

The Culture-Promotion Effect of Multinationals on Trade: the IKEA case

Dylan Bourny, Daniel Mirza & Camelia Turcu

Highlights

- This paper focuses on the idea that multinationals' have the ability to promote their home countries' products on foreign markets.
- We use IKEA as an ideal case study to test our hypothesis.
- We build an original dataset on IKEA presence in foreign markets between 1995 and 2015.
- The setting of a new IKEA store in a destination increases trade flows from Sweden by around 2% for products that resemble IKEA's.
- This result is driven primarily by the products that are being identified to encompass a high-cultural content in IKEA advertisements catalogues.



Abstract

In this paper, we investigate how some MNEs which spread their home culture over time and space to the rest of the world are affecting, in turn, trade flows from home. By selling products embodying cultural information related to their country of origin, those MNEs embrace the role of ambassadors of their home country. We argue that IKEA offers an ideal case to identify a multinational's culture-promotion effect on trade. We build a dataset on IKEA's presence in foreign markets between 1995 and 2015 and merge it with disaggregated product level trade between pairs of countries. We find solid evidence of an externality linked to IKEA: a setting of an IKEA new store in a destination increases trade flows by around 2% from Sweden for products that resemble to what the multinational offers (despite being completely unrelated to that multinational). This result is driven primarily by the products identified to encompass a high-cultural content. Other robustness checks and tests seem to be very much consistent with the hypothesis of IKEA promoting the Swedish culture to the world.

Keywords

Export Promotion, Multinationals, Trade.

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RESEARCH AND EXPERTISE
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The Culture-Promotion Effect of Multinationals on Trade: the IKEA case¹

Dylan Bourny* and Daniel Mirza† and Camelia Turcu‡

1. Introduction

Do multinational affiliates, which sell products that advertise their culture of origin in foreign markets, create positive externalities on independent producers at home? If so, how can one identify such externalities, especially on exports from the country of origin?

Policymakers and researchers need to address these questions. A country's cultural heritage is a public good. When, by its activities, an organization proposes a product which reminds about the culture of its home country, it might be increasing the social gains of that country. Social gains from introducing one country's culture to foreign agents are usually expected from the promotion activities of embassies abroad. Nevertheless, not only embassies might be doing such work. Any famous organization in one country, whether private or public, might be transmitting a part of its inherited culture to other countries. A simple and well known example is the promotion of Hollywood films in Europe after WWII by the Motion Picture Association grouping the main film studios there. Through American films, Europeans could then learn from the American way of life.

In particular, many multinational corporations might be ambassadors of their country: The "Das Auto" well known advertising slogan set for many years by Volkswagen reminds consumers all over the world that the brand is German, and hence of German well recognized (or perceived) quality; L'Oreal company signs its ad-

¹The views expressed in this paper are those of the authors and do not necessarily reflect those of the Institutions to which they belong. The authors formulate a special thank to Soyombo Bat for excellent research assistance in data collection on IKEA and for helping to set-up the first series of econometric regressions regarding this paper. We also thank participants at the ETSG Conference 2018, GdRE International Symposium 2018, INFER Annual Conference 2019, AFSE Congress 2019, Applied Microeconomics Days 2019 and RIEF Doctoral Meeting 2019 for very constructive remarks and suggestions. Special thanks also to Yoto Yotov, Matthieu Crozet, Inmaculada Martinez-Zarzoso, Laura Hering, Volker Nitsch and Charlotte Emlinger for insightful and helpful comments that helped us improve the paper. All remaining errors are ours.

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vertisements with a "L'Oreal. Paris", where one can note that the word "Paris" is always written with highlighted characters in the advertisements; Although the connexion with the home country is not direct, other companies like McDonalds, Coca Cola, Alain Ducasse Entreprises or Moët & Chandon are known to disseminate the American or French food and beverages cultures. These well known companies and many others one could think of, could probably produce some positive externalities on exports from home, especially in the agrifood and beverages industries.

In general, however, it is very difficult to identify and estimate the culture-promotion effect on trade due to multinationals' activities. This is because an important trade activity is usually created by the newly established affiliates between home and the hosting country, and through global value chains (trans-border supply of inputs and services within the global firm or with its subcontractors). In this context, the identification of the culture-transmission effect is very hard, if not impossible, to set. As a matter of fact, in the literature, the theoretical mechanisms underlying the relations between MNEs and trade are usually driven by supply side considerations.²

The fact that outward FDI may generate positive spillovers to other domestic firms' trade which are *not* directly related to MNEs (i.e. not in the value chain) has not been much studied. Cheptea *et al.* (2015) find a positive effect of overseas presence of French MNE food retailers in a given hosting market on exports of Food by French firms to the latter. The authors attribute this positive effect to a reduction in trade costs for suppliers in the country of origin and, possibly, through a change in preferences of representative consumers in the host country in favor of French retail food. These authors do not isolate however, each of these factors. Emlinger and Poncet (2018) also find that, upon their entry into a given chinese city, retail MNEs make a disproportionate rise in imports of retail goods by that city, coming from the origin country of the MNE. They explain their findings by a trade-cost reducing role of western retailers present in China that makes it easier for retail-good producers of the same nationality to export to China.

Our paper is explicitly interested in the identification of demand side changes in host countries (i.e. preferences) upon entry of MNEs. Changes in preferences due to exposure to other cultures is a key element here. It can be actually related to a theoretical literature which looks at how globalization or integration, by connecting cultures, changes overtime final consumers preferences away from goods with an intensive content in the domestic culture and thus in favor of goods with an intensive content in foreign cultures (Bisin and Verdier, 2010; Ollivier *et al.*, 2008).

On the empirical side, an important strand of the literature has been very much interested in the relation between culture and trade in the late 2000s. The litera-

²See Antras and Yeaple (2014) for a nice review of the literature

ture has shown then that differences in culture are costly for exchanging goods or ideas, due to differences in views, norms, tastes, ways of doing business, distrust or simply differences in language across countries. Guizo *et al.* (2009), Disdier *et al.* (2010), Gianetti and Yafeh (2012), Siegel, Licht and Schwartz (2012) provide examples. In line with this literature, a more recent paper by Brynjolfsson, Hui and Liu (2020) finds that the introduction of a machine translation system has significantly increased international trade on the eBay's digital platform.

Finally, on the preferences side, some papers challenge the standard view of persistence of heterogeneity in consumption patterns across space, by showing that preferences do change over time and space with higher interaction of people from different regions. Bronnenberg, Dubé, and Gentzkow (2012) find for instance that brand preferences change endogenously with migration of people across US states. De Sousa *et al.* (2020) study how tastes converge with deeper integration of French regions over time.

Our study is in line with the above cited literature. We are mainly interested here in MNEs which propose a line of products directly linked to their home culture. We ask how those MNEs which spread their home culture over time and space to the rest of the world are affecting, in turn, trade flows. Our baseline hypothesis is that foreign consumers learn more about the culture, tastes and way of living of other countries through the products sold by those. If this hypothesis is true then it has an implication: MNEs offering home-culture related products might change foreign consumers preferences in favor of the products coming from their country of origin.

To our knowledge, our paper is the first to define a strategy that should be able to identify such a preference-sourced externality of home-culture advertizing MNEs on international trade. To make the identification work, we think that four elements or conditions need to be met. First, and crucially, one should begin by identifying MNEs that vehicle an important content of their home culture in their products. While this first element is a necessary condition, it is not a sufficient one to identify the preference-sourced externality. Thus, secondly, we want to make sure that exports from the country of origin (of the MNEs) are orthogonal to what these MNEs sell in the destination market (i.e. no supply side relationship between the MNE and the flow of exports coming from the home country). Third, we want to insure that the home country from where the MNE originates is small enough: a) the home country should have no softpower through history and in terms of its diplomacy; and b) the culture and way of life of the home country should not be sufficiently known to foreign consumers in general. Last but not the least, we need to have access to MNEs data on location overtime and across destinations, under the constraint that the three above conditions are met.

It turns out that the Swedish company IKEA is a typical case of an MNE where

the four elements for identification above can be fulfilled. First, as it is discussed in the heart of the paper, IKEA is a services retailer MNE whose image is strongly related to its country of origin, Sweden, and more generally, to its region of origin, Scandinavia³. Typically, the colours of IKEA's logo are those of the flag of its home country, Sweden. Second, an important proportion of IKEA products originate from countries other than Sweden and Scandinavia. And when they happen to come from the latter, they need to transit through IKEA platforms concentrated in few countries. This, as it will be made clearer in the paper, allows for identifying the externality of IKEA presence on trade from Scandinavia, that is *not* linked to IKEA *per se*. Besides, Compared to the rest of the world, Scandinavia as a region and even more, Sweden as a country of that region constitute very small entities in terms of their economy, political power and cultural influence. This makes both, IKEA store opening in hosting country and exports from the region of origin *a priori* exogenous to Scandinavian diplomatic and other foreign related policies. And finally, one can easily collect data from the internet on the time of openness and location of each IKEA store around the world.

After showing some stylized facts on the link between IKEA's presence and exports of Scandinavia, we use a simple partial equilibrium market set-up as a basis for guiding our empirical test. The set-up reproduces a sort of extended gravity equation where bilateral exports of a product into a market are being affected by the entry of a global retailer MNE through two main channels: 1) a change in the degree of competition in the market and 2) a change in relative preferences, shaped by the advertisements of the MNE's foreign culture. We then take the equation to the test to identify the effect of IKEA presence (and its number of stores) on Swedish bilateral exports of products which resemble to IKEA's products. We do the same for the rest of the Scandinavian countries.

From the BACI dataset supplied by CEPII and offering product level trade data, one is able to identify over 48 products in the 4 digits Harmonized System classification (HS4) which are very much likely to contain disaggregated products that resemble to those supplied by IKEA, mainly in Furniture and Wood industries. A first series of econometric results are based on these 48 products which are then compared with the results obtained when other products are being studied. Further, by using information provided by IKEA through their well known advertisement-catalogues that they edit and send out to their consumers every year, we could identify a series of products (furniture and wood products, lamps, mattresses, etc...) explicitly designed by a Swedish designer, but also food related goods identified as a Swedish speciality. We could then link each of these products to the HS4 products in BACI where near substitutes are very likely to be present. We have identified 20 HS4 products out of the 48 products and ran again our re-

³In this paper, Scandinavia refers more broadly to the following Nordic countries: Sweden, Finland, Norway and Denmark.

gressions by looking at the specific impact of IKEA presence on these products for which we know that cultural-content should be even higher. Last, but not least, we compare our outcomes based on IKEA location to that of another important Swedish MNE, H&M. What is nice about H&M is that it has many common characteristics with IKEA: it is a Swedish company too, which has developed its world network over time and space nearly in the same period than IKEA and a retail MNE that is being supplied by subcontractors and affiliates producing for H&M outside Sweden. The major difference is that products that H&M sells are not known to have a Swedish or more generally a Scandinavian cultural content which, when compared to IKEA shock, enables then to deduce out the externality due to changes in tastes of consumers.

In terms of the empirical methodology, we follow Yotov *et al* (2017) by applying Poisson Pseudo Maximum Likelihood regressions and controlling for many combinations of fixed effects to account for the recent extended gravity literature⁴.

The main results of this paper can be summarized as follows. IKEA presence in a destination promotes Swedish exports of IKEA-like products to that destination. In particular, once we have controlled for all possible combinations of fixed effects, we find a very robust average increase of about 2% of exports in IKEA-like products from Sweden. This figure is estimated to be an average increase for Swedish exports, however, due to the presence of IKEA stores in a typical destination. Further, when going into details, we find that the impact appears to grow linearly with the number of IKEA stores in destination. An additional IKEA store increases by 0.7% exports from Sweden. The results for other Scandinavian countries, although less robust, similarly indicate an increase of Scandinavian exports in IKEA-like goods through the presence of IKEA. Within the range sold by IKEA, we further could show that the effect is clearly driven by the 20 products that we identify ex-ante to be directly linked to the Swedish culture. Finally, compared with the robust IKEA effect, we find that H&M entry and presence do not produce any externality on Swedish exports of clothing and textile accessories. As the reader will see, many other robustness checks are undertaken to check for the validity of our results and for our identification to be really picking a preference dimension linked to the Swedish culture vehicled by IKEA.

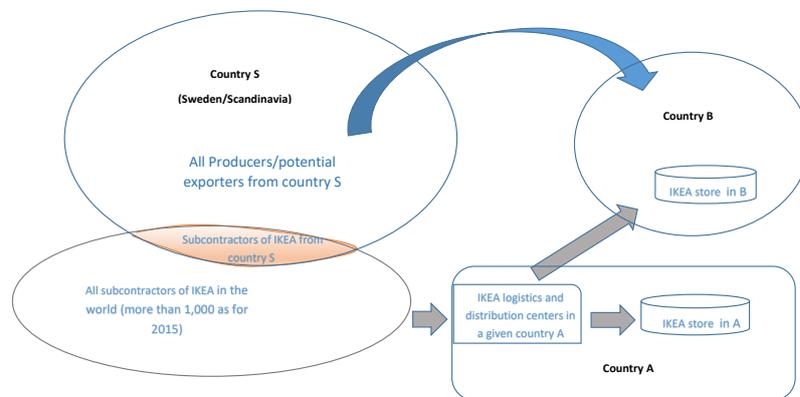
The rest of the paper is structured as follows. Section 2 explains why IKEA is an ideal case to identify the culture-promotion effect we are searching for. Section 3 describes the data and the methodology. Section 4 shows the theoretical set up that has inspired the tests to be run. Section 5 presents the results. The last section concludes.

⁴Mixed combinations of product, country and time, along with bidirectional fixed effects are being accounted for, see UNCTAD Advanced Guide for further details (<https://vi.unctad.org/tpa/web/vol2/vol2home.html>)

2. IKEA: an ideal case

2.1. IKEAs delivery structure

As of 2015, one can count around 368 IKEA retail stores in the world dispersed in more than 40 countries.⁵ Each of these stores receives product deliveries from IKEA distribution and logistic centers (i.e IKEA platforms, hereafter). These can be located in the same country as that of the observed retail store but also in another country. By 2015, IKEA indicates having 33 platforms concentrated in 16 out of the 40 countries where IKEA has retail stores⁶.



