

The trade (policy) discourse in top economic journals

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Abstract

In the aftermath of recent populist upheavals in Europe, nationalist economic policies challenge the overly positive view on economic integration and the reduction of trade barriers established by standard economic theory. For quite a long time the great majority of economists supported trade liberalization policies, at least those actively engaged in policy advice or public debates. In this paper, we examine the elite economics discourse on trade policies during the last 20 years regarding specific characteristics of authors, affiliations, citation patterns, the overall attitude towards trade, as well as the methodological approach applied in these papers. Our analysis yields the following results: First, the hierarchical structure of economics also manifests in the debate about trade. Second, while we found some indications of a shift towards more empirically oriented work, quite often empirical data is solely used to calibrate models rather than to challenge potentially biased theoretical assumptions. Third, top economic discourses on trade are predominantly characterised by a normative bias in favour of trade-liberalization-policies. Forth, we found that other-than-economic impacts and implications of trade policies (political, social and cultural as well as environmental issues) to a great extent either remain unmentioned or are rationalised by means of pure economic criteria.

Keywords: trade evaluation; trade policies; ‘empirical turn’; social studies of economics; bibliometric analysis; top economic journals

JEL: A12; A14; B41; F10

‘It has long been an unspoken rule of public engagement for economists that they should champion trade and not dwell too much on the fine print.’ (Rodrik 2018)

1 Introduction

In the course of recent populist upheavals it has become obvious that trade policy as well as its political and social consequences and its impact on the world economy are controversial issues. Although trade liberalization so far has been on the agenda of trade policy agreements during the neoliberal era in the last decades, there remain serious doubts among active policy-makers regarding the benefits of trade liberalization policies. Whereas the strongest and most longstanding criticism of trade liberalization comes from a (critical) developmental perspective, recently the most powerful nation in the world signalled its willingness to restrict its free-trade policy to protect the U.S. economy particularly from cheap Chinese imports. The new opponents of free-trade argue in favour of trade-barriers to protect (US) economic interests against 'unfair' treatment. The proponents of trade liberalization policies in turn emphasise a win-win situation that supposedly arises from trade liberalization as well as the inefficiency and overall welfare losses linked to protectionism. While this debate is strongly driven by political (and ideological) interests, our paper aims to explore the current debate in economic science. What is the current state of economic theory and research regarding the politically contested issue of trade policies? What kind of arguments are brought forward in favour of trade liberalization and to what extent are negative consequences (social, political and environmental impacts) of trade liberalization addressed? To what extent can we see an ‘empirical turn’ during the last 20 years? Furthermore, who are the dominant actors and institutions in elite economics trade debates and are there any indications for shifts in the debate in the course of the last two decades?

To answer these questions we analyse trade-related research articles published in the ‘top-five’ journals in economics (Card and DellaVigna 2013, Heckman and Moktan 2018) as well as highly cited articles published in other outlets. In doing so we follow a two-fold methodological approach: In a first step we apply bibliometric methods to inspect the overall structure of this debate regarding authorships, affiliations and cited references. In a second step, we conduct a quantitative and qualitative text analysis of the abstracts and partly the whole papers to examine the overall evaluation of trade and the methodology applied in the papers. Furthermore, we also inspect whether and to what extent economic, political, social and environmental implications of trade are being addressed in the papers. Hence, we will be able to develop a better understanding of how trade and implications of trade policies are referenced in the economics elite debate and show whether these are reflecting current political debates. Furthermore, we also aim to sketch recent trends by highlighting the relative importance of different impacts and implications as well as the overall normative evaluation of trade liberalization policies over time. The remainder of the paper is structured as follows. Section 2 offers an overview of the economic trade debate and the specific role of ‘top-five’ journals in economics. In doing so, we aim to provide a rationale for analysing trade-related research in these specific outlets. In section 3 we introduce our twofold analytical framework. In section 4 we discuss the main results of our empirical analysis comprising descriptive statistics and a thematic analysis of the elite economics trade debate in our sample. Section 5 offers a summary of our main results and some concluding remarks.

2 Trade debates in top economic journals

2.1 *On trade debate(s) in the economics profession*

Issues of free trade and related policies are heatedly debated in the public and among politicians of all stripes. Against this background, current IPE debates revolve around topics such as the multifaceted impacts of non-trade-issues in trade agreements (e.g. Lechner, 2016; Haggart, 2017) or the impact of cultural (Skonieczny 2018, Siles-Brügge 2019) as well as country-specific (institutional) peculiarities (Maher 2015, Solís and Katada 2015, Weatherall 2015). In contrast to these debates, economists engaging in political debates on trade quite often seem to speak with one voice (Rodrik 2018). For instance, Alan Blinder – presumably one of the most publicly visible U.S. economists – is quoted in the Wall Street Journal with the statement: ‘Like 99% of economists since the days of Adam Smith, I am a free trader down to my toes’ (Wessel and Davis 2007). Declaration like this lead Wilkinson (2017, p. 36) to conclude that ‘we should bear in mind that even the best (...) accounts of the genesis of multilateral trade offers a partisan narrative’.

On the level of academic economics, however, the debate is more controversial: On the one hand, there is the longstanding but largely marginalised camp of critical voices originating from economic heterodoxy which includes scholars stressing negative effects of trade from social (Kapeller *et al.* 2016, Crouch 2018), developmental (Shaikh 2007, Chang 2009, Aroche Reyes and Ugarteche Galarza 2018) or environmental perspectives (Newell 2012, Krausmann and Langthaler 2019). On the other hand, there is the longstanding tradition in mainstream economists to mainly argue in favour of free trade and related policies (Irwin 2015, Krugman *et al.* 2015), notwithstanding the existence of

theoretical results that indicate potentially negative consequences of increasing integration (e.g. Stolper and Samuelson 1941, Egger and Kreickemeier 2012).

In a review of economists' role in public debates on free-trade Driskill (2012) deconstructs the main arguments posed by 'free-trade-advocates' and thus criticises short-sight reference to the Pareto criterion in international trade and the still dominant heuristic of Ricardo's theory of comparative advantages. In doing so he claims that economists should be 'forthright about the epistemological basis of their policy advocacy of free trade' (Driskill 2012, p. 28).

However, as recent studies on the consensus among economists on economic policy issues showed that the support for trade liberalization to increase potential economic welfare is a rather consensus position among economists (e.g. Gordon and Dahl 2013). Hence only about 5% of the respondents of a survey among economists disagreed with the statement that 'tariffs and import quotas usually reduce general welfare' (Fuller and Geide-Stevenson 2014, p. 134). While this negative stance against tariffs is quite stable over the last three decades, there is also broad consensus among the members of the IGM economic expert panel that import tariffs are even more costly than they would have been 25 years ago (IGM Forum 2018)¹. In a similar vein, Krugman et al. in their textbook on international trade assert:

¹ In fact about 90% of the IGM forum at the Chicago Booth School agreed or strongly agreed with the following statement: 'Trade Disruptions: Because global supply chains are more important now, import tariffs are likely substantially more costly than they would have been 25 years ago'.

‘Most economists, while acknowledging the effects of international trade on income distribution, believe it is more important to stress the overall potential gains from trade than the possible losses to some groups in a country.’ (Krugman et al. 2015, p. 100)

This one-sidedness has recently evoked some individual (but prominent) criticisms originating from the orthodoxy itself (Stiglitz 2017, Arkolakis *et al.* 2018, Rodrik 2018). For instance, in his ‘straight talk on trade’ Rodrik (2018) asks whether economists’ ‘siding with globalization’s cheerleaders’ in the public has been responsible for the increasing rise in right-wing populism in the US (*Trumpism*) and the resulting questioning of the current global trade regime. In a similar vein, Stiglitz (2017) recently² argued that the gains of globalization have long been oversold during the last years by politicians and economists alike. In what follows, we are elaborating Rodrik’s line of argument, as he is explicitly focusing on the role the alleged public one-sidedness of economists has played for public and political debates on trade.

‘In short, had economists gone public with the caveats, uncertainties, and skepticism of the seminar room, they might have become better defenders of the world economy. Unfortunately, their zeal to defend trade from its enemies has backfired. If the demagogues making nonsensical claims about trade are now getting a hearing—and actually winning power—it is trade’s academic boosters who deserve at least part of the blame.’ (Rodrik 2018, xii)

According to Rodrik (2018), economists avoid discussing trade issues with (scientific) sobriety because they fear that the ambiguities of their research findings might be misinterpreted or even worse, abused by political populists in demanding misguided (in

² Newbery and Stiglitz (1984) represent a noteworthy exception of an earlier balanced ‘mainstream’ position on the gains and challenges of trade liberalization.

particular protectionist) policies. While this explanation would imply that the current trade debate held in the public runs counter to the normative and ethical claims scientists should adhere to, the question remains to what extent this behaviour is restricted *only* to the public engagement of economists. For instance recent surveys among economists report that 41% of the respondents disagreed with the statement that ‘it is possible for economists to separate their policy prescriptions from their normative values’ (Fuller and Geide-Stevenson 2014, p. 141).

As Rodrik further argues, when celebrating consensus economists make two central errors: *errors of omission* prevent economists from seeing the blind spots emanating from e.g. a one-sided focus on trade models which assume away real-world complications. *Errors of commission* then result in a next step by administering policies which can be derived from such models³. While the latter clearly relates to the public engagement of economists (policy advise), the former (errors of omission) rather seem to happen *within* the discipline. So, if Rodrik’s argument holds, the observed *public* one-sidedness of the trade debate held by economists is to some extent reflecting an *internal* one-sidedness of the debate, which is rooted deeply in the discipline. By focusing on the elite debate in economics, in this paper we aim to empirically clarify this extent of academic one-sidedness.

2.2 On the institutional peculiarities of economics: the power of the ‘top-five’

Compared to other social sciences, modern (mainstream) economics shows greater signs of stratification among various dimensions: For instance, in the context of women and ethnic minority groups (Bayer and Rouse 2016), editor- and authorships in top-journals

³ The reliance on empirical models in the field of trade policies could even be more concerning, since Linsi and Mügge (2019) have recently shown that official trade statistics are much less accurate than often assumed in research as well as public debates.

(Hodgson and Rothman 1999), the marginalization of alternative theoretical, ‘heterodox’ approaches (Dobusch and Kapeller 2009, Lee and Elsner 2011), or the recruitment of officials in academic associations (Fourcade *et al.* 2015), economics is coined by stark internal differentiations and hierarchies.

An archetypical example, where this stratification in particular has crystallised, are the disciplines most prominent outlets, the so-called ‘top-five’ in economics (Card and DellaVigna 2013): For decades now, the *American Economic Review*, *Journal of Political Economy*, *Quarterly Journal of Economics*, *Econometrica*, and *Review of Economic Studies* serve as a powerful proxy for scientific quality and reputation within the discipline. Due to its popularity and gate-keeping power, these five outlets significantly influence tenure decisions at top economics departments (Heckman and Moktan 2018). Seen from a scientometric perspective, the ‘top-five’ are responsible for a remarkable amount of concentration. For instance, in analysing a large-scale sample of publications in economics, Gloetzel and Aigner (2019) found, that the ‘top-five’ account for nearly 30% of all citations within the economics discipline. Moreover, almost 60% of the 1000 most-cited articles are published in ‘top-five’ journals (see also Laband (2013)). It is also remarkable, that – measured in terms of cited references – the discourse *within* the ‘top-five’ journals is also highly concentrated: On average, one out of four citations made in a ‘top-five’ journal either stem from the same journal (self-citation) or from its four ‘best buddies’ (Aistleitner *et al.* 2019).

In sum, this evidence on the ‘superiority of economists’ (Fourcade *et al.* 2015) in both institutional and scientometric terms strongly suggests, that economic research published in the ‘top-five’ captures significant parts of the discipline’s elite discourse. This research gains not only disproportionate high attention within the discipline (see, Arrow *et al.* (2011) for instance). It can be considered as a source of established expertise

which lays out the basis for current and future advances in economic science. Furthermore, a bibliographic analysis reveals a strong relationship between economists' public engagement in policy-making and publishing in these outlets: On average, one out of five journal articles (21.7%) authored by members of the *Council of Economic Advisers* (CEA) and the *Congressional Budget Office* (CBO) are published in a 'top-five' journal⁴. This indicates that, while '[e]conomists do not, however, often have the deciding voice in economic policy, especially when conflicting interests are at stake' (Krugman *et al.* 2015, p. 100), economic research published in these outlets may still be of significant relevance for the overall policy-making process.

3 Methodology and data

Our analysis of the debate in top economic journals on trade and trade policies in this paper is based on a mixed-method approach combining quantitative (bibliographic, textual and citation analysis) and qualitative methods (qualitative content analysis). Due to the typically very technical language of economic papers we decided to base our two-level analysis of the trade debate in economic-elite discourse mainly on the abstracts of the papers⁵. However, we used the full texts of the papers for the classification of paper types and in cases of disagreement on the coding of papers⁶. Although this approach

⁴ We analysed the publication history of 65 CBO members (2001-2019) and 30 CEA members (since 2000) listed in the EconLit database (in total 4689 journal articles). Correcting for overlapping members, we found that only 21% of the members have no publication in 'top-five' journals (within the CEA members only two have no publication). The average value is 11.3 'top-five' publications per author, the median value is 8.5 publications.

⁵ It should be noted, that about 6% of the papers which enter our final analysis do not contain an abstract (see next section). In this case we compiled 'pseudo-abstracts' and analysed those first paragraphs (and if necessary, the conclusion) of a paper until we were able answer the three questions which define an abstract discussed above (i-iii).

