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A Review of Creative Trade in the Economics literature

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Abstract

In this paper, we provide a review of the economics literature on creative international trade. Starting from an overview of the main features of creative goods and services, we then discuss their implications for international trade modelling, empirical evidence and policies. In light of this review, we discuss possible directions for future research.

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1. Introduction

Over the past decades, the creative industries have gained pace globally, as reflected in their increasing shares of world trade and the parallel rise in national value-added, jobs and exports of developed and less developed countries alike (UNCTAD, 2018, 2010, 2018). Creative trade flows are also more evenly distributed across the globe, with more substantial South-South trade and - with the rise of China as creative power - North-South flows compared with non-creative trade.¹ Creative production and consumption seem to be more globally dispersed than those of non-creative outputs. For specific sectors, anecdotal evidence also points in this direction, with the rise in global production centres around the world, prompted by a mix of cultural and policy factors, such as tax relief and subsidies. The screen industry, for example, has seen the global rise of production centres beyond Hollywood, in India (Bollywood), Nigeria (Nollywood), New Zealand, and in many other countries, including the UK. Similarly, the music industry has seen the global rise of Latin American and the Caribbean, African and Asian ethnic music.

Several dynamics are at play and can explain current trends in the globalisation and international distribution of the creative industries. Arguably creativity, as an innate human trait, should be more uniformly distributed than other production factors, such as physical and human capital or natural resources. Such more widespread endowment could allow for international trade based on comparative advantage and explain some of the above trends. It could also lead to considering creativity not only as an essential determinant of international competitiveness but also as a “leveller” of international (and national) inequality. Counter to this argument, however, creativity also needs to be recognised and nurtured, a process that requires additional investment and resources that are still unevenly distributed.

Indeed, the overwhelming evidence is that creative industries face pervasive diversity challenges and tend to be highly spatially concentrated (see Carey et al., 2019, and Tether, 2019). Internationally, it is possible to point to the still existing sizeable international natural, economic, political, financial and social barriers, which can generate considerable and persistent inequality. For example, uneven human capital

¹ Contrary to the standard theory of comparative advantage, trade of non-creative goods and services flows more abundantly in the North-North direction than in the North-South direction. There is also little evidence of South-South non-creative trade flows, although this has recently increased thanks to increasing regional integration and trade agreements.

accumulation and technological progress in developed countries can foster further international divergence in the creative industries, as well as in other sectors of the economy. Also, “harnessing” creativity requires the presence of formal and informal institutions that differ significantly across countries (Serafinelli and Tabellini, 2019).

Finally, the global reduction in trade costs and tariff barriers, together with the increase in technological progress and digitalisation, has created further trade opportunities, also in the creative industries (see Jones et al., 2015). However, creative trade is also affected by non-tariff barriers (NTBs) and regulatory quality, such as intellectual property rights (IPRs) protection. Indeed, the unevenness of legal institutions has consequences for international competitiveness and international creative trade. Internationally, the anecdotal evidence is that market power often concentrates in the hands of few players, mostly in the Global North, where revenues and royalties tend to accrue more generously thanks to, among other factors, the better enforcement of property rights and technology, such as platforms.² The increasing coverage of these policy areas in a multilateral setting, such as that provided by the World Trade Organisation (WTO), and their inclusion in bilateral and regional trade agreements, has made creative goods and services more tradable and can be partly responsible for the trends mentioned above. However, substantial policy and regulatory barriers still exist and favour trade creation or diversion patterns beyond those that would occur in nature. A further reduction in these still substantial barriers would lead to a further expansion of world trade in creative goods and services.

The above issues have received some attention in both academic and policy circles. In academic circles, the production and consumption of cultural and creative goods, such as music and art, has historically attracted the interest of economists starting already from the contributions of Adam Smith and Alfred Marshall to those of John Kenneth Galbraith and Lionel Robbins (see Throsby, 1994). More recently, there has been a spur of interest for some specific sub-sectors, like music or movies, where the literature is extensive and has already been subject to reviews (see McKenzie, 2014, or Towse, 2003). However, the interest in the rise of creative goods and services in the international economy is only recent and often limited to some specific sub-sectors, like audiovisual or arts. Other sub-sectors have mainly been left unexamined.

² These trends can, of course, differ across creative sub-sectors, depending on the specific production, consumption and trade models (the music or screen industries probably tend to favour “stardom” models than, say, craft).

In policy circles, creativity is recognised as a driver of innovation and growth and as a determinant of resilience to the “globotics upheaval” (Bakhshi et al., 2015a and Baldwin, 2019). Hence, nations across the globe, including the UK (Bakhshi et al., 2015b), place increasing emphasis on creativity and its industries in their industrial strategies. At the same time, international policy institutions, such as UNCTAD and the WTO, push for greater international coordination.³

The increasing national and international importance of the creative industries grants a thorough review of their treatment in the international economics literature. Such a review is critical to provide a synopsis of the separate current academic debates and to learn lessons for national industrial strategies, trade policies and international policy coordination. This paper aims to meet this need, starting from an overview of how the specific features of creative goods and services are addressed in the existing academic literature. Since the literature still has to catch up with the rising importance of the creative industries, this review will often borrow from non-sector-specific theoretical and empirical contributions and discuss how relevant this literature is to the specific modelling needs of creative goods and services. A review of the sector-specific contributions is also provided. Finally, the paper highlights some of the areas still requiring future research.

The rest of the paper is organised as follows. The next section discusses what features make creative goods and services unique and what are the challenges in terms of modelling and policies. Section 3 provides a short overview of existing trade models to see how appropriate they are to analyse trade in the creative industries. Given the service and IPR-intensity of these industries, Sections 4 and 5 look explicitly at the challenges of trade in services and the role of IPRs in trade and trade agreements. Section 6 reviews the most relevant sectoral studies and Section 7 concludes.

³ See Pratt (2015) for a perspective on the relationship between culture, creative industries and development.

2. What is unique about creative goods and services when it comes to trade?

Before delving into the sector-specific literature, it is critical to start from what is distinctive about creative goods and services and what are modelling challenges for theoretical and empirical models of international trade.

The definition of creative industries, and therefore creative goods and services, is part of a broad international debate with no consensus. Since this debate is beyond the scope of this paper, we refer the interested reader to other contributions dealing with the different definitions (see, among the other, Goto, 2017).^{0F} In this paper, instead, we mostly refer to the definition used by the UK Department of Digital, Culture, Media and Sport (DCMS, henceforth) and concentrate on those intrinsic features of creative goods and services that may affect their international exchange.

2.1 The features of creative work according to Caves (2000)

In his pioneering work, Caves (2000) discusses seven specific features that distinguish the production and consumption of creative work compared with non-creative work. While these features are more specific to artistic expression, and hence the cultural industries, they broadly apply to all creative industries. Also, while they have implications for the economics of creative activities, they also have implications for the production, consumption, and exchange of creative work in an international context.

The first feature is related to the higher risk involved in the investment and production of creative work due to the higher uncertainty of demand, the so-called “nobody knows” property. Caves (2000) argues that it is more difficult, if not impossible, for a creator to have any certainty about the consumer response to new work. Such additional demand uncertainty increases the risk involved in creative activities and, therefore, on their financial reward. Such uncertainty also means that there is a great deal of asymmetric information at every stage of the production process and exchange of creative work, especially for more complex productions. While internationalisation offers market differentiation opportunities, it is reasonable to assume that production in an international context may also be associated with more significant uncertainty and asymmetric information.

Linked to the first, the second feature of creative work is that the artist's taste matters more than in other production, or the so-called “art for art's sake” principle. Creatives

may care more about the symbolic value, quality, and integrity of their work than the consumer reaction or the financial return and spend considerable effort in activities that may go unnoticed by the consumer. Again, this feature is likely to apply differently to different types of creative work. The different evaluation of creative work by individuals and countries may translate into different exploitation of creative work too. These differences are reflected, eventually, in the different remuneration of creatives, the extent of copyright protection or the degree of protectionism for cultural goods and services around the world.

The third feature is that creative production often requires the contribution of different inputs, skills and practitioners, i.e., a multiplicative production function. This so-called “motley crew” property has several implications. The creative industries, for example, combine different creative skills and rely on a mix of creative and non-creative skills. Specialist business skills are critical for the commercial exploitation of creative content, both nationally and internationally. The motley crew effect in the modern international production system, also means that the competitiveness of the creative industries depends on accessing international skills and talent, with the implication that migration policies play a critical role in their success. Finally, the combination of different skills required sustained cooperation efforts, which are likely to be more costly in an international context.

The fourth feature is that an artist can choose from amongst an “infinite variety” of creative expressions, and each variety represents a horizontally differentiated product that is similar but not identical to another variety. Similarly, consumers can choose among infinite varieties of similar products. Varieties can be so similar that the consumer may be indifferent between varieties. Since the value of the variety is in its blueprint and its copyright protection, the choice of which production goes ahead will matter to the copyright owner. Hence, there is in practice a finite number of realisations for an infinite number of varieties of expression, especially when productions have irreversible costs. On an international scale, such irreversible costs are even higher than on a national one, further emphasising the issue of the choice of finite realisations of infinite varieties.

However, creative products are not just horizontally differentiated, as recognised by Caves in his fifth feature of creative industries. Creative inputs/skills, and creative outputs are also vertically differentiated by quality into “A or B lists”. This feature makes

the creative industries prone to stardom effects, where “power” concentrates in the hands of a few creative stars and firms, a feature that is enhanced by the economies of scale allowed by the access to international markets. A typical example is that of Hollywood studios, which are essentially multi-product firms. These typically, at the same time, invest in blockbuster movies featuring international stars and smaller productions. The two have very different international promotion and distribution strategies.

The sixth feature, related to the motley crew property, i.e. production requires different skills that are vertically integrated and, hence, all needed for the final success, timely delivery and value of a project. This property implies that coordination matters in order to deliver a creative project, or the “time flies” principle. Such coordination reinforces the need for organisational skills and structures that oversee and complement the creative process. Also, temporal coordination affects the time value of the project and the choice of inputs/skills employed. At any point of the production process, vertical integration implies that the lack of a specific input or skill may hold the entire project. Again, large international projects and the time value of an international investment may be more significantly affected by this property than national ones.

