

Projet ANR- 13-BSH1-0005-03

TOFLIT18

Programme Blanc 2013

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A IDENTIFICATION

Acronyme du projet	TOFLIT18
Titre du projet	Les transformations de l'économie française par le prisme du commerce international, 1716-1821
Coordinateur du projet (société/organisme)	Université Paris-Dauphine
Date de début du projet Date de fin du projet	1 ^{er} janvier 2014-31 décembre 2017
Labels et correspondants des pôles de compétitivité (pôle, nom et courriel du corresp.)	Sans Objet
Site web du projet, le cas échéant	http://toflit18.hypotheses.org/

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Liste des partenaires présents à la fin du projet (société/organisme et responsable scientifique)	Institut National des Études Démographiques SciencesPo Université Paris-Dauphine

B RESUME CONSOLIDE PUBLIC

B.1 RESUME CONSOLIDE PUBLIC EN FRANÇAIS

LE COMMERCE INTERNATIONAL, TEMOIN DE L'ÉCONOMIE DE LA FRANCE AU XVIII^E SIECLE

Les données de la Balance du Commerce au secours de notre connaissance de l'économie Française au XVIII^e siècle

Le projet TOFLIT18 a utilisé les très riches données collectées par le Bureau de la Balance du Commerce et ses successeurs sur le commerce français entre 1716 et 1821. Ces données portent à la fois sur le commerce international de la France entière et de ses régions. Elles nous permettent d'améliorer nos connaissances de l'économie française à la veille de la Révolution industrielle, et donc des processus de développement économique en général. Il a été nécessaire de les collecter et de les travailler pour s'assurer de leur qualité et les rendre utilisables par les chercheurs. Il fallait aussi créer des outils de consultation qui s'adaptent aux questions spécifiques de chaque chercheur. Les méthodes et les outils initiés dans le cadre de TOFLIT18 permettent d'envisager la réalisation d'un programme de recherche d'autant plus original que le commerce intra-européen de cette époque est assez mal connu. Par ailleurs,

nous avons documenté de manière exhaustive l'histoire du projet TOFLIT18 sur un blog de recherche consultable à l'adresse suivante : <https://toflit18.hypotheses.org>.

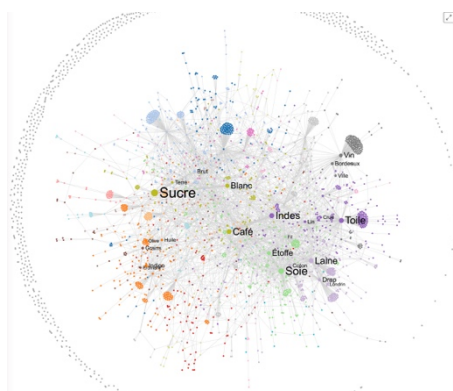
Les outils du big data en histoire économique moderne

Grace à la collaboration étroite entre historiens, économistes et spécialistes des données, nous avons constitué une base de données à partir des archives ayant survécu. Cela nous a demandé un travail important de retranscription, de vérification et de normalisation des sources portant sur plus de 500,000 flux commerciaux différents (par pays partenaire, marchandise, et région françaises). Nous avons notamment classifié et normalisé plus de 50,000 dénominations hétérogènes de marchandises. Afin de contrôler de manière rigoureuse les étapes de ce processus de normalisation des données nécessaire à leur utilisation par les historiens et économistes, nous avons créé un outil d'exploration des données et des flux de commerce français. Ce « datascape » s'appuie sur l'expertise du Médialab de SciencesPo et importe des outils de représentation des données utilisées actuellement pour les questions de « big data ». Ces développements ont abouti à la création et à la mise à disposition publique d'un site de consultation en ligne (<http://toflit18.medialab.sciences-po.fr/#/home>) où il est possible de créer des visualisations (notamment des flux commerciaux : voir Figure 1).

En s'appuyant sur ces deux outils, nous avons entamé une série de travaux de recherches sur les spécialisations de l'économie française à plusieurs niveaux, mais aussi le lien entre politiques et commerce international durant un siècle riche en débats économiques et en bouleversements géostratégiques. Les thèmes abordés vont de la réflexion méthodologique sur les sources quantitatives internationales du commerce international au XVIII^e siècle jusqu'au dévoilement d'aspects peu connus des relations économiques internationales. Ce travail a aussi été l'occasion d'approfondir nos collaborations internationale et d'entamer un projet de mise en réseau de plusieurs infrastructures de recherche comparables à un niveau européen.

