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How open are public procurement markets?

Patrick Messerlin

European University Institute
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European University Institute

Badia Fiesolana

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Abstract

This paper uses different sources of data to assess the relative level of openness of the public procurement markets of major trading nations, with a specific focus on the European Union (EU). The data reveal a picture that is very different from what is commonly argued to be the case by policymakers in the EU. The divergence between discourse and reality is in part a reflection of the absence of appropriate data on government sourcing patterns, suggesting greater effort is needed to both compile more accurate statistics and to take into account basic economic factors such as the size of economies.

Keywords

Government procurement, home bias, openness, trade negotiations.

Introduction*

In recent years there has been a “beauty contest” as to which country is the “most” open in terms of public procurement. This debate has been going on in the WTO forum, but has been even fiercer in the negotiation of preferential trade agreements (PTAs). In particular, some European Union Member States (EUMS) and the Commission have claimed that the EU public procurement markets are more open than those of its main large trading partners. More importantly for the future of the world trade regime, countries that believe they are the most open often hold the view that they are entitled to “reciprocity”—meaning that they have a “right” to get increased access to foreign public procurement markets without providing new concessions. In March 2012, for example, the EU Commission tabled a proposal for a regulation on “the access of third-country goods and services to the Union’s internal market in public procurement and procedures supporting negotiations on access of Union goods and services to the public procurement markets of third countries” (COM/2012/124/FINAL). The discussions on this Regulation often called for a so-called “reciprocity” clause which would open the legal possibility for the EU to deny access to its public procurement markets to firms originating from countries with public procurement markets that the EU regards as less open than its own markets.¹

A basic goal of this paper is to provide some robust evidence on the relative level of openness of public procurement markets of the major trading nations of the world. As the data suggest conclusions that are very different from the EU claims, an effort is made to understand the reasons for such a divergence between discourse and reality, and some lessons are drawn for trade policy initiatives and negotiations on public procurement matters.

1. How open are the EU public procurement markets? A brief review

The study that triggered the claims that the EU was more open than major trading partners was a background report commissioned by the European Commission in preparation for its 2012 proposal for a Regulation on public procurement (Ramboll Consulting Management and HTW Chur, 2012, hereafter the Ramboll study). This study was followed by an impact assessment working document (IAWD) which served as the analytical basis of the Directive proposal and which reinforced the Ramboll study’s conclusion [European Commission 2012]. For the sake of simplicity, the IAWD is examined in detail in Annex 1.

The Ramboll study tries to provide evidence on the relative openness of the EU public procurement markets compared to those of four large countries (Canada, China, Japan and the US). It relies on two key variables drawn from the National Accounts: (i) total demand of goods and services, defined as the sum of intermediate consumption plus final consumption expenditures, gross capital formation and exports for every sector; and (ii) imports of goods and services for every sector. Each of these two variables is split into a private and a public component. For instance, public sector demand (hereafter public demand) for goods and services is defined as the final consumption expenditure by governments plus the intermediate consumption by the sectors carrying out procurement procedures

* This paper revisits, expands and updates Messerlin and Miroudot (2012). I thank very much Sebastien Miroudot for continuous discussions on this topic and am grateful to Bernard Hoekman for very helpful comments. All remaining errors are my own.

¹ According to the Commission work programme for 2015, the proposal will be amended in line with the priorities of the current Commission. See http://ec.europa.eu/growth/single-market/public-procurement/international/index_en.htm

(for details, see Ramboll pp. 17-18).² Public sector imports of goods and services are defined accordingly.

The key data reported in the Ramboll study are summarized in its Table 6 which provides the shares of total—extra-EU plus intra-EU—public imports in public demand for goods and services for the 21 EUMS for which there are data (Britain is the only large missing EUMS) and the aggregate EU21 in 2005. These shares are reproduced in Table 1 under the heading of “ratio 1”.³ They suggest that the EU is more open than the four other countries. However, comparing EU ratio 1 with the ratio 1 of the four other countries—as the Ramboll study does—strongly over-estimate the relative openness of the EU public procurement markets simply because ratio 1 includes intra-EU imports. These should be considered as “domestic” trade. In analyses of trade in goods, the routine procedure is to compare the shares of extra-EU imports alone to GDP with the shares of imports to GDP for the EU partners.

² These industries are (i) electricity, gas and hot water supply, (ii) collection and purification of water, (iii) land transport and transport via pipelines, (iv) post and telecoms, (v) public administration and defense, compulsory social security, (vi) education, (vii) health and social work, and (viii) sewage, sanitation and similar activities.

³ There was no available data for six EUMS: Bulgaria, Cyprus, Latvia, Luxembourg, Malta and Britain.

Table 1. Penetration ratios of public procurement markets, selected countries

	Ratio 1	Ratio 2	Ratio 3	Ratio 2b	Ratio 4
	Total public imports to public demand	Estimated public intra-EU imports to total imports	Extra-EU public imports to public demand	Ratio 2 required for EUMS to be as open as Japan	Intra-EU public imports to public demand
	% [a]	% [b]	% [c]	[d]	% [c]
Austria	9.6	74.1	2.5	51.4	7.1
Belgium	7.0	74.2	1.8	33.1	5.2
Czech Rep.*	13.9	81.4	2.6	66.2	11.3
Denmark	5.6	65.1	2.0	16.3	3.6
Estonia*	12.5	76.3	3.0	62.6	9.5
Finland	7.0	61.2	2.7	32.8	4.3
France	5.8	61.0	2.3	19.6	3.6
Germany	6.5	58.3	2.7	28.3	3.8
Greece*	7.1	58.2	3.0	34.2	4.1
Hungary	12.6	68.4	4.0	62.8	8.6
Ireland*	9.3	66.7	3.1	49.9	6.2
Italy*	6.0	59.4	2.4	21.8	3.6
Lithuania	12.3	59.3	5.0	62.0	7.3
Netherlands*	6.8	49.4	3.4	31.0	3.3
Poland	6.1	65.3	2.1	23.1	4.0
Portugal*	8.5	76.6	2.0	44.8	6.5
Romania*	18.1	63.0	6.7	74.1	11.4
Slovak Rep.*	16.3	77.8	3.6	71.3	12.7
Slovenia*	11.1	79.4	2.3	57.9	8.8
Spain	8.3	62.8	3.1	43.8	5.2
Sweden*	5.7	70.4	1.7	17.4	4.0
EU21 [e]	9.3	67.1	3.1	49.9	6.3
EU21 [f]	7.0	61.8	2.7	33.4	4.3
Canada	6.9	--	6.9	--	--
China	6.1	--	6.1	--	--
Japan	4.7	--	4.7	--	--
USA	4.6	--	4.6	--	--

Source: Ramboll [2012]. Notes: Public imports mean public sector imports. [a] the source is Ramboll Table 6, page 24. The figures for Canada, China, Japan and the US are reported in this column because they were (wrongly) judged by the Ramboll study comparable with the ratio 1 for the EU. [b] shares of public intra-EU imports assuming that these shares are the same than the shares of public and private intra-EU imports (see text above) based on data drawn from Table 6 (EUMS not followed by a star) and from Table 8 (EUMS followed by a star) of the Ramboll study. [c] Ratio 3 are derived from ratios 1 and 2 and constitute the “penetration” ratios comparable to those for the four non-EU countries. The figures for Canada, China, Japan and the US are reported in this column because they are comparable with the ratios 3 for the EU. [d] Ratio 2b are the ratio of intra-EU public imports to EU total imports that are required for the EUMS and the EU21 to be as open as Japan’s public procurement markets (4.7 percent). [e] Unweighted average for the 21 EUMS with available data. [f] GDP-weighted average for the 21 EUMS with available data.

