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1 Introduction

Over the past decades, the creative industries (CIs) have become increasingly global (see UNCTAD (2018), and Fazio (2021a) for a discussion). Within such increasingly competitive creative world economy, the UK aims to maintain and strengthen its position as one of the world-leading creative nations. The UK CIs Sector Deal (BEIS (2018)) explicitly proposed an increase creative industries exports by 50% by 2023. To achieve this objective, it is critical to understand the factors underpinning the international trade exposure of the industry and its firms. The UK departure from the European Union makes such understanding even more urgent, as the country should develop an independent trade policy that works also for the CIs. Unfortunately, the current evidence base is very scant, as detailed by Fazio (2021a) in a previous PEC Discussion Paper.

Based on national and international data sources, in a PEC Discussion paper, Di Novo et al. (2020) (DFV, henceforth) highlight several key macro and sub-sectoral facts on the UK CIs' internationalisation.[1] Their analysis confirms how the industry's growth in Gross Value Added (GVA) and employment is matched by the growth in trade, in particular, when it comes to services. UK creative exports are also mostly "made in the UK", since most trade in value added, especially in the service exports, is generated within the country.

Trade trends and patterns, however, differ across sub-sectors, with some characterised by stronger trade volumes (e.g., those IT-related), and some characterised by a larger share of firms involved in international trade. Another interesting feature is the evidence of intra-industry trade, i.e., in most sub-sectors, the UK both sells and buys from abroad. The most

*The authors would like to thank, without implicating, Hasan Bakhshi, Eliza Easton, Bruce Tether, Jonathan Sapsed for comments on an earlier version of the paper.

[1]The Office for National Statistics (ONS) and the Department for Culture, Media and Sport (DCMS), regularly provide updated trade statistics. Internationally, organisations, such as, among others, UNESCO, UNCTAD and the OECD undertake similar efforts to monitor international creative trade.

export-intensive sub-sectors are also import-intensive, a fact that can be due to both business-to-business (B2B) trade or business-to-consumers (B2C) operations.

The authors look also at the direction of trade flows and show that, while the EU is, overall, the main UK partner for the CIs, the most prominent trade partner may vary by sub-sector and by type of export, whether goods or services. Understanding these patterns can help understand where it can be most beneficial to pursue the removal of trade barriers by negotiating trade deals. The service-intensive nature of the CIs exports means that, on average, these may be more exposed to specific non-tariff and behind-the-border barriers, which may divert trade away from comparative advantage. When looking, in particular, at the Service Trade Restriction Indices of the OECD, which measure such barriers, DFV show that while the UK is a relatively open country, service-related barriers are still quite large around the world. Together with the fact that the EU bloc is the least restricted trade area in the world, this increases the importance of reaching trade agreements which cover the most pressing areas for the CIs, such as intellectual property rights (IPRs), data, e-commerce and cultural cooperation. As discussed by Fazio (2021b) in a recent PEC blog, the UK-EU Trade and Cooperation Agreement (TCA) covers some of these areas, but also raises some concerns, which should be evaluated in future negotiations.[2]

While the above macro and sub-sectoral evidence adds to the scarce evidence base, this remains partial and characterised by several gaps, especially when it comes to the micro-evidence. This is partly due to the fact that the official statistics are unable to fully capture the CIs' trade (see Maioli et al. (2021) on this point). One of the main challenges is that the sector is mostly made by Micro and Small Medium Enterprises (MSMEs) whose trade activities can go unreported, especially for those service-oriented sectors where official data rely on survey-based information that under-represents nano and micro firms and on imputation methods. Further trade can go unreported when it involves electronic transactions, an increasing phenomenon, especially in the service-intensive and digital-oriented sub-sectors, also as a result of the COVID-19 pandemic.[3]

Hence, while the above macro evidence provides interesting insights, we still know too little about the microeconomic features of exporting firms in the creative industries. Yet, from the policy standpoint, this information is critical to inform internationalisation strategies. The same issue is relevant also from the academic standpoint, where there is also a need to fill in the knowledge gap between the creative industries and other sectors, like manufacturing, where the microeconomic features of exporters have been extensively studied thanks to the increasing availability of firm-level datasets from the 1990s. The ensuing literature on firm heterogeneity and trade has changed the way international economists look at firms' internationalisation and the implications for the economy of changes in trade costs and trade barriers due to technological advances and international political negotiations.

[2] https://pec.ac.uk/blog/the-uk-eu-trade-and-cooperation-agreement-whats-in-it-for-the-creative-industries-and-the-steps-ahead-1

[3] For a discussion of the statistical reporting issues due to the changing nature of trade, see Maioli et al. (2021)

While it may be tempting to simply extrapolate information from the literature on manufacturing, creative goods and services have specific features that make it problematic to simply draw inference based on evidence from other sectors. Hence, whether creative firms share the same features of non-creative ones is one of the critical points requiring further investigation (Fazio (2021a)). More evidence is definitely needed on the CIs-specific trade at the firm level.

This paper represents a first attempt to fill this gap in the evidence base. To this end, we use the survey data collected for the UK Creative Industries Council (CIC) Access to Finance Report.[4] The survey collects, naturally, a wide set of information on business characteristics and access to finance, but it also covers a range of other topics, including trade. In particular, firms are asked questions on whether they sell/buy abroad (i.e., their trade exposure), in which regions and how many regions of the world their customers are based (i.e., their extensive margin of trade) and what are the perceived barriers to their activities.

Here, we exploit this set of questions from the survey to look at some firm-level differences when it comes to exporting. In particular, we look at whether firms export or not and where they export to (both measuring the so-called extensive margin of trade). This information is profiled against various business characteristics, such as business size, business age and manager experience, sub-sectoral field, geographical location, use of financial instruments and the perceived business barriers. This allows a snapshot of the firm-level international exposure in relation to some of the characteristics that are often identified in the trade literature as determinants of exporting.

With the above considerations in mind, we first discuss in the next section a brief review of the related literature, drawing parallels with the existing evidence, especially on manufacturing. Section 3 reports information on exporting firms and some of their basic features in comparison to non-exporting firms. Section 4 focuses on two areas: the finance-profile and the differences in perceived obstacles of exporters vs non-exporters. Section 5 discusses the caveats of this work and provides conclusions and policy implications.

2 A recall of some key related literature

The availability of micro-level data from the late 1980s has allowed international trade scholars to investigate trade at the product and firm level. This has led to novel theories of trade and the implications of trade liberalisation. What lessons can we learn from this literature and how well do these apply to the specific nature of goods and services and firms in the creative industries?

A first key point is the departure from the idea of a homogeneous representative firm. Firms are different and their differences matter when it comes to international trade, both in terms of the so-called extensive margins of trade (whether they trade or not, which products are

[4]We would like to thank the CIC for allowing access to this data.

traded, how many destinations a firm or product reaches) and the intensive margin (once a product/firm reaches a foreign market, this margin captures how much is actually traded). A second important point is that national trade is mostly accounted for by few firms and few products, i.e. it is highly concentrated.

The empirical literature has, therefore, concentrated on investigating the micro-level features on exporting firms. Exporting firms seem to enjoy a sort of "export premium": exporting manufacturing firms tend to be more productive, larger and have higher wages (see, among others, Bernard and Jensen (1995) and Bernard and Bradford Jensen (1999), Bernard et al. (2003), Bernard et al. (2006). While this premium highlights the benefits of exporting, it is still unsettled whether firms acquire it after starting to export, i.e., international access improves their productivity, size and wages, or whether they are able to access international markets because they already have these features and are able to overcome domestic and international competition, i.e., they self-select into exporting (Bernard and Bradford Jensen (1999)).[5] While settling this issue is difficult due to the endogenous relationship between productivity and exporting, it is still critical from the policy perspective, if, for example, a country aims to increase its share of world exports, either through the intensive (export volumes) or extensive margin (share of exported products, exporting firms or export destinations).

Second, the literature on firm and product heterogeneity also has interesting predictions on the effects of changes in trade costs, such as those induced by technology or policy shocks (e.g., the introduction or removal of trade barriers). Lower trade barriers (of any kind) may induce re-allocations from the least to the most productive products, firms and sectors. This can lead to an increase in average industry productivity (Bernard et al. (2006)) but the consequences on firms and workers should also be taken into account while such dynamic adjustment takes place.

The firm-level literature has also investigated service firms trade by drawing parallels with the literature on manufacturing. While this literature is much-less developed due to less availability of the data, there are still interesting predictions worth mentioning. Breinlich and Criscuolo (2011), for example, present some stylised facts on UK service trade firms by merging the International Trade in Services Inquiry with the Annual Business Response Survey and the Community Innovation Survey.[6] They concentrate on 10 sub-sectors, among which it is possible to part-trace firms from some creative sub-sectors firms, such as architecture and computer services. Overall, they find that few service firms engage in international trade, and these are bigger and have higher productivity and capital intensity than non-exporters, a result in line with that on manufacturing firms. Differences across firms and sectors emerge in terms of number of destinations reached and intensity of trade (exports and imports values). Finally, both the extensive and intensive margins of service trade are negatively related to distance, reiterating the importance of geographical forces in international trade.

[5] See De Loecker (2013) and Atkin et al. (2017), among others, on the identification of learning by exporting effects.

[6] This allows them to look at information on services exports and imports, skill intensity and other relevant firm-level characteristics.

Federico and Tosti (2012) look at Italian service firms from the Bank of Italy data and report stylised facts for importers and exporters volumes, number of trade destinations, number of types of services and relation with FDI. When looking at the propensity to export relative to FDI they find that trade and FDI are correlated. This correlation, however, may differ across sub-sectors. Among the analysed sub-sectors that can include some creative firms, this is higher for "Architectural and engineering services" and "Computer services" and lower for "Communication services" and "Audio-visual and related services". Bigger markets tend to be served more by FDI than exporting and distance negatively affects trade in some sectors (communication services) and positively in others (financial services). They find evidence that runs in the opposite direction to the one on manufacturing firms: size and productivity are negatively related to services trade (with the exception of firms in communication services).

With the exception of the partial information from the above-mentioned studies, there are virtually no papers looking specifically at firm-level trade in the creative industries and considering the specific features of creative goods and services and creative firms (see, again, Fazio (2021a)). Among these features, a prominent one is that creative firms tend to be disproportionately nano, micro and small medium enterprises (SMEs). It may be difficult to draw a simplistic parallel with the literature on manufacturing. some key differences warrant emphasis.