Nous avons publié un numéro spécial de revue en anglais qui expose un certain nombre d'acquis et d'outils méthodologiques utilisables pour collecter et utiliser les données du commerce international à l'époque pré-statistique (en libre accès : <https://www.ofce.sciences-po.fr/publications/srevue.php?num=140>). Nous avons trois publications à paraître (deux ouvrages collectif internationaux et une revue d'histoire) et cinq documents de travail en cours d'écriture sur le commerce de médicaments, le commerce franco-belge au XVIII^e siècle, les effets de la perte du Canada, les effets des guerres mercantilistes ainsi que sur le fonctionnement du commerce de grains.

Figure 1 : Les réseaux lexicographiques des exportations françaises, 1749-1782



Note : la taille des nœuds et des liens correspond à la taille du commerce. Leur couleur correspond aux groupes de biens dont les dénominations utilisent des termes communs.

Le projet TOFLIT18 (Les transformations de l'économie française par le prisme du commerce international, 1716-1821) est un projet de recherche fondamental coordonné par Guillaume Daudin (Université Paris-Dauphine, LEDA-DIAL) et Loïc Charles (Université Paris-8 et INED). Il associe aussi Béatrice Dedinger et Paul Girard (SciencesPo). Le projet a commencé en janvier 2014 et a duré 48 mois. Il a bénéficié d'une aide ANR de 250 000 € pour un coût global de l'ordre de 1 000 000 €.

B.2 RESUME CONSOLIDE PUBLIC EN ANGLAIS

INTERNATIONAL TRADE AS A WITNESS TO FRANCE'S ECONOMY IN THE 18TH CENTURY

Bureau du Commerce data to the rescue of our knowledge of the French economy in the 18th century

The TOFLIT18 project used the very rich data collected by the Bureau de la Balance du Commerce and its successors on French trade between 1716 and 1821. These data cover both the international trade of France as a whole and of its regions. They allow us to improve our knowledge of the French economy on the eve of the Industrial Revolution, and thus of economic development processes in general. We collected them and transformed them to ensure their quality and to make them usable by researchers. It was necessary to create consultation tools that adapted to the specific questions of each researcher. The methods and tools initiated within the framework of TOFLIT18 make it possible to envisage the realization of a research program all the more original as the intra-European trade of this time is rather badly known. In addition, we have exhaustively documented the history of the TOFLIT18 project on a research blog available at the following address: <https://toflit18.hypotheses.org>.

Big data tools in early modern economic history

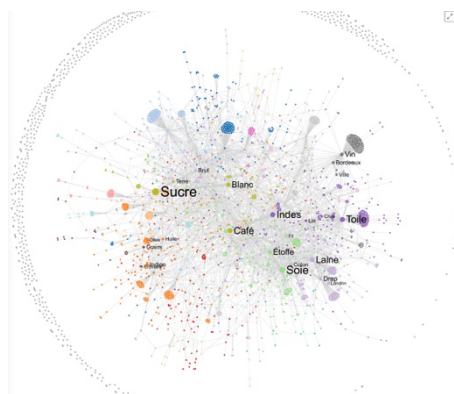
Thanks to the close collaboration between historians, economists and data specialists, we have built a database from surviving archives. This required us to transcribe, verify and standardize sources on more than 500,000 different trade flows (by partner country, merchandise, and French region). In particular, we have classified and standardized over 50,000 heterogeneous commodity names. In order to rigorously control the steps of this data standardization process necessary to their use by historians and economists, we have created a tool for data exploration and French trade flows. This "datascape" is based on the expertise of SciencesPo's Médialab and imports data representation tools currently used for "big data" questions. These developments have led to the creation and public availability of an online consultation site (<http://toflit18.medialab.sciences-po.fr/#/home>) where it is possible to create visualisations (notably commercial flows: see Figure 1).

Thanks to these tools, we have begun a series of research works on the specializations of the French economy at several levels, but also the link between policies and international trade

during a century rich in economic debates and geostrategic upheavals. Topics range from methodological reflection on international quantitative sources of international trade in the 18th century to revealing little-known aspects of international economic relations. This work was also an opportunity to deepen our international collaborations and to start a project to network several comparable research infrastructures at a European level.