Finally, Caves’s seventh feature is the durability of a creative product. This so-called “ars longa” principle depends on the protection of intellectual property rights beyond the present time of creative work. As we will see later, this property has important implications for the theoretical modelling of international trade in creative goods and services. For example, digitalisation allows the transformation of some creative goods from tangible to intangible, significantly reducing transportation costs, or from goods into services, such as the streaming of movies and songs. Such transformation, however, depends on the legal protection offered to the blueprint. Since national legislations typically grant different lengths and strength of IPR protection to different creative work, the international trade of creative goods and services can be significantly affected by international regulatory alignment. National and international legal systems need to keep step with (rapid) technological development. Also, the market structure of platforms raises several concerns about the fairness, and efficiency of revenue distribution between the platforms, the creator, the producer and the distributor, which can be exacerbated at the international level

(for accounts on the economics of platforms, see, among others, Belleflamme and Peitz, forthcoming, and Jullien and Sand-Zantman, 2020).⁴

2.2 Symbolic vs Commercial Value and IPRs

Among the above features, *art for art's sake* and *ars longa* highlight how creative goods and services can have both symbolic and commercial value. The creative expression of the creator may result in goods and services of purely symbolic value or of symbolic value beyond commercial value. The cultural and creative *industries* produce and distribute such goods and services mostly out of commercial interest. The two can be in tension and, indeed, Caves's principle of infinite variety underlines how not all creative expressions end in creative realisations. MacMillan (2014) highlights how the Art. 4 of the 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions defines cultural activities, goods and services as the result of cultural expression. Hence, they are rooted in fundamental human rights that should be respected and promoted.

The alienability of IPRs allows the separation between the creator and what they have created, i.e. the owner of an IPR can be different from the creator. The coincidence or separation between creator and IPR owner can differ depending on the features of the industry. For example, it can depend on the extent to which production and distribution require cooperation between more than one creative skill or between creative and non-creative skills, i.e., the *motley crew*. In industries such as screen, music and live performance, the commercial exploitation of creative inputs strongly depends on the ability to commercialise and distribute outputs, which require the access to vast international networks. The resources needed to invest in these networks, and the economies of scale achieved, give monopoly power to the non-creative distribution part of the industry. MacMillan (2014) underlines how such market power in the hand of commercialisation can represent a threat to creators and cultural diversity and highlights the role of copyright law in addressing possible imbalances.

The international market structure of an industry and the legal protection of creativity have important implications for international trade.^{1F5} For example, the protection of

⁴ See also a series of blogs by Paul Belleflamme at <http://www.ipdigit.eu/2020/04/an-introduction-to-the-economics-of-platform-competition-part-1/>

⁵ Indeed, both the DCMS and WIPO refer to the creative industries as the "copyright industries". The DCMS definition, for example, refers clearly to IPRs as one of the key elements of the creative industries:

cultural diversity from the threat of foreign industries with large market power is also behind the inclusion of cultural clauses, such as “cultural exemptions” in trade agreements. The nature of the national and international IPR regime plays a critical role in determining the tradability and profitability of creative goods and services. The strength of the protection of IPRs and their international enforceability, via trade agreements and international treaties, are essential for all “copyright industries”. For example, the type of “exhaustion regime”, i.e., if an IPR terminates after the first sale of a product or not, is crucial for the treatment of parallel imports and therefore for the revenues and price discrimination strategies of industries like fashion or publishing. Another implication, as discussed by Throsby (1994, 1998) and Schulze (1999) is that the alienability of IPRs creates a number of international accounting issues, once the artist and the owner of the IPR are separated, making international trade statistics more difficult to gather. Moreover, given that more than one legal jurisdiction may be involved, it is more difficult in an international context to protect creative outputs. For this reason, IPRs are increasingly considered in trade and economic integration agreements. Trade may also occur outside conventional market channels, e.g., in the form of pure cultural exchange or legal and illegal peer-exchange, where non-economic and symbolic motivations prevail over the commercial ones.

Also, it is worthwhile remembering that creative goods and services can be identified not only as those outputs that are IPR-protected but also as those whose production relies on creative inputs. For example, the definition promoted by UNCTAD emphasises creativity and intellectual capital as the key inputs of the sector and, at the same time, extends coverage also to the distribution of creative goods and services.⁶ Whether one refers to just outputs or inputs, the territorial nature of IPRs makes their protection challenging at the international level. While countries pursue further protection in international law, there are severe problems with enforceability. As we will see later, in specific industries, firms choose their internationalisation strategies by also taking into account the strength of IPR protection in destination markets.

“those activities which have their origin in individual creativity, skill and talent, with a potential for job and wealth creation through the generation and exploitation of intellectual property”. This is further emphasised in the Creative Sector deal of the Industrial Strategy, where strengthening IPRs is one of the key objectives.

⁶ UNCTAD: *“the sector of the production and distribution of goods and services for which the main production factor is creativity and intellectual capital”*

2.3 Uniqueness vs Reproducibility, Market Structure and International Trade

Schulze (1999) discusses trade in cultural goods and, in particular in the fine arts, distinguishing between *performing art*, *unique art* and *reproducible art*. These art forms differ in terms of durability, production technology and uniqueness, which in turn depend on their “quality” and IPR protection. Across the three art forms, economies of scale and demand can be very different with implications for their patterns of international trade. Since unique goods are by definition produced only once, they cannot be subject to scale economies. Schulze (2020) further discusses how their durability means that these goods can be a store of value and exchanged in what are now extensive international secondary markets. These markets are purely between consumers, i.e., are demand-driven, and excess demand means that the value of unique goods increases over time. Both primary and secondary markets for fine art are typically heavily nationally and internationally regulated to avoid the loss of precious national artefacts.

However, international trade in unique goods also exists in other forms outside primary and secondary markets. Galleries, libraries, and museums perform several services that can be international, such as lending artefacts to institutions in other jurisdictions. Exhibitions rely on visits by international tourists, which, as will be seen later, can be classed as international trade in services.⁷ Revenues increasingly depend on the offer of ancillary products and services (e.g., gadgets or consultancy services rendered to external organisations). Also, their trade has dramatically been affected by digitalisation over the last decades with an increasingly blurry distinction between real and “virtual life” (Giannini and Bowen, 2019). An example of such digital transformation is museum web portals such as Europeana or Google Arts and Culture, which raise their own interesting questions about IPR (Purday, 2010; Bellini et al., 2015). Several museums around the world have developed e-services and placed content online in what can be considered as virtual walks, or “screen walks”, a phenomenon boosted by the recent COVID-19 pandemic (Pennisi, 2020). These transformations create opportunities for unique cultural goods to become reproducible services, in the process opening up entirely new international scenarios.

⁷ It is well-known, for example, the impact that the Guggenheim Museum has had on the city of Bilbao (see Plaza, 2006, for a discussion)

While Schulze (1999, 2020) concentrates on the fine arts, some other creative goods and services can also be unique. For example, high-end luxury and fashion products, which heavily incorporate design as an input, can also be unique and generate secondary markets. Some architectural services, advertising campaigns and fashion products can also be so tailored that they are unique and not reproducible. They do not however generate the kinds of secondary markets discussed above.

Differently from unique goods, reproducible goods need both the creation of an original and its reproduction. A key distinction therefore is that they are already subject to economies of scale in their primary markets. The market structure and international trade of reproducible goods will depend on the costs of creating a new variety (innovation), the legal protection given to the blueprint in national and international law, and the economies of scale in production and distribution. For some creations, the fixed costs of production and distribution can be very high (e.g. blockbuster movies). For others, it can be relatively low (e.g., independent movies or music albums, podcasts, et cetera). Reproducibility will affect economies of scale and the ability of and benefits to a firm from entering international markets.

The demand for unique and reproducible goods to different extents are, however, also affected by the infinite variety principle. This is because the degree of substitutability across different varieties determines the price elasticity of demand for a specific variety. Even in the case of unique goods, this principle matters and can be a driver of price increases or decreases. More significant differentiation between varieties (quality innovations) confers on the creator, the owner of an artefact in the secondary market, the producer or the distributor of a reproducible good or service the ability to affect the price of their product.

As mentioned above, according to Caves, the infinite varieties of creative expression can make products so similar that the consumer may not be able to decide between alternatives. However, production may involve large fixed and sunk costs so that much fewer realizations are actually possible. On one side, open borders mean that the number of varieties available to the consumer expands to include foreign varieties, hence increasing the competition between varieties and reducing monopoly power. On the other, if international trade also offers economies of scale, as it is the case for reproducible goods, it may favour the rise of a few large players in the world.

More generally, the power of the producer or distributor may increase or decrease depending on several factors. These can include the fixed costs involved in the production of an original, the costs of accessing international markets, the economies of scale in production and distribution, and the strength of legal protection over the original. As will be seen later, the need for large distribution networks helps explain the concentration of sectors like music and movies in the hands of a few multinational companies.

At the same time, it will be interesting to observe how technological progress, digitalisation, the fast development of content aggregators and platforms, and their legal frameworks, will affect the creative industries in the years to come.

2.4 Goods vs Services and Tangibles vs Intangibles

Creative goods and services can be significantly different in terms of their composition and tradability. International economists make a substantial distinction between traded and non-traded goods, with services traditionally considered as non-tradable. This assumption descends from the so-called *joint production requirement* that services typically have to be produced and consumed in the same place. Traditional trade theories have, therefore, focused on manufactured goods as tradable goods. However, a considerable and increasing portion of international trade is now in services, including that in the creative industries (see Di Novo, Fazio, Vermeulen, 2020). For this reason, we later devote a section of this paper to service trade.

Creative goods and services can enter international trade in several ways. They can be directly exported, just like any other non-creative good or service, from businesses to consumers (B2C) or other businesses abroad (B2B). While creative goods are usually shipped, creative services are directly exported under one of the four exports modes identified by the World Trade Organisation under the General Agreement of Trade in Services or GATS (again, see later). Creative goods and services are also “indirectly” exported, if they enter as inputs into other national industries that export to final foreign consumers, foreign affiliates or foreign businesses as part of Global Value Chains (GVCs).⁸

Creative goods and services can also enter the export market as complements to other goods or services. For example, software or games are usually sold with support

⁸ See Coe (2015) for a discussion on global production networks in the creative industries.

and updates; in publishing, e-books can come with optional audio-narration, instructional books with dedicated web resources, DVDs with additional video streaming features.

The distinction between goods and services is increasingly difficult, also due to the increasingly tricky separation between the tangible and intangible aspects of creative work, as extensively discussed by Haskel and Westlake (2017). Such distinctions (goods vs services and tangible vs intangible) make the identification and monetary quantification of creative trade quite problematic, especially with the present boom in e-trade. The pioneering contribution in the field is due to Hill (1999), who argues that the above dichotomies are outdated. Technological advances make intangibles increasingly important and continuously generate new classes or formats of intangible products which are *“recorded and stored on media such as paper, films, tapes or disk”*.