The correct comparison should thus have relied only on the shares of extra-EU public imports in EU public demand of goods and services. However, at the time the Ramboll study was undertaken, this was problematic as there was no systematic specific data on intra-EU and on extra-EU public imports. However, two alternative methods would have provided an imperfect, but acceptable solution to the data problem, and would have suggested a very different conclusion in terms of the relative openness of the EU public procurement markets compared to the others.

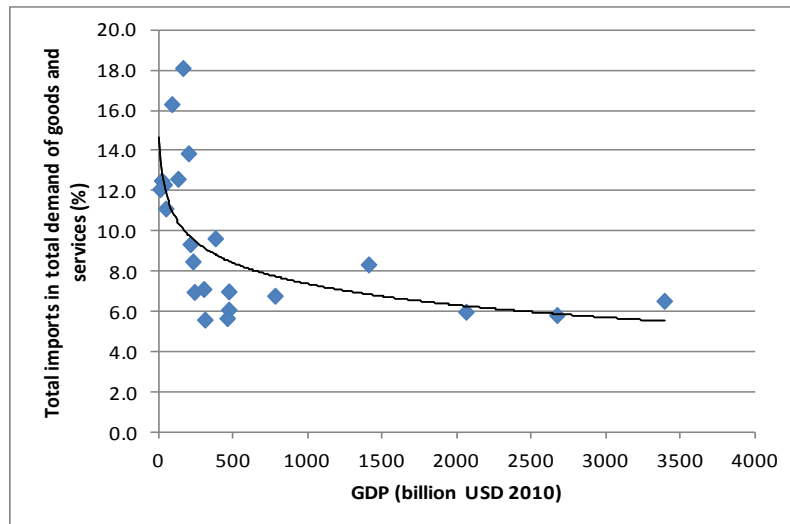
The first alternative method assumes that the shares of public intra-EU imports in public total (intra- and extra-EU) imports are the same as the shares of public and private intra-EU imports in total public and private (intra- and extra-EU) imports. Ratio 2 in Table 1 presents these estimated shares of public intra-EU imports (based on the shares reported in Tables 6 and 8 of the Ramboll study). Ratio 3, which is defined as $\text{ratio } 1 \cdot (1 - (\text{ratio } 2 / 100))$ provides a measure of EU “penetration ratios” (the

shares of extra-EU public imports in total demand for public goods and services for each EUMS and for the EU21 as a whole). This is the only indicator that is truly comparable to the penetration ratios of the four non-EU countries. In sharp contrast with ratio 1, ratio 3 indicates clearly that the EU public procurement markets are not more open than those of the four non-EU comparator countries.

The second alternative method is to calculate “ratio 2b” which is defined as the share of intra-EU public imports in EU total imports that would make EU public procurement markets “as open as” those of a non-EU country taken as a reference. In Table 1, Japan is used as the reference country because, at the time of the Ramboll study, public procurement issues were at the core of the preliminary discussions on a Japan-EU preferential trade agreement. Using this measure, for instance, France’s penetration ratio would be equivalent to Japan’s penetration ratio if the share of French intra-EU imports in France’s total imports would be only 19.6 percent—instead of 61 percent. Such a huge difference is highly unlikely.

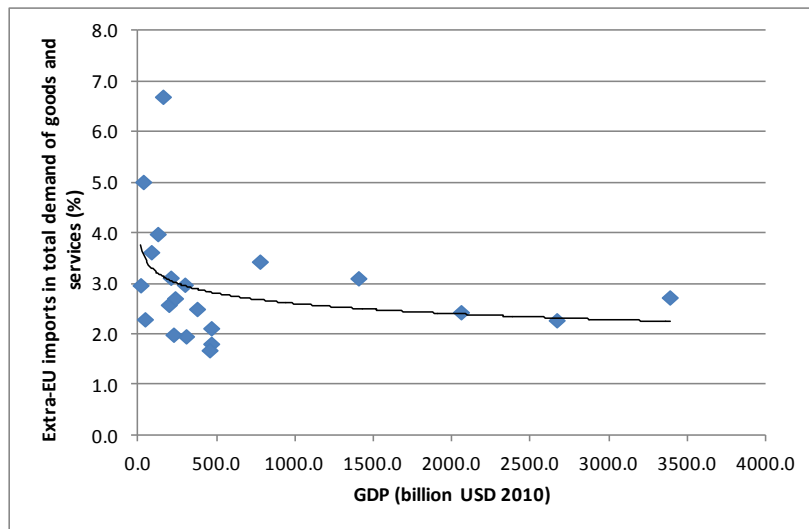
The data in Table 1 suggest three additional observations. First, Figure 1 plots the (logarithmic) correlation between EUMS ratio 1 and their GDP. This correlation is much higher for small countries, which makes sense as it seems reasonable that a small country will less easily satisfy its needs for goods and services for public procurement purposes by purchasing domestic goods and services than a large country which has a wider, more diverse domestic production base. Second, Figure 2 shows that the slope of the correlation using ratio 3 (based on only extra-EU public imports) is somewhat flatter than in Figure 1. This observation seems consistent with the following proposition: for some kinds of public procurement supplies are systematically less easily available in the EUMS economies, hence there is a need to have recourse to firms originating in the rest of world—whether the EUMS in question is small or large. This phenomenon explains, as least partly, the fact that the GDP-weighted average ratios for the EU are smaller than the unweighted average ratios (see Table 1).

Figure 1. GDP and ratio 1 (share of total public imports in public demand)



Sources: Table 1 and World Bank GDP data. Authors’ calculations.

Figure 2. GDP and ratio 3 (share of extra-EU public imports in public demand)



Sources. Table 1 and World Bank GDP data. Authors' calculations.