We have published a special issue of the journal in English which sets out a number of methodological achievements and tools that can be used to collect and use international trade data in the pre-statistical era (open access: <https://www.ofce.sciences-po.fr/publications/srevue.php?num=140>). We have three publications to be published (two international collective works and a history review) and five working papers currently being written on the trade in medicines, the Franco-Belgian trade in the 18th century, the effects of the loss of Canada, the effects of the mercantilist wars and the functioning of the grain trade.

Figure 2 : Lexical networks of French exports, 1749-1782



Note: The size of nodes and links corresponds to the size of the trade. Their color corresponds to groups of exports that use common terms in their denomination.

The TOFLIT18 project (Transformations of the French Economy through the Lens of International Trade, 1716-1821) is a fundamental research project coordinated by Guillaume Daudin (Université Paris-Dauphine, LEDA-DIAL) and Loïc Charles (Université Paris-8 and INED). He also associates Béatrice Dedinger and Paul Girard (SciencesPo). The project started in January 2014 and lasted 48 months. It received an ANR grant of €250,000 for a total cost of around €1,000,000.

C MEMOIRE SCIENTIFIQUE (NON CONFIDENTIEL)

C.1 RESUME DU MEMOIRE

The TOFLIT18 project used the very rich data collected by the Bureau de la Balance du Commerce and its successors on French trade between 1716 and 1821. These data cover both the international trade of France as a whole and of its regions. They allow us to improve our knowledge of the French economy on the eve of the Industrial Revolution, and thus of economic development processes in general. We collected them and transformed them to ensure their quality and to make them usable by researchers. It was necessary to create consultation tools that adapted to the specific questions of each researcher. The methods and tools initiated within the framework of TOFLIT18 make it possible to envisage the realization of a research program all the more original as the intra-European trade of this time is rather badly known. In addition, we have exhaustively documented the history of the TOFLIT18 project on a research blog available at the following address: <https://toflit18.hypotheses.org>.

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C.2 ENJEUX ET PROBLEMATIQUE, ETAT DE L'ART

The main objective of TOFLIT18 is to open a new alley of research on the French economy on the eve of the Industrial Revolution by subjecting French external trade data series to an in-

depth study. It aims at improving our understanding of the 18th century economic history. Using the quantitative data produced by the *Bureau de la Balance du Commerce* (L. Charles et Daudin 2011) is useful because these, though part of the data are macroeconomic by nature, a significant part of the local data are still available in the French regional Archives (e.g. Bayonne, Bordeaux, La Rochelle, Marseille, Nantes, Rouen...) and can be used to better understand the economic linkage between local economies, international trade and the national economy. Thus, analysing these data allow us to deepen our knowledge of economic phenomena on economic development and transformation and the determinants of international trade.

That requires collecting the existing data and making it useable for research. The data need to be worked with to ensure that they contain enough reliable information to be used safely as a guide to the past. Among the issues to be ironed out are their reliability, the difficulties of fitting the realities of merchant activities into administrative categories, the creation of reliable and stable list of goods and geographical entities ready for research and the treatment of prices.

Our research program addresses a crucial period, one that laid the economic ground for the entry of France and Europe in the modern era through the Industrial Revolution. International trade is a very important piece of the 18th century economic history puzzle. Whereas extra-European trade is comparatively well known and has been the object of recent synthesis, intra-European trade has been somewhat neglected. Only a few studies, all partials and based on heterogeneous methods, exist on this subject. More generally, their results are often too general and fragile to support precise economic analysis and comparisons.

The scarcity of works on foreign trade statistics of the early-modern period is all the more unfortunate as external trade flows have been the single economic data that early modern states have collected with the most care. Indeed, the first attempts at measuring foreign trade can be dated from the early seventeenth century. Annual series have been located for Sweden from 1732, Austrian Netherlands from 1759, Milan in 1762, 1769, 1778 and 1791, Venice from 1769/1770 onward, Portugal in 1776-77, 1783, 1789, and from 1796 onward, Spain from 1778 onward, etc. Research on trade of the British Isles is more advanced than for other countries. A recent book has renewed the research on Scottish trade in the 18th century (P. R. Rössner 2008). A team coordinated by David Jacks, Kevin O'Rourke, Alan Taylor is currently gathering data on English and British trade from 1696 to the early 20th century.