Identification of the externality of IKEA on country S exports : Look at how the presence of IKEA at date t in country B (or an additional store set by IKEA in B at that date), increases country's S exports to B (big blue arrow).

Figure 1 – IKEA products traceability after an opening of an IKEA store and the induced externality on exports

In turn, following the yearly summary document from IKEA group in recent years, published in their website, platforms receive products from around 1000 suppliers, from 11 different countries. A high proportion of the manufacturers appear indeed to be located in low wage countries (China 29%) or in Europe (Poland 20%). The yearly document published by IKEA does not inform exactly about the proportion of products which are produced in Sweden and the rest of Scandinavia. But one can easily find articles in the media which point to a very important proportion of

⁵328 stores belonging to IKEA group and 40 belonging to Franchised. See IKEA Group yearly summary documents at https://www.ikea.com/ms/en_US/this-is-ikea/reports-downloads/index.html

⁶These countries are: Canada, the US, Sweden, Germany, France, Italy, Spain, Belgium, England, Poland, Cyprus, Russia, Japan, China, Australia and Singapore

the production (if not all) to be set in developing countries such as China, Malaysia, Vietnam, and Poland and Romania.⁷

Figure 1 illustrates the route traceability of products from IKEA suppliers to IKEA final-consumers' and offers a strategy of identification of the externality of IKEA presence in a hosting country on exporters from Sweden (or, more generally Scandinavia). Assume 4 countries/regions: country *S* representing Sweden, or more generally, Scandinavia; country *A* hosting both, an IKEA retail store and an IKEA platform; country *B* hosting only an IKEA retail store; and finally, the rest of the world in which are present all suppliers of IKEA. Crucially for our paper, suppliers of IKEA goods, whether they originate from country *S* or any other place in the world, do not send in general their products directly to retail stores in countries *A* and *B*. These goods need to pass through the platform in country *A*. Hence, all products that are supposed to be offered to final consumers, on the shelves of the IKEA stores in *A* and *B* transit first through the platform in *A*. This has implications for trade flows related to IKEA. All that is imported by IKEA into country *B* transit through *A*. In the trade data, this is registered as an export from *A* to *B*.⁸ This has another important consequence. Thus, all products sent by country *S* to country *B* in the trade data at our disposal cannot be then products which are supposed to end-up on the shelves of the IKEA store hosted by *B*. This constitutes the basis of our strategy to identify the externality of IKEA. We ask then in our empirical study, what is the impact of hosting an IKEA store for a country like *B* (without a platform) on its imports from country *S* or, equivalently on *S* bilateral exports to *B*. This is being represented by the big blue arrow going from country *S* into country *B*. As an illustration, by 2015, Spain was a typical country *A* while Portugal was a typical country *B*. While in Spain one could find IKEA platforms along with many selling IKEA stores, Portugal was hosting only retail stores. This means that for countries like Portugal, all products which resembled to IKEA ones coming from Sweden or more generally, anywhere in Scandinavia, could not be linked to IKEA by 2015 but to Swedish or more generally to Scandinavian suppliers that were actually producing similar products to those offered by IKEA. This IKEA feature will help us identify the externality that IKEA could have on exports of other firms from Scandinavia.

⁷see Forbes' article (2012) via <https://www.forbes.com/sites/walterloeb/2012/12/05/ikea-is-a-world-wide-wonder/?sh=2d27aa5927b9> or Hunker's article along <https://www.hunker.com/13710050/where-is-ikea-furniture-manufactured>.

⁸Indeed, it is important to note that the trade data we use, coming from the BACI database of the CEPII, itself originating from the UN Comtrade database, do not separate exports from "re-exports" or imports from "re-imports". We can notably read this sentence in the glossary of the database on the UN Comtrade website (<https://comtrade.un.org/db/mr/rfGlossaryList.aspx>): "Re-exports are exports of foreign goods in the same state as previously imported; they are to be included in the country exports." The same is also true for re-imports.

2.2. Cultural content of IKEA products

IKEA's products are still perceived as very Swedish, even if only a tiny proportion is actually made in Sweden (Baraldi, 2003). Concerning its marketing strategy, IKEA is seen as a standardized retailer which goal is to sell the same products to all foreign markets. Burt *et al* (2011) underline that IKEA adapts much less to foreign tastes compared to several other global retailers operating out of a large store format (Tesco, Wal-Mart, Carrefour). Instead, IKEA's strategy is to drive market change: the market will ultimately adapt to the retailer (Tarnovskaya *et al.*, 2008). In this respect, IKEA prefers to invest in knowledge transfer of Swedish and more generally Scandinavian culture so as to make foreign consumers adapt to its products (i.e. change their preferences). In general, IKEA strives to keep a common identity and image across most of its products which are perceived as very Swedish. This product identity is constructed not only around IKEA's style, look and product concept, but it is in line with the Swedish (or Scandinavian) life style (Choi Johansson and Cassinger, 2018). One remarkable marketing policy of IKEA in favor of a Scandinavian transmission of culture is that IKEA products have typical Swedish names (usually first names and names of cities) and carry this identity wherever they are sold around the world. IKEA applies to all its products the furniture certification "Möbelfakta", which has gradually obtained international recognition. The Möbelfakta certification is based on three areas of requirements: Quality, Environment and Social responsibility, which are again three well known values of the Scandinavian societies. In general, IKEA has made "Swedishness" or Scandinavian a key aspect of its strategy: IKEA's logo is built in blue and yellow, the colours of the Swedish flag; Swedish delicacies are served in the IKEA restaurants; in its marketing strategy, IKEA puts forward stories about Sweden that consumers in different markets can get identified with. A special link between the company and Sweden has emerged, a sort of co-branded relation (Kristoffersson, 2014), in the sense that the image of one supports internationally the perception of the other (for example, IKEA's founder story is told on the official website of Sweden on which the country is promoted internationally).

The IKEA delivery structure on one hand, and the Swedish and Scandinavian content of IKEA's products on the other hand, provide an opportunity to identify the externality of a culture-promoting multinational firm on exports from its origin country.

3. Data and Stylized Facts

We begin by constructing a new dataset related to IKEA retail stores' presence in each hosting country, during the period 1995 – 2015. In order to set this database we use the information available on one of IKEA's related websites. We use two alternative indicators: a dummy variable indicating the presence or not

of IKEA across countries and over the time span and another variable indicating the number of IKEA stores in the destination country.⁹

Using our new data, Figures 2 and 3 show the expansion of IKEA during the period under study. Figure 2 highlights the presence of IKEA retail stores around the world in 1995, while Figure 3 show their presence in 2015.¹⁰ Two main observations can be made. First, IKEA presence mainly in Europe, North America and other big markets such as China and Russia in the early period have been reinforced overtime. Second, during the period, IKEA entered new markets located mainly in East of Europe, South East Asia and Eastern Asia.¹¹ Clearly, IKEA targets rich and big markets or those developing rapidly.

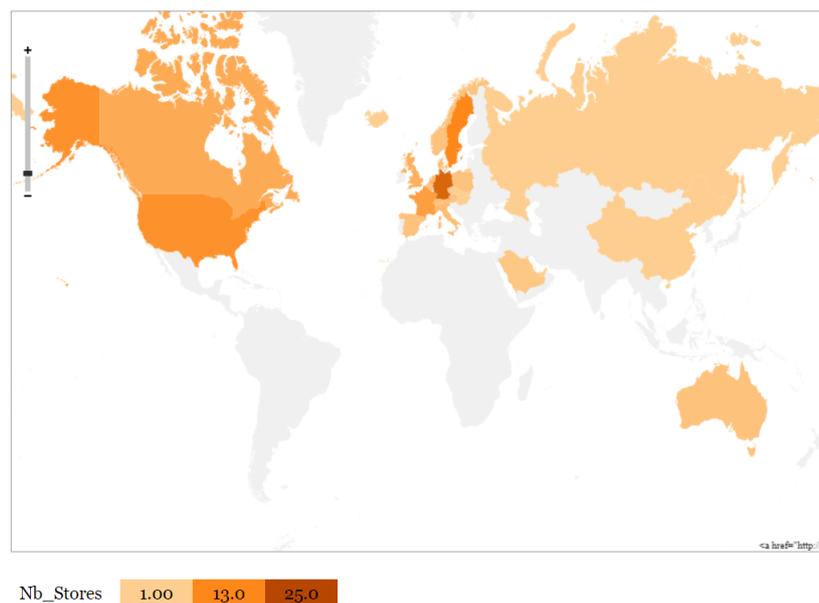


Figure 2 – IKEA presence map in 1995

To identify the IKEA effect, we consider bilateral trade data at the product level. Trade flows originate from UN COMTRADE and are made directly available by researchers at CEPII (i.e. via the BACI database). We have aggregated up the BACI data initially at 6-digit level of the UN Harmonized System (HS, rev.2) to the HS 4-digit level, ending with about 1,200 products. Out of this product list, 48 have been selected to represent products that are similar to the ones sold by IKEA (see Appendix). Except for Norway where they accounted for about 1% of

⁹The information was extracted from the following website address <http://franchiser.ikea.com/worldmap>.

¹⁰IKEA platforms are excluded here.

¹¹Note that IKEA still continues its development worldwide, especially in the continents where it is less present. For example, it opened its first store in Morocco in 2016, in India in 2018, continues its development in Eastern Europe and starts to invest in South America since 2020 with plans to open stores in Brazil, Chile, Colombia, Mexico and Peru in the upcoming years, as underlined on the IKEA website.

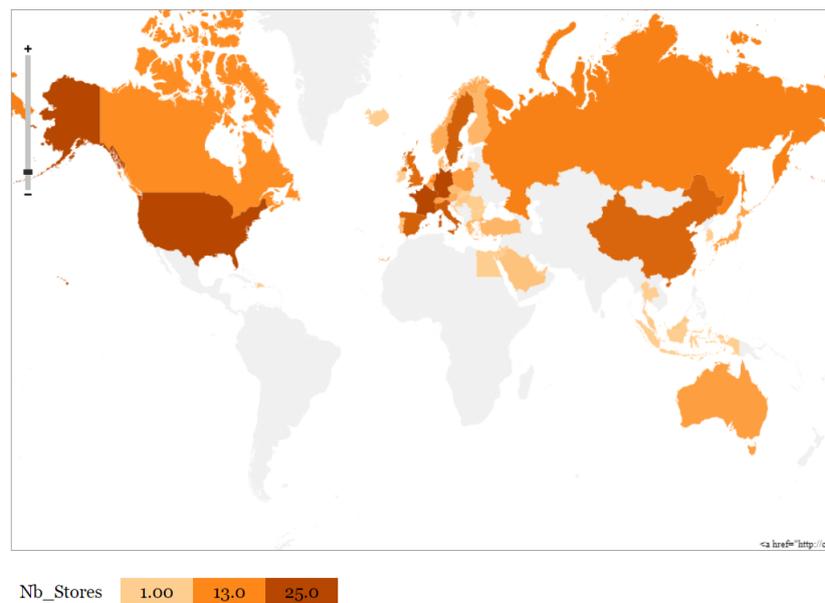


Figure 3 – IKEA presence map in 2015

their total exports, the weights of these products for the rest of the Scandinavian countries considered (Denmark, Sweden, Finland) is rather important: depending on the year and on the country, these 48 products accounted for about 5 to 15% of their total exports. Our work will begin by concentrating on the impact on trade for these 48 product categories when IKEA enters a market compared to the rest of the products.

We also go further in the investigation of our IKEA culture-promotion effect in the last part of our analysis. As it is well known, IKEA edit advertisement-catalogues that they send out to households every year. After running through these IKEA catalogues also available online for a number of years (1997, 1999, 2000, 2002, 2003, 2006, 2007, 2009, 2010, 2011, 2014 and 2015), we could identify a series of products explicitly designed by a Swedish designer, but also food related goods identified as a Swedish speciality. We could then link each of these products to the HS4-digits products in BACI where near substitutes are very likely to be present. We have identified 20 HS4-digits products out of the 48 products. Some examples are very illustrative: for instance, HS1601 and HS1602 are sausages and prepared meat while HS9401 and HS 9403 assembles respectively seats (convertible or not) and furniture and parts of furniture. By 2013-2015, the value share of these 20 goods in total exports of our Scandinavian economies, ranged from 50 (Sweden and Finland) to 65% (Denmark and Norway) of the 48 products taken as a whole. Interestingly, apart from Denmark where these figures did not change much during the 1995-2015 period, they were multiplied by 1.5 to 2 for the three other countries in 20 years. We shall call the goods related to these 20 categories as the IKEA-like highly cultural goods, as the latter correspond to those sold by

IKEA and embodying explicitly a high cultural content when advertised by IKEA. Hence in a second series of specifications, we shall look at how the effect on trade differs when considering these 20 categories compared to the 28 others, also sold by IKEA.

Before presenting the theory-based estimation method and the econometric results, we show some stylized facts related to IKEA presence and its potential effect on Scandinavian trade. For reasons discussed above, we consider all pairs of countries in a trade relationship in BACI except the 16 destination countries having IKEA platforms.¹² We start by plotting exports of Sweden to each destination on the left panel of the graph, and then showing the same figure but for all Scandinavia on the right.¹³ Bilateral exports of Sweden (resp. all Scandinavia) are plotted against a basic indicator of market access to each destination j . Following the gravity literature, a simple indicator of bilateral access is simply computed as the product of GDPs over geographical distance.

As a benchmark, figure 4 begins by showing the plots of *bilateral export flows* measured in logs, during the period. Notice that we have made explicit two sub-samples of destinations. A first sub-sample represents destinations with no IKEA stores (the blue dots) and another sub-sample where at least one IKEA retail store is opened in the country of destination (red dots). The idea is to see whether, for an equal level of market access, those countries which host IKEA stores trade more with Sweden (left graph) or more generally with Scandinavian countries (right graph).¹⁴ The left graph of Figure 4 shows a slightly higher tendency for Swedish exports to IKEA hosting countries compared to other destinations as one can identify a small gap between the red dots trend and that related to the blue one. Note in passing that the gap seems to close up for very high market access destinations. A quasi-similar picture, although less clear, is provided by the right graph of Figure 4, where Scandinavian countries exports are considered.