⁶ Overall the inter-coder-reliability for the coding of overall trade evaluation, trade implications and paper type ranged around 95%.

obviously reduces our text corpus, we argue that (extended) abstracts are a reliable source for our analyses for at least two reasons: First, the definition of a scientific abstract implies that it should clarify (i) why the research was conducted, (ii) what the paper is about and what are the main conclusions of the research and (iii), how and based on which specific methodology the authors arrived at their conclusions. Thus an abstract aims to call attention to the most important information of a paper (Holtz 2011, Ermakova *et al.* 2018). Second, due to its role of communicating research results to a broader public at least within the economics profession, abstracts ought to be and in most cases are written in rather plain language, which in turn enables us to apply qualitative content analytical methods in the first place.

In order to obtain representative data of the elite discourse in economics related to trade, we draw our sample from two different data sources. Each sub-sample is based on different data bases and selection criteria. The first sample is compiled from the EconLit⁷ database and is restricted to papers published in the ‘top-five’ journals in economics (hereafter TOP5) between 1997 and 2017⁸. The second sample is obtained from the Web of Science⁹ database and is restricted to the 100 most cited papers in the field (hereafter TOPCITED) by the end of 2017. All raw data are available upon request. Table 1 provides an overview and summary statistics of the total sample.

⁷ EconLit is published by the American Economic Association (AEA)

⁸ Although not being part of the ‘top-five’ in terms of evaluation ranking, we decided to include the papers in the ‘papers and proceedings’-section of the AER, since these papers (i) are published in the leading economics journal and thus are highly visible in the professional discourse and (ii) due to their presentation and discussion in the Annual Conferences of the American Economic Association also reflect more current debates in the discipline.

⁹ Web of Science (WoS) is maintained by Clarivate Analytics.

For the TOP5 sample we selected those papers which contain at least one JEL code listed in EconLit¹⁰ that relates to trade in a broad sense¹¹.

In this paper, we focus on economic research addressing economic, political, social, environmental or cultural impacts of trade in general or trade-specific policies (e.g. trade agreements, tariffs) from a theoretical or empirical perspective¹². Thus, in a next step we manually excluded those papers containing JEL codes related to trade but engage with topics other than international trade such as financial integration or monetary policy. We also excluded paper types such as notes, short comments, replies, corrigenda and errata since we found that such papers did not contain sufficient data for our analysis.

For the TOPCITED sample we draw on a set of top 1000 cited papers¹³ published between 1957 and 2017. These papers include ‘trade’ either in the title, the abstract (if available) or in the keywords (if available). In order to capture the more recent debate on economic integration we restricted our TOPCITED sample to papers published in the TOP5 period (1997-2017) instead of calculating the annual citation rate per year (total citations divided by years since publication)¹⁴. After screening for papers not relevant to international trade (e.g. ‘trade(-)off’, ‘trade(ers)’ and as described above), we selected the 100 most cited papers.

¹⁰ In EconLit, the ‘Subjects’ field corresponds to the definition of the JEL Codes which we used for our sample selection. However, it should be mentioned, that these JEL Codes do not always correspond to the JEL Codes explicitly indicated in the paper. Moreover, we also included 9 papers dealing with trade issues albeit not containing a relevant JEL code.

¹¹ For a detailed list of the relevant JEL Codes see Appendix A1.

¹² Recently, Lechner (2016) stressed the increasing importance of non-trade issues (NTI) in bilateral trade agreements as well as the huge variation in terms of precision, obligation and delegation of these issues. However, in the economics debate NTIs are mainly only referred to as non-tariff trade barriers.

¹³ We are grateful to Ernest Aigner and Florentin Gloetzi for providing the dataset for this sample.

¹⁴ However, in either case the problem of missing upcoming top cited papers remains. Since citations also need time to accumulate, in our research setting we are not able to screen for potential high-impact papers published towards the end of the period. This limitation becomes visible in the publication history depicted in Table 1 where the publication period of top cited papers ends almost immediately five years before the observation period.

In sum, both sub-samples together consist of 422 unique papers dealing with issues related to trade and thus represent a comprehensive picture of the current trade debate in (mainstream) economics (see Appendix A2 for a detailed list). Table 1 also reveals that the half of TOPCITED papers are also published in a TOP5 journal. This coincidence of top journals and citation impact strongly supports our argument of the elite discourse taking place in these journals.

Table 1: Sample summary statistics. *The share of papers containing no abstract is higher in the original sample. Where available, we used abstract of the papers listed in databases such as AEAweb, RePec, ResearchGate etc... **For a detailed list of all journals see Appendix A.

TOP5 + TOPCITED sample: 422 unique Papers published in 21 journals.		
with Abstract: 395 (93,6%)	without Abstract: 27 (6,4%)*	
published in Journal	absolute	relative
American Economic Review	228	54,0%
Quarterly Journal of Economics	51	12,1%
Review of Economic Studies	43	10,2%
Journal of Political Economy	34	8,1%
Journal of International Economics	17	4,0%
Econometrica	16	3,8%
Review of Economics and Statistics	5	1,2%
Journal of Economic Literature	5	1,2%
European Economic Review	4	0,9%
World Bank Economic Review	3	0,7%
Journal of Economic Perspectives	3	0,7%
Rest**	13	3,1%

4 Results & discussion:

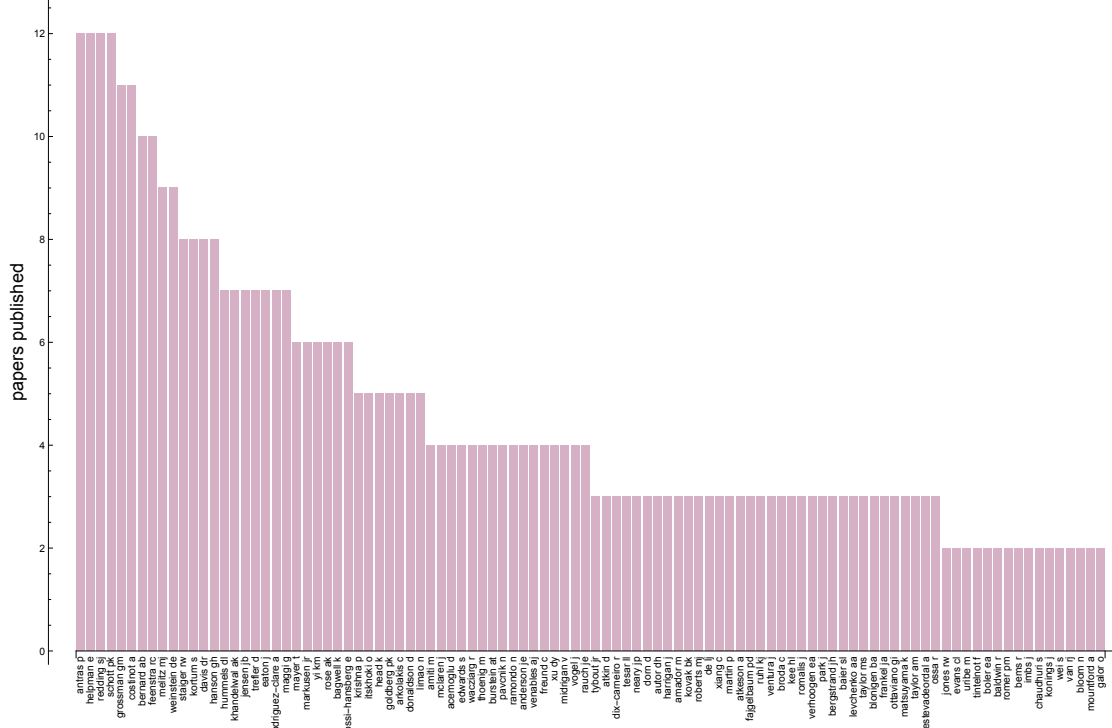
The results section is divided into three parts and basically mirrors our mixed-methods approach. The first part provides some descriptive statistics on the properties of our sample with regard to the distributions of authors and affiliations involved in the elite debate. In the second part we take a closer look at the methodology applied in the papers. In doing so, we contribute to the debate whether and to what extent there can be identified

an ‘empirical’ (Angrist *et al.* 2017) or an ‘applied’ (Backhouse and Cherrier 2014) turn in economics during the last two decades. The third part illustrates our results on the overall trade discourse and divides into three sub-sections: a quantitative analysis of word frequencies and cited references, qualitative coding of abstracts according to their reference to trade implications, and the explicit and implicit normative evaluations of trade.

4.1 Authors and affiliations

Analysing the authors and their institutional affiliations obtained from our sample strongly confirms previous results on the high stratification and concentration of the discipline in general (see above). In our sample, we identified 873 authorships distributed across 462 unique authors. Figure 1 shows the distribution across the 100 most common authors. Measured in terms of publication output, the top-30 authors account for 240 (27.5%) of total authorships. In turn, more than the half (51%) of all authorships is spread across 378 authors with only one or two publications.

Figure 1: The ‘top 100’ authors in the elite trade debate (unweighted authorships). Authors’ own calculation based on data from EconLit database.



The levels of concentration are similar high when looking at the institutional composition. In our analysis, we distinguished between university (figure 2a) and non-university affiliations (figure 2b). The top-30 university affiliations account for the half (50.7%) of the 1096 affiliations listed in our overall sample. Rather unsurprisingly, the top institutions are also highly renowned universities such as five of the eight ‘Ivy League’-universities¹⁵ the MIT, the University of Chicago or the LSE. Moreover, a very high degree of geographical concentration becomes visible. 25 of the top-30 institutions are from the US, which also means that the elite scientific discourse in trade is dominated by US-based (elite) institutions. Also remarkable is the high share of a small group of non-university affiliations (figure 2b). Five out of the top-10 institutions listed are economic

¹⁵ These are Princeton, Harvard, Columbia, Yale and Dartmouth.

(policy) think tanks or banking institutions.

The *National Bureau of Economic Research* (NBER) is ranked first place (and is, almost always, listed as a secondary affiliation). Given its reputation as a platform in disseminating ‘[economic] research findings among academics, public policy makers, and business professionals’ (NBER 2019) the high number of NBER affiliations indicate that the elite discourse on trade is (or at least should be) able to spill over into the sphere of economic policy makers. The same holds also for the Federal Reserve System (ranked second place), followed by the UK-based non-partisan *Centre for Economic Policy Research* (CEPR)¹⁶. Taken together, these institutions either aim to provide policy-relevant research and information for the public with regard to major policy debates or are actively engaged in economic policy-making. Thus, economists affiliated to these institutions presumably have special opportunities to influence public policy debates (Hirschman and Berman 2014, Lepers 2018).

¹⁶ It is important to note, that in the case of multiple affiliations, EconLit does not always lists all affiliations of an author (as listed in the paper). Wherever we found such inconsistencies, we complemented this information manually.

Figure 2a: The ‘top 30’ university affiliations in the elite trade debate. Authors’ own calculation based on data from EconLit database.

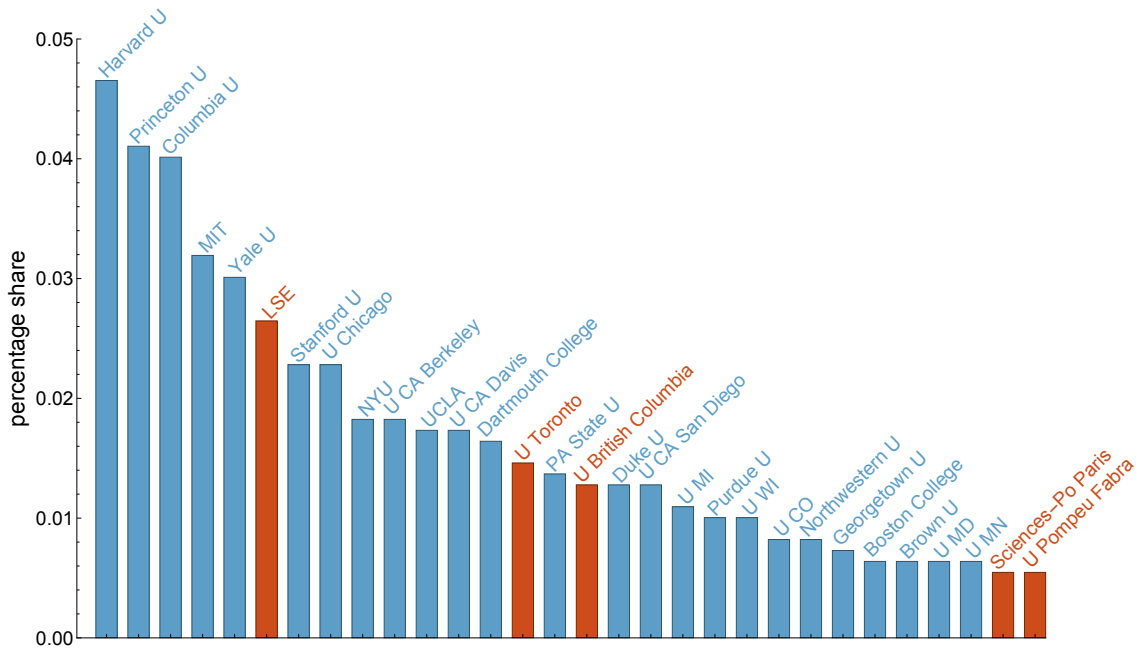
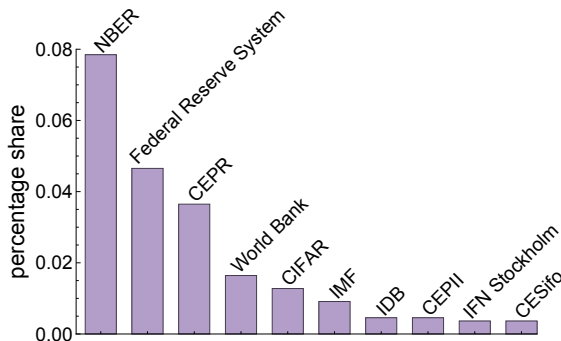


Figure 3b: The ‘top 10’ non-university affiliations in the elite trade debate. Authors’ own calculation based on data from EconLit database.



