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# REINTERPRETING THE COLONIAL TRADE: FRANCE, SUGAR, AND DUTCH DISEASE

« The virtues of the Cane must now be sung;  
The noblest Plant of all the western Isles!  
What greater Subject can employ my Muse?  
Not India's aromatic Groves, nor all  
The Treasures of her Hundred Mines, can boast  
A more important Trade, or yield to Man  
A nobler Use. Here, Muse! your Pow'r exert,  
The subject now your utmost Pow'r demands.  
To trace the Cane thro' all its various Toils,  
Till full Perfection crowns its Use compleat,  
Be now your Task to celebrate at large.»  
**Nathaniel Weekes, Barbados (1754)**<sup>1</sup>

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<sup>1</sup> Cited in Figueroa and Burnett (1986)

## *Abstract*

*In this paper we study French colonial trade during the eighteenth century. We adopt an original point of view and argue that despite all the wealth brought back from the colonies, the overall impact for the French metropolitan economy could have been more mixed than we initially thought. Indeed the monopoly of French traders on sugar from the Caribbean largely reduced the level of manufactured goods exported. This phenomenon can be understood as some kind of Dutch Disease where labour and capital were sucked up by the profitable sugar trade. Our two models inspired from the repeat-sales method and the gravity model of Stijns (2003) are robust enough to affirm that sugar trade has harmed the foundation of the manufacturing industry in France. However, despite our extensive database, we lack information to be more assertive regarding the mechanisms at work.*

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## 1. Introduction

Between 1730 and 1740, French colonies were the largest exporters of sugar in the world and Santo Domingo was exporting around 77 000 tons of sugar in 1767 (Meyer, page 145, (1969)). The progression of sugar imports from the colonies exceeded that of any other commodity. Over the period 1716-1780, Célimene and Legris (page 134, 2002) estimated that the sugar trade represented 110 millions of *livres pesant* and 65% was re-exported throughout Europe. Moreover, the land patent of 1715 gave full refinery rights to the French metropole and enabled French traders to refine sugar themselves. Therefore the French merchants had access to a scarce resource, highly demanded in Europe and in the rest of World, and merchants they protected against competition by monopolistic laws. Sugar soon became a gold mine for investors. In her Manual on History of the Dominican Islands, Moya Pons (page 163, (1995)) estimated that over 100 million pounds were invested by Bordeaux French traders from 1783 to 1787, in order to cope with the increased demand coming from the United States of America following its independence from the United Kingdom and the inherent end of its trade dependency to the British crown.

In this paper, we are concerned with the consequences of such change in the structure of the economy. We make an innovative claim that the inflows of wealth from the colonies – linked to the discoveries of new resources popular in Europe and Asia such as coffee, sugar, chocolate, etc. eventually had damaging outcomes for the French economy. We establish a parallel with the *Dutch Disease* as first defined by Corden and Neary (1982), and with the more general empirical evidence found by Sachs and Warner (1995) on the impact the trade of natural resources has on growth. Because sugar was massively re-exported throughout the rest Europe and because it was sold with a high added value, we believe the case of sugar to be an ideal case to test the impact of colonial commodities on the French economy.

We found conclusive evidence on the noxiousness of colonial commodities for French manufacturing outcomes during the eighteenth century. Especially we found a negative correlation between levels of sugar price and total volumes of manufactured goods exported. This is a new facet of colonial relations that we are exploring here. Indeed, if we do not conclude that colonization was too costly to be profitable – and it is not the topic here – we claim nevertheless, that because of the way France organized the trade with its colonies, it eventually suffered from the unequal trade it initiated. While profitable in many ways, the trade of colonial commodities meant the decline of the manufactured goods industry. We are the first to make this claim. Drelichman (2005) supported a similar story in Spain due to large inflows of silver originating from the Americas, however, we believe the mechanisms underpinning the sugar trade are somewhat different from those underpinning the discovery of precious metals, and are in many ways less obvious. It is clear – and the reader should keep in mind – that our results are preliminary results and further research is needed to fully comprehend this phenomenon. A comparative with the British economy could be very informative. Moreover, as often when it comes to historical research, our database is not as accurate as we could hope, although it is one of the most complete existing databases on trade in eighteenth century Europe.

Our paper uses the following sequential. We first introduce the topic with a literature review on colonial trade and on the *Dutch Disease*. This is followed by a short description of the data used in the data analysis and its limits. In the next two sections, we use different econometrical models to test our hypothesis formulated in previous sections. First we use a repeat-sales method to validate the point made by Sachs and Warner (1995), before using a form of gravity model, based on the one developed by Stijns (2003), to better understand the economic mechanisms at work. In each section we present the results of our regressions and the gap due to sugar trade between realized and potential exported manufactured goods as

we estimated it. Finally we sum up our findings and open the discussion to different potential issues in our concluding remarks.

## **2. Literature Review**

### ***Trade and colonial era throughout the economic literature***

France started its colonial story on the eve of the sixteenth century when the first expeditions to the Gulf Saint Laurent occurred under the supervision of the king François I. However, it is only during the seventeenth century, under the reign of Louis XIV, that France started to build its colonial empire. France constantly sought to increase its power in the colonies throughout the seventeenth and the eighteenth century to compete with the vast British Empire. The political reward was not the only rationale behind the colonial construction as the economic impact was essential in the reasoning of the leading powers of this period. Colonies were seen as a source of economic development either through the spoliation of wealth – as Spain and Portugal with silver and gold (Drelichman (2005)) – or through the creation of a dynamic that would encourage competition and offer a wider market to sell European products. Even for contemporaries, the divergence of views were numerous on the economic impact of colonies. In France mercantilist ideas were dominant since Louis XIV and his famous counsellor Colbert. In Colbert's mind, the state had to organize and control the entire production system. When settlement colonies were created in the Americas, Colbert rushed to implement monopolies to extract resources on behalf of the Crown (Charbit 2006). As Alain Clément (2006; 2009; 2013) highlighted, mercantilists had to review their positions in favour of colonies under the pressure of liberal economic ideas during the eighteenth century because of the scepticism around the benefit of the colonies.

In his *Mémoire*, Labat (1693-1705) explained that the main reason for colonization was the strong demand for luxury goods. Catherine de Médicis herself, queen of the realm, was known to be an important consumer of tobacco. Labat believed that tobacco was the reason why the Antilles islands were colonized by the French. L'Abbé Raynal (1770) also supported this idea and suggested that the fierce competition between English and French in Canada could be explained by the search for “pelts”. For many years, most European countries relied on Northern countries for the trade of pelts and it was considered a luxurious good, and therefore expensive, at this time. Canada was an extraordinary land for those in the pelt trade as they could cover all their need and even export more. According to l'Abbé Raynal, Montreal, Quebec and the city of Trois-Riviere in Canada were mainly areas where French and Indians would meet to exchange and stock furs.

Throughout the eighteenth century trade with colonies grew at an exponential rate and was multiplied more than ten fold (Léon 1977, page 74). Santo Domingo quickly became the most prosperous colony of the French Empire and produced over 75% of sugar exports. Meyer (1989, p148) argues that the current account of France was heavily dependent on colonial trade. According to him, Haiti itself was exporting more than the thirteen American colonies combined. Trade from the island grew from 70 000 tons of sugar in 1714, to 80 000 tons on the eve of French Revolution. Though sugar dominated exports from Haiti, it was not the only luxury good the colonies exported. Sugar accounted for 50% of Haiti exportation, but coffee also accounted for 24% of the colony's exports (Mauro (2002), pages 137-38). Finally, cacao was the third most exported luxury good. In Martinique, more than 100 000 trees were counted around 1760 and a thousand hectares were dedicated to cacao cultivation in Guadeloupe (Harwich 1992, p. 60).

However, one should not make the mistake to think that those luxury goods were destined all to France. Consumption of sugar would never reach more than 1.2 kilograms per capita and per year, even at the end of the eighteenth century (Huetz de Lemps 1996,

pages 629-640). Lavoisier estimated that the annual consumption of chocolate was only about 200 grams per year and per capita at its highest (Harwich 1992, page 76). Coffee was also destined to the wealthiest, and although trendy, consumed volumes of coffee remained meagre (Mauro 2002).

In fact, a huge majority of imports were re-exported towards non-colonial European countries ready to pay a high price for these rare goods (see table 1). The national market was too tiny for French colonies to be profitable without re-exportation. Thus, Marseille re-exported 88% of its coffee imports towards Mediterranean countries and Bordeaux re-exported 90% of its coffee imports and 73% of its sugar (Brasseul 1997, page 200). The British Empire, for instance, was able to produce more diverse goods and had a larger domestic market, as British subjects were richer than French. It is therefore important to study the different impact trade had on a small French economy trading in a select few luxurious goods with its colonies.

