

The Effect of Regulatory Harmonization on Cross-border Labor Migration: Evidence from the Accounting Profession

Matthew J. Bloomfield

Booth School of Business, University of Chicago

Ulf Brüggemann

School of Business and Economics, Humboldt University of Berlin

Hans B. Christensen

Booth School of Business, University of Chicago

Christian Leuz

Booth School of Business, University of Chicago & NBER

Compliance with Data Policy for the Journal of Accounting Research

September 2016

1. A description of which author(s) handled the data and conducted the analyses

All authors were involved in the collection as well as the analysis of the data. Data handling and analyses were performed as described in more detail below (see #2 in particular).

2. A detailed description of how the raw data were obtained or generated, including data sources, the date(s) on which data were downloaded or obtained, and the instrument used to generate the data (e.g., for surveys or experiments). We recommend that more than one author is able to vouch for the stated source of the raw data.

1. Our main analyses are based on the EU's Labour Force Survey (LFS). The LFS dataset is compiled by Eurostat, the statistical office of the EU. Researchers at academic institutions can gain access to the LFS data for scientific purposes after an approval process. Christian Leuz and Ulf Brüggemann filed applications for the LFS dataset. Our data application was handled by Nicoletta Schweikle-Hilgner at Eurostat and approved on June 1, 2011. For the main analyses, we use the December 2012 version of the LFS core data. For the analyses of the extended period from 2002 to 2013 (see Section IA5 of the Internet Appendix), we use the December 2014 version of the LFS core data.

Matthew Bloomfield and Ulf Brüggemann handled the EU Labour Force Survey dataset and performed all statistical analyses. All authors have signed confidentiality agreements and have access to the data.

2. We obtained the aggregate statistics on the fraction of accountants within the group of business professionals (ISCO3D = 241) through a special request to Eurostat. Hans Christensen received these data on July 9, 2014 from the Eurostat User Support. The application was handled by Natalia Nowakowska.

Hans Christensen handled and performed the related statistical analysis (see Section 3.2 of the paper).

3. Christian Leuz privately obtained the dataset related to the ERASMUS program. The data were provided by Marie Johann from the German Academic Exchange Service (DAAD) on August 21, 2014.

Ulf Brüggemann retrieved the data related to the proportion of foreign students at German universities from the website of the Federal Statistical Office of Germany (www.destatis.de) on October 15, 2014.

Ulf Brüggemann handled both datasets on student mobility and performed the related statistical analyses (see Section IA6 of the Internet Appendix).

4. Hans Christensen retrieved the data on the recognition of professional qualifications in the European Union from the website of the European Commission (http://ec.europa.eu/internal_market/qualifications/regprof/) on September 30, 2014.

Hans Christensen handled and performed the related statistical analysis (see Section IA6 of the Internet Appendix).

5. Hans Christensen obtained the comment letters from the website of the European Commission (http://ec.europa.eu/finance/consultations/2014/ifrs/contributions_en.htm) on September 2, 2015. He also selected the quotes presented in Section IA1 of the Internet Appendix.

6. Hans Christensen collected the data on the differences between national auditing standards and International Auditing Standards (see Section IA2 of the Internet Appendix). The data on the language of national audit standards (Section 9A) are based on answers to IFAC's Compliance Program Responses and Action Plans obtained from IFAC's website (<http://www.ifac.org/about-ifac/membership/compliance-program/compliance-responses>) in March 2014. For contractual reasons, we are not allowed to reveal the source of the data on the number of significant reporting and procedural requirements in national auditing standards that do not exist in International Auditing Standards (ISA). We have identified the source to the Editor in compliance with JAR's data policy.

7. Hans Christensen collected the country-level proxies presented in Section IA9 of the Internet Appendix (see Table IA9a). For contractual reasons, we are not allowed to reveal the source of the data on ISA adoption practices. We have identified the source to the Editor in compliance with JAR's data policy. We downloaded data on the market capitalization of listed companies as a percent of GDP (MCAP/GDP) from the Worldbank website (<http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS>) in September 2015. Data on licensing requirements was collected from answers to IFAC's Compliance Program Responses and Action Plans obtained from IFAC's website (<http://www.ifac.org/about-ifac/membership/compliance-program/compliance-responses>) in September 2015. Data on Big4 market share in 2009 was collected from Le Vourc'h and Morand (2011).

