Cross-checking the Sound database with the French Balance du Commerce

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Introduction

• Why should you care?
  – Trade data: an unique window on 18th century macroeconomics
    • Which are important because our modern economy starts here!
  – A number of databases are coming to light using these data (GB, Navigocorpus for navigation, Austrian Netherlands, Hamburg, TOFLIT18 for France, STRO for the Sound...)
  – How do they work together?

• Not the first time people look at that
  – Charles, Coenen & Daudin (ongoing), Rössner (2008) : between other places
  – Or even between different documents in a single place : Rössner (2009)
  – Appart from Ojala & Karvonen, most of these are pretty pessimistic.

• What shall we expect
  – Mirror trade flows are still an issue today, so perfect correspondence is not really expected
    • So we hope the trade flows are going to be related
  – At the very least, it should help us to understand the limitations of each source
  – And probably confirm the outlines of the data

• So, today: comparison of the French Balance du Commerce and the Sound Toll database
  – Data
  – Making them comparable
  – Results

• Apologies: it is going to be sorry tale…
  – Mainly because a number of cargoes do not have “cargo codes” in the database

Data (1) : the French side

- What is it ? Bureau of the balance of trade
  - Bureau de la balance du commerce
  - Small department in the French central administration
  - Active from 1713 to 1792
  - Produced nearly complete bilateral trade data from 1716 to 1792
    - Its successor functioned up to the 1820s

- A short history
  - Born out of the trade negotiation for the peace of Utrecht
  - Major change of status in 1781-1783: more money, more prestige (less work ?)...

- Collection of quantities?
  - Always mainly from the local offices of the farms
    - Which had offices outside the custom union and even in the free ports (Marseilles, Dunkerque, Bayonne...)
    - Could never get data from Alsace and Lorraine
  - Needed collaboration with the Navy for:
    - Colonial trade (after 1781) / New 1784 free ports and Exclusif mitigé (but very expensive)
    - Foreign trade (through consulates)

- Collection of prices?
  - Chambres de Commerce and Intendants during the first bureau
    - At the end of N+1, added prices to a report on their region’s trade
    - Prices did not follow short-term variations / tracked long-term variations
  - After 1781, prices recorded at the same time as quantities
    - By the local offices of the farms (or the Navy)
    - They were used to negotiating prices with traders for ad valorem duties

- 19 years have been transcribed yet : 1750, 52, 54, 55, 57, 69, 71, 72, 74, 75, 77, 80, 82, 87, 88 and 89. (around 100 000 cargos/year/partners)
- TOFLIT18 project : we will transcribe more and do something with the local data as well (http://toflit18.hypotheses.org/)
Commerces de la France avec l'Angleterre

<table>
<thead>
<tr>
<th>Marchandises</th>
<th>Pièces</th>
<th>Quantités</th>
<th>Valeur</th>
<th>Total</th>
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<td>1527</td>
<td>2 lignes</td>
<td>9465</td>
<td></td>
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<tr>
<td>Espagne</td>
<td>600</td>
<td></td>
<td>2650</td>
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<td>Genève</td>
<td>900</td>
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<td>1300</td>
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</tbody>
</table>
Data (2) : The Sound side

- There are obviously better specialists of the Sound here than me
- A quick recap:
  - The main route with the Baltic (though, there is also the Great and Little Belt – difficult to navigate – and the Schleswig-Holstein canal – opens in 1784)
    - So missing some trade from Rostock and Lübeck
  - From 1429 to 1859, Sound records exist
    - Tax collection : lastgeld from 1645, based on the quantity of goods
    - Ships were visited since 1618
  - Jeannin (1964) believes that the post-1710 the “best years” (p. 316) (end of the Swedish exemption – still a Danish one)
- Collection exercise : Soundtoll Registers Online
  - [http://www.soundtoll.nl](http://www.soundtoll.nl). By the University of Groningen and Tresoar, Frisian Historical and Literary Centre at Leeuwarden.
  - Nearly 1.5 million passages / More than 4 million cargoes
  - STRO, now complete from 1634 up to 1857
- Gøbel (2010) : probably more reliable for shipping than for cargos
Making them comparable (1) : Sound