**Table 1:**

<b>Sugar Commercial Balance (in thousands of <i>Livres Tournois</i>), for each economic partner in 1776</b>	
<b>Africa</b>	23
<b>Germany &amp; Poland</b>	0
<b>England</b>	18
<b>Spain</b>	318
<b>Flanders and other states of the Emperor</b>	901
<b>Low Countries</b>	17 400
<b>Indies</b>	0
<b>Italia</b>	659
<b>North</b>	18 800
<b>Portugal</b>	0
<b>Switzerland</b>	141

*Calculation by the author*

The impact of colonial trade is often studied through the lens of the colony. Researchers focused mainly on long-term consequences of colonial trade. James Rauch (1999) and Andrew Rose (2000) both studied how bilateral links between the once colonizer and the previously colonized country still produce positive impacts on trade between the two today.

Using a gravity model, De Sousa and Lochard (2009), showed differences between French and British colonies as ex-British colonies tend to trade more than French ones. Their results corroborate results on the importance of past institutions to understand the present trade patterns. Indeed the British resorted to “indirect rule”, relying on local chief to administer their colonies while French were using the so-called “direct rule” seen as less economically efficient (Crowder 1968). Other studies also explained observed growth rate differences between ex-French colonies and ex-British colonies through the lens of legal system (La Porta, Lopez-de-Silanes, and Shleifer (2008)), especially when comparing French and British colonies in Africa. (Bertocchi and Canova (2002); Grier (1999)). Britain’s superior institutions are believed to be key for today’s development of ex-colonies and the negative impacts of colonization on modern development has been widely explored.

The negative human and social consequences of colonization during the colonial era is hardly debatable (Nunn 2007), moreover there is a large consensus among the literature that colonies suffered long term growth due to this part of their past (Engerman and Sokoloff 2005; Nunn 2009). Although Schwartz (2004) sees the colonial trade as focused on America, with flows of slaves and goods circulating between Europe-Africa-America, many colonies especially in the French Antilles, were never central in the decision-making processes. They might have been the key cog of this trade, but all decisions were made in metropolitan France, by the colonizer and for the benefit of the colonizer. For example, according to the economic regime defined by Dupont De Nemours (1769) in his *Journal de l’Agriculture*, French colonies could exclusively sell their products to France (Tarrade 1972). They were also prohibited to compete with the French metropole. In 1684, building sugar refineries became illegal in the French Antilles so raw sugar had to be manufactured in metropolitan France. In 1736, beaver hat manufacturing was also prohibited in colonies. French colonies were only meant to provide raw material so France could produce more and gain power. Thus, when France is defeated by England in 1763 and forced to sign a peace treaty, Choiseul is

willing to cede all claims on Canada and Louisiana as long as France can keep profitable colonies such as the Martinique or the Guadeloupe. He even negotiated to keep fishing rights in Terre Neuve despite losing Canada. Colonies were thought of as nothing but an economic asset for the French realm and for the interests of the crown to prevail.

At the time, most thought colonial trade would bring significant benefits to France. The trade was highly regulated, and trade with American colonies was limited to 13 ports: Bayonne, Bordeaux, Brest, Calais, Dieppe, Le Havre, Honfleur, Morlaix, Nantes, Rouen, La Rochelles, Sète, Saint-Malo (James 2001). Later on Marseille also gained from the colonial trade, as it became the main platform of colonial products towards Mediterranean countries. The slave trade was also very important, especially in Nantes where famous slaves' trader became among the wealthiest families in France. Not only is colonial trade important as it boosted investments, but it also enabled the selling of French production surpluses. Wine from Bordeaux and textiles from the Maine, Anjou or Cholet were exported in significant amounts towards colonies.

However, the benefits thought to be gained are debatable, especially in the long term. Turgot<sup>2</sup>, for example, was still dubious regarding the gains of the colonial system. The artificial outlets offered to French producers were harming competitiveness as it enabled merchants to sell overpriced product to colonies through the colonial monopoly. He saw the gain for French as a whole as modest at best. Moreover Turgot believed that the defence of colonies was so costly to protect them that they were hardly profitable. By the end of the eighteenth century, the idea caught on and more and more French subjects were favourable to an economic independence of the colonies.

### ***A form of Dutch Disease?***

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<sup>2</sup> See Turgot (1791), page 28, and Schelle (1923)

The term *Dutch Disease* was first coined by The Economist in 1977 when the journal was linking the finding of important resources of natural gas at the end of the 1950s in Groningen, Netherlands, with the decline of the Dutch manufacturing sector<sup>3</sup>. The economic theory behind this concept was developed in a famous paper by Corden and Neary (1982). They created a basic 3-sectors model with a non-tradable sector and two tradable ones. One of the two tradable sectors modelled the booming industry, which in other words would be the natural resources sector. In the case of the Netherlands, this expanding sector would have been the natural gas sector, but this can be extended to other extractive sectors such as the sugar industry from the French colonies in the eighteenth century. The second tradable sector would typically be the manufacturing sector.

The mechanism brought to light by Corden and Neary implies a “*resource movement effect*” and a “*spending effect*”, both of which put downward pressure on the growth of industry. The “*resource movement effect*” is the most obvious one. As demand increases for the booming good, demand for labour in this sector is growing and we thus observe a movement of the labour from the manufacturing and non-tradable sectors to the expanding sector containing the natural resource. The decrease in output from the manufacturing sector is a direct consequence of the increase in output of the booming sector. This first mechanism is called “*direct deindustrialization*” by the authors of the paper. Overall this effect can be minor since some natural resources such as oil might not be labour-demanding (Corden (1984)). The second mechanism highlighted by Corden and Neary is the “*spending effect*” where an increase in income due to the discovery of natural resources leads to higher demand for both tradable and non-tradable goods. Prices in the tradable sector are capped by international prices since these goods can be imported, however prices for non-traded goods will go up and cause a real exchange rate appreciation (Van Wijnbergen (1984)). In the end the appreciation harms

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<sup>3</sup> "The Dutch Disease" - *The Economist* (November 26, 1977), pp. 82-83.

the tradable sector and output from the tradable, or manufacturing, sector will go down. This is called “*indirect deindustrialization*”.

Many studies support deindustrialization following the discovery of a natural resource: Barker (1981), Corden (1984), Kremers (1985) all highlight the important output collapse in textiles, clothing and vehicles sectors in the Netherlands between 1960 and 1980, the period following the discovery of natural gas field near Groningen in 1959. In the United Kingdom, some authors have also shown how the discovery of oil from the North Sea led to a contraction of manufacturing output (see Ross (1986), Forsyth (1986)). More recently, Ruehle and Kulkarni (2011) found similar results in Chile. Instead of de-industrialization, of which they found little evidence, Ruehle and Kulkarni brought to light the de-agricultization of the economy that occurred following the boom in the copper sector of the early 2000’s and thus confirming the pattern of the *Dutch Disease*. Javaid (2011) tested this hypothesis on south-eastern Asian economies and also found evidences supporting the *Dutch Disease*. However, if the impact of natural resources boom on the manufacturing sector is rarely contested, the mechanism of the *Dutch Disease* is less clear. Many economists blamed the incapacity of governments to adapt economic policy to the discovery of natural resources (McMahon 1997) rather than point to a disease that would spread through real exchange rate appreciation (Cuddington (1989), Gelb (1988)). Sachs and Warner (1995) have synthesized the debate in a somewhat concise way by concluding that resource-exporter economies would experience lower growth rates than peers if shares of natural resource production to total country output were higher than for peers. The authors were less interested in the mechanism at work than with the facts. Indeed, Sachs and Warner also showed that this effect was not necessarily resulting from exchange rate appreciation, and thus raised doubts on the *Dutch Disease* theory.

In our study, we focussed on the impact of sugar import on French trade. We believe the large import and re-exports of sugar might be compared to a natural resource that one

country could take advantage of, such as oil in the case of the Netherlands. Sugar – as natural resources – requires little or no transformation and as such can be seen as a financial manna linked to the country’s geography. Moreover the monopoly created by the colonial system excluded all potential competition to get the resources such as cacao, sugar or coffee. In this paper, we test the hypothesis that the highly profitable trade of sugar might have hurt French manufacturing output according to a vision similar to the one of Sachs and Warner (1995). Indeed due to the absence of reliable and accurate data on French GDP, we cannot test the existence of a link between sugar exports and output growth. We thus used manufactured goods exported as a proxy for economic growth. As Kaldor (1966; 1975) argued in his first two laws, manufacturing output and productivity are closely loosely to the growth rate of a given economy. Thus higher (lower) exports of manufactured commodities can be understood as a proxy for higher (lower) manufacturing productivity and thus higher (lower) growth rates.

At first we are not interested in the mechanism at work but we focus on the facts. Once we have found a correlation between sugar exports and manufactured outputs, we use a second method to confirm the causality link and present evidence of some form of a *Dutch Disease* as defined by Corden and Neary (1982).