Hill underlines how these should not be treated as services and suggests instead the taxonomy of tangible goods, intangible goods and services (which should not be considered intangible). As mentioned above, the key distinction between goods and services lies in the required joint presence of the producer and the consumer (see the section on trade in services for further discussion). His distinction is particularly relevant for creative goods that he describes as intangible entities *“...which have all the economic characteristics of goods. They are the originals created by authors, composers, scientists, architects, engineers, designers, software writers, film studios, orchestras, and so on. These originals are intangibles that have no physical dimensions or spatial co-ordinates of their own and have to be recorded and stored on physical media such as paper, films, tapes or disks. They can be transmitted electronically”* (Hill, 1999, p. 427). Once ownership rights (IPRs) are established, these can be traded and can be used to mass-produce and distribute copies. This critical feature implies that these intangibles, repeatedly used in the production process, should be considered for accounting purposes along the lines of fixed capital.⁹

Expanding on the key distinction between goods and services, Hill (1999) argues that the latter's production requires an *“agreement, co-operation and possibly active participation”* of consumers, meaning, a service is not a separate entity – it *“consists*

⁹ Again, see Haskel and Westlake (2017) for a discussion of how intangibles challenge conventional accounting principles.

of some kind of improvement to an existing entity" (Hill, 1999, p. 428) and it cannot be stored. The distinction between intangible and tangible goods lies in the fact that the former are "additions to knowledge and new information of all kinds and also new creations of an artistic or literary nature" (Hill, 1999, p. 438). As such, in his taxonomy, originals like a new book, a new song or a new software programme represent intangible goods. Originals are non-rival (i.e., their consumption or use in one production line does not limit the consumption by another or use in another production line) and represent a durable good or fixed asset, subject to depreciation. However, they are excludable to the extent that it is possible to protect the right of owners, usually via IPR legislation.

Finally, concerning trade, Hill argues that *"It is not possible, for example, to produce services in one country and subsequently export them to another country in the way that automobiles or computers can be produced in one part of the world and transported to other parts. Services can be, and are, exported, but only by resident producers providing the services directly to non-resident consumers. This imposes a major constraint on international trade in services."* Hill (1999, 442).

This constraint is, however, nowadays often overcome, challenging the above taxonomy, especially given the complex nature of several types of creative goods and services. Digitisation, among other things, allows further transformations, making international and temporal data comparisons difficult. For example, digitisation allows the streaming of digital products, technically conferring them characteristics of services rather than goods.

Concerning these issues, Eaton and Kortum (2019) emphasise the distinction between goods and services along the lines of Hill (1999) and especially the role of intangibles. In their view, IPRs represent intangibles and should be treated similarly to "stocks" or assets. They argue that - once creativity is treated as embedded in a product and recognised as an intangible - its modelling in international trade should be different.¹⁰

Technological advances and digitalisation more generally challenge traditional modes of production, consumption and export. Waldfogel (2017) discusses how sectors like music, movies, books and television have been significantly affected by this process. On the one hand, digitalisation has raised concerns about revenues, as

¹⁰ Haskel and Westlake (2017) provide an extensive discussion of the specific features of intangibles and how they affect the economy and intangible-rich firms.

it makes these goods more prone to illicit trade and piracy but, on the other hand, it has made trade easier through lowering the costs of delivering these products to market. Digitalisation has reshaped the way many of the sub-sectors of the creative industries churn new varieties. According to Waldfogel (2017), for example, the above shifts have, on balance, increased the availability of new products for consumers.¹¹

3. Trade theories and creative trade

This section provides a brief overview of international trade theories to assess how fit they are to understand creative trade patterns. International trade theory has dramatically evolved from the classic comparative advantage theory of David Ricardo (Ricardo, 1789) to the neoclassic relative factor abundance approach of Heckscher and Ohlin, the new trade theories of Krugman (1979, 1980) and the more recent firm-level heterogeneity models beginning with Melitz (2003).

3.1 Classical, neoclassical trade and intra-industry trade

Classical and neoclassical trade theories locate the roots of trade patterns in the relative differences in productivity, input availability and preferences between countries. These theories generally consider goods to be homogeneous and output and input markets as perfectly competitive.¹²

Relying solely on productivity differences to explain the patterns of creative trade poses some challenges. On the one hand, the definition and measurement of productivity in the creative process is itself the subject of extensive debate, and it may be challenging to pin trade patterns on differences in creative productivity. On the other hand, bringing creative goods and services to the market also requires non-creative skills which can see large productivity differences across countries. Together with the separation between symbolic and commercial value, the mix of creative and non-creative skills means that some countries and some sectors may be better suited to exploit creativity commercially. Similarly, the strict application of the resource-

¹¹ The intangible-intensity and digitalisation of creative goods and services, creates challenges for statistics and accounting standards. The rise of intangibles challenges national and international accounting principles. In international standards, intangibles are usually treated according to international balance of payments standards as set out in International Monetary Fund (2009). Market digitalisation, disproportionately affecting the creative industries, has made the quantification of this kind of trade particularly difficult, so that it may not be well-reflected in official statistics (see OECD, 2019). For a discussion of trade statistics see, also, Maioli et al. (forthcoming)

¹² In the case of classic trade theory, only the labour input is considered.

based views of international trade can be difficult, since creativity, as discussed above, is an intangible. However, a country may be better able to accumulate “creative capital”, potentially becoming more specialised in creative goods and services, as a result of the ability to nurture and attract creative talent. This in turn depends on the presence of other “resources”, such as formal and informal institutions in society, e.g., better education, IPR regime, democratic institutions, social capital, cultural diversity, and immigration policies.

Even without resorting to differences in creative productivity or resources, differences in preferences can explain creative specialisation and exchange. Such differences, which are deeply rooted in the national culture, can be the source of both the expansion of creative trade and the persistence of so-called home bias effects in cultural consumption, or “cultural discount” – the tendency for excess consumption of locally produced cultural goods and services relative to what might otherwise be predicted according to traditional trade theories. Evidence by Ferreira and Waldfogel (2013), for example, suggests that, despite widespread concerns, globalisation has not reduced home consumption in the music industry.

Other issues make the above models only partial explanations of creative trade. For example, IPR protection confers rights owners a temporary monopoly over creative goods and services, making the assumption of perfect competition in the market for creative work untenable. Similarly, as mentioned above, for creative industries such as music and film, production and distribution tend to concentrate in the hands of a few players. Beyond such market imperfections, the above models, at least in their baseline specifications, do not consider several important features of creative trade, such as asymmetric information, trade frictions, trade policy and trade agreements, and cultural and institutional differences. Fundamentally, while more recent trade models incorporate many of these features, the issue remains that creative goods and services are, by their nature, non-homogeneous.

Empirical evidence confirms these limitations. Indeed, contrary to the principle of comparative advantage, much trade takes place in similar but not identical products and between countries that are similar and not different. Di Novo, Fazio and Vermeulen (2020) show how this phenomenon - known as Intra-Industry Trade (IIT) – is also strongly present in the UK's creative industries. The evidence on IIT has led to the

development of new trade theories starting from the seminal work of Krugman (1979, 1980).

These theories introduce features, both on the consumption and the production sides of the economy, that are relevant for creative trade. On the supply side, firms produce differentiated products. The existence of large, fixed costs of production implies that no single firm or one country can make the investment to produce all varieties. The fixed costs act as a barrier to entry and imply that the firm is a monopolist and enjoys market power. However, markets are contestable, and the entry of new varieties drives profits towards zero. For reproducible work, the fixed costs allow economies of scale, increasing returns to scale in production and market power. However, the strength of these phenomena depends significantly on substitutability across varieties.

The above features are highly relevant for modelling creative trade. As already mentioned, each creative good or service is a new variety, whose value will depend among the other things on its novelty compared with alternatives. However, for the creative industries, beyond the fixed costs, the presence of an IPR is probably the main barrier to entry, giving monopolistic power to the creator or the owner of the right. The territorial nature of IPRs means that their protection can vary significantly across nations with implications for international trade, especially in goods or services easily reproduced. We will see some examples later when discussing some specific sectors.

On the demand side, IIT models assume that consumers love variety: they prefer more varieties of similar but not identical products. This feature is critical to understanding the positive welfare implications of trade liberalisation, as it allows an expansion of the varieties available to national consumers. Again, the significance of this factor may differ across creative sectors. Schulze (1999, 2020) argues that consumers are characterised by “addiction” in consumption (along the lines of Stigler and Becker, 1977). So, he argues, while new trade theories based on monopoly and economies of scale can be a possible explanation for reproducible art, they are not suitable for unique art for which demand-side considerations are more important and the trade is demand-driven, characterised by significant hysteresis in consumption due to the addiction, and linked to international cultural similarity, e.g., embedded in proximity and language. As it will be discussed later, Schulze (1999) provides empirical evidence in this sense using a simple gravity model of trade in cultural goods.

In the case of reproducible art, in contrast, economies of scale play a particularly important role. They can operate at the product, firm, local/regional, national or international levels. For example, in the movie industry, economies of scale matter at the product level (high costs of production and small marginal costs of distribution), but also at the country level (internal market size allows the scale to access foreign markets later). Given that they are subject to the above-mentioned cultural discount, economies of scale apply nationally and depend on the size of the country. As a consequence, these industries tend to locate in the largest country, which becomes globally dominant (Frank, 1992). Economies of scale can also be localised and arise from agglomeration forces, such as labour market pooling, a phenomenon typical of the movie and music industry when we consider the “motley crew” and “time flies” effects of workers employed on a project basis (Schulze, 1999). The role of these effects in shaping international trade requires further investigation.

IIT can be the result of horizontal trade between the producers of a variety in one country with consumers in another country. However, it can also be the result of vertical trade, resulting from the localisation of parts of the supply chain in different countries. Unfortunately, we know little as to what extent creative IIT is horizontal, and hence more related to differences in preferences for cultural or creative varieties, or vertical, due to the participation of creative industries in local and global value chains. Preliminary evidence by Di Novo, Fazio and Vermeulen (2020) for the UK on DCMS data shows that there is a great deal of IIT in the creative industries. Looking at data from the World Input-Output Database, covering trade in value added for several sectors of the economy, they find that, for some UK creative sectors, most value of exports is produced domestically in the UK. Future research will need to address this feature of trade in the creative industries.

While the above models have features that are useful to explain creative trade, they still assume that firms are identical. Extensive empirical evidence, however, shows that firms are heterogeneous, especially in terms of their participation in international trade, as discussed in the next sub-section.