4.2 Methodological approaches

In a second step, we analysed the principal methodological design applied in addressing issues of trade. Therefore, we analysed the full papers in our sample and classified them according to two main categories of paper types: (1) empirical studies and (2) theoretical/technical/methodological (ttm) studies. Overall, our classification scheme assumes a continuum of methodological approaches from pure theoretical models with

far-reaching assumptions to pure empirical papers, directly referring to real economic data and phenomena.

The empirical studies are classified into two sub-categories: papers that aim to explore empirical relationships by focusing on real-world data in the first place (and then e.g. use statistical analytical tools) labelled as ‘empirical pure’ (1a); and papers that introduce an (empirical) economic model and then use real-world data to *estimate* the model parameters, labelled as ‘model estimation’ (1b). The ttm studies can be classified into two sub-categories: papers that introduce (theoretical) economic models and then use real-world data to *calibrate* and/or *simulate* the performance of these models, labelled as ‘ttm applied’ (2a) and papers that solely focus on the theoretical analysis of economic models (including the use of fictitious data), labelled as ‘ttm pure’ (2b). Finally, all remaining papers which cannot be assigned to either of the other sub-categories such as trade-related meta-studies or review papers are classified as ‘other’.

Figure 4: Composition of paper types according to their methodological approach.

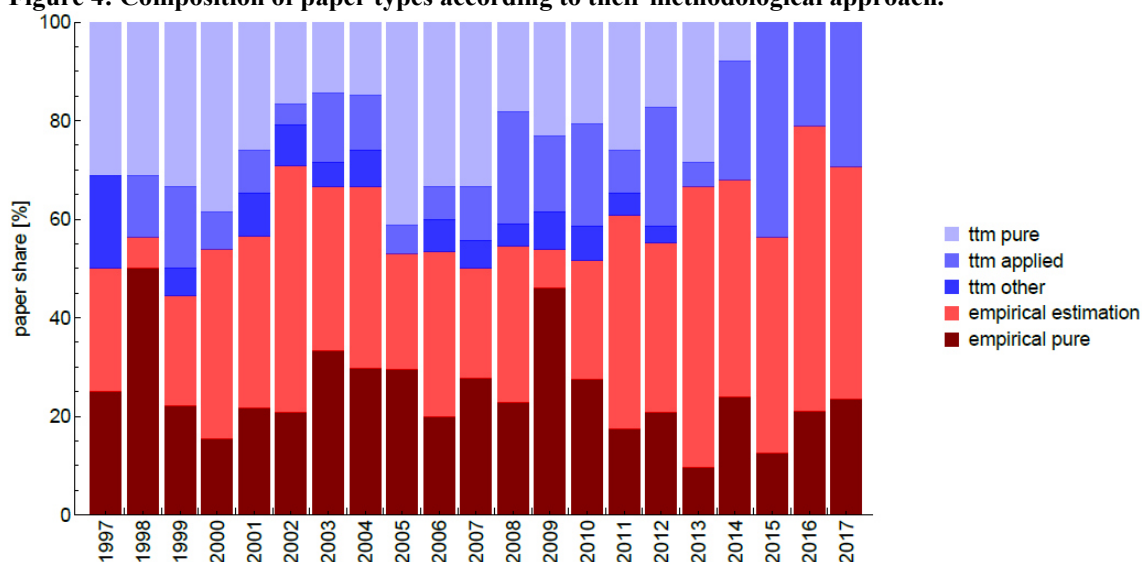


Figure 3 shows some revealing developments over time. First, we found an increase of empirical papers and conversely a decline of papers addressing trade-issues from a pure

theoretical point. This trend is in line with a general ‘empirical turn’ (Angrist *et al.* 2017, Angrist *et al.* 2020) in economics and also aligns well with our word frequency analysis presented below (see figure 4)¹⁷. Second, the economics trade discourse seems to have been undergone an even stronger ‘empirical turn’ compared to the overall economics debate (Hamermesh 2013), regarding the strong decline of pure theoretical papers in the last years. Third, however, among the empirical papers the share of ‘pure empirical papers’ is also decreasing over time. Contrary, the share of ‘tm applied’ papers is increasing particularly during the last ten years.

This way, we conclude that much of the ‘empirical turn’ is not really a shift away from the application of theoretical trade models. Instead empirical data is often rather used to estimate (‘empirical estimation’) or even simply to calibrate and parametrise (‘tm applied’) theoretical trade models. To sum up, our analysis of the methodological approach indicates an ‘applied turn’ (Backhouse and Cherrier 2014, Backhouse and Cherrier 2017) rather than a real ‘empirical turn’, in the sense of an opening up to the empirical investigation of real economic phenomena.

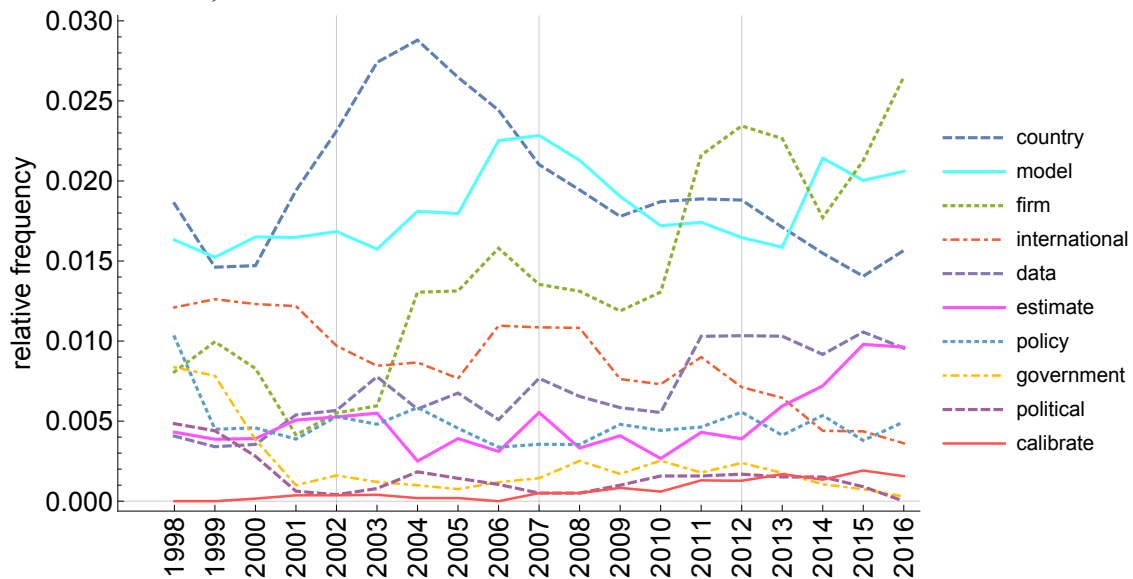
4.3 The structure of the trade debate

Following our methodological approach of a two-level analysis of the trade debate in economics elite discourse we first conducted a thematic analysis. For this purpose, we applied a mixed-method approach combining quantitative and qualitative methods. To get a first thematic overview of the debate, we looked at lemmatised word frequencies using the lemmatise analysis tool of MAXQDA. The three most important tokens in the overall trade debate are ‘countr*’, ‘model*’ and ‘firm*’. The result of this overall token

¹⁷ However, temporal developments have to be interpreted carefully since there are substantial time lags between submitting a paper to a (top) journal and final date of publication (Ellison, 2002)

analysis is unsurprising, given the fact that we analyse an economic debate on trade in goods and services. Nevertheless, we also found some evidence for changes in the trade debate during the last 20 years (see figure 4), which also allows us to draw some careful conclusions about the overall structure of the debate. First, the token ‘firm’ increases over time and is by far the most mentioned term in the last years. In contrast the tokens ‘countr*’ and even more pronounced ‘international*’, typically stronger associated with macroeconomic approaches, decline over times. Thus, the overall token analysis indicates a trend towards microeconomic analysis in the economic trade literature during the last 20 years. Second, the steady increase of the term ‘data’ (and on a lower overall level also the tokens ‘estimate*’ and ‘calibrate*’) provides further evidence for a stronger empirical orientation in economics, which was also reported in recent research (Angrist *et al.* 2017, Angrist *et al.* 2020). Third, social and environmental issues are hardly ever mentioned in the debate, while the relative importance of policy issues (tokens ‘polic*’, ‘political’ and ‘government*’) is declining.

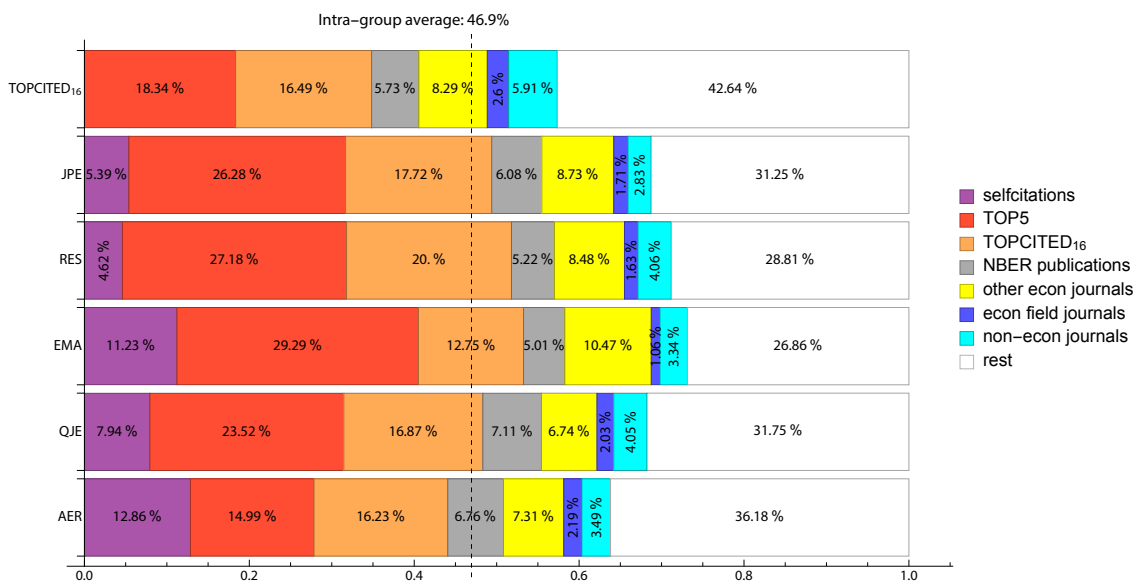
Figure 4: Word frequency development in the elite-economics discourse (sample of selected lemmatised words).



Another quantitative exercise we conduct, is analysing the composition of cited references in our sample. As already mentioned above, measured in terms of citation flows, the overall discourse in the ‘top-five’ journals is highly concentrated (Heckman and Moktan 2018, Aistleitner *et al.* 2019). Referring to their results, Aistleitner *et al.* (2019) emphasise two different ways in which citation data may be interpreted: Either as an indicator for the quality of a publication (evaluative interpretation) or as a specific form of communication (cognitive interpretation). They conclude that, depending on the interpretation, research published in the ‘top-five’ journals is either simply ‘superior’ because these outlets manage to concentrate high research quality (and thus receive many citations), or the discourse in these outlets is simply stronger self-contained and/or highly self-referential (as evidenced by receiving many citations).

Given that both interpretations will eventually lead to different (research policy) implications, we therefore ask whether and to what extent this concentration within the ‘top-five’ journals is reflected in the particular debate on trade. Furthermore, we analyse the overall composition of cited journal references in our sample with regard to specific sub-fields in economics and other disciplines. The cited references data were obtained from *Web of Science*. We excluded books and monographies as well as unpublished material and working papers (with the notable exception of NBER literature). Figure 5 shows the results of these exercise by analysing the intra-group citation flows between the TOP5 journals in our sample plus the remaining 16 TOPCITED journals (treated as an aggregated journal (TOPCITED₁₆)).

Figure 5: citation networks in the elite trade debate. Authors' own calculation based on data from *Clarivate Analytics'* (Web of Science) database. Note: The category 'rest' includes non-journal references (monographs, book series), working papers, unpublished material and data sources.