### **3. Data**

Historical data are sometimes complicated to handle. We use the TOFLIT18 database that covers French trade for the period 1716-1821.<sup>4</sup> For our paper we decided to specifically study the period 1718-1780. The choice of the period is motivated by data issues and by historical facts. Needless to say that French Revolution of 1789 has deeply changed French administration. Customs offices suffered as well and reliable data on trade rarefied in the following years. Moreover as we are studying the impact of products coming from the

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<sup>4</sup> TOFLIT18 : Transformations of the French economy through the lens of international trade, 1716-1821, <http://toflit18.hypotheses.org/>

colonies, we are especially interested in the booming period. The 1780s marked the beginning of a complex relationship between France and its colonies, eventually resulting in the end of French colonial empire in the Antilles (Gauthier and Benot (1988)).

The ambition of the historians and economists working on the TOFLIT project is to bring together all the data on French trade available for the eighteenth century. In this objective, it combines several sources of information gathered at different levels of the French administration, from the national level to the local custom offices. The database is also one of the largest available for Europe and enables us to lead thorough analysis as it includes quantities, volumes, information on the trading partner, etc. In this paper, we are using exclusively data from local offices because at the local level, the Chambers of Commerce were tasked with providing prices before the 1780s which is necessary for our study. However, those data are patchy as these documents were never “official productions”. At the time of the study, we have included data from Bayonne, Bordeaux, Caen, La Rochelle, Marseille, Montpellier, Nantes, Rennes, Rouen although not all years were available for all cities.

Merging sources from different ports in one database can be tricky because of the various procedures it requires. The major issue is dealing with the use of different names and units of measurement for a same commodity depending on the location. Registered merchandises, quantities and prices were often copied from other versions or handwritten by clerks. Thus, the database contains inevitable copying mistakes, retranscription mistakes, but also differences in writing conventions. Orthographic homogenization enables us to group commodities together and follow some of them over the long term, as panel data. We kept full details of each commodity to avoid treating commodities under different forms or texture as the same goods. However it is unavoidable that for some years, clerks aggregated commodities that would have been classified otherwise if another clerk had to report them. Obviously, the different levels of precision we get from our database affect our results.

Nonetheless we are confident that we are able to follow over the years a large group of commodities that will provide us a good estimation of the evolution of prices and quantities.

On a much smaller scale, we face similar problems for prices and volumes as they are subjects to typing mistakes and omissions. We cannot do much to deal with this issue. Fortunately, sugar is mostly measured in *Livres* or *Kilogrammes* making it much easier to homogenize different series and compare them. We have less problem with other commodities as we are not interested in prices but in the value of different types of aggregated products. For further details on methodological issues linked to merged bases, one could refer to Werner Scheltjens (2009; 2015). We have discussed data homogenizations issues above, but one might want to read a full description of the database to gain deep understanding, and therefore should refer to Charles and Daudin (2011, 2015).

Moreover, part of the trade is not measured because fraud, smuggling, or other similar issues are uncharted. Moreover, numerous drug shipments are counterfeit or mistaken for another one as described by Bruslons and Savary (1748) in their dictionary of trade.

We created our own categories of manufactured goods, wine and canvases. It was not an easy task and one may contest the categorization depending on what should be considered as manufactured good or even wine. A list of all the different types of wine is available in the annex as an example of the accuracy and exhaustiveness of the database we had to treat. We considered a product as manufactured if the good was transformed by humans through a complex transformation process, which is a very specific definition. Thus, wood planks, medicinal herbs, basic alcoholic drinks, etc... are not included in this category. The approach is debatable and the definition we adopted for manufactured goods could arguably be tougher or relaxed depending on researchers. We decided to take a rather restrictive definition to amplify the effect of sugar trade on manufactured goods exports as highly processed goods required investments and those investments might have been diverted towards the sugar industry.

To take into account in our regressions the effects of conflicts on trade we created two control variables. Indeed we believe that war periods usually disrupted existing commercial routes. We will go into further details below and the appendix includes further explanations on conflicts taken into account by our control variable.

Finally, we use data on population derived from Dupâquier (1995). We obtained yearly estimation of the French population for the whole studied period. Despite our efforts, these data are also debatable as censuses were not always accurate or frequent in some part of France.

#### **4. Repeat-Sales Method**

First we speak about volumes then prices

##### **1. Methodology**

In this first part, we are interested in confirming our intuition that sugar exports might have reduced the trade of manufactured goods following Sachs and Warner (1995) intuition on the link between natural resources and manufactured goods. We are first interested in two goods that are particularly important at this time. We are looking at canvases and wine exports as the key manufactured goods, and try to evaluate the response in trade of these goods to an increase in sugar exports. Our method is inspired from the repeat-sales method used to estimate housing price trends. Basically it consists in reporting the sales price of the same piece of real estate over time in order to create a price index (Thion, Favarger, and Hoesli 2001). Since it is particularly difficult to compare different houses or apartments due to characteristics inherent to the specific estate, reporting the sales price of the same piece of real estate over time enables one to compare the price variation for identical estates. We follow a similar model where we track the evolution of canvases and sugar over time for each port. In our case, ports can be compared to apartment. Ports have their own specificities such as capacities, location, etc... The hypothesis underlying our model is that the geographic

structure of trade remains unchanged during the studied period and is captured by fixed-effect coefficients. Thus the coefficient for one port will remain unchanged for every year included in our analysis, as it control for the geography of the port which is time-invariant. This is a strong assumption especially for regions which suffered from an important change in trade volume in opposition with national trend. For instance, after prosperous years, La Rochelle has seen its trade collapse when France ceded all of its North American possessions east of the Mississippi River following the Seven Years' War in 1763 (Volkmann 2003; Delafosse 1949) which is not representative of French trade as a whole on this period. Nonetheless this strategy enables us to study the year-on-year change in canvases and wine production for each port. We also use fixed-effects for the identification of the trading partner. The reasoning is similar to the one of ports and apartments, countries have time-invariant characteristics that we can hardly capture if not by using fixed effects. Time-variant effects are captured by control variables such as a dummy controlling for war, a variable controlling for population growth, etc...

Our fixed effects model can be written as follow:

$$X_{i,j,k,t} = A \cdot e^{\alpha_t Year_t + \alpha_i Port_i + \alpha_j Country_j + \alpha_k Product_k} \cdot \left(1 - \frac{X_{i,j,sucre,t}}{X_{i,j,t}}\right)^\beta \cdot e^{\Sigma Controls}$$

This gets us when linearized:

$$\begin{aligned} \ln(X_{i,j,k,t}) &= \ln(A) + \alpha_t Year_t + \alpha_i Port_i + \alpha_j Country_j + \alpha_k Product_k \\ &+ \beta \cdot \ln\left(1 - \frac{X_{i,j,sucre,t}}{X_{i,j,t}}\right) + \theta_1 \cdot War_{j,t} + \theta_2 France\_War_t + \theta_3 Y_t \\ &+ \theta_4 Pop_t \end{aligned}$$

Where  $X_{i,j,k,t}$  is the variable to be explained, representing the total value of exports for wine and canvases (the type of trade is  $k$ ). Let us denote  $t=1, \dots, T$  the time variable in years,  $i=1, \dots, N$  the port we are studying (see annexes) and  $j=1, \dots, J$  the country towards which the port is exporting wine or canvases. Therefore we have fixed effects for every port ( $Port_i$ ), product ( $Product_k$ ), and trading partner ( $Country_j$ ). For each year we study the evolution

of trade flows of one specific commodity between one specific port and one specific partner. We then compare the value of each flow and compute year-over-year growth in the trade of one commodity.

We are interested in the coefficient  $\beta$  as it shows the effect of a relatively higher share of sugar exported value among the total exported value denoted  $\frac{X_{i,j,sucre,t}}{X_{i,j,t}}$ . Moreover  $\ln\left(1 - \frac{X_{i,j,sucre,t}}{X_{i,j,t}}\right)$  is always negative and decreases when the share of sugar increases relative to the total exports. Thus, when the coefficient  $\beta$  is positive, it means that a higher share of sugar in total exports reduces our estimated value of the exported value of canvases or wine. This would confirm the initial idea of Sachs and Warner (1995).

Finally, for each flow we control for the GDP of France at that time ( $Y_t$ ), for war – whether if the conflict involved the specific partner ( $War_{j,t}$ ) or if France is at war ( $France\_War_t$ ) in a more general way – and for the French population ( $Pop_t$ ).

## 2. Results

We run three regressions. One complete with a control for canvases and wine, and two specific regressions where we only observe the trade in either wine or canvases. The results are summed up in the table below.