3.2 Trade models based on firm heterogeneity

As discussed above, creative goods and services have specific features that make them different from non-creative ones when it comes to international trade. However,

there are next to no published studies on the characteristics of exporting firms in the creative industries.

To highlight the importance of firm-heterogeneity, we can start from the well-established evidence for manufacturing firms. For this sector, the availability of micro-level data since the 1980s has given rise to empirical evidence that shows that firms greatly vary in terms of performance. Concerning exporting, for example, it is now well-documented that exporting firms have higher productivity, wages, and size. So for the US, the pioneering study by Bernard and Jensen (1995) shows that exporting manufacturing firms enjoy an “export premium”: they are larger and more productive than non-exporting firms. Bernard and Jensen (1999) further show that better performance pre-dates exporting, rather than the other way around, i.e. that firms self-select into trading. Bernard, Eaton, Jensen and Kortum (2003) estimate that one standard deviation above the mean exporting firms are 167% larger (in terms of plant size) and 75% more productive. While there are differences across sectors, after accounting for these, international firms are still 66% more productive. According to Bernard, Jensen, Redding and Schott (2006), exporting plants are twice the size and 14% more productive than non-exporting plants, they are more capital intensive and pay higher wages than non-exporting ones.

The question still not fully resolved is whether it is access to foreign markets that makes firms ‘better’ (e.g. more productive) via “learning by exporting”, or whether only the ‘fittest’ national firms self-select into trade, as suggested by Bernard and Jensen (1999). Settling this issue is as difficult as it is essential for policymakers charged with developing export promotion strategies. First, controlling for self-selection into trade of the most productive firms is inherently challenging. Second, the relationship between exporting and productivity is endogenous: firms’ decisions relating to technological, process or product quality innovation depend on the decision to export. Third, there appear to be differences between countries. For example, while most studies reject the “learning by exporting” hypothesis in industrialised countries, there is mixed evidence for developing and less developed nations (Clerides et al., 1998, Atkin et al., 2017, Siba and Gebreeyesus, 2017).

As discussed by Atkin et al. (2017), it is difficult to pin down improvements in performance to simple movements along the Production Possibility Frontier (PPF) or actual expansions of the PPF owing to learning by exporting. This identification is

complicated by the lack of information on within-firm changes in mark-ups, product mix and product quality that can be induced by exporting. To address this identification problem, Atkin et al. (2017) conduct a randomised controlled experiment on rug producers in Egypt and identify the causal impact of exporting on firm performance (higher profits, quality improvements and lower output per hour). The authors attribute these effects not to higher margins in exchange for better quality, but to the production of more time-consuming high-quality products and find that learning by exporting improves the technical efficiency of firms not just towards exporting but also towards domestic production. Importantly, they show that these effects are due to knowledge transfer from foreign buyers via intermediaries. It is interesting to note how in this example of the garment industry, creativity of sorts plays a role: firms tend to respond to trade exposure with improved efficiency and new varieties.

Evidence on the impacts of trade liberalisation also shows that these create reallocations between less productive non-exporters and more productive exporters in the same sectors. Again, as pointed by Melitz (2008), it is challenging to separate out the effects of trade liberalisation from the effects of macroeconomic policies. According to Bernard, Jensen and Schott (2006), however, a reduction in trade costs for US firms leads to an increase in average industry productivity as a result of these reallocations.

The main message from the above literature is the need to overcome the notion of "representative firm" and the need to instead develop models that incorporate firm heterogeneity in productivity (and other firm level features). The theoretical literature has responded with two main classes of models. The first is a set of multi-country Ricardian models due to Bernard et al. (2003) and Eaton and Kortum (2010) where firms compete using different technologies to produce the same number of fixed goods and trade costs allow the survival of firms in different countries. The second set of models, originating from Melitz (2003), extends the IIT framework of Krugman (1979, 1980) with monopolistic competition and product variety and introduces firms' heterogeneity, in line with the empirical evidence. The number of varieties produced varies endogenously with the characteristics of the country and the size of the trade costs. Since firms face sunk costs of entry into the market and uncertainty, they need to have a certain level of productivity in order to trade internationally. If not, they either remain domestic or exit the market altogether.

The above models share some common features. In particular, both predict that trade liberalisation increases aggregate productivity and welfare and that trade patterns depend on trade intensity and trade participation. Hence, it is essential to consider both changes at the intensive and at the extensive margin in empirical models of trade, i.e., the size of trade flows and the extent of participation in trade by local firms.

While such models have merits also when considering creative firms compared with the models previously reviewed, important caveats still apply. The assumption that producers compete for the production of the same homogeneous good does not make the multi-country Ricardian models particularly suited to the creative industries, where the “creative” nature of goods and services implies product differentiation. Each movie, TV or radio programme, song, craft, advert, or book is first placed in the market by default as “new” and competes with similar, but not identical, varieties. At the same time, the presence of fixed costs of production together with the protection of an intellectual property right implies that each good or service is exchanged under some degree of monopolistic competition. In this sense, models in the Melitz tradition are more appropriate as they consider the production of different varieties.

Also consistent with this, Hanson and Xiang (2011) propose a multi-product firms’ model for the movie industry along the lines of Bernard et al. (2011). The authors use this approach to investigate the behaviour of the largest Hollywood studios, who often exploit considerable economies of scale on a global level and are also able to differentiate movies over time, given the relatively short lifespan of a movie.

The literature also emphasises the importance of entry costs in shaping international exposure. Lincoln et al. (2018) look at the expansion of US manufacturing firms across the world in terms of trade participation or the extensive margin of trade. Using US Production Census data for the period 1987-2006, they argue that the expansion of the extensive margin has mainly been due to advances in technology, trade agreements and foreign income growth, rather than a reduction in the foreign market entry barriers or sunk costs.

For manufacturing, the firm heterogeneity framework is used to model other international decisions by firms, such as Foreign Direct Investment (horizontal or vertical). Helpman, Melitz, Yeaple (2004), for example, consider the choice of exporting versus horizontal FDI, i.e., to invest in a foreign production facility in order to serve the foreign market as opposed to servicing the same market from the domestic

economy. Firms face the so-called “proximity-concentration trade-off” between incurring the trade costs and maintaining the capacity to service foreign markets.

Again, of the firms serving foreign markets, only the most productive should be expected to engage in FDI. The ratio of FDI sales to exports is higher in sectors with more firm heterogeneity. Firms tend to substitute FDI sales for exports when transport costs are high, and plant-level returns to scale are small. The variables that are heterogeneous across firms also have an impact on the solution to the proximity-concentration trade-off.

Firm heterogeneity, productivity, product differentiation, internal and external (national and international) barriers to trade, and the FDI-trade nexus are all crucial also for the creative industries, but unfortunately have been unexplored in the literature, except for some specific sectors such as audio-visual. Some of the predictions for manufacturing may not equally hold for creative firms and must therefore be investigated. The creative industries have their own features which warrant investigation. For example, what are the implications of creative industries' size distribution of firms? There is strong anecdotal and preliminary evidence that the distribution of creative firms has a long tail of micro and nano firms, who nonetheless are open and international (Di Novo, Fazio and Vermeulen, 2020). Intuitively, given their smaller size, competitive output markets and the intangible nature of their assets, these firms may struggle to access regular finance, grow, and export. Legislation, specifically on IPRs, for example, and trade and investment restrictions, represent a challenge for many creative sectors and firms, especially those that are more service-oriented.

At the sub-sectoral level there also international barriers. For example, Architectural services require recognition of professional qualifications and access to procurement opportunities. Advertising, Audio-visual and Broadcasting face cultural restrictions and quotas (as discussed more extensively below). All sub-sectors face restrictions to short and long-term people mobility, but music and live performance may be relatively more affected than others given that their reliance on international tours. In these areas, international agreements that cover these areas are essential. In their absence, establishing a local presence may be required to bypass such barriers and service a foreign market, but investment treaties or cultural cooperation agreement may still help. International trade agreements vary significantly in terms of depth and areas

covered. Deep trade agreements are especially important for the service-intensive creative sub-sectors.

There is some evidence on the determinants of cultural trade at the sectoral or product level but, unfortunately, there is next to no empirical evidence on the exporting behaviour of creative firms. Similarly, there is some evidence on the barriers to trade for specific sub-sectors, but this is inadequate given their importance in trade. More knowledge is needed on the relevance of specific trade barriers in preparation for new trade agreements.

Given the service-intensive nature of creative trade, in the next section, we look specifically at the issues related to trade in services both generally and specifically for the case of creative trade.

4. Trade in Services and creative trade

Traditionally, trade theory has ignored services, regarding them as non-tradable. The difficulty in obtaining reliable data has hindered empirical evidence. Over time, however, services have become increasingly traded to the point that they now represent a large part of world trade. As mentioned above, this also holds for the creative industries and creative trade. Di Novo, Fazio and Vermeulen (2020) show the strength and pervasiveness of creative services trade in the UK.

Internationally, since 1995, services trade is regulated under the World Trade Organisation (WTO) by the General Agreement on Trade in Services (GATS) that identifies four modes of international services supply:

1. Cross border trade, i.e. a service is produced in one country and sold for consumption abroad. While this type of trade is standard for goods, it is considerably more difficult for services, which require the joint presence of the producer and the consumer. Under mode 1, this joint presence is not physical but contemporaneous in time. The expansion of digital consumption and streaming pertains to this mode of trade.

2. Consumption abroad, i.e. the consumers of one country move to another country in order to consume a service. This type of trade crucially depends on the ease of mobility. International tourism is a typical example, but closer to the creative

industries are those of live performance events, often attracting sizeable flows of international consumers.¹³

3. The commercial presence by a national producer in another country to supply services to their consumers. Under this GATS mode, trade depends on the ability of domestic firms to invest in foreign countries and establish affiliate companies. Therefore, issues such as limitations to business access, workers' visas and the ease of doing business in the recipient country can significantly affect trade under mode 3. Mode 3 of trade in services is also difficult to estimate as it requires information on companies' transactions. As an example, international advertising companies have thousands of employees with headquarters in the major cities across the world, such as London, New York, Paris, Tokyo, and additional offices spread across several countries.¹⁴

4. The provision of services by natural persons present in a foreign country, i.e., citizens of one country move to another country in order to supply a service in that country. Typically, these services are provided by teachers, doctors or, in the case of the creative industries, by musicians, artists and freelancers. Under GATS, countries maintain the freedom to set policies regarding access to residence, citizenship, employment of these persons. Of all trade modes, this is the most deeply intertwined with the movement of people. We know that the creative industries, in general, are very reliant on freelancers and many of these are internationally based or supply services internationally. Ease of movement, at least temporarily, becomes essential for the provision of certain creative services in particular, as it is evident if we consider the importance of tours to promote music and generate income.