• Structure of the Sound database
  – I had an extraction from November 3rd 2013 (thanks J.W. Veluwenkamp and Ubo Kooijinga!)
  – Available data
    • Main database : "ladingen" (4.25 million cargos)
    • “doorvaarten” gives the passages (1.5 million)
    • (I have not used the tax database as it seems to be already in the data)
  – I have only used the data from 1749 to 1795 (the French one is from 1750 to 1789) (113 000 cargos)

• Commodity translation to French: the STO-internal one is incomplete. We used a professional translator + Werner’s work to complete it.
  – Then we linked this to “our” own classification of goods
  – 5324 “soort”: 24 with more than 1000 cargos, 168 with more than 100 cargos
  – => 498 in danish (but 2535 are not identified, for 3091 cargos)
  – => 424 French “marchandises” => 16 sectors (SITC based). 13,534 cargos are not classified, including 2,200 ballast and 5,700 “Diverses marchandises”, 1,000 “Provisions”

• That is very tedious operation... Which in addition runs quickly into decreasing returns...
Industrial decompositions

- 0: Foodstuff, various
- 0a: Foodstuff, European
- 0b: Foodstuff, Exotic
- 1: Beverages and tobacco
- 2: Raw materials
- 3: Fuels
- 4: Oils
- 5: Chemicals
- 6: Manuf. goods, by material
  - 6a: Manuf. goods, linen
  - 6b: Manuf. goods, wool
  - 6c: Manuf. goods, silk
  - 6d: Manuf. goods, cotton
- 7: Machinery and transport goods
- 8: Misc. manuf. goods
- 9: Other (incl. weapons)
  - 9a: Species
Making them comparable (1) : Sound

• Measure units : again, we used both the STO-available ones + Werner’s work + our own. Two issues
  – Unifying the terminology : from 524 units to 114 unified units (3,858 cargos missing => I treat them all as “pieces”)
  – Translate in kg, cm, numbers, etc. : Scheltjens (2009) (relying a lot on Doursther (1840))
    • Thorough procedure, taking into account both the name of the measure, the place of origin of the merchandise and the specific merchandise
      – For example, the same measure unit might mean something different for liquids and dry goods
      – All litres into kg
    – A first pass “translates” 64,000 cargos
    – Using the place of destination instead of the place of origins adds 15,000
    – Finally, using the mode or the mean for the missing values brings me to only 2,000 missing cargos
      • 70,000 in kg (or litres)
      • 31,000 in pcs
      • 10,000 in rigsdaler – value

• Place standardization: the STO-internal one did the trick
  – Keeping passages between France and the Baltic (Russia / Sweden / Denmark / “South Baltic”)
Making them comparable (2) : France

- **Structure of the French database**
  - “Only” 111,165 observations for the time being: goods/partner/year/import or export

- **Geography is tricky (see Jeannin (1975))**
  - **Before 1780**
    - Before 1734, only “Nord”.
    - 1734: Sweden and Denmark are isolated
    - 1744: Russia is isolated
    - Where are the Hanseatic towns? In 1750, explicitly associated with “Nord”, but not mentioned otherwise.
      - There is an “Allemagne” category (including probably Alsace and Lorraine)
      - Still, probably with “Nord” all along
    - => We do not have trade with the Sound
  - **After 1780**
    - Sweden, Denmark and Russia are still here
    - 1780: “Nord”/“Allemagne”/“Flandes Autrichiennes” become...
      - “Quatre villes hanséatiques” (Hamburg, Bremen, Lübeck, Dantzig)
      - “Etats de l’empereur en Allemagne et en Flandre”
      - Prusse
      - Germany and Poland together
    - 1787 and 1789: Germany and Poland are separated
  - **So, a priori, no way of isolating the Baltic from Hamburg and Bremen**
  - Including the North, but excluding “Poland+Germany” 11,368 observations which are goods-specific from 1752 to 1789
  - The only comparison possible are with Sweden (but Göteborg), Denmark (but North Sea and Norway ports) and Russia (but Archangel)
Making them comparable (2) : France

