

ONLINE APPENDIX

Niels JOHANNESSEN Gabriel ZUCMAN
University of Copenhagen Paris School of Economics

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Abstract

This Appendix supplements the paper by the same authors “The End of Bank Secrecy? An Evaluation of the G20 Tax Haven Crackdown”.

The main goal of this Appendix is to describe how we have compiled the dataset on tax treaties used in the paper and what motivates our methodological choices. In Section A, we describe the institutional background. In Section B, we provide detailed information about the data sources. In Section C, we discuss the main methodological choices. In Section D, we explain step-by-step how the treaty dataset has been constructed from the data sources.

In addition, in Section E, we provide additional results on the impact of treaties on the compliance of Swiss account holders, and on the currency composition of deposits, which are excluded from the paper for the sake of conciseness.

A Institutional Background

Three conditions must be satisfied in order for exchange of bank information to be effective (OECD, 2006):

- Availability of information - regulation must ensure that banks keep records of the information that can be requested under treaties.
- Access to information – domestic legislation must allow domestic tax authorities to access bank information.
- Exchange of information – there must be a legal basis for the exchange of information with foreign tax authorities.

For countries that are not tax havens, these conditions are typically satisfied: banks are required to keep records of account information for 5 years or more; tax authorities receive information from banks either automatically or routinely upon request; and tax authorities can provide bank information to numerous partner countries. Typically, the legal basis for information exchange is a double tax convention (DTC). Most DTCs follow a model known as the OECD model convention where Article 26 provides for information exchange on request.

The 52 jurisdictions that we have labeled tax havens in the paper (see Table A1) generally failed to satisfy at least one of these conditions. First, many tax havens had bank secrecy laws that prevented domestic tax authorities to access bank information for the purposes of investigating tax evasion cases. Second, some tax havens had legal provisions restricting the access to bank information to cases with a domestic tax interest, that is domestic tax authorities had access to bank information but not for the purposes of assisting foreign tax authorities in tax evasion cases. Finally, many tax havens had no tax treaties serving as a legal basis for the exchange of information.

It should be noted that many tax havens satisfied one or two of the three conditions, but by failing to satisfy all three prevented effective information exchange. For instance, some tax havens had numerous DTCs providing a legal basis for exchange of information, but no information was effectively exchanged because tax haven authorities could not access information under the prevailing domestic laws. This is true for tax havens for which the DTCs served other important functions, notably to limit double taxation of cross-border economic activity. Conversely, many tax havens did not have particularly strict bank secrecy laws but had concluded no or very few DTCs. This is true for many tax havens with no substantial domestic taxes for which double taxation was not an issue.

The efforts to promote information exchange led the OECD to make two legal innovations. Firstly, in 2002, a new type of treaty was introduced, the Tax Information Exchange Agreement (TIEA). The TIEA contains provisions on information exchange but not on the taxation of cross-border economic activity. It thus suits the needs of tax havens desiring to implement the standard of information exchange without making commitments on taxation. Secondly, in 2005, a revised version of the model DTC was adopted. Notably, the revised text contains new paragraphs 26(4) and 26(5), which explicitly override any provisions on domestic tax interest or bank secrecy in the domestic laws of the contracting states.

There are three distinct ways in which tax havens have implemented the OECD standard on information exchange.

Firstly, a number of tax havens with an existing network of DTCs concluded protocols that amended existing treaties with the new version of Article 26. This is the approach taken by countries such as Switzerland, Luxembourg and Singapore. The amendments were typically accompanied by changes in domestic laws that allowed DTCs with the new Article 26 to override the provisions that would otherwise prevent information exchange, i.e. provisions on bank secrecy and domestic tax interest. Countries taking this approach now have two sets of DTCs: those with the new Article 26, which allow for effective information exchange, and those with the old Article 26, which do not.

Secondly, a few tax havens with an existing network of DTCs removed bank secrecy provisions from domestic bank laws so as to allow for effective information exchange under all existing treaties without amendments. This is the approach taken by countries such as Belgium, Cyprus and Malta.

Thirdly, many tax havens set out to establish treaty networks. This is true for tax havens such as the Cayman Islands, Bahamas and Jersey. Often, the new treaties were accompanied by changes in domestic law allowing tax authorities to access and exchange bank information.

B Sources of treaty information

Our main data source is the Exchange of Tax Information Portal maintained by the Global Tax Forum, which contains two different types of information.