**Table 2:**

VARIABLES	Full specification	Canvases	Wine
$\beta$	0.213 (0.144)	0.942*** (0.207)	0.766*** (0.176)
$Y_t$	-0.000131 (0.00113)	0.00279 (0.00214)	0.00140 (0.00139)
$France\_War_t$	0.212	-0.890	-0.748

	(1.238)	(2.661)	(1.526)
$War_{j,t}$	-0.640*	-0.133	-0.250
	(0.330)	(0.813)	(0.458)
$Product_{canvases}$	-10.31***		
	(0.342)		
$Product_{wine}$	-10.71***		
	(0.366)		
$Pop_t$	-3.27e-05	-0.000578	-0.000223
	(0.000445)	(0.000773)	(0.000550)
<b>Constant</b>	23.18***	24.29*	14.36
	(7.711)	(14.31)	(9.181)
<b>Observations</b>	1,010	440	715
<b>R-squared</b>	0.773	0.801	0.715
<b>Port FE</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>
<b>Year FE</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>
<b>Country FE</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>

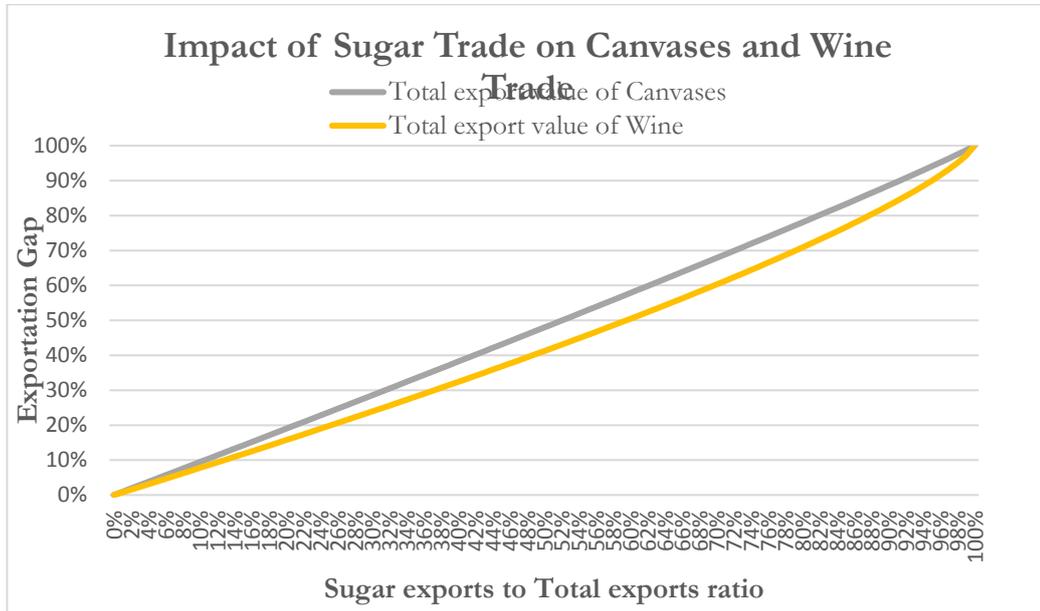
*Standard errors in parentheses*  
\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

The most important result is that the  $\beta$  coefficient is always positive, however it is not statistically significant in our first specification when we estimate wine trade and canvases trade in one single equation. Although not statistically significant, war – whether with the specific partner or in a general sense – always impact negatively the trade of wine and canvases, confirming to what we could expect. When wars arise, trade can be disrupted especially maritime trade as ships can be attacked by an enemy and commercial routes can become targets. The fixed effects controlling for the trading partner is potentially taking out part of the explanatory power of our war variables but the sign of the variables is as expected. In line with the previous comment, our controls for population and French national output are statistically insignificant. It is highly likely that most of the impact of these two variables are captured by the year fixed effects.

From our second and third equation, we can estimate that whenever sugar exports to total exports ratio increased, other things being equal, then canvases and wine exports from

France would decrease. In the graph below we show for each sector the ‘exportation gap’ for each product due to an increase in the sugar export to total exports ratio.

**Figure 1:**



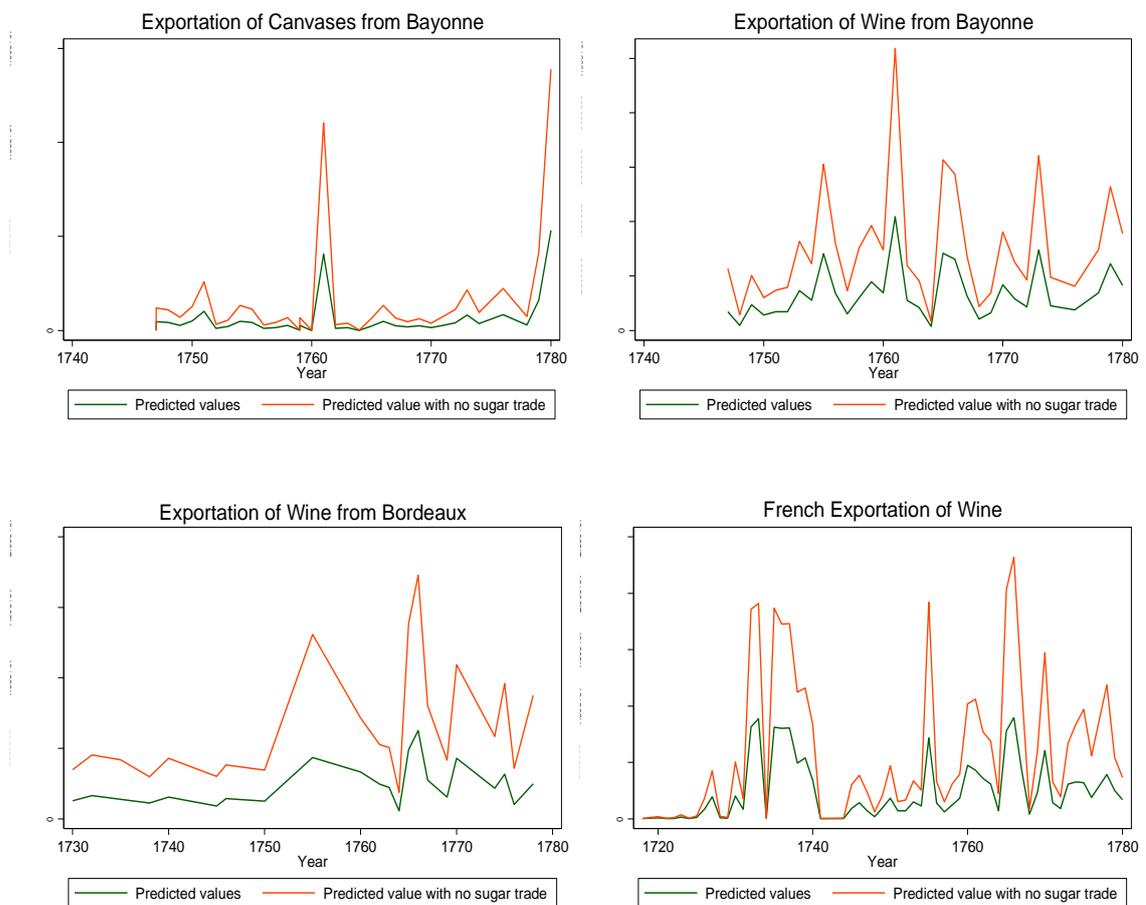
Wine exports are more sensitive to changes in the structure of exportations than canvases. Thus, when the sugar exports to total exports ratio switches from 0 to 20%, other things being equal, the total export value of canvases would collapse by 22.0%. For a similar variation, wine exports would collapse by an even greater margin of 29.1%.

These findings are in line with the findings of Sachs and Warner (1995). However, we need to acknowledge that the scarcity of the data and the lack of control variable greatly undermine the accuracy of our estimation. Beyond those limitations, our regressions are robust to different specifications, especially to inclusion of control variables, and changes in the definition of canvases and wine.

We also extrapolate from our results and adopt a somewhat prospective attitude. We try to evaluate what could have been the total value of exported wine and canvases in the hypothesis that France never had sugar to export. In other words, we bring the ratio of sugar exports to total exports down to 0 for the entire studied period and compute the estimated value of trade for each port. This can be seen as the potential level of exports in the absence

of sugar. We can see from the example of Bayonne (cf. Figure 2) that wine exportations are far from their potential level because of the importance of sugar in the port's trade. Although Bayonne is a bigger exporter of canvases the export level is much closer to its potential level. We note that as the sugar exports to total exports ratio increases at the end of the eighteenth century, the gap between both values is getting wider. However, spikes in predicted value are probably due the lack of control variables and thus the inaccuracy of our model.

**Figure 2:**



We witness the same pattern for Bordeaux and France as a whole. Because Bordeaux is a much bigger exporter of sugar, the potential level of wine exports is much higher than what was actually achieved. Of course our estimated value are not accurate enough to make any claims on the exact level of potential exports, but the gap between predicted levels is nevertheless important enough to be assertive about the negative impact sugar had on the wine and canvases industries in France.