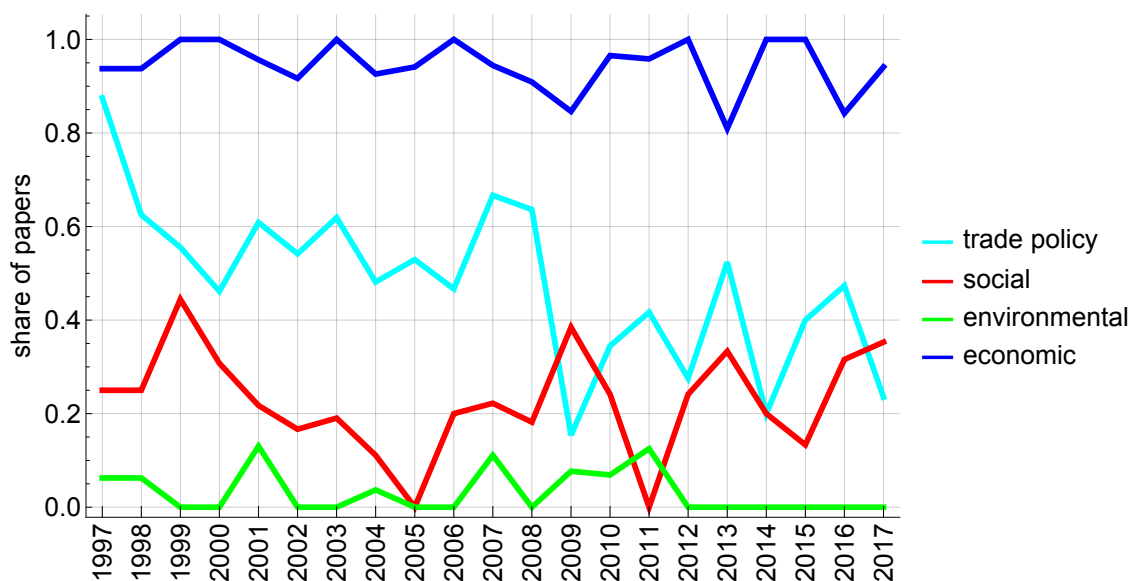
In terms of (journal) citations, the discourse in the trade debate is highly concentrated: On average, almost half (46.9%) of all citations remain within the same group of 21 (elite) journals. Furthermore, we found a substantial share of references to NBER publications (grey-shaded bars in figure 5). In contrast, we found a relatively minor share of references made to journals outside the discipline as well as specific ‘field’ journals (see Appendix C for a detailed list). Given the possibility of two competing interpretations to citation data, as outlined above, one can conclude, that the high level of concentration provides evidence either a) for the excellent quality (evaluative interpretation) or b) for the high degree of self-referentiality (cognitive interpretation) of this debate. However, at least in the case of the specific (elite) discourse on trade, we challenge Angrist *et al.* (2020), who argue that the increase of empirical papers also leads to a higher receptivity to findings from other social sciences.

Much of the critical literature on trade liberalization and globalization particularly raises social and ecological concerns on an increase in trade in goods and to a lesser extent

services. Economists, in turn are often blamed to ignore other-than-economic consequences of globalization and solely focus on the economic gains of trade (Rodrik 2018). Hence, we secondly also coded the papers in our sample according to whether the authors refer to different levels of implications of trade. In doing so, we distinguished between the four codes ‘economic’, ‘policy’, ‘social and cultural’ as well as ‘environmental’ implications. Unsurprisingly we found that nearly all papers (94%) even in their abstracts referred to the economic impacts and implications of trade. The code ‘economic’ implications includes various topics such as relative price developments, changes in exports and imports, economic efficiency and productivity of firms and sectors, changes in market structures or transport costs. The category ‘policy impact’ comprises tariffs, custom unions, international and bilateral trade agreements or references to issues such as policy institutions, liberalization and protectionism, trade barriers or government interventions in general.

We found that quite often policy changes are modelled as quasi-natural experiments to examine a set of economic consequences of changes in openness to trade. This means that many papers interpret political decisions as exogenous shocks and thus do not assess the interplay between economic and political developments by deliberately ignoring the economic, social or political causes for a distinct decision or policy change. Overall, about half of the papers referred to policy impacts of trade, while the social and cultural (22%) as well as environmental impacts of international economic integration (3%) play a minor role in the economics elite discourse on trade.

Figure 6: Impacts and implications of trade.



Most of the papers, which address social and cultural impacts of trade are concerned with changes in employment or income, rising unemployment or the living- and working-conditions of (low-income) workers or workers in distinct countries or sectors. A few papers furthermore also address different implications for workers of different gender, ethnicity and/or cultural background. Despite the fact that social and cultural concerns in general play a rather minor role in the trade discourse, our results show an increase in the share of papers addressing these issues over the last years. This finding points to a slight shift in the trade debate in top economic journals in this specific regard. In contrast, we did not find a similar trajectory for the relevance of environmental issues. Accordingly, there are hardly any papers, which refer to any kind of ecological impacts of trade throughout the whole sample.

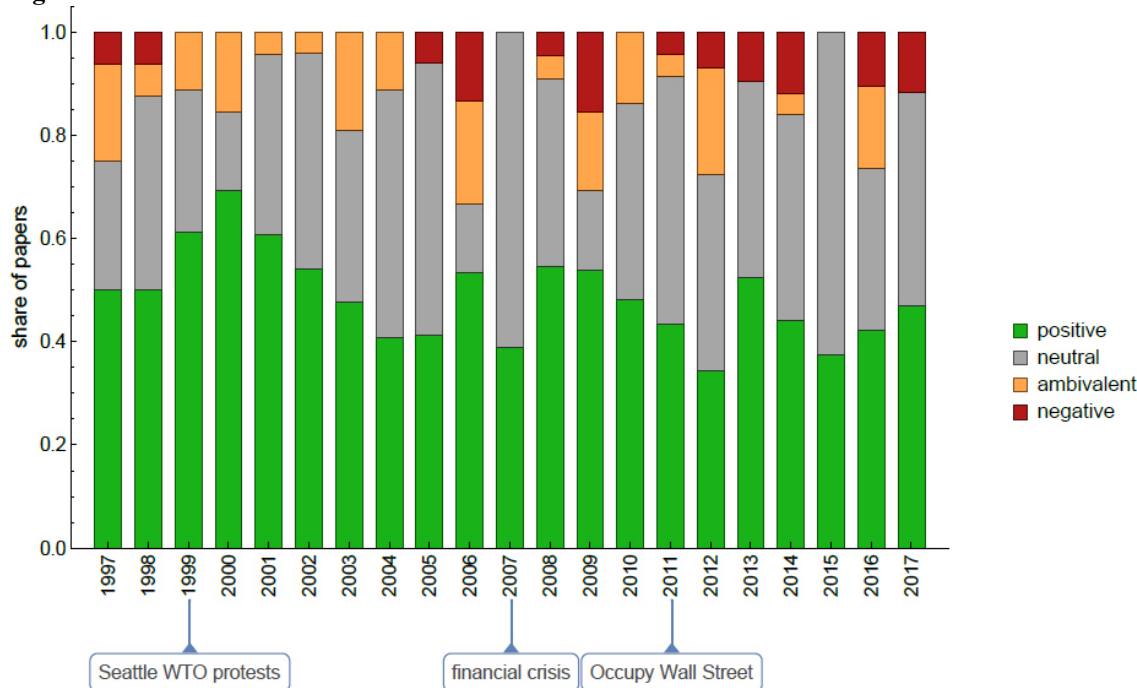
In a last step we took a closer look at the content of the papers in our sample and followed a two-fold approach. First, we examined the overall evaluation of trade in the abstracts and distinguished between the four categories ‘positive’, ‘negative’, ‘neutral’ and ‘ambivalent’, the latter being a mixed evaluation, where positive and negative

consequences of trade are addressed¹⁸. A positive evaluation of trade typically includes references to efficiency gains, welfare, productivity or product quality increases or the theory of comparative advantages of trade. Negative evaluations in turn stress issues such as increases in unemployment, negative distributional or environmental effects of trade increases. The category ‘neutral’ applies for papers without any kind of at least implicit normative evaluation of trade.

Considering the overall evaluation of trade in top economic journals discourse over the last 20 years we found that about half of the papers in our sample (48%) primarily refer to positive implications of trade. In contrast, about 5% report mainly negative implications of trade, while 38% take a rather neutral stance on this issue. Furthermore, about 9% are coded as ambivalent, as they report positive as well as negative implications of trade. Beside this general assessment of the issue of trade in the economics elite discourse, we furthermore examined changes in the evaluation of trade over the last 20 years. Figure 7 indicates a slight increase of rather critical contributions to the debate on trade and in turn a decrease of papers, offering a primary positive perspective on trade. Particularly the decrease of positive evaluations of trade from 2001 to 2004 could be interpreted as a reaction to the anti-globalization protests around the WTO ministerial conference in Seattle in 1999 (‘the battle of Seattle’) and the G8 Summit in Genoa in 2001.

¹⁸ Although we basically used the abstracts for the coding of the papers, we included the full papers in cases where we could not decide about a coding on the basis of an abstract; in particular when the abstracts were very short. To increase reliability, we both classified the papers separately and developed a common coding system after an initial pre-test, where we discussed uncertain cases. The overall inter-coder-reliability ranged between 95% and 99% for different categories. In cases of different classification of overall trade evaluation, we assigned the respective papers to the category ‘neutral’ or ‘ambivalent’, respectively.

Figure 7: Normative evaluations of trade.



5 Conclusion

Research in IPE and related fields often stress the influential role of political institutions such as NGOs (e.g. Holmes 2011, Nega and Schneider 2014), IGOs (e.g. Farnsworth and Irving 2018, Stephen and Parížek 2019) or domestic policy elites (e.g. Kaltenthaler and Mora 2002, Brennan 2013) in deepening international economic integration as part of a neoliberal agenda. With this paper, we point out another important aspect relevant in shaping the public opinion on international trade and trade liberalization: the scientific debate on trade within (mainstream) economics itself and, in particular, the research published in its most prestigious outlets.

More specifically, we combine quantitative and qualitative methods in order to examine the specific characteristics of the debate in high impact papers dealing with trade and trade-policy issues. Capturing a substantial part of the economic *Intelligentsia's* output, we argue, that the discourse on trade is crucial for the transmission of economic expertise into public debates and political decision-making alike.

To sum up, we found that the overall structure of the economic elite debate on trade mirrors the overall structure of the economic elite debate. Thus, our results correspond with recent literature claiming a strong degree of hierarchy and concentration in terms of academic institutions, citations and journals. We found a decrease of pure theoretical approaches and an increase papers using real economic data, suggesting an ‘empirical turn’. However, quite often real data is rather used to calibrate or parameterise theoretical trade models than to empirically investigate real economic phenomena in complex social contexts. This way, what we observe should be rather dubbed as ‘applied turn’, rather informed by the availability of new data and more sophisticated analytical tools than by broader (interdisciplinary) perspectives.

Regarding the other-than-economic consequences and implications of trade and trade liberalization our results show two patterns. At first sight, a substantial share of papers addresses policy implications and impacts of trade (47%) and to a lesser extent also social and cultural implications and impacts of trade (about a fifth). This certainly is not true for environmental and ecological issues, which are only referred to in less than 3% of all papers in our sample. However, a closer look at the way these implications are addressed reveals, that the great majority of papers lack any critical engagement with the respective political or social contexts and causes of trade policies (see also: Watson 2017). The argument of a predominance of a rather narrow, pure economic approach to trade is also supported by our finding that only 4% of all citations in our sample of elite economic discourse goes to non-economic journals.

Concerning the qualitative results of our paper, we found that about half of the papers in our sample provide a positive overall evaluation of trade or trade-enhancing policies. In turn, only a minority (about 5%) provide a predominantly negative evaluation of the consequences and implications of trade. A rather large share of papers in our sample

however refrain from any explicit normative evaluations of trade (38%) or provide a balanced perspective comprising positive and negative impacts of trade (9%). This overall result leads us to conclude that the predominant trade narrative in economic elite discourse constitutes a fairly lopsided support for trade liberalization. It remains open however, whether this bias is caused by an explicit focus on gains from trade or simply by what was termed a theory-ladenness of observation and measurement (Kuhn 1970) in economic theorizing on trade.

Given the multifaceted socio-economic and ecological challenges we will be facing in the 21st century , we argue that a broader conceptualization of the complex implications and impacts of trade liberalization policies, taking into account the social embeddedness of economic action (Granovetter 1985, Polanyi 1985 [1944]) would allow a more comprehensive understanding of this issue. Furthermore, such a broader perspective would also lead to a more balanced view on trade liberalization policies in economic elite discourse, which in turn would also improve the credibility of economic expertise.

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Appendix A

Appendix A1: JEL Codes used for sample selection. (retrieved from AEAweb.org)

JEL Code	Description
B17	History of Economic Thought through 1925: International Trade and Finance
B27	History of Economic Thought since 1925: International Trade and Finance
F02	International Economic Order and Integration
F10	Trade: General
F11	Neoclassical Models of Trade
F12	Models of Trade with Imperfect Competition and Scale Economies; Fragmentation
F13	Trade Policy; International Trade Organizations
F14	Empirical Studies of Trade
F15	Economic Integration
F16	Trade and Labor Market Interactions
F17	Trade: Forecasting and Simulation
F18	Trade and Environment
F19	Trade: Other
F36	Financial Aspects of Economic Integration
F40	Macroeconomic Aspects of International Trade and Finance: General
F41	Open Economy Macroeconomics
F43	Economic Growth of Open Economies
F47	Macroeconomic Aspects of International Trade and Finance: Forecasting and Simulation: Models and Applications
F49	Macroeconomic Aspects of International Trade and Finance: Other
N70	Economic History: Transport, International and Domestic Trade, Energy, Technology, and Other Services: General, International, or Comparative
N71	Economic History: Transport, Trade, Energy, Technology, and Other Services: U.S.; Canada: Pre-1913
N72	Economic History: Transport, Trade, Energy, Technology, and Other Services: U.S.; Canada: 1913-
N73	Economic History: Transport, Trade, Energy, Technology, and Other Services: Europe: Pre-1913
N74	Economic History: Transport, Trade, Energy, Technology, and Other Services: Europe: 1913-
N75	Economic History: Transport, Trade, Energy, Technology, and Other Services: Asia including Middle East
N76	Economic History: Transport, Trade, Energy, Technology, and Other Services: Latin America; Caribbean
N77	Economic History: Transport, Trade, Energy, Technology, and Other Services: Africa; Oceania
O24	Development Planning and Policy: Trade Policy; Factor Movement; Foreign Exchange Policy
P33	Socialist Institutions and Their Transitions: International Trade, Finance, Investment, Relations, and Aid
P45	Other Economic Systems: International Trade, Finance, Investment and Aid
Q17	Agriculture in International Trade
Q27	Renewable Resources and Conservation: Issues in International Trade
Q37	Nonrenewable Resources and Conservation: Issues in International Trade
Q56	Environment and Development; Environment and Trade; Sustainability; Environmental Accounts and Accounting; Environmental Equity; Population Growth