Lastly, ratio 4 reported in Table 1 (the difference between ratios 1 and 3) can be interpreted as the “penetration ratios” within the EU Internal Market. These ratios are often higher than ratio 3 for the non-EU countries, but not invariably. This last observation suggests that there is still a substantial way to go as far as the functioning of the EU Internal Market in terms of public procurement—a point re-examined below.

2. Openness of procurement markets: More evidence on key countries

The above findings—that EU public procurement markets are less open than those of its main trading partners—differs so much from the views expressed by the EU, and in particular by a few EU Member States (France and Germany), that it deserves to be backed up by more evidence in order to ensure this is a robust result.

The recent World Input-Output Database [Timmer *et al.*, 2012 and 2015, hereafter WIOD] is one source of information that can be used to undertake such a robustness test. It has three key advantages: (i) it covers goods and services; (ii) it provides country-specific data for the 14 largest economies in the world (with the EU counted as one), as well as for the individual EU Member States; and (iii) it does so on an annual basis starting from 1995 through 2011.⁴

Table 2 provides the “penetration” ratios (that is, ratio 3 in Table 1) for the 13 individual EU trading partners based on WIOD data. It also gives those ratios for the EU27 as a whole as well as for the EU2, a subset of two EU Member States (France and Germany) for reasons explained later. Table 2 deserves a preliminary observation related to the Great Crisis (since 2008). All the countries show a marked decline in penetration ratios in 2009-2010. The fall is quite large in many cases (more than 10 percent) except for two countries, Australia and India. These declines are followed by a bounce of variable magnitude, depending on the countries. There is little doubt that this evolution is, at least partly, related to the structure of the stimulus packages implemented after the 2008-2009 peak Crisis years. These packages are likely to have had a “domestic bias” for different reasons. In particular, they may have focused on public demand in the sectors having relatively low foreign penetration (a

⁴ The main difference between the WIOD data and the data used in the Ramboll study is that WIOD provides a balanced set of world input-output tables where national accounts have been fully harmonized across countries. The data are different but more comparable across economies. There are minor differences in the industry classification that do not allow us to replicate exactly the calculations of the Ramboll study but it does not put at risk our robustness test.

composition bias not necessarily driven by protectionist goals) or they may have used procedures discriminating against foreign competitors (a clear protectionist bias).

Table 2. Public procurement markets: import penetration (WIOD data)

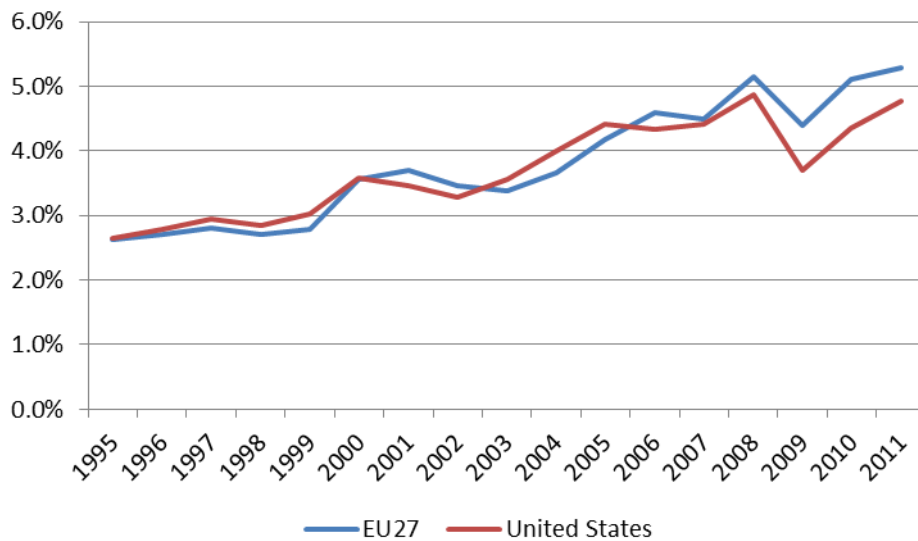
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
EU27 Extra	2.6%	2.7%	2.8%	2.7%	2.8%	3.6%	3.7%	3.5%	3.4%	3.7%	4.2%	4.6%	4.5%	5.1%	4.4%	5.1%	5.3%
EU2 Extra	2.2%	2.2%	2.4%	2.3%	2.3%	2.8%	3.1%	2.9%	2.8%	3.0%	3.4%	3.8%	3.9%	4.3%	3.4%	3.8%	3.9%
Australia	5.1%	5.0%	5.4%	5.4%	5.9%	5.9%	5.8%	6.1%	5.5%	5.9%	6.0%	5.9%	6.2%	6.0%	5.4%	5.3%	5.8%
Brazil	2.1%	2.0%	2.1%	2.1%	2.7%	3.1%	3.5%	3.5%	3.3%	3.3%	3.1%	2.9%	3.0%	3.3%	2.9%	3.2%	3.7%
Canada	4.2%	4.3%	4.6%	4.9%	5.1%	5.1%	5.0%	4.9%	4.8%	4.7%	4.9%	4.6%	4.6%	4.8%	4.8%	4.2%	4.3%
China	3.8%	3.1%	3.3%	2.8%	3.0%	3.4%	3.3%	3.6%	4.5%	5.5%	5.6%	5.7%	5.2%	4.9%	3.9%	4.5%	4.7%
India	4.2%	4.4%	4.0%	4.4%	4.5%	4.4%	4.0%	3.5%	3.4%	4.6%	5.8%	6.3%	6.3%	6.4%	5.8%	6.7%	6.2%
Indonesia	7.9%	7.8%	7.9%	13.9%	9.3%	11.4%	11.6%	9.5%	8.2%	9.9%	10.6%	8.9%	8.8%	8.9%	6.1%	6.8%	8.0%
Japan	1.9%	2.2%	2.3%	2.1%	2.0%	2.3%	2.3%	2.4%	2.5%	2.8%	3.2%	3.8%	4.2%	5.2%	3.4%	4.0%	4.8%
Korea	7.5%	7.5%	8.4%	8.1%	7.7%	9.6%	9.3%	8.9%	9.1%	9.7%	9.9%	9.9%	10.2%	14.0%	11.6%	12.0%	14.4%
Mexico	4.8%	4.9%	5.2%	5.1%	4.9%	5.2%	4.9%	4.5%	5.0%	5.6%	5.8%	5.9%	6.3%	6.5%	5.7%	6.5%	7.4%
Russia	3.3%	3.5%	3.6%	4.6%	6.2%	5.3%	4.7%	4.2%	4.4%	3.7%	3.8%	3.3%	3.1%	3.1%	2.4%	2.6%	3.2%
Taiwan	9.9%	10.1%	10.8%	11.9%	10.7%	10.5%	10.2%	11.3%	11.2%	12.4%	11.9%	12.9%	13.5%	16.7%	13.7%	15.7%	17.3%
Turkey	5.4%	7.3%	6.5%	5.2%	4.4%	5.8%	7.2%	8.3%	8.1%	8.8%	9.5%	11.3%	10.9%	5.1%	4.6%	4.8%	6.0%
United States	2.7%	2.8%	2.9%	2.8%	3.0%	3.6%	3.5%	3.3%	3.6%	4.0%	4.4%	4.3%	4.4%	4.9%	3.7%	4.4%	4.8%
Rest of World	6.4%	6.8%	6.9%	6.9%	6.7%	7.1%	7.2%	7.9%	8.4%	8.8%	9.4%	9.1%	9.1%	8.7%	7.3%	7.3%	6.7%
World	4.2%	4.5%	4.6%	4.6%	4.6%	5.1%	5.2%	5.2%	5.5%	6.0%	6.4%	6.7%	6.8%	7.2%	6.0%	6.4%	6.7%

