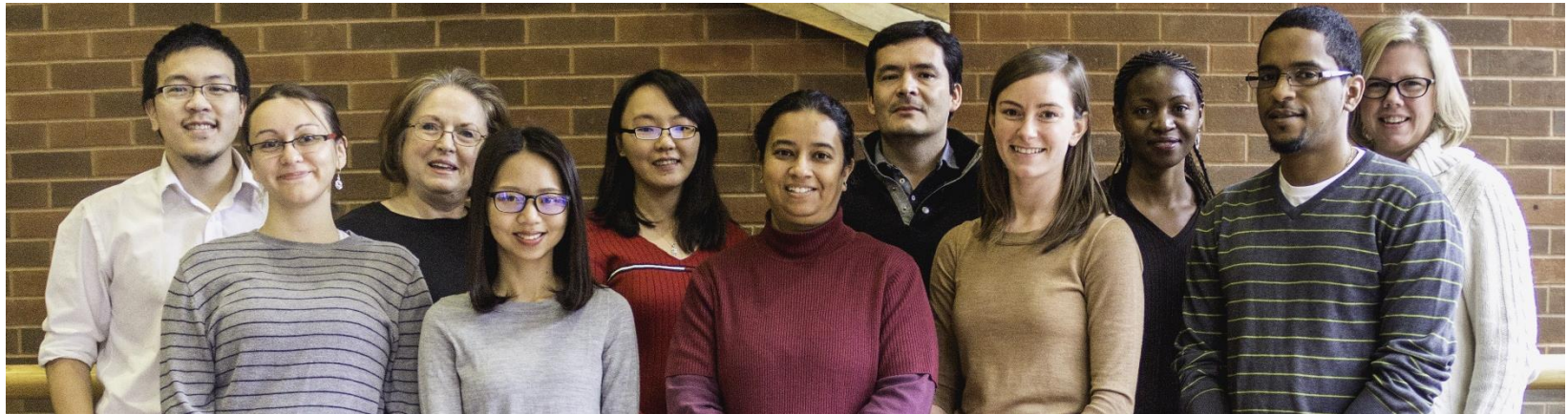# IPUMS-International: Big, Integrated Population Microdata for Russia?, Europe and the World

Robert McCaa

Research Professor & Ambassador, Minnesota Population Center

rmccaa@umn.edu

international.ipums.org

+6 secrets

Outline: IPUMS-International: Big, Integrated Population Microdata for Russia?, Europe and the World

1. **IPUMS-International: the first 18 years**
   - ❖ From 7 countries (2001) to 85 (2017) and beyond (funded through 2020)

2. **What is IPUMS-International used for? bibliography.ipums.org**
   - ❖ ~1500 citations; search by country, topic, and/or keyword

3. **How do you get data?**

4. **How does the IPUMS microdata factory work?**

5. **6 IPUMS secrets**
   - ❖ Help
   - ❖ Revise and resubmit an extract
   - ❖ Tabulator: ananlyze data online
   - ❖ Teaching with IPUMS – special features for group work
   - ❖ Attach characteristics for Mother, Father, Spouse, Householder
   - ❖ Unharmonized variables – if you don't trust IPUMS integration?

** IPUMS-International: first 18 years **

2000: the census microdata revolution is coming…
2017: the revolution is now!!!

The Census in global perspective and the coming microdata revolution

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STEVEN RUGGLES
Department of History,
University of Minnesota
ruggles@hist.umn.edu

Abstract   On the two hundredth anniversary of the first census of Norway, Denmark, and Iceland it is important to recall the history of the census and of — what to many is a little-known resource for population research — census microdata. The population became universal only in th twentieth century. Now, an microdata is beginning to

2000

5

international.ipums.org, a global project to manage the dissemination of integrated population microdata to researchers worldwide without cost

IPUMS INTERNATIONAL

INTERNATIONAL | NAPP

IPUMS.ORG | SELECT DATA | LOGIN

Original source files are *NEVER* disseminated. Instead, something better: integrated *extract*s.

PROJECT
ABOUT IPUMS-I
HOW TO CITE IPUMS-I
USER REGISTRATION AND LOGIN

DATA
BROWSE AND SELECT DATA
DOWNLOAD YOUR DATA EXTRACT
GEOGRAPHY AND GIS
SUPPLEMENTAL DATA FILES
ANALYZE DATA ONLINE

SAMPLES

HARMONIZED INTERNATIONAL
SOCIAL SCIENCE AND HEALTH

IPUMS-International is dedicated to collecting and ... ating census data from around the world. The project goals are to collect and preserve data ... documentation, harmonize data, and disseminate the harmonized data free of charge.

85 countries – 301 censuses – 672 million person records

Source data for IPUMS-International are generously provided by participating National Statistical Offices

r of Understanding

Use Microdata Series International

and the **National Bureau of Statistics of China**

Purpose. The purpose of this letter is to specify the terms and conditions under which metadata and microdata provided by the **National Bureau of Statistics of China** shall be distributed by **Integrated Public Use Microdata Series International** of the University of Minnesota.

1. Ownership. The **National Bureau of Statistics of China** is the owner and licensee of the intellectual property rights (including copyright) in the metadata and microdata supplied to the University of Minnesota to be distributed by **Integrated Public Use Microdata Series International**.

2. Use. These data are provided for the exclusive purposes of teaching, academic research and publishing, and may not be used for any other purposes without the explicit written approval, in advance, of the **National Bureau of Statistics of China**.