Figure 5 shows the tendencies for log of export figures based solely on the identified products in BACI which are supposed to be comparable to those sold by IKEA (i.e. 48 IKEA-like products). Here, the gap between the two patterns (IKEA presence v/s absence) widens. Again, while it appears to reduce with market access for the Swedish panel, it persists when the Scandinavian panel is considered. It is noteworthy, however, that a much higher heterogeneity around the tendency is observed for those destinations hosting IKEA, in the case of Scandinavia.

¹²The inclusion of these 16 countries does not change much the figures, however, although we know that their inclusion might overestimate the impact of IKEA –something we do not want to have– through the exports of goods directly related to IKEA.

¹³Scandinavia is represented by Sweden, Denmark, Finland and Norway.

¹⁴Notice, in passing, that IKEA is present in big and more accessible to Scandinavia countries. This justifies even more why all possible observed factors of market access need to be controlled for in our regressions below as they also determine IKEA entry. In alternative regressions we have

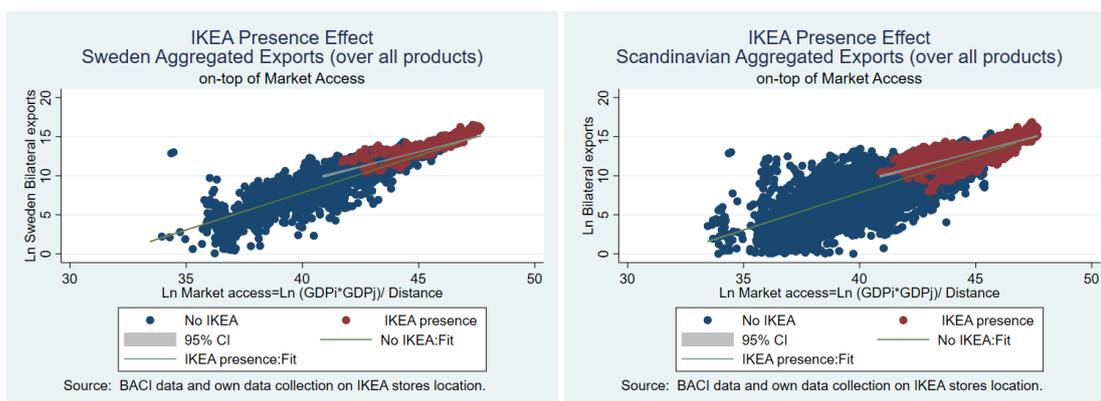


Figure 4 – Market Access, Trade and IKEA presence

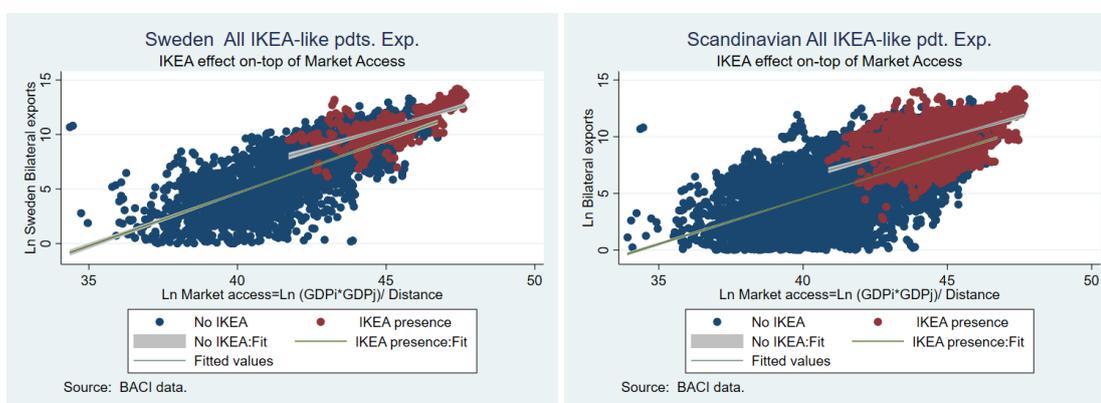


Figure 5 – Market Access, Trade in All IKEA-like products and IKEA presence

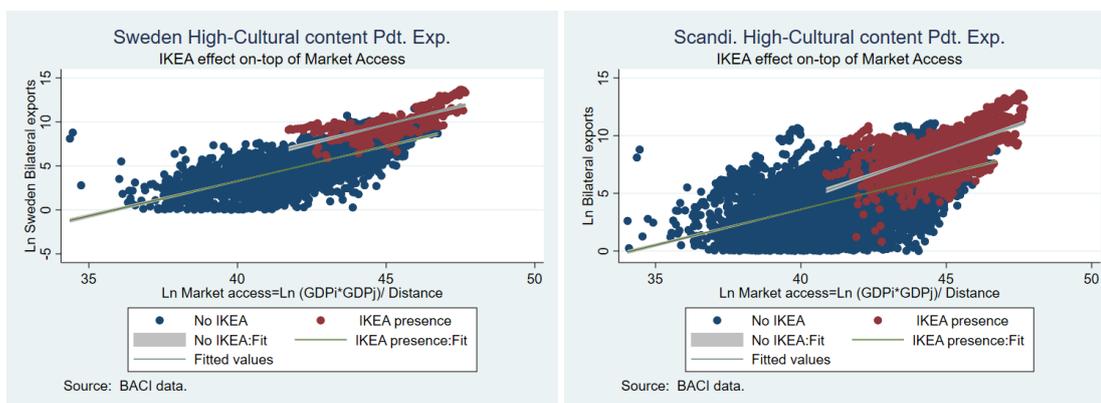


Figure 6 – Market Access, Trade in Highly-Cultural IKEA-like products and IKEA presence

This effect is even more clear cut when we construct the same graphs based on the products which are very likely to embody those goods known to be advertised as highly-cultural when sold by IKEA. Figure 6, on the left panel, shows an even higher

also used instrumental variables. See below.

gap between Swedish export flows to IKEA hosting countries and those related to the rest of the countries. The size of the gap persists whichever the level of market access. Turning to all Scandinavia panel of exports flows, one could still observe a gap which appears to actually even widen with market access. Again, and even more clearly than in Figure 5, export premia related to IKEA appear to be much more heterogeneous for the right panel (i.e. Scandinavia) compared to the left one (i.e. Sweden).

All of the above figures are consistent indeed with the view that IKEA could be increasing trade of the Swedish and possibly, all Scandinavian economies. We leave it to the econometrics section to better study this relation, and try further to identify an externality linked to the cultural dimension, while controlling for all possible confounding factors.

4. From Simple Theory to Econometrics

In what follows, we want to test econometrically whether the entry and extension of IKEA in some destination market is increasing product-level flows from Sweden or another Scandinavian country, through the culture-promotion dimension, compared to any another country exporting to that destination.

In Appendix A, we present a simple gravity-like theoretical set-up that guides our estimations and the identification we are searching for. Interested readers are invited to go through this theory if needed. We present the essence of our simple theory in what follows, in such a way one can hopefully, and clearly, understand the econometric specifications we use, based on that framework.

We use a standard CES utility function on the demand side with a representative consumer being considered.¹⁵ They are shaped by the information people receive from advertisements. On the supply side, we consider a standard market structure in monopolistic competition where firms within each country are homogenous.¹⁶ However, we allow for firms to provide their variety either directly to the market or indirectly, through one particular retail multinational.¹⁷

In our set-up, the retail multinational designs its varieties at the headquarters and then searches for producers to source them, by choosing those who propose

¹⁵We are interested in how the average consumer will be behaving after the entry of a retail multinational like IKEA. However, the tastes of our representative consumers (i.e. preferences) towards a foreign country's products are not represented by a simple parameter, as it is usually considered.

¹⁶The introduction of heterogeneity in our set-up does not change our basic prediction that a multinational offering a cultural content in its product should increase exports of the firms from the same origin country. More on this issue at the end of Appendix A.

¹⁷We have assumed only one retail multinational in the market for simplicity. Assuming more than one does not change the predictions of our model.

the lowest delivered price to the market where it has retail stores.¹⁸ The model introduces a feature however, where the retail multinational advertises its products to be designed with some cultural-content related to its country of origin. Then, the decision for the multinational to enter a given destination market is conditional upon the degree of competition in this market, the size of the latter and the change in demand towards this multinational products that its advertisement would drive. More importantly, conditional upon entry, it is the cultural-content advertised by the multinational which changes the preferences of people not only towards its own products to be sold, but more largely, towards similar ones coming from the origin country of that multinational.

In the appendix we can simply show, however, that the entry of the retail multinational increases overall competition resulting in a reduction of market prices at destination. This results further in a reduction of sales from all country sources. Hence, exports of a product from the origin country of the multinational, say s (like Sweden or Scandinavia), into destination j should be observing two opposite effects from the entry of the multinational retailer: on one hand, a culture-promotion effect positive on exports of country s only and a price (or competition effect), negative on exports from any given source to destination j . Indeed, as shown in the theory, the retail multinational is expected to reduce the average price in market j (the price index in our theory in the appendix). In turn, this factor should be affecting negatively and in a similar fashion bilateral exports of any country i to destination j . In the econometrics, one can easily control however for this competition effect produced by the multinational on prices in the market, through a combination of (time \times product \times destination) fixed effect.

More formally, think about a good h (say a household related good), which varieties are being sold in destination country j . Those varieties are sold by a number of exporting countries (indexed by i) to final consumers in j . Let I_m designates an indicator function taking on 1 if a retail multinational, say m , enters the market j and 0 otherwise. Now, consider E_{jht} to be total expenditure of j consumers on product h at date t , n_{iht} the total number of producers of varieties of good h in country i , τ_{ijt} a measure of transaction costs between i and j , at date t and P_{jht} the average price index of product h in market j . Besides, let us designate by a_{ijt} the taste parameter (i.e. the preference shifter) of an average consumer in j for varieties of product h coming from country i . Following the appendix, one should then obtain the following two equations of bilateral exports to country j in product h and at time t . The first one applies to any typical exporting country i

¹⁸This follows a very recent literature on multinationals, see Head and Mayer 2019

that is not a Scandinavian country ($i \neq s$):

$$x_{ijht} = E_{jht} n_{iht} \frac{(a_{ijt}^\sigma) \tau_{ijt}^{1-\sigma} c_{iht}^{1-\sigma}}{[P_{jht}(I_m)]^{1-\sigma}} \Lambda_{ijht}, \quad (1)$$

where σ (always higher than 1) is known to be the elasticity of substitution between varieties or, put differently in this set-up, represents the elasticity of demand to an increase in the delivered prices of the product (also can be considered to be an elasticity of demand of that product to its cost). Besides, Λ_{ijht} is an indicator of positive trade flows: it takes a value of one if a product h has been exported out from i to j at date t and zero otherwise. We show in the appendix that upon entry of the multinational (i.e. I_m switches from 0 to 1), P_{jht} decreases (through more competition) and bilateral exports of any i -country goes down (i.e. x_{ijht} decreases).

Notwithstanding, when one considers $i = s$ (s being considered in what follows to be either Sweden or Scandinavia) the value of the preference shifter a_{sjt} is expected to change too, upon the multinational entry (i.e. IKEA hereafter), which would give a second expression for country s exports of product h to destination j :

$$x_{sjht} = E_{jht} n_{sht} \frac{[a_{sjt}(I_m)]^\sigma \tau_{sjt}^{1-\sigma} c_{sht}^{1-\sigma}}{[P_{jht}(I_m)]^{1-\sigma}} \Lambda_{sjht} \quad (2)$$

In the case of country s , and upon the entry of the multinational (i.e. I_m switches from 0 to 1), P_{jht} decreases (through more competition) and reduces bilateral exports of country s as much as any other country. Nevertheless, a switch to unity of I_m , should increase preferences of representative consumers through the preference parameter a_{sjt} (in the numerator of our equation) and thus results into an increase in exports of s in product h .

Notice that the only difference that exists between equations 1 and 2 above has to do with the impact of culture promotion on bilateral exports of s countries after m 's entry into the market j .¹⁹

We now take these equations to the test. One way to identify the impact of the promotion of Scandinavian culture by IKEA (through the term $(a_{sjt}(I_m))$), is to run an econometric equation, that is the counterpart of equations 1 and 2, using the Poisson Pseudo Maximum Likelihood (PPML) estimation method. PPML has

¹⁹It is interesting to add that we are focusing on a positive externality specific to export flows of firms based in country s . However, the externality on global sales of those firms with affiliates abroad might be even higher (i.e. think about tablewares, say, made by a Swedish subsidiary in Poland).

the nice property to account for 0 flows when needed (thus accounts implicitly for the Λ term). It is also consistent with extended structural gravity set-ups used in the recent literature. Note that we have also run OLS regressions as an alternative, using only positive flows and found qualitatively similar results in terms of sign and significance. In magnitude, the OLS estimators obtained on IKEA were even higher than those of PPML. However, OLS does not account neither for heteroscedasticity nor for 0 flows on one hand both of which could bias the results (see Santos Silva and Tenreyro 2006). Besides, because we want our estimator to be consistent with a structural approach like that of Anderson and Van Wincoop (2004) we preferred to follow Fally (2015) by showing only PPML regressions. Also, our econometric equation presented below controls for unobservables like the price index (P_{jht}) and the product level expenditure E_{jht} , through the introduction of a three dimensional fixed effect FE_{jht} (i.e. Time $t \times$ Product $h \times$ Importer j). The inclusion of (jht)-fixed effects does more than this: they actually control for all unobservable shocks related to a typical product h , in destination country j overtime. They also handles all possible shocks which are specific to h and/or j overtime such as a rush towards worldwide trendy products on one hand or a structural change in the preferences of representative consumers of country j overtime that is independent from the trading partner. Also, let FE_{iht} to be a (Time $t \times$ Product $h \times$ Exporter i) fixed effect: it represents all changes in exporters' characteristics of product h , overtime. This includes their production costs c_{iht} and all factors specific to exporters overtime that might affect their number n_{iht} , independently from the price index and the (culture-promotion) preference shifter. More broadly, the inclusion of (iht)-type fixed effects allows to control for all unobservable shocks originating from i exporters overtime and, in particular, those related to a typical product h . Typically, they capture a change in the specialization of countries across products.