4.1 Models of trade in services and creative services trade

Given its complexity and rising importance, services trade has received particular attention in recent international trade theory. Deardorff (1995) is the first to ask whether standard comparative advantage applies to trade in services. The problem, he argues, is that there is no definitive agreement on the difference between goods and services from the economic standpoint, rather than a semantic one. While goods and services have several differentiating features, not all of these are relevant from

¹³ Vermeulen, Di Novo and Fazio (2020) also discuss the role of international students in the creative disciplines.

¹⁴ See <https://www.worldatlas.com/articles/the-largest-advertising-companies-in-the-world.html>

the perspective of the principle of comparative advantage. Deardorff proposes an approach to establish which features are essential in terms of the principle of comparative advantage. These can also be valid when considering creative trade.

He looks at three specific characteristics of services and their implications for the comparative advantage principle. The first is that services trade can occur as a by-product of trade in goods (i.e. trade in services complementary to trade in goods). Second, it can be underpinned by international factor movements (i.e. the trade occurring under GATS mode 3). Finally, it can happen “with absent factors” (i.e. factors of production that are not present in the destination country).

Deardorff argues that while the first two characteristics do not imply violations of the principle of comparative advantage, the third can potentially violate it or, at least, cause some loss of generality of the principle. However, he makes the point that every specific feature of services should be put to the test of modelling in order to understand its implications for existing trade theories. The issue is that in the case of services production and consumption have to be simultaneous, i.e. the already mentioned joint production requirement, which makes trade in services more complicated. Under mode 3, firms can solve this problem by setting up foreign operations. These international companies do not source all factors of production from the destination country where some factors of production are absent. These “absent” factors are exported from the home country instead. Deardorff discusses management as one such possible absent factor. In some cases, the most valuable asset of the company is its brand, also an immaterial factor of production, and this can also represent the absent factor.

While the above applies generally to all services, it is especially valid in the case of the creative services industries, which have features that are different from other services industries. While financial services or tourism are also characterised by sub-sectoral heterogeneity, creative services can encompass very different activities, from movie production and distribution to software consultancy or architectural services, with modes of exports that vary greatly. Also, creative services can be a by-product of or a complement to creative goods posing sector-specific challenges.

While framed in the context of models with simplistic assumptions in terms of market structure and the functioning of multinationals, the considerations by Deardorff (1985) can lead to consider creativity as an “absent” exported factor. In the case of the

creative industries, creativity could be conceived as the absent factor of production in the destination country, driving the patterns of investment and services trade. If creative functions remain in the headquarters, they are exported through the affiliates in the foreign economy. In a recent paper, Eaton and Kortum (2019) (EK) look closely at the differences between trade in goods and trade in services, reviewing the challenges they pose in terms of measurement and discussing the implications for general equilibrium modelling. They argue that while GATS modes 1, 2 and 4 can be considered and treated similarly to the trade of goods (in terms of joint production requirement and rivalry of consumption), mode 3 introduces some different challenges. Specifically, mode 3 allows for both a mismatch in time (consumption can occur in a time different from production) and in space (the product can be consumed or used as an intermediate in different places at the same times, making exports non-rival). EK develop their model following Hill (1999). However, while Hill defines the “originals” as intangible goods, EK refers to them as “intangible services”. This distinction is critical since, while the former type is subject to rivalry, the second are non-rival. Also, they should be considered as assets (Note that while also Hill classes these as assets, he argues at length that they should be called intangible goods).

EK illustrate this distinction using an example that is specific to the creative industries, i.e., Netflix streaming the movie *The Big Sleep*. The rights to the movie (an intangible asset, whose revenues accrue to the copyright owner) become a tangible service export (whose revenues accrue to Netflix) once streamed internationally. EK also highlight the accounting complications involved in measuring these intangibles, which have recently begun to be treated along the lines of physical capital investment by national statistical agencies. However, the critical distinction between physical and intangible capital lies in the fact that the latter is non-rival. EK (2019) explain how this creates modelling problems, as non-rivalry implies that intangibles cannot be considered as a compensated factor of production in a growth account, but rather as part of the residual.

In their data analysis, they uncover patterns of specialisation that see countries like the US and the UK specialising in services and Germany, China and Japan specialising in goods. They find that similar geographical forces drive trade in goods and trade in services, a point further discussed below. They develop a model with three sectors and three factors of production (tangible services, tangible goods and intangibles) to explain these results where the first two are rival, and the third is non-rival and

characterised by imperfect competition, with a mark-up due to the introduction of royalties on intangibles. In their numerical simulations, they find welfare-enhancing effects of greater diffusion of ideas for all countries, with possible redistribution effects in terms of wages in some countries.

This model is attractive because, while designed to consider innovation and patents, it can accommodate goods or services protected by IPRs. As such, it is the closest to incorporating a general feature of creative industries into a general equilibrium framework. EK, interestingly, notes the need for new data in order to fill the gap between theory and evidence in this area and *“the availability of data on services trade has improved dramatically in the last few years, but separating its tangible and intangible components remains a daunting challenge. Overcoming that challenge is essential to understanding the role of creativity in driving growth in the world economy”* (EK, p. 111-112)

4.2 The tradability of (creative) services

As already mentioned, in the traditional interpretation, services are considered as non-traded. While making a large portion of national GDP, they have in the past represented a small portion of foreign receipts. This has dramatically changed over time, driven by changes in technology and the increase in international economic integration. The fear of offshoring and international competition for developed countries by developing countries has attracted great interest in this topic, prompting a spur of studies.

While trade in services is, in theory, weightless, several papers have shown that geographical forces still drive it. The tradability of services may also considerably differ across sub-sectors. Jensen and Kletzer (2005, 2010) aim to identify which services are more susceptible to offshorability and, hence, understand their tradability. They suggest that since nontraded services should not be concentrated, concentration can be taken as a measure of tradability. They propose sectoral employment concentration, measured using the Ellison and Glaeser (1999) index and Gini index to measure economic concentration and, hence, the tradability of a sector.¹⁵ In line with

¹⁵ The Ellison and Glaeser index is a measure of concentration that compares a region share of employment in a sector with the area share of employment. Jensen and Kletzer (2006) modify the index to compare the share of sectoral employment in an area with the demand for that sector in the same area. The Gini Index is a commonly used measure of inequality. Please refer to Jensen and Kletzer (2006) for greater detail.

this, they find that more concentrated sectors produce more tradable services, and more dispersed sectors produce less tradable services. While they develop this framework for national data, they also consider that services that are nationally tradable may also be tradable internationally. They use this approach to classify industries and occupations in terms of tradability vs non-tradability. Some of the industries considered are also creative and belong to the most tradable category (in their 2-digits sectoral NAICS sectoral classification, "Motion Pictures and Video Industries", "Sound Recording", "Software Publishing"). They also calculate concentration measures based on occupations using two-digit Standard Occupational Codes (SOCs), where "Computer and Mathematical Occupations", "Architecture and Engineering" and "Art, Design and Entertainment" are among the highly tradable.

Other studies use the gravity model in order to estimate the determinants of trade in services. Lejour and Verheijden (2007) compare estimates of gravity models for ten disaggregated service sectors for Canadian provinces (i.e., within a country) and the European Union (i.e., across countries). Unfortunately, their disaggregation does not allow inference on the creative industries, except for a portion of firms that might fall under the "Communication Services" category. They find that while standard gravity variables, such as distance or market size, still play an essential role, the effect is smaller in magnitude than in the case of goods. They find that traded services are significantly affected by language and regulation barriers.

Anderson et al. (2014) look at the role of distance and border for ten categories of services trade between Canadian provinces and the USA and find that international service trade is negatively affected by geographical barriers to a greater extent than goods trade. In their classification, however, "Communication" is the only sector close to the creative industries.

Anderson et al. (2018) underline the opaqueness of trade costs in services compared with trade costs in goods and the associated difficulty in measuring trade in services. They propose a structural gravity model in order to project the missing data. They then estimate the model over OECD data for 28 countries and 12 services sectors, including some that can be loosely mapped to the creative industries: "Computer and information services", "Misc business/prof/tech services" (which includes architectural services), and "Audiovisual and related services". The objective is to estimate the

barriers to service trade (hence, their tradability). Interestingly, they find that barriers have fallen over time, but not in the same way across all sectors. For the above sectors, they find a statistically significant role of distance only at the 10% level, but highly significant negative border effect both between Canada and the US and between these countries and the rest of the world.

Gervais and Jensen (2019) suggest another approach to estimating the trade costs or tradability of services (and of goods). The main advantage of their approach is that it does not require service trade data, which is often missing and unreliable, but instead uses information on the regional distribution of production and consumption. The use of census data (for the US in their case) further potentially allows the calculation of tradability for a broad range of different industries, rather than aggregate categories. Unfortunately, however, they look at industry groups that do not correspond with the creative industries. The tradability of creative services, specifically across its sub-sectors, nationally and internationally, remains a major gap in the literature.

Other studies look more specifically at the role of regulation which we consider in the next sub-section.

4.3 Service trade restrictions and liberalisation

Beyond the specific features that explain their traditionally lower volumes of trade than in goods, services are very heavily regulated. Copeland and Mattoo (2008) discuss some of these issues. As discussed earlier, service trade happens via physical or electronic personal contact in the domestic country or via a foreign affiliate. Therefore, the volume of international trade in services directly relates to the volume of foreign investment and labour mobility. For example, in order to supply a service internationally, a UK advertising agency needs to either send (or receive) representatives or establish a physical presence abroad. Both modes of supply find several types of resistance, however. Even without legal impediment to the supply of that specific service, face-to-face contact requires an agreement on short-term business visas. Establishing a foreign presence requires a business licence that is typically subject to ownership limitations and visas for the parent company representatives. An architectural firm may face domestic procurement limitations or no recognition of professional qualifications and may have to establish an in-country

presence. Also, modern trade in services often requires the exchange of personal data, which is increasingly restricted by national data protection regulations.

While trade in services is over-burdened by regulation and non-tariff barriers, liberalisation can be trade and welfare-enhancing for the economy. Given their service-intensive nature and that many restrictions to creative services are artificial rather than physical, the logic is that liberalisation in the creative industries should significantly benefit the creative industries and the rest of the economy.