Appendix A2: data sample (short version)

SOURCE	YEAR	TITLE
Journal of Political Economy	2017	International Trade, Technology, and the Skill Premium
Journal of Political Economy	2017	Matching, Sorting, and the Distributional Effects of International Trade
American Economic Review	2017	Nonparametric Counterfactual Predictions in Neoclassical Models of International Trade
American Economic Review	2017	Policy Uncertainty, Trade, and Welfare: Theory and Evidence for China and the United States
American Economic Review	2017	The Wind of Change: Maritime Technology, Trade, and Economic Development
Review of Economic Studies	2017	Trade and Inequality: From Theory to Estimation
American Economic Review	2017	Trade and Manufacturing Jobs in Germany
American Economic Review	2017	Trade Liberalization and Regional Dynamics
American Economic Review	2017	Not So Demanding: Demand Structure and Firm Behavior
American Economic Review	2017	Exporter Dynamics and Partial-Year Effects
American Economic Review	2017	Financial Intermediation, International Risk Sharing, and Reserve Currencies
American Economic Review	2017	WTO Accession and Performance of Chinese Manufacturing Firms
American Economic Review	2017	The Margins of Global Sourcing: Theory and Evidence from US Firms
Quarterly Journal of Economics	2017	Exporting and Firm Performance: Evidence from a Randomized Experiment
Quarterly Journal of Economics	2017	Global Production with Export Platforms
Journal of Political Economy	2017	Globalization, Markups, and US Welfare
Review of Economic Studies	2017	The Determinants of Quality Specialization
Journal of Political Economy	2016	Capabilities, Wealth, and Trade
American Economic Review	2016	Corruption, Trade Costs, and Gains from Tariff Liberalization: Evidence from Southern Africa
Quarterly Journal of Economics	2016	Dynamic Selection: An Idea Flows Theory of Entry, Trade, and Growth
Quarterly Journal of Economics	2016	Measuring the Unequal Gains from Trade
Econometrica	2016	Prices, Markups, and Trade Reform
American Economic Review	2016	Trade and the Global Recession
Review of Economic Studies	2016	Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT and Productivity
American Economic Review	2016	Trade, Domestic Frictions, and Scale Effects
American Economic Review	2016	Income-Induced Expenditure Switching
American Economic Review	2016	Endogenous Skill Acquisition and Export Manufacturing in Mexico
American Economic Review	2016	Tracing Value-Added and Double Counting in Gross Exports: Comment
American Economic Review	2016	The Surprisingly Swift Decline of US Manufacturing Employment
American Economic Review	2016	Domestic Value Added in Exports: Theory and Firm Evidence from China
American Economic Review	2016	Firm Dynamics, Job Turnover, and Wage Distributions in an Open Economy
Quarterly Journal of Economics	2016	Railroads and American Economic Growth: A 'Market Access' Approach
Quarterly Journal of Economics	2016	A Unified Theory of Firm Selection and Growth
Econometrica	2016	IV Quantile Regression for Group-Level Treatments, with an Application to the Distributional Effects of Trade
Review of Economic Studies	2016	Estimating Strategic Models of International Treaty Formation
Review of Economic Studies	2016	Do Prices Determine Vertical Integration?
Quarterly Journal of Economics	2015	Comparative Advantage and Optimal Trade Policy
American Economic Review	2015	Competition, Markups, and the Gains from International Trade
Review of Economic Studies	2015	Dissecting the Effect of Credit Supply on Trade: Evidence from Matched Credit-Export Data
Review of Economic Studies	2015	Estimates of the Trade and Welfare Effects of NAFTA
American Economic Review	2015	How Well Is US Intrafirm Trade Measured?
American Economic Review	2015	New Trade Models, New Welfare Implications
Journal of Political Economy	2015	Poultry in Motion: A Study of International Trade Finance Practices
American Economic Review	2015	Trade Liberalization and the Skill Premium: A Local Labor Markets Approach
American Economic Review	2015	R&D, International Sourcing, and the Joint Impact on Firm Performance
American Economic Review	2015	Imported Inputs and Productivity
American Economic Review	2015	The Value of Relationships: Evidence from a Supply Shock to Kenyan Rose Exports
Quarterly Journal of Economics	2015	Risk, Returns, and Multinational Production
Review of Economic Studies	2015	Income Differences and Prices of Tradables: Insights from an Online Retailer
Review of Economic Studies	2015	Financial Fragility in Small Open Economies: Firm Balance Sheets and the Sectoral Structure
Review of Economic Studies	2015	Quid Pro Quo: Technology Capital Transfers for Market Access in China
Review of Economic Studies	2015	A Linder Hypothesis for Foreign Direct Investment
American Economic Review	2014	A Balls-and-Bins Model of Trade
Journal of Political Economy	2014	A Theory of Capital Controls as Dynamic Terms-of-Trade Manipulation
Journal of Political Economy	2014	An Alternative Theory of the Plant Size Distribution, with Geography and Intra- and International Trade
Econometrica	2014	Information Frictions in Trade
Quarterly Journal of Economics	2014	International Trade and Institutional Change: Medieval Venice's Response to Globalization
Review of Economic Studies	2014	International Trade and Labour Income Risk in the U.S.
Quarterly Journal of Economics	2014	International Trade Puzzles: A Solution Linking Production and Preferences
American Economic Review	2014	Missing Gains from Trade?
Review of Economic Studies	2014	Roads and Trade: Evidence from the US
American Economic Review	2014	The Network Structure of International Trade
American Economic Review	2014	Together at Last: Trade Costs, Demand Structure, and Welfare
American Economic Review	2014	Trade Adjustment and Productivity in Large Crises
Quarterly Journal of Economics	2014	Trade Adjustment: Worker-Level Evidence
Quarterly Journal of Economics	2014	Trade and the Topography of the Spatial Economy
Review of Economic Studies	2014	Trade Integration, Market Size, and Industrialization: Evidence from China's National Trunk Highway System
Econometrica	2014	Trade Liberalization and Labor Market Dynamics
American Economic Review	2014	Trade Wars and Trade Talks with Data
American Economic Review	2014	Welfare and Trade without Pareto
American Economic Review	2014	Importers, Exporters, and Exchange Rate Disconnect
American Economic Review	2014	The Wage Effects of Offshoring: Evidence from Danish Matched Worker-Firm Data
American Economic Review	2014	Demand and Defective Growth Patterns: The Role of the Tradable and Non-tradable Sectors in an Open Economy
American Economic Review	2014	Market Size, Competition, and the Product Mix of Exporters
American Economic Review	2014	Tracing Value-Added and Double Counting in Gross Exports

American Economic Review	2014	Finance and Misallocation: Evidence from Plant-Level Data
Quarterly Journal of Economics	2014	International Prices and Endogenous Quality
American Economic Review	2013	Commercial Imperialism? Political Influence and Trade during the Cold War
Review of Economic Studies	2013	Credit Constraints, Heterogeneous Firms, and International Trade
Quarterly Journal of Economics	2013	Do Terms-of-Trade Effects Matter for Trade Agreements? Theory and Evidence from WTO Countries
Journal of Political Economy	2013	How Important Is the New Goods Margin in International Trade?
American Economic Review	2013	Regional Effects of Trade Reform: What Is the Correct Measure of Liberalization?
American Economic Review	2013	Self-Enforcing Trade Agreements: Evidence from Time-Varying Trade Policy
AMERICAN ECONOMIC REVIEW	2013	THE CHINA SYNDROME: LOCAL LABOR MARKET EFFECTS OF IMPORT COMPETITION IN THE UNITED STATES
American Economic Review	2013	The Geography of Trade and Technology Shocks in the United States
Journal of Political Economy	2013	The Margins of Multinational Production and the Role of Intrafirm Trade
Review of Economic Studies	2013	The Proximity-Concentration Tradeoff under Uncertainty
American Economic Review	2013	Time as a Trade Barrier
American Economic Review	2013	Trade Liberalization and Embedded Institutional Reform: Evidence from Chinese Exporters
American Economic Review	2013	Trade Liberalization and Gender Inequality
Journal of Political Economy	2013	Trade, Multinational Production, and the Gains from Openness
American Economic Review	2013	Trade, Tastes, and Nutrition in India
Review of Economic Studies	2013	War Signals: A Theory of Trade, Trust, and Conflict
American Economic Review	2013	Trading Away Wide Brands for Cheap Brands
American Economic Review	2013	A Trapped-Factors Model of Innovation
Econometrica	2013	Endogenous Ranking and Equilibrium Lorenz Curve across (Ex Ante) Identical Countries
Econometrica	2013	The Theory of Optimal Delegation with an Application to Tariff Caps
Review of Economic Studies	2013	An Elementary Theory of Global Supply Chains
Journal of Political Economy	2012	Country Size, International Trade, and Aggregate Fluctuations in Granular Economies
American Economic Review	2012	Exports and Within-Plant Wage Distributions: Evidence from Mexico
American Economic Review	2012	Global Supply Chains and Wage Inequality
American Economic Review	2012	Liberalized Trade and Worker-Firm Matching
American Economic Review	2012	Measuring the Upstreamness of Production and Trade Flows
American Economic Review	2012	New Trade Models, Same Old Gains?
American Economic Review	2012	Offshoring and the Role of Trade Agreements
American Economic Review	2012	Offshoring, Transition, and Training: Evidence from Danish Matched Worker-Firm Data
American Economic Review	2012	Profits in the 'New Trade' Approach to Trade Negotiations
American Economic Review	2012	Proximity and Production Fragmentation
Review of Economic Studies	2012	Quality Sorting and Trade: Firm-Level Evidence for French Wine
American Economic Review	2012	Ricardo's Theory of Comparative Advantage: Old Idea, New Evidence
American Economic Review	2012	Skill Dispersion and Trade Flows
American Economic Review	2012	Tariff Revenue and Tariff Caps
Econometrica	2012	Task Trade between Similar Countries
Quarterly Journal of Economics	2012	The Impact of Trade on Organization and Productivity
American Economic Review	2012	Trade Agreements and the Nature of Price Determination
American Economic Review	2012	Trade Costs, Asset Market Frictions, and Risk Sharing
Review of Economic Studies	2012	Trade, Firms, and Wages: Theory and Evidence
American Economic Review	2012	Trade, Labor Market Frictions, and Residual Wage Inequality across Worker Groups
Review of Economic Studies	2012	What Goods Do Countries Trade? A Quantitative Exploration of Ricardo's Ideas
American Economic Review	2012	Exports, Export Destinations, and Skills
American Economic Review	2012	Lost in Transit: Product Replacement Bias and Pricing to Market
American Economic Review	2012	Markups and Firm-Level Export Status
American Economic Review	2012	Industrial Structure and Capital Flows
American Economic Review	2012	The Finnish Great Depression: From Russia with Love
American Economic Review	2012	Understanding International Prices: Customers as Capital
Quarterly Journal of Economics	2012	Export Prices across Firms and Destinations
Quarterly Journal of Economics	2012	How Do Different Exporters React to Exchange Rate Changes?
Journal of Political Economy	2011	A 'New Trade' Theory of GATT/WTO Negotiations
Econometrica	2011	An Anatomy of International Trade: Evidence from French Firms
American Economic Review	2011	Buffalo Hunt: International Trade and the Virtual Extinction of the North American Bison
Review of Economic Studies	2011	Enforcing International Trade Agreements with Imperfect Private Monitoring
Journal of Political Economy	2011	Income Distribution, Product Quality, and International Trade
Quarterly Journal of Economics	2011	Intermediated Trade
Quarterly Journal of Economics	2011	Multiproduct Firms and Trade Liberalization
Econometrica	2011	Nonhomotheticity and Bilateral Trade: Evidence and a Quantitative Explanation
Econometrica	2011	Product Differentiation, Multiproduct Firms, and Estimating the Impact of Trade Liberalization on Productivity
Quarterly Journal of Economics	2011	The Role of Dispute Settlement Procedures in International Trade Agreements
American Economic Review	2011	The Role of Trade and Competitiveness Measures in US Climate Policy
American Economic Review	2011	Trade Finance and the Great Trade Collapse
American Economic Review	2011	Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms
American Economic Review	2011	US Trade and Inventory Dynamics
American Economic Review	2011	Vertical Linkages and the Collapse of Global Trade
American Economic Review	2011	What Do Trade Negotiators Negotiate About? Empirical Evidence from the World Trade Organization
AMERICAN ECONOMIC JOURNAL MICROECONOMICS	2011	ZEROS, QUALITY, AND SPACE: TRADE THEORY AND TRADE EVIDENCE
American Economic Review	2011	R&D Investment, Exporting, and Productivity Dynamics
American Economic Review	2011	The 'Collapse in Quality' Hypothesis
American Economic Review	2011	The Environmental Consequences of Global Reuse
Quarterly Journal of Economics	2011	Growth in the Shadow of Expropriation
Quarterly Journal of Economics	2011	Estimating Cross-country Differences in Product Quality
Review of Economic Studies	2011	Globalization and Risk Sharing
American Economic Review	2010	Can Multistage Production Explain the Home Bias in Trade?
American Economic Review	2010	Climate Shocks and Exports