We showed so far that there is a link between the amount of sugar exported and the trade in canvases and wine. Basically sugar trade increases at the expense of other types of trades and not hands in hands as we could have imagined. However we can hardly generalize this finding unless we show a causality link between sugar and trade. In statistical terms, we demonstrated the existence of a correlation between the two but not an economic mechanism. Therefore we need to understand how this mechanism operates. In the next part, we want to explore further the hypothesis of a potential *Dutch Disease*. To do this we have to explore the relationship between prices and export of sugar as prices are what make the sector profitable for French merchants and might divert investments from other sectors. We do not fully consider the theory of Corden and Neary (1982) as it involves real exchange rates and we do not have enough data to test such hypothesis at this time. However, we have yearly sugar prices for every port that exported sugar and we can thus establish a precise link between price variation and manufactured goods variation.

## **5. Gravity model**

### **1. Methodology**

Now we wish to go further in-depth and try to show the existence of a *Dutch Disease* related to sugar trade specifically from the colonies. We build a similar model to the one used by Stijns (2003) to show that price-led energy booms led a country's manufacturing exports to decrease. His paper casted away remaining doubts on the empirical existence of the *Dutch Disease* by using a more global view and by including as many countries as he could in his analysis instead of making a country specific study. Stijns used a Gravity Model to overcome all endogeneity issues linking energy prices and exports of manufacturing trade.

In our case we decided to use a gravity model to test the hypothesis we formulated previously. Therefore we estimated the trade of manufactured goods between each port and each commercial partner of France. For instance, we tried to approximate the trade of

manufactured goods between Bordeaux and England, or between La Rochelle and Italy. We included in our regression a coefficient testing for the existence of a *Dutch Disease* linked to sugar exports, as we will explain later on.

Stijns used this model to study the impact of natural resources such as gas and oil on trade with contemporary data. Because of a lack of data, our estimation of manufactured goods' trade is not as accurate as the one obtained with contemporaneous data as we can't include as many explanatory variables as he did.

Below is the equation we used:

$$\ln(X_{i,j,t}) = \beta_0 + \beta_1 \cdot \ln(Y_t) + \beta_2 \cdot War_{j,t} + \beta_3 \cdot France\_War_t + \beta_4 \cdot Year_t + \sum_k^n \beta_k \cdot (Country_j + Port_i + Year_t) + \tilde{\beta} \cdot DD_{i,j,t} + \varepsilon_{ijt}$$

Where  $X_{ijt}$  is the exports value of manufactured goods from port  $i$  to country  $j$ . For each flow we control for the GDP of France at that time ( $Y_t$ ), and for war ( $War_{j,t}$  &  $France\_War_t$ ). Because of the lack of data, it is hard to estimate the trade between one port and one trading partner without using fixed effects for each port ( $Port_i$ ), trading partner ( $Country_j$ ) and year ( $Year_t$ ). As we are interested in the effect of sugar price variations, the use of fixed effects to determine the bilateral flows of manufactured goods is not an issue. We are not interested in how much the distance impacted trade for instance, thus fixed effects will measure the impact of all unobserved characteristics of the bilateral trade between two countries. We are more interested in variables that change and might impact the trade such as wars, or sugar prices if a *Dutch Disease* related to sugar existed.

The variable we are interested in is  $DD_{i,j,t}$ . We can decompose the variable as follows:

$$\forall t \Leftrightarrow DD_{i,j,t} = dummy_{i,j,t} \times \ln(Real\ Price\ of\ Sugar_{i,j,t})$$

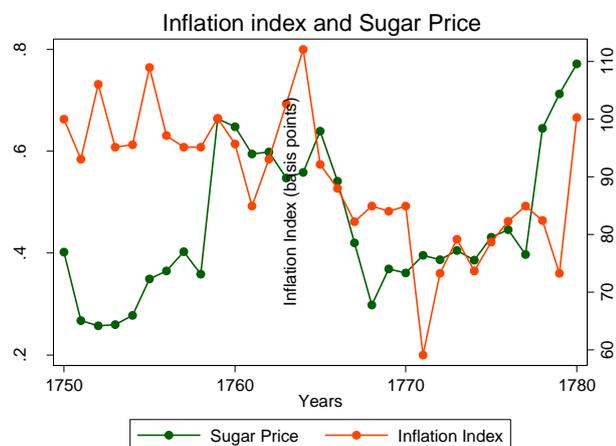
Where  $dummy_{i,j,t}$  takes the value of 1 if the port  $i$  is a net exporter of sugar relatively to the country  $j$ . It takes the value 0 if the port is not a net exporter of sugar relatively to  $j$ .

This dummy enables us to specifically target the sugar exporter ports and thus capture the specific effect on manufactured commodities by the availability of sugar. Using this dummy reduces the noise around our results. The real price of sugar at time  $t$  is built by using an inflation index based on the price variation of the most exported goods. To do that, we estimated the price variations for goods that appeared at least 50 times in our data over the period 1749 to 1789. We then used this index as an inflation index for the period, thus we obtained:

$$Real\ Price\ of\ Sugar_{i,j,t} = 100 \times \frac{Price\ of\ Sugar_{i,j,t}}{Inflation\ Index_{i,j,t}}$$

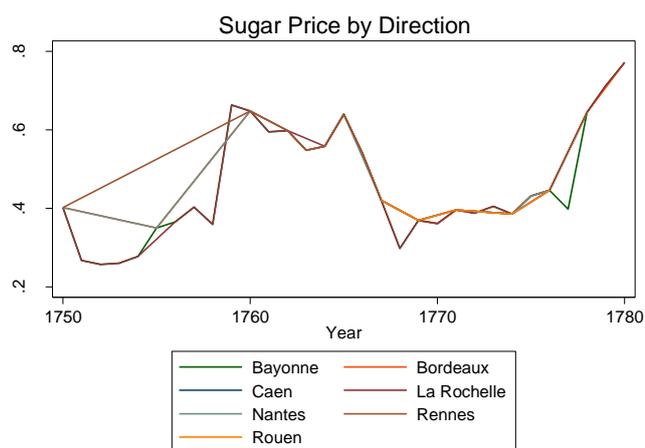
There are significant differences between real price of sugar and the nominal price of sugar as we can see in figure 3. Especially, it is only after the end of the Seven Years' War that sugar prices are synchronized with the French economy's inflation.

**Figure 3:**



One should note that the price of sugar is not defined at the national level but at a local level. Thus prices in Bordeaux or Marseille can be different depending on the political situation, the trading partners, or other similar factors. Differentiating prices according to region enables us to gain in accuracy in our regressions although prices are quite similar from one port to another due to the high integration of French port in the Atlantic trade.

**Figure 4:**

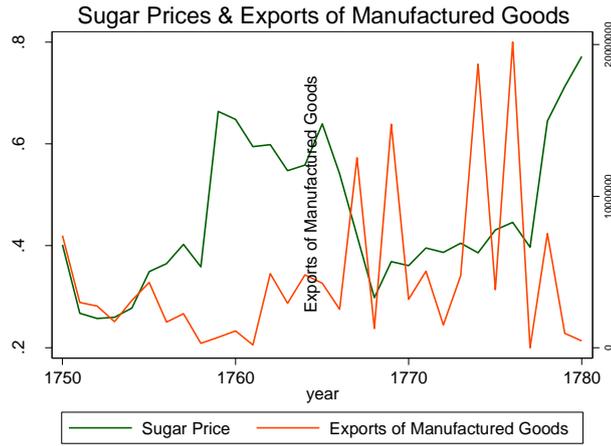


As a result, our coefficient  $\tilde{\beta}$  will catch the effect of an increase in the price of sugar on the overall trade of manufactured goods.  $\tilde{\beta}$  is negative if an increase in the price of sugar will cause a decrease of overall trade of manufactured good with a specific partner, thus signalling the possibility of a so-called *Dutch Disease*.

## 2. Results

Before presenting the results of the model, we can graphically identify the link between manufactured goods exports and the price of sugar (Figure 5). The data on exports are more volatile with some spikes in the 1770's. Spikes will reduce the overall capacity of our model to predict the level of exports, but despite those spikes, we can identify when looking carefully, that both series are usually moving in opposite direction.

**Figure 5:**



Now we focus on the statistical analysis. In the table below are presented the results of our gravity model.

**Table 3:**

Gravity Model	Model (1)	Model (2)	Model (3)
$DD$	-1.686*** (0.0290)	-1.898*** (0.0265)	-3.035*** (0.0349)
$Y_t$	-0.00268*** (0.000305)	-0.00202*** (0.000272)	0.000138*** (2.59e-05)
$France\_War_t$	-0.420*** (0.0139)	-0.281*** (0.0130)	-1.307*** (0.0489)
$War_{j,t}$	0.616*** (0.0315)	0.567*** (0.0426)	0.563*** (0.0414)

<i>Year<sub>t</sub></i>	0.200*** (0.0202)	0.162*** (0.0180)	
<b>Constant</b>	-336.0*** (34.69)	-268.9*** (30.96)	12.82*** (0.0877)
<b>Observations</b>	124,300	124,300	124,300
<b>R-squared</b>	0.174	0.349	0.409
<b>Port FE</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>
<b>Partner FE</b>		<b>YES</b>	<b>YES</b>
<b>Year FE</b>			<b>YES</b>

*Standard errors in parentheses*  
\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Here we run three models where we add fixed effects each time to increase the quality of our estimation. In every case the *Dutch Disease* variable is statistically significant and negative, which supports our hypothesis that sugar might have created some kind of a *Dutch Disease* in France.