The creative nature of creative firms means that they produce highly differentiated goods and services, giving them more scope for being traded internationally. This feature could potentially mean that, while predominantly small, they can still attract foreign demand. At the same time, however, such international exposure may be more experiential and demand driven than a strategic choice of the firm, which typically needs resources and the ability to exploit economies of scale. Also, the largest part of the value added and capital in the creative industries is intangible and in the form of Intellectual Property Rights (IPRs), such as design, trademarks and copyright.These rights are more difficult to protect internationally than IPRs like patents. Also, creative firms typically struggle to obtain finance from traditional sources, which can represent a limitation also for international trade, given the fixed costs involved in expanding to international markets.

Finally, creative firms and creative exports are often service-intensive, which comes with a series of implications. Service trade may happen through a variety of modes and especially the indirect modes, such the establishment of foreign affiliates, which may require high fixed costs.[7]

Further, the statistical reporting of service trade is more complicated and the role of key firm-level determinants of trade may be different. For example, productivity is more difficult to measure in the services sector than in manufacturing and the role of size for trade participation is not necessarily relevant in all sub-sectors, since in some cases services can be bespoke and unique independently of scale in some sub-sectors. In other cases, however, size could still be important, e.g., audiovisual and streaming, in particular. In most cases, services trade requires

[7]The General Agreement of Trade in Services (GATS) indicates the following modes of service trade delivery: cross border trade, consumption abroad, commercial presence in a foreign country, presence of natural persons (https://www.wto.org/english/docs_e/legal_e/26-gats_01_e.htm)

the presence abroad of natural persons or a foreign affiliate. In all cases, non-tariff and behind-the-border barriers matter more - for services compared to manufacturing - than at the border tariff barriers. The last point is particularly relevant when we think about the impact and coverage of trade agreements and the way they may shape trade by covering (or not covering) services provision directly or indirectly via foreign presence.

Among other important specific features, the creative industries are also undergoing a digital transformation that makes them even more service-oriented and increases the role of e-commerce and data-exchange. Creative firms require high intensity of human capital and often work on projects which may be more difficult to deliver at the international level, especially since they often need different skills and the timeline of delivery is essential. Finally, since the creative industries are often representative of the culture of a country, firms may face additional cultural barriers when it come to trade.

While there is some empirical literature on the determinants of cultural trade for some specific sub-sectors, or products, there is next to no empirical evidence on firm-level exporting by creative firms. As discussed above, this paper tries to start addressing this imbalance by exploiting survey data on the UK creative industries.

3 Exporting creative firms and their features

In order to form a view of the participation of CI's firms in international markets, we rely on the survey data collected by the consultancy firm BVA BDRC. The survey was collected in 2017 on behalf of the Creative Industries Council for the Access to Finance Report. Hence, the survey is influenced by the results of the Brexit referendum and the ensuing uncertainty over the negotiations over the type of agreement between the EU and the UK. It predates, obviously the actual agreement and, also, the current pandemic.

The survey consists of 575 firms mapped into the nine creative sectors, as defined by DCMS: Advertising and Marketing; Architecture; Crafts; Design and designer fashion; Film, TV, video, radio and photography; IT, software, computer services and computer games; Publishing; Museums, galleries and libraries; Music, performing and visual arts.[8]. Naturally, the questionnaire is rich of information on finance, but it also contains additional items on several other topics, including trade. Note that all the variables from the survey are qualitative (either binary, ordinal or categorical).[9]

[8] In order to correct for possible distortions due to sampling, observations in the data have been weighted relying on ONS-DCMS official figures to reflect sectoral, geographical and size (employees) composition in the Creative Industries.

[9] A minimum threshold of $\geq$ 80% non-missing observations has been used to decide which variables to retain in the analysis. More information on the survey can be found in the original report https://www.thecreativeindustries.co.uk/media/471225/cic-access-to-finance-research-report-june-2018.pdf

3.1 Sectoral and geographical distribution

To begin, we document the sample distribution of creative firms across the nine sub-sectors and NUTS1 regions, together with the share of exporters, to gather an idea of export participation. This information can be helpful to gauge which sectors and regions are most internationally competitive and, also, how exposed they could be to external shocks, such as those due to changes in trade policy.

Table 1 breaks down the export participation by sector. Overall, according to the answers to this bloc of questions, all sectors are quite "open", with export participation ranging from "Architecture", a sector typically affected by non-tariff barriers ($\geq$ 20% of exporters), to "Museum, galleries and libraries", which is, however, the one of the smallest sectors in the sample ($\geq$ 83%). The table shows how the largest portion of the sample belongs, instead, to "IT, software and computer services", a sector that also has a high share of firms reporting having customers based abroad.

Table 1: Sectoral breakdown of creative businesses and exporters

	% Businesses	% Exporters
Advertising and Marketing	9.0	50.4
Architecture	5.6	19.9
Crafts	1.0	56.5
Design and designer fashion	8.1	66.2
Film, TV, radio, video and photography	11.4	66.3
IT, software and computer services	44.7	73.5
Museums, galleries and libraries	2.6	82.8
Music, performing and visual arts	13.4	68.8
Publishing	4.1	58.8

Note: The first column reports the share of business belonging to each sub-sector within CIs. The second column reports the within-sector share of exporting firms, resulting from information of foreign destinations sales. Weighted results.

Table 1 allows a comparison between the CIC data and the official statistics compiled by DCMS.[10]. The CIC survey data in the second column of Table 1 uncovers export participation patterns, and sectoral rankings in terms of the share of exporters, that are generally higher than the official ones.

While such discrepancies should be taken as a caveat to the present work, it is also important to remember that the official statistics may also be under-reporting trade participation by the creative sectors, as discussed extensively by Maioli et al. (2021). There could be several reasons for such discrepancies. The CIC survey is specifically designed to monitor CIs' businesses, limiting some of the issues affecting the official data, such as to the attribution of sector of operation and the possible under-representation of nano and micro businesses.

[10]See https://www.gov.uk/government/statistics/dcms-sectors-economic-estimates-2017-business-demographics

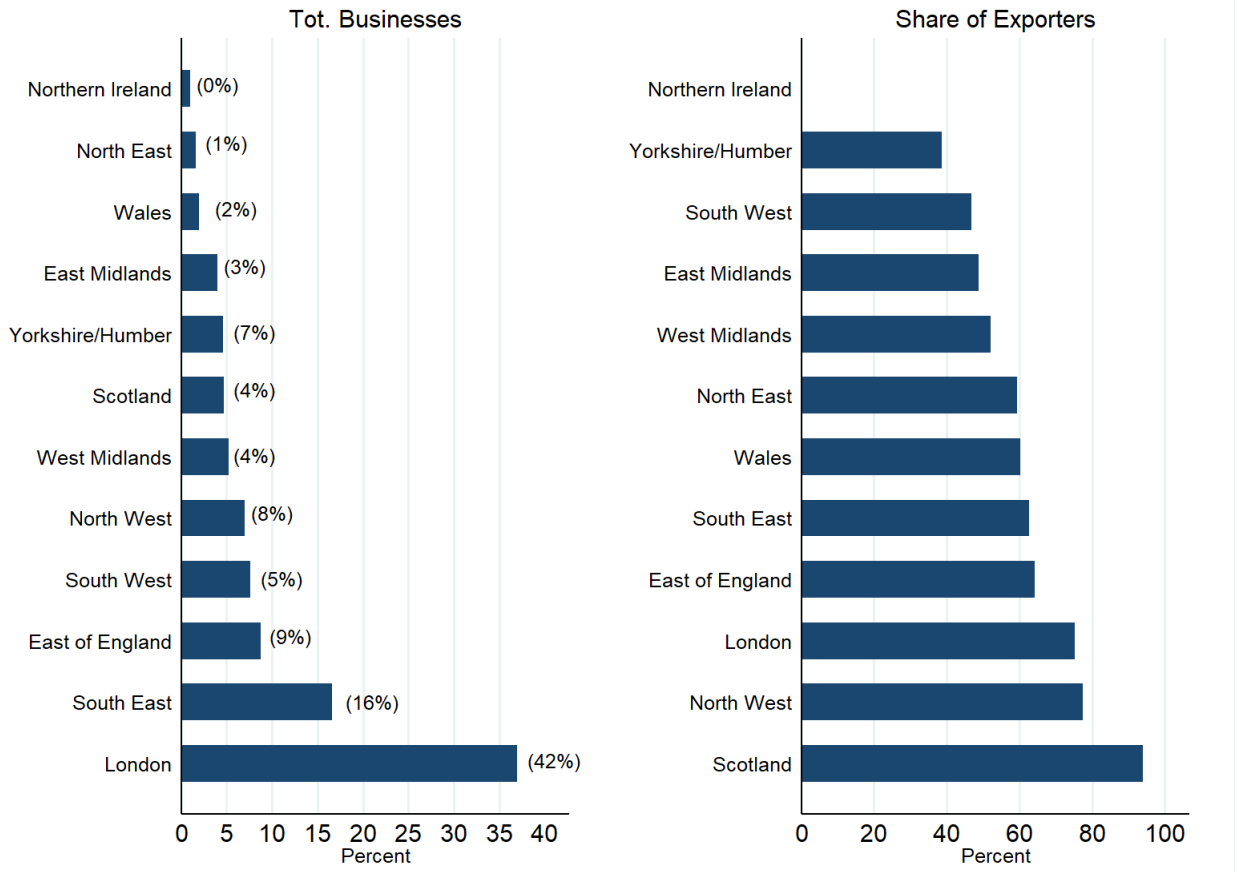
Discrepancies may arise for several reasons. For instance, DCMS acknowledges that since firms' trading status is based on firms' main activity, this may, in principle, result in lower export participation numbers. At the same time, Table 1 measures exporting status from a positive answer to the question on having customers abroad. This allows capturing trade that might otherwise go unreported, but equally, since it does not say much about the intensity of export participation, whether it pertains to the main activity or not, whether the business is a committed exporter or not, it may also lead to reporting of trading status that is purely temporary/experiential.

Also, compared to the self-reported answers used here, the official statistics may not fully reflect the size and composition of digital trade and e-commerce across creative subsectors.[11]

Turning our focus on the geography of exports, Figure 1 shows, on the left panel, the geographical distribution of firms across the twelve UK NUTS1 regions together with the national share of exporters (in parentheses) and, on the right panel, the regional trade exposure, i.e., the share of exporters over the total number of firms in each region. In line with what we know about the CIs, London and the South East have the highest shares of creative firms, which also translates in the highest national share of exporters. However, regional export intensities portray a different picture. Figure 1 shows that Scotland and the North West are the regions with highest shares of firms with customers based abroad. London and the South East are only third and fifth in terms of this measure of extensive margin of trade. This could suggest that while international trends and shocks may be channeled at the national level via London and the South East, the same may have a larger relative effects on Scotland and the North West, which has relevant implications for the levelling-up agenda.