3. Authorization. To access or obtain copies of integrated microdata of China from **Integrated Public Use Microdata Series International**, a prospective user must first submit an electronic authorization form identifying the user (i.e., principal investigator) by name, electronic address, and institution. The principal investigator must state the purpose of the proposed project and agree to abide by the regulations contained herein. Once a project is approved, a password will be issued and data may be acquired from servers or other electronic dissemination media maintained by **Integrated Public Use Microdata Series International**, the **National Bureau of Statistics**, or other authorized distributors. Once approved, the user is licensed to acquire integrated metadata and microdata of China from **Integrated Public Use Microdata Series International** or other authorized distributors. No titles or other rights are conveyed to the user.

4. Restriction. Users are prohibited from using data acquired from the **Integrated Public Use Microdata Series International** or other authorized distributors in the pursuit of any commercial or income-generating venture either privately, or otherwise.

5. Confidentiality. Users will maintain the absolute confidentiality of persons and households. Any attempt to ascertain the identity of a person, family, household, dwelling, organization, business or other entity from the microdata is strictly prohibited. Alleging that a person or any other entity has been identified in these data is also prohibited.

6. Security. Users will implement security measures to prevent unauthorized access to microdata acquired from **Integrated Public Use Microdata Series International** or its partners.

7. Publication. The publishing of data and analysis resulting from research using metadata or microdata of China is permitted in communications such as scholarly papers, journals and the like. The authors of these communications are required to cite **National Bureau of Statistics of China** and **Integrated Public Use Microdata Series International** as the sources of the data of China, and to indicate that the results and views expressed are

8. Sharing. **Integrated Public Use Microdata Series Internation**
   electronic copies to the **National Bureau of Statistics of China**
   data related to its integrated microdata as well as timely reports o

9. Violations. Violation of this agreement may lead to professiona
   prosecution.

10. Jurisdiction. Disagreements which may arise shall be settled by
    transaction and friendly composition. Should a settlement by these
    impossible, a Tribunal of Settlement shall be convened which wil
    under law. This Tribunal shall be composed of an (1) arbitrator, w
    lot from the list of Arbitrators of the Chamber of Commerce of Pa
    shall be governed by, and construed in accordance with, generally
    International Law.

Date: _1/22/02_

Signed: _____

Regents of the University of Minnesota
By: Kevin McKoskey
Grants Manager, Sponsored Projects Administration

Date: _3/5/2002_

Signed: _Zhang Weimin_
National Bureau of Statistics

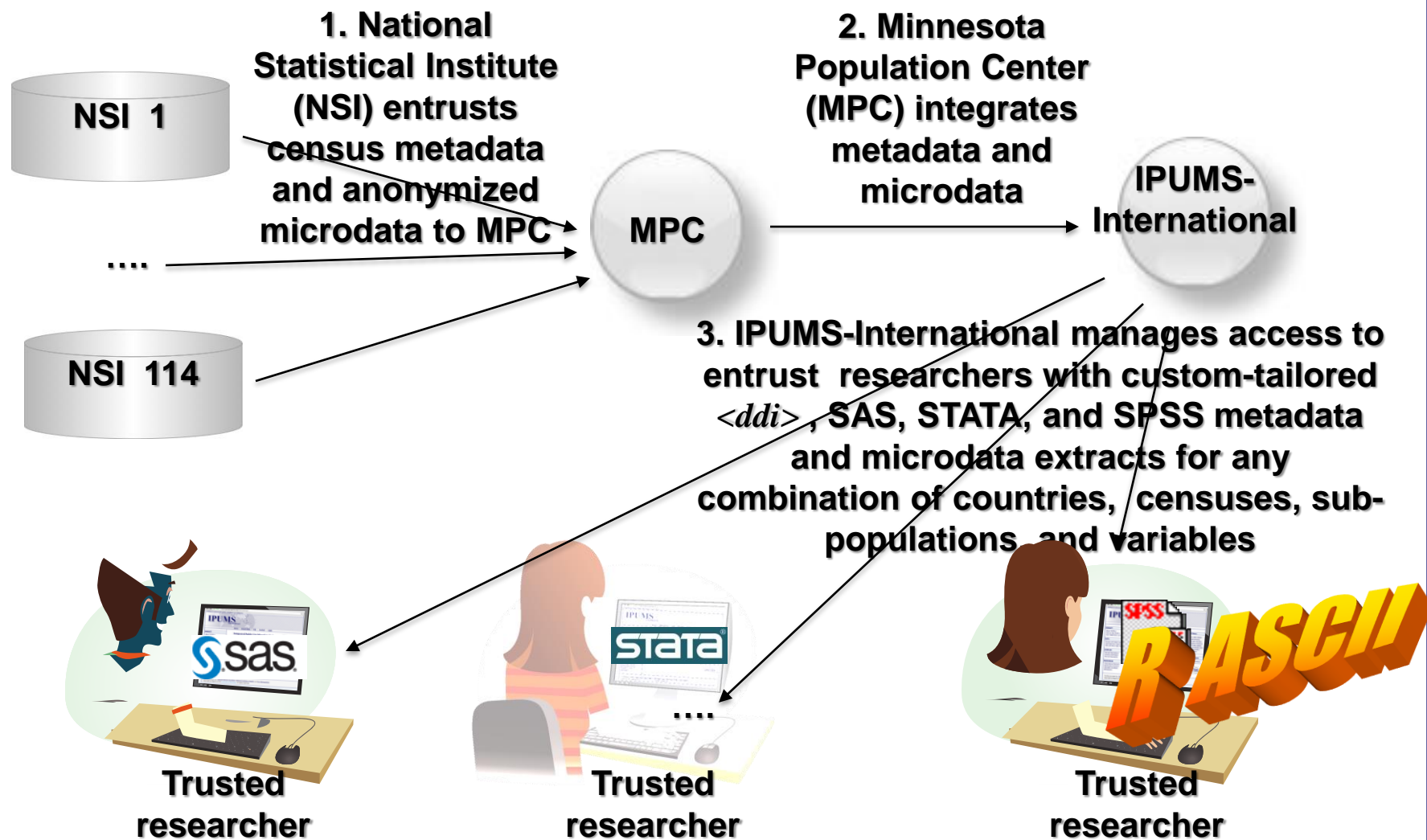|	
Poland	Central Statistical Office
Portugal	National Institute of Statistics
Puerto Rico	Puerto Rico Institute of Statistics
Romania	National Institute of Statistics
Russia	**Federal State Statistics Service #115 ?**
Rwanda	National Institute of Statistics
Saint Lucia	Government Statistics Department
Senegal	National Agency of Statistics and Demography
Sierra Leone	Statistics Sierra Leone
Slovak Republic	Statistical Office
Slovenia	Statistical Office of the Republic of Slovenia
South Africa	Statistics South Africa
South Sudan	National Bureau of Statistics
Spain	National Institute of Statistics
Sudan	Central Bureau of Statistics
Suriname	General Bureau of Statistics
Switzerland	Federal Statistical Office
Tanzania	National Bureau of Statistics
Thailand	National Statistical Office