However, Egger et al. (2012) note that the effects of service trade liberalisation may be challenging to quantify. As we have heard, measuring services exports is hard, and services are not easily distinguishable from goods. Indeed, any liberalisation of services will also impact on goods. The authors estimate structural gravity equations using OECD data in a general equilibrium setting to estimate the impact of liberalisation of goods and services on welfare. Given the higher costs of trade in services, it is not surprising that they find trade in services to be more elastic to a reduction of barriers than the trade in goods. There are, however, interesting general equilibrium effects, as the liberalisation of services induces substitution effects between labour demand in services and manufacturing. Also, if several pairs of countries liberalise at the same time, there can be both trade creation and trade diversion. Overall, they find that liberalisation yields significant welfare effects on the economy with more substantial effects for goods than for services. On the issue of the effects of service trade liberalisation and trade, Guillin (2013) also finds that economic integration boosts trade mainly if it also includes service trade provisions.

Van del Marel and Sheperd (2013) use the dataset developed by Francois et al. (2009), later updated by Francois and Pindyuk (2013), and the Service Trade Restriction Indices developed by the OECD to look at the sector-disaggregated effect of regulation in a gravity model specification and find that these effects are heterogeneous.¹⁶ Again, unfortunately their analysis does not cover the creative industries, but some descriptive evidence on the strength of creative service trade restrictions is provided by Di Novo, Fazio and Vermeulen (2020). Investigating the effects of restrictions more specifically for the creative industries is an overdue exercise made difficult mainly by the availability of sub-sector specific trade restriction indices.

¹⁶ See also Gervais (2018) for the estimation of policy restrictions on service trade.

Substantial economic benefits can also arise from economic integration agreements that beyond goods industries also cover service industries. The more comprehensive the set of areas covered by an international agreement, the “deeper” it is. Muladbc et al. (2017) emphasise how international trade agreements have become deeper over time, covering issues beyond tariffs, such as regulation and policy in areas such as services, investment, competition, and intellectual property rights. They build a measure of depth using World Bank data on the content of 279 trade agreements for 44 policy areas (from standards to movements of capital and labour mobility) and employ a gravity model of World Input-Output Data of goods, services and value-added trade. They find that deeper economic integration agreements lead to more substantial trade benefits and integration into GVCs, increasing both forward and backward linkages. Both domestic value-added by domestic exporting firms and foreign value-added by foreign firms in the domestic economy go up.¹⁷

4.4 Firm-heterogeneity and services trade

At the micro-level, compared with manufacturing, much less is known about the characteristics of firms that engage in services trade, including exporting or importing creative businesses. International firms trading manufactured goods are typically larger, more productive, more capital intensive.

Do international service firms have the same features? Breinlich and Criscuolo (2011) present some stylised facts about UK service trade firms, using data from the Annual Respondents Database, the International Trade in Services Inquiry and the third Community Innovation Survey. Merging the three datasets allows them to obtain, for the sampled firms, information on services and goods exports and imports, skill intensity and other relevant firm-level characteristics. In terms of service type, they look at ten aggregates, which unfortunately mix creative firms with non-creative firms. For example, computer services likely fall under “Telecommunications” together with postal services; architectural services fall under “Technical Services” together with

¹⁷ Muladbc et al (2017) find that the EU is the deepest economic integration agreement in the world. This is likely a result of the combination of the Single Market not only in goods but also in services, as enhanced by the Single Market for services directive (Article 49, ex Article 43, TEC). This sets two main freedoms: the freedom for consumers to be served in the country of the service producer and the freedom for firms to establish presence in any member of the EU. Together with the freedom of movement of people, this reduces considerably the barriers to service trade under the 4 GATS modes. Even though the Single Market for Services is still far from being “single”, recent work by the OECD shows how intra-EU service trade restrictions are considerably smaller than outside the EU (Benz and Gonzalez, 2019).

mining services. It is, therefore, difficult from their study to draw inference specific to the creative industries. In general, they find that few firms engage in international trade in services, with trade participation varying across industries. In line with the literature on trade heterogeneity in manufacturing, they find that size, productivity and capital intensity differ between traders and non-traders. Other substantial differences pertain to the number of markets served, the value of exports/imports per market, and the importance of each individual market in the overall sales. Also, interestingly, the extensive and intensive margins of trade correlate with traditional gravity variables (e.g. negatively with distance).

Federico and Tosti (2017) use Italian firm-level data on trade in services from the Bank of Italy and report stylised facts for service trade importers and exporters and the extensive and intensive margin (volumes, number of countries, number of types of goods/services). They also look at the difference between trade and FDI in line with Helpman et al. (2004). Interestingly, they find that many international firms export and import and also engage with FDI. They then look at exports over the sum of exports and foreign affiliates sales (i.e., direct exports plus the provision of services through FDI) and find some degree of sectoral heterogeneity. A higher ratio indicates a higher propensity to export relative to FDI. This ratio is relatively high for “Architectural and engineering services” and “Computer services” and low for “Communication services” and “Audio-visual and related services”. The export share is smaller in more sizeable export destinations for sectors such as insurance and business services, but not for the others. Distance negatively affects trade in communication services and positively trade in financial services. Firm size and firm productivity negatively affect trade in services, except in the case of communication services. These results suggest that the mentioned proximity trade-off might depend on the specific type of service. The above studies are, unfortunately, only partially representative of the creative industries, and more sector-specific evidence is needed.

5. The Role of Intellectual Property Rights in International Trade

Intellectual Property Rights refer to the range of protections provided in the law to encourage and reward creative and/or distinctive work (e.g., copyright on books, paintings, live or recorded performances) or promote fair competition (e.g., industrial property, trademarks, distinctive signs, geographical indications, plant variety rights). IPRs are supposed to help provide the economic incentives needed to invest in Research & Development and encourage innovations and inventions (e.g. patents, industrial designs and trade secrets). Once a right is recognised, protection is applied for a defined period or until “distinctiveness” applies (except for trademarks and geographical indications). As discussed above, they are probably even more critical in the creative industries than in other sectors of the economy, as they are IPR-intensive and often referred to as the “copyright industries”.

5.1 Implications of IPRs for creative trade

The role of IPRs deserves a separate discussion in international trade modelling, especially for IPR-intensive goods and services. IPRs enable the alienability or commercialisation of the creator's rights. This function is critical for the trade exploitation of creations, but also the functioning of multinationals. However, it is also controversial, as discussed by Macmillan (2014), as it can create an asymmetry of power between the “creators” and the industry, limiting cultural expression, which as we have seen is a fundamental human right. Under the assumption that consumers desire variety, such asymmetry can also limit the number of varieties available to consumers and have implications for their welfare.

In neoclassic models of trade incorporating market imperfections, or in IIT models of manufacturing, the monopolistic structure arises from barriers to entry, such as the sunk investment costs. In the creative industries, the barrier is the fixed costs of innovation, or the value-added of creativity, while the cost of copies is relatively small. However, IPR-intensive industries also have legal entry barriers. The IPR regime gives right owners time exclusivity for a period fixed by law, or variable with the distinctiveness of the work. Again, the protection of IPRs is different across different sub-sectors.

Another critical characteristic of trade in IPR-intensive goods and services is the “territoriality” of IPRs, i.e., they only apply in their jurisdiction. It is, however, challenging to protect intangible rights. Imitation and piracy are not easily monitored and

sanctioned in national economies and even more so in an international context. As a consequence, international trade can be costly. IPR owners need to go through cumbersome and costly registration procedures to protect their rights under different legislations. Trade facilitation, therefore, often requires multilateral or bilateral agreements that incorporate IPR elements.

5.2 IPRs and International Agreements

Like any form of protection, by allowing monopolies, IPRs are not (statically) Pareto-efficient. Curtis (2012) recalls that, for this reason, some have argued that their introduction in international agreements creates an international imbalance since countries entering the agreements are often at different levels of development. For example, the development imbalance under the current international IPR regime could be responsible for international music royalties more abundantly accruing to more developed countries. However, weak IPRs can become a further barrier to trade. Future research should aim to look at this balance between these two different tensions to ensure a fair international trading system in the creative industries.

The WTO system regulates IPRs under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), introduced in the 1994-1996 Uruguay Round. These establish “*minimum standards of protection and enforcement that each government has to give to the intellectual property held by nationals of fellow WTO members.*” Hence, the TRIPS aim to help the international convergence of regulation needed in order to trade by providing a set of minimum standards for protection and enforcement of IPRs that each member should apply in their territory. International or regional agreements may apply beyond the provisions of the WTO. The EU, for example, is the “deepest” trade block, having achieved over the years through several Directives and institutions significant levels of integration between different national legislations.

Curtis (2012) highlights how the increase in international exchange, especially of knowledge-related goods and services, has been paralleled by many of the above-mentioned international changes in IPR law and policy, like the TRIPS, the Anti-Counterfeiting Trade Agreement (ACTA) or the OECD Codes of Conduct or guidelines. A lot of international transactions are further regulated outside international agreements either via private contracts or non-written norms.

An extensive literature investigates the importance of IPRs for international trade. Most of this literature relates to patents, rather than other IPRs more relevant for the creative industries, such as copyright and design rights. In this literature, Ferrantino (1993) looks at the role of membership in intellectual property treaties for US exports, foreign affiliate sales, and flows of royalties and license fees. The author finds that the impact is conditional on the extent of the domestic protection of IPRs. For the case of US multinationals, parent companies export more to subsidiaries based in countries that are not part of these international agreements. There is little impact on arms'-length exports and foreign investment. Maskus and Penubarti (1995) find evidence of a positive effect of the strength of local IPRs protection (patents) in a gravity model of international trade volumes

5.3 Parallel imports and grey markets

Another critical issue when we consider how the protection of IPRs affects international trade is that of parallel trade or grey markets.¹⁸ Parallel imports are “goods produced genuinely under protection of a trademark, patent, or copyright, placed into circulation in one market, and then imported into a second market without the authorisation of the local owner of the intellectual property right.” (Maskus, 2000, p. 1269). These markets arise as a result of the incentive provided by arbitrage on price differentials and by free riding on the investment made by an IPR owner (Richardson, 2009).

Parallel imports depend on when the right of the IPR owner is exhausted after the first sale. The regime of exhaustion can be national, international, or regional. Under national exhaustion, the IPR owner loses their rights upon the first sale within a country but can exclude parallel imports from other countries. Under international exhaustion, the IPR owner loses their rights upon first sale irrespective of where that has happened and cannot prohibit parallel imports. Under regional exhaustion, IPRs are exhausted upon the first sale in a group of countries, as is the case, for example, in the EU, and parallel imports can be excluded from outside.

