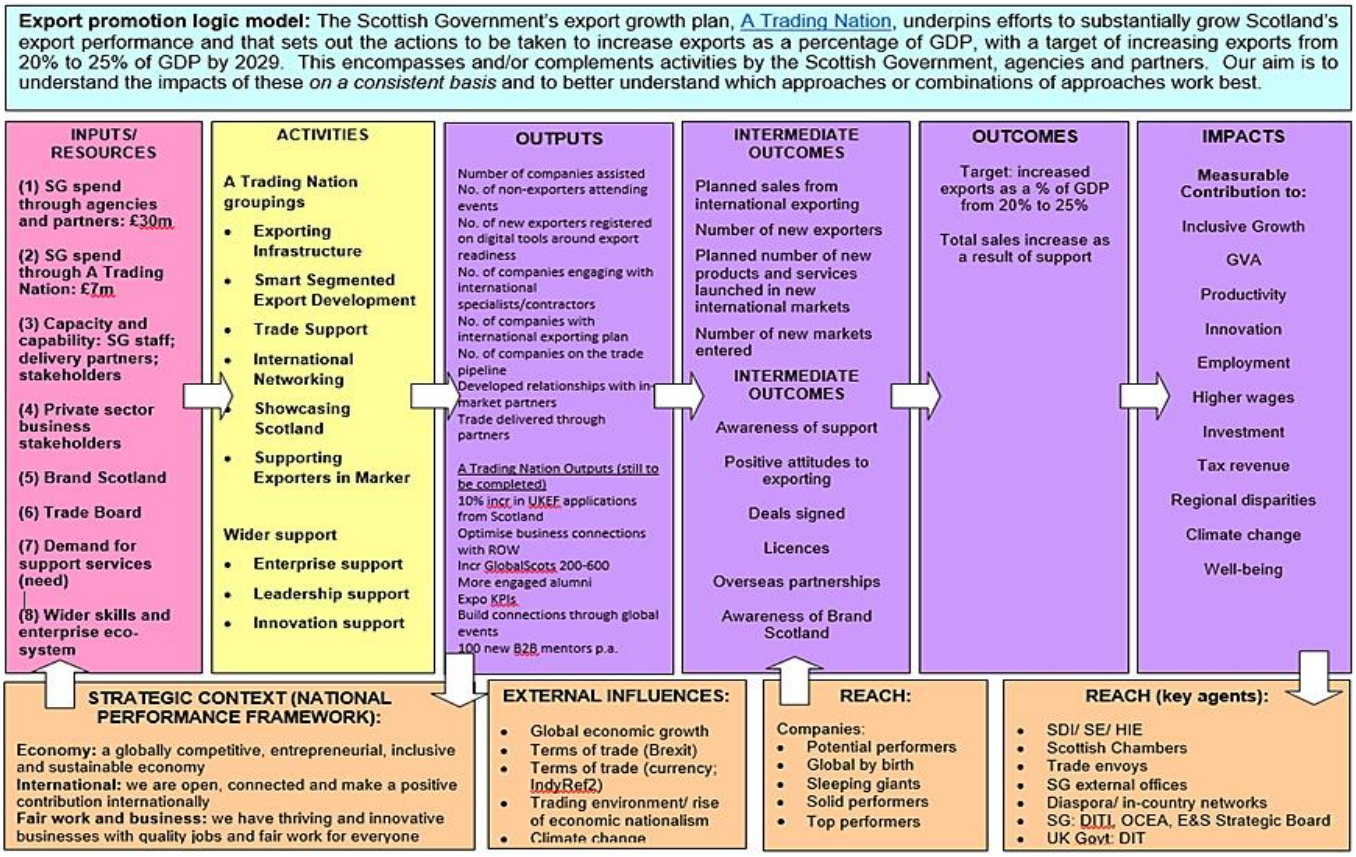
Recommendations	Explanation
	primary mode would have excluded SCC and HIE firms entirely). Company contacts should also be regularly updated to ensure the best contact is approached for the evaluation (e.g., CEO, senior manager). This would positively affect survey representativeness as well as its response rate.
For impact by support types, consider focusing on qualitative data collection	By type, the support tended to be mostly focused on international support only (c. 70%) which, coupled with the fact that sub-groups always have smaller response rates and greater margin of error, meant that extensive and highly accurate quantitative analysis by different support types was difficult. In addition to focusing on ways to improve survey opt-ins and response rates, it is worth considering profiling firms for interviews, e.g., by support types, in order to gather more insight into firms based on specific support types of interest.
Minimise or mitigate survey drop-off due to not recognising support types	About a quarter of firms had to be removed from the survey because they reported not receiving any export or wider business development support and among those that remained there was some mismatch between support activities they reported accessing and what was recorded in the management information system. This means that in the future more caution needs to be applied into how support is classified and presented to beneficiaries as they might not recognise or recall the same categories delivery partners use. This could include removing asking firms about the support they accessed altogether (and using management information data only), prompting them with examples, using broader categories of support activities (e.g., advisory support as opposed to different types of it) in the management information systems that could be used as prefills etc.
Harmonise data collection tools across different analyses and evaluation methods	This evaluation used and tested two different evaluation approaches in a stepwise manner starting with beneficiary evaluation, which focused on self-reported information, followed by a control group analysis through the non-beneficiary survey. These methods separately and together provided valuable insights into the impact of export support as well as the feasibility of the methods. Going forward, if possible, the selection of methods should be agreed in advance so that they can collectively inform the design of mutually complementary data collection tools (mainly, the questionnaires).
Consider alternative methodologies for exports of	For non-beneficiary firms, goods exporters presented a fairly accessible source to draw a list on non-beneficiary firms and

Recommendations	Explanation
services for methods involving a counterfactual	export data (HMRC, TiG). This was less true of service exporters where data tends to come from surveys and ultimately provided only a small share of the sample, as non-beneficiary evaluation showed. This indicates the need to either identify other sources for data/firms who export services (e.g., commercial databases), which might increase evaluation costs, or consider focusing analysis on exporters of goods.
Analyse outcomes and consider gearing support towards different groups of beneficiaries depending on initial export status	The overarching aim of the support is to increase export sales and this evaluation as a whole indicates that there are different pathways towards it. About 40% of beneficiary firms are not exporting and the majority never exported: focusing on export sales filtered them out of most of the evaluation survey and out of counterfactual methods. However, the evaluation (and, potentially, support) could focus on what helps them to enter export markets, to date and in the future. Similarly, there are firms that export intermittently and those that stopped exporting (about 16% of all firms). For them, the evaluation could focus on continuing to export and on what helps them to re-enter export markets. Analysing by these groups would also allow to identify impacts that could otherwise be hidden when analysing outcomes on all: for example, impact of support types by A-C-E model was identified for exporters only when broken down by years (using a counterfactual group), but not for all beneficiaries (in the beneficiary survey only).
Add markers on support intensity to the Management Information system	Based on the provided Management Information data, this evaluation aimed to capture intensity of support by using the number of support activities, years in which the support was accessed and by the categorisation of support activities as specified by delivery partners. Conversations with delivery partners indicated that there is a qualitative dimension to the support that separates light touch interventions from the intensive ones. In the future, such markers for intensiveness of support activities could be added in the Management Information and provided to the evaluators to better capture this qualitative dimension. Alternatively, support delivery dates for when the support activities were started and finished could be provided so that a period of time could be used as a proxy for intensiveness.