[11] DCMS provides detailed reference to the methodology underlying their data collection. See https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology/dcms-sector-economic-estimates-methodology.

Figure 1: Businesses and exporters by region



Note: The left-panel breaks-down the location of creative businesses over UK NUTS1 regions, with percentages in parentheses reporting the share of exporters located in the region. The right-panel reports the share of exporting firms within each region. Weighted results.

3.2 Currently exporting and hoping to export

As mentioned above, the survey contains two direct blocs of questions on trade. The first bloc asks if a business currently sells abroad and if selling more abroad is in the plans for the next 12 months or so. The second block asks where in the world customers are currently based and where the business hopes to sell more in the future from seven possible destinations (UK, Europe, N. America, S. America, China, India, Middle East and Africa, Other or None). The reported answers allow insights on the current and prospective geographical orientation of trade flows from firms in the industry. It is worth remembering that the survey was critically taken when the UK had already taken the decision to exit the EU, but there was still a lot of uncertainty about whether a deal would have been reached and, if yes, what kind of deal. Hence, the answers to these questions can be informative of how businesses see international expansion in a post-Brexit world.

In analysing the answers to the two blocs of questions, it is important to emphasise that they ask slightly different questions ("plan to sell in the next 12 months" vs "hope to sell in the future"

and "where do you currently sell to" vs "where are customers based"). Therefore, responses can also differ across the two.

Using information from the two blocs we can report alternative extensive margins of the creative industries. The first margin relates to the comparison of exporters vs non-exporters. The second refers to the number of destinations reached by a firm. We can calculate the first margin as the share of exporters from the first bloc of explicit questions but also extrapolate it from the second bloc using the answers on where customers are based. The share of exporters calculated from the first bloc and the implicit share from the second bloc are reported in tables 2 and 3.

Table 2: Currently exporting vs exporting intentions (a)

	Plan to sell more abroad in next 12 months		
Currently selling abroad	No	Yes	Total
No	24.4	19	43.4
Yes	8.2	48.4	56.6
Total	32.6	67.4	100

Note: This table breaks-down information based on whether creative firms currently report to sell abroad and/or plan to do in the future. All reported numbers are calculated using survey weights.

Table 3: Currently exporting vs exporting intentions (b)

	Hope to have more customers abroad in the future		
Customers currently based abroad	No	Yes	Total
No	11.9	22.3	34.2
Yes	3	62.8	65.8
Total	14.8	85.1	100

Note: This table breaks-down information based on creative firms currently report to have customers based abroad and/or they aim to in the future. All reported numbers are calculated using survey weights.

We can see how almost 57% of respondents say that their business/organisation currently sells abroad and 67% plans to do more so in the next 12 months. Around 66% reports having customers based abroad and 85% hope to have more customers based abroad. The vast majority of exporters plans to sell abroad in the next 12 months or have more customers based abroad in the future. Also, a substantial portion of those currently not selling abroad or not having customers abroad, is either planning to export in the next 12 months (19%) or would like to export in the future (22.3%), respectively.

Table 4 breaks down the responses reported in Table 3 by region of destination using the blocs of questions on where customers are currently based and where the business hopes to sell more

in the future. The first column shows that Europe and North America are the top current destinations, with ≥59% and ≥54% of firms reporting having customers in these regions. This is almost twice the share of firms having customers in South America and Middle-East and Africa, more than twice the share of those with customers in India and almost five times in China.

Table 4 also reports information on exporting intentions in relation to the desired location of foreign customers. In particular, column 2 reports the percentage of firms hoping to have customers in the future in each of the listed destination, regardless of whether they currently export to such destinations already. Columns 3 and 4 disaggregate the information in column 2 by separating those who are already exporters (column 3) from the those who are not (column 4). These numbers highlight where firms would like to consolidate their markets and which new markets they would like to explore, which can be informative to envisage trade support actions and steer future trade negotiations.

In general, currently exporting businesses disclose the intention to increase their foreign customer base across all destinations, albeit more strongly towards already consolidated markets. Over 30% of the sample exporting to Europe and more than 27% of those already exporting to North America would like to export more to these markets, which are already the largest export destinations. Exporters would also like to expand towards South America, India, Middle-East and Africa, but to a less extent.

The last column of the table shows which new markets firms would like to expand to. It can be see how the distribution of exporter wannabes is more even than that of current exporters. Hence, creative businesses seem to be quite ambitious in terms of desire to explore markets where they currently have no customers. Interestingly, China represents the most desired future destination: ≥ 47% of the respondents would like to export more there, but only 9.7% is already exporting there.

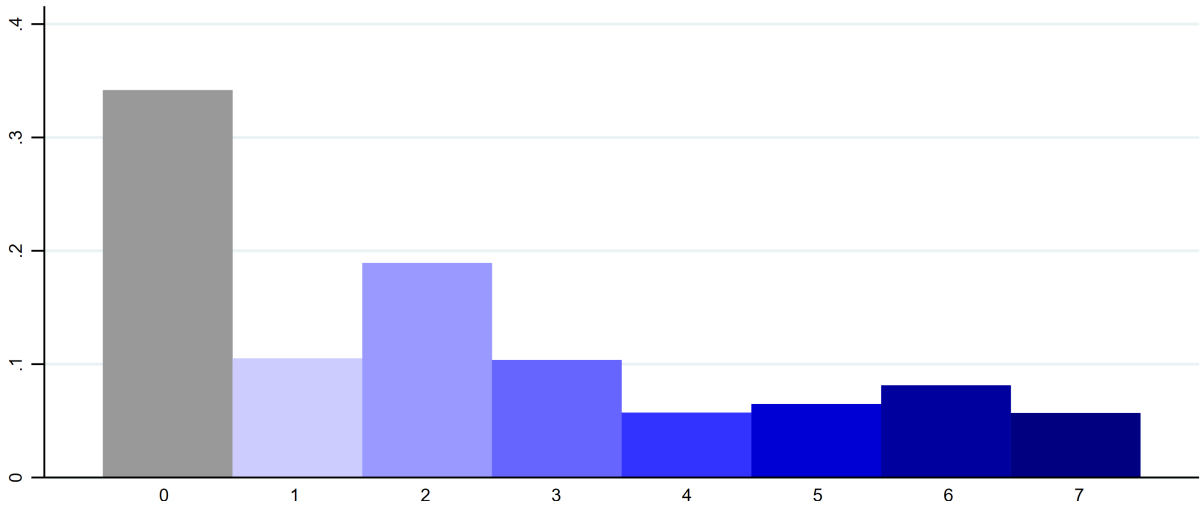
Table 4: Foreign sales destinations

Destination	Customers currently based	Hope to sell more in future	Hope to sell more in future	
			Already selling	Not selling yet
Europe	58.6	56.7	30.4	26.3
North America	53.9	46.7	27.5	19.3
South America	28.1	34.3	11.9	22.5
China	13.0	46.8	9.7	37.2
India	20.2	35.7	8.0	27.7
Middle East and Africa	26.3	34.3	10.0	24.3
Other	23.3	28.1	13.6	14.5

Note: This table reports responses to questions on current and desired customers by destination. The first column reports the percentage of businesses reporting having customers abroad. The second column reports the percentage of those hoping to have more foreign customers based on the following question: "Where does the business hope to sell (more) to in the future?", regardless of the current export status by each of these destinations. The third and fourth columns are a disaggregation of the second column and report the share of positive answers for the subset of those exporters already selling to that destination (e.g., Sale to EU="Yes" & Hope to sell (more) to EU="Yes") and for those exporters not currently selling to that destination (e.g., Sale to EU="No" & Hope to sell (more) to EU="Yes") respectively. All reported numbers are calculated using survey weights.

Information on sales destinations also allows inference on the extensive margin of creative firms in terms of the number of markets they serve, as shown in Figure 2. As expected the largest portion of the sample does not have foreign customers (around 35%) but the figure shows how there is a large portion of the sample selling to more than one destination and over 20% of respondents selling to more than four destinations, showing the existence of businesses who are truly global. Also, interestingly, the distribution of firms with foreign customers does not decline monotonically with the number of destinations. Almost twice more firms sell to at least two destinations than to just one and few more firms sell to six destinations than to five or four.

Figure 2: Share of exporters by export destination (or extensive margin)



Note: Foreign destinations reported in the survey are: Europe, US and Canada, Latin America, China, India, Middle East and Africa, Other. Weighted results.

3.3 Some features of exporters

3.3.1 Size, profitability and business models

As mentioned above, firm size and profitability are considered by the literature as important determinants of firm-level heterogeneity in terms of trade participation. The survey also allows us to see whether businesses' demand is coming from other businesses (B2B), consumers (B2C) or both. While the survey does not specify whether the business supplies these services abroad or not, this information together with the information on exporting can help gauge the position of the business in national and global supply chains.

In order to assess to what extent these characteristics vary between exporters and non-exporters, Table 5 reports the results of a χ^2 test spanning firm-level characteristics denoting size (number of employees), profitability (last year turnover, turnover growth, economic result) and demand source. For all variables considered, except for the previous year turnover growth, exporters

and non-exporters are significantly different. Figure A1 in the Appendix complements this analysis by presenting the distribution of exporters and non-exporters across the same set of variables. Although the majority of both exporters and non-exporters have between two and ten employees, there is also a large mass of single-operator businesses in line with what we know about the nano size of firms in the creative industries. Most businesses record less than £50k in turnover in the previous year. We discussed above how, for manufacturing firms, the literature shows that size is usually a good predictor of export propensity. Similarly, here, we can see from the figure that the distribution of firms, in terms of size, number of employees and turnover, is unambiguously rightward-shifted for the exporters.

Differences are slightly less marked when we consider the previous year economic result and turnover growth. Compared to the non-exporters, a smaller fraction of exporters tends to report negative turnover growth and losses.

Finally, pure B2B sales is the main mode of operation among the 50% of non-exporting businesses and $\geq 30\%$ among the exporters. B2C-only sales are reported by only 10% of the non-exporters and, generally, a large portion of businesses seem to have complex a customer base made of both businesses and consumers. Interestingly, the share of businesses selling B2C and both B2B and B2C is significantly higher among the exporters. These numbers highlight how integrated creative businesses are in national and global value chains, contributing to exporting both directly to consumers and businesses. The large share of B2B domestic businesses means that they may still trade indirectly by supplying goods and services to exporting non-creative businesses.

Table 5: Main operating characteristics: exporters vs non-exporters

Variable	χ^2 Test	P-value
Employees	14.78	0.00
Last year turnover	2.63	0.03
Last year turnover growth	2.01	0.09
Last year economic result	3.64	0.02
Demand source	4.32	0.02

Notes: χ^2 test based on the firms' exporting status (Yes/No). All row variables are qualitative. See Figure A1 for details on underlying classes. Weighted results.