1. National Statistical Institute (NSI) entrusts census metadata and anonymized microdata to MPC

2. Minnesota Population Center (MPC) integrates metadata and microdata

NSI 1

....

NSI 114

MPC

IPUMS-International

3. IPUMS-International manages access to entrust researchers with custom-tailored *<ddi>*, SAS, STATA, and SPSS metadata and microdata extracts for any combination of countries, censuses, sub-populations, and variables

SAS

STATA

....

SPSS

ASCII

Trusted researcher

Trusted researcher

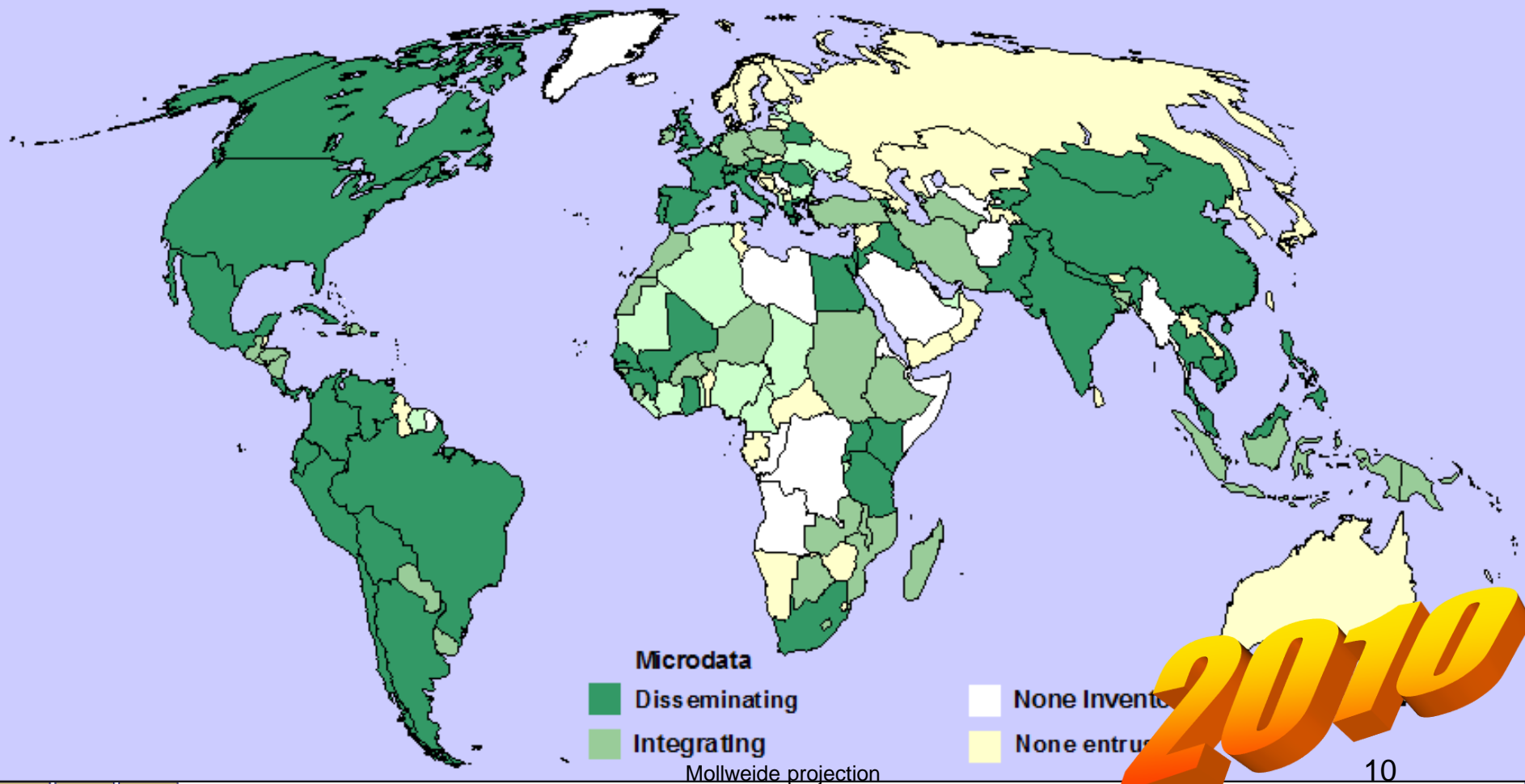**Trusted researcher**

IPUMS-International microdata factory – 3 steps:
1. NSI entrusts source microdata to MPC
2. MPC integrates
3. IPUMS web-site manages dissemination to trusted researchers