10. Appendices

Appendix 1

The Logic Model for Export Promotion Support (September 2019):



Appendix 2

Other than ATN industrial market(s) beneficiary firms export to:

Advertising Production
Agricultural and clothing
Agriculture
Aquaculture
Aquaculture
Arts & crafts
Automotive
Automotive tools
Aviation
Aviation
B-to-C companies that have large salesforces and customer service employees
B2C (x2)
Bagpipes and accessories
Beauty & personal care
Bio technology
Brand and Marketing
Business consultancy
Camping equipment
Clothing
Clothing, footwear, Fashion accessories. soft home furnishing, Christmas decorations
Commemorative Coins
Consultancy
Consultancy and Coaching all B2B
Contract research organisation
Council
Customers we are B2C exporter
Cycle apparel, helmets, footwear and eyewear
Daffodil Bulbs, Flowers and seed potatoes
Digital services for Agriculture
Electrical transmission
Fashion (x2)
Fashion and Apparel
Fitness
FMCG
Forestry, agriculture, timber production
Furnishing markets and Retail
Games
Giftware
Health & Beauty
Healthcare
Healthcare & Mobility

Horticulture
Hydroponics and fish farms
I.T.
Knitwear
Leisure
Leisure and Pharma
Luxury Bedding
Manufacture of Tweed Products
Maritime
Maritime and Transport and Infrastructure
Marketing
Marketing Services
Medical
Medical Devices
Metal Recycling
Musicians
Packaging & consultancy
Paints, coatings, paper packaging
Paper, Packaging & Tissue
Petrochemicals
Pharma and medical device
Pharmaceutical and Bio tec
Pharmaceuticals
Publishing (x2)
Publishing (Marketing and Business growth)
Publishing, heritage and arts and culture
Quarrying
Rail sector
Records storage
Research
Retail (x5)
Retail
Retail
Retail and wholesale
Salt Production
Seed potatoes, agriculture
Skincare (x2)
Sports (x2)
Sports equipment
Sports recreation
Tech
Textile (x3)
Textile manufacturers
Textile Retailers
Transport

Video games
Water
Water and wastewater treatment
Water Management/FM

Appendix 3

Other types of services beneficiary firms export:

Analysis and modelling
Analysis Engineering
Certification
Chemical Cleaning Services
clinical research expertise
Consultancy (x5)
Contract development Diagnostics
Contract Manufacturing
Cybersecurity Services
Data consultation and Peptides
Design
Engineering consultancy
entertainment
Inspection services
Life sciences
Marine
Marketing and design
Marketing services (x2)
Medical illustration and animation
Online support for software
Operations
Personnel Consultancy
Pharmaceutical Regulatory Services
Production services
Publishing
R&D (x2)
Recruitment
Research and Data (x2)
Scientific development
Software (x2)
Software
Software as a service (x2)
Software development
Tech
Technical
Technical Support
Technology services

Television Production Services
Textile Dyeing & Finishing
Training and Consulting

Appendix 4

Beneficiary firms' countries of export outside of ATN15:

Country	Firm count	% of Other
Australia	43	28%
UAE	23	15%
Japan	23	15%
New Zealand	17	11%
Singapore	16	11%
South Korea	12	8%
Malaysia	11	7%
Hong Kong	9	6%
South Africa	9	6%
India	8	5%
Saudi Arabia	7	5%
Brazil	7	5%
Finland	7	5%
Mexico	6	4%
Taiwan	6	4%
Thailand	6	4%
Angola	5	3%
Nigeria	5	3%
Azerbaijan	5	3%
Qatar	5	3%
Chile	4	3%
Kuwait	4	3%
Portugal	4	3%
Czech republic	4	3%
Egypt	4	3%
Indonesia	3	2%
Vietnam	3	2%
Ghana	3	2%
Columbia	3	2%
Croatia	3	2%
Pakistan	3	2%
Israel	3	2%
Suriname	3	2%
Turkey	2	1%
Tanzania	2	1%
Trinidad	2	1%

Country	Firm count	% of Other
Malta	2	1%
Austria	2	1%
China	2	1%
Estonia	2	1%
Maldives	2	1%
Jordan	2	1%
Kenya	2	1%
Luxembourg	2	1%
Mauritius	2	1%
Cyprus	2	1%
Philippines	2	1%
Hungary	1	1%
Morocco	1	1%
Romania	1	1%
Argentina	1	1%
Bulgaria	1	1%
Greece	1	1%
Algeria	1	1%
Bahrain	1	1%
Kosovo	1	1%
Djibouti	1	1%
Lithuania	1	1%
Uzbekistan	1	1%
Fiji	1	1%
Greenland	1	1%
Sri Lanka	1	1%
Oman	1	1%
Mozambique	1	1%
Uganda	1	1%
Myanmar	1	1%
Latvia	1	1%
Jersey	1	1%
Gabon	1	1%
Moldova	1	1%
Slovenia	1	1%
Senegal	1	1%
Equatorial Guinea	1	1%
Iceland	1	1%
Namibia	1	1%
Bangladesh	1	1%
Zambia	1	1%

Appendix 5

"Other" support activities beneficiary firms reported accessing:

Export support (Other advisory support):

1:1 support
Alan Hogarth Scottish North American Business
Business Gateway
Business gateway support, and advice from SDI about IP
Chamber of Commerce COO support
Connections with SDI colleagues in other countries for general advice
Conversations about offering help
Country office support Asia
Data gathering for international markets
Defence and Sustainability Accelerator
Digital Boost
Elevator programme
Energy hubs in Germany and the Netherlands
Export Finance Manager
General pricing strategy
General Support from SDI regarding textiles
Help From Edinburgh Napier University
High Growth Ventures support
ICT development
International taxation
International trade procedures and process details
IP Audit (x2)
Japanese market support
Local advice from Business Gateway
Looking into international market
Marketing
Meetings with account manager at SDI
Named advisor at SDI and a named advisor at SE
One to one support with SDI
Contact point at SDI support about access to markets and legalities on access to markets
Physical purchases
Publishing Scotland support
SCC admin support
Scottish International
Scottish Manufacturing dept. via SE
SDI one to one expert in market support for the Nordics and Singapore
SE Advice to Small Exporters
Speaking with [name] from SDI
Start-up workshops
Travel/accommodation to UK event

Export support (Other type of support via grant contribution):

Attended Large Events with Financial Assistance From Business Gateway
Business Development Support/Help investing new markets
By design grant and the innovation vouchers
By design grant for about 6K for prototype development
Capital grant HIE
Consultancy Financial Controller
Covid Grant
Cybersecurity
Digital Marketing Support (Grant)
Early stage start up grant
Equipment purchases
Funding for the pay back loan.
Grant availability on hardware and marketing and new branding
High Growth Ventures
Innovation
Innovation Support Grant, IP valuation support, Mini-CAPX grant
Innovation voucher, IP protection and advice
IP audit implementation
IP development support
IP support
Islands recovery development grant
Make it to Market grant
Pivotal resilience grant
Product development support
Received consultancy support on manufacturing and Capex grant from SE
Scottish Enterprise ambition mentoring
SE grant for product development
SE SMART GRANT
SEO for website
Support for attendance at global trade shows
To develop a prototype drinking fountain
To engage someone in the middle east and Asia pacific this was business development technical support from the S.E
Trade show support and creative sector support
Innovate UK Grant and Scottish enterprise grant