3.3.2 Manager/owner age, business age, gender

An extensive literature has looked at the role of business age and managerial experience for firm performance, also in terms of international trade. In the international business literature, traditionally, in line with the theorising in the Uppsala model (U-M), firms are thought to adopt a staged internationalisation process where they first reach local experience (the so-called born-local international firms) and then - through an experimental process - they become increasingly

committed at the international level. A staged process is also adopted by firms according to the Innovation-related models (I-M), where the decision to export is likened to the introduction of an innovation. For an early review, key references and critical assessment of the U-M and I-M models, see Andersen (1993).

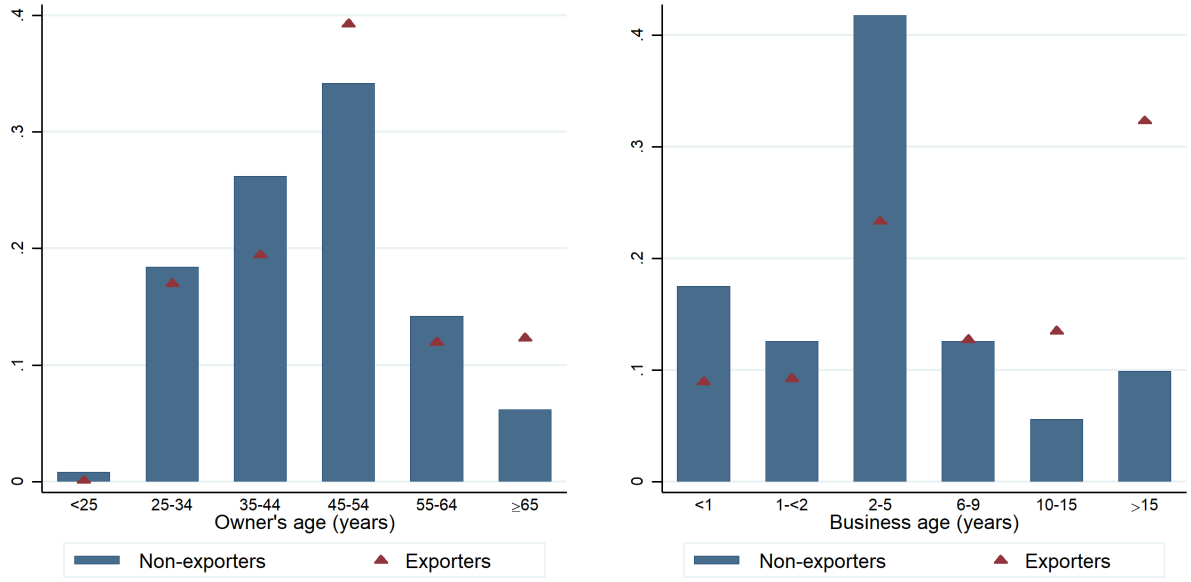
However, especially in recent times, in reflection of the increase in globalisation and technology, this view has been complemented by that of the so-called "born global" firms that skip such staged process to become international at birth or within a short period thereafter. These firms tend to be younger in terms of their establishment but have expert managers. Love et al. (2016), for example, find that the age and experience of firms can be significant determinants of export performance. For UK SMEs, however, the authors find that the two effects run in opposite directions: international experience is a positive factor and business age is a negative one. Aronica et al. (2021) similarly find that age matters for the active but not necessarily for the committed exporters, which are mostly associated with greater managerial experience. Age is, as expected, positively related to being an international born local firm and negatively to being a born global firm.

Figure 3 looks at the manager/owner and business age distributions for exporters vs non-exporters (panel a) and by the number of destinations reached by the business (panel b). The panels show that exporting status and the number of exporting destinations are not uniformly distributed across the different manager/owner and business age categories. The largest share of managers/owners are below 54 and belong to the 45-54 category. However, there is a larger share of exporters in the 45-54 and in the over 65 age groups. The distribution of exporters by business age shows that exporters tend to be more highly concentrated among the older firms. To the extent that managerial age and business age are a proxy for experience (albeit not necessarily exporting experience), this descriptive evidence seems to suggest that both could be determinants of exporting among creative firms.

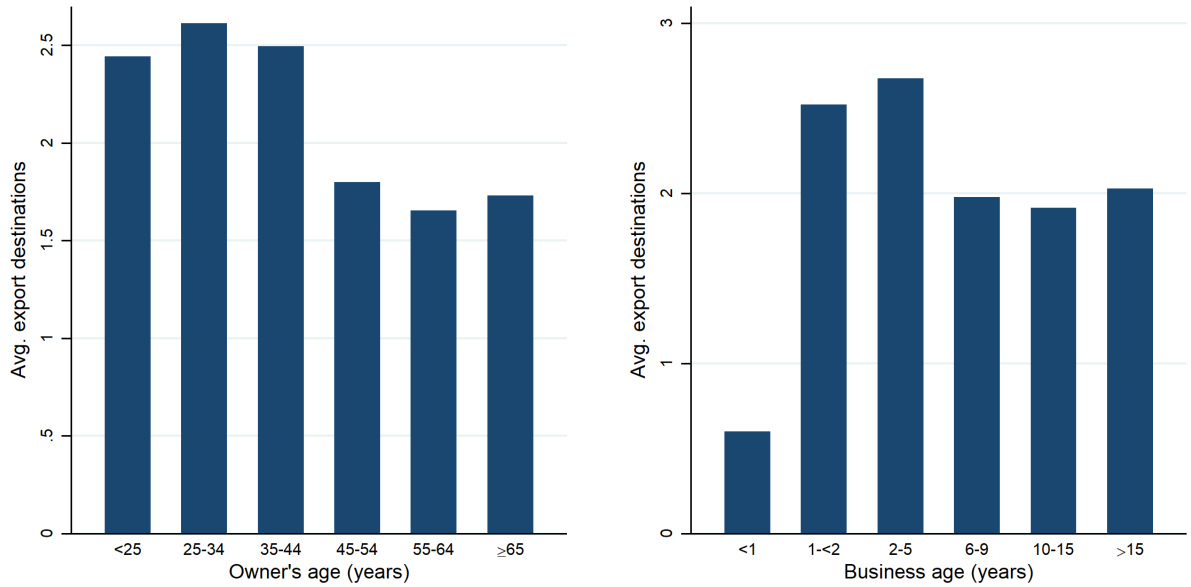
Panel b, however, returns a slightly different picture with the average number of export destinations being higher among the younger managers/owners (less than 34 years old) and businesses (between one and five years of age). This evidence should also be read in junction with Table 4 showing that creative firms are keen to experience new unexplored markets. Younger (and more dynamic?) managers/owners and businesses seem to be driving the global outreach of the UK CIs. This descriptive evidence, however, warrants some consideration in future multivariate empirical work, beyond the scope of this study.

Figure 3: Owner and business age and extensive margins

(a) Age and exporting status



(b) Age and number of export destinations



Note: Panel (a) breaks-down (owner and business) age profiles by exporting status, while panel (b) reports the average number of exporting destinations (including the case of no exports) by (owner and business) age cohorts. All figures weighted.

We know that the creative industries are characterised by a gender representation gap.[12] An interesting question is, therefore, whether female managers/owners are less represented also when it comes to exporting. Table 6 distinguishes exporters by the gender of the manager/owner. The table confirms that firms in the sample are in majority managed/owned by males who represent over 65% of the weighted sample. It is possible to see how, while the gender difference among

[12] https://en.unesco.org/news/unesco-reports-persistent-gender-inequalities-cultural-and-creative-industries

the 34% of non-exporters is not large (19.2% are males and 14.1% females), there is a much bigger difference between the 65% of exporters with 46% of exporting firms managed/owned by males and only 14.5% by females. This gap is also present in the extensive margin of the destinations reached by the firm. Virtually no firm exporting to more than five markets is led by a female owner/manager.

Table 6: Exporters by manager/owner gender

Currently Exporting	Male	Female	Total
No	19.2	14.1	34.2
Yes	46.6	14.5	65.8
Total	65.9	28.6	
Selling to 1 country	6.1	3.8	10.5
Selling to 2 countries	14	3.7	18.9
Selling to 3 countries	7.1	2.6	10.4
Selling to 4 countries	3.5	1.8	5.7
Selling to 5 countries	4	2.4	6.5
Selling to 6 countries	6.3	0	8.1
Selling to 7 countries	5.4	0.1	5.7

Notes: the table reports weighted shares of export status vs male vs female manager/owner. The difference between total and the sum of male and female is due to "prefer not say".

3.3.3 Innovators and innovation plans

The relationship between innovation and trade is part of a long-standing debate in the economics of trade and growth, where the most difficult issue is to disentangle the direction of causality. An early review of this literature can be found in Lachenmaier and Wössmann (2006).

A point worth bearing in mind when it comes to the creative industries' innovations is that these are often protected by IPRs like copyrights, trademarks and design, which are more difficult to enforce internationally than other IPRs like patents. Hence, it may be more difficult to extract their full commercial value in an international context. Nonetheless, both product/service innovation and process innovation can be important for the firm ability to compete internationally. Indeed, the first type of innovation can be driven by the desire to achieve higher revenues and the second can help the company become more cost-efficient and have the internal infrastructural support needed to deal with international operations.

Table 7 uses two questions on innovation that are contained in the questionnaire: whether firms have, in the past three years, introduced a new product or service and whether firms have made a significant improvement on an aspect of the business (a proxy for process innovation). Unfortunately, we do not have information on the depth of these innovations (i.e. R&D investment or the number of innovations) but, at least, we know which firms have innovated and which ones have not.

In general, the table shows how both types of innovation tend to be more common among the exporters than the non-exporters: exporters have more frequently developed both new products/services and new processes. Unfortunately, we are unable here to ascertain the direction of causality between the two here due to the limitations of the data, but this is something that would be interesting and critical to explore in the future.

However, the survey allows looking at the direction of travel, in terms of the expectations of exporters vs non-exporters in terms of innovation (which could also be linked to investment in R&D). Indeed, the last two rows of Table 7 show the answers to similar questions on innovation but in terms of future plans. In this case, more than 60% of firms respond that they are planning to introduce at least one of the two types of innovation. Interestingly, the desire to introduce product and service innovations is more common among the exporters. The desire to introduce process innovations is more common among the non-exporters than the exporters but the two are not statistically different in this respect. Given the more disruptive nature of the first type of innovation, this evidence could suggest either that firms see investing in new products or services as a way to remain competitive in international markets.