MPC MINNESOTA POPULATION CENTER

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IPUMS-International: 2010
dark green = disseminating: 55 countries - 149 samples - 325mpr
green = integrating: 37 - countries - 116 censuses - ~200mpr
lightest green = negotiating

Microdata

Disseminating

Integrating

None Invent

None entru

Mollweide projection

MINNESOTA POPULATION CENTER

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10

IPUMS-International: 2017

dark green = anonymized, integrated and disseminating
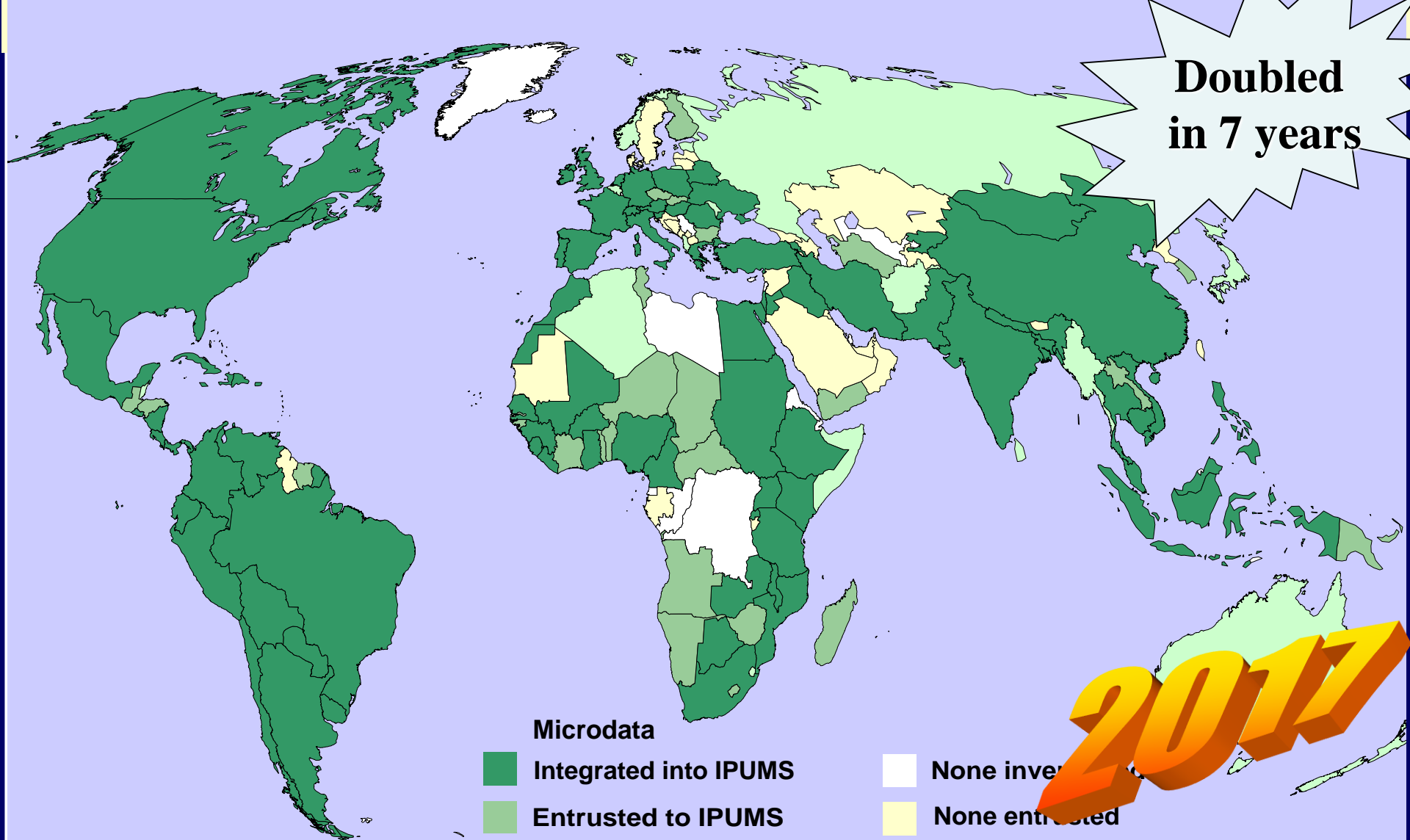## 85 countries - 301 samples - 672 million son records

Doubled in 7 years

2017

Microdata

- Integrated into IPUMS
- Entrusted to IPUMS
- None inve...
- None entrusted

zumeeld TRUSS integrated microdata Samples http://international.ipums.org 85 countries 672 million person records (+ ca. 117 + such)

