Ireland Reexport Technical Summary

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1 Introduction

My research aims to explore Ireland's reexport trade value using historical trade ledgers. Existing literature on the history of Ireland's reexport economy is limited, prompting a detailed examination of the trade ledgers that document partners and imported goods through Ireland's reexports. Over a cross-section of four years (1784-1822), this study seeks to describe the stylized facts of reexport trade and the evolution of partner economies reliant on these transactions.

Motivated by the late eighteenth and early nineteenth centuries, this period offers insights into how the reexports can elucidate economic restructuring and development. Specifically, in one stream, the study aims to understand Ireland's reexport economy before and after the Union with Britain. The political-economic implications of the Union are contentious, moreso, we are interested in how it impacted Ireland economically. Trade value is an important indicator to this. Consequently, one can express and argue for the changes that happen else where, the political-economic reasoning of other partner's imports via Irish reexports, can be discussed to how other countries are changing. Reexports play a crucial role here, reflecting mercantilist trade ideologies such as the Navigation Acts, which gradually shifted towards geopolitical influences and trade liberalization at the turn of the century. The greater role of the nature of reexports with respect to the partner is what will be concerned.

The primary research questions guiding this study are two: firstly, to assess the reexport trade value and nature of the reexport trade through Ireland, and secondly, to analyze changes in reexport

trade over time. From the latter, we do so by taking the trade value across time and quantifying trade changes (in total value) across different dimensions, including goods categorized by GG (Good Groups), partner regions (English, Rest of Europe, Asia, Americas), and their combined effects, this study aims to derive insights into historical trade dynamics.

This paper is structured as follows: Background provides context on Ireland's historical reexport economy, followed by a description of the data used. The methodological approach encompasses descriptive statistics to answer Research Questions 1 and 2, and trade decomposition techniques to explore Question 2 further, across various dimensions of trade. The findings and discussion sections synthesize the results, offering interpretations and implications derived from the analysis.

2 Background Information

The background begins by examining Ireland's political context to which its broader trade and economic context operates, in order to provide a foundation for understanding its reexport trade. Then Irish economy with its trade, in all aspects, is examined and mesh together with the political context that Ireland operates under, (what time frame should I focus and stop at). The interconnectedness and tie of the Irish economy to England. From there, the Irish reexport economy potentially emerges, and our understanding is facilitated by a few conjectures of its reasons. Then this leads to our discussion about the shift from a mercantilist to a 'modern' trade ideology, which illustrates the greater changes happening for Ireland and British internally. In 1801, the Act of Union, Ireland and England government combine. (at the end, note or question what does this mean for Irish reexports;)

By integrating these elements, this study aims to elucidate how Ireland's reexport economy emerged and evolved against a backdrop of shifting trade dynamics and political transformations.

The development of Ireland's reexport trade, first necessitates a consideration of its broader economic and political context. As early as the late fifteenth century, Irish affairs was meddled and controlled through British interests. After the Anglo-Norman invasion of Ireland, late twelfth century, Irish lands was absorbed by England. The significance of this event is one that marks

a significance in the tense history of Irish to come. The greater English control over Irish lands resulted; changes in Irish economy, social, and culture. The following English and Irish relations carry over to the sixteenth century, this next significant time frame for Ireland occurs within the Tudor ruling period of England, 1480s–1603. Under King Henry VIII rule, the king sought to conquest Ireland. More formally, Ireland was subjected to lost political and economic autonomy through Ponying laws (1494), Irish Act of Attainder (1537), Act for the King's Title to the Crown of Ireland (1541), the Act of Supremacy (1560), The Act of Surrender and Regrant (1534). Even after the Tudor, into the Stuart period that follows, from 1603 to 1714, further laws were enacted to dampen Irish autonomy and in trade: New Plantation of Ulster (1609), Cromwellian Settlement (1650s), Irish Cattle Acts (1665–1685), Wool Act (1699), Acts of Settlement (1701–1708), Navigational Acts (1651, 1660, 1663)¹. TO DO: Synthesize, Research and Cite, following impacts of acts on Irish economic and trade. What is the (focus on economic) significance, and importance of it all, leading up to the middle 1700's-or after Stuart and to Georgian period.

More relevant to our study's time period, the following acts and their effects of Irish economy, continues through the start and middle into the Georgian period, 1715-1800s. Importantly, starting in the third quarter of the century in 1780's, many acts were repealed giving Irish concessions, and potentially trade privileges- implications of economic outcomes². These concession, started as a hearing, were first brought by near the end of the American Revolution for the British's concern of losing its Ireland in the potential collaboration between its colonies—British North America and Ireland—as it was on the verge of losing its American colonies³. Then in 1782, British concessions were made to Ireland, illustrate British fears of a potential Irish revolution. At this junction, from the literature, it is suggestive that Ireland was granted the permission to conduct reexport trading,

 $^{^1}$ The Navigational Acts prohibit most of Irish exports to British colonies. Cullen, *Anglo -Irish Trade 1660-1800*, pp.2-4.

²Steele, The Anointed, the Appointed, and the Elected: Governance of the British Empire, in McCuskery, ed., 'The Eighteenth Century', p. 125. The Board of Trade was abolished in 1782, it significance was to facilitate the trade of British Americas with English. Bartlett, Ireland, Empire, and Union, 1600-1801 in Kenny, ed., 'Ireland and the British Empire', pp.77-78. See Bartlett further discussion for the timeline and year of the concessions and modifications to acts and laws that affect Ireland politically (Declaratory Act, Mutiny Act, Poynings Law, Constitution of 1782).

³Bartlett, Ireland, Empire, and Union, 1600-1801 in Kenny, ed., 'Ireland and the British Empire', p. 78.

Ireland was permitted to trade directly with colonies in 1780, ⁴. Secondary sources on the nature and details of Irish reexport are scanty. However, it reasons that major concession in terms of political, along economic and trade would be made. The following concessions and British fears for an Irish separation was quelled until the near turn of the century, to the next significant event in Irish and British history. The Irish reexport economy, for fact, emerges as early as 1784, and possibly some time earlier. The impacts of American Revolutionary war is a potential motivating reason, much, more is inconclusive of how the Irish reexports fare from the latter end of eighteenth century to nineteenth century. Reexports are a necessary tool and measure of the changes happening, as its use of the time was in the name of mercantile policies. TO DO: Fact check the decade of 1780, the idea, possibility, of trade concessions for Ireland. Apart from the idea: 'Ireland now can trade freely with colonies' What specific legal innovation lead to prerequisite of trade and economic outcomes.

Then in 1801, Ireland fully transitions from its status as a colony to dominion-kingdom with Ireland's Union in 1801 with the English. This is significant, as it is the first time in history where British and Irish governments have been unified under one. The Act of Union was Highlight the political, and elaborate on the economic tenets. One main, if not sole motivating, political reason for the union includes British concerns over sympathetic French revolutionaries to Catholic Irish, and aiding their overthrow of the British governance sought greater alliance to Ireland⁵. Synthesize importance of 1801, for economic and political outcomes of Ireland. Cite primary source of economic changes in Union. In the last decade, Ireland revolutionaries and British governance was tense, and the eve of a potential Irish revolution was near.

At this moment, before the Union, the development of the Ireland economy is nothing dramatic; and the outcome after. Following the timeline from mid seventeenth century up to the late eighteenth century; Ireland's economy is smaller than its metropole, England's economy. Ireland was

⁴Cullen, *Anglo-Irish Trade 1660-1800*, p. 2. Conversely, it is possible that as early as 1660's, an Ireland reexport economy exists, "Even where Irish ships were debarred under the Navigation Acts from carrying commodities from the colonies [British North America] to Ireland, they were still free to engage in the direct trade from the colonies to Britain."

⁵Bartlett, Ireland and the British Empire, in Marshall, ed. 'The Oxford History of the British Empire' 5 vols. (Oxford, 1998), II, pp. 269-271

domestically, guided in the direction by its English relations, producing in greater linen textiles, and provisions of foods and beverages. Guided, seems to be the appropriate word, as the retardation of Irish economy from the British Acts have been put at ease or questioned, as the acts hindered the greater trade in Irish exports of raw materials (cattle, wool) and the development of a greater linen and provision was fostered or capable ⁶. Pastoral raw animal goods was still within Ireland's economy. Moreover, the regional distribution of Ireland shows that Ireland economy consists of: agriculture and crop production, pastoral activities in dairy and butter, animal raising, textiles (largely linens; woolen, cotton)⁷. The economic activity in manufacturing textiles greater production occurred and burgeon in the greater end of the eighteenth century. By then, linen textile production was focused heavily than any other materials like woolen or cotton⁸. Ireland's balance of payments was on the favorable side, prior to the American revolution, its exports were larger than imports. A similar pattern for the English as well. Then following the American Revolution and the years after, before the turn of century, Irish balance of payments was bad, with British trading declined.

Once the Act of Union was created, we observe the Irish economy...Insert paragraph of the implication of the Act of Union of Ireland economy after. It is questioning whether an economic reason for the Union, from the Ireland's point of view is its balance of payments. Is there an economic reason for the Union- Ireland trade deficit near the end of the century, as a potential reason. Moreover, for reexports the answer is not clear whether it serves as an economic reason for Union, and how the Irish reexport fares after. For all trade matters, encompassing of exports including reexports and imports considered, the story of trade by these measures is changing within this period as indicative of trade ideologies and policies are changing.

British mercantilism have eased and changed withing the seventeenth century. Much like its economy, the English influenced Irish trade, drawing from the Navigation Acts and other acts that aid Irish specialization. Irish trade patterns was predominately the Anglo-Irish from 1660-1700,

⁶Cullen, Anglo-Irish 1660-1800, p. 5

⁷Ó Gráda, Ireland: A New Economic History, 1780-1939, pp. 32-36, Whelan, Settlement and Society in Eighteenth-Century Ireland

⁸Ireland has a former robust history with sheep and sheep farming, as developed during the sixteenth century. However, with the Wool Act, 1699, English dampened the sheep and woolen products of Ireland, hindering its trade and further economy with sheeps.

where this pattern continues to be strong somewhere after into the early nineteenth century with England⁹. There are signs that the Union, and all that has came before, had shaped Ireland's trade pattern strongly¹⁰. By the time Union, Ireland's exporting and importing goods from abroad, trade across many different partners and goods with respect to different time periods.

3 Data

Data of Ireland's trade comes from Ledgers of Imports and Exports, Ireland, 1698-1829 (P.R.O reference Cust 15) from the National Archives, Kew. Cust 15 are trade ledgers with yearly data from 1698-1829 of Ireland's trade. I looked at reexports of the trade years: 1784 (March 25 1783-March 25 1784), 1794 (March 25 1793-March 25 1794), 1805 (January 5 1803-January 5 1804), 1822 (January 5 1821-January 5 1822). The subsequent analysis and discussion will pertain to the cross section of the years, as times periods: 1784-1822, 1784-1794, 1794-1805, and 1805-1822.

The ledgers, for each year, are segmented to provide detailed information on imports to Ireland, Irish exports, and Irish reexport trade. The ledgers record the goods and their total value of goods traded, and occasionally specify the price that the partners paid for the good. Specifically, from the section labeled "Foreign commodities exported" is interpreted as encompassing Irish reexports and the non-Irish consumed trade. Reexports are described as goods that transported through British and/or foreign ships, that sail to Ireland for a reexport tax evaluation, before sailing back to its final destination and consumption. Moreover, the listed partners, as countries or territories, would otherwise, document a strain of their imports, via Ireland reexports.

In addition to the trade ledgers, I consulted the database, *Dictionary of Traded Goods and Com*modities 1550-1820 by Cox and Dannehl (2007) for good's cross-referencing and labelling purposes, I will elaborate in the next section on the method. Cox and Dannehl's comprehensive compilation serves as an online encyclopedia, encompassing a wide array of commodities traded among mer-

⁹Cullen, Anglo-Irish Trade 1660-1800, p. 29, 45

¹⁰As a oh-hand note of Ireland's' development; regardless of mercantilism. Ireland's trade, at least more efficiently and productively, started in the late eighteenth century. Leading up to this time then, Ireland had pivoted to a transportation revolution, mirroring to England's capacities: transportation infrastructure in lighthouse, port and etc, and development of commercial and trading networks, Hancock, , pp. 2000. The prerequisite for greater level of trade was kick-started within this century.

chants and early nation-states. This database and with the aid a unit converter calculator, were tools to enhance the accuracy and thoroughness of transcribing good's and for their later matching and sorting, and categorization processes.

4 Method

This section outlines the progression from trade ledger examination to analysis. It begins with (1) sorting and matching goods recorded in the trade ledgers, followed by (2) establishing bins and labels for our unit analysis (goods and partners). Lastly, (3) the analysis involves trade decomposition using these bins and labels. Initially, the first step involves creating a general summary statistic for overall trade. However, the second step enriches our understanding of both summary statistics and trade decomposition. Ultimately, trade decomposition serves as a mechanism for analyzing changes in trade value within a given year across various dimensions such as trading partners and categories of goods (GG).

4.1 Matching and Sorting

I start with the trader ledgers and the first step is to transcribe the raw goods listed on the ledger, of each given year, into a spreadsheet and then to carefully match each good listed at each given year, by their "label." The nature of these yearly trade ledgers does not provide a cohesive list of all reexported goods for any given time period; therefore as the researcher, we need to consolidate and meticulously review the trade ledgers from each year to create the list of all goods reexported and their total value trade, and interchangeably, that we can sort this list of all goods by the partner type. The goal is to have a sheet of all traded goods with their total value and price, and to understand what good are appearing in the reexport trade across the four years with respect to the partner.

Matching is a pivotal component of understanding the total trade per good and trade decomposition. The latter is paramount wherein our trade margins hinge upon the temporal trading of the good. The mis-specification of labels can significantly influence these margins, as we are describing the pattern of trade between two time frames, more details on the matching methodology is provided in the appendix.

From there, once we have the list of all goods traded and their quantities, we are prepared to generate summary statistics encompassing the overall trade value and identifying any discernible trade patterns singularly. Currently, the dataset exists in two forms: firstly, as a detailed list of all goods exported specifically to the primary partner; and secondly, as an aggregated dataset combining trade data across all partners, listing all exported goods collectively. In the upcoming section, I will introduce bins and labels to enhance and elaborate upon our summary statistics and trade decomposition. This process will involve restructuring the dataset in its aggregated form (Form 2), into different dimensions, allowing for a more detailed analysis of trade dynamics across different categories and dimensions.

4.2 Bins and Labels

The creation of bins and labels serves to reorganize the reexport trade value without altering the total reexport trade value. Essentially, this involves categorizing the total trade value in two distinct dimensions: by type of goods (GG) and by trading partner.

Goods are sorted into GG bins based on their type, which sets the stage for subsequent discussions on Summary Statistics and Trade Decomposition in the following sections. Each good in the trade ledger is classified according to its characteristics and intended use. Goods are categorized into specific bins such as TEXTLm, for textile processed manufactures, MLWRKm for metal-worked manufactures, FOBEVm for processed foods and beverages, PASTLg for pastoral goods and animal non-manufactures, TILAGRg for tilling unprocessed agricultural goods, RAWg for raw material goods, TROPgm for tropical goods and manufactures¹¹, or MISCgm for othermiscellaneous goods and manufactures. For further details on the sorted goods, GG, refer to the table 7.4 in Appendix. Once the goods are categorized into the appropriate bins, we can take the sum of all trade value of their goods, as a result we have the reexport trade value respect to the GG dimension.

 $^{^{11}\}mathrm{All}$ of the goods classified as TROPgm are non-European in origin.

The final dimension and label we define pertains to Ireland's reexport partnerships, categorized under (regional) partners. Similar to the GG dimension, the total value attributed to these partners is derived from aggregating and categorizing trade values originating from various countries and territories listed in the trade ledgers. These partners are then labeled accordingly, such as English, Rest of Europe, Asia, and Americas. This classification ensures a comprehensive assessment of reexport partnerships, facilitating a nuanced understanding of trade dynamics. It's important to note that there is currently no evidence suggesting differential pricing of goods imported by partners listed in the ledgers. Therefore, there should be no concern regarding endogeneity issues, related to partners, affecting the prices or appearances of goods listed each year.