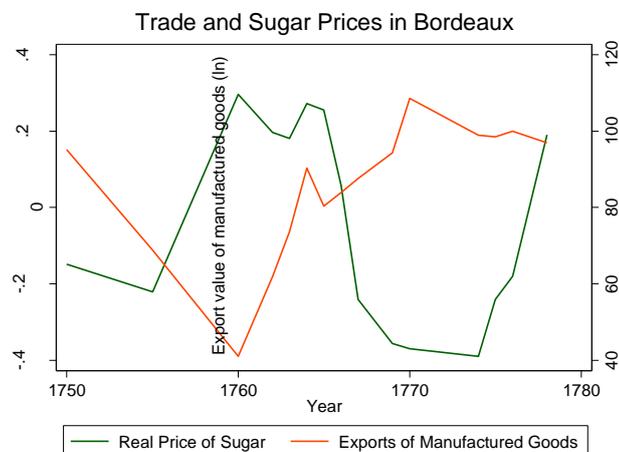
All the control variables are statistically significant although the results for the two variables related to war are difficult to explain. When France is at war the volume of exported manufactured goods decreases but the trade with the specific country against whom France is at war decreases less, or in certain regressions increases. This result is hard to explain but might be due to data issues. England throughout the eighteenth century is always part of the opposing coalition whenever France is at war (see in annex the wars taken into accounts), however England also remains one of its greatest commercial partner. This particularity might bias the results.

The variable controlling for GDP is statistically significant this time, but its impact on the volume of manufactured goods exported is rather small. Again the results for the two first models are intriguing as GDP growth is associated with a decline in the volume of exported manufactured commodities. This can be explained by the high correlation between years and GDP growth. Indeed throughout the eighteenth century, the French economy is growing slowly and without any period of major boom or decline of the economy. Thus the effect of GDP growth could be partly captured by the variable *Year<sub>t</sub>*. This intuition is

supported by the third model where the variable  $Year_t$  is taken out of the model and replaced by yearly fixed effects.

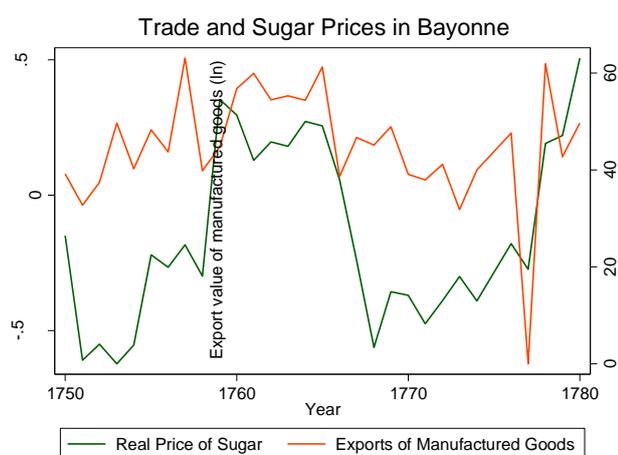
The results from the regressions are quite clear and supportive of our theory on the *Dutch Disease*. All the results are strongly statistically significant and with the expected sign. It shows that prices of sugar and manufactured goods exports are moving in opposite direction for ports that are net exporters of sugar. When prices are going up, French traders tend to invest more in the costly trade of sugar at the expense of local industries. One could argue that the link between prices and manufactured goods could be explained by wars or problem of transits. Indeed during the Seven Years War, the British navy was blocking trade routes from the Caribbean to France, it is thus tempting to associate periods where sugar price is high with wars, and simultaneously periods where exports of manufactured goods are low with wars (see for instance figure 6).

**Figure 6:**



However our model does control for war but also for the trend in countries that do not export sugar, or at least, that export less sugar. Thus when looking at Bayonne for example, where the port did not specialized in sugar exports, we observe different patterns than in Bordeaux. Although the trend for sugar prices is very similar, the volumes of manufactured exported goods follows a very different trend as it is almost stable, even when at war with England (see figure 7).

**Figure 7:**



Differentiating the effects of a price increase between sugar net exporter ports and other ports enables us to capture only the effect of sugar prices on the volumes of manufactured goods exported and put aside other factors that could influence the exports volumes.

Therefore we efficiently identify part of the mechanism operating here. When ports were specialized in the sugar trade, then an increase in the price of sugar was followed by a decrease in the volumes of manufactured goods exported relatively to the potential level. There could be multiple reasons for this decrease, an investments dry-up, an increase in labour cost due to the appreciation of the French money, or other similar situations. It is impossible with our data to differentiate whether France experienced “*direct deindustrialization*” or “*indirect deindustrialization*” as defined by Corden and Neary (1982), but we can assert that France experienced an economic phenomenon close to a *Dutch Disease*. Overall it does not mean that France did not profit at all from the trade with its colonies, as we are not studying the

GDP growth of France during this period. Nonetheless France experienced a deindustrialization because of the access to natural resources from its colonies such as sugar. It is possible that coffee or chocolate had similar effects on the French economy but due to the small size of these trades, it might be difficult to identify and isolate the impact of these trades on the French economy.

### 3. Robustness Checks

To test our results we run two other regressions based on Model (3). In Model (5) we do not identify which ports are net exporters, thus we apply the Dutch Disease effect to all ports even those who are not taken part to the sugar trade. We found an overall significant but much lower effect on manufactured goods. This finding supports our results. Most of the effect disappear when include without differentiation all ports in the analysis.

**Table 4:**

VARIABLES	Model (3)	Model (4)	Model (5)
<i>DD</i>	-3.035*** (0.0349)	2.274*** (0.0938)	-0.873*** (0.0503)
<i>Y<sub>t</sub></i>	0.000138*** (2.59e-05)	-0.00112*** (4.03e-05)	-9.26e-05*** (2.50e-05)
<i>France_War<sub>t</sub></i>	-1.307*** (0.0489)	-1.789*** (0.0699)	-0.940*** (0.0520)
<i>War<sub>j,t</sub></i>	0.563*** (0.0414)	0.169*** (0.0401)	0.359*** (0.0426)
<i>Year<sub>t</sub></i>			
<b>Constant</b>	12.82*** (0.0877)	16.23*** (0.159)	12.48*** (0.0861)

<b>Observations</b>	124,300	61,099	124,300
<b>R-squared</b>	0.409	0.604	0.373
<b>Port FE</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>
<b>Partner FE</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>
<b>Year FE</b>	<b>YES</b>	<b>YES</b>	<b>YES</b>

*Standard errors in parentheses*  
\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

The results of the Model (4) are puzzling and less straightforward. In this one we left out of the analysis the net exporter ports. Surprisingly results show that when prices of sugar went up, manufactured trade went up as well, although the size of the coefficient is much smaller than in Model (3). This effect could be an indirect consequence of the *Dutch Disease*. Indeed because manufactured goods production collapsed in port, it might be that regions not trading any sugar substituted sugar exporter ports in the manufactured goods production. However the impact was still globally negative for France as we can see from Model (5) and from the size of coefficients. The specificity of our model, studying ports and not country, makes it more complex to grab the full picture. However all the robustness checks support our initial theory and enable us to propose an even more global picture where non-sugar exporters eventually substituted sugar exporters in the manufacturing of commodities, and somewhat benefited from the curse of their competitors.

## **6. Conclusions**

To conclude, we showed in this essay how important sugar trade was for the French realm. It was by far the most exported commodity from the French colonies and represented a profitable business for French businessmen. At first supported by the mercantilists, successive kings granted specific monopoly rights to French traders so they would not face the competition of local producer. Eventually the sugar business became essentially a giant monopoly with France at the centre of the system. France became a major hub for sugar trade, as most of it was re-exported to other European countries. England was also an important colonial power and did import sugar as well, however importations were mostly

absorbed by the domestic market. On the opposite side, the French domestic market was narrow and most of the sugar was re-exported towards the rest of Europe. France soon became one of the biggest exporters of sugar throughout Europe. Below is a table that sums up the trade balance for sugar between France and other economic partners in 1776 only (see Table 1).

In this paper we investigated the impact of the trade of sugar on the French economy during the eighteenth century. We demonstrated that when the share of sugar exports increased relatively to the total external trade of each port, the nominal value of exports of wine and canvases tended to decline. This is in line with the argument made by Sachs and Warner (1995) that high shares of natural resources exports tend to decrease growth rates. Although in our case, we are looking at nominal values of exports and not growth rates. The effect is robust despite issues inherent to historic data that are often unreliable and imprecise.