Table 7: Innovation in the past and innovation plans in the next 12 months

	Non-exporters	Exporters	χ^2-Test	P-value
You have developed a new product or service (last 3 years)	63.9	77.1	3.17	0.08
You have improved an aspect of the business (last 3 years)	46.3	66.7	3.80	0.05
To develop a new product and service (next 12 months)	51.0	68.7	2.93	0.09
To significantly improve an aspect of the business (next 12 months)	61.3	59.7	0.04	0.85

Notes: Columns (1) and (2) report the share of non-exporting and exporting firms, respectively, engaging with any of the row-dimensions. Columns (3) and (4) report the Chi-square test statistic and associated p-value regarding differences based on exporting status (Yes/No) for any of the row-dimensions. Weighted results.

3.3.4 Current business operations and plans ahead

Nano and micro businesses tend to adopt less formal internal processes and often operate on a project-oriented basis, especially in the CIs (see DeFilippi (2015)). However, international trade requires some degree of formality in terms of business operations. It is, therefore, interesting to see whether exporters and non-exporters are different in terms of their handling of internal business operations, such as those highlighted in Table 8, i.e. having a formal written business plan, producing quarterly business accounts, having a mentor, seeking professional advice or having benefited from creative industry tax relief. In general, there are no statistically significant differences between exporters and importers except for the having a mentor (at 10%) and for access to tax relief.

Benefiting from tax reliefs, in particular, seem to be more likely among the exporters than the non exporters. This is also a further burning issue that would deserve further analysis.[13] Also, a

[13]We know that tax reliefs are more in use in some sectors than in others (e.g., movies, where, according to Table 1, 66.3% of businesses are exporters).

slightly higher share of non-exporters seem to have a mentor, a fact that could be also linked to due (smaller) size, and indirectly to non-exporting. From Table 9, there do not seem to be large differences in the sample between the exporters and the non-exporters in terms of 12-months ahead business expectations, except for the slightly (but not significantly) larger portion of not exporters that are planning to get the business in a more stable position.

Table 8: Organisational characteristics

	Non-exporters	Exporters	χ^2-Test	P-value
You have a formal written business plan	37.7	38.0	0.03	0.87
You produce regular monthly or quarterly management accounts	38.2	39.1	0.00	0.96
You have a mentor who provides help and advice	40.9	27.2	3.73	0.06
You have sought professional advice before seeking external finance	33.4	32.4	0.10	0.75
Has your business benefitted from any creative industry tax reliefs?*	10.6	33.1	23.44	0.00

Notes: All rows report Yes/No percentages answers regarding business operations for non-exporting and exporting firms separately (columns (1) and (2)). Columns (3) and (4) report the Chi-square test statistic and associated p-value regarding differences based on exporting status (Yes/No) for any of the row-dimensions. Weighted results.
*Missing answers (including "don't know" cases) regarding the question on tax reliefs account for 11% of data.

Table 9: 12 months ahead businesses expectations

	Non-exporters	Exporters	χ^2-Test	P-value
To find a business mentor to provide help and advice	29.3	32.5	0.19	0.66
To take on more staff	54.3	54.3	0.00	1.00
To get the business in a more stable trading position	70.8	64.4	0.78	0.38
Positive turnover growth	74.3	72.5	0.07	0.79

Notes: All rows but the last are Yes/No answers based on the question: "Which of the following are in your plans for business in the next 12 months or so?" The last row refers to 12 months ahead expectations regarding business' turnover, reporting the fraction of positive growth prospects (i.e. answers indicating turnover growth), out of the following options available: "Close the business", "Merge or sell the business", "Get smaller", "Stay the same size", "Grow by up to 10%", "Grow by between 10% and 19%" and "Grow by 20% or more". Columns (1) and (2) report percentages based on exporting status, while columns (3) and (4) report the Chi-square test statistic and associated p-value regarding differences based on exporting status (Yes/No) for any of the row-dimensions. Weighted results.

4 Focus Areas

4.1 Focus (1): Finance and exporting

Since the article by Greenaway et al. (2007) an extensive literature has been devoted to the importance of access to finance for exporting firms and how firms that face credit constraints are less likely to self-select themselves into exporting. Wagner (2014), who reviews this literature, documents how exporting firms are less financially constrained than non-exporting firms. Access to finance is an important issue for creative businesses, as shown in the CIC Access to finance report which uses the same data of this paper. And, in line with the literature, it can also explain the different engagement of businesses in international trade operations.

There are at least two broad dimensions regarding finance which can be gauged from the data. The first relates to use of a specific financial instrument, where - for each instrument considered - firms can alternatively report to be currently using that instrument, to have used it in the past/ever benefitted from it - either as a result of an unsuccessful application or because they did not apply at all.[14] For comparison, we therefore aggregate answers by use of financial instrument, i.e., we define binary indicators for whether a certain instrument has ever been used or not.

In Table 10, we use a χ-square test statistic to assess the scope for differences in the use of financing instruments by businesses depending on their exporting status.[15] From Table 10 it is evident that, among the bank/debt financial instruments, exporters are more financially exposed to business loans, bridging loans and the use of business credit cards compared to non-exporters, whereas the exporters' financial exposure to business overdrafts and commercial mortgages is not statistically different from non-exporters.

Figures A2-A4 in the Appendix illustrate these results in greater detail by presenting, for each financial instrument, the frequency histogram across the different uses made by businesses, based on the original answer options and conditioning the answers on the exporting status.[16] Indeed, the details from Figure A2 show that the greater use of business loans by exporters vs non-exporters is driven by either current and past use of business loans, reflecting a higher fraction of applicants who export or, conversely, higher shares of non-exporting firms that did not apply or did not consider applying for business loans. Differently, a higher use of bridging loans is mainly attributable to the past and mirrors higher success rates in financing applications by exporters or a higher proportion of non-exporters who did not apply for these loans, while the difference in the use of business specific credit cards is mainly shaped by a higher current use by exporters vs non-exporters.

The results regarding alternative sources of financing, which also includes funding from public bodies, reveal the importance for the creative exporters of the more informal channels, like crowd-funding and close personal contacts, alongside export-specific financing and venture capital ("3rd party equity investment"). Interestingly, the higher exposure of exporters to the latter form of financing is attributable to both present and past use. Finally, the data shows a higher use of funding from CI bodies, when this is not to be paid-back, though the difference is mainly due to the higher use of this source in the past.

[14] In relation to use of each financial instrument, interviewees can choose among one of the following answers: Has now/Used in past/Applied but unsuccessful/Consider but not applied/Never considered

[15] The null hypothesis is rejected if the associated p-value is lower than 5% under a 95% confidence level. Rejecting the null hypothesis amounts to say that exporters are more likely to use such financial instrument.

[16] In Table A1 in the Appendix, we have carried out the same test considering the original answer options for each variable. The results are to be interpreted as a comparison of the distribution of each variable conditional on exporting status.

Table 10: Use of financial instruments: exporters vs non-exporters

Financial instrument	Non-exporters	Exporters	χ^2 Test	P-value
Core				
Business Overdraft	25.6	36.5	2.04	0.15
Business Loan	12.4	25.4	6.32	0.01
Commercial Mortgage	3.4	5.0	0.20	0.66
Bridging Loan	2.2	8.0	3.92	0.05
Business credit card	20.4	42.8	14.83	0.00
Secondary				
Loans/equity from directors/friends/family	43.7	59.2	4.75	0.03
Leasing and equivalent	10.7	18.4	2.22	0.14
Inovice finance	6.8	7.6	0.04	0.85
Export/import finance	0.2	6.1	37.07	0.00
Trade Finance	2.0	3.5	0.60	0.44
3rd party equity investment	8.5	18.9	3.75	0.05
Crowd funding	6.5	17.2	6.17	0.01
Non-bank Sh. term finance (i.e. online)	1.9	4.9	1.81	0.18
Public				
CI body's funding to pay back	15.0	25.0	1.56	0.21
CI body's funding not to pay back	15.8	29.1	5.92	0.02
Other Public body's funding to pay back	7.6	6.9	0.02	0.88
Other Public body's funding not to pay back	16.7	15.0	0.09	0.77

Notes: Columns (1) and (2) report the share of Non-exporters and Exporters, respectively, reporting to have ever used (currently or in the past) any of the financial instruments considered. Columns (3) and (4) report the Chi-square test statistic and associated p-value regarding differences based on exporting status (Yes/No) for any of the financial instrument reported. Weighted results.

Overall, the data shows a higher engagement of exporting businesses (compared to non-exporting ones) with financial instruments. While this is somehow expected, a novel and interesting aspect emerges in relation to the previously mentioned differences in the use of informal financing and funding from CI bodies, which might not share the same underlying mechanisms of traditional financial channels in terms of accessibility. This may reflect a different "pro-activeness" on the side of exporting businesses, something that also emerges when breaking down by exporting status the information on finance providers and reliance on external sources to find out about financial opportunities.

Table 11 shows how a higher share of creative exporters (19.71%) relies on equity providers, like venture capitalists and angel investors, than non-exporters (6.43%) and also how a higher share of creative exporters (37.89%) access finance from CI public bodies, like the Arts Council and Creative England, than non-exporters (25.62%).

Table 12 shows that in order to find out information on funding opportunities, a creative exporters tend to approach trade or professional associations and Arts or creative organisations, the British Business Bank and the Business Finance Guide. On the other hand, creative exporters seek funding opportunities information to a lesser extent than non-exporters from sources like the Chamber of Commerce (the difference is statistically significant at 10% though), Innovate UK and its Knowledge Transfer Network, the CBI, the Federation of Small Businesses or the Institute of Directors. The data shows that there is no statistically significant difference

between exporters and non-exporters in terms of propensity to engage with banks, chartered accounts, lawyers, 3rd party investors, local authority, local enterprise network or growth hub, local library, ICAEW's Creative Industries - Routes to Finance, BEIS, DCMS, IPO and others, to find information about funding. Explaining these differences among creative exporters and non-exporters in accessing information about potential types of finance is admittedly hard without knowing more information like the entrepreneurial experience and existing social networks or without carrying out a multivariate analysis based also on business size, sector and location (sub-national and/or rural vs urban variations might exist with some of these organisations and bodies being more accessible than others depending on location). Again, this gives scope for further work. In general, from the policy standpoint, given the higher propensity to export reported by innovative businesses, it would be interesting to explore whether information on finance for innovation could be coupled with information on exporting to maximise the potential of creative businesses in both dimensions.