Source: World Output-Input Database, November 2013. Authors' calculations.

The Transatlantic Trade and Investment Partnership (TTIP) negotiations make it particularly interesting to focus on the EU27 and US penetration ratios. As illustrated by Figure 3, these ratios were relatively similar from 1995 to 2009, but since then the EU27 ratios are higher than for the US. It is worth noting that the growth rate of the US penetration ratio is lower than the EU one since 2003, that is, a few years before the US measures strengthening the restrictions in US public procurement introduced in the aftermath of the 2008 crisis.

As the discussions on public procurement are very important in the TTIP negotiations, an additional database is used to check the trends suggested by Figure 3. This alternative database is the OECD Inter-Country Input-Output tables (hereafter OECD ICIO). These have been created for analyzing trade flows in value added. While similar to the data compiled by the WIOD project, the OECD ICIO data are different in several respects, and have pluses and minuses compared to the WIOD data. Among the minuses, the number of years covered is smaller, and data are reported on an annual basis only since 2008. Among the pluses, the data for 2010 and 2011 are based on more recent input-output tables released by the countries (as the OECD ICIO data were updated in June 2015). Figure 4, which is based on the OECD ICIO data, suggests the same catching up of the EU27 compared to the US. However, the sharp decline after 2008 in the US penetration ratios is not confirmed.

Figure 3. EU27 and US penetration ratios, 1995-2011 (based on WIOD)

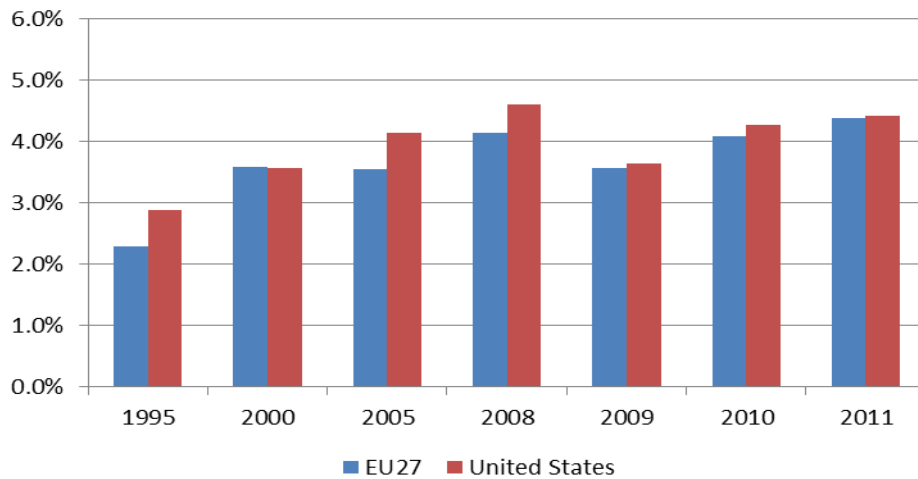


Source: World Output-Input Database, November 2013. Authors' calculations.

Another mega-PTA being negotiated by the EU involves Japan. Here it is preferable to focus on the EU2 (France and Germany) subset for two reasons. First, it allows taking into account the size effect of public demand underlined in section 1—larger countries tend to have smaller penetration ratios. The size of the EU2 combined public demand is very close to the Japanese public demand (1.1 to 1.2 times on the whole period), hence making the EU2 an appropriate set of EUMSs to compare to Japan.⁵ Second, it focuses on two Member States that have expressed serious reservations on opening PTA negotiations with Japan, and/or have taken an aggressive stance on opening the public procurement markets of key trading partners (Canada, US).

⁵ However, some caution is in order. The EU2 public demand is an aggregated figure of two economies which, individually, are significantly smaller than Japan (Germany and France are 0.6 and 0.5 times the Japanese economy). Hence, the EU2 penetration ratios are systematic over-estimates of what would have been the penetration ratios of a fully unified EU2 economy, since aggregating these two economies does not eliminate the fact that decisions have been taken in the context of these two notably smaller economies.

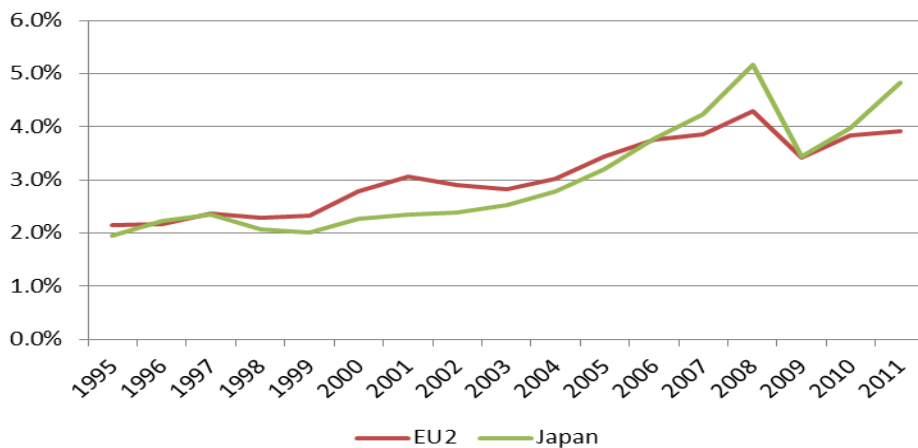
Figure 4. EU27 and US penetration ratios, selected years (based on OECD ICIO)



Source: OECD ICIO, June 2015. Authors' calculations.