In the French case, the breadth of the data collected by the French state as well as their complexity made them more difficult to handle. The dispersion of a large part of the sources during the French Revolution increased the difficulty of their exploitation for economic historians. For this reason, most studies on "national" French external trade in the 18th century have used a limited range of archival sources. Country-level studies never used the whole range of centrally-gathered French data. A wealth of works of international trade and shipping in France at the local level, especially ports, include reflections on the economic effect of external trade, but they do not provide an in-depth discussion at the country level. Recent research have shown more interest for this issue and some bilateral trade between France and other countries/European regions have been closely examined. These works do not however develop a systematic quantitative treatment of total French trade and do not use econometric tools.

C.3 APPROCHE SCIENTIFIQUE ET TECHNIQUE

The first condition for the project success was the quality and the organization of the team. We operated on the basis of monthly internal meetings and annual conferences. Regular meetings allowed the discussion of critical issues, the development of common methodologies and the deepening of mutual understanding. Each year, our work was presented to the scientific community to trigger general discussions on methodological issues or interpretative research. The prerequisite for the core of TOFLIT18 was the constitution of a database of the French external trade registered by the *Bureau de la balance du commerce* from 1716 to 1821 (including local data from 1716 to 1781). Guillaume Daudin and Loïc Charles already had the experience of *Bureau de la Balance du Commerce* data collection and re-transcription. The group included members of other database projects. The conceptual issues were simple enough as the set of raw data is relatively coherent. The main obstacle was the amount of work required for transcription, accuracy checks and dealing with the data flows.

A serious difficulty is linked to the classification of merchandises. Researchers need a general table of correspondence between the denomination of goods in different time periods and different places. Furthermore, they need goods to be identified and categorized to process and analyze the data. We had to realize a common user interface to organize the data that could accommodate multiple potential approaches of researchers. It was to be flexible enough that it can be re-used in the future to answer other research questions concerned with the material world of the eighteenth century and early nineteenth century. Building on past experience of the FNSP/Sciences Po médiab, we selected the “datascape” methodology to answer these objectives. A “datascape” is a set of digital data methods and tools that fosters the use of exploratory data analysis (Tukey 1977) for social sciences research purposes (Latour and al. 2011). It aims at providing an exploratory data analysis method to model information from archives through navigation through archives. In our context, we used a bottom-up process for treating and classifying the data in categories. In short, we digitized the documents in a form (including spelling) as close as possible to the original and then, step by step, we normalized the data in order to suppress (for example) spelling or geographical diversity without losing information. This provides a solid base to create classifications that relates to specific research questions. For example, to study the international market for drug it was necessary to identify the commodity names that – in an eighteenth-century context – describe drugs and separate them from other kind of commodities. E.g. should mercury be treated as a medical drug? To do such thing, we had to develop expert knowledges through the use of eighteenth-century dictionaries and encyclopedias mostly.

The interpretative program was organized in two main directions. First of all, the project was to enhance our knowledge of the structure and evolution of French local and national specialization. Second, the project was to focus on the interplay between political events and international trade, looking at the effect of the evolution of mercantilist economic policies, the effect of the *Exclusif* that reserved trade with French colonies to French ships, and the effect of wars on French trade and French economy.

C.4 RESULTATS OBTENUS

The first result is the creation of a unique database of French 18th century international trade that currently gathers nearly 515,000 verified trade flows to which will be added tens of thousands of additional ones still to be verified. The documented csv files are kept in a private GitHub repository (https://github.com/medialab/toflit18_data) that will be made public.

The completion of the datascape is certainly the most impressive achievement of TOFLIT18 (<http://toflit18.medialab.sciences-po.fr/#/home>). This is actually a formidable tool to explore a large quantity of heterogeneous data. The product glossary explores the meaning of more than 2,000 different obscure goods. The goods classifications reduce more than 55,000 goods denomination in than 20,000 ones without any information loss, and makes available a 25 category classification inspired from SITC that is a sound starting point for researchers. The datascape offers three different views on French trade (Time series, Product terms network, Locations network), and two additional ones for the French data (Metadata and Classifications). All the code is available under an open access license on <https://github.com/medialab/toflit18>.