4.3 Trade Decomposition

Lastly, in our analytical approach, I delve into trade decomposition. While stopping at summary statistics from the initial steps is feasible, grounding our understanding of numerical changes analytically provides deeper insights. Trade decomposition enables us to mathematically explain the trade changes in two distinct ways- margins: extensive and intensive. The extensive margins illustrate ongoing trade over a given time period and how it evolves or contracts. Conversely, the intensive margins expound on trade evolution through the cessation of old trade patterns and/or emergence of new ones. The absolute value of the magnitudes of the margins give rise and explanatory power of how the trade changes. Trade contraction can be attributed to negative extensive and/or intensive margins: the extensive margin accounts for a greater reduction in existing trade, while the intensive margin explains the complete disappearance of trade. On the other hand, trade expansion can be attributed to positive extensive and/or intensive margins: the extensive margin accounts for the growth of existing trade, while the intensive margin explains the introduction of new trade.

Specifically, I will be focusing on trade decomposition in trade value change between two given years allows us to factor in both goods and partners, as trade value is influenced by both. A comprehensive trade decomposition across goods' volume or price is possible, however, with current data constraints, I prioritize examining trade value changes for shorter time spans. Ideally, a longer

dataset spanning more than four years would provide deeper insights, and trade decomposition over the trade appearance of specific goods or good types may be possible. The trade decomposition approach in trade value allows us to broadly describe trade changes across different dimensions: all goods combined and further disaggregate to types (GG) to understand shifts in traded goods. Similarly, considering changes through the partner dimension informs us about the demands of specific partners via reexports. Lastly, examining changes jointly across both goods and partners provides a comprehensive understanding of how trade dynamics evolve in relation to both dimensions simultaneously. The analyzing of trade decomposition across various dimensions is a potent method to dissect trade changes and comprehend how these changes manifest across goods, partners, and the combined dimensions of goods and partners. Further details on the decomposition can be found in the appendix, the results will be discussed and conjectures are utilized to provide explanations in the body

5 Findings and Discussion: Total Trade

After sorting and matching the goods and their total value traded of the given four years, I answer how (Q.1) the partner characteristic of the total trade and the total value of the trade across this time frame, in section: Summary Statistics, and (Q.2) decompose and discuss the results and change in patterns of the reexport trade in section 2, (Q.2). A discussion will be prompted in the latter, in section: Trade Decomposition. A supplementary section in the Appendix, *Findings and Discussion: Goods Traded*, will be used to describe the Goods traded, rather the good characteristic of the trade, and a discussion of the specifics of the goods traded and the trade decomposition.

5.1 Summary Statistics

The Irish reexport trade consists of partner countries-regions in the Europe, Americas, and Asia—there is no indication of a role from Africa. This is consistent with the Atlantic Trade patterns of 1700's, in commodities, from the side of the figures British exports¹². The raw partners show that

¹²Excluding Ireland from the British export figures, British exports to Africa is small, the role of 'slave-produced commodities' remain big for Americas; Engerman, Mercantilism and overseas trade, 1700-1800 p. 192

Table 1: Reexport Trade Value Summary by GG (a) Total Reexport Trade Value (in £)

| GG | 1784 | 1794 | 1805 | 1822 |
|---------|----------|----------|-----------|----------|
| TEXTLm | 16141.48 | 4545.78 | 14567.74 | 265.68 |
| MLWRKm | 2247.37 | 2176.10 | 10855.33 | 2.40 |
| FOBEVm | 6327.91 | 6787.29 | 25173.38 | 18331.87 |
| PASTLg | 1329.24 | 7.00 | 17058.19 | 9578.45 |
| TILAGRg | 1037.24 | 0.00 | 965.88 | 2867.17 |
| RAWg | 3306.56 | 1683.23 | 44628.66 | 17409.39 |
| TROPgm | 41590.92 | 6688.84 | 36240.76 | 27934.44 |
| MISCgm | 1856.75 | 3973.66 | 19160.84 | 2005.10 |
| sum | 73837.48 | 25861.89 | 168650.77 | 78394.49 |

(b) Share (%) of Total Reexport Trade Value

| GG | 1784 | 1794 | 1805 | 1822 |
|---------|--------|--------|--------|--------|
| TEXTLm | 21.86% | 17.58% | 8.64% | 0.34% |
| MLWRKm | 3.04% | 8.41% | 6.44% | 0.00% |
| FOBEVm | 8.57% | 26.24% | 14.93% | 23.38% |
| PASTLg | 1.80% | 0.03% | 10.11% | 12.22% |
| TILAGRg | 1.40% | 0.00% | 0.57% | 3.66% |
| RAWg | 4.48% | 6.51% | 26.46% | 22.21% |
| TROPgm | 56.33% | 25.86% | 21.49% | 35.63% |
| MISCgm | 2.51% | 15.36% | 11.36% | 2.56% |

^a A supplemental table, Table 7, in the Appendix, disaggregates the following table and its findings in partner terms. This table is a summarized version, that has all the trade value broken down by GG, and not partner's GG.

most trade value by their shares, are change from the beginning year and the ending year, table 6. Moreover, the Act of Union's impact is suggested by these trade partners from the years 1784 and 1794, compared to the years 1805 and 1822. More weakly, there seems to be some evidence of new trade with new partners, and the extent of continued trade with traditional partners remains to be questionable, with England being a notable exception, table 6.

Generally, European metropole economies, besides England, have a smaller role in the Irish reexport trade compared to its colonies or territories. Relative to their size and economies; Spain, Portugal, Italy and France, only contributes about less than 10 percent of trade value, –from their share, their relative importance to Ireland, declines across the years or becomes obsolete. On the other hand, their colonies and contested territories (Holland, Madeiras, Flanders) plays a stronger role—as there are some sign of recurring trade between these partners. The role of Dutch trade is very variable as the partner appears in the trad ledger at different year occurrences, and at different names, reflective of the ongoing political and state development of the Dutch. In regard to the English's colonies, the opposite argument is made, as their colonies in North America, West Indies have a relatively small role in the trade—also they are subject to great fluctuation across the years, reflective of their socio-economic-political events. England, mainly rather than Scotland, has a large share in the Irish reexport trade value. Then, on the same continent, with the new country of United States, their importance from within each state is also observed; Northern states, generally, trade more. Lastly, Asian European colonies play a small role, and with no role for independent Asian countries.

From the raw partners and their trade, the total trade in reexports of each year, as a summation of the reexport trade value of all traded goods across all partners¹³, is dynamic, table 1. Briefly, we observe that most of the trade value comes from goods and manufactures of tropical, food and beverages and raw materials. There is lots of movement for the other GG bins, which are and to be tailored and more specific to the partner and their demand; this is explained in the Appendix. At large, the reexport trade value is variable across the cross section of the year. However as

¹³There is small discrepancies in the accountant's reported trade value for years 1805 and 1822, I use my estimates of the total reexport trade value by summing all the trade value of the partners, and verified by the same procedure of adding up the trade value reported for all goods traded.

a big picture, reexport trade value seems to start at a modest £73837.48 in 1784, and declines dramatically in 1794 to £25861.89. Then, trade value seems to pick up after, in the nineteenth century to £168650.77 in 1805, and £78394.49 in 1822, table 2. The new partner aggregates shows that as English partner (British Isles), has a significant role in the reexport trade values, following Rest of Europe and/or Americas, and Asia has small importance.

Once, we take the consideration of the change in reexport trade value across the years concurrently with the changes across partner and GG; it is reflective that these trade changes, in value, are partly responsible from these factors. The trade value when disaggregated by GG, partner, and their joint partner GG, shows that each partner changes. The more observable patterns is the rise of English partner, and the greater trade in raw goods and tropical goods and manufactures. Other observable patterns include: the decline in textile manufactures and trade with Rest of Europe partner. As a whole, over this period, trade increase in value of 6.17%, or £4557.02 from 1784-1822, table 10d. From these reference points, trade increase humbly over this period, disregarding the short run changes. It is seemingly, or plausible, observable with the trend English reexport trade patterns, that there was trade decline in the last decade of the eighteenth century from the American Revolution¹⁴, and a trade rebound that follows after despite the Napoleonic Wars into the eighteenth century. Deane and Cole's moving three year averages show a smoother trend of the British trade, our data here shows some signs of similarities, if not a lag for British terms.

The value and the value shares are important to keep in mind for the next section, from the GG/Partner and their trade value reported, we segue this to the broader discussion for the change of Total Trade value across each year, and this decomposition by trade margins. We, otherwise, would like to explain the values of table 2b.

¹⁴Deane and Cole, *British Economic Growth 1688-1959*, pp. 45-46, English reexports 'entered a period of sustained growth in the mid-fifties [1750's] and that the sudden upsurge at the end of the century followed a particularly severe fall in the volume of trade during the American War of Independence... [with growth occurring] slightly more rapid in the recovery of the late eighties and nineties."

Table 2: Reexport Trade Value Summary by Partner

| Region | Re | export Trac | de Value (in | £) |
|----------------|-----------|-------------|--------------|----------|
| rtegion | 1784 | 1794 | 1805 | 1822 |
| English | 12065.66 | 13742.04 | 120097.07 | 52409.49 |
| Share (%) | 16.34~% | 53.14% | 71.21% | 66.86% |
| Rest of Europe | 39030.69 | 4614.34 | 21304.72 | 10413.13 |
| Share (%) | 52.86% | 17.84% | 12.63% | 13.28% |
| Asia | 2473.96 | 228.76 | 1962.95 | 88.72 |
| Share (%) | 3.35% | 0.88% | 1.16% | 0.11% |
| Americas | 20267.17 | 7276.76 | 25286.02 | 15483.15 |
| Share (%) | 27.45% | 28.14% | 14.99% | 19.75% |
| Total Reexpo | ort Trade | Value of A | ll Partners | s (in £) |
| | 1784 | 1794 | 1805 | 1822 |
| | 73837.48 | 25861.89 | 168650.77 | 78394.49 |

(a) Reexport Trade Total Value and Regional Share, with Yearly Changes

| Region | Region's I | Reexport Tra | de Value Difference |
|----------------|------------|--------------|---------------------|
| | 1784-1794 | 1794-1805 | 1805-1822 |
| English | 1676.38 | 106355.04 | -67687.59 |
| Rest of Europe | -34416.35 | 16690.39 | -10891.59 |
| Asia | -2245.20 | 1734.19 | -1874.23 |
| Americas | -12990.40 | 18009.25 | -9802.87 |
| Total Reexpor | t Trade Va | lue Differer | nce of All Partners |
| | 1784-1794 | 1794-1805 | 1805-1822 |
| | -47975.58 | 132565.80 | -90256.28 |

⁽b) Reexport Trade Total Value Difference

^{a The Total Net Value column of each respective panel describes the net change of trade from [time 2 - time 1] with respect to the GG. The following: Total Net % Change column is the change of the Total Net Value [time 2 - time 1] over the Total Value of trade in time 1.}

^b Trade change is then decomposed by the extensive and intensive margins. Given each margin: we have the difference in trade from [time 1 - time 2] in value terms and the percent change: which is the change in value with respect to the trade value at time 1.

5.2 Trade Decomposition

How do we make sense of the changes observed in the summary statistics? In this section, I will present the broader discussion of the trade change with using the trade decomposition as an accounting method for the trade changes are happening, and across at which dimensions. The trade decompositions, with its reference from the summary statistics, are discussed and with the addition of historical insights and conjectures to understanding the changes that happen. I will discuss the trade decomposition by partner and GG (joint) since this approach offers a complete view of the changes. As a result, I will address each partner individually.

English

The role of the English partner did not start of as important or highly, at the start, their contribution, as percent share, to the trade value was only 16.34% and later grows to over fifty percent, table 7e. The bulk of English trade, in percent shares of the joint partner and GG, has been tropical goods and manufactures, across time the trade values have expanded into foods and beverages, and raw goods. The following has important outcomes for the greater changes in the composition of the trade value, disaggregate by only GG; the dominance of English trade is highlighted here.

Given the overall trade decline from 1784-1794, the trade decomposition for English shows that trade increased within this period, table 3a, where there was an overall greater expansion in pre-existing trade from textile manufactures, and food and beverages, table 12. Moreover, there is a general increase in extensive margins in manufactures such as textiles, metalworks, and few foods and beverages; whereas there seems to be decrease in non-manufactures, such as pastorals, tilling, raw goods, and tropical goods and manufactures, table 12. There is a possibility of the aftermath of the American Revolutionary war, that their domestic demands for manufactures is needed. This is in no way a signal or an indicator of their need to rebuild of its manufacturing economy; as English imports are expanding and growing, at large, following 1780¹⁵. Although the increase in trade is minor at 2.27% for 1784-1794, trade increases dramatically at a 411.24% from 1794-1805.

¹⁵Deane and Cole, British Economic Growth 1688-1959, p. 45; Mantoux, The Industrial Revolution in the Eighteenth Century p. 44

Table 3: Trade Decomposition by Partner

| Partner | Total Net | Total Net | Extensive Margins | | Intensive I | Margins | |
|----------------|-----------|-----------|-------------------|---------|-------------|---------|--|
| | Value | % Change | Value | % | Value | % | |
| English | 1676.38 | 2.27% | -536.80 | -0.73% | 2213.182 | 3.00% | |
| Rest of Europe | -34416.35 | -46.61% | -32272.67 | -43.71% | -2143.68 | -2.90% | |
| Asia | -2245.20 | -3.04% | -2240.56 | -3.03% | -4.64 | -0.01% | |
| Americas | -12990.40 | -17.59% | -4931.31 | -6.68% | -8059.09 | -10.91% | |
| Sum | -47975.58 | -64.97% | -39981.35 | -54.15% | -7994.233 | -10.83% | |

(a) Trade Decomposition, 1784-1794

| Partner | Total Net | Total Net | Extensive Margins | | Intensive 1 | Margins | |
|----------------|------------|-----------|-------------------|---------|-------------|---------|--|
| | Value | % Change | Value | % | Value | % | |
| English | 106355.04 | 411.24% | 72 196.66 | 279.16% | 34 158.38 | 132.08% | |
| Rest of Europe | 16690.39 | 64.54% | 14979.70 | 57.92% | 1710.68 | 6.61% | |
| Asia | 1734.19 | 6.71% | 1734.19 | 6.71% | 0.00 | 0.00% | |
| Americas | 18009.25 | 69.64% | 9971.16 | 38.56% | 8038.09 | 31.08% | |
| Sum | 142 788.87 | 552.12% | 98 881.71 | 382.35% | 43907.16 | 169.78% | |

(b) Trade Decomposition, 1794-1805

| Partner | Total Net | Total Net | Extensive | Margins | Intensive M | Iargins |
|----------------|-----------|-----------|-----------|---------|-------------|---------|
| | Value | % Change | Value | % | Value | % |
| English | -67687.59 | -40.13% | -63645.03 | -37.74% | -4042.56 | -2.40% |
| Rest of Europe | -10891.59 | -6.46% | -3709.69 | -2.20% | -7181.90 | -4.26% |
| Asia | -1874.23 | -1.11% | -1874.23 | -1.11% | 0.00 | 0.00% |
| Americas | -9802.87 | -5.81% | -9356.02 | -5.55% | -446.84 | -0.26% |
| Sum | -90256.28 | -53.52% | -78584.97 | -46.60% | -11671.30 | -6.92% |

(c) Trade Decomposition, 1805-1822

^a Like Table 3, the format and reading this table is the same, but at the Partner dimension. This is trade change of the partner.

b To reiterate, the Total Net Value column of each respective panel describes the net change of trade from [time 2 - time 1] with respect to the Partner. The following: Total Net % Change column is the change of the Total Net Value [time 2 - time 1] over the Total Value of trade in time 1. Trade change is then decomposed by the extensive and intensive margins of each partner. Similarly, given each margin: we have the difference in trade from [time 1 - time 2] in value terms and the percent change: which is the change in value with respect to the trade value at time 1.