The econometric counterpart of the theory equations taken to the test will then be:

$$x_{ijht} = \exp(\beta \cdot \tau_{ijt} + \beta_i \cdot Z(\text{IKEA})_{ijt} + FE_{iht} + FE_{jht}) \cdot u_{ijht} \quad (3)$$

where β shall be our parameter of interest. This parameter should reveal the culture promotion effect of IKEA on Scandinavian exporters. The variable τ_{ijt} is the usual transaction costs variable that can be proxied by common language, geographical distance, or colonies but also includes regional and bilateral trade agreements. Language is a "dummy" variable that takes value 1 if i and j have a common language and 0 otherwise. Contiguity is a binary variable that is equal to 1 if i and j have a common border. Colony is a dummy variable that is equal to 1 if i and j are colonies at time t . RTAs captures the presence of a regional /bilateral trade agreement (the dummy is 1 if the i and j are members of a trade agreement,

otherwise it is 0). We also control for a bilateral foreign investment variable to control for informational externalities and falling communication costs.²⁰ Last but not least, the IKEA variable $Z(IKEA)_{sjt}$ can be expressed in two ways. First, it is expressed as a dummy variable that takes 1 when IKEA is observed to be present in the market at time t **and** when the flow observed is originating from the Scandinavian country under consideration. It takes 0 otherwise. Alternatively, $Z(IKEA)_{sjt}$ is considered as a continuous variable that is represented by the *number of IKEA stores*. To account for possible non linearities, we test a more general formulation where we add to the number of stores, its square, that is the *(number of stores)²*.

4.1. Other empirical considerations

As already mentioned in section 3, recall that we have constructed our dataset of IKEA presence and number of stores using the information from the following website <http://franchiser.ikea.com/worldmap> from 1995 to 2015. On the trade side, recall that we have classified our products first, into two categories: a category of products of 48 goods that resemble to those sold by IKEA (see the appendix) and a category that includes the rest of the observed products. Further, recall that within the 48 goods sold by IKEA, 20 of them have been classified as resembling to IKEA's products that were considered to be a vehicle of the Scandinavian culture (highly-cultural products).

Besides, for reasons already raised in the prior sections, we exclude importing countries that have IKEA distribution centers together with IKEA stores (i.e. 16 importing countries were excluded) as we want to focus only on IKEA's externality on flows from Sweden or Scandinavia which are completely independent from IKEA (exclude intra-IKEA's trade between Sweden/Scandinavia and a destination country when IKEA opens up a store there).

5. Results and Interpretation

We are interested in whether or not IKEA produces a positive externality on Scandinavian exports. We begin by considering the four Scandinavian countries (Sweden, Denmark, Norway and Finland) as to be our group of interest which exports need to be compared with those of the rest of the exporting countries in our sample. Thus, we have to look at how the estimates differ between the two groups, after IKEA entry compared to before its entry into destination j .

²⁰One could also insert other controls affecting bilateral trade overtime like bilateral tariffs or another more specific RTA indicator like being part of the EU, having the same currency, etc... As it will be seen below, when we emphasize the effect of highly cultural goods from other goods sold by IKEA, our specifications could then account for all possible changes across a trilateral dimension: exporter \times importer \times year effect.

Because IKEA is a Swedish company, one would expect the latter to benefit from an even greater externality than the rest of Scandinavia. We thus prefer to run two sets of regressions: one where Sweden is considered alone and another where the three other Scandinavian countries are considered collectively (while excluding Sweden). Of course, in both cases, the rest of the countries, which would become a sort of control group (of exporters and importers) do not change.

5.1. First set of results

In Table 1 we present the first set of results obtained through PPML, solely based on the category of 48 products which are similar to those sold by IKEA and where Sweden is the only considered country. In column 1 we show the results based on equation 3, where typical gravity variables are being introduced, along with the *Product* \times *Exporter* \times *Time* and *Product* \times *Importer* \times *Time* series of fixed effects. For these products, the results regarding the traditional transaction costs variables (distance, contiguity, common language, colonial relationships, RTAs) appear to be in line with those of the literature, generally based on more aggregated data, or on a broader set of products. Bilateral foreign direct investments, introduced as an additional control, appear to be positively and significantly related to trade in those goods.

More interestingly, the IKEA presence dummy appears to be positively related with Swedish trade for the 48 products, with high statistical significance. Column 2, reports the results of a more general specification where bidirectional effects are being introduced (*Exporters* \times *Importer* effects), sweeping out all bilateral variables which do not vary over time. The effect of our multinational of interest is then divided by almost 4 but remains positive and statistically significant at the 1% level. Column 3 reproduces the same result on the IKEA effect by including an even more general specification with (*Exporters* \times *Importer* \times *Product* fixed effects). Column 4 specification replicates that of column 3 by adding zero flows²¹. Notice that accounting for standard errors, the values of the coefficients of columns 2 to 4 are not statistically different from each other. They suggest that the presence of at least an IKEA store in one country results in an average increase of Swedish exports in those 48 products, by about 2.2 to 2.8% (i.e. $(Exp(0.022) - 1) \times 100$ to $(Exp(0.028) - 1) \times 100$).

²¹In practice, we have added rows with zero trade values for products and pairs of partners at some date t , whenever the exporter had been exporting that product to any country in the world during the observed period. This actually implies that the exporter has the resources to produce that product before exports but some barriers to trade prevent its exports everywhere and at every observed date. This also helps explain why we produce tests results with around 8 millions of observations in the following tables instead of 22 millions that we would have used had the panel been balanced.

Table 1 – Effect of IKEA on Sweden and on products similar to those of IKEA

	1	2	3	4	5	6	7	8
ln(Distance)	-0.204 ^a (0.003)				-0.204 ^a (0.003)			
Contiguity	0.110 ^a (0.004)				0.109 ^a (0.004)			
Common Official Language	0.146 ^a (0.003)				0.146 ^a (0.003)			
Colonial Relationship	0.168 ^a (0.005)				0.168 ^a (0.004)			
IKEA Presence Dummy	0.082 ^a (0.011)	0.022 ^a (0.007)	0.028 ^a (0.007)	0.026 ^a (0.007)				
RTAs	0.097 ^a (0.003)	0.014 ^a (0.002)	0.008 ^a (0.002)	0.009 ^a (0.002)	0.097 ^a (0.003)	0.014 ^a (0.002)	0.008 ^a (0.002)	0.009 ^a (0.002)
ln(FDI)	0.021 ^a (0.001)	0.000 (0.000)	0.001 ^a (0.000)	0.001 ^a (0.000)	0.021 ^a (0.001)	0.000 (0.000)	0.001 ^a (0.000)	0.001 ^a (0.000)
Number of IKEA stores					0.037 ^a (0.005)	0.004 (0.003)	0.006 ^b (0.003)	0.007 ^b (0.003)
Number of IKEA stores ²					-0.003 ^a (0.001)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	2693880	2689249	2598646	7898346	2693880	2689249	2598646	7898346
Product_Exporter_TimeFE	YES	YES	YES	YES	YES	YES	YES	YES
Product_Importer_TimeFE	YES	YES	YES	YES	YES	YES	YES	YES
Exporter_ImporterFE	NO	YES	-	-	NO	YES	-	-
Product_Exporter_ImporterFE	NO	NO	YES	YES	NO	NO	YES	YES
Zero Trade Flows Included	NO	NO	NO	YES	NO	NO	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

Columns 5 to 8 replicate those of 1 to 4, but where IKEA presence dummy has been replaced by two variables: the number of IKEA stores and its square in the destination country. While in column 5, the results seem to suggest an inverted U-shape relation between the number of stores and exports from Sweden (i.e. coefficients on the number of stores is positive while negative on its square), this relation breaks up in the subsequent specifications to suggest that the relationship is linear (i.e. the coefficient on the square term is not statistically significant in columns 6 to 8). While in column 6 the impact of IKEA is still positive while non-statistically significant, it turns out to be statistically significant however in the last two columns where all possible sets of fixed effects are being considered along with zero flows. The coefficient on the number of IKEA stores obtained then is around 0.007. This suggests that while one store produces 0.7% more exports from Sweden in the product categories under study, the opening of say, three stores in a destination country appears to be producing 2.1% more additional exports from Sweden, a figure which is very much in line with the effect estimated using the IKEA presence dummy variable above.

Table 2 replicates specifications 2 to 4 and 6 to 8 from Table 1, where the considered countries are now the rest of Scandinavian countries (ie. *Other Scandinavia*). Specification 9 to 11 which represent the results related to IKEA's Presence dummy, report statistically significant coefficients around 0.02 to 0.027, which, accounting for standard errors, are somewhat similar to the ones obtained from Sweden (see corresponding columns 2 to 4 in Table 1). The following specifications 12 to 14, employing the number of stores variables suggest here, however, an inverted U-shape effect from IKEA entry. That is, the higher the number of IKEA stores in a destination country the higher the positive incremental effect on *Other Scandinavian* exports into that country but up till a turning point whereby a further increase in stores reduces the obtained effect on exports. But by some simple calculation one would find a turning point of about 1.83 in columns 13 and 14²². This suggests then that, say, after a second store opening, the impact on exports of other Scandinavian countries exports starts becoming negative which is at odds with the results in columns 9 to 11. Therefore, we prefer arguing that the estimates obtained so far on Scandinavian countries other than Sweden are not robust enough in order to offer an unambiguous estimation of the impact of IKEA on *Other Scandinavia*.

In what follows next, we ask whether the externality of IKEA spreads over other products than those which are similar to the products sold by IKEA. The idea here is to see whether the promotion of a country's culture by a multinational benefits to a broader number of products and thus producers in other sectors, beyond the

²²The turning point in column 14, is obtained through $-0.11/(2*0.003)=1.83$.

Table 2 – Effect of IKEA on other Scandinavian countries and on products similar to those of IKEA

	9	10	11	12	13	14
IKEA Presence Dummy	0.020 ^a (0.006)	0.024 ^a (0.006)	0.027 ^a (0.006)			
RTAs	0.085 ^a (0.003)	0.089 ^a (0.003)	0.094 ^a (0.003)	0.085 ^a (0.003)	0.091 ^a (0.003)	0.095 ^a (0.003)
ln(FDI)	0.005 ^a (0.000)	0.005 ^a (0.000)	0.006 ^a (0.000)	0.005 ^a (0.000)	0.005 ^a (0.000)	0.007 ^a (0.000)
Number of IKEA stores				0.009 ^a (0.003)	0.011 ^a (0.003)	0.011 ^a (0.003)
Number of IKEA stores ²				-0.001 ^b (0.000)	-0.003 ^b (0.000)	-0.003 ^b (0.000)
Observations	2750711	2649715	7786359	2750711	2649715	7786359
Product_Exporter_TimeFE	YES	YES	YES	YES	YES	YES
Product_Importer_TimeFE	YES	YES	YES	YES	YES	YES
Exporter_ImporterFE	YES	-	-	YES	-	-
Product_Exporter_ImporterFE	NO	YES	YES	NO	YES	YES
Zero Trade Flows Included	NO	NO	YES	NO	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

Table 3 – Effect of IKEA on Sweden and on other products

	1'	2'	3'	4'	5'	6'	7'	8'
ln(Distance)	-0.213 ^a (0.002)				-0.212 ^a (0.002)			
Contiguity	0.103 ^a (0.005)				0.103 ^a (0.005)			
Common Official Language	0.084 ^a (0.002)				0.084 ^a (0.002)			
Colonial Relationship	0.136 ^a (0.003)				0.136 ^a (0.003)			
IKEA Presence Dummy	0.036 ^a (0.006)	0.005 ^b (0.002)	0.006 ^a (0.002)	0.007 ^a (0.002)				
RTAs	0.066 ^a (0.002)	0.005 ^a (0.002)	0.006 ^a (0.002)	0.006 ^a (0.002)	0.065 ^a (0.002)	0.005 ^a (0.002)	0.006 ^a (0.002)	0.006 ^a (0.002)
ln(FDI)	0.019 ^a (0.000)	-0.001 ^a (0.000)	-0.004 ^a (0.000)	-0.004 ^a (0.000)	0.019 ^a (0.000)	-0.001 ^a (0.000)	-0.004 ^a (0.000)	-0.004 ^a (0.000)
Number of IKEA stores					0.022 ^a (0.003)	0.002 (0.001)	0.002 ^b (0.001)	0.002 (0.001)
Number of IKEA stores ²					-0.002 ^a (0.000)	-0.000 (0.000)	-0.000 ^b (0.000)	-0.001 ^b (0.000)
Observations	41015463	41014222	40100240	138019252	41015463	41014222	40100240	138019252
Product_Exporter_TimeFE	YES							
Product_Importer_TimeFE	YES							
Exporter_ImporterFE	NO	YES	-	-	NO	YES	-	-
Product_Exporter_ImporterFE	NO	NO	YES	YES	NO	NO	YES	YES
Zero Trade Flows Included	NO	NO	NO	YES	NO	NO	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

Table 4 – Effect of IKEA on other Scandinavian countries and on other products

	9'	10'	11'	12'	13'	14'
IKEA Presence Dummy	0.005 ^c (0.002)	0.005 ^c (0.002)	0.006 ^c (0.002)			
RTAs	0.062 ^a (0.002)	0.062 ^a (0.002)	0.064 ^a (0.002)	0.062 ^a (0.002)	0.062 ^a (0.002)	0.064 ^a (0.002)
ln(FDI)	0.003 ^a (0.000)					
Number of IKEA stores				0.001 (0.001)	0.000 (0.001)	0.001 (0.001)
Number of IKEA stores ²				-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Observations	40019314	40001690	138231442	40019314	40001690	138231442
Product_Exporter_TimeFE	YES	YES	YES	YES	YES	YES
Product_Importer_TimeFE	YES	YES	YES	YES	YES	YES
Exporter_ImporterFE	YES	-	-	YES	-	-
Product_Exporter_ImporterFE	NO	YES	YES	NO	YES	YES
Zero Trade Flows Included	NO	NO	YES	NO	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

products which are advertised by the multinational itself.