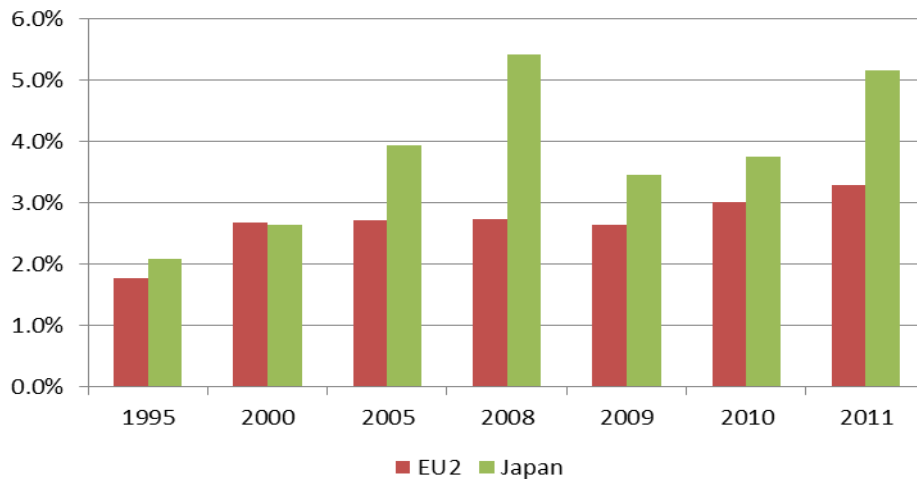
Figure 5, which is based on WIOD data, shows that Japan's penetration ratios have progressively caught up the EU2 ratios since 2003-2004. Since 2007 Japan is more open than the EU2, despite the intrinsic size-related bias of the EU2 data (see the note of caution in footnote 6). Figure 6, which uses OECD ICIO data, reinforces Figure 5: Japan's penetration ratio is higher than the EU2's as of 2005, and remains higher in subsequent years.

Figure 5. EU2 and Japan penetration ratios, 1995-2011 (based on WIOD)



Source: World Output-Input Database, November 2013. Authors' calculations.

Figure 6. EU2 and Japan penetration ratios, selected years (OECD ICIO data)



Source: OECD ICIO, June 2015. Authors' calculations.

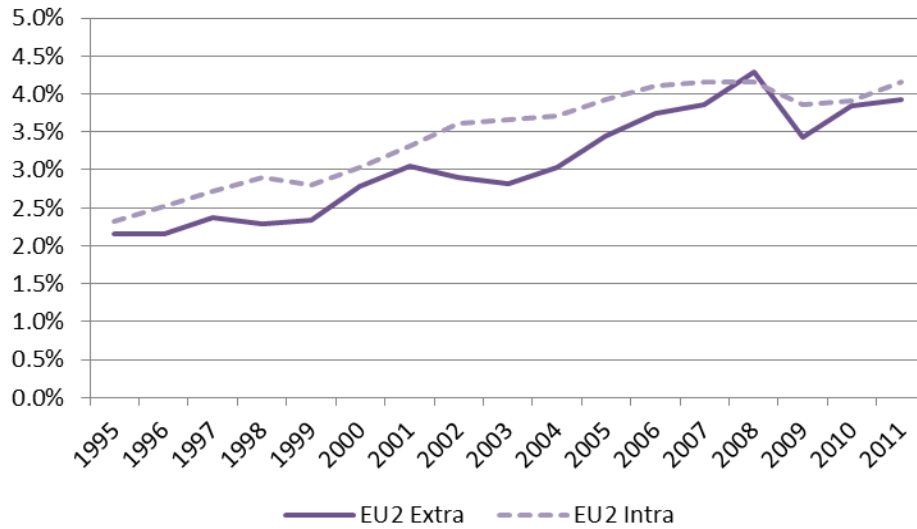
Finally, Table 3 reports data on the evolution of intra- and extra-EU penetration ratios for the EU27 and for the EU2. Since 2003, the average annual growth of the intra-EU2 penetration ratio has slowed down. It became smaller than the extra-EU2 ratio after 2008. This evolution may simply reflect more sluggish growth in the EU Member States, but may also reflect an Internal Market in public procurement which does not function well, at least to the extent that it involves these two EUMS. Results using OECD ICIO data (Figure 8) highlight the increasing similarity between the extra- and intra-EU ratios for the EU2.

Table 3. Intra-EU penetration ratios of public procurement markets (based on WIOD)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
EU27 Intra	3.2%	3.3%	3.5%	3.6%	3.6%	3.9%	4.1%	4.2%	4.2%	4.3%	4.3%	4.5%	4.6%	4.8%	4.5%	4.4%	4.7%
EU2 Intra	2.3%	2.5%	2.7%	2.9%	2.8%	3.0%	3.3%	3.6%	3.7%	3.7%	3.9%	4.1%	4.2%	4.2%	3.9%	3.9%	4.2%

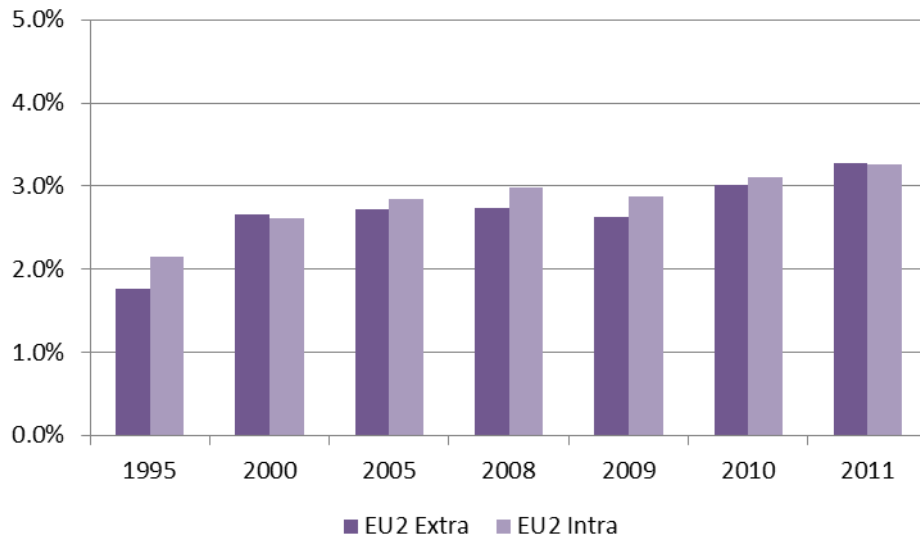
Source: World Output-Input Database, November 2013. Authors' calculations.

Figure 7. Intra and extra EU2 penetration ratios, 1995-2011 (based on WIOD)



Source: World Output-Input Database, November 2013. Authors' calculations.

Figure 8. Intra and extra EU2 penetration ratios, selected years (OECD ICIO)



Source: OECD ICIO, June 2015. Authors' calculations.