Table 11: Finance providers

Variable	Non-exporters	Exporters	χ^2 Test	P-value
High street bank	29.23	29.66	0.00	0.95
New, challenger bank	3.21	6.19	0.62	0.43
Non-bank provider	13.00	8.34	0.43	0.51
Equity provider (e.g. angel, venture capitalist)	6.43	19.71	8.82	0.00
CI public body (e.g. Creative England, Arts Council)	25.62	37.89	3.50	0.06
Other public body	15.93	13.10	0.42	0.52
Other	33.67	33.18	0.00	0.96

Notes: These are all Yes/No answers related to the following question: "Which of the following are finance providers that the business has used for funding now or in the past?". Columns (1) and (2) report percentages by exporting status, while columns (3) and (4) report the Chi-square test statistic and associated p-value regarding differences based on exporting status (Yes/No) for any of the row dimensions. Weighted results.

Table 12: Businesses asking for financial opportunities

	Non-exporters	Exporters	χ^2 Test	P-value
Trade or professional association	35.5	51.2	4.90	0.03
Arts or creative organisation (e.g. Arts Council England, Creative England)	40.9	66.4	7.60	0.01
Bank	36.0	36.6	0.00	0.95
Chartered accountant	14.1	22.5	1.28	0.26
Lawyer	11.0	14.2	0.17	0.68
Potential investor	28.9	37.2	1.35	0.25
Local authority, local enterprise network or growth hub	39.6	31.8	0.96	0.33
Chamber of commerce	16.1	6.4	3.04	0.08
Local library and information service	9.7	4.9	0.82	0.37
ICAEW's Creative Industries - Routes to Finance	0.8	1.9	1.13	0.29
British Business Bank and the Business Finance Guide	0.4	2.3	5.23	0.02
Innovate UK and its Knowledge Transfer Network	23.2	9.9	18.58	0.00
CBI, Institute of Directors, Federation of Small Businesses, etc	4.3	1.3	3.78	0.05
BEIS	0.9	2.6	1.90	0.17
DCMS	8.7	5.7	0.99	0.32
IPO	3.8	1.6	1.21	0.27
Other	11.5	10.7	0.03	0.87
None	23.1	13.4	2.62	0.11

Notes: These are all Yes/No questions regarding whether the business has used each of the subjects reported to find out about potential types of financing. Columns (1) and (2) break-down percentages by exporting status, while columns (3) and (4) report the Chi-square test statistic and associated p-value regarding differences based on exporting status (Yes/No) for any row entry. Weigthed results.

4.2 Focus (2): obstacles to business operations and exporting

In this subsection, we report information regarding the perception of respondents on several "environmental" aspects that may affect operations. Questions may refer to general aspects - like those regarding economic climate or political uncertainty - or aspect that are more tailored to creative businesses and prospective exporters, e.g., changes in IPRs and access to foreign markets, respectively. These are all ordinal variables on a 10 Likert scale (1: No obstacle, 10: Major obstacle)

As a starting point, Table 13 allows an overview of the above aspects - either generally or by exporting status. All variables have been redefined as binary indicators (see the table for details). Overall, the three most important aspects (for more than 60% of businesses) relate to the broad economic and political climate as well as increased market competition - either domestically or abroad, with the next most important barrier being access to finance - picked up as important by 53% of businesses.

Dealing with IP changes is perceived as important by the lowest share of businesses (slightly more than 20% of businesses). However, the break-down by exporting status allows focus on further pressing issues. For instance, the financing of current operations and concerns about lower demand are also considered as major issues by more than 50% of the non-exporters. Exchange rate fluctuations and access to EU markets, both uncertain at the time of the survey due to the outcome of the EU referendum, are widely important issues reported by the exporters. Interestingly, we notice that a lower share of exporters reports issues of cash flow or late payments compared to non-exporters, indicating a healthier financial stance for exporting firms, in line with past literature (see, again, Wagner (2014)).

It is also interesting to note the lack of noticeable differences in the perception of exporting vs non-exporting firms regarding two dimensions like management skills and IP changes. The latter may, in principle, represents more of a concern for firms seeking to protect their "core success factor" when competing in international markets and against foreign competing firms. Management skills are widely acknowledged in the literature as a key determinant to participate international markets, as recently documented by Bloom et al. (2021). Of course, the no difference between non-exporters and exporters in the perception of management and leadership skills as an obstacle does not necessarily imply that differences in management and leadership skills do not exist between businesses based on their exporting status.

Table 13: Perceptions on barriers affecting businesses operations by exporting status

	Overall	Non-exporters	Exporters
The current economic climate	67.2	58.1	71.8
Access to external finance	53.0	50.4	54.3
Legislation, regulation and red tape	35.7	28.4	39.4
Issues recruiting and retaining skilled staff	45.2	47.1	44.2
Cash flow or issues with late payment	50.7	57.0	47.4
Availability of relevant advice	36.8	35.0	37.7
Political uncertainty and future government policy	67.9	58.5	72.7
The quality of management and leadership skills	26.3	21.5	28.7
Changes in the value of sterling	47.9	27.7	58.2
Lower customer demand	52.3	65.5	45.5
Increased competition in your markets	61.9	54.3	65.7
Access to EU markets	47.5	33.4	54.7
Access to other international markets	43.2	30.7	49.6
Dealing with changes in IP	22.6	25.1	21.3

Notes: All columns report the share of businesses (within heading status) rating aspects in rows as important to their operations, where all aspects considered have been redefined on a (0,1) basis from the underlying [1,10] scale, whereby the binary variable takes the value of 0 if the ordinal variable is in the range 1 to 5 and take the value of one if the ordinal variable is in the range 6 to 10. Weighted results.

The above table is complemented by Figure A5, where we compare the probability density function for the underlying answers to each barrier conditional on export status. The figure shows how the economic climate, policy uncertainty, customer demand, competition, access to finance and cash flow issues are important issues for both exporters and non-exporters. However, exporters seem to be more affected than non-exporters by the economic climate and uncertainty, by the access to EU and other international markets, increased competition, management skills and the value of sterling. Non-exporting businesses are more concerned by dealing with IP changes, lower customer demand (signalling their inability to absorb exposure to domestic shocks with international demand) and cash flow issues.

5 Conclusions

In this paper, we have exploited a recent survey of creative businesses to provide a snapshot of the exporting behaviour of creative firms.

The survey was originally collected in 2017 for the Access to Finance Report for the Creative Industries Council. While it is important to underline that this work is affected by some of the caveats that typically affect the measurement of trade, the survey has some key features that are useful to start filling the current evidence gap, gather some policy implications and guide future work.

First, the survey explicitly targets creative firms. The survey present some features that can make the data different from the official data, e.g., self-reporting of sector of operation and the inclusion of a greater portion of nano and micro businesses, which is probably more representative of the nature of creative industries sectors. Second, while the survey does not, unfortunately, contain information on the trade volumes or intensity of trade, it contains other interesting information, e.g., whether a business has customers abroad and where these are based, which can help map the destinations of creative trade and understand the extensive margin of trading businesses. Together with the other information on business characteristics, expectations and future plans, access to finance, and perceived barriers, the data allows portraying several key facts about creative businesses and their participation in international trade.

We summarise here some of the findings of this study and suggest some of the policy implications. First, across all sectors, a large share of creative businesses engage internationally by having customers based abroad. We do not know how stable or intense these relationships are, but it is interesting to observe that creative firms have potentially a very international outlook. In terms of geography, exporters tend to be nationally concentrated in the usual regions, London and the South East, accounting for more than half of the exporters. However, the share of exporters is high across all regions and regions, like Scotland and the North West, have very high shares of respondents that are internationally active. This information adds a further international dimension to the levelling-up agenda. While international shocks, such as those due to changes in trade policy or exchange rates, affect the UK creative industries nationally via London and the South East, the same shocks may affect proportionally more these regions and the creative industries outside London and the South East.

Creative businesses emerge as globally engaged with many of them having a diversified international customer base present in several international destinations. Moreover, most of those already with customers abroad hope to expand into further markets and a good portion of those who are not exporting hopes to start exporting. These hopes for international expansions not only pertain already consolidated markets, like the EU and North America, but also into China, currently not a major UK partner for the creative industries. With respect to the latter, geographical and cultural distance, but especially policy barriers could explain the current lack of engagement.

Businesses tend to be different also when it comes to size, profitability and customer-orientation (B2B vs B2C). Exporting firms tend larger both in terms of number of employees and revenues. There is a higher share of businesses selling mostly B2C or both B2B and B2C among the exporters. The non-exporters, instead, mostly operate B2B.

We are not able to measure the experience of the business in international markets, but we can look, in line with previous literature, at the experience (measured by age) of the owner/manager and of the business. Being an exporter is more frequently associated with having owners/managers who tend to be older and with being an older business. Reaching a greater number of international locations, however, is associated more frequently with younger

businesses (between 2 and 5 years old) and younger owners/managers (less than 44). In terms of the personal characteristics of the owner/manager, we also observe a gender gap in export participation, as it is observed in other business areas of the CIs.

Innovation seems to be key. Exporters tend to have innovated more in the past in both products/services and processes than non exporters and they are also more likely to plan product and process innovations in the next 12 months. This evidence suggest the importance of sectoral growth strategies that, at the same time, are able to support both innovation and trade.

No significant differences emerge in terms of organisational characteristics and administrative infrastructure, except for the greater reliance of businesses that export also on some form of creative industries tax relief.

We also provide a comparison among exporters and non-exporters in terms of access to finance. With respect to the first, the data shows that exporters (compared to non-exporters) tend to rely more often on the use of several different financial instruments, such as loans from banks, but also business credit cards, loans from directors, family and friends, crowdfunding and third party equity investment, but also funding from public bodies but if this does not have to be paid back. The first type of loans could be linked to more traditional and larger businesses who can more easily access traditional forms of finance. The second type of finance could be linked to smaller businesses who struggle to access traditional finance and need to rely of card credit, personal loans and equity investment. Finally, those cases relying on public funding could be linked to specific actions by creative industries bodies.

The above analysis shows how many creative businesses already have customers in more than one international location and they are keen to expand further. Many of those who do not, would like to have them. While this confirms the international dynamism of the sector and at the same time raises the issue of what type of barriers might prevent them from trading and how these barriers could be reduced. We broadly observe that exporting firms are more sensitive to political and economic uncertainty, as well as, unsurprisingly, to issues tightly related to international market competitiveness, such as the value of the Pound, and market access, in particular to the EU. Some of these perceived barriers may be specific to the period when the survey was carried out, which was critically during the long period of negotiations after the referendum and before the agreement. It would be interesting to see how businesses would respond now that the agreement has been reached.Other issues affecting business operations, like bureaucracy and red tape, are also more frequently perceived by the exporters. These are less likely to be related to the specific period when the survey was on the field and they are also more likely to have increased now, given that the exit from the EU has increased red tape versus the main trade partner.