Table 3: Trade Decomposition by Partner, continued

| Partner | Total Net | Total Net | Extensive Margins | | Intensive I | Margins | |
|----------------|-----------|-----------|-------------------|---------|-------------|---------|--|
| | Value | % Change | Value | % | Value | % | |
| English | 40 343.83 | 54.64% | 19 962.17 | 27.04% | 20 381.66 | 27.60% | |
| Rest of Europe | -28617.56 | -38.76% | -14766.73 | -20.00% | -13850.83 | -18.76% | |
| Asia | -2385.24 | -3.23% | -2199.52 | -2.98% | -185.72 | -0.25% | |
| Americas | -4784.02 | -6.48% | -9038.28 | -12.24% | 4254.27 | 5.76% | |
| Sum | 44 557.02 | 6.17% | -6042.36 | -8.18% | 10599.37 | 14.36% | |

⁽d) Trade Decomposition, 1784-1822

In 1794-1805, we understand loosely by Deane and Cole's figures of trade and Mantoux's, that British economy was growing and the rebound from its war with its former American colonies was seen. The trade growth of 411.24%, is from the an extensive and intensive margin increase of 279.16% and 132.08%, respectively, table 3b. The increase in extensive trade comes from the greater goods and manufactures of foods and beverages, pastoral, and raw materials 16, table 12. And the continued trade of tropical goods and manufactures such as: textile, metalworks, misc; contributes to the greater intensive margins, table 12. In most aspects, if not all, all good groups are being traded more, with more trade in newer goods. The following may be perplexing for time being as the Napoleonic Wars was started, and wars, of this time, is known to fluctuate trade and if not decrease trade. The role of Act of Union, has an important implication for the reexports, and questions. The constant nominal prices of most goods in the Irish reexport trade may serve as some factor making Irish reexport trade more appealing to English partners and this is attractive in a time when prices are supposed to increase, implications for English imports. This is consistent with the English allowing Irish reexports to only continue, for Irish special interest concerns, a few years after their Union. One conjecture for this concession, is the English would still benefit given the high price of goods sold at time. Would like to create a counterfactual trade decomp, using constant reexport price, to understand whether trade loss in 1805-1822 is partly

^c The Trade Decomposition of the first and last year on the time period.

¹⁶One caveat is the 'introduction' of these new goods may have been already traded, but the disruption in trade from some time prior or chance, treats these goods as 'new'. Therefore, we have to be careful to label or attribute the, any, increase in extensive margins from the trade of new goods, especially from this our inference.

due to change in price. It does not seem so, as the prices changes are minimal, and some evidence that bulk of the trade value is explained by the volume of trade not price (at least late end of seventeenth century)

The trade growth in 1805-1822 seems to show that this was a peak of trade in this period as trade after 1805-1822 decreases to staggering -40.13% or -£67687.59, table 3c. The following quantity is less striking compared to the pattern of trade decline seen with other partners, of this time frame. However, what is surprising is that, in terms of trade value, there is a general increase despite the volatility. The trade change here shows that there is a general decrease across all summed trade decomposition margins, with the exception of tilling goods. A few good groups are continued traded like: pastoral, and tropical goods and manufactures. But the loss in cease trade of goods like: textiles, metal works, pastoral, raw, tropical goods and manufactures, and misc; leads us to an inclusive or un-meaningful result for the pattern of the goods traded and not. On this accord, trade with respect to the English partner, seems to more selected. The extensive loss comes encompasses lost trade of most goods groups, except miscellaneous goods and manufactures, table 12.

Rest of Europe

At the start, the bulk of trade share is explained by the Rest of Europe partner, with a share of 52.86% of the total value, their trade value was dominantly in tropical goods and manufactures, with textile manufactures following a staggering second place, table 7f. Across time, the trade shares for the Rest of Europe partner declines and never rebounds, with a change in the composition of its trade value by GG as well. It is suggestive that since the start of Irish reexport economy, the Rest of Europe partners would play a greater role if not similar with English partners.

From 1784 to 1794, trade decreased by 46.61%, table 3a. This significant decline is attributed to a substantial reduction in the volume of traded goods, which fell by 43.71%. Hence the year following after 1784 or some time thereafter, before '94 has an important implication, where most trade loss, in manufactures and goods, comes from the raw partners within this label, that altogether disappear from trade or trade less.

Then from in 1794-1805, we observe a positive trade value increase of 64.54%, with the greater

weight coming from the trade of new goods by 57.92%, table 3b. The introduction or resurgence in goods and manufactures of: textiles, metal works, raw materials, tropicals and miscellaneous explains for this greater extensive margin, table 12. And more intensely, the continued trade of manufactures in food and beverages, a few tropical goods and manufactures, with decline in some miscellaneous goods and manufactures, table 12. It seems like the interruption of the French wars positively affected the trade demand in most goods, concurrently as a few European metropole partners and their colonies in Europe stopped trading in the period prior, the wars of this period prompted trade resurgence in other European partners (Denmark and Norway, Russia; with a few minor European Spanish colony-territory partners), table 6. This off course is looks relatively small and minor, as the trade decline in the last period is drastic, but the size of the trade change from the English eclipses this great change. Lastly, by other developments, there cease to be the trade in tilling and pastoral goods for the rest of the time period.

Any sign of the 'Rest of Europe' partner trade rebounding is challenged, as seen in 1805-1822. Natural of all partner trade patterns, trade declines in this period, however the magnitude of the English decline completely overshadows the Rest of Euorpe's, as the partner shares prompt the growth from 12.64% to 13.28%, table 6. The following leads us to the impression that the relative partner grows, but we are just observing the trade contraction. The trade decline here is also prompted in both the greater loss of traded goods and less goods being traded; with more losses in manufactured goods and some trade expansion in raw materials and tropicals, table 12. Within this trade partner, the role of the 'Belgium Holland' and 'Germany Hanseatic Towns' as the raw partners with the bigger trade share is relevant to note.

Asia

The story of the Asia partner shows, is consistently, a small role it has for the Irish reexport economy, and if not for Irish exports in general. From the latter, Asia has always played a small partner for Ireland, unlike for Scotland and after its Union with England– interesting note, one motivating Scottish support for its Union would be the access to the Asian market¹⁷, with that

 $^{^{17}}$ Bartlett, Ireland, Empire, and Union, 1690-1801 (Kenny, 2004), pp. 67 maybe 272. This would be weak

said, Scottish Union with English did not come easily¹⁸.

Americas

The Irish American reexport trade can be decomposed by three major branches, by region, as seen by the changes in trade shares of British North America, United States, and the British Indies. The role of South Americas, rather South American colonies of European, does not show great significance across the four years. Instead, for the three other regions, the trade pattern changes are quite observable, table 12. Unfortunately, we will treat these regions as a fixed concept, but our discussion will surmise the conjectures for each region. Its important to note the greater changes that is reported under the 'Americas' trade decomposition captures the greater change (in magnitude) effect of the which ever region at the given period. The following time period mark the importance of each region: 1784-1794 rise in (British) West Indies, 1794-1805 decline of all partners, 1805-1822 rise in (British) North Americas, as shown from the region's partner trade shares, table 6. However, relative to the other 'region' partners like English, these British colonies remain a smaller role.

From 1784-1794, trade declines by 17.59%, table 3a, overall the trade loss comes from the loss in trade goods and goods being traded less. This maybe be in part attributed to the raw partner's trade that is not captured in the broad trade decomposition. The trade decomposition across the GG bins corroborates some sentiment of intra regional changes as there is mixed effects on the overall pattern of the trade change. Some margins of the goods are positive and others negative. It is probable to observe that the decade aftermath of the American Revolution has some restructuring effect on the demands of the countries-colonies in Americas as a whole.

More clearer patterns are observed in the next time period, 1794-1805, as the relative decline in importance of the Americas is shown. Like the case of Europe, there is a trade value increase at the ending year of this period, but it is completely overshadowed by the dominance of English partner.

Nonetheless, the trade increase shows some evidence of the British West Indies-Caribbeans being

¹⁸Bartlett

compelling reason, if not Ireland's opposition reason with Union. Potential gains are observed with trade with Americas, Europe- there is a questionable room for Asian trade

an important partner. Trade increases 69.54% from '94 to '05, with the increase, of relatively equal, new goods being traded (38.56%) and goods being traded more (31.08%), table 3b. Despite the general decline of metal work manufactures, and tropical goods and manufactures; most goods and manufactures of all types are traded more and entering the trade. As a result of these changes, it is probable that we are observing to meet (British) Americas' demands, the necessary rerouting in trade partners, using Irish reexports, is necessary during the Napoleonic Wars. The newly country of United States, turning inward as a result, where most of their demands in manufactures ceased or stop shortly, and perhaps some implications and changes on food and beverages.

Furthermore, from 1805-1822, trade decreases, mostly from the result of goods ceased to be traded. The total effect of goods stop trading and goods being traded also seems to explains for most goods groups, with the exception of mainly tropical goods and manufactures. The motivating partner that seems to capture the effect is the British North Americas with its relative magnitude trade shares being largest, it is fitting to observe so as these partners are not the ones with direct production and economies of tropicals. The further trade depression and role of United States is perhaps reflected as Ireland aligns its self with England; moreover, it does not seem to improve in the favor of Irish reexports as a result of the War of 1812.

All Trade Partners

Report trade decomposition of entire period, with all partners summed together, the row of the totals of table 3. As a story, Ireland's reexport trade is exceptional and the trade changes across partners and goods are dynamic. We are seeing shifts in important trade partners via trade value shares and the types of goods traded (which in part are informed by the partner), refer to table 2. The sheer magnitude of the reexport trade value should remarked, which is informed by the good types and goods that are reexported.

Report findings, and make any adjustments or add ons with what the joint table summed shows about

The decomposition of trade change from partner shares, table 6, keep in mind the trends in important partners.

6 Conclusion

Ireland's reexport economy shows robust signs of growth and changes within the late eighteenth and early nineteenth century. For, us we remark that this trade: in importance in trade partners is informed by England's relationship with other countries, and Ireland's fluxing status with respect to England (1784-1822). The early workings of international trade and geopolitics are exemplify here. Moreover, we see some the impacts of war and peace.

7 Appendix

7.1 Method: Matching and Sorting

The methodology of matching is simple and it starts with recording the goods. At the earliest year, I record all goods that are traded and their quantities related to trade from the trade ledger, then with this list of the goods traded at 1784, it is a baseline for goods that are traded across the next three years. Thus for the next three years, I would then match the goods recorded respectively to the baseline. All goods must be matched or created as a new entry to indicate the trade of a new good. Specifically, the good's label and its unit reexported must match those in the baseline list. I then review the prices at which the goods are reexported to identify any significant price changes across years, the following also helps for matching harder cases since most goods before 1805 have constant prices. In extreme cases, I also matched and combined goods with their quantities, over the instance that their prices are the same at the given year and relatively similar to its earlier trade existence. The following tactic for matching flagged goods raises some concerns: such as (1) potential changes in the good's prices (2) general price differences of the good, therefore matching based on price is done carefully. Regardless, in the method of matching and descriptive statistics, it is important to take note of the pattern of prices and total value of each good- and the following applies for the flagged goods. All instances of matching flagged goods and combined quantities, table 7.4 and table 7.5, its the extensive table of all matched goods traded. As other notes of my matching: (1) more broader labels at a latter time are less likely to matched if there is no indicator

of characteristic in the label, (2) a few broad labels are matched, but not at all occurrences¹⁹. In total, matching by this nature is done at the most conservative level— my philosophy for matching is not too concerned in replicating the actual material conditions of goods traded, as it is merely impossible at a grand level. Finally, to ensure correcting accounting, I verify that the recorded total value equals the product of the price and the quantity reexported.

In the end, I have a list of all goods traded with their respective quantities and from this list, I ensure that I am able to disaggregate by partner to have all the traded goods sorted by partner. It is possible that I have a few mistakes is matching goods, as it is possible that we are capturing new naming rules and convention for pre-existing goods (that are wrongly not matched on my end).

The importance of matching goods to their labels to indicate the continuation of trade is show, or otherwise the new trade, has greater implications of the trade decomposition. Further, it also impacts our understanding the number of traded goods at each year, and our idea of the evolution of pre-existed trade goods. More conceptually, the concept of new goods entering trade involves two aspects: (1) some goods may have their labels changed, which could be due to updating old labels as a result of changes made to the goods, and, or, (2) the introduction of entirely new goods into trade.

7.2 Method: Trade Decomposition

In this section, the following is the method to understanding the trade patterns, moreso, their changes with respect to the different dimensions of representing our reexport trade value. In the next section, I will report the results of the analysis and discuss the stylized facts that we can prescribe.

First and foremost, as definitions, I define and classify each good's trade value as : $x_{j,k,t}$ where the j'th partner J = 4; English, RestofEurope, Asia, Americas, k'th good's group (J= 8: (1)TEXTLm, (2)MLWRKm, (3)FOBEVm, (4)PASTLg, (5)TILAGRg, (6)RAWg, (7)TROPgm, (8)MSICgm), and t = year (T=4; 1784, 1794, 1805, 1822). The summations for the indices are

¹⁹For instance: the good: "Painting Stuffs" in 1805 is not matched with "Pictures 2 Feet Square and under 4 Feet Square" in 1822" for the argument that we are not sure if this was the actual good in 1805. We can compare the units of either case- but I am not moved.

given by $\sum_{j=1}^{4}$ for J and $\sum_{k=1}^{8}$ for K.

Then the (joint) marginal decomposition in trade value, V, of the given time frame, (t_1, t_2) , is defined by terms of **i** or **e**, as either **intensive** (1) or **extensive** (2), after taking the difference of the value from the second and the first year:

$$V(x)_{j,k}^{\mathbf{i}} = \Sigma \ x_{j,k,t_2} - x_{j,k,t_1} \left\{ x_{j,k,t_1} > 0 \quad \text{AND } x_{j,k,t_2} > 0 \right\}$$
OR

$$V(x)_{j,k}^{\mathbf{e}} = \Sigma \ x_{j,k,t_2} - x_{j,k,t_1} \begin{cases} x_{j,k,t_1} = 0 \text{ and } x_{j,k,t_2} > 0 \text{ OR} \\ x_{j,k,t_1} > 0 \text{ and } x_{j,k,t_2} = 0 \end{cases}$$
 (2)

We would then take the sum of equations (1) and (2), intensive and extensive, to get the total trade decomposition. The following would explain for the change in trade across the two years of the given time frame. As of now, equations (1) and (2) describes the accounting formula for the trade decomposition. From the value of the $x_{j,k,t}$, we can take on any linear transformation of x's by summing across the j'th and k'th index; note: it matters when we take the summation before the trade decomposition. In this case, we kept the indices unsummed before the trade decomposition, thus this the extensive version, table . Keep in mind, we can and would like to add across index(s) before the trade decomposition, depending which dimension we are interested).