Wider business development support:

A package to attend international trade shows from SDI
Business Gateway Grant
By design grant for about 2K to 5K from the SE
Capital Equipment Loan
Covid related pivotal support

Digital Boost
Early-stage growth challenge fund, 80% loan, 20% grant
Employment contract advice - Business Gateway
Employment grant
Financial advice in profiling
Financial support to raise employment in rural areas, salary support.
General support
Graduate career advantage Scotland
Graduate in to work scheme form HIE
Intellectual property grant and trade marking
International trade mission grant, and grant from local council for business plan
Mini-CAPX grant
One to one support with business advisor
Part of a 16 week accelerator programme
Pathfinder Accelerator
Pivotal enterprise resilience grant, Early stage growth challenge
SCC provided support
Scottish Edge Grant
Scottish Enterprise an aerospace work force development fund
Scottish Enterprise high growth team consultant
Scottish Investment bank investment
SE funding for By design
Small grant
Support for social media and how to benefit using it
Trade missions to Germany, Norway and Finland

Appendix 6

Other new countries that beneficiary firms started exporting to as a result of the support:

Country	Firm count
Australia	5
Japan	4
Indonesia	3
Israel	3
Malaysia	3
Thailand	3
Azerbaijan	2
Guyana	2
Suriname	2
UAE	2
Angola	1
Armenia	1

Country	Firm count
Austria	1
Bolivia	1
Brazil	1
Ghana	1
Hong Kong	1
Hungary	1
Iraq	1
Kazakhstan	1
Kenya	1
Nigeria	1
Singapore	1
Syria	1
Taiwan	1
Tanzania	1
Uruguay	1
Uzbekistan	1
Vietnam	1

Appendix 7

Support activities considered the most useful activities by beneficiary firms:

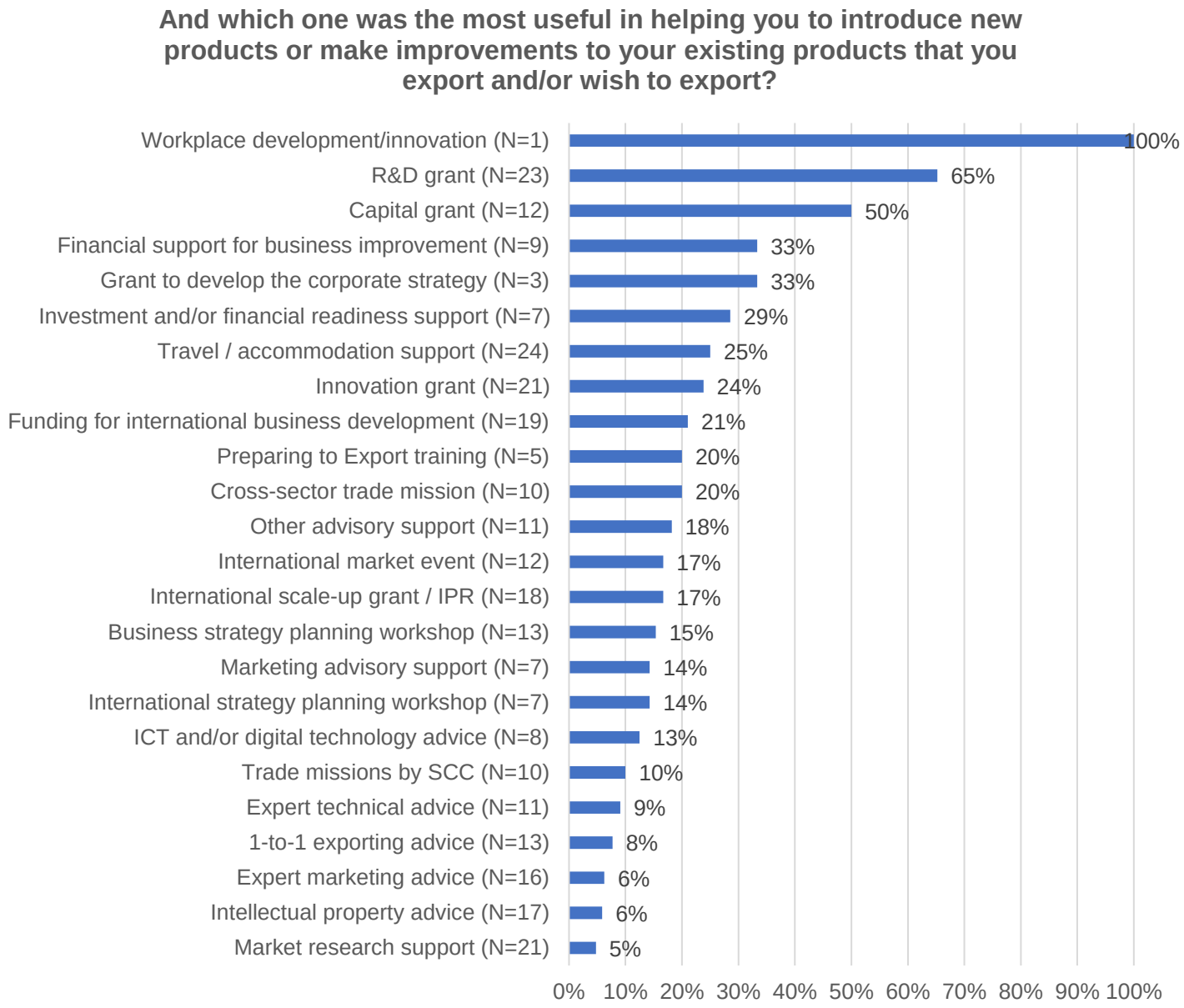


Figure 63. Share of firms considering the specific activity useful among other useful activities (count in brackets, applies to respondents with min. 2 activities chosen as useful)