Table 3 does exactly that. It reproduces exactly the same specifications as Table 1 (where Sweden is the benchmark country only), while now looking at the impact on the products that are *not sold* at all by IKEA (the 1,950 lines of HS4 products left in the BACI database). Interestingly, whether one applies the dummy or the number of stores variables, the impact on exports from Sweden appears to be positive and statistically significant, which suggest indeed a positive externality of IKEA on Swedish overall products on average. Now, the effects appear to be 3 to 4 times smaller in magnitude than those of Table 1, which suggests a smaller externality on the rest of the products.

Table 4 replicates again the same type of regressions as Table 3 but now by considering *Other* Scandinavian countries. And again, the results here appear to be less robust than for Sweden. While the dummy variable suggests a positive externality that seems to be equivalent to that observed for Sweden, the number of stores variables do not produce any statistically significant impact on Other Scandinavia's trade.

5.2. Highly cultural goods

A question that can be raised is the following: is IKEA's positive externality, estimated so far at least for Sweden exports, related to its advertisement of the Swedish culture? Some might argue that IKEA's setting of a new store in some destination might help increasing business networks between Sweden and the destination country. Others might argue that IKEA entry into some destination is itself endogenous to some new policy of openness of the destination country towards Sweden or, say, all Scandinavian countries. Finally, another confounding factor might be that consumers increase their perceived quality of Swedish products when they consume IKEA's products, so that what we might be picking is simply a change in the perception of consumers in terms of quality.²³ So, how can we be confident that it is indeed the culture vehicled by IKEA's advertisements that is producing the externality we are attempting to identify, not any other confounding factor?

One way to do so, is to consider a narrower list of products in the trade data which resemble to those for which a typical advertisement of Swedish culture is undertaken by IKEA, through their catalogues' adverts. We have already described in section 3 and shown in the appendix the 20 products that we have identified

²³Another argument is that IKEA could be viewed as a trend setter inciting firms from the rest of the world to copy the products it sets in the first place. Thus, the change in preferences of average consumers would come from producers copying IKEA products. This mechanism might be at work but then it should be affecting positively alike exports coming from s and all other i countries.

as to have a high-cultural content of the Swedish culture (or, to a lesser extent, a content of the Scandinavia culture as a whole).

By differentiating the goods sold by IKEA into two further categories (20 highly-cultural v/s the rest) we have now the possibility to identify separately the impact of IKEA on exports from Sweden for the highly-cultural related products compared to the rest being sold by IKEA too. Table 5 presents the results for the particular impact on Swedish exports compared to the rest. As we want to concentrate on highly cultural goods, we introduce now an interaction term between the IKEA considered variable and a dummy indicating a highly cultural good. This new variable varies now along 4 dimensions (i.e. exporter, importer, time and product). This allows us then to introduce a new set of fixed effects: $Exporter \times Importer \times Time$ fixed effects that replace the traditional bi-directional fixed effect introduced in the prior tables. By so doing, these new series of fixed effects will thus control for all of the events that would have increased Swedish exports into a destination j and which have taken place exactly at the same time as IKEA's decision to enter the market or to set an additional store.

The results in columns 15 to 18 obtained from Table 5 are actually very much similar in magnitude and sign to those of Table 1, accounting for standard deviations. The only difference stems from the level of significance which is now at around 10%. This smaller significance is obtained for two reasons: first, we are considering a set of fixed effects including time varying bi-directional fixed effects and second, we are basing our estimates on 20 categories of products instead of the 48 that we have considered so far²⁴.

Table 6 runs exactly the same specifications for the panel where Other Scandinavian countries are considered (columns 15' to 18'). Again, the results are less significant and less robust than those for Sweden. Especially, the effect of the interaction term on the IKEA dummy variable does not appear to be statistically significant when including zero flows. On the opposite, however, the number of stores comes out now with some statistical significance, while the square term does not appear anymore to be significant.

²⁴When we replace the time varying bidirectional fixed effects by non-time varying ones, the results become more statistically significant. Results are available upon request.

Table 5 – Effect of IKEA on Sweden and on similar products than those of IKEA, with Highly Cultural Goods

	15	16	17	18
Highly Cultural Goods Dummy x IKEA Presence Dummy	0.018 ^c (0.009)	0.018 ^c (0.009)		
Number of IKEA stores x Highly Cultural Goods Dummy			0.007 ^d (0.004)	0.007 ^d (0.004)
Number of IKEA stores ² x Highly Cultural Goods Dummy			-0.001 (0.000)	-0.001 (0.000)
Observations	2537002	7526132	2537002	7526132
Product_Exporter_TimeFE	YES	YES	YES	YES
Product_Importer_TimeFE	YES	YES	YES	YES
Product_Exporter_ImporterFE	YES	YES	YES	YES
Exporter_Importer_TimeFE	YES	YES	YES	YES
Zero Trade Flows Included	NO	YES	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively. (The p-value is equal to 0.109 for ^d)

6. Robustness checks

In this section we run a battery of robustness checks. We want to assess whether or not some other confounding effects of unobserved factors are producing the results we are obtaining on the IKEA variables. First, we run a time specific falsification test: Here, we make use of a new variable, IKEA entry into a destination at some particular date t (as an alternative to IKEA presence at that date). While we expect IKEA entry at date t to have an effect on exports by date t not before that date, a regression where we include our IKEA dummy should then provide no statistically significant and positive effect at a past date, say $t - 1$ or $t - 2$. Second, we investigate the robustness of our results through another export country-specific falsification test : we look at how Ireland, not Sweden, is being affected by IKEA's entry for reasons developed below. Third, we test the sensitivity of our results to the presence of another Swedish multinational retailer (i.e. *H&M*) in the destination markets. We perform this robustness test as, it could be that IKEA is indeed producing positive externalities but which might not be related to culture-promotion effects *per se*, but might be linked more to IKEA's ability as an important multinational (as much as *H&M*'s one), to create or expand international networks. Last but not the least, because we have many dimensions in our panel (Export \times Import \times HS product \times year), some might argue that we are not estimating the impact of a switch in the IKEA variables (IKEA presence and IKEA number of stores) in a very neat way. We thus provide Diff-in-Diff estimates by following the new Difference-in-Difference literature related to the seminal recent work of De Chaisemartin and d'Haultefeuille (2020).

6.1. First falsification test: time lags

A first simple test of confounding factors is to look at whether or not an IKEA's new store openness at time t is associated with an increase in exports from Sweden at exactly the same year, t . If however, one observes that IKEA's openness of a store at t is increasing exports from Sweden at a prior date then this would mean that some confounding factors (like progressive openness policies spanning over several years) are being captured by the IKEA variable. Table 7 presents the results of, again, a PPML series of regressions where two dummy variables related to IKEA are considered. A first dummy indicates whether or not one observes at a precise time t a very first new IKEA store to open in some destination (i.e. IKEA's entry into the market). A second dummy captures, for destinations where IKEA is already settled, whether or not one observes an additional IKEA store opening at date t (i.e. any extension of the IKEA's network within the destination country). These two dummies are being used as right-hand variables in three alternative settings to explain the value of bilateral exports at dates t , $t - 1$ and $t - 2$. The mentioned table shows indeed that the two dummies of interest appear to have a positive and statistically significant impact on current Sweden's trade, while they

Table 6 – Effect of IKEA on Other Scandinavian countries and on similar products than those of IKEA, with Highly Cultural Goods

	15'	16'	17'	18'
Highly Cultural Goods Dummy x IKEA Presence Dummy	0.016 ^c (0.008)	0.011 (0.007)		
Number of IKEA stores x Highly Cultural Goods Dummy			0.003 ^c (0.003)	0.005 ^c (0.003)
Number of IKEA stores ² x Highly Cultural Goods Dummy			0.000 (0.000)	-0.001 (0.000)
Observations	2746563	7591395	2746563	7591395
Product_Exporter_TimeFE	YES	YES	YES	YES
Product_Importer_TimeFE	YES	YES	YES	YES
Product_Exporter_ImporterFE	YES	YES	YES	YES
Exporter_Importer_TimeFE	YES	YES	YES	YES
Zero Trade Flows Included	NO	YES	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

fail to explain lagged trade of Sweden at years $t - 1$ and $t - 2$. This is consistent with the fact that IKEA produces a specific shock on bilateral exports of Sweden at time t , independent from any other factors that could span over previous years.

6.2. Falsification test 2: Ireland as an artificially benchmark country

We suggest another test where Sweden and other Scandinavian countries are kept out of the study and replaced now by Ireland as an artificially benchmark country. The choice of Ireland is not random. Ireland is a country rather close to Sweden in terms of resources (labour, capital, climate), in terms of its size, its European culture and geographical location with the rest of world markets. Ireland is also an important centre of multinationals undertaking activities in Europe and throughout the world. One might think then that if IKEA's setting of a store in a destination country contributes to a reduction in telecommunication and other management costs between the hosting country and all partners in the network of IKEA, then one should observe a higher trade not only with Scandinavia but also with a country like Ireland. Table 8 suggests that Ireland does not benefit from IKEA's presence.²⁵

6.3. Another Swedish multinational: *H&M*

A last series of regressions is conducted while controlling now for another important multinational company which originates from Sweden, *H&M*²⁶. Again, the idea is to push the analysis further towards identifying the culture-promotion effect on trade of a country, embodied in the products being sold by the multinational. Actually, few people know that *H&M*, a textile multinational, is a Swedish firm, precisely because this firm does not advertise Sweden in its products (Norby and Hajek, 2011). We think then that if there is a difference in the effect on Swedish exports from a setting of an IKEA store compared to an *H&M* one, this should be very probably linked to the culture-promotion effect we wish to identify. Because, *H&M* and IKEA are in different industries and sell completely different products, we run two series of regressions: a first one based on IKEA-alike products (columns 29 and 30, respectively excluding, and then including zero flows); and a second series, on the other hand, based on data specific to exports in *H&M*-alike products, basically clothing and other textiles accessories sold by *H&M*²⁷.

²⁵Although they are not statistically significant, the results indicate that Ireland seems to be negatively affected by IKEA's presence. This is actually in line with what we would expect when referring to the theory as the negative sign could be the result of a part of a competition effect that has not been completely conditioned out by the trilateral fixed effect introduced so far: Product \times Importer \times Time.

²⁶The yearly data on the presence of *H&M* and on the number of *H&M* stores in each destination country is collected using the annual reports and statistics available on the *H&M* website.

²⁷We have selected 29 products in our HS4 classification. These concern the following products: HS6101 to HS6112, HS6114 to HS6116, HS6201 to HS6203, HS6205 to 6209, HS6211, HS6213,

Table 7 – Falsification test 1: Effect of IKEA on Sweden and on similar products than those of IKEA, with dependant trade variable defined with lags

	19	20	21	22	23	24
	in t			in $t - 1$		in $t - 2$
First IKEA store (date t)	0.059 ^a (0.021)	0.060 ^a (0.021)	0.026 (0.031)	0.024 (0.021)	0.047 (0.031)	-0.000 (0.018)
Additionaln IKEA store (date t)	0.024 ^a (0.009)	0.026 ^a (0.009)	0.015 (0.008)	0.013 (0.008)	0.010 (0.008)	0.011 (0.008)
RTAs	0.008 ^a (0.002)	0.009 ^a (0.002)	0.008 ^a (0.002)	0.009 ^a (0.002)	0.008 ^a (0.002)	0.009 ^a (0.002)
ln(FDI)	0.001 ^a (0.001)	-0.001 ^a (0.000)	0.001 ^a (0.001)	-0.001 ^a (0.000)	0.001 ^a (0.001)	-0.001 ^a (0.000)
Observations	2637543	7543328	2637543	7543328	2637543	7543328
Product_Exporter_TimeFE	YES	YES	YES	YES	YES	YES
Product_Importer_TimeFE	YES	YES	YES	YES	YES	YES
Product_Exporter_ImporterFE	YES	YES	YES	YES	YES	YES
Zero Trade Flows Included	NO	YES	NO	YES	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

Table 8 – Effect of IKEA on Ireland and on similar products than those of IKEA

	25	26	27	28
IKEA Presence Dummy	-0.014 (0.010)	-0.012 (0.010)		
RTAs	0.008 ^a (0.002)	0.009 ^a (0.002)	0.008 ^a (0.002)	0.009 ^a (0.002)
ln(FDI)	-0.001 ^a (0.000)	-0.001 ^a (0.000)	-0.001 ^a (0.000)	-0.001 ^a (0.000)
Number of IKEA stores			-0.006 (0.005)	-0.005 (0.005)
Number of IKEA stores ²			0.001 (0.001)	0.000 (0.001)
Observations	2700212	7879635	2700212	7879635
Product_Exporter_TimeFE	YES	YES	YES	YES
Product_Importer_TimeFE	YES	YES	YES	YES
Exporter_ImporterFE	NO	NO	NO	NO
Product_Exporter_ImporterFE	YES	YES	YES	YES
Zero Trade Flows Included	NO	YES	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

We report the results regarding the *H&M*-alike products in columns 31 and 32, respectively. If *H&M* happens to increase exports, especially where it is expected to be the more effective (i.e. in clothing and other accessories products), then one should conclude that the externalities from opening a store held by a Swedish multinational do not have to be linked necessarily to culture-promotion. Table 9 shows the PPML results when adding an *H&M* presence dummy together with the IKEA related dummy.

Again, with no surprise IKEA's coefficients continue to appear statistically significant and with a positive sign and very similar in magnitude to what it has been obtained above, in columns 29 and 30 (IKEA-alike products). They seem to be also weakly statistically significant in one of the two specifications related to the clothing and accessories products (31 and 32), but with a coefficient 10 to 20 times weaker than that observed in columns 29 and 30.