Census	%	Persons	Census	%	Persons	Census	%	Persons	Census	%	Persons
1960 Mexico	1.5	502,800	1993 Peru	10	2,206,424	1970 Switzerland	5	312,538	1963 Uruguay	10	256,171
1970	1	483,405	2007	10	2,745,895	1980	5	317,803	1975	10	279,994
1990	10	8,118,242	1990 Philippines	10	6,013,913	1990	5	342,797	1985	10	295,915
1995	0.4	332,061	1995	10	6,864,758	2000	5	364,086	1996	10	315,920
2000	11	10,099,182	2000	10	7,417,810	1988 Tanzania	10	2,310,424	2006	6	256,866
2005	10	10,284,550	1978+ Poland	10	3,577,272	2002	10	3,732,735	2011	10	328,425
2010	10	11,938,402	1988+	10	3,894,527	2011+	10	4,498,022	1971 Venezuela	10	1,158,527
2015+	10	11,344,365	2002+	10	3,824,056	1970 Thailand	2	772,169	1981	10	1,441,266
1989 Mongolia	10	190,631	2011+	10	4,051,255	1980	1	388,141	1990	10	1,803,953
2000	10	243,725	1981 Portugal	5	492,289	1990	1	485,100	2001	10	2,306,489
1982 Morocco	5	1,012,873	1991	5	491,755	2000	1	604,519	1989 Vietnam	5	2,626,985
1994	5	1,294,026	2001	5	517,026	1970+ Trinidad & T	10	69,339	1999	3	2,368,167
2004	5	1,482,720	2011	5	528,870	1980+	10	105,464	2009	15	14,177,590
1997 Mozambique	10	1,551,517	1970 Puerto Rico	1	27,212	1990+	10	113,104	1990 Zambia	10	787,461
2007	10	2,047,048	1980	5	160,219	2000+	10	111,833	2000	10	996,117
2001 Nepal	11	2,583,245	1990	5	177,655	2011+	10	116,917	2010	10	1,321,973
1960 Netherlands	1.2	143,251	2000	5	189,828	1985 Turkey	5	2,554,364	Candidates for 2018 and beyond:		
1971	1.2	159,203	2005 (PRCS)	1	35,416	1990	5	2,864,207	2010 round censuses		
2001	1.2	189,725	2010	1	36,032	2000	5	3,444,456	More countries/places		
1971 Nicaragua	10	189,469	1977 Romania	10	1,937,021	1991 Uganda	10	1,548,460	Angola		
1995	10	435,728	1992	10	2,238,578	2002	10	2,497,449	Australia		
2005	10	515,485	2002	10	2,137,967	2001 Ukraine	10	4,889,288	Belgium		
2006 Nigeria - GHS	0.1	83,700	2011+	10	1,991,924	1991 UK	1	541,894	Benin		
2007	0.1	85,183	1991 Rwanda	10	742,918	2001	3	1,843,525	Bulgaria		
2008	0.1	107,425	2002	10	843,392	1960 USA	1	1,799,888	Chad		
2009	0.1	77,896	1980 Saint Lucia	10	11,451	1970	1	2,029,666	Finland		
2010	0.1	72,191	1991	10	13,382	1980	5	11,343,120	Guatemala		
1973 Pakistan	2	1,453,332	1988 Senegal	10	700,199	1990	5	12,501,046	Honduras		
1981	10	8,433,058	2002	10	994,562	2000	5	14,081,466	Japan		
1998	10	13,102,024	2004 Sierra Leone	10	494,298	2005 (ACS)	1	2,878,380	Korea		
1997 Palestine	10	259,191	2002 Slovenia	10	179,632	2010	1	3,061,692	Laos		
2007	10	227,067	1996 South Africa	10	3,621,164	1963 Uruguay	10	256,171	Madagascar		
1960 Panama	5	53,553	2001	10	3,725,655	1975	10	279,994	Mauritius		
1970	10	150,473	2007	2	1,047,657	1985	10	295,915	Myanmar		
1980	10	195,577	2011	10	4,418,594	1996	10	315,920	Namibia		
1990	10	232,737	2008 South Sudan	7	542,765	2006	6	256,866	Niger		
2000	10	284,081	1981 Spain	5	2,084,221	2011	10	328,425	Nigeria PES		
2010	10	341,118	1991	5	1,931,458	1971 Venezuela	10	1,158,527	Papua New Guinea		
1962 Paraguay	5	90,236	2001	5	2,039,274	1981	10	1,441,266	Russia		
1972	10	233,669	2011	10	4,107,465	1990	10	1,803,953	Tunisia		
1982	10	301,582	2008 Sudan	17	5,066,530	2001	10	2,306,489	Turkmenistan		
1992	10	415,401							Yemen		
2002	10	516,083							Zimbabwe, etc.		

2018?

Google Analytics – Calendar year 2016 Traffic from cities worldwide to international.ipums.org

Top 30 Countries, #1 City		
1	USA	▶ Minneapolis
2	UK	▶ London
3	France	▲ Paris
4	Mexico	▼ Mexico City
5	Brazil	▲ Belo Horizonte
6	Austria	▲ Vienna
7	Spain	▼ Barcelona
8	Singapore	▲ Singapore
9	South Africa	▲ Johannesburg
10	Canada	♥ Toronto
11	Chile	▲ Santiago
12	Argentina	▼ Buenos Aires
13	Colombia	▲ Bogota
14	Korea, RO	▲ Seoul
15	China	▼ Beijing
16	Thailand	▲ Bangkok
17	Belgium	▲ Louvain-la-Neuve
18	Germany	♥ Munich
19	Switzerland	▲ Geneva
20	Nigeria	▲ Lagos
21	Ireland	▲ Dublin
22	Israel	▲ Tel Aviv-Yafo
23	Netherlands	▼ Amsterdam
24	Hong Kong SAR	▲ Hong Kong
25	Kenya	▲ Nairobi
26	Australia	▼ Melbourne
27	Uruguay	▲ Montevideo
28	Italy	♥ Milan
29	Poland	▲ Warsaw
30	India	▼ New Delhi

7,009

3,834 cities - 176 countries encompassing 98.3% of total world population

United Nations
Department of Economic and Social Affairs

Strong
UN.
Better
World.