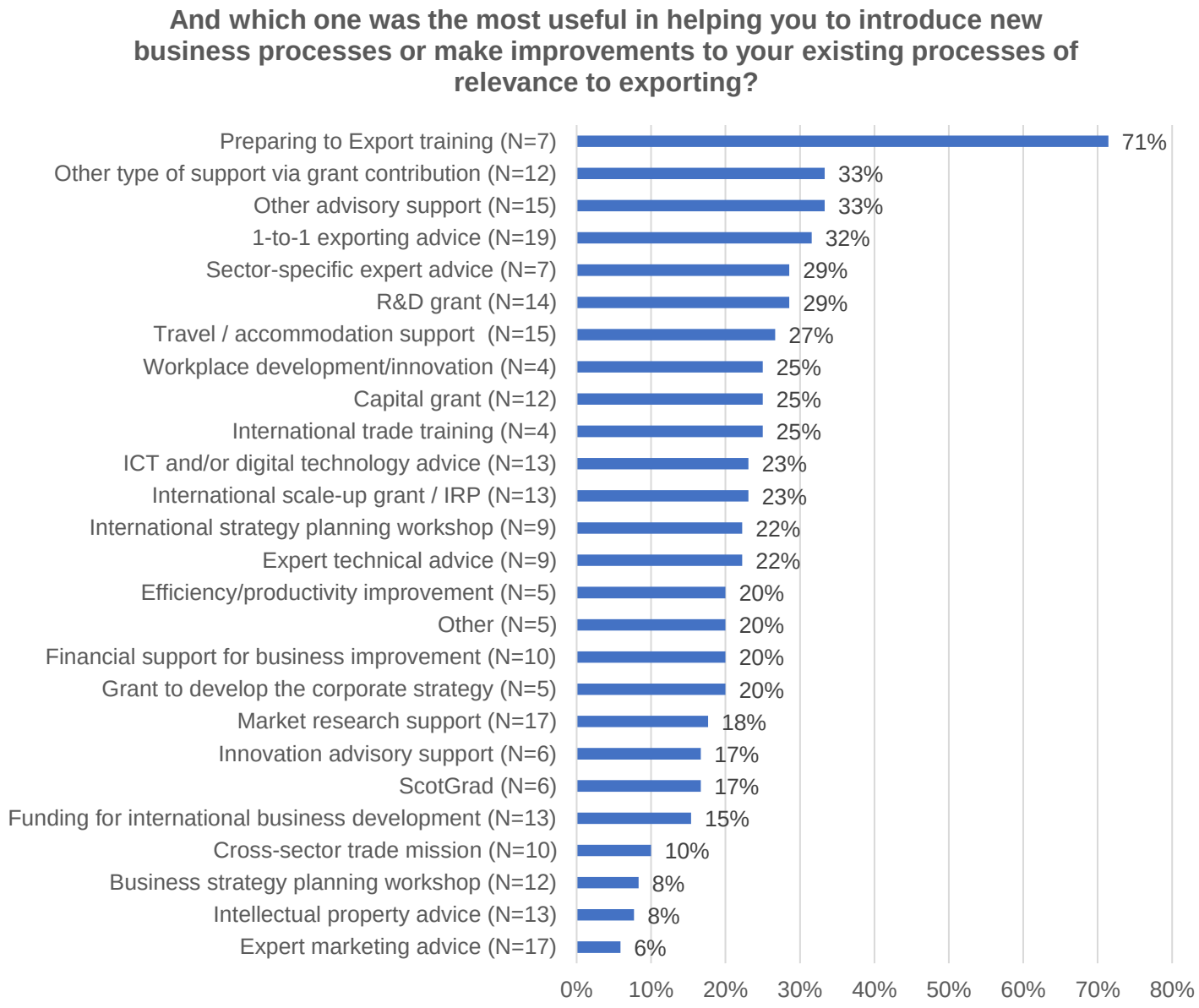


Figure 64. Share of firms considering the specific activity useful among other useful activities (count in brackets, applies to respondents with min. 2 activities chosen as useful)

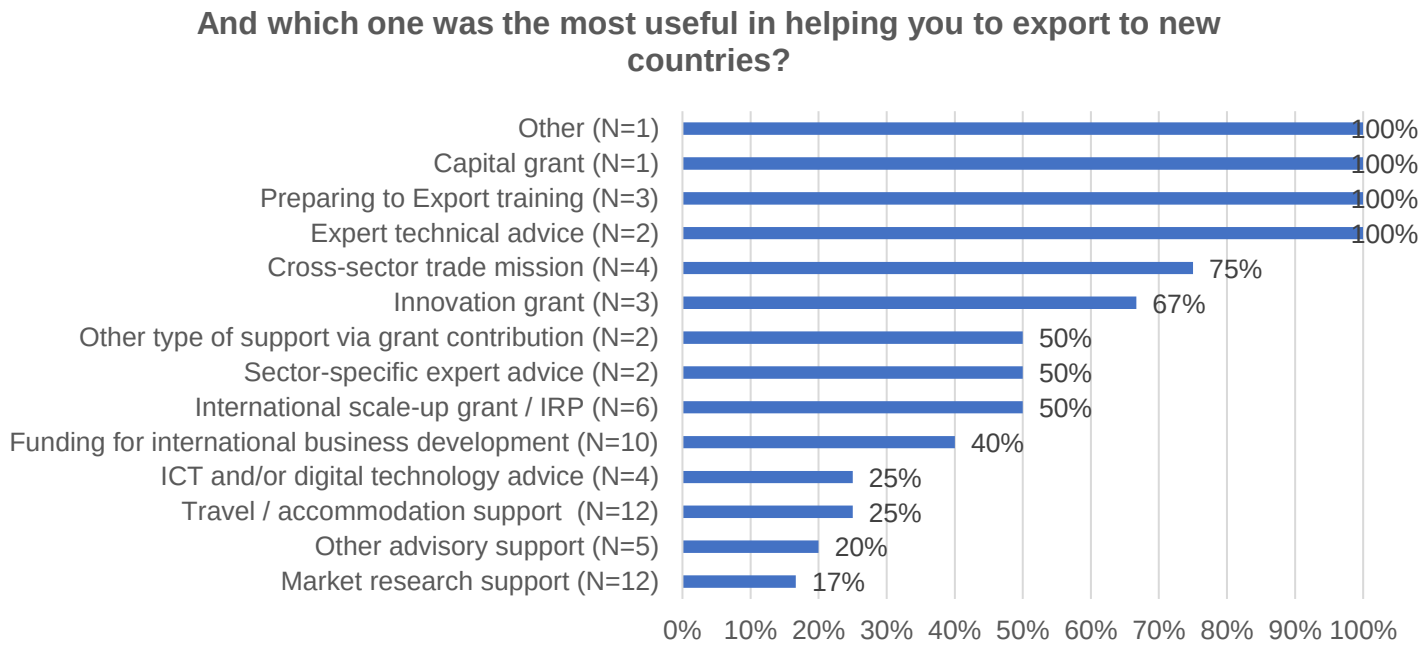


Figure 65. Share of firms considering the specific activity useful among other useful activities (count in brackets, applies to respondents with min. 2 activities chosen as useful)