For instance, if we were interested in the general trade change between two years, with no regard for the good group nor partner, we would have: have summed across the j'th, $(J = \Sigma_{j=1}^4)$ and k'th, $(K = \Sigma_{k=1}^8)$ index before doing the trade decomposition. Thus we would have: intensive (3), extensive (4)

$$V(x)^{\mathbf{i}} = x_{t_2} - x_{t_1} \begin{cases} \Sigma^J \Sigma^K \ x_{t_1} > 0 & \text{AND} \\ \Sigma^J \Sigma^K \ x_{t_2} > 0 \end{cases}$$
 (3)

OR

$$V(x)^{\mathbf{e}} = x_{t_2} - x_{t_1} \begin{cases} \Sigma^J \Sigma^K \ x_{t_1} = 0 \text{ and } \Sigma^J \Sigma^K \ x_{t_2} > 0 \text{ OR} \\ \Sigma^J \Sigma^K \ x_{t_1} > 0 \text{ and } \Sigma^J \Sigma^K \ x_{t_2} = 0 \end{cases}$$
(4)

This gives a bigger picture of the total trade flows but with no greater information of the where (partner-region) the evolution of the reexport trade flows changes. This trade decomposition does gives us an idea for how the subsequent trade decomposition across different dimensions occur. Furthermore, we can disaggregate the good's trade value by good type. We would individual sort the trade value by the k'th index before the trade decomposition; and that would result: (ONLY PARTNER)

$$V(x)_{j}^{\mathbf{i}} = x_{j,t_{2}} - x_{j,t_{1}} \begin{cases} \Sigma^{K} \ x_{j,t_{1}} > 0 & \text{AND} \\ \Sigma^{K} \ x_{j,t_{2}} > 0 \end{cases}$$
OR

$$V(x)_{j}^{\mathbf{e}} = x_{j,t_{2}} - x_{j,t_{1}} \begin{cases} \Sigma^{K} \ x_{j,t_{1}} = 0 \text{ and } \Sigma^{K} \ x_{j,t_{2}} > 0 \text{ OR} \\ \Sigma^{K} \ x_{j,t_{1}} > 0 \text{ and } \Sigma^{K} \ x_{j,t_{2}} = 0 \end{cases}$$

$$(6)$$

Next, the second trade decomposition at the partner level takes into consideration of the trade flows of the partner dimension but no CG dimension. From this method, we are able to see how the partners' total demand in reexports change across time—with no greater information of the change in the type of commodities that are reexported we focus on the third trade decomposition that we can do. We would sum across the j'th index before the trade decomposition to have only the partner dimension.

Lastly, the third trade decomposition happens at the joint CG and partner dimension. This trade decomposition combines both dimensions to get a picture of the how trade changes from within partners and the types of commodities that are reexported from the different times. In doing this, we can sum across the partner to derive another summary of the trade decomposition which we get a different result that the first trade decomposition when we did not take into consideration of

the partner. This would enable us to look at the conditional trade change. One might realize that the equation (1) and (2) is the equation for this trade decomposition, since we do not sum across any index before the trade decomposition. The result is 32 different trade decomposition's (of two margins): for each partner there is eight GG dimensions. The summarized version of these joint trade decomposition, table, that we sum over the partner.

The summation of the joint trade decomposition across the partner gives us a different perspective of the trade decomposition from the GG dimension. The extensive margin in absolute terms grows larger as we should expect, with the decline of the intensive margins, to equalize the total change in trade value.

Through, this simple trade decomposition, we can understand the evolution and if not, the pattern of the trade of commodities through its trade value. Broadly speaking, with commodities' characteristic staying equal, we can observe and prescribe the expansion and contraction of trade with respect to the time frame. In doing so, we are looking at the extensive and intensive trading of the commodities. We need to be explicit and highlight the importance of t'th index, as each trade decomposition across two time, depends on wether we observe the good being traded in the years. Extensively, the commodities are being traded in the two years. Intensively, the commodities is only being traded in one of the years, with respect to the time frame. There are different dynamics at play when we talk about intensive and extensive margins with the observation of the commodities trade and their trade values.

we can define the extensive and intensive margins of trade. The extensive trade of a commodity at t1 and t2 (or any transformation of the $x_{i,j,t}$) is the the trade of the commodity, its trade value, in the two years (t1-t2). We would then take the difference of the trade value in the second year and subtract its trade value in the first year: $(x_{i,j,t1} \text{ minus } x_{i,j,t2})$.

if the commodity is in both years then it takes the value of 2, consequently if the commodity only appears in one of the years it takes value 1. It should be clear that from the k'th index: we are sorting our total value of commodities in terms of extensive[1] or intensive[2], with respect to t's. From there we can some sum across the i's to get $X_{j,t}$ as an aggregate quantity; and/or sum across js to get the aggregate across all commodities $X_{j,t}$ or $x_{i,k,t}$. Table 1 reports the descriptive

statistics of $X_{j,t}$ and $x_{i,t}$, table 2 reports the descriptive statistics of $x_{i,j,t}$.

7.3 Findings and Discussion: Summary Statistics

Table 7.4: All Matched Goods Traded with Total Trade Value and Price $\,$

| Good | Unit | GG | | Total Ti | ade Value | | | Pr | ice | |
|------------------------------|----------------------|---------|---------|----------|-----------|---------|--------|--------|--------|-------|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 |
| Annato | Cwt | TILAGRm | | | | 8.44 | | | | 0.833 |
| Apparel | Value | TEXTLm | 26.29 | | 460.00 | | 1.000 | | 1.000 | |
| Argal | Cwt | MISCgm | | | | 118.76 | | | | 1.017 |
| Arms | Value | MISCgm | 2.00 | | | | 1.000 | | | |
| Ashes Pearl | Cwt | RAWg | | | 273.75 | | | | 1.250 | |
| Ashes Pot | Cwt | RAWg | | | 398.75 | 209.70 | | | 1.250 | 1.154 |
| Ashes Barilla | Cwt | RAWg | | | 890.00 | 108.56 | | | 1.250 | 1.154 |
| Balsam Capivi | Lbs | RAWg | | | | 118.07 | | | | 0.117 |
| Bacon English | Flitches | PASTLg | 18.00 | | | | 0.750 | | | |
| Beads Coral | Lbs | MISCgm | | | | 0.70 | | | | 0.933 |
| Beer | Barrel | FOBEVm | 209.54 | 169.33 | 89.00 | 2.78 | 1.000 | 1.000 | 1.000 | 0.463 |
| Berries Juniper | Cwt | TILAGRm | | | 70.00 | | | | 2.000 | |
| Brimstone Rough | Cwt | RAWg | | | | 308.33 | | | | 0.771 |
| British Undrest | - | RAWg | | | | 32.14 | | | | |
| Bullion | - | MISCgm | | 44.33 | | | | 0.333 | | |
| Cantharides | Lbs | PASTLg | | | | 0.47 | | | | 0.233 |
| Carpetting | Yards | TEXTLm | | 51.10 | | | | 0.100 | | |
| Coaches & Coachmakers Work | Value | MLWRKm | | 220.00 | 490.00 | | | 1.000 | 1.000 | |
| Cheese | Cwt | PASTLg | 56.77 | | 178.75 | | 1.625 | | 1.625 | |
| $Cider^*$ | Tons | FOBEVm | | | 129.86 | 216.69 | | | 5.000 | 4.627 |
| Coals | Tons | RAWg | | 578.25 | 636.75 | | | 0.750 | 0.750 | |
| Coffee | Cwt | TROPgm | 1702.31 | 662.50 | 21080.00 | 337.02 | 10.500 | 10.000 | 10.000 | 0.083 |
| Copper Wrought | Value | MLWRKm | | | 144.49 | | | | 1.000 | |
| Copper Unwrought | Cwt | MLWRKm | | 37.19 | 6210.00 | | | 5.000 | 5.000 | |
| Cordage | Cwt | PASTLg | 124.30 | | 152.50 | | 1.250 | | 1.250 | |
| Cork | Cwt | PASTLg | 551.89 | | 661.50 | 6998.55 | 3.250 | | 3.500 | 3.233 |
| Corn Beans & Peas | Barrel | TILAGRm | | | 105.00 | | | | 1.000 | |
| Corn Beans & Quaso | Barrel | TILAGRm | 41.88 | | | | 1.250 | | | |
| Corn Oats | Barrel | TILAGRm | | | 33.75 | | | | 0.375 | |
| Corn Wheat | Barrel | TILAGRm | 409.50 | | 351.00 | | 1.750 | | 1.350 | |
| Cot. Manf. Calico Brit. Col. | Yards | TEXTLm | | 46.13 | | | | 0.150 | | |

Table 7.4, cont.

| Good | Unit | GG | | Total Tr | ade Value | | | \Pr | ice | |
|------------------------------|-----------------------|---------|---------|----------|-----------|---------|-------|-------|-------|-------|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 |
| Cot. Manf. Cot. Plain & Col. | Value | TEXTLm | | 160.33 | | | | 0.167 | | |
| Cot. Manf. Muslin Brit. Wh. | Yards | TEXTLm | | 583.52 | | | | 1.000 | | |
| Cot. Manf. Muslin Brit. Col. | Yards | TEXTLm | | 211.65 | | | | 0.150 | | |
| Cot. Manf. Calico Col | Yards | TEXTLm | | 47.47 | | | | 0.167 | | |
| Cot. Manf. Cot. Plain | Yards | TEXTLm | | | 354.90 | | | | 0.167 | |
| Cot. Manf. Muslin Wh. | Yards | TEXTLm | | | 620.03 | | | | 1.000 | |
| Cot. Manf. Muslin Wh. | Yards | TEXTLm | | | 39.15 | | | | 0.150 | |
| Curants | Cwt | TILAGRm | | | | 1146.16 | | | | 2.077 |
| Cutlery | Value | MLWRKm | | | 214.29 | | | | 1.000 | |
| Drapery New | Yards | TEXTLm | 3492.15 | 134.75 | 259.00 | | 0.150 | 0.125 | 0.125 | |
| Drapery Old | Yards | TEXTLm | 4458.75 | 1990.50 | 8310.40 | | 0.750 | 0.750 | 0.700 | |
| Drapery Ornamented | Value | TEXTLm | | | 66.41 | | | | 1.000 | |
| Drugs | Value | MISCgm | 35.00 | 786.76 | 1649.14 | | 1.000 | 1.000 | 1.000 | |
| Dye Stf. Argeal | Cwt | RAWg | | | 25.30 | | | | 1.100 | |
| Dye Stf. Fustick | Cwt | RAWg | | | 283.50 | | | | 0.700 | |
| Dye Stf. Indigo* | Lbs | RAWg | | | 32.00 | 713.17 | | | 0.333 | 0.308 |
| Dye Stf. Logwood | Cwt | RAWg | | | 16301.25 | | | | 2.250 | |
| Dye Stf. Madder | Cwt | RAWg | | | 25.00 | 815.73 | | | 1.250 | 1.000 |
| Dye Stf. Verdigrise | Lbs | RAWg | | | 1149.75 | | | | 0.125 | |
| Earthenware | Value | MISCgm | 911.04 | 102.46 | 1033.68 | | 1.000 | 1.000 | 1.000 | |
| Ess. of Bergamont and Lemon | Lbs | TROPgm | | | | 68.50 | | | | 0.500 |
| Fish Cod | Barrel | MISCgm | 321.42 | 1544.00 | 200.00 | | 1.000 | 4.000 | 1.000 | |
| Fish Cod [?] | - | MISCgm | | | 4132.00 | | | | 4.000 | |
| Fish Cod of Newfoundland | Cwt | MISCgm | | | | 1527.18 | | | | 0.925 |
| Fish Herrings | Barrel | MISCgm | 54.75 | | | | 0.750 | | | |
| Fish Herrings Brit. | Barrel | MISCgm | | | 2527.00 | | | | 1.000 | |
| Fish Herrings Frgn. | Barrel | MISCgm | | | 5515.00 | | | | 1.000 | |
| Fish Herrings Wh. | Barrel | MISCgm | | | | 29.60 | | | | 0.925 |
| Fish Ling | Hogshds. | MISCgm | | 116.25 | 1791.00 | | | 4.500 | 4.500 | |
| Fish [?] Small Newland | Hunds. | MISCgm | | 500.00 | | | | 0.500 | | |
| Fish Salmon | Cwt | MISCgm | | | | 1.42 | | | | 0.708 |

Table 7.4, cont.

| Good | Unit | GG | | Total Tra | ade Value | | | Pr | ice | |
|-------------------------------|----------------------|---------|---------|-----------|-----------|---------|-------|-------|-------|-------|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 |
| Fish Sturgeon | - | MISCgm | | 9.00 | | | | 0.600 | | |
| Flannel | Yards | TEXTLm | | 68.93 | | | | 0.075 | | |
| Flaxseed | Hogshds. | TILAGRm | 69.00 | | 81.00 | | 2.000 | | 3.000 | |
| Flax Undrest | Cwt | TILAGRm | 473.50 | | 304.50 | | 2.000 | | 1.750 | |
| Furs | Value | PASTLg | 99.00 | 7.00 | 82.93 | | 1.000 | 1.000 | 1.000 | |
| Fustian | - | TEXTLm | 74.38 | | | | 0.750 | | | |
| Galls | Cwt | MISCgm | | | | 81.57 | | | | 2.771 |
| Glass Bottles | Dozen | MISCgm | | 204.01 | 72.53 | | | 0.075 | 0.075 | |
| Gla. Bottles of Green or Com- | Dozen | MISCgm | | | | 1.28 | | | | 0.069 |
| mon Gla.(s) | | | | | | | | | | |
| Glass Cases | No. | MISCgm | 33.75 | | 7.50 | | 1.500 | | 1.500 | |
| Glass Ware | Value | MISCgm | | 5.42 | 334.25 | | | 1.000 | 1.000 | |
| Gloves | Pairs | TEXTLm | 10.65 | | | | 0.150 | | | |
| $Groc. \ Almonds$ | Cwt | TROPgm | 18.94 | 22.97 | | 154.95 | 3.000 | 2.500 | | 2.308 |
| Groc. Aloes* | Lbs | TROPgm | | | | 103.12 | | | | 0.092 |
| Groc. Annifeeds | Cwt | TROPgm | | | 18.67 | | | | 1.333 | |
| Groc. Cocoa Nuts | Lbs | TROPgm | | | 286.75 | | | | 0.050 | |
| Groc. Figs | Cwt | TROPgm | 169.80 | | 7.50 | 48.23 | 1.125 | | 0.750 | 0.693 |
| Groc. Ginger | Cwt | TROPgm | 16.97 | 207.56 | 9.00 | 22.77 | 1.500 | 1.500 | 1.500 | 1.385 |
| Groc. Hull'd Barley | Cwt | TROPgm | | | 66.00 | | | | 1.100 | |
| Groc. Mustarde | Lbs | TROPgm | | 68.25 | | | | 0.025 | | |
| Groc. Pepper Guenia | Lbs | TROPgm | | | | 1477.56 | | | | 0.063 |
| Groc. Pimento | Lbs | TROPgm | | 743.15 | 432.80 | 0.00 | | 0.050 | 0.050 | |
| Groc. Prunes | Cwt | TROPgm | 34.79 | 24.56 | | 0.12 | 0.342 | 0.500 | | 0.463 |
| Groc. Raisins | Cwt | TROPgm | 498.53 | 1134.98 | | 113.18 | 1.200 | 1.200 | | 1.154 |
| Groc. Rice | Cwt | TROPgm | | | 66.25 | 980.18 | | | 1.250 | 1.154 |
| Groc. Saffron | Lbs | TROPgm | | 78.00 | | 33.20 | | 1.625 | | 1.383 |
| Groc. Sugar Loaf | Cwt | TROPgm | 26.50 | | | | 4.000 | | | |
| Groc. Sugar Muscovado | Cwt | TROPgm | 4820.41 | 216.09 | | 812.79 | 1.833 | 2.500 | | 2.077 |
| Groc. Small Parcels | Value | TROPgm | | | 124.63 | | | | 1.000 | |
| Gum Arabic | Cwt | RAWg | | | | 0.33 | | | | 5.250 |

Table 7.4, cont.