UN Commission on Population and Development: **Encourages Governments to adopt open-data policies allowing** *the dissemination of public-use, geo-referenced and anonymized microdata from censuses*, **household surveys, civil registration, population registers, health information systems and other relevant administrative records with respect for confidentiality;**

http://www.un.org/en/development/desa/population/pdf/commission/2016/documents/Resolution2.pdf

2. What do researchers use IPUMS for?

Search "bibliography.ipums.org" & see:

BIBLIOGRAPHY

Publications, working papers, and other research using data resources from IPUMS.

NEW SEARCH | **ADD A PUBLICATION** | **ADMIN**

Search

bibliography.ipums.org

Keywords	France
Title	
Author	
Journal	
Citation types	All Citation Types
Year published	
Topic	Family and Marriage
Project	IPUMS-International

Search   Clear

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BIBLIOGRAPHY

Publications, working papers, and other research using data resources from IPUMS.

Sort Results By: Pub Year, descending

Schwanitz, Katrin,; Mulder, Clara, H
"Living Arrangements of Young Adults in Europe." Comparative Population Studies, 2015
Abstract | Full Citation | Google

Elwood, Carlson,
2014. "The young householder deficit in Italy compared to France." *Demografie* 56: 14
Abstract | Full Citation | Google

Lappegrd, Trude,; Vignoli, Daniele,; Kleusener, Sebastian,
2014. "Social Norms, Economic Conditions and Spatial Variation of Childbearing withing Cohabitation across Europe." MPIDR Working Paper
Abstract | Full Citation | Google

Lippman, L.H.,; Wilcox, W.B.,; Ryberg, R.,; DeRose, L.F,,; Corcuera, P.,; Gas, M.,; Fernandez, L.C.M.,; Salazar, A.,; Tarud, C.,; Rivera, R.G.,
"World Family Map 2014: Mapping Family Change and Child Well-Being Outcomes." Child Trends, 2014
Abstract | Full Citation | Google

Steinhauer,Andreas
"Identity, Working Moms, and Childlessness: Evidence from Switzerland." University of Zurich, 2013
Abstract | Full Citation | Google

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**70 pages, ~1500 citations
(add yours—restricted to IPUMS microdata)**

Clingingsmith, David,
2017. "Are the World's Languages Consolidating? The Dynamics and Distribution of Language Populations." *The Economic Journal* 127: 34
Abstract | Full Citation | Google

den Boer, Andrea,; Hudson, Valerie,
2017. "Patrilineality, Son Preference, and Sex Selection in South Korea and Vietnam." *Population and Development Review* 43: 29
Abstract | Full Citation | Google

DeRose, Laurie, F; Huarcaya, Gloria,; Salazar-Arango, Andres,; Agurto, Marcos,; Corcuera, Paul,; Gonzalvo-Cirac, Marga,; Tarud, Claudia,
2017. "Childrens Living Arrangements and On-time Progression Through School in Latin America and the Caribbean." *Journal of Family and Economic Issues* 38: 20
Abstract | Full Citation | Google

Duque, Valentina,; Rosales-Rueda, Maria,; Sanchez, Fabio,
"Mitigating the Persistent Effects of Early-Life Shocks: Evidence from Safety Net Programs in Colombia." University of Michigan, 2017
Abstract | Full Citation | Google

Gandolfi, Davide,; Halliday, Timothy,; Robertson, Raymond,
2017. "Trade, FDI, migration and the place premium: Mexico and the United States." *Review of World Economics* 153: 37
Abstract | Full Citation | Google