These two major achievements have necessitated a lot of time resources that we originally intended to devote to analytical work. However, a first work has already been published and other ones are about to be published. The collective issue on comparative international trade statistics (Loïc Charles et Daudin 2015) has been called “an essential reference work for anyone interested in early modern trade” (O’Rourke 2017). It is available in free access (<https://www.ofce.sciences-po.fr/publications/srevue.php?num=140>). A work on the economic consequences of the French wars is in its final stage and should be published in a collective volume directed by Patrick O’Brien (LSE). Still, a number of comparative works have been published or are at working paper stage. The comparison of the French data with comparable sources from the Sound, from Hamburg and from Belgium is well advanced and shows that they are sound basis for historical and economic work as long as some caution is exercised. In particular, the final version of the Sound paper is written and will be published soon in a collective volume in English. First version of papers presenting the datascape and the way the classification of goods evolved in French statistics have already been presented in seminars and conferences. We are preparing a French version of this methodological piece which is to be published in the *Revue de Synthèse* in early 2019. Eventually, works on drug trade, the effect of the loss of Canada, the effect of the Second Hundred Year War, and the functioning of grain trade have been started.

As a side note, we want to mention two achievements that we did not foresee when we put the project together. First, we have introduced to research nearly twenty interns from all levels of qualification (L3 to M2). Some of them have decided to continue research careers (including one in economic history). Second, we have fully documented the progress of the project on an Hypotheses blog (<https://toflit18.hypotheses.org>). We believe this additional work was worth it notably because we have put online the minutes of our monthly meetings. As a project manager, I know I would have been happy to access this kind of information beforehand to realize the type of difficulties I was to be confronted with.

C.5 EXPLOITATION DES RESULTATS

TOFLIT18 created a datascape that is a real research infrastructure. It is the stepping stone to the creation of an European-wide network of similar research infrastructures. The aim is to exploit synergies through an INFRAIA submission planned in 2019 or 2020.

C.6 DISCUSSION

We had initially asked for 350,000€. The grant was «only» 250,000€. We are grateful for the money we had. Still, it led us to a number of decisions that slowed process of acquiring,

digitalizing and curating the data. Because they were too expensive, we could not rely on professional transcribers as much as we could have done and had to delegate the bulk of the work to interns. It was difficult to find interns. It was difficult to manage them (the team leaders could not manage more than 4 interns at a time). They worked well enough, but their output was of heterogeneous quality and required thorough verification.

This last issue highlighted the high price of not being able (for budgetary reasons) to hire a permanent and well qualified data administrator (ingénieur d'étude) for a year and a half as we had first planned to do. He or she would have had to be versed enough in paleography to be able to check the transcriptions and tech-savvy (although this last part could have been part of the training we may have offered) enough to manage the data flows from original archives to datascapable-ready data through pictures, raw transcriptions and corrected transcriptions. The budget restriction of about 100,000€ was almost the exact full cost of such a qualified data administrator and made it impossible to hire such a person.

As a result, most of the curation work was done by one of the team leaders – a full time professor and researcher – helped occasionally by former interns who were hired for short periods (from 1 to 6 months). Inevitably, it was not done as quickly as we had hoped (and it is still not finished). This had two consequences. First, the interpretative program was much delayed as one needs to have the “full” range of data before starting the interpretative work. Second, the economists bailed out. One explanation is that the data were not in an easy-enough format to work without delving into historical-methodological issues for which they felt unqualified.

A silver lining in that cloud is that the intra-disciplinary work was done mainly between historians, economic historians and data scientists. Personally, I found that very enriching and I am retrospectively very happy to have worked with the Medialab in SciencesPo, but on the other hand the time passed to discuss methodological issues was unavailable for pure research which, again, delayed the interpretative program.

C.7 CONCLUSIONS

The main objective of TOFLIT18 was to open a new alley of research on the French economy on the eve of the Industrial Revolution by subjecting French external trade data series to an in-depth study. We are proud of the research tools we produced for the community thanks to the close collaboration between historians, economic historians and scientists. We look forward toward completing the interpretative program.

C.8 REFERENCES

Charles, L., et G. 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): 128–155.