Quarterly Journal of Economics	2010	External Economies and International Trade Redux
American Economic Review	2010	Facts and Figures on Intermediated Trade
American Economic Review	2010	Growth, Size, and Openness: A Quantitative Approach
QUARTERLY JOURNAL OF ECONOMICS	2010	IMPORTED INTERMEDIATE INPUTS AND DOMESTIC PRODUCT GROWTH: EVIDENCE FROM INDIA
American Economic Review	2010	Imports 'R' Us: Retail Chains as Platforms for Developing-Country Imports
ECONOMETRICA	2010	INEQUALITY AND UNEMPLOYMENT IN A GLOBAL ECONOMY
Journal of Political Economy	2010	Innovation, Firm Dynamics, and International Trade
American Economic Review	2010	Intermediation and Economic Integration
American Economic Review	2010	International Trade and Income Differences
American Economic Review	2010	Intrafirm Trade and Product Contractibility
American Economic Review	2010	Inventories, Lumpy Trade, and Large Devaluations
Review of Economic Studies	2010	Labour Market Rigidities, Trade and Unemployment
American Economic Review	2010	Making Room for China in the World Economy
Journal of Political Economy	2010	Market Penetration Costs and the New Consumers Margin in International Trade
American Economic Review	2010	Political Limits to Globalization
JOURNAL OF INTERNATIONAL ECONOMICS	2010	THE EROSION OF COLONIAL TRADE LINKAGES AFTER INDEPENDENCE
American Economic Review	2010	Trade Agreements as Endogenously Incomplete Contracts
American Economic Review	2010	Trade and Carbon Taxes
American Economic Review	2010	Trade Shocks and Labor Adjustment: A Structural Empirical Approach
American Economic Review	2010	What Parts of Globalization Matter for Catch-Up Growth?
American Economic Review	2010	Wholesalers and Retailers in US Trade
American Economic Review	2010	Real Business Cycles in Emerging Countries?
American Economic Review	2010	The Changing Incidence of Geography
American Economic Review	2010	The Quantitative Role of Capital Goods Imports in US Growth
Quarterly Journal of Economics	2010	Improved Access to Foreign Markets Raises Plant-Level Productivity . . . For Some Plants
Quarterly Journal of Economics	2010	Frequency of Price Adjustment and Pass-Through
Review of Economic Studies	2010	The Long and Short (of) Quality Ladders
QUARTERLY JOURNAL OF ECONOMICS	2009	CULTURAL BIASES IN ECONOMIC EXCHANGE?
INTERNATIONAL ECONOMIC REVIEW	2009	FIRM HETEROGENEITY AND THE LABOR MARKET EFFECTS OF TRADE LIBERALIZATION
Review of Economic Studies	2009	Labour Market Regulations and the Sectoral Reallocation of Workers: The Case of Trade Reforms
Review of Economic Studies	2009	Openness, Government Size and the Terms of Trade
American Economic Review	2009	Plants and Imported Inputs: New Facts and an Interpretation
American Economic Review	2009	Technology, International Trade, and Pollution from US Manufacturing
American Economic Review	2009	The Increasing Returns Revolution in Trade and Geography
American Economic Review	2009	The Margins of US Trade
Journal of Political Economy	2009	Trade and Capital Flows: A Financial Frictions Perspective
American Economic Review	2009	Trade Liberalization and New Imported Inputs
American Economic Review	2009	Offshoring and Volatility: Evidence from Mexico's Maquiladora Industry
Econometrica	2009	An Elementary Theory of Comparative Advantage
Review of Economic Studies	2009	The Technology Cycle and Inequality
American Economic Review	2008	Distorted Gravity: The Intensive and Extensive Margins of International Trade
Quarterly Journal of Economics	2008	Does Regionalism Affect Trade Liberalization toward Nonmembers?
American Economic Review	2008	Endogenous Variety and the Gains from Trade
Quarterly Journal of Economics	2008	Estimating Trade Flows: Trading Partners and Trading Volumes
American Economic Review	2008	Firm-Level Heterogeneous Productivity and Demand Shocks: Evidence from Bangladesh
American Economic Review	2008	Historical Property Rights, Sociality, and the Emergence of Impersonal Exchange in Long-Distance Trade
REVIEW OF ECONOMIC STUDIES	2008	INTERNATIONAL RISK SHARING AND THE TRANSMISSION OF PRODUCTIVITY SHOCKS
American Economic Review	2008	Made in America? The New World, the Old, and the Industrial Revolution
Review of Economic Studies	2008	Make Trade Not War?
Review of Economic Studies	2008	Market Size, Trade, and Productivity
American Economic Review	2008	Pricing-to-Market, Trade Costs, and International Relative Prices
American Economic Review	2008	R&D Investments, Exporting, and the Evolution of Firm Productivity
REVIEW OF ECONOMICS AND STATISTICS	2008	THE PUZZLING PERSISTENCE OF THE DISTANCE EFFECT ON BILATERAL TRADE
American Economic Review	2008	Trade Costs, 1870-2000
WORLD BANK ECONOMIC REVIEW	2008	TRADE LIBERALIZATION AND GROWTH: NEW EVIDENCE
American Economic Review	2008	Trade Policy and Loss Aversion
Quarterly Journal of Economics	2008	Trade, Quality Upgrading, and Wage Inequality in the Mexican Manufacturing Sector
AMERICAN ECONOMIC REVIEW	2008	TRADING TASKS: A SIMPLE THEORY OF OFFSHORING
American Economic Review	2008	Optimal Tariffs and Market Power: The Evidence
American Economic Review	2008	Contracts, Hold-Up, and Exports: Textiles and Opium in Colonial India
American Economic Review	2008	EU Institutional Reform: Evidence on Globalization and International Cooperation
Review of Economic Studies	2008	Trading Population for Productivity: Theory and Evidence
American Economic Review	2007	A Political-Economy Theory of Trade Agreements
Review of Economic Studies	2007	Are Preferential Trade Agreements with Non-trade Objectives a Stumbling Block for Multilateral Liberalization?
REVIEW OF ECONOMIC STUDIES	2007	COMPARATIVE ADVANTAGE AND HETEROGENEOUS FIRMS
JOURNAL OF INTERNATIONAL ECONOMICS	2007	DO FREE TRADE AGREEMENTS ACTUALLY INCREASE MEMBERS' INTERNATIONAL TRADE?
ECOLOGICAL ECONOMICS	2007	EXAMINING THE GLOBAL ENVIRONMENTAL IMPACT OF REGIONAL CONSUMPTION ACTIVITIES - PART 2: REVIEW OF INPUT-OUTPUT MODELS FOR THE ASSESSMENT OF ENVIRONMENTAL IMPACTS EMBODIED IN TRADE
JOURNAL OF THE EUROPEAN ECONOMIC ASSOCIATION	2007	EXPORT-PLATFORM FOREIGN DIRECT INVESTMENT
JOURNAL OF ECONOMIC PERSPECTIVES	2007	FIRMS IN INTERNATIONAL TRADE
Review of Economic Studies	2007	Institutional Quality and International Trade

American Economic Review	2007	Pricing-to-Market in a Ricardian Model of International Trade
Quarterly Journal of Economics	2007	Relationship-Specificity, Incomplete Contracts, and the Pattern of Trade
Journal of Political Economy	2007	Sorting It Out: International Trade with Heterogeneous Workers
American Economic Review	2007	Trade Flow Dynamics with Heterogeneous Firms
American Economic Review	2007	Trade Liberalization, Intermediate Inputs, and Productivity: Evidence from Indonesia
JOURNAL OF ECONOMIC PERSPECTIVES	2007	TRANSPORTATION COSTS AND INTERNATIONAL TRADE IN THE SECOND ERA OF GLOBALIZATION
American Economic Review	2007	Unbalanced Trade
American Economic Review	2007	Pricing to Habits and the Law of One Price
Econometrica	2007	Market Entry Costs, Producer Heterogeneity, and Export Dynamics
Review of Economic Studies	2007	Beyond Icebergs: Towards a Theory of Biased Globalization
American Economic Review	2006	Accounting for the Growth of MNC-Based Trade Using a Structural Model of U.S. MNCs
American Economic Review	2006	Do Labor Issues Matter in the Determination of U.S. Trade Policy? An Empirical Reevaluation
QUARTERLY JOURNAL OF ECONOMICS	2006	GLOBALIZATION AND THE GAINS FROM VARIETY
American Economic Review	2006	Helping Infant Economies Grow: Foundations of Trade Policies for Developing Countries
American Economic Review	2006	Preferential Trade Agreements as Stumbling Blocks for Multilateral Trade Liberalization: Evidence for the United States
JOURNAL OF INTERNATIONAL ECONOMICS	2006	PRODUCT QUALITY AND THE DIRECTION OF TRADE
JOURNAL OF INTERNATIONAL ECONOMICS	2006	SURVIVAL OF THE BEST FIT: EXPOSURE TO LOW-WAGE COUNTRIES AND THE (UNEVEN) GROWTH OF US MANUFACTURING PLANTS
American Economic Review	2006	Trade and the Great Divergence: The Family Connection
JOURNAL OF ECONOMIC LITERATURE	2006	TRADE, FDI, AND THE ORGANIZATION OF FIRMS
JOURNAL OF DEVELOPMENT ECONOMICS	2006	WHAT MATTERS FOR FINANCIAL DEVELOPMENT? CAPITAL CONTROLS, INSTITUTIONS, AND INTERACTIONS
American Economic Review	2006	Globalization and Emerging Markets: With or Without Crash?
American Economic Review	2006	Estimating the Effects of Global Patent Protection in Pharmaceuticals: A Case Study of Quinolones in India
American Economic Review	2006	Will International Rules on Subsidies Disrupt the World Trading System?
American Economic Review	2006	National Treatment in the GATT
Quarterly Journal of Economics	2006	Offshoring in a Knowledge Economy
JOURNAL OF INTERNATIONAL ECONOMICS	2005	A SIMPLE MODEL OF FIRM HETEROGENEITY, INTERNATIONAL TRADE, AND WAGES
American Economic Review	2005	A Spatial Theory of Trade
American Economic Review	2005	An Empirical Assessment of the Comparative Advantage Gains from Trade: Evidence from Japan
JOURNAL OF MONETARY ECONOMICS	2005	DETERMINANTS OF BUSINESS CYCLE COMOVEMENT: A ROBUST ANALYSIS
JOURNAL OF INTERNATIONAL ECONOMICS	2005	EXPORTING RAISES PRODUCTIVITY IN SUB-SAHARAN AFRICAN MANUFACTURING FIRMS
American Economic Review	2005	Implications of Intellectual Property Rights for Dynamic Gains from Trade
Quarterly Journal of Economics	2005	International Trade and Macroeconomic Dynamics with Heterogeneous Firms
REVIEW OF ECONOMIC STUDIES	2005	OUTSOURCING IN A GLOBAL ECONOMY
Quarterly Journal of Economics	2005	Rent Destruction and the Political Viability of Free Trade Agreements
American Economic Review	2005	The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth
AMERICAN ECONOMIC REVIEW	2005	THE VARIETY AND QUALITY OF A NATION'S EXPORTS
American Economic Review	2005	The Impact of Outsourcing to China on Hong Kong's Labor Market
American Economic Review	2005	Incomplete Contracts and the Product Cycle
American Economic Review	2005	Distance, Time, and Specialization: Lean Retailing in General Equilibrium
American Economic Review	2005	Wealth as a Determinant of Comparative Advantage
Quarterly Journal of Economics	2005	A Protectionist Bias in Majoritarian Politics
Quarterly Journal of Economics	2005	Ownership and Control in Outsourcing to China: Estimating the Property-Rights Theory of the Firm
Quarterly Journal of Economics	2004	Across-Product versus Within-Product Specialization in International Trade
American Economic Review	2004	Dissecting Trade: Firms, Industries, and Export Destinations
American Economic Review	2004	Do We Really Know That the WTO Increases Trade?
JOURNAL OF INTERNATIONAL ECONOMICS	2004	ECONOMIC DETERMINANTS OF FREE TRADE AGREEMENTS
JOURNAL OF INTERNATIONAL ECONOMICS	2004	ECONOMIC GEOGRAPHY AND INTERNATIONAL INEQUALITY
American Economic Review	2004	Export versus FDI with Heterogeneous Firms
American Economic Review	2004	Factor Proportions and the Structure of Commodity Trade
JOURNAL OF POLITICAL ECONOMY	2004	GLOBAL SOURCING
REVIEW OF ECONOMICS AND STATISTICS	2004	MAPPING THE TWO FACES OF R&D: PRODUCTIVITY GROWTH IN A PANEL OF OECD INDUSTRIES
American Economic Review	2004	On the Measurement of Product Variety in Trade
Journal of Political Economy	2004	The Distribution of Talent and the Pattern and Consequences of International Trade
Journal of Political Economy	2004	The Factor Content of Bilateral Trade: An Empirical Test
American Economic Review	2004	The Home-Market Effect and Bilateral Trade Patterns
American Economic Review	2004	The Long and Short of the Canada-U.S. Free Trade Agreement
Quarterly Journal of Economics	2004	Trade and Productivity
JOURNAL OF ECONOMIC LITERATURE	2004	TRADE COSTS
REVIEW OF ECONOMICS AND STATISTICS	2004	TRADE, FINANCE, SPECIALIZATION, AND SYNCHRONIZATION
JOURNAL OF ECONOMIC LITERATURE	2004	TRADE, GROWTH, AND THE ENVIRONMENT
American Economic Review	2004	Variety Growth and World Welfare
American Economic Review	2004	Why Is Manufacturing Trade Rising Even as Manufacturing Output Is Falling?
American Economic Review	2004	International Protection of Intellectual Property
American Economic Review	2004	Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers through Backward Linkages