3. Divergence between discourse and reality

The data reported in Table 2 permit going beyond bilateral comparisons with the world's largest trading nations. They show that the EU and US public procurement markets are increasingly less open than those of most East Asian economies. These observations raise the following question: how can one explain the huge divergence between discourse and reality during the last years?

A first answer is provided by the absence of reliable information in the WTO-GPA forum. All the signatories of the WTO Government Procurement Agreement (GPA) have recognized that a huge effort should be made to collect much better data on the openness of public procurement markets, and to make their notifications much more comparable [Anderson 2012]. The current methodologies used for estimating the GPA-covered public procurements are so different among the signatories that it is impossible to reconcile them [Anderson et al. 2011, in particular footnotes 21 to 23].

These good intentions suggest exploring ways to improve on the current measures. The key question is whether it makes sense to continue to rely on the current indicators based on GPA commitments—such as the list of the public procurement markets (entities, sectors) covered. A parallel with trade in goods is useful for shedding some light on this issue. It comes to nobody’s mind to assess the openness of a country to trade in goods by focusing exclusively on the list of tariff concessions made by the country in question. Rather, assessments of countries’ openness routinely take into account the whole universe of goods (the Harmonized System) including the tariffs that a country may enforce without having necessarily negotiated them. This is in sharp contrast with the current way to assess openness in the GPA context which focuses only on the lists of products which have been subjected to negotiations for being liberalized. Not only is such a method not exhaustive, but it generates variable yardsticks, as these will reflect the wide differences in the types of goods and services procured and the heterogeneity of the public entities that are listed in national GPA commitments. It does not permit economically sound comparisons among countries.

There is thus a need to use an approach in public procurement similar to that used for trade in goods. Such an approach requires a unique definition of the whole set of economic activities potentially subjected to the universe of “public procurement”—independently from the commitments made by GPA signatories. As noted previously, there are two reasons why national accounts data are the only statistics to offer such a basis. First, public demand is the best common basis for assessing the relative size of the public procurements markets among economies since it takes into account every euro or dollar spent by any public authority, whether central, local or a specific entity. Second, corresponding public imports benefit from the extensive efforts that have been pursued during the last fifty years by the National Accounts authorities in every country in the world for collecting comparable data. Last but not least, National Accounts allow having data over time, independently from GPA commitments related to specific negotiations. In short, the GPA forum should consider to adopt a methodology based on the one followed in section 2 to assess levels and trends in openness of procurement markets.

4. Lessons for negotiations on public procurement markets

Four lessons can be drawn from the foregoing measurement exercise. The first two center on improving the preparation of the future negotiations; the two others concern ways to improve the negotiating techniques *per se*.

First, governments should refrain from claiming that their public procurement markets are more open than those of their trading partners without providing robust evidence. There are now enough data to quickly check such claims, making those that are not well-founded costly in terms of reputation for the governments that would adopt such a stance, hence ultimately weakening their negotiating leverage.

Second, “penetration ratios” in the case of large economies can be misleading in both an international as well as a domestic context. The EU offers a useful illustration of this. As shown by Figures 1 and 2, penetration ratios among the 27 EUMS vary by a factor of almost 5. Such a situation is much less likely for trade in goods: once imported in a given “region” of a large economy, goods can circulate freely to the other “regions” of the economy. The fact that tradability is much more limited in public procurement contracts implies that an “average” openness indicator for public

procurement in a large economy may easily be a meaningless average of “open” and “closed” regions within that economy. As a result, there is a need to start working on data on public procurement openness at the sub-central or sub-federal level for large economies—e.g., the US, India, Canada, China, etc. It is worth stressing that such efforts are useful in the domestic context as well. As illustrated above in the EU case (the only large economy for which there are data at the “sub-central” level), an average openness indicator reduces the incentives to open the most closed EU Member States not only vis-à-vis the rest of the world, but also vis-à-vis the other EU Member States.

The two other lessons to be drawn from our measurement exercise center on negotiating techniques *per se*. First, the evidence presented in this paper illustrates an intrinsic weakness of the notion of “reciprocity”. To make sense, such a notion requires two conditions: (i) the country stating such a claim should really be more open than its trading partner(s); and (ii) the threat associated with reciprocity—that is, closing the “more open” market if the trading partner does not open more its own markets without asking for concessions—should be credible. Checking whether this second condition is met is crucial.

Table 4. Relative size of the public procurement markets, selected countries (based on WIOD)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
EU27/USA	1.30	1.29	1.14	1.12	1.04	0.90	0.84	0.91	1.06	1.16	1.16	1.19	1.28	1.32	1.24	1.19	1.28
EU2/Japan	0.92	1.06	1.03	1.10	0.89	0.73	0.81	0.91	1.03	1.08	1.11	1.23	1.38	1.33	1.18	1.07	1.02
EU2/China	7.61	6.39	4.67	4.20	3.62	2.85	2.54	2.59	2.78	2.52	2.15	1.95	1.65	1.44	1.25	1.04	0.90

Source: World Output-Input Database, November 2013. Authors’ calculations.

For illustrative purposes, Table 4 shows that such credibility is unlikely even for a large trading partner: the ratios of EU public demand to the public demand of its three main trading partners are low (US and Japan) or have recently become low (China). The implication is that threats could easily end up in costly retaliations for the firms of the threatening entity—or worse, could induce other large trading partners to adopt a “reciprocity” tactic. As a result, the threat of a large trading country is meaningful only in case of (much) smaller trading partners. But then, it remains to be seen whether this situation has positive net benefits when one takes into account the substantial political costs that are likely to arise (the large country being perceived by the whole trade community as “bullying” the smaller countries).

The last lesson concerns a complex situation which is likely to emerge more and more often as time goes on. It is the case where goods and services are produced and delivered by state-owned entities ruled by the Government Procurement Agreement in one country while they are delivered in the other country by privately owned entities under private contract law. A good illustration of this case are the Japan-EU negotiations on a Free Trade Agreement in the rail sector. In both economies, passengers rail services (hereafter PRS) operators buy rail equipment. Almost all the PRS operators are publicly-owned in the EU, whereas in Japan some 70 percent of PRS are delivered by three privately-owned and economically healthy operators (JR-East, JR-Central and JR-West). Such a situation is frequent in many infrastructure sectors.

Using the Japan-EU rail illustration, what follows explores briefly the option to negotiate a specific chapter on the rail sector that would introduce “parallel” commitments for publicly-owned and private operators in a balanced and progressive way. The introduction (“*chapeau*”) of such a chapter could state that (i) the FTA’s ultimate goal is to improve the welfare of the European and Japanese train passengers, and that this goal requires a progressively improved market access in the rail supply markets of both partners; (ii) note that coping with prevailing legal differences (private/public operators) requires two sub-chapters, one addressing the issues raised by better access to markets dominated by private PRS operators (be in Japan or in the EU) and the other one addressing the issues raised by better access to markets dominated by publicly-owned PRS operators (again be in Japan or

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in the EU); and (iii) spell out the conditions under which a PRS operator would be listed in one or the other of these two sub-chapters, and the criteria that need to be met for it to be shifted from one sub-chapter to the other.