Charles, Loïc, et Guillaume Daudin, éd. 2015. « Eighteenth Century International Trade Statistics: Sources and Methods ». *Revue de l'OFCE (Special Issue)*, n° 140: 7-377.

O'Rourke, Kevin. 2017. « Review of Eighteenth-Century International Trade Statistics: Sources and Methods ». *The International Journal of Maritime History* 29 (2): 439-40.

Rössner, Philipp Robinson. 2008. *Scottish Trade in the Wake of Union (1700-1760): The Rise of a Warehouse Economy*. Stuttgart: Franz Steiner Verlag.

D LISTE DES LIVRABLES

Date de livraison	N°	Titre	Nature (rapport, logiciel, prototype, données, ...)	Partenaires (souligner le responsable)	Commentaires
12/2014	1	Exploration of the archives and gathering of digital copies of all documents	Documents	INED	
Not finished	2	End of transcription	Data	INED	
6/2015	3	Specification of the private datascape	Software	ScPo	
11/2015	4	First release of the private datascape	Software	ScPo	
07/2016	5	Final version of the private datascape	Software	ScPo	
	6	Methodology conference	Meeting	ScPo	
	7	First papers	Publications	Dauphine	
	8	Integrated public datascape	Software	ScPo	
	9	Result conference	Meeting	ScPo	
	10	Long-term storage	Data	ScPo	

E IMPACT DU PROJET

E.1 INDICATEURS D'IMPACT

Nombre de publications et de communications (à détailler en E.2)

		Publications multipartenaires	Publications monopartenaires
International	Revue à comité de lecture		
	Ouvrages ou chapitres d'ouvrage	1	
	Communications (conférence)	7	1
France	Revue à comité de lecture	2	
	Ouvrages ou chapitres d'ouvrage		
	Communications (conférence)	7	2
Actions de diffusion	Articles vulgarisation	1	2
	Conférences vulgarisation		
	Autres		

Autres valorisations scientifiques (à détailler en E.3)

	Nombre, années et commentaires (valorisations avérées ou probables)
Brevets internationaux obtenus	
Brevet internationaux en cours d'obtention	
Brevets nationaux obtenus	
Brevet nationaux en cours d'obtention	
Licences d'exploitation (obtention / cession)	
Créations d'entreprises ou essaimage	
Nouveaux projets collaboratifs	3
Colloques scientifiques	4
Autres (préciser)	Publication du code source de la plateforme TOFLIT18 sous licence libre AGPL3 (http://github.com/medialab/toflit18) Publication prévue du corpus sous licence libre (ODBL) et documentée au format datapackage.

E.2 LISTE DES PUBLICATIONS ET COMMUNICATIONS

REVUES A COMITE DE LECTURE

Loïc Charles et Guillaume Daudin (dir.), *18th Century International Trade Statistics: Sources and Methods*, n° spécial de la *Revue de l'O.F.C.E.* (sous la direction de), 2015/4, n° 140, juillet 2015, 401 p.

Loïc Charles et Guillaume Daudin, « Les archives de la balance du commerce françaises au XVIII^e siècle manuscrit au *datascape* », *Revue de Synthèse*, à paraître 2019.

OUVRAGES OU CHAPITRES D'OUVRAGES

Loïc Charles et Guillaume Daudin, « Cross-checking the Sound database with the French *Balance du Commerce* data », in *The Baltic in European maritime history, 1600-1800*, sous la dir. de Jan Willem Veluwenkamp et Werner Scheltjens, à paraître 2018.

COMMUNICATIONS

Loïc Charles et Guillaume Daudin, « A la recherche du chiffre juste : méthodes et réformes au Bureau de la balance du commerce ». **Séminaire « Administrer par l'écrit »**. — Paris, Université Paris 1, 11 avril 2018.

Loïc Charles et Guillaume Daudin, « Les archives de la balance du commerce, des manuscrits au *datascape* ». **Journées d'études « Du Tesson aux archives du Web : Sources et traitement des sources en histoire économique »**. — Paris, EHESS, 8 février 2018.