An Ernst & Young (EY, 2018) report for the UK Intellectual Property Office highlights the limiting lack of data on parallel imports, even within the EU, where the phenomenon is quite significant due to the adoption of a regional exhaustion regime. While more

¹⁸ Refer, among others, to Maskus (2000), Saggi (2016), and Ernst & Young (2018) for a detailed discussion.

significant in the pharmaceutical industry, parallel trade is reportedly important also for some creative industries, such as music recordings and publishing. The debate on Brexit has revived the issue of exhaustion for the UK.¹⁹ According to stakeholder interviews conducted by EY (2018), the choice of an international exhaustion regime is considered by publishers as a significant threat to the industry. The issue of parallel imports and exhaustion is contemporary also in terms of the increasing digitalisation of trade.²⁰

The whole point of preventing parallel imports is so that firms can charge different prices (or price discriminate) across markets; parallel imports limit this ability by exploiting such price differentials. So, on the one side, those who would like to protect IPRs like to promote national exhaustion and, on the other, those concerned about price discrimination and consumer welfare prefer the principle of international exhaustion. The choice of exhaustion regime requires a compromise between these two different tensions. Under the TRIPS, a country can choose its own exhaustion regime.

The issue is directly addressed by Saggi (2012) who develops a model of interaction between the Global North and South in terms of IPR protection and exhaustion regime. A Northern firm is a monopolist in their territory thanks to the protection conferred by the recognition of an IPR via national exhaustion and aims to price discriminate internationally. This discrimination is, however, only possible if the IPR is also protected in the South to avoid imitation.²¹ The monopolist loses its power if the home country adopts an international exhaustion regime and the South permits imitation. Imitation by the South produces a negative externality for the North (lower firm profits) and a positive externality for consumers in the North and the South (lower prices in the North under international exhaustion and a wider variety in the South). The South should protect IPRs if this is needed to induce exports from the North, and

¹⁹ At the time of writing, the UK government has decided to temporarily adopt the regional system, leaving the issue open for the longer term.

²⁰ For example, jurisprudence is emerging that applies exhaustion to the resale of e-books, unlike the case of physical books. In the Dutch court case of Tom Kabinet, e-books are considered as intangible goods (to which exhaustion does not apply under the Infosoc Directive), rather than distribution of tangible goods (to which exhaustion would apply). For e-books, it is not possible to apply the Software Directive as the latter is not relevant for copyrighted material. See <http://copyrightblog.kluweriplaw.com/2015/01/28/the-dutch-courts-apply-usedsoft-to-the-resale-of-ebooks/>

²¹ The preference of the firm between national exhaustion and the freedom to price discriminate will also depend on the quality difference and the price competition between the North and the South and on market size and taste differences.

there is a sizeable difference in quality between the Northern and the Southern goods. The difference in quality of goods available is lower if the North adopts national exhaustion. When the firm's export decision is policy-dependent, then there can be a situation where both countries end up in a lower equilibrium. International agreements like the TRIPS can help eliminate the stand-off by introducing the international harmonisation of regulation. However, the implication of Saggi (2012) is that global welfare increases if this harmonisation induces exports to the South by the firm. If the firm would sell to the South irrespective of imitation, then TRIPS would lower global welfare.

Empirically, then, the evaluation of TRIPS depends on whether they increase the extensive margin of trade of developing countries in developed countries. On this point, Lin and Lincoln (2017) look at US manufacturing firms and the role of IPRs (patents) for trade participation. In their data, while firms with patents represent a mere 9% of the sample, they account for almost 90% of trade and are more likely to be exporters. They then investigate the role of IPR reforms in developing countries, especially for those firms which own patents and may be more sensitive to the protection of IPRs abroad. Using a propensity score matching difference-in-difference approach over census data, looking at the differential behaviour of exporters with patents after the introduction of reforms in destination countries, they find that IPR reforms in Argentina, Brazil, Colombia, the Philippines and Turkey have expanded the number of varieties that enter these markets from the US. This expansion has welfare-enhancing effects due to consumers' preferences for variety and domestic firms' productivity improvements thanks to the access to intermediate technology-rich inputs. These results give insights for the negotiation of trade agreements and the priority by developed countries' representatives for IPRs protection.²²

As discussed above, IPRs play a critical role in determining trade patterns, whether in terms of grey markets, imitation or innovation, or arms' length trade and the extensive margin. Acting as a barrier to trade, IPRs can affect the choice of direct exports versus indirect exports via foreign affiliates and, therefore, the organisation of international

²² For further references to the modelling and evidence on parallel imports, see Robbins (2009) on equilibrium parallel imports and the rise of global uniform pricing and Raimondos-Møller and Schmitt (2010) for the relationship between parallel imports and tax convergence; for the interaction between parallel imports and innovation, see Grossman and Lai (2008), Hwang et al (2014) and Kim and Park (2016), and Tanaka and Iwaisako (2014).

production via multinationals.²³ In specific reference to the movie industry, MacCalman (2004) looks at the relationship between IPRs and the choice of FDI versus licensing agreements. The paper empirically looks at how the network distribution of movies and videos by Hollywood Studios is affected by IPR standards in forty countries. Using a set of bivariate probit models, the author finds a non-monotonic relationship between IPR standards and FDI. Both low or high standards increase the likelihood of FDI or service via affiliates. Moderate standards increase the likelihood of licensing agreements.

6. Sector-specific studies

As noted previously, there is, in general, a lack of academic research on internationalisation in the creative industries specifically. But there are exceptions, such as movies and music, which have attracted considerable attention. It is interesting to reflect on the reasons for why these sub-sectors have been more heavily researched. First, because they are richer in data than other sub-sectors. Second, because the audio-visual sector has a role as an international means of communication, meaning that it is of wider theoretical and empirical interest. A third explanation is that in the case of movies, the persisting dominance of the US studios has attracted attention from economists interested in consumer welfare. A fourth factor is that the audio-visual sector attracts more political attention than other sectors insofar as policymakers wish to 'protect' national culture against the influence of foreign culture.

6.1 Movies trade

As noted above, the film industry has been analysed extensively in the literature. Since this paper is primarily concerned with international trade issues, for a more general economic analysis of this sub-sector, we refer the reader to other papers (see, among others, McKenzie (2014) and the references therein).

Despite the dominance of Hollywood studios in Western markets, the film industry has over time become a multi-polar industry, with some emerging countries becoming

²³ See, for example, Markusen (2001), on how the extent of protection for IPRs can influence trade versus the decision to set up subsidiaries; Awokuse and Yin (2010) in reference to the role played by stronger IPR standards in fostering FDI in China; Tanaka and Iwaisako (2014) on the welfare implications of IPRs for FDI and innovation.

international leaders and international blockbusters filmed in multiple locations (often to exploit generous tax levies and subsidies in more than one place). However, there has traditionally been an English-language and US dominance in most markets. This has made the international trade of movies, and audio-visual content in general, rich in political tensions. Indeed, in the absence of supporting scientific evidence, protectionism in these sub-sectors has historically been high. Puttnam (1997), for example, provides an entertaining account of the fight over film production and distribution in trade negotiations. Grant and Wood (2004) underline the rise of film industries as a global phenomenon and discuss how their international trade is heavily regulated, often characterised by restrictions (quotas) and subject to trade wars. Specific modelling issues have also been discussed in many journal articles (see Frank, 1992, for an early contribution).

Several papers look at the barriers to trade specifically. Marvasti and Canterbury (2005), for example, investigate the international success of the US motion pictures industry despite pervasive international protectionism. They first construct indicators to capture trade barriers in several markets. Protectionism from movies imports relies on different strategies across the globe. These include full restrictions, such as censorship for religious and moral reasons and quota restrictions, such as cultural exemptions. The latter can also apply within trade agreements, as in the case of North American Free Trade Agreement (NAFTA), and more recently the US, Mexico and Canada (USMCA) agreement, where Canada and Mexico restrict content from the US⁹ and impose duties mostly to collect taxes.²⁴ Trade barriers also include violations of property rights (piracy and black markets), service barriers (e.g. dubbing licence requirements or local printing), subsidies and video levies (more typical of the European experience). The authors then develop two restriction indices: the first is the simple count of barriers imposed on US movies, and the second is a combination of count and complexity of barriers. They use these indicators in an augmented gravity model, where measures of cultural distance (in terms of literacy, religion, and English language) are included alongside more traditional physical distance and proximity (border) variables and measures of the importance of the film industry in each country. They test and find evidence in favour of the theory of endogenous protectionism whereby countries raise barriers to US movies in response to foreign competition.

²⁴ See Seaman (1992) for a discussion of the issues.

Rauch and Trinidad (2009) develop a theoretical model where zero trade and communication costs, under consumption externalities, lead to the dominance of one cultural style in the global consumption of cultural goods like music and movies. While in the short run this increases welfare, it can reduce it in the long run, as scarce cultural goods can be more valuable and their protection leads to higher welfare. The authors extract interesting trade policy implications from their work. For example, current protectionist restrictions on quantity, like the cultural exemptions, keep communication costs low and increase the production of varieties that are closer to the dominant cultural style in local markets. They suggest that subsidies may be a more valid means to protecting diversity along the lines of the 2005 UNESCO Declaration. However, since it may be difficult to convince local taxpayers to pay for something that, under consumption externalities, would benefit mostly foreign consumers, Rauch and Trinidad (2009) suggest large countries could pay for the removal of cultural import restrictions by small countries in exchange for support of their national arts agency.

Hanson and Xiang (HX, 2011) investigate US exports in motion pictures in order to consider the role of trade barriers in an extended model of fixed export costs where firms are heterogeneous a-la-Melitz. The objective of the paper is to look at whether bilateral fixed trade costs are more important for film production than multilateral fixed trade costs: the former create a trade disadvantage for producers in smaller countries as they face additional costs for every new trade partner. If instead the fixed costs are global, then firms will only face *variable* costs each time they enter a new market.²⁵ The statistical distribution of movie performance is characterised by: heavy tails (heterogeneity matters), not all movies being exported, high fixed costs of producing the first unit and small marginal costs of making copies, the fixed cost of production usually being incurred in the exporting country and the variable cost in the importing country, trade being characterised by zero transportation costs, and barriers to trade being related to cultural differences (as suggested by Marvasti and Canterbury, 2005, and Rauch and Trinidad, 2009). Using data from ScreenDigest.com for the box-office revenues of domestic and US movies in 46 countries from 1995 to 2006, and data from other sources to measure the trade barriers (geographic and cultural distance, levies,

²⁵ In their model, as the global fixed costs increase relative to the bilateral fixed costs, adjustment occurs along the intensive margin, i.e. a lower volume per variety. As the global fixed costs decrease relative to the bilateral fixed costs, adjustment occurs along the extensive margin, i.e. imports per variety increases.

quotas, IPR protection), they find that for movie exports the global fixed costs dominate the bilateral ones and trade adjusts along the intensive margin ie.... Adjustment along the extensive margin is, in contrast, minimal, with smaller countries importing a lot from the US. The intensive margin varies across countries depending on the extent of trade barriers. By contrast, in manufacturing goods trade adjusts along the extensive margin. The authors suggest that this may be due to the different mode and cost of delivery of movies, which is global.