Now let us turn to the *H&M* dummy variables introduced in table 9. Strikingly, they do not suggest any statistically significant link with Swedish exports. In particular, notice that *H&M* related coefficients do not even appear to be statistically significant in columns 31 and 32 where only *H&M*-alike products are concerned.

HS6214, HS6215 and finally, HS6404 and HS6505.

Table 9 – Effect of IKEA and H&M stores on Swedish exports in IKEA-alike and H&M-alike products

	IKEA-alike pdts		H&M-alike pdts.	
	29	30	31	32
IKEA Presence Dummy	0.025 ^a (0.005)	0.024 ^a (0.005)	0.002 ^c (0.001)	0.001 (0.001)
H&M Presence Dummy	0.002 (0.008)	0.001 (0.008)	0.007 (0.006)	0.007 (0.007)
RTAs	0.008 ^a (0.002)	0.008 ^a (0.002)	0.008 ^a (0.002)	0.008 ^a (0.002)
ln(FDI)	0.001 ^a (0.000)	0.001 ^a (0.000)	-0.001 ^a (0.000)	-0.001 ^a (0.000)
Observations	2,499,446	7,948,706	1,674,892	4,578,964
Product_Exporter_TimeFE	YES	YES	YES	YES
Product_Importer_TimeFE	YES	YES	YES	YES
Exporter_ImporterFE	NO	NO	NO	NO
Product_Exporter_ImporterFE	YES	YES	YES	YES
Zero Trade Flows Included	NO	YES	NO	YES

Note: Robust standard errors in parentheses, clustered by importer-exporter, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

6.4. Diff-in-Diff (DD) estimations

So far, we have shown results based on PPML specifications. As already argued above, these are fully grounded on micro-foundations of gravity equations in general equilibrium on one hand (See Fally, 2015) while accounting for the heteroscedasticity of the residuals that could bias the obtained estimators on the other hand (See Santos Silva and Tenreyro 2006 **(add this biblio)**). Nevertheless, our trade data vary along 4 dimensions (Exporter, Importer, HS4 products and year) while the shock being studied involves to look at how exports perform for one country in particular, namely Sweden, and more broadly one region, Scandinavia. Some might argue then that by handling all of these dimensions we might not be estimating in a neat way the impact of a switch in the IKEA variables (IKEA presence and IKEA number of stores) on export performance of those countries. One reason has to do with common trends before the IKEA shock: typically, we do not know whether Swedish and other countries flows into one destination were following a common trend before the latter experiences the IKEA shock. We do not know neither whether bilateral Swedish exports across destinations and time

²⁸We obtain exactly the same signs and significance when considering the number of IKEA stores v/s the number of H&M stores. Results are upon request.

were following common trends before IKEA enters some of those destinations at some given years.

Besides, assuming the hypothesis of common trend appears to be valid in our data, another issue arises from the estimation of the IKEA effect. As we are running PPML regressions, our estimated coefficient might not be capturing an average treatment effect (ATE) per se, based on linear regressions in the Diff-in-Diff (DD) literature.

For these reasons, we have chosen in this subsection to turn to linear regressions and estimate consistent average treatment effects on one hand while testing for before treatments common trends on the other hand. We do that by following the new DD literature (see De Chaisemartin and D'Haultfoeuille, 2020)²⁹. The estimator they set accounts for heterogenous effects across groups (treated and untreated) and overtime. They show how this estimator can produce a neat average treatment effects (ATE) estimator on one hand while it can also handle non-binary treatments on the other, the latter being necessary in our case to look at the impact of the number of IKEA stores that open in a destination, overtime. We implement what they call the DID_M estimator (DID for Multiple groups and periods) through their package `did_multiplegt` delivered in *Stata*.

Besides departing from PPML, one shortcoming to apply DD specifications to our case is that they are still not very well suited to handle our 4 dimensions whereby treated and untreated groups can then vary over exporters, destinations, products, time and all different combinations of these dimensions. We have then opted for a smaller panel to work with by concentrating on bilateral exports of Sweden products overtime. We are then left out with a panel very close to that handled by the DD literature, where Swedish exports vary along products, destinations and overtime. We stick to the set-up proposed by De Chaisemartin and d'Haultfoeuille in what follows by defining the country of destination to represent the group variable. Shocks take place at destination (IKEA entry or new stores) and thus some destination countries will be treated overtime other will not. Hence, we shall be asking by how much exports of Swedish products into a destination increase on average when the destination experiences an IKEA new investment shock (switches from being untreated to being treated).³⁰

The aim here is to see whether the IKEA effect measured for the whole panel in PPML in previous tables is still robust to these new techniques in sign and significance but also in magnitude, recalling again that PPML has some properties

²⁹The authors would like to thank especially Clément De Chaisemartin for his great advices related to the implementation of their DD estimator on our data

³⁰We have also worked on another specification where we have defined a group by a pair (product-destination) instead of defining the group by units being only destinations. Using such a framework produces qualitatively the same sign and significance of estimators (see appendix) and will be discussed further below.

not accounted for by DD specifications, and vice versa. Table 10 presents the obtained results based on our now 3 dimensions' Swedish subpanel of bilateral exports.

Columns 1 to 4 employ 3 different estimation techniques to look at the impact of IKEA presence (binary treatment). The first column reproduces the PPML specifications used in previous tables but here applied on our Swedish subpanel. Because of the three dimension structure of the now studied subpanel, we have added (Product \times Importer) and (Product \times year) fixed effects. The obtained effect is about twice in magnitude than the one obtained on the whole dataset (see table 1) but still of the same order of magnitude. The second column presents the fixed effect estimator obtained from a linear regression based on the same subsample, with exactly the same combination of fixed effects. Here, the effect appears to be much higher (around 0.46).³¹ The third column shows the DD estimator defined by De Chaisemartin and d'Haultfoeuille (2020). The estimator in column 3 appears to be positive and of the same magnitude of the fixed effects one while not statistically significant, because of a high standard error related to the estimator. In the fourth column, we then concentrate on the impact of IKEA for Swedish exports of goods which resemble to those with a highly cultural content being sold by IKEA when it invests a new market. As in column 15 from table 6, one neat way to do so, is again to run a regression including the interaction term of interest while employing the same specification than in column 3, although replacing the IKEA dummy variable which varies by destination and time, by a destination and time additional fixed effect. Here, the coefficient appears to be even larger (it reaches 1.56) while being highly statistically significant at the 1% level. One of the differences in the results in magnitude between Fixed effects and DD_M estimators comes from the combination of fixed effects being used. In fact, while the FE regressions allows for a product and importer fixed effect, the DD regressions employed here follow strictly De Chaisemartin and Haultfoeuille by using an importer group effect. We show in the appendix that if we define a group where the unit of observation is a market defined by a product and a destination, then we could run specifications that we could directly compare to the column 2 fixed effects regression. From our appendix one could see the results of such a specification (column 1 of table A1 in the appendix) that appears in magnitude to be closer to the fixed effects shown in our table 10.

Columns 5 to 8, presents the results where we substitute the IKEA binary variable by the continuous variable of the number of stores into the equation (instead of

³¹For comparison, note that by running standard linear fixed effects regressions on the whole 4 dimensions sample we have obtained a high coefficient on the IKEA dummy too, around 0.20, with high level of statistical significance (1% level). Results are available upon request. A nice discussion by Santos Silva and Teneyro (2014) and Larch, Wanner, Yotov and Zilkin (2021) is given to understand why the PPML and FE estimators might differ substantially, mainly linked to the heteroscedasticity of the log of trade residuals.

Table 10 – PPML, FE and DID_M estimators on Swedish Bilateral Exports of IKEA similar goods

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	PPML	FE	DID _M	DID _M , HC	PPML	FE	DID _M	DID _M , HC
IKEA Dummy	0.065 ^a (0.012)	0.461 ^a (0.065)	.610 ^a (0.056)					
IKEA Dummy x Highly Cultural Goods Dummy				.775 ^a (0.037)				
Number of stores					-0.007 (0.005)	0.133 ^a (0.042)	.464 ^a (0.031)	
Squared(number of stores)					0.000 (0.000)	-0.007 ^c (0.004)		
Number of stores x Highly Cultural Goods Dummy								.216 ^a (0.031)
Controls (ln(GDP), ln(FDI), RTAs)	YES	YES	YES	YES	YES	YES	YES	YES
Observations	46132	46132	46132	45673	46132	46132	46132	45673
R ²		0.820	0.820	0.852		0.820	0.820	0.852
Prt x Importer_FE	YES	YES			YES	YES		
Importer_FE			YES	YES			YES	YES
Year_FE YES		YES	YES	YES	YES	YES	YES	YES
Prt x Time_FE	YES	YES	YES	YES	YES	YES	YES	YES
Importer x Year_FE				YES				YES
Number of switchers			524	2073			2459	1892

Note: Robust standard errors in parentheses, clustered by importer and time, with ^a, ^b, ^c denoting significance at the 1%, 5% and 10% level respectively.

the IKEA dummy). The PPML regression appears now with a statistically non significant effect related to an increase in the number of stores.³² Turning to FE estimators and then the DD two estimators (columns 6 to 8 respectively), again the results are very much qualitatively in line with those proposed in columns (2 to 4), with positive and highly statistically significant effects of setting a new IKEA store on Swedish exports, in particular for highly cultural content related goods.

The De Chaisemartin and D'Haultfoeuille *Stata package* offers also the possibility of running placebo tests from which one can deduce the validity of the common trend assumption. In practice, the authors propose a test that looks at the differences in the outcome variable between the treated and the untreated groups before the treatment date. In our case, we look at whether the DID_M estimator for each date before the treatment date 0 is statistically significant or not. We consider up to 10 years before the treatment. The authors offer in addition a joint placebo test based on the different yearly tests undertaken before date 0. The graphs of the tests are joined in the appendix. The graphs point to the fact that before the treatment indeed, the estimator obtained is not statistically different from 0 for most if not all of the years observed in all of the DID_M related specifications (columns 3, 4, 7 and 8) which are being shown. A joint placebo test confirms this for columns 3, 7 and 8 (very high p-value higher for all three specifications (repsceively. 0.99, 0.42 and 0.33 meaning that taken collectively for the 10 years of observations before treatment, the difference in outcomes between the untreated and the treated are not statistically significant). Although the graph appears to be clear for the specification of column 4 with, for most years, a difference in outcomes not statistically different from 0, the obtained p-value equals 0.07, however.³³

7. Conclusions

In this paper, we have focused on the idea that multinationals' have the ability to promote their home countries' products on foreign markets. This issue, as far as we know, has been overlooked up to now. We have argued that multinationals activities produce a positive externality on exports, when they embrace an ambassador function, through the promotion of their home country's culture that is represented in their products.

We have focused on IKEA as an ideal case to test our hypothesis. We have built an original dataset on IKEA presence in foreign markets between 1995 and 2015

³²That being said we have also looked at the impact of the number of stores interacting with the high cultural content product specific dummy and found again positive and statistically significant effects of IKEA in the PPML regression for those products. Results are available upon request.

³³The p-value related to this specification happens to be very sensitive to the number of periods considered. Here we have considered 10 periods but had we had considered a number of periods of 4 or 6 the pvalue would have reached more than 0.10.

and merged it with product level trade between pairs of countries. We have found solid evidence of an externality linked to IKEA: a setting of an IKEA new store in a destination increases trade flows by around 2% from Sweden for products that resemble to what the multinational offers (despite being completely unrelated to that multinational). This result is driven primarily by the products that are being identified to encompass a high-cultural content in IKEA advertisements catalogues. An externality of the same magnitude is also identified for other Scandinavian countries exports but the estimates are less robust. Finally, we find evidence that IKEA's externality spreads beyond the products similar to what IKEA sells: other products coming from Sweden benefit from a new IKEA store openness although at a rate that is three times smaller. We have also conducted a battery of robustness checks that tend to be consistent with our hypothesis that IKEA is indeed producing some externality on trade from home, linked to the promotion of the Swedish culture.

Our paper is a good start to identify the ambassador role of some multinationals. We have considered IKEA as an interesting case to study for reasons put forward throughout the paper. It is certainly not the only one where a multinational might act as an ambassador to its home country through the products it sells. Information on more multinational firms is needed with related data on the cultural content of the products being sold, to confirm the external validity of our findings. To date, this is extremely hard to obtain, however.

Yet, if one thinks that multinationals in general, through their progressive spread over the globe, have the ability to promote their country's culture, policymakers should reconsider a different manner to promote their home products than the traditional way only through relying on the civil service of their embassies. Maybe a policy creating some incentives for multinationals to contribute to *home* promotion might be a good alternative (or complement).

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Appendix

9. Theoretical set-up and the identification of IKEA's culture-promotion effect

We aim to identify how a multinational, by advertising the culture of its region of origin in the hosting country, through its products, constitutes a positive externality for exports which originate from that region. To fix ideas, let us consider a simple gravity-like set-up where the preferences of representative consumers towards a country's products are not a simple parameter, as it is usually considered. They are shaped by the information people receive from advertisements regarding the country from where the product originates. The objective here is to show how a multinational by being active in a hosting market, can change those preferences. By its presence, and through the advertisements that it could afford, the multinational increases the differentiation of its products. And if, through its advertisements, the multinational contributes to the knowledge of the culture from which it originates, it might help change the image of consumers about its region of origin as a whole. By so doing, multinationals might have a positive externality on producers of their home country. Thanks to a quasi-public good role played by the multinational, at given costs, representative producers of varieties in the country of origin can experience an increase in the foreign demand addressed to them.

The modelling framework we propose is designed to show how the entry of a multinational like IKEA into a new market can affect exports of its origin country to that market. It describes a simple partial equilibrium market functioning, which we think is just enough to constitute a good basis for our estimation part. To start with, think about a market in a country j to represent a market of some type of household goods. Formally and without loss of generality, let us consider a simple set-up with different varieties of products indexed by k in market K of a destination j . Varieties are sold to final consumers by representative firms originating from I countries, each being indexed by i . Further information about sellers from each country i will be provided further on, in the following sub-sections. Assume however that each of these actors in the market has a monopoly over the differentiated variety k it offers.

