**Readme file for “Unequal Expenditure Switching: Evidence from Switzerland”, by Auer, Burstein, Lein, and Vogel, August 28, 2023**

This document summarizes the files to generate the results in the paper, Online Appendix B, and Online Appendix D.

**Data sources**

The underlying data files that are used by these codes are divided into those that are: 1) not publicly available because it is proprietary and available for purchase (Nielsen homescan data with household characteristics) or because it has to be requested free of charge (FORS data) and 2) publicly available (which are included in our replication material).

1. Non-public data that has to be requested or purchased:

a) Nielsen Homescan data (Nielsen Switzerland (2016,2019), proprietary data)

Text files obtained from Nielsen and not included in the replication material are: rawda\_2011, rawda\_2012, rawda\_2013, rawda\_2014, rawda\_2015, rawda\_2016, rawda\_2017, rawda\_2018, rawda\_2019, rawda\_202032, HH\_char\_2016027, Member\_char\_2016027, HH\_char\_2019.dta, Member\_char\_2019.dta, plz2\_wemf\_new and plz\_canton.dta (former dataset includes matching between 2digit zip codes and WEMF [Werbemedienforschungs AG ] regions, the latter between plz, wemf, and canton, included in an excel file tab Output\_Layout\_Description\_2019.xlsx provided by Nielsen)

These files are proprietary and available for a fee under Nielsen’s discretion. In order to request access to dataset, please contact:

THE NIELSEN COMPANY (SWITZERLAND) GMBH

Park 6

6039 Root D4, Switzerland

<https://www.nielsen.com/ch/de/contact-us/>

b) FORS data Swiss Household Panel (2019)

shp14\_h\_user.dta, shp13\_h\_user.dta, imputed\_income\_hh\_long\_shp.dta

shp`yr'\_h\_user for `yr'=1999-2019, shp14\_p\_user.dta

The FORS data is free of charge. Access can be requested at <https://forscenter.ch/projects/swiss-household-panel/> [swisspanel@fors.unil.ch](mailto:swisspanel@fors.unil.ch)

2) Publicly available data:

The following are all from the Auer et al. (2021) Replication Material, also included in this paper in the replication material

* EAN\_origins.dta
* CH\_ean\_byhand\_coded.dta
* Matching\_categories\_Nielsen\_SFSO\_bfscategories
* Invoicing\_shares\_2019\_08\_29notimputeuro.dta

chfeur\_daily\_bis.dta

Daily exchange rate CHF-EUR from the Bank of International Settlements (2020). The CHR/EUR daily rate was computed by the BIS using the CHF/USD and EUR/USD series.

CPI\_detailedResults\_2015Basket.xlsx

from the SFSO (2016) includes the detailed CPI basket and index positions

WeightsIndexpositionen.xls

from the SFSO (2016) includes the detailed weights in the CPI

ConsumptionbyIncome\_gapsFilled.xlsx

from the SFSO (2014) includes the data of the household budget survey where the gaps are filled by the authors (formulas provided in the excel file)

HABE\_CPI\_match\_lev4.xlsx

includes our matching between the SFSO HBS and the SFSO CPI categories

IP\_IS\_2016.dta

includes the import shares by CPI category from the SFSO (2016) tables in Appendix 5 of SFSO (2016)

SFSOsectoralimportshares.dta sectoral import shares in SFSO (2014)

Concordance\_Nielsen\_bfs\_categories.dta concordance Nielsen product groups and SFSO product names.

**Stata codes to reproduce main empirical results**

The empirical part is coded in Stata (Version 17.0).

Run\_all code

The code **Run\_all.do** reads the raw data, generates the dataset for analysis, and replicates all the results in the body of the paper and the main results in the empirical Appendix. It is described in more detail below. It also defines the order in which the single codes should be run. The single codes are described in more detail below.

Underlying codes that create the datasets used in regressions and the output.

1. 0\_Datageneration\_2021\_08\_22.do

Input:

rawda\_`y’

descript\_`y'.dct

CH\_ean\_byhand\_coded.dta

plz2\_wemf\_new.dta (converted from excel files to Stata files)

EAN\_origins.dta

Called in subroutine fcode\_details.do:

HH\_char\_2016027.dta (converted from txt files to Stata files)

Member\_char\_2016027.dta (converted from txt files to Stata files)

HH\_char\_2019.dta (converted from txt files to Stata files)

Member\_char\_2019.dta (converted from txt files to Stata files)

Output:

allorigindata\_CH\_2012\_2016\_replication\_2023.dta

2) Generate\_Data\_for\_XSectionalRegressions\_2021\_08\_16.do

Input:

allorigindata\_CH\_2012\_2016\_replication\_2023.dta

Output:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication

3) FORS\_income\_datageneration.do

Input:

shp14\_h\_user.dta

shp13\_h\_user.dta

imputed\_income\_hh\_long\_shp.dta

shp`yr'\_h\_user for yr=1999-2019

shp14\_p\_user.dta

plz\_canton.dta

Output:

Nielsen\_fcode\_char\_withcanton14.dta

coefficients\_income\_prediction14.dta

coefficients\_change\_income\_prediction14.dta

4) FORS\_income\_prediction.dta

Input:

Nielsen\_fcode\_char\_withcanton14.dta

coefficients\_income\_prediction14.dta

Output:

fcode\_predicted\_income.dta

fcode\_predicted\_income\_Forsonly.dta

fcode\_predicted\_change\_in\_income\_wide.dta

5) Table1.do

Input:

HABE\_CPI\_match\_lev4.xlsx

ConsumptionbyIncome\_gapsFilled.xlsx

HABE\_new\_cat\_match.dta

CPI\_detailedResults\_2015Basket.xlsx

WeightsIndexpositionen.xls

IP\_IS\_2016.dta

Output:

Table1

average\_inflation\_byIncomeClass\_wide.dta includes inflation rates by income group used by other codes below

6) sub\_prices\_robust.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication

Matching\_categories\_Nielsen\_SFSO\_bfscategories.dtaInvoicing\_shares\_2019\_08\_29notimputeuro.dta

Output:

Prices\_robust.dta

7) Approach1\_main.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

fcode\_predicted\_income.dta

fcode\_predicted\_change\_in\_income\_wide.dta

average\_inflation\_byIncomeClass\_wide.dta

Output:

Generates figure 2 and creates inputs for tables 2 and 4 (put together later into latex tables in Table\_Figures\_main.do) and A6 (used in Table\_Figures\_Appendix.do)

8) Table\_stdev\_pricechanges.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

fcode\_predicted\_income.dta

Output:

Tables 3 and A7 in the paper

Data\_stdev\_pricechanges data used in the Matlab code actualREPLJuly26.m

9) Approach2\_main.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

fcode\_predicted\_income.dta

fcode\_predicted\_change\_in\_income\_wide.dta

Matching\_categories\_Nielsen\_SFSO\_bfscategories.dta

bfs\_priceindex\_productcategory\_officialPPI\_SNB\_2019.dta

Invoicing\_shares\_2019\_08\_29notimputeuro.dta

average\_inflation\_byIncomeClass\_wide.dta

Output:

Inputs for Tables 5 and 6 (put together later into latex tables in Table\_Figures\_main.do)

10) Table\_Figures\_main.do

Input:

Estimates stored from Approach1\_main.do and Approach2\_main.do

Output:

Formatted tables 2, 4, 5, 6

11) Figure1.do

Input:

chfeur\_daily\_bis.dta

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

Output

Figure 1, panels a) and b) and Appendix Figure 2

12) Approach1\_Appendix.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

fcode\_predicted\_income.dta

fcode\_predicted\_income\_Forsonly.dta

fcode\_predicted\_change\_in\_income\_wide.dta

average\_inflation\_byIncomeClass\_wide.dta

Output:

creates inputs for Appendix Figure 1, and Appendix Tables 8, 11col1&3, 12

13) Approach2\_Appendix.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

fcode\_predicted\_income.dta

fcode\_predicted\_income\_Forsonly.dta

fcode\_predicted\_change\_in\_income\_wide.dta

Matching\_categories\_Nielsen\_SFSO\_bfscategories.dta

bfs\_priceindex\_productcategory\_officialPPI\_SNB\_2019.dta

Invoicing\_shares\_2019\_08\_29notimputeuro.dta

average\_inflation\_byIncomeClass\_wide.dta

Output:

creates inputs for Appendix Tables 9, 10, 11col2&4, 13

14) Approach2\_Appendix\_Hausman.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

fcode\_predicted\_income.dta

fcode\_predicted\_change\_in\_income\_wide.dta

Matching\_categories\_Nielsen\_SFSO\_bfscategories.dta

bfs\_priceindex\_productcategory\_officialPPI\_SNB\_2019.dta

Invoicing\_shares\_2019\_08\_29notimputeuro.dta

prices\_jv.dta

average\_inflation\_byIncomeClass\_wide.dta

Output:

creates inputs for Appendix Table 14

15) Tables\_Figures\_Appendix.do

Input:

Estimates stored from Approach1\_Appendix.do, Approach2\_Appendix.do, and Approach2\_Appendix\_Hausman.do

Output:

creates Appendix Figure 1, and Appendix Tables 5,8—14

16) Appendix\_SummaryStatistics.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

Output:

Appendix Tables 1 and 2.

17) Appendix\_TableA4.do

Input:

Expenditures\_byIncome\_class\_ImportShares\_withaverageExpenditures.dta, alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta (to generate Nielsen\_importshares\_byCategory.dta), Concordance\_Nielsen\_bfs\_categories.dta

Output:

Appendix Table 4

18) Appendix\_TableA6.do

Input:

alleandata\_2020\_09\_22fcode\_dateshifted\_replication.dta

Output:

Appendix Table 6

**Matlab codes to reproduce model-based quantitative results**

1. actualREPLJuly26.m reproduces the results in Section 5.1 (Table 7) and Appendix D.1 (Tables A15 and A16).
2. counterfREPLJuly26.m reproduces the results in Section 5.2 (Tables 8 and 9) and Appendix D.2 (Appendix Tables 17--23).

**Data References:**

Auer, R., A. Burstein, and S. Lein (2021): “Exchange rates and prices: evidence from the 2015

Swiss franc appreciation,” American Economic Review, 111, 1–35. <https://doi.org/10.1257/aer.20181415>

Nielsen Switzerland (2016): “Homescan Data Switzerland, Jan 2012-May2016,"

<https://www.nielsen.com/ch/de/contact-us/>.

Nielsen Switzerland (2019): “Homescan Data Switzerland, Jun 2016 - 2019

<https://www.nielsen.com/ch/de/contact-us/>.

Bank for International Settlements (2020): “US dollar exchange rates”, Bank for International Settlements, <https://www.bis.org/statistics/xrusd.htm?m=2675>, Accessed on 17.09.2020.

Swiss Household Panel (2019) “Wave 21 of the Swiss Household Panel” FORS <https://forscenter.ch/projects/swiss-household-panel/>

Swiss Federal Statistical Office (2016): “Consumer Price Index (December 2015 = 100): Methodological foundations,” <https://www.bfs.admin.ch/bfs/en/home/statistics/prices/consumer-price-index.assetdetail.1867121.html>.

Swiss Federal Statistical Office (2014): “Household Budget Survey,” <https://www.bfs.admin.ch/bfs/en/home/statistics/economic-social-situation-population/income-consumption-wealth/household-budget.html>