Firstly, there are reports on specific tax havens documenting the progress in implementing effective information exchange. These reports are the most important output of the OECD peer review process. The reports cover the institutional framework necessary for exchange of several types of tax relevant information. For bank information, the reports investigate to what extent the three conditions discussed above are met: availability of information, access to information and exchange of information. At the time of writing, the peer-review process is ongoing. All OECD countries and major tax havens have been subject to the first stage of the peer-review whereas most non-OECD countries

and many smaller tax havens have not yet been reviewed.

Secondly, the Portal contains the following information about specific tax treaties between country-pairs:

- The type of the treaty (DTC or TIEA)
- The date of signature
- The date of entry into force
- An assessment of whether the treaty meets the OECD standard
- An indication of whether the DTC contains paragraphs 26(4) and 26(5)

While the Portal is a very useful primary source of information, it has - at least for the purposes of our study - a number of weaknesses:

- Treaty coverage: The portal relies on self-reporting from individual countries for information about new treaties and coverage is not perfect.
- Date of signature: In some cases, the Portal mentions treaties without mentioning subsequent treaty amendments. For our purposes, this is problematic in cases where the treaty amendment and not the original treaty constitutes the legal event that established effective information exchange. As discussed above, this is the case for several major tax havens where treaties that have been amended with the new article 26 provide for effective information exchange whereas treaties that have not been amended do not.
- Date of entry into force: The information on the date of entry into force is highly incomplete. In some cases, this reflects that treaties have been signed but have not come into force. In other cases, treaties that have come into force are not listed as such in the Portal.
- Peer review assessment: A treaty is deemed compliant if both partner countries have received a favorable assessment of the general institutional framework in the

peer-reviews and the specific treaty follows the OECD standard. A treaty is deemed non-compliant if at least one of the partner countries has received an unfavorable assessment of the general institutional framework or if the specific treaty has shortcomings. A treaty is unreviewed if at least one of the two countries has not been subject to a peer-review. At the time of writing, around 20% of treaties were still unreviewed. Unreviewed treaties are not a random subset of the universe of treaties, notably because treaties concluded by OECD countries are much more likely to be reviewed than treaties concluded by non-OECD countries.

In most countries, the ministry or government agency in charge of negotiating tax treaties operates a webpage with updated treaty information. Typically, these webpages include copies of all treaties to which the country is party. These webpages constitute a complementary data source. A list of these webpages is included in Table A2. We have also drawn on a list of TIEAs maintained by the OECD (http://www.oecd.org/document/7/0,3746,en_2649_33767_38312839_1_1_1_1,00.html).

C Methodological discussion

The universe of tax treaties between tax havens and other countries includes:

- Treaties that are assessed to be compliant by the Portal. These treaties are in full compliance with the OECD standard of information exchange.
- Treaties that are not assessed by the Portal. This includes treaties that are listed by the Portal but unreviewed and treaties that are not listed by the Portal.
- Treaties that are assessed to be non-compliant by the Portal but possibly allow for some measure of information exchange. This includes treaties that have been concluded with the explicitly stated purpose of establishing a legal basis for information exchange but where minor shortcomings in the general institutional framework of one of the partner countries or small discrepancies between the treaty text and the model treaty has triggered non-compliant status.

- Treaties that are assessed to be non-compliant by the Portal and clearly do not provide for effective information exchange. This holds for the treaties of Switzerland, Luxembourg and Singapore that have not been amended with the new Article 26. These treaties have never been intended to constitute a legal basis for exchange of bank information and there is no reason to believe that tax evaders with offshore bank accounts should have responded to these treaties.

The key methodological choice in the construction of the treaty dataset is the criterion determining which treaties are included in the dataset.

In the paper, we apply the following selection criterion: We include all legal events pertaining to the exchange of information on the basis of treaties occurring after the relevant tax haven endorsed the OECD standard of information exchange. We exclude all legal events occurring before the relevant tax haven endorsed the OECD standard.

By legal events, we mean new DTCs and TIEAs; protocols amending Article 26 of existing DTCs; and changes in the domestic legislation of tax havens that allow for exchange of bank information under existing treaties. By the endorsement of the OECD standard of information exchange, we mean the day at which the government of the relevant tax haven officially committed to implement the OECD standard typically in the form of a letter to the OECD.

This selection criterion has the advantage of being simple, transparent and objective. To implement it, we simply need information on the universe of legal events affecting information exchange and the dates at which tax havens officially endorsed the OECD standard.