A. Demand

Assume a representative household in destination country j to maximize a standard CES utility function of the following form:

$$U_j = \left(\sum_i \sum_k a_{ij} q_{ijk}^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

where q_{ijk} designs the quantity of good k sold by a monopolist in the market and $\sigma > 1$ is the elasticity of substitution between varieties. The variable a_{ij} expresses a weight preference related to the goods being sold by sellers from i to destination j . We assume here each seller to be identified by households as to be from a given origin. Hence, households weight each origin differently in their utility function (i.e. a sort of Armington hypothesis). The new critical assumption made in this set-up is that these weights are not necessarily constant, they can vary with the level of expenditure in advertisement related to the culture of each of the countries. We develop more on this issue below. Under a standard budget constraint for the representative consumers in j with expenditure E_j on household products, one can then derive from first order conditions the demand value faced by sellers from i in market j :

$$x_{ijk} = p_{ijk} \cdot q_{ijk} = E_j \frac{a_{ij}^\sigma p_{ijk}^{1-\sigma}}{P_j^{1-\sigma}} \quad (4)$$

Where $P_j = (\sum_i \sum_k a_{ij}^\sigma p_{ijk}^{1-\sigma})^{1/(1-\sigma)}$ is a preference-adjusted price index. One needs then to interpret the expression $\frac{a_{ij}^\sigma p_{ijk}^{1-\sigma}}{P_j^{1-\sigma}}$ as an indicator of preferences-adjusted *relative* price of seller of variety k originating from i , compared to the rest of the sellers on the market.

B. Supply in the standard case

On the supply side, we provide further details related to the sellers on the market. Assume a first standard case, where all of the exporters are actually producing their variety back in their home country and shipping it into market j ³⁴. These are then considered as direct exporters of their own variety to market j , in opposition to being an indirect exporter through an intermediary firm (say a wholesaler at home in i or a retailer in destination j). However, as already mentioned, all these firms have a monopoly over the varieties they produce/sell. Each firm sets an optimal price (and a corresponding quantity, along with the demand addressed to it, as in equation 1) for each variety, by equalizing its marginal revenue from exporting to its marginal cost. Assume c_{ik} the marginal cost of production. Assume further, $\tau_{ij} > 1$ to be an additional cost of transaction between i and j , $\forall i \neq j$. The optimal price charged by a representative seller of product k , from i in market j will be :

$$p_{ijk} = \frac{\sigma}{\sigma - 1} c_{ik} \cdot \tau_{ij}, \forall k, \forall i \quad (5)$$

³⁴One can of course include home producers in j selling directly to their internal market (i.e. home).

Replacing quantities by the demand function in equation (1), and accounting for the price expression above, net profits for any representative seller from i will equal :

$$\pi_{ijk} = p_{ijk}q_{ijk} - c_{ik} \cdot \tau_{ij} \cdot q_{ijk} - F_{jk} = \frac{E_j}{P_j^{1-\sigma}} \left(\frac{\sigma}{\sigma-1} \right)^{-\sigma} \left(\frac{\sigma}{\sigma-1} - 1 \right) c_{ik}^{1-\sigma} \cdot \tau_{ij}^{1-\sigma} a_{ij}^\sigma - F_{jk} \quad (6)$$

Producers from i , when they make (gross) profits high enough to cover the fixed costs F_{jk} , enter the market³⁵. As usual, higher expenditure (E_j), lower degree of competition (through P_j), higher mark-ups (i.e. $\frac{\sigma}{\sigma-1}$) and lower variable costs (c_{ik} and τ_{ij}) favour profits. A higher preference of consumers in j towards products coming from i , through the a_{ij} term, increases profits too and might also contribute to the entry of producers from i into the market.

C. Entry of a Global Player

Now, assume a global firm m which can be interested in entering the market. Firm m is specialized in the retailing activity, and originates from an origin country say s , belonging to the group of countries l . Firm m does not produce the varieties by itself. Rather, it buys varieties of goods from suppliers as those mentioned above and resell them back to the market. It can thus constitute a platform of indirect exports for some of these suppliers.

Firm m manages already a number of local retail stores in the world, in the group of countries l . It has actually two types of costs: one at the level of the corporation (i.e global fixed costs) and another type at the store level (local fixed costs). Global costs borne by the corporation at its headquarter serve three purposes: first, a part serves research, design and related advertisements linked to the varieties of goods proposed by the multinational; second, another part serves as fixed costs related to the search for suppliers of varieties present in world markets; third, a last part of these costs is based on expanses related to the search of logistics centers around the world, which would serve eventually as import and export platforms between suppliers and local stores. Once all of the expenses in design and advertisement are undertaken on one hand and suppliers together with logistics centers chosen at the global level of the firm on the other hand, they act as a *public good within the multinational*, from which will benefit each newly opened store in the world.

³⁵For simplicity, we do not consider here that firms from a country i , are heterogeneous. That is, if gross profits cover the fixed costs of entry, all firms from i enter the market. No firms enter it otherwise.

At the global level, the multinational has perfect information about the costs borne by its suppliers, transaction costs and the reaction of consumers to its locally set prices and advertisements (i.e. it knows about the local demand curve of consumers). Its program is then to choose the optimal level of expenditure in new design and advertisements at the global level $A(m)$ which maximizes its worldwide profits, after having observed the optimal prices set by each of its stores (it takes all local prices as given). By spending in design/advertisements, the multinational expects to shift demand of consumers towards its own products. Thus, assume that $a(m)_j = a(A(m)_j) = (A(m)_j)^\alpha$ with $0 < \alpha < 1$ representing a parameter of incidence of advertisement on demand and the utility of consumers. From there, by computing the global profits expression³⁶, one can determine the optimal level of fixed costs in advertisements (denoted by A) that the company as a whole needs to pay. In short, one obtains an expression for optimal expenditure in A by equalizing the marginal revenue from A with its marginal cost. This provides the following equation which can be easily derived from global profit maximisation program of the headquarter:

$$A(m) = Q.G(\sigma, \alpha, \tau(\bar{m}), \bar{c}) \quad (7)$$

Expenditure in advertisements and design at the global level is actually proportional to global quantities (re)-sold by m in worldmarkets ($Q = \sum_j \sum_i \sum_l q(m)_{ijl}$), where l is the index related to varieties sold by suppliers in country i which are sub-contractors of m , in all of the markets j invested by m . One can also verify that it is positively linked to its market power in each market (expressed through the elasticity of substitution σ), the local incidence on demand from advertisement (i.e. α), the structure of transaction costs m has with all of its suppliers ($\tau(\bar{m}) = (\tau_{m1}, \dots, \tau_{ml})$), and a vector of production costs of its suppliers ($\bar{c} = (c_1, \dots, c_l)$).

Besides, the multinational spends fixed costs at the global level to analyse the supply conditions that prevail in different countries overtime (costs of production in each country and transaction costs associated to doing business with suppliers of those countries). Once it spots a country where conditions of supply are good enough, it then selects its suppliers randomly.³⁷ Now, if some suppliers chosen by the multinational are already serving market j , the multinational would ask them to withdraw from the market for obvious direct competition reasons. But why would suppliers accept to export indirectly via the multinational's platform rather than serving directly a given market j if they have the ability to do so? In fact, one can show that representative suppliers would always accept the proposal of the multinational as they know that m would give them easier access to world

³⁶as sum of all local ones.

³⁷Of course this is a simplification. In coherence with the rest of our set-up, we assume that suppliers from each country are homogeneous in terms of their supply costs.

market opportunities, beyond market j per se, through reducing the transaction costs associated with each potential market that they could not reach so far and, thanks to the multinational's advertisement, an increase in the preference for their products.³⁸ Recall that we have designated each supplier of i to m by an index l , l also being an index of the variety being offered by that supplier. Let $\tau(m)_i$ represent the transaction cost supported by m from shipping the good from i to one of its logistics center in some given location³⁹. The pricing rule of a given supplier l to sell to the global firm m can be thus written in the following manner:

$$p(m)_{il} = \frac{\sigma}{\sigma - 1} c_{il} \cdot \tau(m)_i, \forall l, \forall i \quad (8)$$

Firm m purchases then each of the varieties l at the price mentioned above, irrespective of the destination markets where these varieties will eventually be sold to the final consumers.

Now, let us go back to market j . Our multinational m has to decide whether or not to enter that market. Again, like any other supplier, it does so if it estimates that its gross profits in j are higher than the local fixed costs it bears. Assuming that m supports an additional transaction cost $\delta(m)_j$ (with $\delta(m)_j > 1$) to move a variety purchased and stored in some logistics center to market j , profits of the multinational can be computed as the sum of profits over all products l it sells and for which it has a monopoly in a given market j . Hence:

$$\pi(m)_j = \sum_i \sum_l p(m)_{ijl} q(m)_{ijl} - \delta(m)_j \sum_i \sum_l p(m)_{il} \cdot q(m)_{ijl} - F(m)_j \quad (9)$$

Facing a demand for each product l addressed to its stores, and equal to $q(m)_{ijl} = E_j \frac{(a(m)_j)^\sigma p(m)_{ijl}^{1-\sigma}}{P_j^{1-\sigma}}$, and accounting for the price of purchase of l by m in equation 8 the optimal price which is set then by the multinational for variety l in destination j will be:

$$p(m)_{ijl} = \left(\frac{\sigma}{\sigma - 1} \right) \left[\frac{\sigma}{\sigma - 1} c_{il} \cdot \tau(m)_i \right] \delta(m)_j, \forall l \quad (10)$$

³⁸Also they will not be supporting any fixed costs of exporting to enter a new market as these fixed costs are already paid by the m platform. The only fixed cost that they will be facing is one that they need to pay once and for all, to change the variety of their product in such a way it can meet the design demanded by the buyer m .

³⁹Without loss of generality, we have assumed that m pays the same shipping costs from i to any logistic center it has in the world.

where one can notice now the double margins applied to final consumers due to the additional margins that our firm m applies in the market. Inserting optimal prices and their corresponding quantities into the profits expression, summing over all of the products l one obtains then the following (local) profit expression of m (on market j):

$$\pi(m)_j = \frac{E_j}{P_j^{1-\sigma}} \left(\frac{\sigma}{\sigma-1} \right)^{1-\sigma} \left(\frac{\sigma}{\sigma-1} - 1 \right)^{1-\sigma} A(m)^{\alpha\sigma} \delta(m)_j \left(\sum_i \sum_l c_{il}^{1-\sigma} \cdot \tau(m)_i^{1-\sigma} \right) - F(m)_j \quad (11)$$

Hence, firm m is incited all the more to enter market j the higher is the size of the market, the higher are its advertisements (through $A(m)$), and the higher the price index on the market (the lower the degree of competition there). Nevertheless, the higher double mark-ups would be, the higher transaction costs and suppliers' costs would be and the less m would be willing to invest the market.

Finally, because it is beyond the scope of this paper, we do not model explicitly the global costs borne from searching for locations that would serve for logistics platforms, neither do we model the optimal choice of location of each of those platforms in the world. One should simply keep in mind that those should be chosen in a way to minimise the costs of transaction costs between each i supplier and m on one hand (i.e. $\tau(m)_i$) and, on the other hand, the cost of shipment between m and the local store affiliate in j , (i.e. $\delta(m)_j$).

D. Entry and outcome for the rest of sellers

Now, assume that profits of m are high enough to cover its fixed costs and m enters then market j . What is the impact of its entry on the outcome of the market? And how it would affect the other sellers in the market?

As already mentioned, firm m has the power to shift demand for its products thanks to its advertisements. Now, let us do another critical assumption that the design and the advertisement of the products of m vehicle some cultural content that is specific to the country from which it originates, namely country s . Indeed, any given culture from any given country, constitutes a sort of national public good. Firms which are willing to spend money to advertise their good directly benefit from this public good if the product sold has some specific features that inform or remind people about the culture of the origin country. Then, if some traits not well known by foreign consumers are revealed by the advertisement of a firm, through the cultural content of its products, this new knowledge about a foreign culture could benefit in turn to all of the firms which have the same nationality.

Here, we assume that when firm m decides to enter a market j , it does not actually only change the degree of competition in the market which is what we shall see below, it also changes the preference of consumers towards goods coming from the same origin than that of firm m .⁴⁰ This suggests that a_{sj} the demand shifter related to any actual or potential exporter from country s , should change upon entry of firm m . This is how producers from s , entirely independent from m , still benefit from the positive externality of m through the advertisement of their common s culture. Without loss of generality, we thus assume that upon entry, the preference shifter variable increases to reach the value of m 's related preference shifter. Formally, let I_m designates an indicator function taking on 1 if m enters the market and 0 otherwise, then we have: $(a_{sj}|_{I_m=1} = a(m)_{sj}) > (a_{sj}|_{I_m=0})$.

The entry of m produces another effect, observable on the price index. When the multinational m enters the market (opens up a new store), one should observe a reduction in the preference adjusted price index P_j . First, one can simply show a *net* increase in the number of varieties upon firm m entry reducing the price index. Indeed, on one hand some firms stop serving directly the market and now begin serving it indirectly. On the other hand, some countries not represented so far by their producers in some destination (for example, due to high transaction costs to that destination), can sell now their varieties indirectly through the m stores. It is pretty much standard in the literature that the increase in the diversity of products reduces the price index as one will see below. Second, the increase in the demand shifter for country s along those of the products sold by m , will also reduce the preference-adjusted price index. To see this, let us consider that the production costs in each country i are the same for all k products (i.e. $c_{ik} = c_i, \forall k$) then prices of exporters from i observed by consumers in j will be equal $p_{ijk} = p_{ij} \forall k$. Similarly, prices set by m on all products l originating from i will also be equal: $p(m)_{ijl} = p(m)_{ij}, \forall l$.