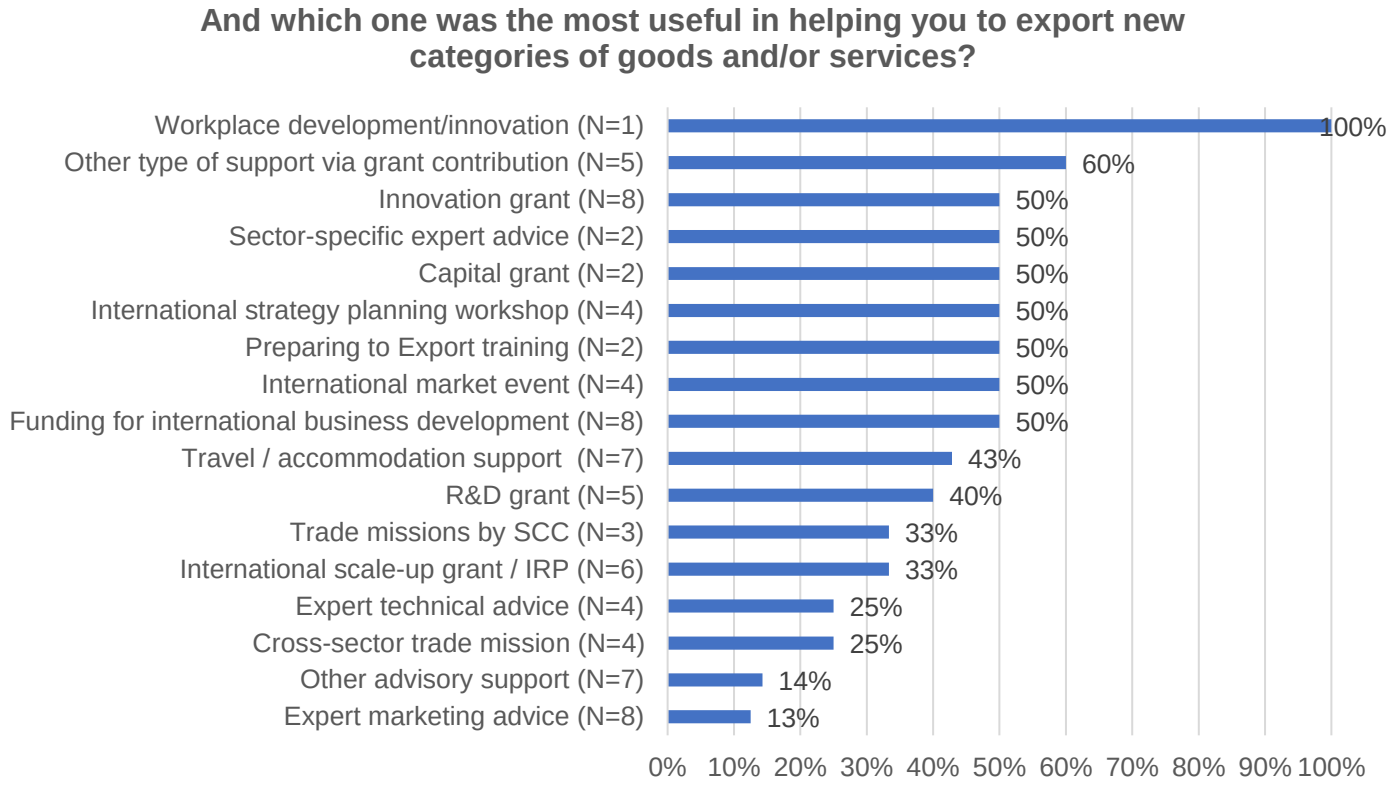


Figure 66. Share of firms considering the specific activity useful among other useful activities (count in brackets, applies to respondents with min. 2 activities chosen as useful)

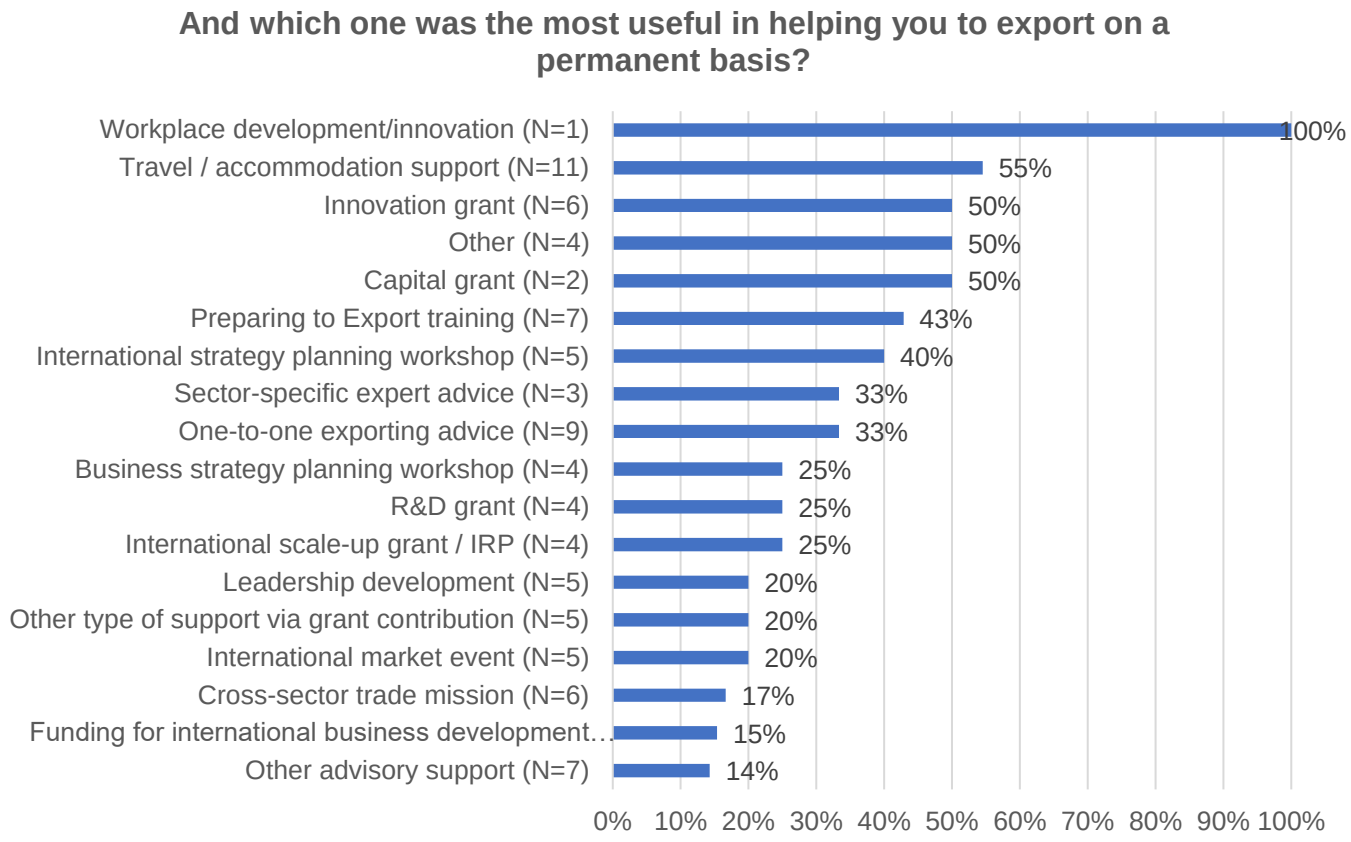


Figure 67. Share of firms considering the specific activity useful among other useful activities (count in brackets, applies to respondents with min. 2 activities chosen as useful)

Appendix 8

Support types considered the most useful by beneficiary firms and reasons for that:

Support Type (firm count)	Reasons for being the most useful (overlap possible)
Travel / accommodation support to access international markets (23)	Exposure to new markets; meeting clients; market access; help with expensive costs, esp. for SMEs; knowledge about new markets; travelling results in being taken more seriously
R&D grant (19)	Enabled/accelerated product & process development; ready for market, incl. international; increased competitiveness; enabled R&D that could not do themselves due to size; level of financial contribution; restructured business and relaunched product; enabled to work with more advanced companies; feasibility study; enabled to invest more; customer acquisition via product improvement; freedom to innovate;
Funding for international business development (14)	Increased sales; increased marketing activity; produced visible results to business; took company to the next level; Created contacts for market access and maintenance; allowed work to continue despite COVID-19 restrictions; key in testing a new country & re-targeting if needed; Learning about different markets; contacts and connections in new markets; direct targeted support to access international market; product developed for different markets; product improvement and customer acquisition; allowed to test new product;
One-to-one exporting advice (13)	Extra help; tailored to business and product needs; market knowledge; shaped strategy; market opportunities; clarified questions about exporting; helped to develop a unique service adaptable to clients in different countries; knowledge of customer requirements
Innovation grant (12)	Product development incl. that wouldn't have happened otherwise; enhanced and expanded product rate; level of financial contribution; improved service; Addressed the key challenge of insufficient financing that could not be addressed with venture capital; improved business process and reduced cost;
Cross-sector trade mission (9)	Knowledge of the market; get the feel of (potential) future market; making connections and customers; resulted in collaboration in AI/ML leading to developing new service to export, and in a tender.
Market research support (8)	Bespoke; market knowledge; Helped to assess market value and target countries; Gained a better understanding of the potential; made market visit more productive