All authors vouch for the stated sources of the raw data.

3. *If the data are obtained from an organization on a proprietary basis, the authors should privately provide the editors with contact information for a representative of the organization who can confirm data were obtained by the authors. The editors would not make this information publicly available. The authors should also provide information to the editors about the data sharing agreement with the organization (e.g., non-disclosure*

agreement, any restrictions imposed by the organization on the authors with respect to publishing certain results).

For contractual reasons, we are not allowed to reveal the source of the data on (a) the number of significant reporting and procedural requirements in national auditing standards that do not exist in ISAs and (b) ISA adoption practices (see #2 above). We have identified the source to the Editor in compliance with JAR's data policy.

The LFS dataset and the special request data from Eurostat are also subject to strict confidentiality requirements. Below we quote from the terms of use described in Annex 12.5 of the "Guidelines for the assessment of research entities, research proposals and access facilities".

General principles

Access to confidential data for scientific purposes will only be granted if all the conditions laid down in the Regulation on access to confidential data for scientific purposes are fulfilled, in particular:

- access will be granted only to researchers belonging to a recognised research entity;
- the research entity's duly designated representative must have signed a confidentiality undertaking;
- access may be granted only if the research proposal submitted by the researchers asking for access to confidential data for scientific purposes has been approved; each research proposal must be countersigned by the contact person identified in the confidentiality undertaking;
- all researchers asking for access to confidential data for scientific purposes must have signed a confidentiality declaration.

The research entity's duly designated representative shall take all the necessary regulatory, administrative, technical and organisational measures to ensure that access to confidential data for scientific purposes is organised in accordance with the present terms of use.

Data handling

Researchers must ensure that any results of the research published or otherwise disseminated do not contain information that may permit the identification of individual statistical units (persons, households, enterprises, etc.).

In any reports, including all publications and unpublished papers, researchers must ensure the strict application of the guidelines for publication attached to the confidential data for scientific purposes. No copy of all or part of the data may be made and none of the data may leave the research entity's premises.

4. *A complete description of the steps necessary to collect and process the data used in the final analyses reported in the paper. For experimental papers, we require information about subject eligibility and/or selection, as well as any exclusion criteria.*

We describe our data in section 3 of the paper. For further details, see #2 above and our Stata do-file "BBCL_LM_Code".

5. *Prior to final acceptance of the paper, the computer program used to convert the raw data into the dataset used in the analysis plus a brief description that enables other researchers to use this program. Instead of the program, researchers can provide a detailed step-by-step description that enables other researchers to arrive at the same dataset used in the analysis. The purpose of this requirement is to facilitate replication and to help other*

researchers understand in detail how the sample was formed, including the treatment of outliers, Winsorization, truncation, etc. This programming is in most circumstances not proprietary. However, we recognize that some parts of the data generation process may indeed be proprietary or otherwise cannot be made publicly available. In such cases, the authors should inform the editors upon submission, so that the editors can consider an exemption from this requirement.

We use Stata to convert the raw data and perform all analyses. The Stata do-file “BBCL_LM_Code” uses the LFS dataset as input and yields the content of the main analysis (i.e., Table 3 in the paper) as output.

- 6. Data and programs should be maintained by at least one author (usually the corresponding author) for at least six years, consistent with National Science Foundation guidelines.*

The authors will maintain all data and programs for at least six years except for the LFS dataset. The LFS dataset can be accessed by the authors until December 31, 2019. After this expiration date, the authors are required to do the following according to the terms of use described in Annex 12.5 of the “Guidelines for the assessment of research entities, research proposals and access facilities”:

The researcher(s) must not make further use of the information made available to him/her/them by Eurostat after the completion of the research project or termination of the access to data. Failure to comply with this requirement shall result in liability to claims for damages and to penalties.

Furthermore, at the request of Eurostat, the research entity must return or destroy all documents and computer records relating to the work performed in relation to the research proposals.