Giuliano, Paola,; Nunn, Nathan,

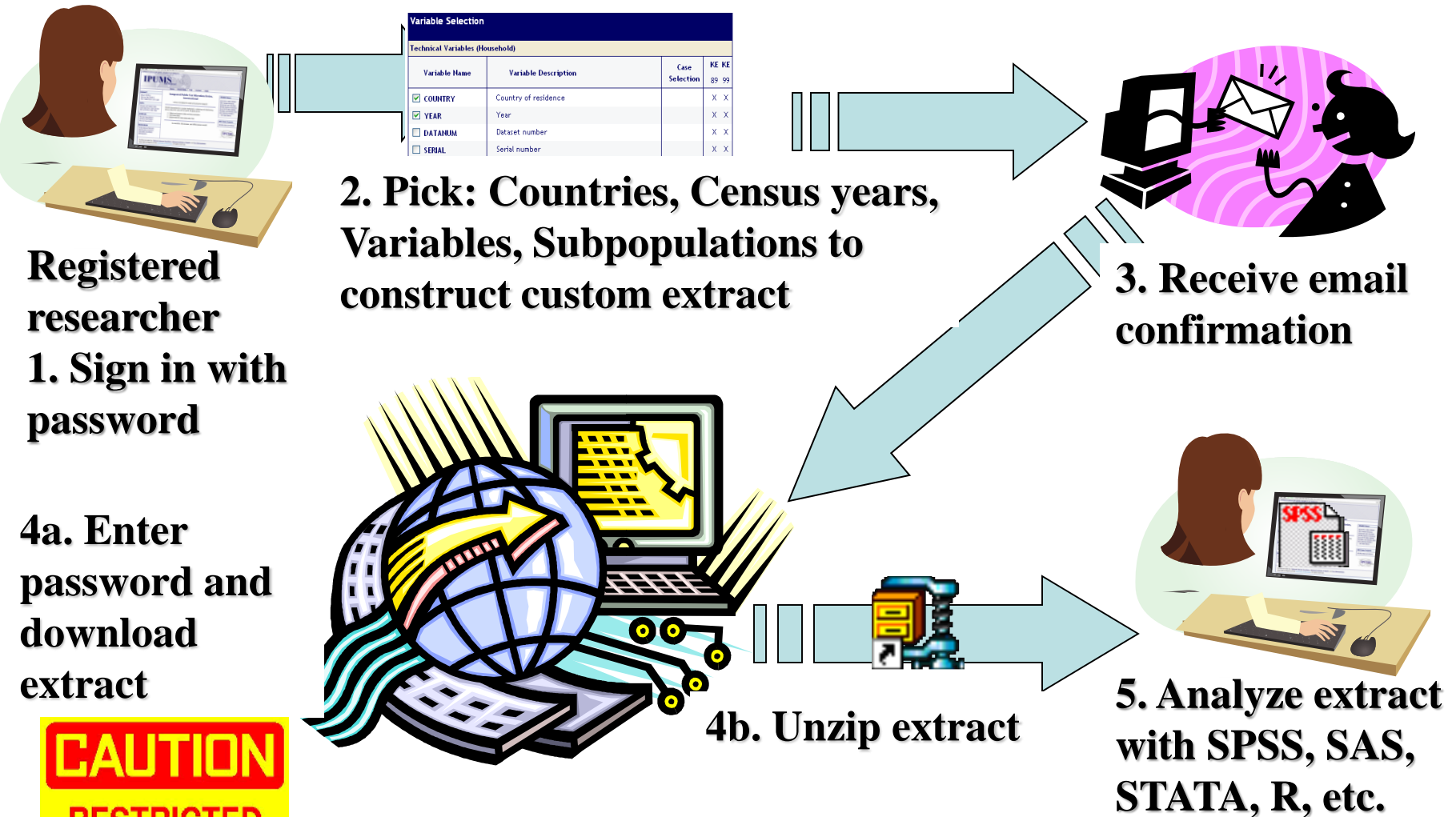# 3. How do you get IPUMS-International microdata?

15 minutes to register, data for life

How to get data: *international.ipums.org*
Custom pooled, integrated microdata extract:

2. Pick: Countries, Census years, Variables, Subpopulations to construct custom extract

Registered researcher
1. Sign in with password

3. Receive email confirmation

4a. Enter password and download extract

4b. Unzip extract

5. Analyze extract with SPSS, SAS, STATA, R, etc.

CAUTION
RESTRICTED AREA

ESOTA POPULATION CENTER

UNIVERSITY OF MINNESOTA

6 steps to construct an extract:
Pick samples and variables in any order

HARMONIZED INTERNATIONAL CENSUS DATA FOR SOCIAL SCIENCE AND HEALTH RESEARCH

IPUMS-International is dedicated to collecting and distributing census data from around the world. The project goals are to collect and preserve data and documentation, harmonize data, and disseminate the harmonized data free of charge.

85 countries – 301 censuses – 672 million person records

Source data for IPUMS-International are generously provided by participating National Statistical Offices

CREATE AN EXTRACT

GET DATA

CREATE AN ACCOUNT

REGISTER

WHAT IS IPUMS?

IPUMS provides census and survey data from around the world integrated across time and space. IPUMS integration

1. Pick samples

1. Pick samples: submit sample selections

SELECT SAMPLES

Variable documentation on the website can be filtered to display only material corresponding to chosen datasets (more information on this feature).

SUBMIT SAMPLE SELECTIONS

ALL COUNTRIES	AFRICA	AMERICAS	ASIA	EUROPE

☐ All Samples

☐ Argentina	☐ 2010	☐ 2001	☐ 1991 ⓘ	☐ 1980	☐ 1970
☐ Armenia	☐ 2011	☐ 2001			
☑ Austria	☑ 2011	☑ 2001	☑ 1991	☑ 1981	☑ 1971
☐ Bangladesh	☐ 2011	☐ 2001	☐ 1991		
☐ Belarus	☐ 2009	☐ 1999			
☐ Bolivia	☐ 2001	☐ 1992	☐ 1976		

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2. Pick variables

3. Review data cart

IPUMS INTERNATIONAL

IPUMS.ORG | SELECT DATA | FAQ | HELP | LOGIN

DATA CART

ADD MORE VARIABLES

CREATE DATA EXTRACT

ADD MORE SAMPLES

Clear Data Cart

In cart	Variable	Variable Label	Type	AT 1971	AT 1981	AT 1991	AT 2001	AT 2011
☑	COUNTRY	Country [preselected]	H	X	X	X	X	X
☑	YEAR	Year [preselected]	H	X	X	X	X	X
☑	SAMPLE	IPUMS sample identifier [preselected]	H	X	X	X	X	X
☑	SERIAL	Household serial number [preselected]	H	X	X	X	X	X
☑	PERNUM	Person number [preselected]	P	X	X	X	X	X
☑	PERWT	Person weight [preselected]	P	X	X	X	X	X
☑	ERELATE	Relationship to head, Europe	P	X	X	X	X	.
☑	AGE	Age	P	X	X	X	X	X

EXTRACT REQUEST ([HELP](#))

SAMPLES:	5	(show)	Change
VARIABLES:	10	(show)	Change
DATA FORMAT:	Default (fixed-width text)		Change
STRUCTURE:	Rectangular (person)		Change
ESTIMATED SIZE:	168.7 MB		How to reduce extract size

OPTIONS

SELECT CASES — Include only specified cases (for example, persons age 60 and older).