Let us now divide the population of exporters between those who are originating from country s and the rest ($i', \forall i' \notin s$). Accounting for exporters from any country proposing similar prices across their varieties, the price index before firm m entry (i.e. $I_m = 0$) can then be re-expressed as:

$$P_j|_{I_m=0} = \left(\sum_{i'} n_{i'j} a_{i'j}^\sigma p_{i'j}^{1-\sigma} + n_{sj} a_{sj}^\sigma p_{sj}^{1-\sigma} \right)^{1/(1-\sigma)} \quad (12)$$

where $n_{i'j}$ represents the number of firms from i' serving j and n_{sj} that of s serving j . Note in passing that some countries might not be at all represented in the price index if their suppliers have high costs and thus cannot enter market j . This also

⁴⁰One should remember here that although products sold by firm m might not necessarily originate from country producers in s , the only fact of redesigning them and advertising them as embodying some cultural aspects of the country of origin of m , flags the product as to originate from the country of m .

includes country s where n_{sj} could be null and thus consumers at destination j if remote enough from exporters from s , might not get to know about the products that are produced in s .

Now, consider m enters the market (i.e. $I_m = 1$). Consider we divide further the population between direct exporters (superscript d) and indirect exporters through the global firm (superscript m), the price index expression changes upon firm m entry. We obtain:

$$P_j|_{I_m=1} = \left[\sum_{i'} n_{i'j}^d a_{i'j}^\sigma p_{i'j}^{1-\sigma} + \sum_{i'} n(m)_{i'j} A(m)_j^{\alpha\sigma} (p(m)_{i'j})^{1-\sigma} + \sum_c n(m)_{cj} A(m)_j^{\alpha\sigma} (p(m)_{cj})^{1-\sigma} + n_{sj}^d a_{sj}^\sigma (p_{sj}^d)^{1-\sigma} + n(m)_{sj} A(m)_j^{\alpha\sigma} (p(m)_{sj})^{1-\sigma} \right]^{1/(1-\sigma)} \quad (13)$$

Here one can see a new set of countries c now represented by firms which exports indirectly through m . Countries c , before m 's entry had 0 flows to destination j . Thanks to its entry, some chosen firms from those countries can now supply indirectly destination j . Accounting for the fact that the firms which had already entered the market (and paid the fixed cost) before entry of firm m , will not exit it upon the entry of the latter⁴¹, one can easily verify then that the total number of firms increases after entry because $n_{i'j} < n_{i'j}^d + n(m)_{i'j} + n(m)_{cj}$ and $n_{sj} < n_{sj}^d + n(m)_{sj}$. Also, because indirect exports from i' , c and s related to firm m , together with all direct exports from s benefit from the culture-promotion related to m they would observe higher demand to their product, at given prices ($A(m)\alpha_j > a_{i'j}, \forall i'$ and $A(m)_j^\alpha > a_{sj}, \forall s$)

One will then obtain that $(P_j|_{I_m=1}) < (P_j|_{I_m=0})$. This reduction in the price index upon entry of firm m must be then affecting all the bilateral flows into country j alike. But because a_{sj} increases due to entry (i.e. when $I_m = 1$), firms' from s exporting directly into j should be observing two opposite effects from the entry of firm m : on one hand, a price effect, negative on their exports to j while on the other hand, a positive culture promotion effect towards the varieties sold by these countries.⁴² This can be seen very clearly from aggregating up equation 1 across all of the direct exporters from country s (i.e. those who are supposed to benefit from the culture-promotion externality due to entry of m .) Indeed, let us represent aggregate flows from s to j , while making some of its determinants

⁴¹They would just do smaller sales and smaller profits

⁴²Obviously, firm m entry into market j will benefit bilateral flows from countries where m has located logistics centers, thus mitigating the reduction in flows of those countries related to the price effect.

depend on firm entry m :

$$x_{sj} = n_s \cdot x_{sjk} = E_j n_s \frac{(a_{sj}^\sigma)|_{l_m} \tau_{sj}^{1-\sigma} c_{sj}^{1-\sigma}}{P_j^{1-\sigma}|_{l_m}} \quad (14)$$

where n_s the number of firms exporting from s to j . Hence, the entry of the MNE retailer m reduces the price index while shifting demand through the culture-promotion effect. The culture-promotion increases a_{sj} , which then becomes equal to $(a_{sj}|_{l_m=1} = (A(m)_{sj})^\alpha) > (a_{sj}|_{l_m=0})$. Equation 14 actually exactly corresponds to equation 2 in the heart of the text, when firms of country s find it worthwhile to serve country j (i.e. when $\Lambda_{sjht} = 1$).

For the rest of the exporting countries i' , with $i' \neq s$ —except those where there is a logistic center (they should be a small minority)—the effect of entry by the global firm m translates solely through the price index. The entry of m should reduce the flows of these countries due to higher competition⁴³. One can then obtain equation 1 in the text, which apply to all countries other than s .

Finally, recall that our equations are obtained using a within country homogeneous firms assumption. If we had considered a heterogeneous firms set-up we would still obtain a very similar type of equation to test except that the number of exporting firms would have been related again, to the price but also, would have been positively related to the culture promotion shifter when it comes to country s . The calculations made with a heterogeneous firms set-up are available upon request. All in all, and because we have product, not firm level trade data, we would have had the same empirical specification below to test with the same prediction that IKEA should increase exports of s countries compared to other i countries.

10. Common trends and Placebos on years before treatment in DD regressions

11. IKEA-like goods considered in the paper

⁴³Of course for a country z where m has settled a logistic center, the entry of the latter into j creates mechanically some extra flows by z . But these flows add up to the direct flows and assuming that m 's supply from its distribution center is relatively small compared to the whole country's supply, one would still observe a priori a negative impact from m 's entry on z 's flows (albeit smaller than what it would be expected)

Codes	Description	Highly Cultural Goods
1601	Sausages and similar products of meat, meat offal or blood; food preparations based on these products	
1602	Prepared or preserved meat, meat offal or blood	
3924	Tableware, kitchenware, other household articles and toilet articles, of plastics	
3926	Articles of plastics and articles of other materials of heading no. 3901 to 3914, n.e.s. in chapter 39	
4104	Leather of bovine or equine animals, without hair on, excluding leather of heading no. 4108 or 4109	
4105	Sheep or lamb skin leather, without wool on, excluding leather of heading no. 4108 or 4109	
4419	Tableware and kitchenware, of wood	
4421	Wooden articles n.e.s. in heading no. 4414 to 4420	
5701	Carpets and other textile floor coverings; knotted, whether or not made up	
5702	Carpets and other textile floor coverings; woven, (not tufted or flocked), whether or not made up, including "kølem", "schumnacks", "karamanie" and similar hand-woven rugs	
5703	Carpets and other textile floor coverings; tufted, whether or not made up	
5704	Carpets and other textile floor coverings; of felt, (not tufted or flocked), whether or not made up	
5705	Carpets and other textile floor coverings; n.e.s. in chapter 57, whether or not made up	
5903	Textile fabrics impregnated, coated, covered or laminated with plastics, other than those of heading no. 5902	
6911	Tableware, kitchenware, other household articles and toilet articles; of porcelain or china	
7013	Glassware of a kind used for table, kitchen, toilet, office, indoor decoration or similar purposes (other than of heading no. 7010 or 7018)	
9401	Seats (not those of heading no. 9402), whether or not convertible into beds and parts thereof	
9403	Furniture and parts thereof, n.e.s. in chapter 94	
9404	Mattress supports; articles of bedding (eg mattresses, quilts, eiderdowns, cushions pouffes and pillows), fitted with springs or stuffed, whether or not covered	
9405	Lamps; light fittings; including searchlights, spotlights and parts thereof, n.e.s.; illuminated signs, name-plates and the like, having permanently fixed light source and parts thereof n.e.s. or included	
	Other Goods	
0602	Plants, live; n.e.s. in heading no. 0601. (Including their roots) cuttings and slips; mushroom spawn	
0603	Flowers; cut flowers and flower buds of a kind suitable for bouquets or for ornamental purposes, fresh, dried, dyed, bleached, impregnated or otherwise prepared	
0813	Fruit, dried, other than that of heading no. 0801 to 0806; mixtures of nuts or dried fruits of this chapter	
1603	Extracts and juices of meat, fish or crustaceans; molluscs or other aquatic invertebrates	
1604	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs	
1605	Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved	
2204	Wine of fresh grapes, including fortified wines; grape must other than that of heading no. 2009	
3406	Candles, tapers and the like	
4415	Packing cases, boxes, crates, drums and similar packings, of wood; cable-drums of wood; pallets, box pallets and other load boards, of wood	
4823	Paper, paperboard, cellulose wadding and webs of cellulose fibres; cut to size or shape, articles of paper pulp, paper and paper-board, cellulose wadding or webs of cellulose fibres, n.e.s. in chapter 48	
4901	Printed books, brochures, leaflets and similar printed matter, whether or not in single sheets	
4905	Maps and hydrographic or similar charts of all kinds, including atlases, wall maps, topographical plans and globes, printed	
6601	Umbrellas; sun umbrellas (including walking stick umbrellas, garden umbrellas and similar umbrellas)	
6910	Ceramic sinks, wash basins, pedestal, baths, bidets, water-closet pans, flushing cisterns, urinals and similar sanitary fixtures	
7010	Carboys, bottles, flasks, jars, pots, phials, ampoules, containers of glass of a kind used for the conveyance or packing of goods; preserving jars of glass; stoppers, lids and other closures of glass	
8206	Tools, hand, two or more of heading no. 8202 to 8205, put up in sets for retail sale	
8208	Knives and cutting blades, for machines or for mechanical appliances	
8209	Tools; plates, sticks, tips and the like for tools, unmounted, of sintered metal carbides or cermets	
8210	Tools; hand-operated mechanical appliances, weighing 10kg or less, used in the preparation, conditioning or serving of food or drink	
8211	Knives; with cutting blades, serrated or not (including pruning knives), other than knives of heading no. 8208, and blades therefor	
8213	Scissors; tailors' shears and similar shears, and blades therefor	
8214	Cutlery; other articles, (eg hair clippers, butchers' or kitchen cleavers, choppers and mincing knives, paper knives), manicule or pedicure sets and instruments (including nail files)	
8215	Cutlery; spoons, forks, ladles, skimmers, cake-servers, fish-knives, butter knives, sugar tongs and similar kitchen or tableware	
8525	Transmission apparatus for radio-telephony, radio-telegraphy, radio-broadcasting or television, whether or not incorporating reception, sound recording or reproducing apparatus; television cameras	
9105	Clocks, other, n.e.s.	
9501	Toys; wheeled, designed to be ridden by children (eg tricycles, scooters, pedal cars), dolls' carriages	
9502	Dolls; representing only human beings	
9503	Toys; other; reduced-size ("scale") models and similar recreational models; working or not; puzzles of all kinds	

Note: This table resumes what we consider as "IKEA-like goods" in this paper, taking the HS nomenclature of 1992 (also called H0) at the four-digit level. Highly cultural goods are defined as goods labelled at least once (during our period of interest) as designed by a Swedish designer, in addition to food sold as Swedish specialty. (Consultation of IKEA catalogues of 1997, 1999, 2000, 2002, 2003, 2006, 2007, 2009, 2010, 2011, 2014, 2015)

Table .1 – IKEA-like goods

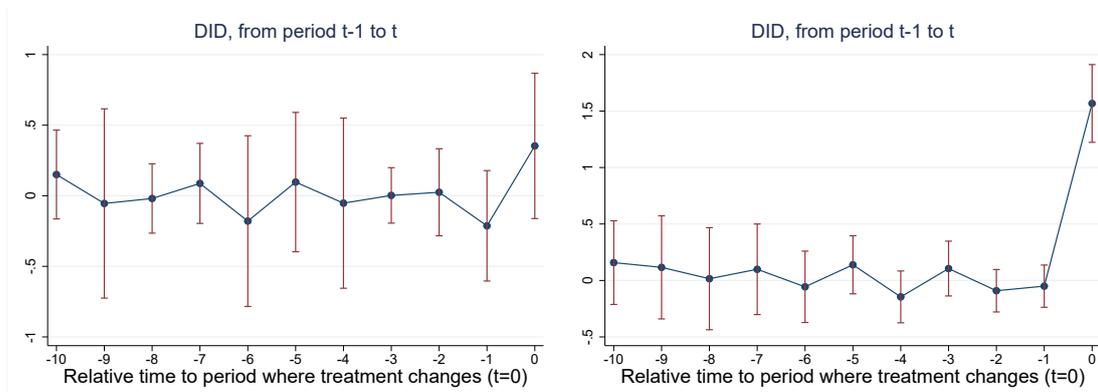


Figure .1 – Difference in outcomes up to 10 years before treatments, specifications 3 and 4, table 10

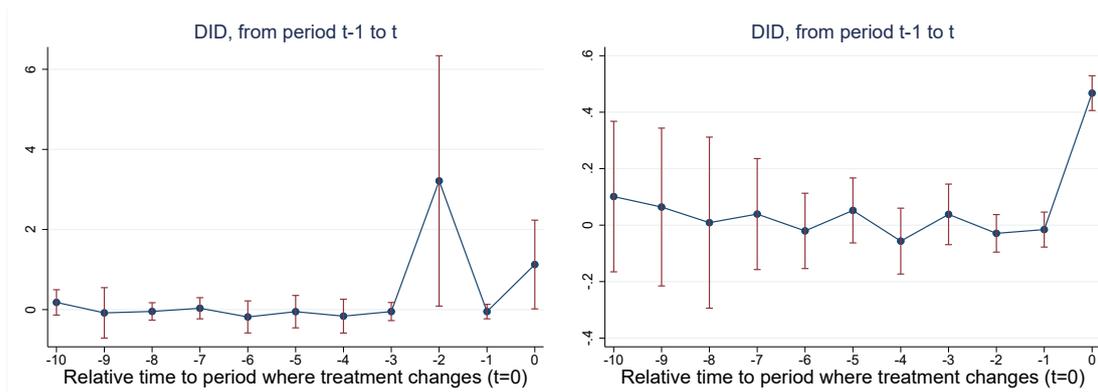


Figure .2 – Difference in outcomes up to 10 years before treatments, specifications 7 and 8, table 10