An alternative selection criterion would be compliance with the OECD standard of information exchange. The most obvious difficulty with this criterion is that it would require independent legal reviews of the large number of jurisdictions and treaties that have not been subject to peer-review. This is an enormous task even for the team of legal experts involved in the ongoing peer-review and far beyond what is possible for the purposes of this study.

A second problem is that the OECD's assessment of whether treaties comply with the standard has important limitations. In some cases, even legal experts have doubts whether a specific treaty is in compliance with the standard. The OECD's assessment evolves, for instance when it turns out that a legally compliant treaty is not enforced well.

Consider the amendment to the French-Swiss treaty signed in August 2009. We know from the introductory example of the paper that this treaty induced some tax evaders to respond. Until November 2011, the French-Swiss treaty was listed as unreviewed on the Portal. In December 2011, it was listed as non-compliant. At the same time, there were media reports that Swiss and French officials had diverging interpretations of the treaty, and that some misunderstanding remained more than two years after the signature of the treaty.¹

As the case of the French-Swiss treaty illustrates, it is hard to know for sure whether a treaty provides for effective information exchange. Our selection criterion does not imply a stance on whether treaties provide for effective information exchange or not. Our treaty database allows us to investigate whether depositors actually responded differently to treaties deemed compliant and non-compliant by the OECD. We find that there is no significant response to non-compliant treaties, but a statistically significant and modest response to compliant treaties. Because the sample of treaties assessed by the OECD is not random, these results should be taken with care (and that is why we do not report them in the main text).

In practice, the treaty sample that results from our selection criterion is close to the treaty sample which would result from applying the OECD standard as selection criterion. Typically, to the extent that tax havens were signing treaties prior to their official endorsement of the OECD standard, these treaties did not follow the standard whereas the vast majority of treaties signed after the endorsement do follow the standard.

¹See for instance http://www.romandie.com/news/n/_Paris_ferme_la_porte_a_un_accord_fiscal_controverse_avec_la_Suisse171120111711.asp.

D Step-by-step construction of the treaty database

1. We obtain a list of all treaties concluded by the 52 tax havens in our sample from the Exchange of Tax Information Portal. This list includes 1,468 country-haven pairs (where pairs that include two tax havens are counted twice). Some country-haven pairs have several entries either because they have concluded several treaties (for instance, a DTC and a TIEA) or because treaty amendments are reported as separate treaties.
2. For 857 country-haven pairs, the Portal indicates that at least one treaty change occurred after the tax haven endorsed the OECD standard.
 - For 838 of these country-haven pairs, we have found no conflicting information in other sources. We retain the information pertaining to the first legal event after endorsement by the tax haven in the dataset.
 - For 19 of these country-haven pairs, we have found conflicting information from other sources. We retain the updated information in the dataset.
3. For 611 country-haven pairs, the Portal indicates that the latest treaty change occurred after the tax haven endorsed the OECD standard.
 - For 159 of these country-haven pairs, the tax haven changed its domestic law after endorsing the OECD standard so as to provide information exchange under its existing treaties and we retain these observations in the dataset: (i) Belgium changed its law on 14 April 2011, allowing for information exchange with 71 countries; (ii) Cyprus changed its law on 10 July 2008, allowing for information exchange with 36 countries; (iii) Malta changed its law on 18 January 2008, allowing for information exchange with 27 countries; (iv) Chile changed its law on 5 december 2009, allowing for information exchange with 25 countries.
 - For 49 of these country-haven pairs, other sources indicate that a treaty change occurred after endorsement contrary to the information in the Portal and we

retain these observations in the dataset.

- The remaining 403 country-haven pairs are excluded.
4. For 25 country-haven pairs for which no treaty is listed in the Portal, we have found information on treaties signed after endorsement of the OECD standard from other sources. We include these observations in the dataset.

Thus, a total of $857 + 159 + 49 + 25 = 1,090$ treaties are included in the final dataset. All treaty information can be downloaded on the authors' websites. For each treaty in our dataset, we list the information provided by the Portal as well as other information derived from other sources.

E Additional results

E.1 Currency composition of deposits

Table A3 presents descriptive statistics on the currency composition of deposits in tax havens. The table is constructed as follows: For each quarter and for each currency, we have summed deposits over “treaty” pairs and “no-treaty” pairs respectively. This gives the aggregate portfolio of deposits for each quarter and for the “treaty” and “no-treaty” group respectively with a breakdown on currencies. Then we have computed the corresponding currency fractions for each quarter and each group and averaged over quarters.