Guillaume Daudin, Elisa Tirindelli « The Futility of Mercantilist Wars. A case study of France and Hamburg between 1713 and 1820 ». **EHESS conference (Tübingen)**, septembre 2017

Loïc Charles, Guillaume Daudin et Silvia Marzagalli, "The consequences of the French Wars on the French Economy". **Troisième conférence annuelle du Leverhulme Trust International Network, Ref: IN-2014-026 « Economic Outcomes Flowing from the Revolutionary Napoleonic Wars, 1793-1815 »** .— Londres, juin 2017

Loïc Charles et Guillaume Daudin, «La production des données sur le commerce extérieur de la France au xviii^e siècle» **Journée d'étude Chiffres privés, chiffres publics**, Institut de la gestion publique et du développement économique (Ministère de l'économie et des finances), Mai 2017

Paul Girard, Mathieu Jacomy, et Christophe Leclercq. « Explorer associations et transformations à travers des datascares ». présenté à **Science XXL : Ce que l'abondance et la diversité des données font aux sciences sociales**, Paris, France, 16 mars 2017. <http://spire.sciencespo.fr/hdl:/2441/2solvroutm9kgpsu49vb8pphju>.

Loïc Charles et Guillaume Daudin « La production des données sur le commerce extérieur de la France au xviii^e siècle» **Séminaire de l'Unité de Recherche «Histoire et populations»**, mars 2017

Loïc Charles et Guillaume Daudin, « Les données de la balance du commerce (1713-1823): Analyse critique et histoire économique quantitative ». **Séminaire « Chiffres publics, chiffres privés. Calculs, comptabilités et statistiques (XVII^e-XXI^e siècle) »** .— Université de Paris 1 La Sorbonne, 16 Décembre 2016.

Girard, Paul, et Guillaume Plique. « Des archives du commerce à des données quantifiables, une longue chaîne de transformation des données ». présenté à ANF MATE-SHS, Collecter et produire des données pour la recherche en SHS, Fréjus, 16 novembre 2016. <http://medialab.github.io/toflit18/ANFmateSHS>.

Loïc Charles et Guillaume Daudin, «The contribution of STRO to the database of French external trade statistics (1716-1821)», **Transport statistics in pre- and early industrial economic history: The challenges and opportunities of Sound Toll Registers Online**, Université de Leipzig, Octobre 2016

Loïc Charles et Guillaume Daudin, « Mapping the world of eighteenth-century commodities with a multidimensional database". **Workshop « From Quantitative to Qualitative Analysis:New Perspectives on Research in Social History »** .— Neubauer Collegium, University of Chicago, 14 Octobre 2016.

Girard, Paul, et Guillaume Plique. « Organizing the reversible chain of transformations From trade statistics records to datascares ». **Workshop « From Quantitative to Qualitative Analysis:New Perspectives on Research in Social History »** .— Neubauer Collegium, University of Chicago 14 octobre 2016. <http://medialab.github.io/toflit18/chicago/#/>.

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chiffres privés. Calculs, comptabilités et statistiques (XVII^e-XXI^e siècle) » .— Ministère de l'Économie et des Finances, 31 Mai 2016.

Loïc Charles, Guillaume Daudin et Silvia Marzagalli, “The consequences of the French Wars on the French Economy”. **Deuxième conférence annuelle du Leverhulme Trust International Network, Ref: IN-2014-026 « Economic Outcomes Flowing from the Revolutionary Napoleonic Wars, 1793-1815 »** .— Lisbonne, 6 mai 2016.

Loïc Charles, Ann Coenen et Guillaume Daudin, «Comparing Early Trade Statistics: The Case of Austrian Netherlands and France from 1759 to 1791» **Economic History Society Annual Meeting**, Université de Cambridge, Avril 2016

Guillaume Daudin, Béatrice Dedinger Séminaire «Comment on écrit l'histoire du commerce global : naissance et vie d'une statistique commerciale», **Séminaire «Du Local au Global»**, Centre d'Histoire de SciencesPo, Paris, Mai 2015

Loïc Charles, Guillaume Daudin et Silvia Marzagalli, “France: a range of questions”. **Première conférence annuelle du Leverhulme Trust International Network, Ref: IN-2014-026 « Economic Outcomes Flowing from the Revolutionary Napoleonic Wars, 1793-1815 »** Madrid, avril 2015

ACTIONS DE DIFFUSION

Alexandre Aubourg, Loïc Charles et Guillaume Daudin «La collecte du chiffre commercial au XVIII^e siècle», *Cahiers d'histoire des Douanes et des Droits Indirects*, n°59, 2nd semestre 2016