While the above descriptive analysis starts filling some gaps in the knowledge base it also gives some insights for further work. First of all, the next step should be to move from descriptive analysis to multivariate analysis where, at least, relationship can be analysed whilst correcting for the role of confounders. This objective, unfortunately, clashes with the the lack of data

that could allow the identification of relationships from a causal perspective, e.g, is exporting the result of a selection of the best businesses or one of learning from exporting? is innovation driving trade or vice versa? Finally, a lot has changed since the survey used in this study was first collected. While the analysis reported here gives us an interesting snapshot, it would be worthwhile to look at more recent data to see how recent policy developments, such as the UK-EU trade and cooperation agreement, and other agreements signed by the UK government after the UK exit from the EU are shaping the international success of the UK creative businesses. Similarly, it would be important to understand how the pandemic has impacted on the international exposure of the sector to inform policies for the recovery.

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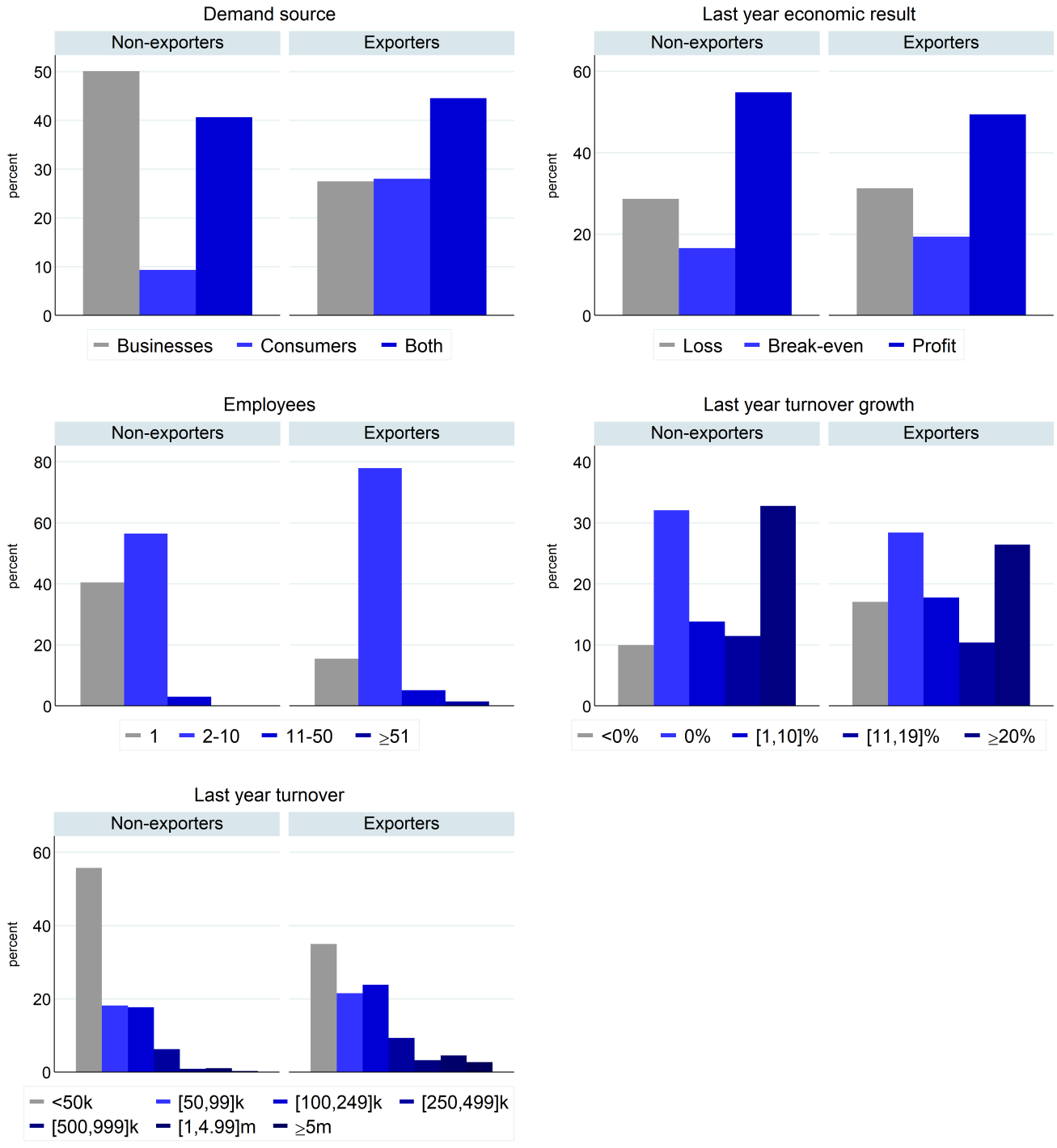
Appendix A: Additional tables and figures

Figure A1: Summary of businesses characteristics by innovation status



Notes: Self-reported business characteristics by exporting status. All figures are weighted.

Table A1: Use of financial instruments: exporters vs non-exporters

Financial instrument	χ^2 Test	P-value
Core		
Business Overdraft	1.02	0.38
Business Loan	1.53	0.21
Commercial Mortgage	1.00	0.38
Bridging Loan	2.07	0.11
Business credit card	5.17	0.00
Secondary		
Loans/equity from directors/friends/family	3.32	0.02
Leasing and equivalent	0.83	0.48
Invoice finance	0.62	0.60
Export/import finance	2.63	0.06
Trade Finance	1.38	0.24
3rd party equity investment	1.72	0.17
Crowd funding	2.29	0.07
Non-bank Sh. term finance (i.e. online)	1.56	0.21
Public		
CI body's funding to pay back	2.98	0.03
CI body's funding not to pay back	2.61	0.04
Other Public body's funding to pay back	0.20	0.84
Other Public body's funding not to pay back	0.45	0.71

Notes: Chi-square independence test between exporting status (Yes/No) and any of the funding instruments reported in the rows. Answers to questions on Questions on each funding instrument allow the following answering options: "Has now", "Used in the past", "Applied but unsuccessful", "Considered but not applied for", "Never considered". Weighted results.

Figure A2: Use of financing instruments: core

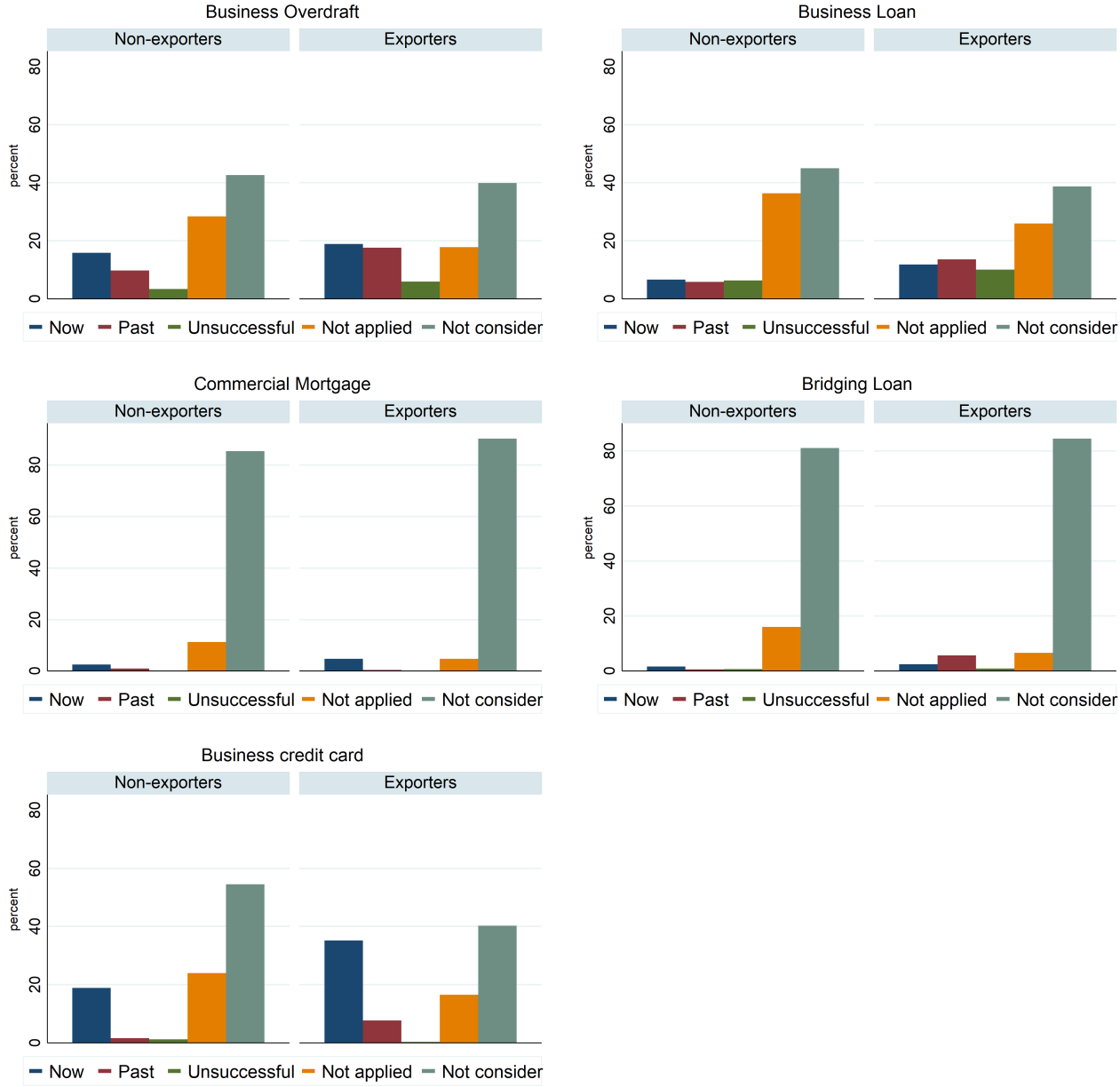


Figure A3: Use of financing instruments: secondary (private sources)