The results show that currency composition is strikingly similar in the two groups of country-pairs, which explains why our regression results remain the same when we use fixed-exchange rate measures of deposits.

E.2 The effect of treaties on compliance in Switzerland

In Table A4, we investigate whether treaties signed by Switzerland with EU countries affect the deposits held by residents of the EU in Switzerland (col. 1) and the fraction of interest income that savers voluntarily disclose to their home government (col. 2 and 3).

Consistent with the graphical evidence presented in the paper, we find no statistically significant effect of treaty signature on compliance on the part of EU Swiss account holders.

References

OECD (2006). *Tax Co-operation: Towards a Level Playing Field*. Organisation for Economic Co-operation and Development.

Table A1: List of 52 Tax Havens and Date of Endorsement of the OECD Standard

Andorra	March 10, 2009	Luxembourg	March 1, 2009
Anguilla	March 5, 2002	Macao SAR	November 15, 2005
Antigua and Barbuda	February 20, 2002	Malaysia	April 7, 2009
Aruba	May 31, 2001	Malta	May 19, 2000
Austria	March 1, 2009	Marshall Islands	July 17, 2007
Bahamas	March 15, 2002	Monaco	March 24, 2009
Bahrain	September 11, 2001	Montserrat	February 27, 2002
Barbados	January 1, 2001	Nauru	January 1, 2003
Belgium	March 1, 2009	Netherlands Antilles	November 30, 2000
Belize	March 8, 2002	Niue	February 15, 2002
Bermuda	May 15, 2000	Panama	April 15, 2002
Cayman Islands	May 18, 2000	Saint Kitts and Nevis	March 6, 2002
Chile	December 5, 2009	Saint Lucia	March 5, 2002
Cook Islands	March 22, 2002	Saint Vincent and the Grenadines	February 26, 2002
Costa Rica	April 7, 2009	Samoa	April 9, 2002
Curacao (*)	November 30, 2000	San Marino	April 4, 2000
Cyprus	May 24, 2000	Seychelles	February 26, 2001
Dominica	March 6, 2002	Singapore	February 10, 2009
Gibraltar	February 27, 2002	Sint Marten (*)	November 30, 2000
Grenada	February 27, 2002	Switzerland	March 13, 2009
Guernsey	February 21, 2002	Trinidad and Tobago	January 1, 2011
Hong Kong SAR	November 15, 2005	Turks and Caicos Islands	March 8, 2002
Isle of Man	December 13, 2000	Uruguay	April 7, 2009
Jersey	February 22, 2002	Vanuatu	May 15, 2003
Liberia	July 12, 2007	Virgin Islands, British	February 4, 2002
Liechtenstein	March 12, 2009	Virgin Islands, US	March 11, 2002

Note: (*) Curacao and Sint Marten came into existence in 2010 upon the secession of Netherlands Antilles.