Guillaume Daudin, Corentin Ponton et Quentin Vidal «Historical Analysis of France's Foreign Trade : the TOFLIT18 project», *Dialogue*, n°43, Juillet 2016

Guillaume Daudin, Corentin Ponton et Quentin Vidal «Analyse historique du commerce extérieur français : le projet TOFLIT18», *Dialogue*, n°43, Juillet 2016 [link](#)

E.3 LISTE DES ELEMENTS DE VALORISATION

NOUVEAUX PROJETS COLLABORATIFS

2014 : Participation au Leverhulme Trust International Network, Ref: IN-2014-026 « Economic Outcomes Flowing from the Revolutionary Napoleonic Wars, 1793-1815 » (Principal investigator : Patrick O'Brien)

2018 : Participation au projet blanc ANR “Portic”. Sélectionné en 2^e étape AAP Générique 2018

PORTs & Information and Communication Sciences and Technology : Querying and visualizing eighteenth-century shipping and trade dynamics in the digital era
Partenaires : CMMC-Université Nice Sophia-Antipolis, LIENs -Université de la Rochelle, MEDIALAB & CHSP – Fondation Nationale de Sciences Politiques

2019 ou 2020 (suivant publication de l'appel) : Projet européen Infraia sur la mise en réseau de structures de recherches. Partenaires intéressés : Dauphine, Galway, INED, Münster, Minho, Leipzig, Paris-8, SciencesPo

ORGANISATION DE COLLOQUE ET WORKSHOP

L. Charles et G. Daudin, colloque international *International Trade and the Economy (1600-1870)*, Paris, Université Paris Dauphine, 19-20 Octobre 2017.

L. Charles, Paul Cheney (Université de Chicago) et Allan Potofsky (Université Paris 7 Diderot), workshop « From Quantitative to Qualitative Analysis: New Perspectives on Research in Social History », Neubauer Collegium, University of Chicago, 14 Octobre 2016.

L. Charles et G. Daudin, workshop “Classifying International Trade before 1945”, Sciences Po, Paris, 16 Septembre 2016.

L. Charles et G. Daudin, workshop “Early Trade Statistics”, 23 Mai 2014, OFCE.

AUTRES

Publication du code source de la plateforme TOFLIT18 sous licence libre AGPL3

(<http://github.com/medialab/toflit18>)

Publication prévue du corpus sous licence libre (ODBL) et documentée au format datapackage.

E.4 BILAN ET SUIVI DES PERSONNELS RECRUTES EN CDD (HORS STAGIAIRES)

Identification				Avant le recrutement sur le projet			Recrutement sur le projet				Après le projet				
Nom et prénom	Sexe H/F	Adresse email (1)	Date des dernières nouvelles	Dernier diplôme obtenu au moment du recrutement	Lieu d'études (France, UE, hors UE)	Expérience prof. Antérieure, y compris post-docs (ans)	Partenaire ayant embauché la personne	Poste dans le projet (2)	Durée missions (mois) (3)	Date de fin de mission sur le projet	Devenir professionnel (4)	Type d'employeur (5)	Type d'emploi (6)	Lien au projet ANR (7)	Valorisation expérience (8)
Plique, Guillaume	H	Guillaume.plique@sciencespo.fr	Mai 2018	Expert en ingénierie de la communication numérique (HETIC)	France	2,5	ScPo	Développeur	10	Sept. 2017	CDI	Enseignement et recherche publique	Ingénieur	oui	oui
Rebours, Anthony	H	reboursanthony@hotmail.fr	Mai 2018	Master Recherche Histoire de la pensée économique	Université de Paris 1 (France)	0	Ined	Assistant-Ingénieur d'étude	2	Sept. 2017	Doctorant	Enseignement et recherche publique	Enseignant-chercheur	non	oui
Konaté, Demba	H		Mai 2018	Master économie des organisations	Université de Paris 8	0	Ined	Assistant-Ingénieur d'étude	5	Sept. 2016	CDI	Autre public	Fonctionnaire DGFIP	non	non
Moutou, Laura	F		Mai 2018	Master économie des organisations	Université de Paris 8	0	Ined	Assistant-Ingénieur d'étude	9	Juin 2016	CDD	EPIC	Assistant-Ingénieur d'étude	non	oui