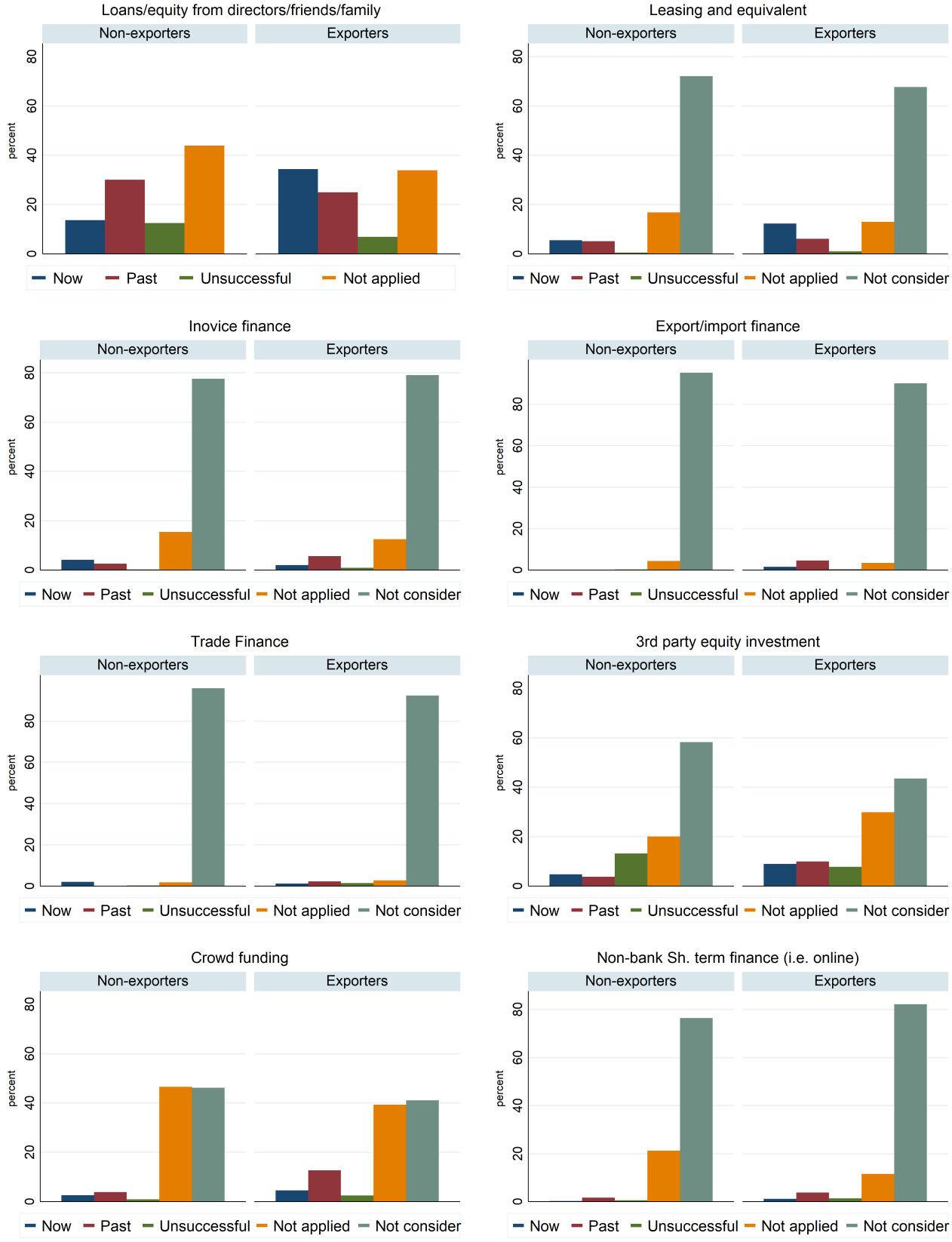


Figure A4: Use of financing instruments: secondary (public sources)

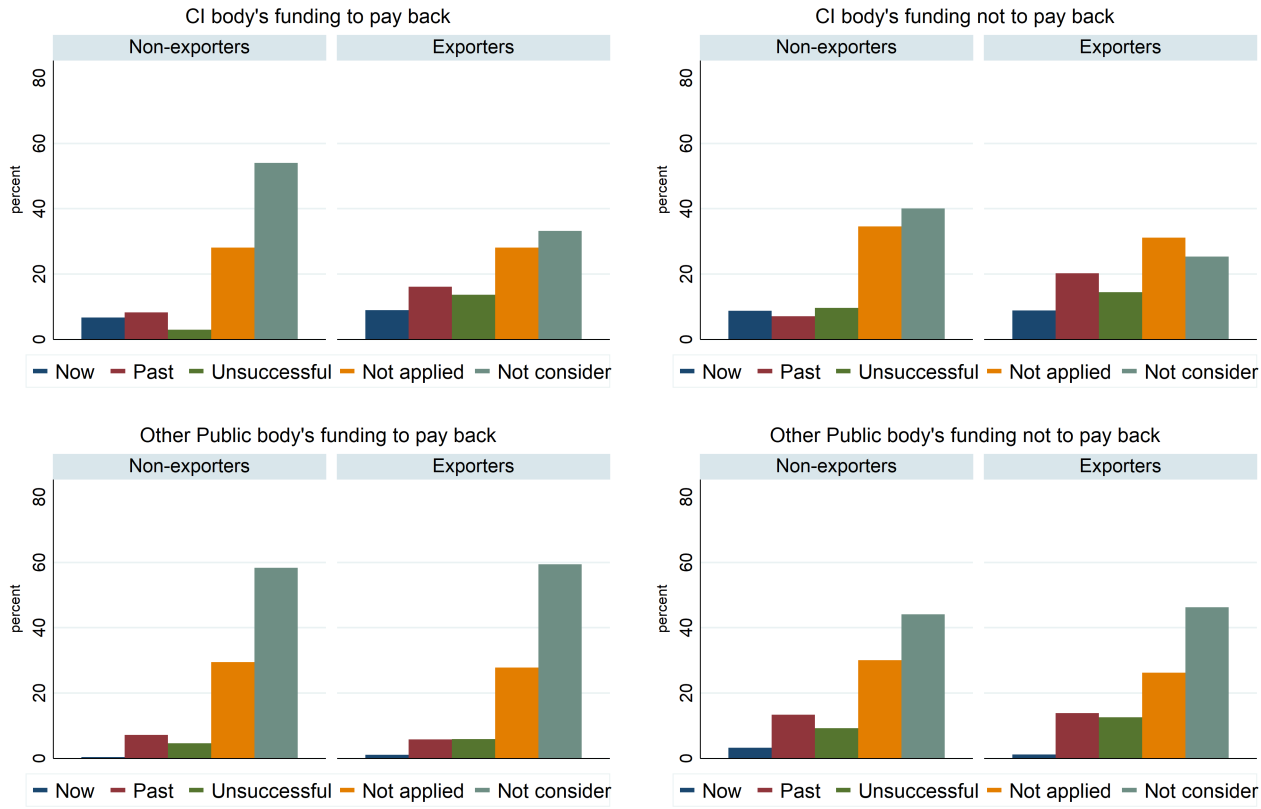
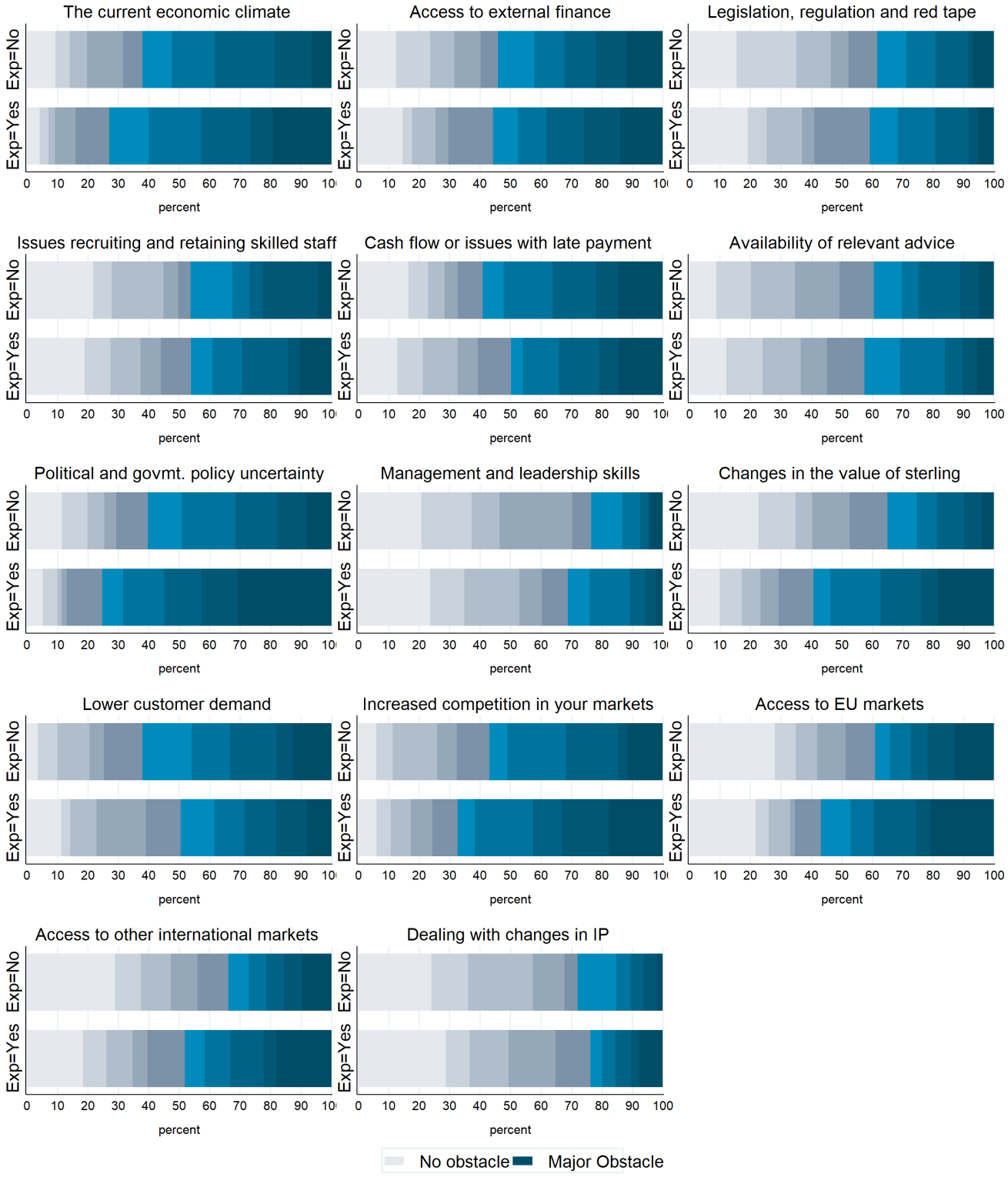


Figure A5: Perceptions on barriers impacting businesses operations by exporting status



Note: This figure reports the perception of various barriers impact on businesses operations, distinguishing by exporters and non exporters. Answers regarding each aspect range over [1,10] interval. Grey colors indicate an aspect is of lower importance [1,5], while blue colours mean the opposite. Weighted figures.