• Goods
  – 2953 goods => 1641 once they are corrected for spelling, etc.
  – 7 higher than 80: “Marchandises” : 146 ; Eau de vie : 108 ; Mercerie : 101 ; Vin de Bordeaux : 98 ; Merrain : 86
  Indigo : 85, Planches de sapin : 83.
  – 28 higher than 50
  – Again using SITC classification

• All flows have values assigned to them

• Units
  – Only for 1780
  – Translation in kg, etc. with help from Scheltjens (2009) (and Doursther (1840))
Comparing them (1)

• Three ways of comparing the sources
  – Compare the sectorial composition of trade in a given year (or period)
    • Value for the French source
    • Number of cargoes, kg, values,... for the Sound Source
  – Compare the volume of trade in terms of kg, values (when given in the Sound) or number of pieces
    • Only possible for 1780 because of the French source
  – Compare the longitudinal evolution of trade throughout the period
• Compare the sectorial composition of trade for the sum of all years when available
  – Surprise : the composition of Sound taxes seem to be quite related to the composition of the value of French trade
  – Denmark : effect of Norway
  – Anomaly spotting:
    • French foodstuff exports to Sweden
      – Vinegar and Mediterranean products (prunes, etc.)
    • How come France was exporting raw material to Russia according to the Sund?
      – Sector “2” includes salt
    • How come France was importing tea, spirit, wine and spirit from Denmark according to the Sund?
      – From Copenhagen : a mistake?
Comparing them (2)

• Compare the volume of trade in terms of kg, values (when given in the Sound) or number of pieces
  – When it is available both in the Sound and the French sources
  – So only for 1780 for the time being
  – kg measure dominate both the Sound and the French data

• All over the place
  – A mistake in the treatment of the French source ?
  – Or issues with quantities in the French sources ?
    • Aggregation of regional table : which measures ?
  – Wood would dominate the weight, and we know little about it
Comparing them (3)

• Compare the longitudinal evolution of trade throughout the period
  – Not really all over the place
    • (Ta
Comparing them (3)

• Compare the longitudinal evolution of trade throughout the period
  • French years: 1750, 52, 54, 55, 57, 69, 71, 72, 74, 75, 77, 80, 82, 87, 88 and 89
  • Sound years: 1749-1795
  • Using, both indexed at 1 in 1780
    – The value of the French source
    – The taxes for the Sound

– Not really all over the place
  • Thank you, Russia!
  • Removing the 5% smallest and largest observation for each series does some good (especially for the Danish)

– What about doing it the main traded goods?
French Exports, Russia, taxes, 0a: Foodstuff, Exotic
Corr : 0.31

Year
1750 1760 1770 1780 1790 1800

French Exports, Russia, taxes, 1a: Beverages and tobacco
Corr : 0.64

Year
1750 1760 1770 1780 1790 1800

French Imports, Russia, taxes, 2a: Raw materials
Corr : 0.88

Year
1750 1760 1770 1780 1790 1800

French Imports, Russia, taxes, 4a: Oils
Corr : 0.87

Year
1750 1760 1770 1780 1790 1800
Conclusion

• What have we done?
  – Presented the two sources
  – Presented the necessary work to make them comparable
  – Tried actually comparing them

• What do I think I have learned?
  – First, it is a difficult task
  – Second, the results might be seen as disappointing
    • Even if there are some bright spots (the usefulness of Sound taxes, some longitudinal correlations)
    • It mostly seem impossible to “fit” the various data
  – Third, maybe that should encourage us to change our perspective
    • Good way of checking the data?
    • Certainly, creating the conditions making the joint usage possible is very worthwhile
    • Confirms that the question is the thing
      – It might be fruitless to try to create checked, unified “super-data” that could be useful to answer all questions relating to the phenomenon
      – Better to see the data as multiple entries to related phenomena