Table A2: List of Official Government Webpages with Information on Tax Treaties

Denmark	http://www.skm.dk/love/dbo/
Guernsey	http://www.gov.gg/ccm/navigation/income-tax/tax-information-exchange-agreements---mutual-agreement-procedures---double-taxation-arrangements/tax-information-exchange-agreements/;jsessionid=9A44CA0323B6DA2D57172916B727E24F
Jersey	http://www.gov.je/TAXESMONEY/INTERNATIONALTAXAGREEMENTS/TIEA/Pages/index.aspx
Isle of Man	http://www.gov.im/treasury/incometax/sections/practitioners/internationalagreements.xml
Cayman Islands	http://tia.gov.ky/pdf/BilateralAgreementsArrangements.pdf
Belgium	http://fiscus.fgov.be/interfafznl/fr/international/conventions/index.htm
Sweden	http://www.skatteverket.se/privat/skatter/arbeteinkomst/internationellt/dubbelbeskattningavrakning/skatteavtal.4.5fc8c94513259a4ba1d800025922.html
Ireland	http://www.revenue.ie/en/practitioner/law/tax-treaties.html
Austria	http://www.bmf.gv.at/Steuern/Fachinformation/InternationalesSteu_6523/DiesterreichischenD_6527/_start.htm
Cyprus	http://www.mof.gov.cy/mof/ird/ird.nsf/dmldtc_en/dmldtc_en?OpenDocument
France	http://www.impots.gouv.fr/portal/dgi/public/documentation.impot;jsessionid=SROIN10KIGRVZQFIEIPSFFA?pageId=docu_international&espld=-1&sfid=440&choix=AUT#pays
Antigua and Barbuda	http://www.foreignaffairs.gov.ag/diplomacy/TIEA.php
Norway	http://www.regjeringen.no/en/dep/fin/Selected-topics/taxes-and-duties/tax-treaties-between-norway-and-other-st.html?id=417330
Chile	http://www.sii.cl/pagina/jurisprudencia/convenios.htm
Argentina	http://www.afip.gov.ar/institucional/convenios.asp
San Marino	http://www.esteri.sm/on-line/en/Home/InternationalTreaties/BilateralConventions/BilateralConventions-BilateralagreementswithotherStates.html
Spain	http://www.meh.es/es-es/normativa%20y%20doctrina/normativa/cdi/paginas/cdi_alfa.aspx
Cyprus	http://www.mof.gov.cy/mof/ird/ird.nsf/dmldtc_en/dmldtc_en?OpenDocument
Malta	http://www.mfsa.com.mt/pages/viewcontent.aspx?id=196
Singapore	http://iras.gov.sg/irasHome/page_ektid812.aspx#comprehensive
Bahrain	http://www.mof.gov.bh/CategoryList.asp?ctype=agree
US	http://www.irs.gov/businesses/international/article/0,,id=96739,00.html
Germany	http://www.bundesfinanzministerium.de/nn_318/DE/Wirtschaft__und__Verwaltung/Steuern/000.html
Luxembourg	http://www.impotsdirects.public.lu/conventions/index.html
Seychelles	http://www.src.gov.sc/pages/resources/dtas.aspx
UK	http://www.hmrc.gov.uk/taxtreaties/in-force/index.htm
Switzerland	http://www.admin.ch/ch/fr/rs/0.67.html
Canada	http://www.fin.gc.ca/treaties-conventions/treatystatus_-eng.asp
portugal	http://info.portaldasfinancas.gov.pt/pt/informacao_fiscal/convencoes_evitar_dupla_tributacao/convencoes_tabelas_doclib/
hong kong	http://www.ird.gov.hk/eng/tax/dta_inc.htm
Australia	http://www.treasury.gov.au/contentitem.asp?NavId=052&ContentID=625
Malaysia	http://www.hasil.gov.my/goindex.php?kump=5&skum=5&posi=4&unit=1&sequ=1&cariw=france
Mexico	http://www.sat.gob.mx/sitio_internet/informacion_fiscal/legislacion/52_3558.html

Table A3: Currency Composition: Averages Over the Full Sample

	No treaty	Treaty
USD	57%	62%
GBP	8%	9%
CHF	4%	2%
EUR	26%	25%
Other	5%	2%
	100%	100%

Table A4: Regressions of Fraction of Interest Declared by and Deposits of Swiss-Account Holders on Treaty Signature

VARIABLES	BANK: Switzerland SAVER: EU27 DEPVAR: deposits	BANK: Switzerland SAVER: EU27 DEPVAR: fraction - declared int inc	BANK: Switzerland SAVER: EU27 DEPVAR: fraction - declared int inc
Signed	-0.1087 (0.1367)	-0.0253 (0.3385)	-0.0232 (0.6717)
year2006	0.2552*** (0.0001)	0.0273*** (0.0025)	0.0273*** (0.0025)
year2007	0.4584*** (0.0000)	0.0428*** (0.0001)	0.0466*** (0.0000)
year2008	0.5055*** (0.0000)	0.0527*** (0.0000)	0.0565*** (0.0000)
year2009	0.5309*** (0.0000)	0.1186*** (0.0002)	0.1219*** (0.0005)
year2010	0.5318*** (0.0000)	0.1388*** (0.0001)	0.1417*** (0.0007)
year2011	0.6303*** (0.0000)	0.1662*** (0.0000)	0.1688*** (0.0005)
Constant	6.7602*** (0.0000)	0.0620*** (0.0000)	0.0592*** (0.0038)
Observations	189	185	185
R-squared	0.5585	0.5009	0.1381
Number of panelid	27	27	
countrypair FE	YES	YES	NO
time FE	YES	YES	YES

Robust pval in parentheses
 *** p<0.01, ** p<0.05, * p<0.1