Support Type (firm count)	Reasons for being the most useful (overlap possible)
Capital grant (7)	Increased competitiveness; expanded and automated core business processes; production capacity; allowed SME to develop innovative products
International scale-up grant / International Recovery Programme (IRP) grant as a response to Covid-19 (7)	Improved products/processed during COVID-19; kept the business going; allowed to focus on key development areas incl. internationally; helped to recover; allowed to explore an international strategy; compensated for lack of customer contact; team spent quality time in target markets;
International strategy planning workshop (6)	Developed a cohesive strategy; tailored advice and support to the business model; could focus on priority questions; can make an impact in international marketing events; contacts; improved decision making and focus;
Preparing to Export training (6)	Knowledge on exporting, incl. after EU-exit; confidence gains;
Business strategy planning workshop (5)	Knowledge learned; business orientation; helped to develop business plan; changed manufacturing process to focus on adding value;
Financial support for business improvement (5)	Enabled to bring a third party to an otherwise small team without a business strategy experience; supported internal establishment; bespoke instrument that could only be developed with funding; developments that will attract exports; helpful to respond to market / customer requirements
Expert technical advice (5)	Integral to business; led to exporting; knowledge on the new market; helped to process the right paperwork; useful in improving products/processes during COVID-19;
International market event (5)	Resulted in international contacts that led to export sales; exposure; opportunity to engage potential customers;
Sector-specific expert advice (5)	Found new mentors; helped to export; 1-on-1 advice; knowledge gains
Trade missions by SCC (3)	Facilitated the project; market opportunity; meeting customers; resulted in many contacts
Grant to develop the corporate strategy (3)	Helped with business restructuring; allowed to bring a thrid party to an SME with no experience of business strategy; resulted in a business plan
Efficiency/productivity improvement (2)	Streamlining leading to business efficiency;
Investment and/or financial readiness support (2)	Critical investment; enabled to develop software
Leadership development (2)	Better planning; team confidence

Support Type (firm count)	Reasons for being the most useful (overlap possible)
Workplace development/innovation (2)	Training and upskilling support; increased output to fulfil export and domestic orders
Expert marketing advice (1)	Plan to enter market
Globalscot (1)	Networks and contacts
Innvation advisory support (1)	Changed manufacturing process to focus on adding value;
Intellectual property advice (1)	Developed IP strategy
International trade training (1)	Changed internal processes that may increase turnover;
Marketing advisory support (1)	Knowledge;
ScotGrad (1)	Extra member of staff

Appendix 9

Sectors classed as "other" that beneficiary firms plan to export to in the future:

Aerospace Defence and renewables
Agriculture (x3)
Aquaculture
Automotive tools
B2C & B2B Pet Retail
Beauty & Personal care
Business coaching and training
Defence and health care/public sector and data centre operators
Defence and security
Dry bulks storage and handling
Education and Green Energy
environmental certification
Farming
Fashion
Financial Industry
Floating wind
Food packaging
General Industrial Market in Europe
Government tech
Healthcare (x2)
Hospitality (x2)
Hospitality and retail
Lab Services
Live Events
Marine (x2)
Marine Engineering
Marine shellfish
Maritime and Energy
Maritime, Space
Maritime/ Shipping
Media and entertainment
Medical
Medical Devices (more)
Medicine
New renewable technology sectors
Pet food.
Pharmaceutical Industry
Research
Retail
Retail and wholesale
Retailers
Sanitizer cleansing market

Sports
Sportswear
Superalloy melters - vacuum furnace capability
Telecoms and car industries
Textile Manufacturing
Textiles
Transmission and distribution operators
Transport

Appendix 10

New countries beneficiary firms plan to export to in the next three years:

Country	Count
USA	40
Canada	23
Australia	17
France	16
India	16
Europe	15
Japan	12
Germany	9
China	8
New Zealand	8
Asia	7
Malaysia	7
Singapore	7
Spain	7
Italy	6
Saudi Arabia	6
Brazil	5
Indonesia	5
Norway	5
Sweden	5
UAE	5
Africa	2
America	4
Denmark	4
Ireland	4
Scandinavia	4
Taiwan	4
Guyana	3

Country	Count
Kenya	3
Netherlands	4
Oman	3
APAC	3
Argentina	2
Chile	2
Finland	2
Israel	2
Korea	2
Mexico	2
Mozambique	2
Namibia	2
Nordic countries	2
Panama	2
Portugal	2
Switzerland	2
Vietnam	2
Algeria	1
Americas	1
Angola	1
Australasia	1
Baltic countries	1
Cameroon	1
Caribbean	1
Ivory coast	1
Columbia	1
Costa Rica	1
Ecuador	1
Equatorial Guinea	1
Gambia	1
Ghana	1
Greece	1
Greenland	1
Hungary	1
Iraq	1
Jamaica	1
Kazakhstan	1
Kuwait	1

Country	Count
Sri Lanka	1
Latvia	1
Macau	1
Malta	1
Mauritania	1
Morocco	1
Myanmar	1
Nordics	1
Pakistan	1
Peru	1
Poland	1
Qatar	1
Russia	1
Senegal	1
Thailand	1
Turkey	1
Uganda	1
Uruguay	1

Appendix 11

Results of the econometric analysis

Table 19. Summary statistics of merged data (2015-2022)

	Non-beneficiary		Beneficiary		Mean difference
Variables		Mean		Mean	
marker (=1 for beneficiaries, dummy)	1080	0	1400	1	-1
Intervention (=1 for assistance for between-years period, dummy)	1080	0	1225	0.356	-0.356***
Years of assistance (=1 if assisted, for years of being assisted, dummy)	1080	0	1225	0.267	-0.267***
First assistance (=1 if the first year of assistance)	1080	0	1400	0.125	-0.125***
Tot employee	737	49.246	738	33.381	15.865**
log(Tot employee)	737	2.6	738	2.415	0.185**
Firm age	1080	33.422	1376	23.465	9.957***
Headquarter in Scotland	1080	1.074	1400	1.046	0.028***
Export value	945	1600000	1225	1400000	2.30E+05
log(Export value)	945	7.670	1225	8.038	-0.368
Export experience (no. of years exporting)	1080	14.019	1400	8.071	5.948***
Foreign owned	1072	0.209	1176	0.156	0.052***
Export goods only (dummy)	1080	0.807	1360	0.529	0.278***
Export services only (dummy)	1080	0.059	1360	0.282	-0.223***
Export goods and services (dummy)	1080	0.133	1360	0.188	-0.055***
Export to market: construction	1080	0.119	1392	0.075	0.044***
Export to market: Food and drink	1080	0.193	1392	0.195	-0.003