We did not stop at a simple correlation; we borrowed a model from Stijns (2003) to go further into detail. Our results are interesting and innovative. We found the existence of a price-effect. Indeed, when prices of sugar go up, manufactured goods exports goes down. Our model clearly identified this effect as we include ports that are not net exporters of sugar, and an increase in sugar prices does not impact their exports of manufactured commodities in the same way. We did not precisely establish a link between sugar exports and growth rates, but we believe manufactured commodities exported can be seen as a proxy for French growth rates overall (Kaldor (1966); Kaldor (1975)). Therefore we can assert that the “discovery” of sugar and the immense wealth it represented at the time, ironically harmed the French economy.

Overall, the presence of a form of *Dutch Disease* for sugar exporting ports is well supported by our paper. Ports involved in the sugar trade saw their industries melt proportionally to the level of sugar price. Our results also motivate further researches on how non-exporter ports reacted to this phenomenon. It seems that some ports might have

benefited from the “curse” of sugar exporting ports. Therefore the total impact on France is less obvious. We found that the impact was negative overall, but because of a substitution effect, the size of variation is not as high as we could have expected. Non-sugar exporting ports substituted their cursed rivals – and benefited in some ways from sugar price increases – reducing the overall negative impact of sugar on the manufacturing industry.

We believe this study is interesting as it shed lights on a less studied area of colonization history. The way France exploited its colonies might have been a key factor in the decline of the economy relatively to the British. Especially the monopoly given to merchants to exploit sugar, coffee or chocolate from the colonies have essentially harmed the French economy while a more liberal system in the United Kingdom might have preserved the manufacturing sector and provide the British with a commercial advantage over countries that did not possess any colonies. The way institutions were built can be decisive in the way the British handled their colonies. The economical colonial successes of the United Kingdom relatively to France could support previous works on institutions, especially the work of Acemoglu, Johnson, and Robinson (2000, 2005) that links economic institutions and development differences, or the paper of Drelichman and Voth (2008) on the link between institutions and the silver inflows in Spain which eventually led the country to decline. However to be able to draw more decisive conclusions, we first need to keep researching the impact of colonial goods on domestic economies. A similar study on other major exporters of colonial goods could offer us more certainty.

## Appendix

### Variable “Country” & “Port”

Country Group	Port
Africa	Bayonne
Germany & Poland	Bordeaux
England	Caen
Flanders and other states of the Emperor	La Rochelle
Low Countries	Marseille
Indies	Montpellier
Italia	Nantes
Levant & Barbary	Rennes
North	Rouen
Portugal	
Spain	
Switzerland	
United States of America	
Colonies	

### Variable “War” and “France\_War”:

Below are listed the conflicts that are taken into account by our variable. The variable is coded 1 if for a given year and trading partner, we can identify a conflict between France and this specific partner. It is coded 0 in any other case. We must note that it does not take the severity of a particular conflict. We also created a second variable that is coded 1 when France is at war, whoever the enemy is.

Start	Finish	Name of Conflict
1688	1697	War of the League of Augsburg
1701	1714	War Of Spanish Succession
1740	1747	War of Austrian Succession
1750	1753	Anglo-Micmac War
1756	1763	Seven Year's War
1767	1768	First Anglo-Mysore War
1775	1783	Fourth Anglo-Dutch War
1775	1783	United States War of Independence
1775	1783	Antilles War
1775	1783	Second Anglo-Mysore War
1791	1804	Haitian Revolution
1792	1797	War of the First Coalition
1798	1802	War of the Second Coalition
1801	1801	War of the Oranges
1801	1801	English Wars (Scandinavia)
1803	1805	War of the Third Coalition (Austerlitz)
1806	1807	War of the Fourth Coalition
1807	1814	English Wars (Scandinavia)
1808	1814	Spanish War of Independence
1808	1814	War of the Fifth and Sixth Coalition
1815	1815	War of the Seventh Coalition (Waterloo)

## Variable “Pop”

Year	French Population (million)	Year	French Population (million)
1740	23,148	1765	24,664
1741	23,138	1766	24,752
1742	23,128	1767	24,840
1743	23,119	1768	24,929
1744	23,109	1769	25,019
1745	23,100	1770	25,030
1746	23,091	1771	25,123
1747	23,081	1772	25,216
1748	23,072	1773	25,309
1749	23,062	1774	25,402
1750	23,053	1775	25,496
1751	23,260	1776	25,591
1752	23,371	1777	25,289
1753	23,483	1778	25,382
1754	23,595	1779	25,476
1755	23,709	1780	25,570
1756	23,822	1781	25,672
1757	23,936	1782	25,773
1758	24,051	1783	25,875
1759	24,166	1784	25,978
1760	24,182	1785	26,081
1761	24,321	1786	26,184
1762	24,405	1787	26,288
1763	24,491	1788	26,392
1764	24,577		

## **Simplified list of wine (French spelling)**

Vin / Vin Anti-Scorbutique / Vin Blanc / Vin Commun d'Espagne / Vin D'absinthe /  
Vin d'Aiguillon / Vin d'Alicante / Vin d'Ambrion / Vin D'amont / Vin d'Andelys / Vin  
d'Anjou / Vin d'Aubagne / Vin d'Auxerre / Vin d'Espagne / Vin d'Oléron / Vin d'Oléron  
Rouge / Vin D'orange / Vin d'Orléans / Vin De Barcelone / Vin De Bayonne / Vin De  
Bergerac / Vin De Blaye / Vin De Bordeaux / Vin De Bourbonne / Vin De Bourg / Vin  
De Bourgogne / Vin De Cahors / Vin De Cap / Vin De Cap Breton / Vin De Castillon /  
Vin De Champagne / Vin De Charente / Vin De Chypre / Vin De Cognac / Vin De  
Constance / Vin De Côte / Vin De Côte-Rotie / Vin De Croisic / Vin De Deviet / Vin De  
Domé / Vin De Domme / Vin De Doures / Vin De Faial / Vin De Florence / Vin De  
France / Vin De Frontignan / Vin De Gaillac / Vin De Garonne / Vin De Gênes / Vin De  
Gensac / Vin De Guacy / Vin De Haule / Vin De Hongrie / Vin De Hors / Vin De L'île  
De Ré / Vin De La Charente / Vin De La Rochelle / Vin De Languedoc / Vin De Liqueurs  
/ Vin De Madère / Vin De Malaga / Vin De Malaga De Rancio / Vin De Malvoisie / Vin  
De Marennes / Vin De Marseille / Vin De Médoc / Vin De Montreuil / Vin De Moselle /  
Vin De Muscat / Vin De Nantes / Vin De Naples / Vin De Navarre / Vin De Pacaret /  
Vin De Palme / Vin De Paquarat / Vin De Pays / Vin De Portugal / Vin De Prague / Vin  
De Provence / Vin De Quercy / Vin De Rancio / Vin De Ré / Vin De Rezac / Vin De  
Rhin / Vin De Rivesaltes / Vin De Rivière / Vin De Rochefort / Vin De Rolas / Vin De  
Rome / Vin De Rota / Vin De Rots / Vin De Saint-Jean / Vin De Saint-Jean d'Angély /  
Vin De Saintonge / Vin De Ste. Foy / Vin De Syracuse / Vin De Tezac / Vin De Tinto /  
Vin De Tonnerre / Vin De Ville / Vin De Xérès / Vin Des Canaries / Vin Des Grandes  
Borderies / Vin Des Îles / Vin Doux / Vin Etranger / Vin Hors / Vin Muscat / Vin Muscat  
Ordinaire / Vin Nantes / Vin Ordinaire / Vin Rancio / Vin Rouge / Vin Rouge d'Espagne  
/ Vin Saint-Ange / Vin Tinto / Vin Verdé De Florence