Didier et al. (2010) build on Schulze (1999) and estimate a gravity model to look at the determinants of trade flows in cultural goods (including movies), using the UNESCO definition. They find that distance is even more critical for cultural than non-cultural goods. They find some heterogeneity across different types of goods. Common language naturally favours more goods based on writing, and a shared colonial past helps trade in heritage goods and visual goods. Past trade influences current trade in line with the addictive aspect of cultural consumption discussed by Schulze (1999). Another noteworthy finding is that taking cultural trade, as a measure of cultural proximity, emerges as a determinant of overall trade. The implication is that countries should be careful in setting cultural protectionist measures, as this can potentially have unintended negative consequences on trade more generally in the economy.

Hellmanzik and Schmitz (2015) estimate a gravity model of audio-visual trade (comprised of movies, music, radio, broadcasting, performing arts) and consider the role of virtual proximity, defined using bilateral hyperlinks and bilateral website visits. They find that this variable positively affects audio-visual trade and find evidence along the lines of Hanson and Xiang (2011) that global fixed costs of distribution dominate the bilateral fixed cost. Hellmanzik and Schmitz (2016) estimate another gravity model of audio-visual services trade along the lines of Didier et al. (2010) to look at the role of trade barriers, such as cultural exceptions, and WTO commitments. They find that WTO commitments favour, while trade restrictions lower, both imports and exports. A recent industrial organisation literature looks at the strategic release of films. McCalman (2005) looks at the role of IPR strengths for the speed of release of Hollywood movies in a market and finds a non-linear relationship. Dalton and Leung (2017) investigate strategic decision-making in release gaps by Hollywood studios. They develop a theoretical discrete choice model of release where they look at three effects: the release gap effect related to issues like the prevalence of digital theatres in a market, the word-of-mouth effect due to movie reviews and the competition

effect due to the release of competing blockbusters. These effects are also affected by the strength of IPR protection, as suggested by McCalman (2005) and associated levels of piracy.²⁶ Using data from Boxofficemojo.com they find empirical evidence for the significance of all three of these effects.

Cabral and Natividad (2018) look at the international exports of movies and consider how proximity, in terms of political affinity (measured using countries voting patterns at the United Nations), and release strategy are related. More specifically, they assume that proximity and demand are substitutes, i.e., given that demand will be higher among closer countries, a distributor will prefer to release a movie to more proximate countries when demand is low as the movie is more likely to feature well anyway. Using a dataset that combines Boxofficemojo.com, Internet Movie Database (IMDb) and DVD sales data from Nielsen, they find that movies are first released to "closer" countries when demand is low and that releases in closer countries are associated with higher revenues. Similarly, Belleflamme and Paolini (2019) look at strategic release decisions and promotion investment to investigate staggered movie release. Using Boxofficemojo.com data for 1500 films in the period 2001-2013, they find that large budget movies are released closer to demand peaks.

6.2 Music trade

Interest among economists in the music market has significantly grown at least since the 1990s (see Connolly and Krueger, 2006). This trend is, like film, probably due to the global nature of the music industry itself. From an industrial organisation perspective, the industry has been dramatically affected by technological developments and has adjusted consequently. Waldfogel (2012, 2017), Aguiar and Waldfogel (2018a,b) and Krueger (2019) analyse these changes.

Krueger (2019) argues how - enabled by digitalisation and file-sharing - piracy has completely changed the way the music industry is structured and its revenue distribution. For example, nowadays, artists focus more on extracting royalties from live performance and less on records sales, a phenomenon that has also caused a massive spike in the price of concert tickets.²⁷ Also, the advent of streaming and platforms has changed the way talent emerges, music is delivered, and earnings are

²⁶ In countries where there is more piracy, however, movies are likely to be released globally at the same time to avoid what we could call an "illegal parallel import" effect, so that the Bollywood strategies may be different from the Hollywood ones).

²⁷ On a related issue, Shiller and Waldfogel (2011) discuss pricing strategies in the digital music market.

distributed. The author discusses how the industry has become a truly global industry and underlines how it has become increasingly unequal over time, leading to the rise of global “superstars”.²⁸ This trend is attributed to a combination of more significant economies of scale and distinctiveness. Greater economies of scale, both nationally and internationally, are possible thanks to language dominance, digitalisation and platforms. Also, the uniqueness or distinctiveness of the product lowers the elasticity of substitution.

Ferreira and Waldfogel (2013) use a large dataset on weekly singles charts over fifty years for the top forty songs in the largest twenty-two markets to investigate the extent of penetration of foreign music in the domestic economy. They show that some relatively small countries export relatively more than large countries (eg Sweden vs the US). International trade in music has also been subject to geographical and cultural forces, as we have seen in the case movies, and that home bias has tended surprisingly to *increase* over time. This result is surprising because the forces of globalisation and digitisation might have been expected to reduce home bias. The authors explain it with the increase in local MTV channels and internet penetration and with protectionist measures such as quotas in airplay.

Takara (2018) looks at international trade in music CDs in a modified gravity model similar to Helpman et al. (2008) to consider the role of cultural differences measured using ethnomusicology and civilisation classifications. They find that cultural differences play a role, but mostly as a “negotiating cost”, determining the extensive margin of trade, rather than trade volume.

Aguiar and Waldfogel (2018c) look at the impact that the fast growth of streaming services has had on revenues. They put together two datasets: one international product-level dataset for the years 2012-2013 combining song-level measures of digital track sales, top 50 songs streaming measures from Spotify and artist-level piracy measures that are better suited to look at sales displacement effects and the role of piracy, and a more complete and more recent second dataset consisting of aggregate US data on digital and physical music sales as well as streaming at Spotify, Pandora, and YouTube US that covers the most important streaming services and a period of especially rapid growth in streaming. In the product-level data, they find

²⁸ The interested reader can refer to the classic article by Rosen (1981) on the economics of “Superstars”.

that Spotify streaming leads to both an increase in sales revenue and piracy, a result consistent with either a stimulation effect or simple unobserved heterogeneity, i.e. simply, popular songs are both streamed and sold at the same time. In the aggregate data, in contrast, they find a negative effect of streaming on sales revenue, but it is not possible to distinguish between the effects of different streaming types. The overall effect of streaming is a reduction in sales, with the calculation on revenues made impossible by the lack of access to data on payments to IPR holders. Statistically, they are unable to identify a significant (non-neutral) effect of streaming on revenues. Better data on payments to rights holders in the future might help in gathering further evidence on this critical point.

6.3 Other sub-sectors

Far fewer studies look at other creative sub-sectors, a gap that will need to be addressed in future research. What published studies there are mostly address issues such as localisation or firm internationalisation from an international business perspective, rather than the theoretical or quantitative economics perspective which is arguably more important for policymakers. For example, for games, Margiron (2015) looks at the localisation of Japanese video games, and Cunningham et al. (2012) discuss the internationalisation of small games development firms in Poland and Hungary. Fillis (2000, 2004) considers the barriers to internationalisation in micro craft firms. Perry (1990) and Horsky et al. (2012) look at the internationalisation of advertising. Schulze (1999) discusses trade in fine arts that is related to museums and galleries.

7 Conclusions

The creative industries are increasingly recognised as one of the fast-growing parts of the economy in both developed and developing countries, a trend that has attracted the attention of national and international policymakers. In the UK, one of the world-leading creative nations, the Industrial Strategy aims to raise the competitiveness of the creative industries nationally and internationally, aiming at a “50% increase in reported creative industries exports by 2023”.²⁹

²⁹ <https://www.gov.uk/government/publications/creative-industries-sector-deal/creative-industries-sector-deal-html#:~:text=The%20Creative%20Industries%20Sector%20Deal,unlock%20growth%20for%20creative%20businesses.&text=Increase%20exports%3A%20delivering%20a%2050,creative%20industries%20exports%20by%202023>

Given the importance of independent research to guide policies, in this paper we have attempted to provide a review of the literature on creative trade, and its gaps, from an economics standpoint. Unfortunately, this is not a straightforward task since there are next to no UK-sector-specific studies on international trade in the creative industries and what international evidence there is is scattered and unsystematic.

We have started by looking at the main features of creative goods and services and their implications for the modelling of international creative trade. We review Caves's seven features of creative work, but also the IPR-intensity, service-intensity, intangible nature, and reproducibility of creative goods and services. Technological change and digitalisation make significantly increase the modelling challenges. Future work should try to create dynamic taxonomies of creative goods and services which can be used to inform trade policies.

We discuss how these features affect the production, consumption, and international distribution (exports and imports) of creative goods and services and how well they are considered in existing international trade theory. A basic finding is that the market structure determines the trade and welfare effects in these industries. On the production side, monopolistic power is conferred by the economic and legal barriers to entry. Among the first, we count the cost of innovating, the uniqueness or distinctiveness of a new variety, and the economies of scale of reproducible work. Among the second, we have legal barriers such as the protection of IPRs. On the demand side, the elasticity of substitution between varieties, and consumers' preference for variety, and tendency for addiction in consumption, are critical. Future research is needed to understand how these factors differ across creative sub-sectors and affect international trade at the macro and sectoral levels.

Overall, the creative trade literature must catch up with the extensive literature on non-creative trade, especially in terms of the role of firm-heterogeneity, services trade, the effects of trade liberalisation, and the role of IPRs. Future research should, in particular, look at the microeconomic features of exporters and non-exporters at the extensive (whether or not a firm exports and how many countries it reaches) and intensive margins (how much it exports) of trade. As with the wider trade literature, this

analysis needs to discriminate between self-selection and learning by exporting effects.

The creative industries tend to be heavily regulated (although not all sub-sectors to the same extent). Few studies look at the effects of trade liberalisation and the importance of regulatory alignment. Yet, given the current international trend towards revisiting trade agreements, a better understanding is needed of the main barriers to trade in the creative industries and the implications of removing such barriers, as well as the role of regulatory alignment. Finally, while there is now a vast literature covering individual sub-sectors within the creative industries, especially in audio-visual and music, future research that investigates the impact of digitalisation and streaming on internationalisation in these sectors, not only at the product level but also at the firm level, would be welcome. The rising importance in international trade of sub-sectors such as architecture, advertising, design, videogames and publishing also warrants a less exclusive focus on audio-visual industries.

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