American Economic Review	2004	Financial Opening and Development: Evidence and Policy Controversies
American Economic Review	2004	Financial Openness, Sudden Stops, and Current-Account Reversals
American Economic Review	2004	Dynamic Pricing in the Presence of Antidumping Policy: Theory and Evidence
Journal of Political Economy	2004	Shipping the Good Apples Out? An Empirical Confirmation of the Alchian-Allen Conjecture
Journal of Political Economy	2004	A Direct Test of the Theory of Comparative Advantage: The Case of Japan
Journal of Political Economy	2003	Can Vertical Specialization Explain the Growth of World Trade?
JOURNAL OF FINANCIAL ECONOMICS	2003	CULTURE, OPENNESS, AND FINANCE
American Economic Review	2003	Exchange-Rate Regimes and International Trade: Evidence from the Classical Gold Standard Era
Quarterly Journal of Economics	2003	Firms, Contracts, and Trade Structure
AMERICAN ECONOMIC REVIEW	2003	GRAVITY WITH GRAVITAS: A SOLUTION TO THE BORDER PUZZLE
JOURNAL OF MONETARY ECONOMICS	2003	INSTITUTIONS, TRADE, AND GROWTH
REVIEW OF ECONOMIC STUDIES	2003	PATTERNS OF SKILL PREMIA
American Economic Review	2003	Plants and Productivity in International Trade
Journal of Political Economy	2003	Relative Factor Abundance and Trade
Econometrica	2003	The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity
Quarterly Journal of Economics	2003	The Rise and Fall of World Trade, 1870-1939
American Economic Review	2003	Trade Structure, Industrial Structure, and International Business Cycles
American Economic Review	2003	The Economic Significance of National Border Effects
American Economic Review	2003	Information, International Substitutability, and Globalization
American Economic Review	2003	A Theory of Defensive Skill-Biased Innovation and Globalization
American Economic Review	2003	One Size Fits All? Heckscher-Ohlin Specialization in Global Production
American Economic Review	2003	How Does Globalization Affect the Synchronization of Business Cycles?
American Economic Review	2003	Globalization and Its Challenges
American Economic Review	2003	Stages of Diversification
Journal of Political Economy	2003	Are Regional Trading Partners 'Natural'?
Journal of Political Economy	2003	Commercial Policy with Altruistic Voters
American Economic Review	2002	A Century of Missing Trade?
INTERNATIONAL ECONOMIC REVIEW	2002	AGGLOMERATION AND TRADE REVISITED
Quarterly Journal of Economics	2002	An Estimate of the Effect of Common Currencies on Trade and Income
American Economic Review	2002	Antidumping Investigations and the Pass-Through of Antidumping Duties and Exchange Rates
American Economic Review	2002	Cost of Protection: Where Do We Stand?
EUROPEAN ECONOMIC REVIEW	2002	DOES A CURRENCY UNION AFFECT TRADE? THE TIME-SERIES EVIDENCE
REVIEW OF ECONOMICS AND STATISTICS	2002	ETHNIC CHINESE NETWORKS IN INTERNATIONAL TRADE
JOURNAL OF INTERNATIONAL ECONOMICS	2002	FINANCIAL DEVELOPMENT AND INTERNATIONAL TRADE - IS THERE A LINK?
Review of Economic Studies	2002	Gradualism in Trade Agreements with Asymmetric Countries
American Economic Review	2002	Increasing Returns and All That: A View from Trade
REVIEW OF ECONOMICS AND STATISTICS	2002	INSECURITY AND THE PATTERN OF TRADE: AN EMPIRICAL INVESTIGATION
American Economic Review	2002	Interpreting the Tariff-Growth Correlation of the Late 19th Century
Journal of Political Economy	2002	On Theories Explaining the Success of the Gravity Equation
American Economic Review	2002	Protection for Sale: An Empirical Investigation: Comment
Econometrica	2002	Technology, Geography, and Trade
American Economic Review	2002	The Internet and International Trade in Services
American Economic Review	2002	The Mystery of the Excess Trade (Balances)
American Economic Review	2002	Trade and Poverty in the Poor Countries
Review of Economic Studies	2002	Trade Liberalization, Exit, and Productivity Improvement: Evidence from Chilean Plants
American Economic Review	2002	Transport Costs and the Geography of Arbitrage in Eighteenth-Century China
American Economic Review	2002	How Regional Blocs Affect Excluded Countries: The Price Effects of MERCOSUR
Quarterly Journal of Economics	2002	A Theory of Insidious Regionalism
Quarterly Journal of Economics	2002	The World Income Distribution
Review of Economic Studies	2002	Optimum Tariffs and Retaliation Revisited: How Country Size Matters
American Economic Review	2001	An Account of Global Factor Trade
JOURNAL OF ECONOMIC LITERATURE	2001	BUSINESS AND SOCIAL NETWORKS IN INTERNATIONAL TRADE
American Economic Review	2001	Commercial Policy in a 'Fragmented' World
American Economic Review	2001	Estimating the Knowledge-Capital Model of the Multinational Enterprise
American Economic Review	2001	Guns, Butter, and Openness: On the Relationship between Security and Trade
American Economic Review	2001	Increasing Returns versus National Product Differentiation as an Explanation for the Pattern of U.S.-Canada Trade
WORLD BANK ECONOMIC REVIEW	2001	INFRASTRUCTURE, GEOGRAPHICAL DISADVANTAGE, TRANSPORT COSTS, AND TRADE
American Economic Review	2001	International Coordination of Trade and Domestic Policies
American Economic Review	2001	International Trade and Business Cycles: Is Vertical Specialization the Missing Link?
Review of Economic Studies	2001	International Trade and Currency Exchange
American Economic Review	2001	Is Free Trade Good for the Environment?
American Economic Review	2001	National Money as a Barrier to International Trade: The Real Case for Currency Union
JOURNAL OF INTERNATIONAL ECONOMICS	2001	THE GROWTH OF WORLD TRADE: TARIFFS, TRANSPORT COSTS, AND INCOME SIMILARITY
JOURNAL OF INTERNATIONAL ECONOMICS	2001	THE NATURE AND GROWTH OF VERTICAL SPECIALIZATION IN WORLD TRADE
American Economic Review	2001	Trade and Exposure
EUROPEAN ECONOMIC REVIEW	2001	TRADE IN CAPITAL GOODS
CANADIAN JOURNAL OF ECONOMICS REVUE CANADIENNE D ECONOMIQUE	2001	USING THE GRAVITY EQUATION TO DIFFERENTIATE AMONG ALTERNATIVE THEORIES OF TRADE
QUARTERLY JOURNAL OF ECONOMICS	2001	WELFARE AND MACROECONOMIC INTERDEPENDENCE

American Economic Review	2001	The Role of International Fragmentation in the Development Process
American Economic Review	2001	Cross-Country Technology Diffusion: The Case of Computers
American Economic Review	2001	Market Trade in Patents and the Rise of a Class of Specialized Inventors in the 19th-Century United States
Quarterly Journal of Economics	2001	Domestic Policies, National Sovereignty, and International Economic Institutions
Econometrica	2001	A Dynamic Equilibrium Model of International Portfolio Holdings
Journal of Political Economy	2000	A Ricardian Model with a Continuum of Goods under Nonhomothetic Preferences: Demand Complementarities, Income Distribution, and North-South Trade
American Economic Review	2000	Aggregation Bias in the Factor Content of Trade: Evidence from U.S. Manufacturing
American Economic Review	2000	Beyond the Algebra of Explanation: HOV for the Technology Age
Quarterly Journal of Economics	2000	Different Paths to Free Trade: The Gains from Regionalism
American Economic Review	2000	Diversity and Trade
American Economic Review	2000	Does Exchange-Rate Stability Increase Trade and Welfare?
American Economic Review	2000	International Trade as an 'Integrated Equilibrium': New Perspectives
JOURNAL OF INTERNATIONAL ECONOMICS	2000	ON CRISES, CONTAGION, AND CONFUSION
American Economic Review	2000	Productivity Levels and International Competitiveness between Canadian and U.S. Industries
JOURNAL OF INTERNATIONAL ECONOMICS	2000	THE THEORY OF ENDOWMENT, INTRA-INDUSTRY AND MULTI-NATIONAL TRADE
American Economic Review	2000	Economic Integration and Political Disintegration
American Economic Review	2000	'Globalization' and Vertical Structure
American Economic Review	2000	Wage Shocks and North American Labor-Market Integration
American Economic Review	1999	Aid, Nontraded Goods, and the Transfer Paradox in Small Countries
AMERICAN ECONOMIC REVIEW	1999	AN ECONOMIC THEORY OF GATT
AMERICAN ECONOMIC REVIEW	1999	COOPERATIVE INVESTMENTS AND THE VALUE OF CONTRACTING
American Economic Review	1999	Discrepancies in International Data: An Application to China-Hong Kong Entrepot Trade
American Economic Review	1999	Does Trade Cause Growth?
American Economic Review	1999	Endogenous Lobby Formation and Endogenous Protection: A Long-Run Model of Trade Policy Determination
JOURNAL OF INTERNATIONAL ECONOMICS	1999	EXCEPTIONAL EXPORTER PERFORMANCE: CAUSE, EFFECT, OR BOTH?
JOURNAL OF ECONOMIC LITERATURE	1999	EXPLAINING AFRICAN ECONOMIC PERFORMANCE
JOURNAL OF INTERNATIONAL ECONOMICS	1999	INTERNATIONAL TRADE AND INDUSTRIAL UPGRADING IN THE APPAREL COMMODITY CHAIN
JOURNAL OF INTERNATIONAL ECONOMICS	1999	NETWORKS VERSUS MARKETS IN INTERNATIONAL TRADE
AMERICAN ECONOMIC REVIEW	1999	PROTECTION FOR SALE: AN EMPIRICAL INVESTIGATION
QUARTERLY JOURNAL OF ECONOMICS	1999	THE IMPACT OF OUTSOURCING AND HIGH-TECHNOLOGY CAPITAL ON WAGES: ESTIMATES FOR THE UNITED STATES, 1979-1990
EUROPEAN ECONOMIC REVIEW	1999	THE RISE AND FALL OF REGIONAL INEQUALITIES
American Economic Review	1999	The Role of Multilateral Institutions in International Trade Cooperation
American Economic Review	1999	Voluntary Export Restraints on Automobiles: Evaluating a Trade Policy
American Economic Review	1999	A Schumpeterian Model of Protection and Relative Wages
Journal of Political Economy	1999	Effort, Wages, and the International Division of Labor
Review of Economic Studies	1999	Learning by Doing, Precommitment and Infant-Industry Promotion
EUROPEAN ECONOMIC REVIEW	1998	ARE INTERNATIONAL R & D SPILLOVERS TRADE-RELATED? ANALYZING SPILLOVERS AMONG RANDOMLY MATCHED TRADE PARTNERS
American Economic Review	1998	Change in U.S. Tariffs: The Role of Import Prices and Commercial Policies
American Economic Review	1998	Does European Unemployment Prop Up American Wages? National Labor Markets and Global Trade
JOURNAL OF ECONOMIC PERSPECTIVES	1998	INTEGRATION OF TRADE AND DISINTEGRATION OF PRODUCTION IN THE GLOBAL ECONOMY
JOURNAL OF INTERNATIONAL ECONOMICS	1998	MULTINATIONAL FIRMS AND THE NEW TRADE THEORY
JOURNAL OF PUBLIC ECONOMICS	1998	OPENNESS, COUNTRY SIZE AND GOVERNMENT
ECONOMIC JOURNAL	1998	OPENNESS, PRODUCTIVITY AND GROWTH: WHAT DO WE REALLY KNOW?
ECONOMIC JOURNAL	1998	THE ENDOGENEITY OF THE OPTIMUM CURRENCY AREA CRITERIA
American Economic Review	1998	The Home Market, Trade, and Industrial Structure
Journal of Political Economy	1998	The Value of Trade Agreements in the Presence of Political Pressures
American Economic Review	1998	Voting for Protection: Does Direct Foreign Investment Influence Legislator Behavior?
JOURNAL OF POLITICAL ECONOMY	1998	WHY DO MORE OPEN ECONOMIES HAVE BIGGER GOVERNMENTS?
American Economic Review	1998	Industrial Development and the Convergence Question
Quarterly Journal of Economics	1998	Is Learning by Exporting Important? Micro-dynamic Evidence from Colombia, Mexico, and Morocco
Quarterly Journal of Economics	1998	Regionalism and Multilateralism: A Political Economy Approach
Journal of Political Economy	1998	Regionalism in a Multilateral World
American Economic Review	1997	A Political-Economic Analysis of Free-Trade Agreements
American Economic Review	1997	An Empirical Assessment of the Proximity-Concentration Trade-off between Multinational Sales and Trade
Journal of Political Economy	1997	Critical Evidence on Comparative Advantage? North-North Trade in a Multilateral World
Journal of Political Economy	1997	Gains from Trade, Inefficiency of Government Programs, and the Net Economic Effects of Trading
QUARTERLY JOURNAL OF ECONOMICS	1997	GROWTH AND INTERDEPENDENCE
WORLD BANK ECONOMIC REVIEW	1997	OPENNESS AND WAGE INEQUALITY IN DEVELOPING COUNTRIES: THE LATIN AMERICAN CHALLENGE TO EAST ASIAN CONVENTIONAL WISDOM
American Economic Review	1997	Per Capita Income Convergence and the Role of International Trade
American Economic Review	1997	Size, Sunk Costs, and Judge Bowker's Objection to Free Trade
AMERICAN ECONOMIC REVIEW	1997	TECHNOLOGY, FACTOR SUPPLIES, AND INTERNATIONAL SPECIALIZATION: ESTIMATING THE NEOCLASSICAL MODEL
American Economic Review	1997	Trade Liberalization Reforms and the World Bank
American Economic Review	1997	Trade Policy and Economic Development: How We Learn
American Economic Review	1997	Trade Policy, Growth, and Income Distribution
American Economic Review	1997	Trade Reform and Uniform Import Tariffs: The Chilean Experience
American Economic Review	1997	Using International and Japanese Regional Data to Determine When the Factor Abundance Theory of Trade Works