The sub-chapter devoted to state-owned operators would state that they should be perfectly consistent with the provisions of the WTO Government Procurement Agreement. The sub-chapter devoted to private operators would state that these operators should have equally transparent purchasing rules, and possibly clarify this statement in the negotiated text or under the form of voluntary codes of conduct to be followed by the private firms (indeed as done by the three private JR companies in the Japan-EU case). Finally, such provisions could be complemented by measures specifying a progressive liberalization of the covered operators when purchasing equipment. For instance, it could be agreed that the year Y will witness better market access for the purchases of (say rail) equipment by (possibly only a first group of) private operators and better market access for the public procurement of (say rail) equipment by (possibly only a first group of) publicly-owned operators, with both sets of operators having roughly of the same economic size. Such a progressive and balanced scheduling of improved market access would accommodate the differences in legal situations, while ensuring that benefits accrue to all the consumers in both signatories.

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Annex 1

The impact assessment working document (IAWD) is the analytical basis of the Directive proposal [European Commission 2012]. It consists in a cover text and 11 annexes. Its Annex 3 entitled “Problem analysis” is the key part of the IAWD in terms of market openness since it presents the Commission’s estimates of the level of openness of public procurement markets in the EU as a whole (there is no estimate by EU Member State) and in twelve major EU trading partners.

Table A1 recapitulates the figures of Tables 3 and 7 of the IAWD Annex 3 which summarizes the main findings.

- Column 1 presents the size (in billions of Euros) of the total public procurement markets above the thresholds as set by the Government Procurement Agreement (GPA) signed at the end of the Uruguay Round (1995).⁶
- Column 2 presents the IAWD Annex 3 estimates of the public procurement markets openness based on the legal international commitments taken by the EU and twelve countries, either under the 1995 WTO Government Procurement Agreement (GPA) or under existing preferential trade agreements (as best illustrated by Mexico which is not a Party to the GPA). The openness ratios of these so-called *de jure* commitments are given by the share (in percent) of the value of the markets considered as open *de jure* in the total value of public procurement markets above the GPA thresholds.
- Column 3 presents the IAWD Annex 3 estimates of the commitments taken by the EU with respect to its twelve partners when the “general notes or specific derogations” are taken into account. Specific derogations are targeted restrictions imposed by the EU “because of the disparities in commitments” in 1995 GPA [Annex 3 page 8]. For instance, the US has not been granted access to EU public procurement markets in water, airports services and urban transport (among others) and Japan has not been granted access to EU public procurement markets in electricity and urban transport [General Notes and Derogations from Article III, Appendix I for the EC, Government Procurement Agreement 2003].
- Column 4 presents the IAWD Annex 3 estimates of the public procurement markets openness of the EU’s partners on a *de facto* basis. A market is considered as open *de facto* if “a country does not apply protectionist measures in the public procurement markets that are not open *de jure*” [IAWD Annex 3, methodological box 4]. The *de facto* openness ratios are measured by the share (in percent) of the value of the markets considered as open *de facto* in the total value of public procurement markets above the GPA thresholds.
- For information sake, column 6 describes very briefly the current situation in terms of PTAs between the EU and the other countries listed.

⁶ The IAWD presents the potential *de jure* commitments that the EU would take under the new GPA under negotiations in the WTO if these negotiations were successful. This information is not reported in Table 1 since the IAWD provides no equivalent estimates for the EU’s trading partners.

Table A1. The IAWD's estimates of the openness of public procurement markets

	Size of	de jure	de facto [c]		Preferential trade agreements (PTA) between the EU's trading partners and the EU
	PP markets	commit-	commitments (%)		
	covered	ments (%)	EU	EU's	
	[a]	[b]	% [d]	partners	
	1	2	3	4	5
Parties to the 1995 Government Procurement Agreement					
EU	370	85	--	--	
USA [e]	559	32	46	47	ongoing negotiations
Japan	96	28	70	72	ongoing negotiations
Canada	59	16	10	40	PTA agreement signed
Korea	25	65	82	80	PTA implemented
Israel	2	75	na	75	PTA implemented
Other countries					
Mexico [f]	20	75	na	92	PTA implemented
China	83	0	--	24	no PTA under consideration
Russia	18	0	--	56	no PTA under consideration
India	19	0	--	70	ongoing negotiations
Brazil	42	0	--	38	ongoing negotiations with Mercosur
Turkey	24	0	--	25	Customs Union does not cover public procurement
Australia	20	0	--	63	PTA negotiations to be opened
Total non EU	967	25	18	na	

Source: IAWD Annex 3, Tables 3 and 7. PP: public procurement. [a] in billions of Euros. [b] in percent of total PP markets above the 1995 Government Procurement Agreement threshold. [c] taking into account the specific derogations imposed by the EU in order to achieve “balanced” concessions; [d] taking into account the absence of protectionist measures (Methodological Box 4); [e] an estimate of Euros 279 billion was reported in previous drafts and is still reported sometimes; [f] mostly because of Mexico's PTAs with the US and the EU.

Column 2 figures are those systematically reported by the proponents of the Directive for justifying the need for such a Directive. Indeed, these figures deliver a strong impression of asymmetry: the estimated openness of the EU public procurement markets (85 percent) is much larger than the openness of most of the EU trading partners (which range from 0 to 75 percent).

However, such a comparison does not compare what is comparable. It systematically over-estimates the EU level of openness and systematically under-estimates the level of openness of the EU's trading partners:

- Column 2 systematically over-estimates EU openness because it does not take into account the “specific derogations” that the EU imposes on a bilateral basis because of the disparities in commitments. These specific derogations are an integral part of the 1995 GPA. As a result, they are the best definition of the “true” EU commitments. Column 3 takes into account these specific derogations, and shows a drastic reduction of the level of openness of the EU in all the cases but Korea. For instance, the EU degree of openness drops from 85 percent (column 2) to 46 percent (column 3) in the case of the US and to 70 percent (column 3) in the case of Japan.
- Column 2 systematically under-estimates the openness of the EU trading partners because it does not take into account the fact that countries do not apply *de facto* protectionist measures in some public procurement markets. Column 4 shows that taking into account these open market practices increase drastically the true level of openness of all EU partners which then ranges from 24 to 92 percent.
- In short, two important lessons can be drawn from Table A1:

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- The “true” EU level of openness (including specific derogations) and the “true” level of commitments of EU GPA partners (taking into account systematic non-protectionist practices) are generally very similar.
- The level of openness of non-GPA countries is within the range of the “true” EU level of openness (10 to 82 percent).