	Non-beneficiary		Beneficiary		Mean difference
Variables		Mean		Mean	
Export to market: Engineering and Advanced Manu	1080	0.237	1392	0.115	0.122***
Export to market: Life science	1080	0.052	1392	0.115	-0.063***
Export to market: Chemical science	1080	0.074	1392	0.011	0.063***
Export to market: Energy, low carbon and renewable	1080	0.104	1392	0.121	-0.017
Export to market: Energy, oil and gas	1080	0.2	1392	0.138	0.062***
Export to market: Technology, Digital & Media	1080	0.074	1392	0.167	-0.093***
Export to market: Financial and Business Service	1080	0.03	1392	0.029	0.001
Export to market: Education	1080	0.067	1392	0.063	0.003
Export to market: Tourism	1080	0.044	1392	0.069	-0.025***
No. of firms (Tot: 312)		135		175	

Note: stars indicate statistically significant differences

Table 20. Summary Statistics of merged data (2015)

	Non-beneficiary		Beneficiary		Mean difference
Variables		**Mean**		**Mean**	
marker (=1 for beneficiaries, dummy)	135	0	175	1	-1
Intervention (=1 for assistance for between-years period, dummy)	135	0	175	0	0
Years of assistance (=1 if assisted, for years of being assisted, dummy)	135	0	175	0	0
First assistance (=1 if the first year of assistance)	135	0	175	0	0
Tot employee	31	137.581	29	87.517	50.063

	Non-beneficiary		Beneficiary		Mean difference
Variables		**Mean**		**Mean**	
log(Tot employee)	31	3.599	29	3.571	0.028
Firm age	135	33.422	172	23.465	9.957**
Headquarter in Scotland	135	1.074	175	1.046	0.028
Export value	135	1.60E+06	175	9.30E+05	6.70E+05
log(Export value)	135	7.214	175	5.995	1.219*
Export experience (no. of years exporting)	135	11.607	175	5.966	5.642***
Foreign owned	134	0.209	147	0.156	0.052
Export goods only (dummy)	135	0.807	170	0.529	0.278***
Export services only (dummy)	135	0.059	170	0.282	-0.223***
Export goods and services (dummy)	135	0.133	170	0.188	-0.055
Export to market: construction	135	0.119	174	0.075	0.044
Export to market: Food and drink	135	0.193	174	0.195	-0.003
Export to market: Engineering and Advanced Manu	135	0.237	174	0.115	0.122***
Export to market: Life science	135	0.052	174	0.115	-0.063*
Export to market: Chemical science	135	0.074	174	0.011	0.063***
Export to market: Energy, low carbon and renewable	135	0.104	174	0.121	-0.017
Export to market: Energy, oil and gas	135	0.2	174	0.138	0.062
Export to market: Technology, Digital & Media	135	0.074	174	0.167	-0.093**
Export to market: Financial and Business Service	135	0.03	174	0.029	0.001
Export to market: Education	135	0.067	174	0.063	0.003
Export to market: Tourism	135	0.044	174	0.069	-0.025

Note: stars indicate statistically significant differences

Table 21. Summary Statistics of merged data (2015-2016)

	Non-beneficiary		Beneficiary		Mean difference
Variables		**Mean**		**Mean**	
marker (=1 for beneficiaries, dummy)	270	0	350	1	-1
Intervention (=1 for assistance for between-years period, dummy)	270	0	350	0	0
Years of assistance (=1 if assisted, for years of being assisted, dummy)	270	0	350	0.02	-0.020**
First assistance (=1 if the first year of assistance)	270	0	350	0.02	-0.020**
Tot employee	109	83.642	88	60.58	23.063
log(Tot employee)	109	2.984	88	3.093	-0.108
Firm age	270	33.422	344	23.465	9.957***
Headquarter in Scotland	270	1.074	350	1.046	0.028
Export value	270	1.50E+06	350	9.60E+05	5.00E+05
log(Export value)	270	7.268	350	6.254	1.014*
Export experience (no. of years exporting)	270	11.941	350	6.209	5.732***
Foreign owned	268	0.209	294	0.156	0.052
Export goods only (dummy)	270	0.807	340	0.529	0.278***
Export services only (dummy)	270	0.059	340	0.282	-0.223***
Export goods and services (dummy)	270	0.133	340	0.188	-0.055*
Export to market: construction	270	0.119	348	0.075	0.044*
Export to market: Food and drink	270	0.193	348	0.195	-0.003
Export to market: Engineering and Advanced Manu	270	0.237	348	0.115	0.122***

	Non-beneficiary		Beneficiary		Mean difference
Variables		**Mean**		**Mean**	
Export to market: Life science	270	0.052	348	0.115	-0.063***
Export to market: Chemical science	270	0.074	348	0.011	0.063***
Export to market: Energy, low carbon and renewable	270	0.104	348	0.121	-0.017
Export to market: Energy, oil and gas	270	0.2	348	0.138	0.062**
Export to market: Technology, Digital & Media	270	0.074	348	0.167	-0.093***
Export to market: Financial and Business Service	270	0.03	348	0.029	0.001
Export to market: Education	270	0.067	348	0.063	0.003
Export to market: Tourism	270	0.044	348	0.069	-0.025

Note: stars indicate statistically significant differences

Table 22. Logit model for selection into beneficiary firms' group

	(1)	(2)	(3)	(4)	(5)
Variables	**2015**	**2015-16**	**2015-17**	**2015-20**	**2015-22**
log(Export value)	0.156*	0.121***	0.107***	0.108***	0.119***
	(0.069)	(0.034)	(0.023)	(0.016)	(0.013)
log(Tot employee)	-0.058	0.051	0.046	-0.016	-0.000
	(0.272)	(0.148)	(0.105)	(0.073)	(0.058)
Firm age	-0.000	0.005	0.003	0.002	0.001
	(0.013)	(0.006)	(0.004)	(0.003)	(0.003)
Export experience in years	-0.048	-0.038*	-0.040***	-0.045***	-0.044***
	(0.031)	(0.016)	(0.011)	(0.008)	(0.006)
Foreign-owned = 1	0.185	0.224	0.055	-0.118	-0.238
	(0.794)	(0.419)	(0.308)	(0.225)	(0.183)

	(1)	(2)	(3)	(4)	(5)
Variables	**2015**	**2015-16**	**2015-17**	**2015-20**	**2015-22**
Export goods (dummy)	0.011	-0.527	-0.660+	-0.726**	-0.785***
	(1.078)	(0.559)	(0.375)	(0.251)	(0.195)
Export services (dummy)	1.661	1.364+	0.954+	0.929**	1.052***
	(1.821)	(0.777)	(0.495)	(0.339)	(0.271)
Export to market: Construction	-1.764	-1.698*	-0.722+	-0.575*	-0.564*
	(1.433)	(0.711)	(0.408)	(0.282)	(0.231)
Export to market: Food and drink	-2.323+	-0.538	-0.112	0.144	0.237
	(1.331)	(0.517)	(0.343)	(0.232)	(0.185)
Export to market: Engineering and Advanced Manufacturing	-1.504	-1.126*	-0.908**	-0.711**	-0.721***
	(0.957)	(0.513)	(0.346)	(0.233)	(0.184)
Export to market: Energy, low carbon and renewable	1.330	0.736	0.587	0.595+	0.433
	(1.477)	(0.734)	(0.473)	(0.329)	(0.266)
Export to market: Energy, oil and gas	-1.408	-0.629	-0.362	-0.357	-0.291
	(0.984)	(0.522)	(0.351)	(0.239)	(0.192)
Export to market: Technology, Digital & Media	-0.211	0.429	0.746+	0.716*	0.833***
	(1.265)	(0.642)	(0.412)	(0.283)	(0.228)
Export to market: Life Sciences		33.520	2.958***	2.290***	2.417***
		(2,134.532)	(0.855)	(0.486)	(0.390)
Export to market: Chemical Sciences		-17.573	-3.501***	-3.411***	-3.541***