| Good | Unit | GG | | Total Tr | ade Value | | | Pr | ice | |
|------------------------------|-----------------------|--------|--------|----------|-----------|---------|-------|-------|--------|--------|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 |
| Habdshry. Pins | Dozen | TEXTLm | 2.70 | | | | 0.900 | | | |
| Habdshry. Small Parcels | Value | TEXTLm | 159.30 | 271.98 | 373.11 | | 1.000 | 1.000 | 1.000 | |
| Habdshry. Thread Outnal | Lbs | TEXTLm | 515.88 | | | | 0.250 | | | |
| Habdshry. Thread Sisters | Lbs | TEXTLm | 295.22 | | | | 0.750 | | | |
| Habdshry. Thr. Whited | Lbs | TEXTLm | 2.13 | | | | 0.133 | | | |
| Brown | | | | | | | | | | |
| Hardware | Value | PASTLg | 360.33 | | | | 1.000 | | | |
| Hrdwr. Knives | Number | MLWRKm | 18.53 | | | | 0.013 | | | |
| Hrdwr. Razors | Number | MLWRKm | 6.00 | | | | 0.025 | | | |
| Hrdwr Scissors | - | MLWRKm | 3.56 | | | | 1.333 | | | |
| Hrdwr Small Parcels | Value | MLWRKm | 690.93 | | | | 1.000 | | | |
| Hats | No. | TEXTLm | 270.00 | 193.50 | 196.50 | | 0.750 | 0.750 | 0.750 | |
| Hats [?] | Dozen | TEXTLm | | | | 138.33 | | | | 0.692 |
| $Hemp\ Undrest$ | Cwt | RAWg | | | 948.60 | 100.33 | | | 0.775 | 0.717 |
| Hides Tanned | No. | PASTLg | | | 50.00 | | | | 2.000 | |
| Hides Untanned | No. | PASTLg | | | 9862.67 | | | | 1.333 | |
| Hides | Lbs | PASTLg | | | | 33.23 | | | | 21.665 |
| Horses | No. | PASTLg | | | 110.00 | | | | 10.000 | |
| Hops | Cwt | RAWg | | | 95.00 | 3728.25 | | | 5.000 | 4.617 |
| Hos. Small Parcels | Value | TEXTLm | | | 20.00 | | | | 1.000 | |
| Hos. Stockings Cot. | Pairs | TEXTLm | | 250.75 | | | | 0.125 | | |
| Hos. Stockings Silk and Cot. | Pairs | TEXTLm | | 270.00 | | | | 0.375 | | |
| Hos. Small Parcels not Silk | Value | TEXTLm | | 103.00 | | | | 1.000 | | |
| Instruments Mathematical | Value | MISCgm | | | 17.83 | | | | 1.000 | |
| Instruments Musical | Value | MISCgm | | | 22.75 | | | | 1.000 | |
| Iron Bar | Cwt | MLWRKm | | | | 2.40 | | | | 0.738 |
| Iron Iron and Hrdwr. | Value | MLWRKm | | 438.10 | | | | 1.000 | | |
| Iron Unwrought | Cwt | MLWRKm | | 617.95 | 1928.80 | | | 0.850 | 0.800 | |
| Iron Sundry Articles | Value | MLWRKm | | | 1056.40 | | | | 1.000 | |
| Isinglass | Cwt | MISCgm | | | | 4.33 | | | | 4.617 |
| Ivory Wrought | Lbs | PASTLg | | | 129.00 | | | | 0.600 | |

Table 7.4, cont.

| Good | Unit | GG | | Total Tra | ade Value | | | Pr | ice | |
|-----------------------------|----------------------|---------|---------|-----------|-----------|---------|-------|-------|-------|--------|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 |
| Jewellery | Value | MISCgm | | 472.43 | 178.95 | | | 1.000 | 1.000 | |
| Lead Ore | - | RAWg | | | | 238.48 | | | | - |
| Lead Pig | Cwt | MLWRKm | 1244.36 | | 105.00 | | 0.600 | | 0.525 | |
| Lead Shott | Cwt | MLWRKm | 3.00 | | | | 0.750 | | | |
| Lead White | Cwt | RAWg | 120.83 | | 29.33 | | 1.333 | | 1.333 | |
| Lemons | Thous. | TILAGRm | | | | 16.04 | | | | 0.001 |
| Liquorice Root | Cwt | RAWg | | | | 86.70 | | | | 1.037 |
| Linen British | Yards | TEXTLm | 10.20 | | 3698.55 | | 0.150 | | 0.150 | |
| Linen Cambrick | Yards | TEXTLm | 144.67 | | | | 0.333 | | | |
| Linen Canvas | Yards | TEXTLm | 1114.26 | | | | 0.058 | | | |
| Linen Kenting | Yards | TEXTLm | 1546.40 | | | | 0.100 | | | |
| Linen Lawns | Yards | TEXTLm | 185.85 | | | | 0.175 | | | |
| Linen Muslin | Yards | TEXTLm | 13.30 | | | | 0.175 | | | |
| Linen & Cotton | Value | TEXTLm | 1367.34 | | | | 1.000 | | | |
| Mats | No. | MISCgm | | | 153.87 | | | | 0.067 | |
| Meal Flour | Cwt | FOBEVm | 132.54 | | | | 0.625 | | | |
| Millstones | No. | RAWg | | | 1.25 | | | | 1.250 | |
| Molasses | Cwt | TROPgm | | 3029.20 | 264.00 | 1643.22 | | 1.625 | 1.500 | 2.182 |
| Nuts | Bushel | TILAGRm | | | 2.63 | 106.92 | | | 0.525 | 0.233 |
| Oakurn | Cwt | MISCgm | | | 2.50 | | | | 0.625 | |
| Oil Blubber of Newfoundland | Tuns | RAWg | | | | 63.26 | | | | 5.854 |
| Oil Linseed | Gallons | RAWg | | | 121.25 | | | | 0.125 | |
| Oil of Castor | Lbs | FOBEVm | | | | 2.10 | | | | 0.117 |
| Oil of Olives | Tuns | FOBEVm | | | | 516.94 | | | | 38.771 |
| Oil Seville | Gallons | FOBEVm | 1300.34 | | 164.83 | | 0.175 | | 0.167 | |
| Oil Sweet | Gallons | RAWg | 5.63 | | 100.50 | | 0.250 | | 0.250 | |
| Oil Train | Gallons | RAWg | | | 417.05 | 374.04 | | | 0.025 | 5.817 |
| Oil Vitrial | Gallons | RAWg | | | 30.00 | | | | 0.017 | |
| Olives | Gallons | RAWg | | | | 0.58 | | | | 0.117 |
| Oranges and Lemons | Cwt | TROPgm | 718.00 | 366.25 | | | 0.500 | 0.500 | | |
| Orchidia | Cwt | TROPgm | | | | 8.07 | | | | 1.017 |

Table 7.4, cont.

| Good | Unit | GG | | Total Tr | ade Value | | | Pr | ice | |
|--------------------------|----------------------|-----------------------------|---------|----------|-----------|---------|-------|-------|-------|--------|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 |
| Painting Stuffs | Value | MISCgm | | | 180.00 | | | | 1.000 | |
| Paper Pressing | - | MISCgm | | | 3.59 | | | | 0.004 | |
| Pasleboards | No. | MISCgm | | | 2.00 | | | | 0.004 | |
| Perfumery | Value | MISCgm | | 40.00 | | | | 1.000 | | |
| Pics. under 2ft sq | No. | MISCgm | | | | 9.23 | | | | 9.233 |
| Pics. 2ft sq and under 4 | No. | MISCgm | | | | 13.85 | | | | 13.850 |
| Pics. 4ft sq and Upwards | No. | MISCgm | | | | 36.93 | | | | 18.467 |
| Pitch | Barrel | RAWg | | | 19.50 | 12.49 | | | 0.500 | 0.463 |
| Plates of Fin | Bushel | MISCgm | 112.63 | | | | 2.125 | | | |
| Plate Wrought | - | MLWRKm | | | 50.00 | | | | 0.333 | |
| Plated Ware | Value | MLWRKm | | 622.88 | 421.35 | | | 1.000 | 1.000 | |
| Printingtype | Cwt | MISCgm | | | 17.00 | | | | 4.250 | |
| Ribband of Silk | Lbs | $\overline{\text{TEXTLm}}$ | 10.50 | 46.69 | 13.50 | | 2.000 | 2.250 | 2.250 | |
| Rosin | Cwt | RAWg | 1263.00 | | 6.00 | | 0.500 | | 0.500 | |
| Sadlers Ware | Value | MLWRKm | | 218.40 | 101.00 | | | 1.000 | 1.000 | |
| Salt Foreign | Bushel | RAWg | 224.80 | 137.40 | | | 0.067 | 0.067 | | |
| Salt White | Bushel | RAWg | 849.13 | 412.50 | | | 0.063 | 0.063 | | |
| Salt | Bushel | RAWg | | | | 1213.45 | | | | 0.071 |
| Sangius Draconis direct | Lbs | RAWg | | | | 1.00 | | | | 0.167 |
| Seeds Flax | Bushel | TILAGRm | | | | 1545.73 | | | | 0.396 |
| Seeds Onion | Cwt | TILAGRm | | | | 43.89 | | | | 3.696 |
| Seeds Other Grafs | Cwt | TILAGRm | 43.37 | | 18.00 | | 0.900 | | 0.900 | |
| Silk Manufacture | _ | TEXTLm | 1530.38 | 115.50 | 66.00 | 19.50 | 3.500 | 3.500 | 3.000 | 3.000 |
| Silk Raw India | Lbs | RAWg | | 260.33 | | 734.45 | | 0.900 | | 0.925 |
| Silk & Cotton Mixed | Value | $\widetilde{\text{TEXTLm}}$ | | | 90.19 | | | | 1.000 | |
| Silk Waste and unk. | Lbs | TEXTLm | | | | 44.50 | | | | 0.500 |
| Skins Deer Undreft | No. | PASTLg | | | 357.38 | | | | 0.125 | |
| Skins Goat | - | PASTLg | | | 40.00 | | | | 8.000 | |
| Skins Kid Drest | No. | PASTLg | | | 106.20 | | | | 0.025 | |
| Skins Seal | No. | PASTLg | | | 281.25 | | | | 0.075 | |
| Skins Sheep | - | PASTLg | | | 1.58 | | | | 2.100 | |

Table 7.4, cont.

| Good | Unit | GG | | Total Tr | ade Value | | | Pr | ice | |
|-------------------------|----------------------|-----------------------------|----------|----------|-----------|----------|-------|-------|-------|-------|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 |
| Smalts | Lbs | MISCgm | | | | 159.73 | | | | 0.046 |
| Snuff | Lbs | TROPgm | 319.50 | | | | 0.125 | | | |
| Soap | Cwt | MISCgm | | | 8.75 | 4.76 | | | 1.250 | 1.154 |
| Spirits Frgn. Brandy | Gallons | FOBEVm | | 628.88 | 924.88 | 1081.62 | | 0.125 | 0.125 | 0.117 |
| Spirit Cordial Water | Gallons | MISCgm | | | | 0.01 | | | | 0.073 |
| Spirits Frgn. Geneva | Gallons | FOBEVm | | | 1966.00 | 1537.90 | | | 0.125 | 0.117 |
| Spirits Frgn. Rum | Gallons | FOBEVm | 1476.10 | 105.00 | 7326.20 | 1915.17 | 0.100 | 0.100 | 0.100 | 0.093 |
| Sponge Direct | Lbs | RAWg | | | | 51.10 | | | | 0.233 |
| Starch | Cwt | FOBEVm | | 11.15 | | | | 0.833 | | |
| Stationary | Value | MISCgm | | 40.77 | 56.00 | | | 1.000 | 1.000 | |
| Steel | Cwt | MLWRKm | | | 20.00 | | | | 1.250 | |
| Stockings Cot. | Pairs | TEXTLm | 50.80 | | | | 0.133 | | | |
| Stockings Silk | Pairs | TEXTLm | 93.00 | | | | 0.750 | | | |
| Stockings Thread | Pairs | TEXTLm | 755.25 | | | | 0.125 | | | |
| Stockings Woolen | Pairs | TEXTLm | 5.10 | | | | 0.150 | | | |
| Stockings Worsted | Pairs | TEXTLm | 7.00 | | | | 0.250 | | | |
| Stones Burs | Hunds. | RAWg | | | | 5.00 | | | | 5.000 |
| Stones Marble Blocks | - | RAWg | | | | 57.23 | | | | 0.279 |
| Succus Liquriritae | Cwt | RAWg | | | | 169.71 | | | | 3.446 |
| Tallow | Cwt | PASTLg | | | 2416.50 | 0.00 | | | 1.500 | |
| Tar | Barrel | RAWg | 547.80 | 72.00 | 87.00 | 83.07 | 0.600 | 0.600 | 0.600 | 6.646 |
| Tea Bohea | Lbs | TROPgm | 12933.50 | 81.75 | 30.80 | | 0.100 | 0.150 | 0.100 | |
| Tea Green | Lbs | TROPgm | 2943.60 | | | | 0.300 | | | |
| Tobacco | Lbs | TROPgm | 17388.08 | 53.58 | 13854.37 | 22131.54 | 0.025 | 0.025 | 0.033 | 0.031 |
| Toys | Value | MISCgm | 74.40 | | 93.30 | | 1.000 | | 1.000 | |
| Turpentine | Cwt | RAWg | | 222.75 | 814.00 | | | 1.000 | 1.000 | |
| Twine | Cwt | $\overline{\text{PASTLg}}$ | 42.75 | | | | 3.000 | | | |
| Vinegar | Tuns | $\widetilde{\text{FOBEVm}}$ | 68.25 | 4.00 | 82.45 | | 9.000 | 8.000 | 7.750 | |
| Upholstry Ware | Value | MLWRKm | 281.00 | 21.58 | 100.00 | | 1.000 | 1.000 | 1.000 | |
| Watches | Value | MLWRKm | | | 14.00 | | | | 1.000 | |
| Wax Bees Unmanufactured | Cwt | PASTLg | | | | 283.10 | | | | 5.171 |

Table 7.4, cont.

| Good | Unit | GG | Total Trade Value | | | | | Pr | ice | |
|-------------------------------|----------------------|----------------------------|-------------------|----------|-----------|----------|--------|--------|--------|--------|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 |
| Wine Cape of Good Hope | Tuns | FOBEVm | | | | 1280.51 | | | | 50.770 |
| Wine French | Tuns | FOBEVm | 1965.00 | 3597.38 | 5430.00 | 2538.77 | 60.000 | 60.000 | 60.000 | 55.344 |
| Wine Madeira | Tuns | FOBEVm | | 642.98 | 106.94 | 495.00 | | 55.000 | 55.000 | 50.772 |
| Wine Port | Tuns | FOBEVm | 1018.65 | 538.98 | 6752.34 | 3524.23 | 55.000 | 55.000 | 55.000 | 50.901 |
| Wine Rhenish | Tuns | FOBEVm | | 66.79 | 65.69 | 101.54 | | 55.000 | 55.000 | 50.772 |
| Wine Spanish* | Tuns | FOBEVm | 157.50 | 1022.81 | 2135.18 | 4579.77 | 45.000 | 45.000 | 45.000 | 41.538 |
| Wine not Enumerated | Tuns | FOBEVm | | | | 538.85 | | | | 41.539 |
| Wood Camwood | Cwt | RAWg | | | | 627.58 | | | | 1.846 |
| $Wood\ Deals^*$ | Hunds. | RAWg | 295.38 | | 284.75 | 141.71 | 4.250 | | 4.250 | - |
| Wood Deal Ends | Hunds. | RAWg | | | | 189.50 | | | | - |
| Wood Fustic | Cwt | RAWg | | | | 918.56 | | | | 0.647 |
| Wood Mahogany | Tons | RAWg | | | 1715.00 | 27.01 | | | 7.000 | 0.286 |
| Wood Masts | No. | PASTLg | | | | 8.31 | | | | 2.077 |
| Wood Nicaragua | Cwt | RAWg | | | | 211.83 | | | | 0.925 |
| Wood Spars | Hunds. | RAWg | | | 1.63 | 3.00 | | | 3.250 | 3.000 |
| $Wood\ Staves^*$ | Hunds. | RAWg | | | 230.75 | 150.84 | | | 0.250 | - |
| $Wood\ Timber^*$ | Loads | RAWg | | | 495.00 | 156.88 | | | 2.750 | - |
| Wood Woodware | Loads | PASTLg | | | 1131.94 | | | | 1.000 | |
| $Wool\ Cotton^*$ | Cwt | RAWg | | | 19216.00 | 5757.31 | | | 4.000 | 0.033 |
| Wool Sheep | Cwt | PASTLg | | | 1496.00 | 89.92 | | | 4.000 | 0.033 |
| Wool Foreign | Lbs | PASTLg | | | | 2164.87 | | | | 0.033 |
| Yarn Cotton | Cwt | $\overline{\text{TEXTLm}}$ | | | | 63.35 | | | | 0.069 |
| Yarn Mohair | Lbs | PASTLg | 76.20 | | | | 0.150 | | | |
| Small Parcels in General | Value | MISCgm | 311.77 | 108.24 | 1162.20 | | 1.000 | 1.000 | 1.000 | |
| Other Articles (Wholly Manf.) | Value | MISCgm | | | | 15.76 | | | | 1.000 |
| Sum | - | - | 73837.48 | 25861.89 | 168650.77 | 78394.49 | - | - | - | - |