American Economic Review	1997	A Coalition-Formation Approach to Equilibrium Federations and Trading Blocs
American Economic Review	1997	International Labor Flows and National Wages

Appendix B

Appendix B: word frequency development in the sample abstracts (the top 100 words)

token	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
country	0.029	0.019	0.008	0.017	0.019	0.022	0.028	0.032	0.026	0.021	0.026	0.016	0.016	0.021	0.019	0.017	0.021	0.014	0.012	0.017	0.018
model	0.019	0.013	0.017	0.016	0.017	0.017	0.017	0.013	0.024	0.017	0.027	0.025	0.012	0.020	0.019	0.013	0.017	0.018	0.029	0.013	0.019
firm	0.000	0.011	0.013	0.006	0.006	0.001	0.010	0.007	0.022	0.010	0.015	0.015	0.009	0.012	0.019	0.034	0.017	0.016	0.020	0.028	0.032
export	0.006	0.006	0.012	0.006	0.001	0.006	0.010	0.007	0.021	0.000	0.011	0.011	0.003	0.010	0.010	0.023	0.019	0.011	0.013	0.010	0.021
good	0.008	0.011	0.008	0.009	0.017	0.006	0.010	0.007	0.008	0.004	0.013	0.011	0.014	0.011	0.010	0.003	0.007	0.007	0.008	0.006	0.004
market	0.005	0.013	0.001	0.008	0.008	0.005	0.003	0.010	0.009	0.011	0.005	0.017	0.010	0.012	0.011	0.012	0.013	0.007	0.009	0.010	0.008
international	0.014	0.013	0.009	0.016	0.012	0.009	0.009	0.008	0.009	0.006	0.018	0.009	0.005	0.008	0.008	0.011	0.003	0.006	0.004	0.003	0.004
cost	0.002	0.008	0.008	0.003	0.006	0.005	0.003	0.012	0.013	0.002	0.014	0.011	0.004	0.011	0.004	0.006	0.005	0.012	0.009	0.010	0.009
import	0.010	0.002	0.001	0.001	0.002	0.004	0.006	0.006	0.005	0.009	0.006	0.005	0.015	0.016	0.006	0.004	0.020	0.012	0.013	0.012	0.005
data	0.005	0.005	0.003	0.003	0.005	0.008	0.004	0.012	0.002	0.007	0.007	0.010	0.003	0.004	0.009	0.018	0.005	0.009	0.014	0.009	0.006
price	0.003	0.000	0.005	0.006	0.003	0.009	0.002	0.008	0.005	0.003	0.012	0.006	0.004	0.008	0.009	0.016	0.005	0.005	0.011	0.013	0.005
productivity	0.000	0.014	0.004	0.004	0.001	0.005	0.005	0.010	0.008	0.002	0.008	0.009	0.005	0.005	0.012	0.008	0.004	0.007	0.008	0.008	0.006
growth	0.005	0.006	0.007	0.004	0.007	0.011	0.007	0.004	0.004	0.014	0.002	0.007	0.000	0.015	0.003	0.000	0.005	0.005	0.001	0.011	0.005
product	0.000	0.003	0.009	0.002	0.002	0.003	0.003	0.010	0.009	0.007	0.001	0.000	0.007	0.013	0.008	0.007	0.010	0.007	0.002	0.006	0.005
estimate	0.003	0.003	0.007	0.002	0.003	0.010	0.002	0.004	0.001	0.007	0.002	0.008	0.000	0.004	0.004	0.005	0.003	0.010	0.009	0.010	0.010
industry	0.002	0.002	0.008	0.010	0.002	0.002	0.009	0.011	0.004	0.013	0.008	0.005	0.005	0.003	0.002	0.005	0.004	0.005	0.000	0.003	0.006
tariff	0.000	0.000	0.003	0.000	0.004	0.015	0.004	0.003	0.002	0.004	0.008	0.005	0.000	0.003	0.007	0.005	0.011	0.003	0.007	0.010	0.006
economy	0.010	0.013	0.005	0.003	0.005	0.004	0.002	0.006	0.011	0.009	0.002	0.006	0.005	0.005	0.006	0.004	0.004	0.005	0.005	0.003	0.004
policy	0.019	0.006	0.005	0.002	0.007	0.003	0.006	0.005	0.006	0.002	0.002	0.007	0.002	0.005	0.005	0.006	0.004	0.008	0.001	0.007	0.003
production	0.010	0.005	0.005	0.000	0.008	0.006	0.002	0.005	0.003	0.004	0.006	0.002	0.003	0.003	0.004	0.005	0.010	0.005	0.003	0.003	0.007
world	0.006	0.010	0.001	0.010	0.009	0.006	0.006	0.005	0.003	0.006	0.002	0.005	0.005	0.003	0.002	0.001	0.004	0.002	0.002	0.002	0.003
theory	0.005	0.000	0.001	0.007	0.002	0.007	0.004	0.009	0.002	0.003	0.002	0.001	0.005	0.003	0.006	0.012	0.006	0.005	0.002	0.003	0.002
domestic	0.003	0.006	0.001	0.003	0.006	0.001	0.004	0.001	0.004	0.002	0.011	0.005	0.008	0.004	0.005	0.001	0.002	0.005	0.004	0.007	0.002
income	0.006	0.008	0.008	0.003	0.003	0.004	0.003	0.002	0.002	0.004	0.001	0.002	0.003	0.000	0.011	0.001	0.002	0.010	0.008	0.004	0.007
wage	0.003	0.010	0.012	0.004	0.000	0.000	0.002	0.001	0.002	0.004	0.007	0.006	0.004	0.005	0.000	0.011	0.003	0.005	0.000	0.005	0.008
sector	0.005	0.002	0.003	0.004	0.000	0.003	0.002	0.003	0.004	0.009	0.005	0.002	0.002	0.005	0.002	0.001	0.005	0.010	0.010	0.003	0.009
economic	0.008	0.002	0.000	0.003	0.004	0.004	0.012	0.005	0.003	0.003	0.001	0.005	0.002	0.002	0.003	0.000	0.003	0.005	0.002	0.001	0.004
foreign	0.002	0.006	0.003	0.000	0.006	0.002	0.001	0.010	0.005	0.004	0.002	0.002	0.002	0.006	0.000	0.007	0.001	0.010	0.010	0.007	0.007
empirical	0.002	0.006	0.004	0.005	0.005	0.003	0.001	0.007	0.001	0.004	0.006	0.002	0.005	0.001	0.006	0.004	0.005	0.002	0.001	0.005	0.002
input	0.000	0.000	0.003	0.008	0.002	0.001	0.000	0.001	0.006	0.000	0.007	0.000	0.027	0.002	0.001	0.008	0.001	0.002	0.009	0.003	0.003
quality	0.000	0.000	0.000	0.000	0.000	0.002	0.001	0.003	0.003	0.004	0.003	0.005	0.012	0.003	0.011	0.008	0.000	0.004	0.001	0.003	0.010
welfare	0.000	0.002	0.004	0.006	0.002	0.003	0.002	0.002	0.005	0.008	0.003	0.002	0.002	0.003	0.003	0.003	0.001	0.005	0.008	0.012	0.000
capital	0.000	0.000	0.010	0.003	0.003	0.004	0.004	0.004	0.000	0.002	0.004	0.003	0.010	0.004	0.002	0.006	0.003	0.005	0.003	0.000	0.002
evidence	0.005	0.010	0.007	0.004	0.005	0.005	0.004	0.004	0.001	0.006	0.004	0.004	0.001	0.001	0.003	0.001	0.004	0.001	0.002	0.001	0.005
gain	0.005	0.000	0.000	0.001	0.001	0.001	0.001	0.003	0.004	0.004	0.005	0.006	0.003	0.006	0.003	0.001	0.011	0.008	0.004	0.003	0.001
technology	0.008	0.000	0.004	0.007	0.007	0.003	0.004	0.001	0.003	0.000	0.004	0.000	0.011	0.004	0.006	0.001	0.005	0.001	0.002	0.003	0.001
equilibrium	0.006	0.003	0.004	0.012	0.003	0.003	0.002	0.001	0.006	0.003	0.002	0.001	0.003	0.003	0.002	0.003	0.003	0.003	0.003	0.004	0.005
important	0.003	0.003	0.007	0.006	0.002	0.008	0.004	0.004	0.006	0.004	0.002	0.002	0.004	0.002	0.001	0.003	0.003	0.001	0.000	0.000	0.002
demand	0.000	0.000	0.003	0.001	0.002	0.002	0.001	0.002	0.006	0.004	0.006	0.004	0.001	0.003	0.007	0.003	0.004	0.005	0.002	0.003	0.010
study	0.000	0.002	0.003	0.005	0.002	0.002	0.001	0.005	0.003	0.009	0.003	0.003	0.003	0.002	0.006	0.002	0.002	0.003	0.008	0.003	0.002
manufacture	0.003	0.002	0.001	0.002	0.003	0.003	0.001	0.003	0.007	0.003	0.004	0.001	0.004	0.002	0.002	0.002	0.003	0.007	0.000	0.004	0.006
bilateral	0.006	0.002	0.005	0.002	0.002	0.009	0.004	0.002	0.002	0.003	0.003	0.005	0.002	0.002	0.004	0.002	0.001	0.000	0.000	0.003	0.000
liberalization	0.003	0.002	0.001	0.000	0.001	0.001	0.000	0.000	0.003	0.006	0.002	0.014	0.003	0.002	0.001	0.003	0.006	0.001	0.003	0.007	0.005
worker	0.003	0.002	0.007	0.001	0.000	0.000	0.000	0.002	0.006	0.002	0.004	0.001	0.003	0.002	0.000	0.013	0.001	0.008	0.001	0.001	0.005
output	0.000	0.000	0.001	0.007	0.003	0.002	0.002	0.001	0.000	0.001	0.004	0.002	0.011	0.003	0.003	0.004	0.004	0.001	0.001	0.003	0.004
exchange	0.003	0.000	0.001	0.007	0.006	0.007	0.002	0.002	0.000	0.000	0.005	0.006	0.002	0.001	0.000	0.003	0.000	0.001	0.000	0.000	0.002
labor	0.000	0.002	0.003	0.006	0.003	0.001	0.004	0.003	0.001	0.006	0.001	0.000	0.000	0.002	0.000	0.004	0.006	0.005	0.000	0.003	0.004
plant	0.002	0.002	0.001	0.000	0.000	0.006	0.002	0.002	0.000	0.003	0.002	0.009	0.010	0.001	0.004	0.004	0.000	0.002	0.000	0.001	0.001
do	0.002	0.005	0.004	0.003	0.002	0.003	0.002	0.002	0.004	0.003	0.002	0.002	0.002	0.001	0.002	0.001	0.003	0.001	0.002	0.001	0.004
explain	0.003	0.005	0.003	0.003	0.002	0.003	0.001	0.002	0.003	0.002	0.003	0.004	0.002	0.004	0.003	0.002	0.002	0.001	0.002	0.001	0.004
other	0.000	0.003	0.003	0.000	0.002	0.004	0.004	0.004	0.000	0.002	0.002	0.002	0.002	0.005	0.002	0.003	0.002	0.002	0.001	0.003	0.003
exporter	0.000	0.005	0.008	0.000	0.000	0.001	0.001	0.002	0.003	0.000	0.002	0.005	0.000	0.001	0.002	0.006	0.005	0.005	0.005	0.003	0.001
investment	0.003	0.000	0.008	0.001	0.003	0.001	0.001	0.005	0.001	0.006	0.002	0.003	0.002	0.001	0.002	0.000	0.000	0.001	0.008	0.003	0.005
financial	0.000	0.000	0.000	0.001	0.000	0.003	0.003	0.012	0.001	0.010	0.000	0.000	0.002	0.001	0.002	0					

Appendix C

Analysis of cited references in the trade debate sample

For the analysis of economic field journals, we classified journals in the cited references data according to the following fields:

field	description
Econ and Agriculture	Agricultural Economics and other topic linking economics with agriculture
Econ and History	Economic History and History of Economic (ideas)
Heterodox Economics	Schools of Heterodox economic thought
Econ and Social	Economic Sociology, Socio-Economics and all other topics linking economics to social aspects
Econ and Development	Economic Development and Development Economics
Econ and Environment	Environmental and Resource Economics
Econ and Geography	Economic Geography and all fields linking Economics to aspects of geography
Econ and Psychology	Economic Psychology and all fields linking Economics with aspects of psychology
Econ and Law	Economic Law and economic analysis of Law

Note that we only classified journals which are not listed in our trade debate sample (For instance, the Journal of Development Economics is listed in TOPCITED and thus not included in “Econ and Development”)

For the analysis of non-economic disciplines, we classified journals in the cited references data according to the following disciplines:

discipline	notes
Business and Management	includes Organization Science
Legal Studies	
Health Sciences	
Sociology	
Political Science	
Psychology	
Environmental Sciences	
Multidisciplinary	includes generalist journals and journals covering multiple disciplines
Geography	
History	
Statistics and Mathematics	
Medicine	
Natural Sciences	
Theology	

Engineering	
Criminology	
Anthropology	
Educational Science	
Agriculture	
Computer Science	
Philosophy	
Development	
Political Economy	journals that are neither classified in "Political Science" nor "Heterodox Economics"
Transportation Research	