Variables	(1) 2015	(2) 2015-16	(3) 2015-17	(4) 2015-20	(5) 2015-22
		(1,613.481)	(1.008)	(0.665)	(0.552)
Export to market: Financial and Business Services		16.764	-0.574	-0.539	-0.504
		(4,140.978)	(1.115)	(0.640)	(0.490)
Export to market: Education		-32.442	-1.169	-0.867+	-0.847*
		(3,077.725)	(0.741)	(0.449)	(0.354)
Export to market: Tourism		-0.273	-0.175	-0.353	-0.392
		(0.805)	(0.544)	(0.388)	(0.318)
Constant	0.272	-0.541	-0.382	-0.014	-0.102
	(1.542)	(0.727)	(0.484)	(0.323)	(0.253)
Observations	53	191	385	808	1,296

Note: stars indicate statistically significant differences

Table 23. Different types of assistance: statistics

First year of entering assistance

Types of assistance	2016	2017	2018	2019	2020	2021	Total	%	Note
A - Awareness	0	0	48	32	56	24	160	14%	
C - Capability	0	8	112	128	120	0	368	32%	The largest single category
E - Exploitation	0	8	8	48	0	8	72	6%	Sample small
Multiple (A, C, E combinations)	56	48	224	168	56	0	552	48%	
Among multiples:									
A+C+E	24	32	104	64	16	0	240	21%	
A + C	0	0	40	40	24	0	104	9%	

First year of entering assistance

Types of assistance	2016	2017	2018	2019	2020	2021	Total	%	Note
A + E	8	0	24	24	0	0	56	5%	Sample small
C + E	24	16	56	40	16	0	152	13%	
Total	56	64	392	376	232	32	1,152	100%	

Table 24. ATT estimates of different types of assistance

	A- Awareness	C- Capability	E- Exploitation	M- Multiple	A+C+E	A+C	C+E
ATT	3.079	3.495	-2.718	0.276	1.086	1.151**	1.873*
	(2.831)	(0.793)	(1.116)	(0.567)	(1.201)	(0.594)	(1.062)
Group-specific							
Group-average	1.885	4.009***	-2.718	0.254			
	(1.618)	(1.036)	(1.116)	(0.492)			
g=2017				-4.710**	1.999		
				(2.276)	(3.525)		
g=2018	4.114	0.330		0.821	0.985		
	(3.396)	(0.612)		(0.812)	(1.117)		
g=2019		4.727**	-2.718	-0.033		1.151**	
		(2.205)	(1.116)	(0.672)		(0.594)	
g=2020	0.492	5.662*		0.464			1.873*
	(1.230)	(3.178)		(1.803)			(1.062)
Calendar time							
Calendar time-	2.853	2.771***	-2.718	0.826	1.714	0.288	
	-	(0.683)	(1.116)	(0.564)	(1.296)	-	
t=2017				3.000*	4.253*		
				(1.654)	(2.370)		
t=2018	0.098	-0.057		0.466	0.409		
	(0.578)	(0.204)		(0.333)	(0.509)		
t=2019		2.770	0.830	0.591	2.181	1.151**	
		(1.685)	(1.043)	(1.035)	(1.461)	(0.594)	
t=2020	3.349	3.401***	-7.929	0.547	2.143		1.409
	(3.130)	(0.868)	(4.446)	(0.516)	(1.340)		(1.547)
t=2021	7.964*	4.969***	-1.055	-0.474	-0.418		2.338***
	(4.414)	(1.228)	(1.797)	(0.952)	(2.133)		(0.612)
Event Study:							
Post event		2.933***	-2.718	-2.817**	0.272	0.384	1.248
		(0.736)	(1.116)	(1.264)	-	-	-
e=0	0.295	3.067***	0.830	0.195	0.483	1.151**	1.409
	(0.706)	(0.886)	(1.043)	(0.611)	(0.625)	(0.594)	(1.545)
e=1		4.718***	-7.929	0.950	2.321*		2.338***
		(1.227)	(4.446)	(0.617)	(1.395)		(0.612)
e=2	6.206	3.500**	-1.055	0.570	1.933*		
	(4.626)	(1.414)	(1.797)	(0.855)	(1.049)		
e=3	7.964*	0.448		-0.363	0.359		
	(4.414)	(1.069)		(1.807)	(2.336)		
e=4				-	-3.735		
				(6.517)	(4.589)		

Table 25. Different types of assistance: statistics

First year of entering assistance

	2016	2017	2018	2019	2020	2021	Total	%
International support	32	16	264	288	216	24	840	60%
International + R&D/I	8	24	104	56	8	0	200	14%
International + Other	16	24	32	32	8	8	120	9%
Wider business development	0	8	56	80	72	24	240	17%
Total	**56**	**72**	**456**	**456**	**304**	**56**	**1,400**	**100%**

Table 26. ATT estimates of different types of assistance

	International support	International + R&D/I	International + Others	Wider Business Development
ATT	1.382**	2.558	-1.446	1.562
	(0.655)	(2.095)	(4.464)	(1.136)
Group-specific				
Group-average	1.437**	3.789	-1.981	1.147
	(0.716)	(2.587)	(2.928)	(0.917)
g=2017	2.185			
	(1.498)			
g=2018	1.662**	0.096	1.763	0.560
	(0.868)	(0.769)	(1.654)	(0.795)
g=2019	0.410	8.771	-5.725	4.561
	(0.595)	(6.102)	(4.661)	(5.317)
g=2020	2.199	1.044		0.782
	(1.831)	(0.992)		(0.373)
Calendar time				
Calendar time-	1.927***	2.042	-0.984	0.995
	(0.672)	(1.547)	(3.773)	-
t=2017	4.498***			
	(1.552)			
t=2018	1.264*	0.647	2.254	0.560
	(0.757)	(0.886)	(1.625)	(0.795)
t=2019	0.675	0.384	1.425	
	(0.798)	(0.962)	(1.859)	
t=2020	1.556*	3.724	-8.259	2.504**
	(0.831)	(2.815)	(10.896)	(2.247)
t=2021	1.643*	3.413	0.645	0.914
	(0.910)	(3.609)	(2.419)	(0.588)
Event Study:				
Post event average	0.295	2.087	-1.211	1.041
	(0.673)	(1.773)	(14.217)	-

	International support	**International + R&D/I**	**International + Others**	**Wider Business Development**
e=0	0.819	0.801	1.918	0.513
	(0.618)	(0.809)	(1.905)	(0.414)
e=1	1.962***	4.171	-9.169	2.611
	(0.721)	(3.023)	(10.145)	(2.001)
e=2	1.402	3.912	1.972	
	(0.859)	(3.366)	(3.078)	
e=3	1.842	-0.536	0.438	
	(1.412)	(2.435)	(1.819)	
e=4	-4.549***			
	(1.177)			