Table 7.4, cont.

| Good | Unit | GG | | Total Trade Value | | | | Price | | | | |
|------|------|----|------|-------------------|------|------|------|-------|------|------|--|--|
| | | | 1784 | 1794 | 1805 | 1822 | 1784 | 1794 | 1805 | 1822 | | |

- ^a This table reports all matched goods in the trade ledger and whether or not they appear in the trade ledger across the four years. Also, the table includes the good's total trade value summed across the partner and the reexport price (official).
- ^b GG codes: textile manufacturers (TEXTLm), metal-worked processed goods (MLWRKm), food and beverages (FOBEVm), pastoral products (PASTLg), tilling and agriculture goods (TILAGRg), raw materials (RAWg), tropical goods and manufactures (TROPgm), and miscellaneous manufactured goods (MISCgm)..
- ^c Some goods that have different reported names that are matched and/or labelled is noted in italics. After matching these flagged goods with tweaked and similar names, we take that these goods first appear in the ledger at their early appearance reported and then reported the year and their label. Additionally, some goods' labels, in later years, are subsets of larger labels reported in earlier years; their labels are italicized and then, marked with an asterisk (*) to indicate that the label contains a summed total value of the subset label and matched to the corresponding larger label from the earlier report. Theoretically, this 'new' label, differing only in characteristic or origins, may obscure any recent trade if there was no existing record of that good, which would account for the introduction of the new label. Table 7.5 reports all italicized goods and their matched name to. Using Table 7.4 and Table 7.5, for the flagged goods: here are some examples
 - Beer first appeared in 1784. And other variants "Beer and Ale" in 1805, and "Beer all sorts" in 1822 are matched to this label. Therefore, from this good, we take that Beer was reexported in all four years.
 - Another example, Dye stuff Indigo, which first appeared in the spreadsheet in 1805. Then in 1822, we observe two name variants of Indigo's: Indigo East India AND Indigo Spanish, and since they are reexported at the same price, we take the sum of trade value for both labels and report under 1822 under the name "Dye Stuff Indigo".
- ^d Finally, the unit of the good is italicized when it changes from the previous year, resulting in the price also being italicized. I correct for this and, convert the latter year quantity to the unit of the earliest year occurrence. This is rare, but again, most if not all occurrence of unit change happens in the latter year. All instances of unit changes, (with reference for conversion https://www.unitconverters.net/) are:
 - Coffee (1784, 1794, 1805): Cwt, Coffee (1822): Lbs
 - Oil Train (1805): Gallons, Oil Train (1822): Tuns
 - Tar (1784, 1794, 1805): Barrel, Tar (1822): ?
 - Wood Mahogany (1805): Tons, Wood Mahogany (1822): Cwt
 - Wood Timber (1805): Tons, Wood Timber (1822): Load
 - Wool Cotton (1805): Cwt, Wool Cotton (1822): Lbs

This only has implications on the price and the quantity, rather than the trade value because I take the trade value as given on the ledger and do not change this value. The reporting of the price and quantity can be transformed and manipulated by a fixed quantity by changing the unit. For good measure and reporting, the transcribing of the total quantity is checked by multiplying the price and the quantity, and vice versa. One note: for comparing across similar goods, be careful to convert the units first like for woods.

- ^e From these table, one can argue, that there are some goods and good labels that should be italicized/matched like
 - Fish Cod (1784) and some variation of its label like Fish Cod of Newfoundland (1822), Glass Bottles (1794) and Glass Bottles of Green or Common Glasses (1822), Salt Foreign (1784) or Salt White (1784) and Salt (1822)

It is possible, that these later good labels were preexisting and traded before at their early year occurrence, but I reserve hesitation to match. Our estimates for the extensive and intensive margins would be more impacted if the years were consecutive.

- f Abbreviations for goods and good's unit are subject to be used where spacing is limited; Brit. Plt. (British Plantation), Cot. (Cotton), Frgn. (Foreign), Gla. (Glass), Groc. (Groceries), Habdshry. (Haberdashery), Hos. (Hosiery), Hrdwr. (Hardware), Manuf. (Manufactures or Manufactured), Musc. (Muscovado), Pics. (Picutres), unkn. (unkonwn), and n. Ex. (and not exceeding), Thous. (Thousands), Hunds. (Hundreds), Hogshds. (Hogsheads).
- g Total Value quantities are rounded to the hundredth place, Price quantities are rounded to the thousandth place. And quantities that are ?, are values that I could not decipher from the trade ledger.

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Table 7.5: Index of Matched Flagged Good Names

| \mathbf{Good} | Ledger Recorded Good Name | | | d Name |
|-----------------|---------------------------|----------------|-----------------|--------------------------------|
| | 1774 | 1784 | 1805 | 1822 |
| Ashes Pot | | | Ashes Pot | Ashes Pot Brt. Plt. |
| Beer | Beer | Beer | Beer & Ale | Beer all sorts |
| Cider | | | Cider | · Cider Guernsey |
| | | | | · Cider Jersey |
| Coffee | Coffee | Coffee | Coffee | Coffee Brit. Plt. |
| Dye Stf. Indigo | | | Dye Stf. Indigo | · Indigo East India |
| , , , | | | , , , | · Indigo Spanish |
| Dye Stf. Madder | | | Dye Stf. Madder | Madder all sorts |
| Groc. Almonds | Groc. Almonds | Groc. Almonds | • | Almonds all sorts |
| Groc. Aloes | | | | · Aloes all sorts |
| | | | | · Aloes Hepatica/Barbadoes |
| Groc. Ginger | Groc. Ginger | Groc. Ginger | Groc. Ginger | Ginger Brit. Plt. |
| Groc. Raisins | Groc. Raisins | Groc. Raisins | | · Raisins of the Sun |
| | | | | ·Raisins all sorts |
| Groc. Rice | | | Groc. Rice | Rice not Brt. Plt. |
| Hides (1822) | | | | Hides Cow & Ox Tanned |
| | | | | and not otherwise |
| Nuts | | | Nuts | Nuts Small |
| Oil Train | | | Oil Trian | Oil Train Newfoundland |
| Silk Manuf. | Silk Manuf. | Silk Manuf. | Silk Manuf. | Silk Manuf. all sorts |
| | | | | not Enum. |
| Silk Raw India | | Silk Raw India | | Silk Raw East India Bengal |
| Soap | | | Soap | Soap Hard |
| Spirits | Spirits | Spirits | Spirits | Spirits Rum Brt. Plt |
| Frgn. Rum | Frgn. Rum | Frgn. Rum | Frgn. Rum | |
| Wine Spanish | Wine Spanish | Wine Spanish | Wine Spanish | · Wine Spanish Red |
| | | | | \cdot Wine Spanish White |
| Wood Deals | Wood Deals | | Wood Deals | W.D 8 and n. Ex. 12Ft |
| (W.D) | | | | \cdot W.D 12 and n. Ex. 14Ft |
| | | | | \cdot W.D 14 and n. Ex. 16Ft |

Table 7.5, cont.

| Good | Ledger Recorded Good Name | | | |
|-------------|---------------------------|------|-------------------|---|
| | 1774 | 1784 | 1805 | 1822 |
| | | | | · W.D 16 and n. Ex. 18Ft |
| | | | | \cdot W.D 18 and n. Ex. 20Ft |
| Wood Deal | | | | ·W.D Ends under 8 ft |
| Ends | | | | \cdot W.D Ends 8ft |
| Wood Staves | | | Wood Staves (W.S) | · W. S. n. Ex. 36in(L), n. ex. 14 (W) |
| | | | | · W. S. abv. 36inn. ex.50 |
| | | | | · W. S. abv. 50inn. ex.60 |
| | | | | · W. S. abv. 60inn. ex.72 |
| Wood Timber | | | Wood Timber | · Wood Timber of all other sorts not Enum. |
| | | | | · Wood Timber Fir British 8in sq or upwards |
| Wool Cotton | | | Wool Cotton | · Wool Cot. Brt. Pltn. |
| | | | | · Wool Cot. East India |
| | | | | · Wool Cot. Frgn. |

Table 6: Total Reexport Trade Value by Partner Shares

| Americas: | 27.45% | 28.14% | 14.99% | 19.75% |
|--|---------|--------|--------|--------|
| Asia New Holland (DU) | | | | 0.11% |
| Straights (BR) | 0.68% | 0.88% | 1.16% | |
| East Country | 2.67% | 3.3070 | | 3.21/0 |
| Asia: | 3.35% | 0.88% | 1.16% | 0.11% |
| Russia | | 0.48% | 2.61% | |
| Prussia | | 0.4007 | 0.05% | |
| East Europe: | 0.00% | 0.48% | 2.66% | 0.00% |
| D 4 D | 0.0004 | 0.1004 | 0.000 | 0.0004 |
| Sweden Ports within Baltics | | | | 0.37% |
| Sweden Ports without Baltics | | | | 0.04% |
| Norway | | | | 2.12% |
| Denmark and Norway | 1.72% | 0.61% | 4.85% | |
| Northern Europe: | 1.72% | 0.61% | 4.85% | 2.53% |
| | 0.0070 | 0.0070 | , | |
| Portugal | 0.60% | 0.60% | 2.70% | 0.14/0 |
| Malta | 14.11/0 | 0.1070 | | 0.14% |
| Madeiras (PO) | 14.11% | 0.78% | | 0.0070 |
| Gibraltar (BR) | | | 0.04/0 | 0.86% |
| Canary Islands (SP) | 0.01/0 | 0.10/0 | 0.84% | |
| Spain | 0.34% | 6.16% | 0.31% | |
| Italy | 4.79% | 1.93% | 0.81% | 9.0070 |
| Belgium Holland | 1.0070 | 1.2070 | | 5.08% |
| Holland (DU, DU/FR, FR, DU) | 7.80% | 7.28% | | 1.10/0 |
| Germany Hanseatic Towns | | | | 4.48% |
| France Ports without the Mediterranean | 3070 | | | 0.20% |
| France | 5.78% | | | |
| Flanders | 17.71% | , , | - 0,0 | , , |
| Mainland Western Europe: | 51.14% | 16.75% | 5.13% | 10.76% |
| Rest of Europe (excl. English): | 52.86% | 17.84% | 12.64% | 13.28% |
| Jersey Isle | 1.00% | | | 0.49% |
| Isle of Man | | | 0.57% | 0.13% |
| Guernsey | | | 1.26% | 1.45% |
| Scotland | 1.84% | 1.77% | 6.83% | 4.05% |
| England | 13.51% | 51.37% | 62.54% | 60.73% |
| English(-British Isles): | 16.34% | 53.14% | 71.21% | 66.85% |
| Europe: | 69.20% | 70.98% | 83.84% | 80.14% |
| | | | | |

Table 6, cont.

| Region:Country/Territory | 1784 | 1794 | 1805 | 1822 |
|--|--------|--------|--------|--------|
| British North America (N. Amer, excl. US): | 6.61% | 6.14% | 0.92% | 11.03% |
| Canada | | , | 0.90% | 9.42% |
| Quebec | 5.67% | | | |
| New Brunswick | | | | 0.64% |
| Newfoundland | 1.43% | 6.04% | 0.03% | 0.93% |
| Nova Scotia | 3.34% | 0.10% | | 0.04% |
| Early United States: | 18.51% | 5.92% | 1.72% | 0.56% |
| Carolina | 0.14% | 1.06% | | |
| Georgia | | | 0.59% | 0.25% |
| Louisiana | | | 0.59% | |
| Pennsylvania | 0.71% | 2.89% | 0.02% | |
| New England | | 0.63% | 0.01% | |
| New Orleans | | | | 0.01% |
| New York | 4.47% | 1.15% | 1.11% | 0.23% |
| Virginia and Maryland | 9.36% | 0.19% | | 0.07% |
| West Indies-Caribbean: | 2.33% | 16.08% | 12.32% | 8.16% |
| Antigua (BR) | 0.16% | 3.04% | 0.28% | |
| Barbados (BR) | 0.47% | 3.73% | 1.91% | 2.65% |
| Dominica (BR) | | | 0.48% | |
| Grenada (BR) | | | 1.94% | |
| Jamaica (BR) | 0.41% | 5.76% | 6.28% | 4.90% |
| St Croix | | 0.17% | | |
| St Kitts (BR) | 0.15% | 1.03% | 0.27% | |
| St Vincents (BR) | | | 0.16% | 0.06% |
| Tortola (BR) | 0.21% | 0.17% | | |
| Trinidad (BR) | | | 1.00% | 0.55% |
| West Indies in General (BR) | 0.92% | 2.18% | | |
| South America: | 0.00% | 0.00% | 0.03% | 0.00% |
| Honduras (SP) | | | 0.02% | |
| Suriname (DU, DU, BR, DU) | | | 0.01% | |

| Region:Country/Territory | 1784 | 1794 | 1805 | 1822 | |
|--------------------------|------|------|------|------|--|
| ~ , | | | | | |

- ^a The table reports all (raw) partners listed in the reexport trade ledgers, countries and territories that are not bolded and italized, and their share of the reexport trade value for each year. To get the raw value, multiply the trade value of the respective year with the decimal of the share. The aggregation of each trade partners are sorted and placed within each bold-ed region: English, Rest of Europe, Asia, and Americas.
- ^b **Rest of Europe** and **Americas** can be further dis-aggregated into smaller regions, their values are the sum of the italized regions or adding up all the raw partners. These italized region are not reported in the ledgers; it is the result of adding up the partners by their regional location. Moreover, they serve for a better understanding of the intra-regional trade within the broader trading patterns.
- ^c Value of "Europe" is the result of adding "English" and "Rest of Europe."
- ^d Partners of colonial status or territorial disputes, who derive significant influence from, have their metropole in (), proceeding their name. (BR) for British, (SP) for Spanish, (Du) for Dutch, FR for French. The implications of colonial influence has influence in the traded of given goods, and possible geo-politics effects.
 - Flanders, as territory, was largely controlled by Austrian powers and was in 1784, then following the Napoleonic War was in French in years 1794 and 1805. Post Napoleonic Wars, in 1822 was in Dutch rule.
 - Holland, as Dutch rule in 1784, and transitions to French hands in 1794 and is controlled in 1805, then returns to Dutch hands in 1822.
 - Honduras as a contentious territory for our study, is moreorless Spanish controlled after 1763. Following the treaty of the 1763, British were able to conduct (logwood) wood trade in the region, but were not actively moved to insert their control. Then 1798, by the de facto, the British had 'territorial sovereignty,' of region²⁰.
 - Suriname was a Dutch colony in the year 1784, then was a British captured territory and controlled from 1799-1816, that finally returned to being a Dutch colony after in 1817.