Comparing what is comparable leads to the conclusion that the IAWD on which the Directive proposal relies fails to support the EU claim to have public procurement markets that are more open than those of its partners.

To conclude, it is useful to put into perspective the “asymmetry” in the level of openness argued by the proponents of the Directive. Such an asymmetry would imply that the European negotiators (from the Commission and the Member States) would have negotiated “badly” during the Uruguay Round. This is because, during the Uruguay Round, the GPA was not part of the global trade-off among all issues on the table (industrial tariff cuts, agricultural “tariffication”, opening services markets, etc.). Rather, it was a stand-alone negotiation that involved only a limited number of “willing” countries, not all GATT contracting parties (i.e., it was a “plurilateral” agreement). The logic of stand-alone trade negotiations imposes that, on the sole issue at stake (in this case, the opening of public procurement markets), every country balances the market access concessions it grants to its partners almost exactly with the market concessions it gets from its partners. The available evidence on the GPA negotiations during the Uruguay Round does not support the hypothesis of a failure of the EU negotiators. The experts who analyzed the 1995 GPA stressed the almost perfect balance of the negotiations between the two largest trading partners in terms of value of the markets opened, with US\$ 103.2 billion opened by the US side and US\$ 103.3 billion opened by the EU [Schott and Buurman 1994]. Indeed, for reaching such a balance, the US negotiators had to bring at the table of negotiations 39 US States (including the five largest) and 7 US municipalities (among the 24 largest US towns) on the top of the federal public procurement markets.⁷

⁷ These figures are those related to US commitments with respect to the EU.

Annex 2

As in the Ramboll study, our analysis of import penetration ratios is based on Input-Output data. Our main results rely on the World Input-Output Database (Timmer *et al.*, 2015). This set of input-output tables offers two advantages:

- First, it covers all EU economies, as well as 13 other major countries, over the period 1995-2009. This gives better geographic and time coverage.
- In addition, the dataset provides a global (world) matrix of inter-country and inter-industry transactions. Therefore, it is possible to distinguish between extra-EU and intra-EU imports when it comes to public demand.

The methodology used to construct the WIOD tables is explained in Timmer *et al.* (2012). The benchmark being national accounts, the data are comparable to the ones analysed in the Ramboll study. But figures are not exactly the same because of differences in the way data are harmonised and balanced in the WIOD and OECD tables used in the Ramboll study.

As a robustness check, the same calculations are done using the OECD Inter-Country Input-Output matrices that are the underlying data of the OECD-WTO Trade in Value Added (OECD ICIO) database. These tables are also not fully comparable with the ones used in the Ramboll report, despite being also issued by the OECD. The reason is that they correspond to more recent work (June 2015 update) and more recently collected input-output information (using the 2010 benchmark input-output tables released by countries in 2013-2014).

With both the WIOD and OECD ICIO data, public demand is calculated as the sum of:

- Final consumption expenditure by governments
- Intermediate consumption by industries in public sectors

The public sectors are defined as: ‘electricity, gas and water supply’ (100%), ‘post and telecommunications’ (50%), ‘public administrations and defence; compulsory social security’ (100%), ‘education’ (100%) and ‘health and social work’ (100%). There are slight differences between the WIOD and OECD ICIO industry classification of industries, but not for these sectors.

The same classification of public procurement by industry is used as in the Ramboll study (table 2, p. 18), except that ‘sewage and refuse disposal, sanitation and similar services’ is excluded as there are no specific data for these activities in the WIOD and OECD ICIO data (the sector is aggregated with ‘other community, social and personal services’). As this industry represents a small share of public demand (in terms of imports of intermediate products), our results can only be marginally affected by its omission.

Table A2 below is similar to Tables 2, 3 and 4 in the main text but gives the detailed results of our calculations with the OECD ICIO database (using the June 2015 update).

Table A2. Public procurement penetration ratios, selected countries (OECD ICIO data)

	1995	2000	2005	2008	2009	2010	2011
A. Penetration ratios (ratios 3 of Table 1)							
EU27 Extra	2.3%	3.6%	3.6%	4.1%	3.6%	4.1%	4.4%
EU2 Extra	1.8%	2.7%	2.7%	2.7%	2.6%	3.0%	3.3%
Australia	4.8%	5.8%	5.3%	5.8%	4.9%	5.0%	5.2%
Brazil	1.4%	2.1%	2.3%	2.1%	2.1%	2.3%	2.4%
Canada	6.1%	5.3%	4.9%	3.8%	4.0%	4.0%	3.8%
China	0.9%	0.8%	1.1%	1.0%	0.9%	0.9%	0.9%
India	3.5%	3.9%	4.2%	6.7%	4.8%	5.2%	6.5%
Indonesia	5.5%	10.3%	9.9%	7.8%	5.6%	6.2%	7.1%
Japan	2.1%	2.6%	3.9%	5.4%	3.5%	3.7%	5.2%
Korea	6.1%	9.2%	10.3%	13.2%	11.6%	12.1%	14.0%
Mexico	3.3%	3.7%	3.0%	4.0%	3.8%	3.8%	3.8%
Russia	4.7%	6.7%	4.9%	4.8%	4.5%	4.6%	4.9%
Taiwan	8.7%	7.7%	10.7%	15.3%	12.7%	14.0%	16.0%
Turkey	8.3%	6.6%	4.7%	5.2%	4.4%	4.7%	4.4%
United States	2.9%	3.6%	4.1%	4.6%	3.6%	4.3%	4.4%
Rest of World	5.7%	5.5%	6.1%	6.2%	5.8%	5.9%	6.0%
World	4.0%	4.6%	5.2%	5.8%	4.9%	5.3%	5.6%
B. Relative size of the public procurement markets (ratios of EU public demand to trading partner's public demand)							
EU27/USA	1.32	0.90	1.14	1.31	1.24	1.17	1.23
EU2/Japan	0.93	0.74	1.08	1.31	1.19	1.08	1.04
EU2/China	8.01	2.50	2.00	1.46	1.29	1.10	0.97
C. Intra-EU ratios (ratios 4 of Table 1)							
EU27 Intra	2.8%	3.1%	3.4%	3.7%	3.5%	3.8%	3.9%
EU2 Intra	2.1%	2.6%	2.9%	3.0%	2.9%	3.1%	3.3%

Source: OECD ICIO, June 2015. Authors' calculations.

Author contacts:

Patrick Messerlin

Professor Emeritus, Sciences Po Paris and Senior Programme Associate, Global Governance Programme, Robert Schuman Centre for Advanced Studies, EUI,

Chairman, European Centre for International Political Economy (ECIPE)

Email: patrick.messerlin@free.fr