## **Bibliography**

- Acemoglu, Daron, Simon Johnson, and James A Robinson. 2000. 'The Colonial Origins of Comparative Development: An Empirical Investigation'. National bureau of economic research.
- . 2005. 'Institutions as a Fundamental Cause of Long-Run Growth'. *Handbook of Economic Growth* 1: 385–472.
- Barker, T. 1981. 'Chapter 12: Policy Issues in Energy-Rich Economies'. IN BARKER T. AND V. BRAILOVSKY, *Oil or Industry*.
- Bertocchi, Graziella, and Fabio Canova. 2002. 'Did Colonization Matter for Growth?: An Empirical Exploration into the Historical Causes of Africa's Underdevelopment'. *European Economic Review* 46 (10): 1851–71.
- Brasseul, Jacques. 1997. 'Histoire Des Faits économiques'.
- Bruslons, J.S., and P.L. Savary. 1748. *Dictionnaire Universel de Commerce*. Dictionnaire Universel de Commerce.
- Célimene, Fred, and André Legris. 2002. *L'économie de L'esclavage Colonial: Enquête et Bilan Du XVIIe Au XIXe Siècle*. CNRS.
- Charbit, Yves. 2006. 'Les Colonies Françaises Au Xviie Siècle: Mercantilisme et Enjeux Impérialistes Européens'. *Revue Européenne Des Migrations Internationales* 22 (1): 183–99.
- Charles, Loïc, and Guillaume Daudin. 2011. 'La Collecte Du Chiffre Au XVIIIe Siècle: Le Bureau de La Balance Du Commerce et La Production Des Données Sur Le Commerce Extérieur de La France'. *Revue D'histoire Moderne et Contemporaine* 58 (1): 128–55.
- . 2015. 'Eighteenth-Century International Trade Statistics'. *Revue de l'OFCE*, no. 4: 7–36.
- Clément, Alain. 2006. 'English and French Mercantilist Thought and the Matter of Colonies during the 17th Century'. *Scandinavian Economic History Review* 54 (3): 291–323.
- . 2009. "'Du Bon et Du Mauvais Usage Des Colonies": Politique Coloniale et Pensée économique Française Au XVIIIe Siècle'. *Cahiers D'économie politique/Papers in Political Economy*, no. 1: 101–27.
- . 2013. 'L'analyse économique de La Question Coloniale En France (1870-1914)'. *Revue D'économie Politique* 123 (1): 51–82.
- Corden, Warner Max. 1984. 'Booming Sector and Dutch Disease Economics: Survey and Consolidation'. *Oxford Economic Papers* 36 (3): 359–80.
- Corden, W Max, and J Peter Neary. 1982. 'Booming Sector and de-Industrialisation in a Small Open Economy'. *The Economic Journal* 92 (368): 825–48.
- Crowder, Michael. 1968. 'West Africa under Colonial Rule'. *Hutchinson, London*.
- Cuddington, John. 1989. 'Commodity Export Booms in Developing Countries'. *The World Bank Research Observer* 4 (2): 143–65.
- Delafosse, M. 1949. 'La Rochelle et Les Iles Au XVIIe Siècle'. *Revue D'histoire Des Colonies*, 238–81.
- De Sousa, José, and Julie Lochard. 2009. 'Histoire Coloniale et Commerce International'. *Revue économique* 60 (3): 635–45.
- Drelichman, Mauricio. 2005. 'The Curse of Moctezuma: American Silver and the Dutch Disease'. *Explorations in Economic History* 42 (3): 349–80.
- Drelichman, Mauricio, and Hans-Joachim Voth. 2008. 'Institutions and the Resource Curse in Early Modern Spain'. *Institutions and Economic Performance*, 120–47.
- Dupâquier, Jacques. 1995. *Histoire de La Population Française, vol.2. De La Renaissance à 1789*. 1re édition 'Quadrige'. Vol. 2. 4 vols. Histoire de La Population Française 2. Presses Universitaires de France: Quadrige.

- Dupont De Nemours, Pierre-Samuel. 1769. *Du Commerce et de La Compagnie Des Indes*. et se trouve à Paris: chez Delalain: Lacombe.
- Engerman, Stanley L, and Kenneth L Sokoloff. 2005. 'Colonialism, Inequality, and Long-Run Paths of Development'. National Bureau of Economic Research.
- FIGUEROA, JOHN J, and Paula Burnett. 1986. 'The Penguin Book of Caribbean Verse in English'.
- Forsyth, Peter J. 1986. *Booming Sectors and Structural Change in Australia and Britain: A Comparison*. Australian National University, Centre for Economic Policy Research.
- Gauthier, Florence, and Yves Benot. 1988. 'La Révolution Française et La Fin Des Colonies'. In , 491–93. JSTOR.
- Gelb, Alan H. 1988. *Oil Windfalls: Blessing or Curse?* Oxford University Press.
- Grier, Robin M. 1999. 'Colonial Legacies and Economic Growth'. *Public Choice* 98 (3-4): 317–35.
- Harwich, Nikita. 1992. 'Histoire Du Chocolat'. Paris, Éditions Desjonquères.
- Huetz de Lemp, Alain. 1996. 'Boissons Coloniales et Eessor Du Sucre'. *Histoire de Lalimentation*, 629–41.
- James, Cyril Lionel Robert. 2001. *The Black Jacobins: Toussaint L'Ouverture and the San Domingo Revolution*. Penguin UK.
- Javaid, Shahid Hussain. 2011. 'Dutch Disease Investigated: Empirical Evidence from Selected South-East Asian Economies'. *Journal of Economic Cooperation & Development* 32 (4): 51.
- Kaldor, Nicholas. 1966. *Causes of the Slow Rate of Economic Growth of the United Kingdom: An Inaugural Lecture*. Cambridge University Press.
- . 1975. 'Economic Growth and the Verdoorn Law--A Comment on Mr Rowthorn's Article'. *The Economic Journal* 85 (340): 891–96.
- Kremers, J. 1985. 'Booming Sectors and Structural Change in Australia and Britain: A Comparison'. *Natural Resources and the Macroeconomy*.
- Labat, Jean-Baptiste. 2014. *Voyage Aux Isles: Chronique Aventureuse Des Caraïbes, 1693-1705*. Libretto.
- La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer. 2008. 'The Economic Consequences of Legal Origins'. *Journal of Economic Literature* 46 (2): 285–332.
- Léon, Pierre. 1977. *Histoire économique et Sociale Du Monde - Inerties et Révolutions, 1730-1840*. Vol. 3. A. Colin.
- Mauro, Frederic. 2002. 'Histoire Du Café'. Paris, Éditions Desjonquères.
- McMahon, Gary. 1997. 'The Natural Resource Curse: Myth or Reality'. Mimeo.//World bank Institute, World Bank, Washington, DC.
- Meyer, J. 1969. *L'armement Nantais Dans La Deuxième Moitié Du XVIIIe Siècle*. Vol. 28. Touzot.
- Moya Pons, Frank. 1995. *Manual de Historia Dominicana*. Santo Domingo, DO: Caribbean Publishers.
- Nunn, Nathan. 2007. 'The Long-Term Effects of Africa's Slave Trades'. National Bureau of Economic Research.
- . 2009. 'The Importance of History for Economic Development'. National Bureau of Economic Research.
- Rauch, James E. 1999. 'Networks versus Markets in International Trade'. *Journal of International Economics* 48 (1): 7–35.
- Raynal, Abbé. 1770. 'Philosophical and Political History of the Settlements and Trade of the Europeans in the East and West Indies, Trans'. *JO Justamond* 8: 307–10.
- Rose, Andrew K. 2000. 'One Money, One Market: The Effect of Common Currencies on Trade'. *Economic Policy* 15 (30): 08–45.
- Ross, Anthony Clunies. 1986. 'The United Kingdom's Experience with North Sea Oil and Gas'. *IDS Bulletin* 17 (4): 1–6.

- Ruehle, Alex A, and Kishore G Kulkarni. 2011. 'Dutch Disease and the Chilean Copper Boom—an Empirical Analysis'. *International Journal of Education Economics and Development* 2 (1): 61–80.
- Sachs, Jeffrey D, and Andrew M Warner. 1995. 'Natural Resource Abundance and Economic Growth'. National Bureau of Economic Research.
- Schelle, Gustav. 1923. *Oeuvres de Turgot et Documents Le Concernant: Avec Biographie et Notes*. Vol. 3. F. Alcan.
- Scheltjens, Werner. 2009. 'The Volume of Baltic Shipping at the End of the Eighteenth Century: A New Estimation Based on the Danish Sound Toll Registers'. *Scripta Mercaturae* XLIII (vol. 1): 73–99.
- . 2015. 'French Imports to the Baltic, 1670-1850'. *Revue OFCE*, no. 140: 137.
- Schwartz, Stuart B. 2004. *Tropical Babylons: Sugar and the Making of the Atlantic World, 1450-1680*. Univ of North Carolina Press.
- Stijns, Jean-Philippe. 2003. 'An Empirical Test of the Dutch Disease Hypothesis Using a Gravity Model of Trade'. Available at SSRN 403041.
- Tarrade, Jean. 1972. *Le Commerce Colonial de La France à La Fin de l'Ancien Régime: L'évolution Du Régime de l'Exclusif de 1763 à 1789*. Vol. 12. [sl: sn], 1972 (Poitiers [France]: Imp. P. Oudin).
- Thion, Bernard, Philippe Favarger, and Martin Hoesli. 2001. 'Indices Des Ventes Répétées et Modification de L'environnement Immobilier'. *Revue d'Économie Régionale & Urbaine*, no. 5: 809–30.
- Turgot, Ann Robert Jacques. 1791. 'Mémoire Sur Les Colonies Américaines et Sur Leurs Relations Politiques Avec Leurs Métropoles et Sur La Manière Dont La France et l'Europe Ont Dû Envisager La Suite de L'indépendance Des Etats-Unis d'Amérique'.
- Van Wijnbergen, Sweder. 1984. 'The Dutch Disease': A Disease after All?' *The Economic Journal* 94 (373): 41–55.
- Volkman, J.C. 2003. *La Rochelle*. Editions Jean-paul Gisserot.