Table 7: Reexport Trade Value Summary by Partner and GG

| English | Trade Value, in £ | | | | |
|---------|-------------------|----------|-----------|----------|--|
| | 1784 | 1794 | 1805 | 1822 | |
| TEXTLm | 1692.70 | 3523.68 | 8556.64 | 246.18 | |
| MLWRKm | 0.00 | 1519.08 | 9924.07 | 0.00 | |
| FOBEVm | 1735.55 | 2339.69 | 10542.92 | 7019.12 | |
| PASTLg | 745.09 | 0.00 | 16744.19 | 9544.75 | |
| TILAGRg | 946.37 | 0.00 | 965.88 | 2849.67 | |
| RAWg | 1899.30 | 555.08 | 42610.33 | 12071.18 | |
| TROPgm | 5046.65 | 4399.56 | 26133.43 | 19581.28 | |
| MISCgm | 0.00 | 1404.95 | 4619.63 | 1097.30 | |
| Sum | 12065.66 | 13742.04 | 120097.07 | 52409.49 | |

| a) | English | Trade |
|----|---------|-------|
| | | |

| R. Europe | Trade Value, in £ | | | | | |
|-----------|-------------------|---------|----------|----------|--|--|
| | 1784 | 1794 | 1805 | 1822 | | |
| TEXTLm | 5408.81 | 0.00 | 993.54 | 0.00 | | |
| MLWRKm | 1527.08 | 0.00 | 482.75 | 0.00 | | |
| FOBEVm | 1617.60 | 1106.63 | 1515.71 | 226.60 | | |
| PASTLg | 461.93 | 0.00 | 0.00 | 0.00 | | |
| TILAGRg | 41.88 | 0.00 | 0.00 | 0.00 | | |
| RAWg | 478.92 | 403.00 | 1374.50 | 3932.02 | | |
| TROPgm | 28584.54 | 911.75 | 10097.33 | 5588.51 | | |
| MISCgm | 909.94 | 2192.96 | 6840.88 | 666.00 | | |
| Sum | 39030.69 | 4614.34 | 21304.72 | 10413.13 | | |

(b) Rest of Europe Trade

| Asia | Trade Value, in £ | | | | | |
|---------|-------------------|--------|---------|-------|--|--|
| | 1784 | 1794 | 1805 | 1822 | | |
| TEXTLm | 0.00 | 0.00 | 0.00 | 0.00 | | |
| MLWRKm | 0.00 | 0.00 | 174.10 | 0.00 | | |
| FOBEVm | 274.04 | 205.36 | 1703.85 | 88.72 | | |
| PASTLg | 0.00 | 0.00 | 0.00 | 0.00 | | |
| TILAGRg | 49.00 | 0.00 | 0.00 | 0.00 | | |
| RAWg | 0.00 | 0.00 | 0.00 | 0.00 | | |
| TROPgm | 2012.16 | 0.00 | 0.00 | 0.00 | | |
| MISCgm | 138.77 | 23.40 | 85.00 | 0.00 | | |
| Sum | 2473.96 | 228.76 | 1962.95 | 88.72 | | |

⁽c) Asia Trade

| Americas | Trade Value, in £ | | | | | |
|----------|-------------------|---------|----------|----------|--|--|
| | 1784 | 1794 | 1805 | 1822 | | |
| TEXTLm | 9039.97 | 1022.10 | 5017.56 | 19.50 | | |
| MLWRKm | 720.29 | 657.03 | 274.40 | 2.40 | | |
| FOBEVm | 2700.73 | 3135.62 | 11410.90 | 10997.42 | | |
| PASTLg | 122.22 | 7.00 | 314.00 | 33.70 | | |
| TILAGRg | 0.00 | 0.00 | 0.00 | 17.50 | | |
| RAWg | 928.34 | 725.15 | 643.83 | 1406.19 | | |
| TROPgm | 5947.57 | 1377.53 | 10.00 | 2764.65 | | |
| MISCgm | 808.04 | 352.35 | 7615.33 | 241.79 | | |
| Sum | 20267.17 | 7276.76 | 25286.02 | 15483.15 | | |

⁽d) Americas Trade

^a This is the supplementary table for table 1. The trade value are disaggregate into partner, and then by GG.

^b Sub-tables 7a-7d are the reexport trade value of each partner disaggregated by GG. Sub-tables 7e-7h are the GG trade value of each partner's as a share of the total trade value of each given year

Asia

TEXTLm

 MLWRKm

 ${\rm FOBEVm}$

PASTLg

TILAGRg

RAWg

TROPgm

MISCgm

Sum

1784

0.00%

0.00%

0.37%

0.00%

0.07%

0.00%

2.73%

0.19%

3.35%

Table 7: Reexport Trade Value Summary by Partner and GG, cont

| English | Trade Share | | | | |
|---------|-------------|--------|--------|--------|--|
| | 1784 | 1794 | 1805 | 1822 | |
| TEXTLm | 2.29% | 13.62% | 5.07% | 0.31% | |
| MLWRKm | 0.00% | 5.87% | 5.88% | 0.00% | |
| FOBEVm | 2.35% | 9.05% | 6.25% | 8.95% | |
| PASTLg | 1.01% | 0.00% | 9.93% | 12.18% | |
| TILAGRg | 1.28% | 0.00% | 0.57% | 3.64% | |
| RAWg | 2.57% | 2.15% | 25.27% | 15.40% | |
| TROPgm | 6.84% | 17.01% | 15.50% | 24.98% | |
| MISCgm | 0.00% | 5.43% | 2.74% | 1.40% | |
| Sum | 16.34% | 53.14% | 71.21% | 66.85% | |

1794

0.00%

0.00%

0.79%

0.00%

0.00%

0.00%

0.00%

0.09%

Trade Share

1805

0.00%

0.10%

1.01%

0.00%

0.00%

0.00%

0.00%

0.05%

1.16%

1822

0.00%

0.00%

0.11%

0.00%

0.00%

0.00%

0.00%

0.00%

0.11%

| | | Americas | |
|---|---|----------|-----|
| | | | 17 |
| | | TEXTLm | 12 |
| | | MLWRKm | 0.9 |
| | | FOBEVm | 3.6 |
| | | PASTLg | 0.1 |
| | | TILAGRg | 0.0 |
| | | RAWg | 1.5 |
| | | TROPgm | 8.0 |
| | | MISCgm | 1.0 |
| П | 1 | C | 0.5 |

0.88%(g) Asia share

| R. Europe | Trade Share | | | | |
|-----------|-------------|--------|--------|--------|--|
| | 1784 | 1794 | 1805 | 1822 | |
| TEXTLm | 7.33% | 0.00% | 0.59% | 0.00% | |
| MLWRKm | 2.07% | 0.00% | 0.29% | 0.00% | |
| FOBEVm | 2.19% | 4.28% | 0.90% | 0.29% | |
| PASTLg | 0.63% | 0.00% | 0.00% | 0.00% | |
| TILAGRg | 0.06% | 0.00% | 0.00% | 0.00% | |
| RAWg | 0.65% | 1.56% | 0.81% | 5.02% | |
| TROPgm | 38.71% | 3.53% | 5.99% | 7.13% | |
| MISCgm | 1.23% | 8.48% | 4.06% | 0.85% | |
| Sum | 52.86% | 17.84% | 12.64% | 13.28% | |

(f) Rest of Europe share

| Americas | | Trade | Share | |
|----------|--------|--------|--------|--------|
| | 1784 | 1794 | 1805 | 1822 |
| TEXTLm | 12.24% | 3.95% | 2.98% | 0.02% |
| MLWRKm | 0.98% | 2.54% | 0.16% | 0.00% |
| FOBEVm | 3.66% | 12.12% | 6.77% | 14.03% |
| PASTLg | 0.17% | 0.03% | 0.19% | 0.04% |
| TILAGRg | 0.00% | 0.00% | 0.00% | 0.02% |
| RAWg | 1.26% | 2.80% | 0.38% | 1.79% |
| TROPgm | 8.05% | 5.33% | 0.01% | 3.53% |
| MISCgm | 1.09% | 1.36% | 4.52% | 0.31% |
| Sum | 27.45% | 28.14% | 14.99% | 19.75% |

(h) Americas share

7.4 Findings and Discussion: Goods Traded

The trade value, when reflecting the diversity, or rather count, of goods traded during this period, varies significantly. Over a span of four years, approximately 244 distinct goods were reexported after matching. Notably, some goods were traded intermittently, with instances of discontinuation by year-end, underscoring the variability in trading patterns by value, observed across different goods. Importantly, it becomes evident that a significant portion of the trade value can be attributed to a select few goods, table 8. The value of 10 goods with the largest values, explains approximately over 50% of the trade value of each given year, table 9. Moreover, at different number of good cuttoffss, we see that the greater number of goods with the top values increase at a decreasing rate of explaining the share of the total trade value.

Table 8: 10 Goods with the Highest Reexport Value and their share of the Total Value

| 1784 | | 1794 | | 1805 | | 1822 | |
|-----------------|----|--------------|----|------------------|----|-----------------|----|
| Good | % | Good | % | Good | % | Good | % |
| Tobacco | 24 | Wine French | 14 | Coffee | 12 | Tobacco | 28 |
| Tea Bohea | 18 | Molasses | 12 | Wool Cotton | 11 | Cork | 9 |
| Gr. Sugar Musc. | 7 | Drapery Old | 8 | Dye Stf. Logwood | 10 | Wool Cotton | 7 |
| Drapery Old | 6 | Fish Cod | 6 | Tobacco | 8 | Wine Spanish | 6 |
| Drapery New | 5 | Gr. Raisins | 4 | Hides Untanned | 6 | Wine Port | 5 |
| Tea Green | 4 | Wine Spanish | 4 | Sprt. Frgn. Rum | 6 | Hops | 5 |
| Wine French | 3 | Drugs | 3 | Drapery Old | 5 | Wine French | 3 |
| Coffee | 2 | Gr. Pimento | 3 | Wine Port | 4 | Wool Frgn. | 3 |
| Linen Kenting | 2 | Coffee | 3 | Copper Unwrht. | 4 | Sprt. Frgn. Rum | 2 |
| Silk Manuf. | 2 | Wine Madeira | 3 | Fish Hern. Frgn. | 3 | Molasses | 2 |
| - | 72 | - | 59 | - | 68 | - | 70 |

 $^{^{\}mathrm{a}}$ In 1784, 48 different goods are traded; in 1794: 66 goods; in 1805: 126 goods; in 1822: 117 goods.

| | 1784 | 1794 | 1805 | 1822 |
|--------|--------|--------|--------|--------|
| top 5 | 58.49% | 43.69% | 47.03% | 55.05% |
| top 10 | 71.64% | 58.60% | 68.34% | 70.36% |
| top 15 | 80.66% | 70.32% | 78.98% | 79.69% |
| top 20 | 86.97% | 79.45% | 84.53% | 86.45% |

Table 9: Shares of Reexport Trade Value from Different Good Count Cutoffs

Important goods like: tobacco, spirits, wines, fishes, raw materials like woods, flax, and few

manufactures, table 8. Here, a patterns emerges from the nature goods that are traded more: tropical goods and manufactures across Atlantic (trade from Americas' originated goods to consumed in Europe), and raw goods. This observation sheds light on the nature of the reexport economy, highlighting the significant variation in the goods traded with a few goods being more important. There is a role for partner demand idiosyncrasies that fosters, small, trade in goods. However, with the shares of a few selected goods, one can conjecture that the reexport trade is for primarily done for goods that are addictive and essential—much less trade for the more frivolous and niche goods. From the goods that have the small reexport trade value: there is paselboards,

Trade Decomposition

Without getting too bogged on the specifics of the good, or rather which set of goods that are traded often and highly, the understanding of which types of goods and trade partners contribute most to the total trade value is essential. It is more relevant to utilize our sorting tools such as GG, table 1, and (region) partner, table, to identify patterns in the general types of traded goods and to analyze trends among trading partners. If we were to look at only the raw partner listed in the trade ledger, our analysis would not be as effective as well.

The dis-aggregation of the total trade value, by the good type (GG), would confirms and explain that most of the trade, across the four years, comes from tropical goods and manufactures and foods and beverages. As a whole, from these set of goods, we see a more distinctive pattern in their increase in trade shares over time and their relatively large trade values, table 1b. But even then, there is no one category of CG that is consistently explains for the greater composition of trade across all four years, table 1. Goods of various types differ in their significance based on their trade value, with some being more important than others, across different years. Textile manufacture trade experiences a decline over time, while tropical goods (and manufactures) maintain a relatively important position in terms of share. Conversely, metal work manufactures and tilling-agricultural goods remain less important in trade value, within these four years.

Caveat

One important note about understanding the goods traded, from the dimension of number of goods

Table 10: Trade Decomposition by Good

| GG | Total Net | Total Net | Extensive I | Extensive Margins | | Margins |
|---------|-----------|-----------|-------------|-------------------|-----------|---------|
| | Value | % Change | Value | % | Value | % |
| TEXTLm | -11595.70 | -15.70% | -4427.54 | -6.00% | -7168.16 | -9.71% |
| MLWRKm | -71.27 | -0.10% | 188.15 | 0.25% | -259.42 | -0.35% |
| FOBEVm | 459.37 | 0.62% | -83.09 | -0.11% | 542.47 | 0.73% |
| PASTLg | -1322.24 | -1.79% | -1230.24 | -1.67% | -92.00 | -0.12% |
| TILAGRg | -1037.24 | -1.40% | -1037.24 | -1.40% | 0.00 | 0.00% |
| RAWg | -1623.33 | -2.20% | -623.51 | -0.84% | -999.83 | -1.35% |
| TROPgm | -34902.08 | -47.27% | 459.20 | 0.62% | -35361.27 | -47.89% |
| MISCgm | 2116.91 | 2.87% | 1154.67 | 1.56% | 962.24 | 1.30% |
| Sum | -47975.58 | -64.97% | -5599.61 | -7.58% | -42375.97 | -57.39% |

(a) Trade Decomposition, 1784-1794

| GG | Total Net | Total Net | Extensive Margins | | Intensive I | Margins |
|---------|------------|-----------|-------------------|---------|-------------|---------|
| | Value | % Change | Value | % | Value | % |
| TEXTLm | 10021.96 | 38.75% | 3556.37 | 13.75% | 6465.60 | 25.00% |
| MLWRKm | 8679.22 | 33.56% | 1166.08 | 4.51% | 7513.14 | 29.05% |
| FOBEVm | 18386.09 | 71.09% | 2249.55 | 8.70% | 16136.54 | 62.40% |
| PASTLg | 17051.19 | 65.93% | 16975.25 | 65.64% | 75.93 | 0.29% |
| TILAGRg | 965.88 | 3.73% | 965.88 | 3.73% | 0.00 | 0.00% |
| RAWg | 42945.43 | 166.06% | 42280.68 | 163.49% | 664.75 | 2.57% |
| TROPgm | 29551.92 | 114.27% | -1341.30 | -5.19% | 30893.23 | 119.45% |
| MISCgm | 15187.18 | 58.72% | 12089.76 | 46.75% | 3097.42 | 11.98% |
| Sum | 142 788.87 | 552.12% | 77942.26 | 301.38% | 64 846.61 | 250.74% |

(b) Trade Decomposition, 1794-1805

| GG | Total Net | Total Net | Extensive | Margins | Intensive I | Margins |
|---------|-----------|-----------|-----------|---------|-------------|---------|
| | Value | % Change | Value | % | Value | % |
| TEXTLm | -14302.06 | -8.48% | -14255.56 | -8.45% | -46.50 | -0.03% |
| MLWRKm | -10852.93 | -6.44% | -10852.93 | -6.44% | 0.00 | 0.00% |
| FOBEVm | -6841.51 | -4.06% | 2091.12 | 1.24% | -8932.63 | -5.30% |
| PASTLg | -7479.74 | -4.44% | -12410.71 | -7.36% | 4930.97 | 2.92% |
| TILAGRg | 1901.30 | 1.13% | 1797.01 | 1.07% | 104.29 | 0.06% |
| RAWg | -27219.27 | -16.14% | -14745.35 | -8.74% | -12473.92 | -7.40% |
| TROPgm | -8306.32 | -4.93% | 1811.84 | 1.07% | -10118.16 | -6.00% |
| MISCgm | -17155.74 | -10.17% | -17151.75 | -10.17% | -3.99 | 0.00% |
| Sum | -90256.28 | -53.52% | -63716.34 | -37.78% | -26539.94 | -15.74% |

(c) Trade Decomposition, 1805-1822

^a The Total Net Value column of each respective panel describes the net change of trade from [time 2 - time 1] with respect to the GG. The following: Total Net % Change column is the change of the Total Net Value [time 2 - time 1] over the Total Value of trade in time 1.

^b Trade change is then decomposed by the extensive and intensive margins. Given each margin: we have the difference in trade from [time 1 - time 2] in value terms and the percent change: which is the change in value with respect to the trade value at time 1.

Table 10: Trade Decomposition by Good, continued

| GG | Total Net | Total Net | Extensive Margins | | Intensive N | Margins |
|---------|-----------|-----------|-------------------|---------|-------------|---------|
| | Value | % Change | Value | % | Value | % |
| TEXTLm | -15875.80 | -21.50% | -14364.93 | -19.45% | -1510.88 | -2.05% |
| MLWRKm | -2244.97 | -3.04% | -2244.97 | -3.04% | 0.00 | 0.00% |
| FOBEVm | 12003.95 | 16.26% | 4270.02 | 5.78% | 7733.93 | 10.47% |
| PASTLg | 8249.20 | 11.17% | 1802.54 | 2.44% | 6446.66 | 8.73% |
| TILAGRg | 1829.93 | 2.48% | 1829.93 | 2.48% | 0.00 | 0.00% |
| RAWg | 14102.83 | 19.10% | 14721.22 | 19.94% | -618.39 | -0.84% |
| TROPgm | -13656.48 | -18.50% | -12627.25 | -17.10% | -1029.23 | -1.39% |
| MISCgm | 148.35 | 0.20% | 148.35 | 0.20% | 0.00 | 0.00% |
| Sum | 4557.02 | 6.17% | -6465.08 | -8.76% | 11 022.10 | 14.93% |

(d) Trade Decomposition, 1784-1822

traded, stems from correctly matching goods and their labels across time.

As a pattern and one of the important reasons to match goods by their labels correctly is the expansion of the new goods traded either from new label updates or new labels entirely. The former comes about, as we tend to observe some good with a tweaked version of its pre-existing old label—usually occurring in the later years²¹. It will correct if naturally there is more new goods traded, we do not want to capture However, most goods that appear in the trade ledger, somewhat consistently each year, keep their same label across the four years. The role of retailing can be observed here, as the development and creation of new labels, and perhaps the demand for new novel goods to be sold and haved. The labels of few goods become diverse as a maybe be a result: accountant's methodology changing and new information (updating labels and new trade to be had) for goods. The former, comes from a report of a private individual's accountanting recordings his own goods becoming more precise and calculating of the various of goods that are traded (Deanne). It is possible, that trade ledger accountant changes their methodology to reflect this latter on.

The idea of trade from new goods being trade has two parts: (1) some goods may have their labels changed, in retrospect this may be the result of updating the old label with new information, and this would not reflect the new trade of good, or updating the old label to incorporate a new

^c The Trade Decomposition of the first and last year on the time period.

 $^{^{21}}$ Refer to table 7.5 for all instances of similar labels that are matched to the older label.

Table 11: Trade Decomposition by Joint: Good and Partner, then summed across Partner

| GG | Total Net | Total Net | Extensive Margins | | Intensive I | Margins |
|---------|-----------|-----------|-------------------|---------|-------------|---------|
| | Value | % Change | Value | % | Value | % |
| TEXTLm | -11595.70 | -15.70% | -9195.61 | -12.45% | -2400.10 | -3.25% |
| MLWRKm | -71.27 | -0.10% | -71.27 | -0.10% | 0.00 | 0.00% |
| FOBEVm | 459.37 | 0.62% | 661.62 | 0.90% | -202.25 | -0.27% |
| PASTLg | -1322.24 | -1.79% | -1322.24 | -1.79% | 0.00 | 0.00% |
| TILARGg | -1037.24 | -1.40% | -1037.24 | -1.40% | 0.00 | 0.00% |
| RAWg | -1623.33 | -2.20% | -756.18 | -1.02% | -867.16 | -1.17% |
| TROPgm | -34902.08 | -47.27% | -30072.78 | -40.73% | -4829.30 | -6.54% |
| MISCgm | 2116.91 | 2.87% | 1812.34 | 2.45 | 304.57 | 0.41% |
| Sum | -47975.58 | -64.97% | -39981.35 | -54.15% | -7994.23 | -10.83% |

(a) Joint Trade Decomposition, 1784-1794, summed

| GG | Total Net | Total Net | Extensive Margins | | Intensive I | Margins |
|---------|------------|-----------|-------------------|---------|-------------|---------|
| | Value | % Change | Value | % | Value | % |
| TEXTLm | 10021.96 | 38.75% | 4211.02 | 16.28% | 5810.95 | 22.47% |
| MLWRKm | 8679.22 | 33.56% | 1044.00 | 4.04% | 7635.22 | 29.52% |
| FOBEVm | 18386.09 | 71.09% | 8127.67 | 31.43% | 10258.42 | 39.67% |
| PASTLg | 17051.19 | 65.93% | 17051.19 | 65.93% | 0.00 | 0.00% |
| TILARGg | 965.88 | 3.73% | 965.88 | 3.73% | 0.00 | 0.00% |
| RAWg | 42945.43 | 166.06% | 42343.68 | 163.73% | 601.75 | 2.33% |
| TROPgm | 29551.92 | 114.27% | 11063.55 | 42.78% | 18488.37 | 71.49% |
| MISCgm | 15187.18 | 58.72% | 14074.72 | 54.42% | 1112.46 | 4.30% |
| Sum | 142 788.87 | 552.12% | 98 881.71 | 382.35 | 43 907.16 | 169.78% |

(b) Joint Trade Decomposition, 1794-1805, summed

| GG | Total Net | Total Net | Extensive Margins | | Intensive N | Intensive Margins | |
|---------|-----------|-----------|-------------------|---------|-------------|-------------------|--|
| | Value | % Change | Value | % | Value | % | |
| TEXTLm | -15875.80 | -21.50% | -14472.12 | -19.60% | -1403.69 | -1.90% | |
| MLWRKm | -2244.97 | -3.04% | -2244.97 | -3.04% | 0.00 | 0.00% | |
| FOBEVm | 12003.95 | 16.26% | 5922.24 | 8.02% | 6081.71 | 8.24% | |
| PASTLg | 8249.20 | 11.17% | 1802.54 | 2.44% | 6446.66 | 8.73% | |
| TILARGg | 1829.93 | 2.48% | 1829.93 | 2.48% | 0.00 | 0.00% | |
| RAWg | 14102.83 | 19.10% | 14514.35 | 19.66% | -411.51 | -0.56% | |
| TROPgm | -13656.48 | -18.50% | -13542.68 | -18.34% | -113.80 | -0.15% | |
| MISCgm | 148.35 | 0.20% | 148.35 | 0.20% | 0.00 | 0.00% | |
| Sum | 4557.02 | 6.17% | -6042.36 | -8.18% | 10599.37 | 14.36% | |

⁽c) Joint Trade Decomposition, 1805-1822, summed

^a We start with doing a trade decomposition of each partner and the CG, therefore there are a total of 32 trade decompositions (extensive and intensive margins); 4 partners and each with 8 GG for one given time frame. Within each GG, we sum across the extensive and intensive margins of each partner to get these tables.

^b Reading this table is the same as the last two.

Table 11: Trade Decomposition by Joint, Good and Partner, then summed after Partner cont.

| GG | Total Net | Total Net | Extensive N | Iargins | Intensive Margins | | |
|---------|-----------|-----------|-------------|---------|-------------------|--------|--|
| | Value | % Change | Value | % | Value | % | |
| TEXTLm | -15875.80 | -21.50% | -14472.12 | -19.60 | -1403.69 | -1.90% | |
| MLWRKm | -2244.97 | -3.04% | -2244.97 | -3.04 | 0.00 | 0.00% | |
| FOBEVm | 12003.95 | 16.26% | 5922.24 | 8.02 | 6081.71 | 8.24% | |
| PASTLg | 8249.20 | 11.17% | 1802.54 | 2.44 | 6446.66 | 8.73% | |
| TILARGg | 1829.93 | 2.48% | 1829.93 | 2.48 | 0.00 | 0.00% | |
| RAWg | 14102.83 | 19.10% | 14514.35 | 19.66 | -411.51 | -0.56% | |
| TROPgm | -13656.48 | -18.50% | -13542.68 | -18.34 | -113.80 | -0.15% | |
| MISCgm | 148.35 | 0.20% | 148.35 | 0.20 | 0.00 | 0.00% | |
| Sum | 4557.02 | 6.17% | -6042.36 | -8.18 | 10599.37 | 14.36% | |

⁽d) Joint Trade Decomposition, 1784-1822, summed

aspect of the good that would otherwise reflect new changes of the good, (2) other new introduced goods that are now traded.

7.5 Findings and Discussion: Trade Decomposition

The following is the extensive table of the trade decomposition of the partner and CG. In other words, one can understand the changes in the trade value by partner and the group groups.

^c The Trade Decomposition of the first and last year on the time period.

Table 12: Extensive Table of Trade Decomposition by Joint: GG and Region, un-summed across Region

| GG | Region | 1784-1794 | | 1794-1805 | | 1805-1822 | | | 1784-1822 | | | | |
|---------|----------------|-----------|-----------|-----------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | T. Net | E. | I. | T. Net | E. | I. | T. Net | E. | I. | T. Net | E. | I. |
| TEXTLm | English | 1830.98 | 881.48 | 949.50 | 5032.96 | -11.09 | 5044.05 | -8310.46 | -8310.46 | 0,00 | -1446.52 | -1446.52 | 0.00 |
| | Rest of Europe | -5408.81 | -5408.81 | 0.00 | 993.54 | 993.54 | 0.00 | -993.54 | -993.54 | 0.00 | -5408.81 | -5408.81 | 0.00 |
| | Asia | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Americas | -8017.87 | -4668.28 | -3349.60 | 3995.46 | 3228.56 | 766.90 | -4998.06 | -4998.06 | 0.00 | -9020.47 | -7616.78 | -1403.69 |
| | | -11595.70 | -9195.61 | -2400.10 | 10021.96 | 4211.02 | 5810.95 | -14302.06 | -14302.06 | 0.00 | -15875.80 | -14472.12 | -1403.69 |
| MLWRKm | English | 1519.08 | 1519.08 | 0.00 | 8404.99 | 766.23 | 7638.77 | -9924.07 | -9924.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Rest of Europe | -1527.08 | -1527.08 | 0.00 | 482.75 | 482.75 | 0.00 | -482.75 | -482.75 | 0.00 | -1527.08 | -1527.08 | 0.00 |
| | Asia | 0.00 | 0.00 | 0.00 | 174.10 | 174.10 | 0.00 | -174.10 | -174.10 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Americas | -63.27 | -63.27 | 0.00 | -382.63 | -379.08 | -3.55 | -272.00 | -272.00 | 0.00 | -717.89 | -717.89 | 0.00 |
| | | -71.27 | -71.27 | 0.00 | 8679.22 | 1044.00 | 7635.22 | -10852.93 | -10852.93 | 0.00 | -2244.97 | -2244.97 | 0.00 |
| FOBEVm | English | 604.14 | -766.00 | 1370.15 | 8203.22 | 6208.69 | 1994.54 | -3523.79 | 1929.25 | -5453.05 | 5283.58 | 3248.79 | 2034.79 |
| | Rest of Europe | -510.98 | 949.13 | -1460.10 | 409.09 | -660.36 | 1069.45 | -1289.11 | 61.03 | -1350.14 | -1391.00 | 34.32 | -1425.31 |
| | Asia | -68.68 | -64.04 | -4.64 | 1498.49 | 1498.49 | 0.00 | -1615.13 | -1615.13 | 0.00 | -185.31 | 0.41 | -185.72 |
| | Americas | 434.88 | 542.54 | -107.65 | 8275.29 | 1080.85 | 7194.43 | -413.48 | 33.36 | -446.84 | 8296.69 | 2638.73 | 5657.95 |
| | | 459.37 | 661.62 | -202.25 | 18386.09 | 8127.67 | 10258.42 | -6841.51 | 408.51 | -7250.03 | 12003.95 | 5922.24 | 6081.71 |
| PASTLg | English | -745.09 | -745.09 | 0.00 | 16744.19 | 16744.19 | 0.00 | -7199.44 | -12130.41 | 4930.97 | 8799.66 | 2353.00 | 6446.66 |
| | Rest of Europe | -461.93 | -461.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -461.93 | -461.93 | 0.00 |
| | Asia | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Americas | -115.22 | -115.22 | 0.00 | 307.00 | 307.00 | 0.00 | -280.30 | -280.30 | 0.00 | -88.52 | -88.52 | 0.00 |
| | | -1322.24 | -1322.24 | 0.00 | 17051.19 | 17051.19 | 0.00 | -7479.74 | -12410.71 | 4930.97 | 8249.20 | 1802.54 | 6446.66 |
| TILAGRg | English | -946.37 | -946.37 | 0.00 | 965.88 | 965.88 | 0.00 | 1883.80 | 1797.01 | 86.79 | 1903.30 | 1903.30 | 0.00 |
| | Rest of Europe | -41.88 | -41.88 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -41.88 | -41.88 | 0.00 |
| | Asia | -49.00 | -49.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -49.00 | -49.00 | 0.00 |
| | Americas | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 17.50 | 17.50 | 0.00 | 17.50 | 17.50 | 0.00 |
| | | -1037.24 | -1037.24 | 0.00 | 965.88 | 965.88 | 0.00 | 1901.30 | 1814.51 | 86.79 | 1829.93 | 1829.93 | 0.00 |
| RAWg | English | -1344.23 | -958.43 | -385.80 | 42055.25 | 41467.00 | 588.25 | -30539.15 | -14658.44 | -15880.71 | 10171.88 | 10583.39 | -411.51 |
| | Rest of Europe | -75.92 | 39.46 | -115.38 | 971.50 | 1043.50 | -72.00 | 2557.52 | 2557.52 | 0.00 | 3453.11 | 3453.11 | 0.00 |
| | Asia | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14.65 | 14.65 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Americas | -203.19 | 162.79 | -365.98 | -81.32 | -166.82 | 85.50 | 0.00 | 0.00 | 0.00 | 477.85 | 477.85 | 0.00 |
| | | 2167.30 | -756.18 | -867.16 | 42945.43 | 42343.68 | 601.75 | -27219.27 | -11338.56 | -15880.71 | 14102.83 | 14514.35 | -411.51 |
| TROPgm | English | -647.09 | -926.42 | 279.33 | 21733.87 | 4631.67 | 17102.19 | -6552.15 | -18825.58 | 12273.43 | 14534.63 | 2222.91 | 12311.72 |
| | Rest of Europe | -27672.79 | -26251.76 | -1421.03 | 9185.58 | 7799.41 | 1386.18 | -4508.83 | 1322.94 | -5831.76 | -22996.03 | -10570.52 | -12425.52 |
| | Asia | -2012.16 | -2012.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -2012.16 | -2012.16 | 0.00 |
| | Americas | -4570.04 | -882.44 | -3687.60 | -1367.53 | -1367.53 | 0.00 | 2754.65 | 2754.65 | 0.00 | -3182.92 | -3182.92 | 0.00 |
| | | -34902.08 | -30072.78 | -1037.24 | 29551.92 | 11063.55 | 18488.37 | -8306.32 | -14747.99 | 6441.67 | -13656.48 | -13542.68 | -113.80 |
| MISCgm | English | 1404.95 | 1404.95 | 0.00 | 3214.68 | 1424.09 | 1790.59 | -3522.33 | -3522.33 | 0.00 | 1097.30 | 1097.30 | 0.00 |
| | Rest of Europe | 1283.03 | 430.20 | 852.83 | 4647.92 | 5320.86 | -672.94 | -6174.88 | -6174.88 | 0.00 | -243.94 | -243.94 | 0.00 |
| | Asia | -115.37 | -115.37 | 0.00 | 61.60 | 61.60 | 0.00 | -85.00 | -85.00 | 0.00 | -138.77 | -138.77 | 0.00 |
| | Americas | -455.69 | 92.56 | -548.26 | 7262.98 | 7268.17 | -5.19 | -7373.53 | -7373.53 | 0.00 | -566.25 | -566.25 | 0.00 |
| | | 2116.91 | 1812.34 | 304.57 | 15187.18 | 14074.72 | 1112.46 | -17155.74 | -17155.74 | 0.00 | 148.35 | 148.35 | 0.00 |