ATTACH CHARACTERISTICS — Attach data from mother, father, spouse or household head as a new variable (for example, education of mother).

CUSTOMIZE SAMPLE SIZES — Specify the number of cases to include from each sample in your extract.

Describe your extract

```
Austria marriage and residence patterns 1971-2011
```

SUBMIT EXTRACT

OTA

5. Oops, Login! … then submit (nothing lost!)

IPUMS

LOG IN TO IPUMS INTERNATIONAL

EMAIL ADDRESS

tmccaa@umn.edu

PASSWORD

●●●●●●●●●●

SIGN IN

IPUMS uses a common user management system for several data projects: IPUMS International, IPUMS USA, IPUMS CPS, IPUMS Higher Ed, IPUMS NAPP, NHGIS, IPUMS Health Surveys, IPUMS Time Use, and IPUMS Terra.

If you already have an account with any of these projects, sign in here. If you've not yet registered for IPUMS International, you will be directed to the project registration page after signing in.

If you do not have an account for any IPUMS project, you may create one here.

HELP

❯ Forgot your password?

6. Download extract ("formatted data")

IPUMS INTERNATIONAL

IPUMS.ORG | SELECT DATA | FAQ | HELP | LOGOUT

DATA CART
YOUR DATA EXTRACT

0 VARIABLES
0 SAMPLES

DOWNLOAD OR REVISE EXTRACTS

Use the links provided below to download a data extract (right-click the links for the data, command files, and codebook) or to revise an extract (previous extract as the basis for defining a new extract). For instructions on downloading and opening an extract on your computer go here. Not be available for 72 hours, after which they are subject to deletion.

← Previous | **1** | 2 | 3 | 4 | 5 | 6 | 7 | Next →

Extract Number	Date	Formatted Data	Fixed-width Text Files Data	Command Files SPSS SAS STATA	Codebook	Revise Extract	Resubmit Extract	Description (click to edit)	Hide selections Show all
346	2017-06-06	SPSS	Data	SPSS SAS STATA	Basic DDI	revise		Austria 1971-2011 Marital Status and Co-residence	☐
345	2017-02-23					revise	resubmit	Malawi 2008 domain errors	☐
344	2017-02-09					revise	resubmit	Malawi with unharmonized variables	☐
343	2017-02-08					revise	resubmit	Malawi 2008 Griff's occ2 question	☐
342	2017-01-01					revise	resubmit	China 1990 migration married persons with spouse vars	☐
341	2016-12-27					revise	resubmit	China 1990 migration co-resident kin	☐

Persons aged 0-14 with age, mom African samples

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4. How does the IPUMS microdata factory work?

Big microdata, small factory

What is IPUMS-International integration?

➢ **IPUMS goal –**
   Simplify comparative analysis for all datasets
   but lose no meaningful information in any dataset

➢ **IPUMS integration solution –**
   Code for any single concept is the same for all datasets
      Simple example: "Male" = code "1" in every dataset.
   Write new metadata to describe, compare, and document concepts

➢ **IPUMS integration method - Composite hiearchical coding**
   First digit = general code
   Second and higher digits = detailed codes
    Complex example: EDATTAIN (next slide)

30

Example: IPUMS EDATTAIN

Table 2. Educational Attainment (EDATTAN) 3-digit detailed code with frequencies for 8 European Countries

Code	Label	Austria 2001	Greece 2001	Ireland 2011	Italy 2001	Romania 2002	Spain 2001	Switzerland 2000	Ukraine 2001
000	NIU (not in universe)	135,480	60,222	117,404	160,897	223,986	9,429	61,858	249,197
100	LESS THAN PRIMARY COMPLETED	·	34,748	·	317,651	·	·	·	·
110	No schooling	·	·	·	·	78,667	473,420	12,776	341,478
120	Some primary	·	124,318	·	·	1,456	·	·	·
130	Primary (4 years)	·	·	·	·	384,871	·	·	637,966
	PRIMARY COMPLETED, LESS THAN SECONDARY								
	Primary completed								
211	Primary (5 years)	·	·	·	719,220	·			·
212	Primary (6 years)	·	300,134	51,896	·	·			·
	Lower secondary completed								
221	General and unspecified track	237,957	108,576	64,702	850,317	528,362	462,072	·	708,507
222	Technical track	·	·	·	·	·	·	·	·
	SECONDARY COMPLETED								
	General or unspecified track								
311	General track completed	34,593	213,311	123,420	600,717	122,104	199,858	77,527	1,544,92
312	Some college/university	·	·	·	19,065	7,717	·	·	·
320	Technical track	·	·	·	·	·	·	·	·
321	Secondary technical degree	342,559	19,591	·	129,727	576,739	159,802	134,987	·
322	Post-secondary technical education	14,942	46,434	15,876	10,513	56,970	114,012	27,674	782,292
400	UNIVERSITY COMPLETED	37,940	121,550	84,414	182,632	128,632	117,939	23,033	608,088
999	UNKNOWN/MISSING	·	·	16,823	·	28,463	·	26,231	16,834

IPUMS Integrated Microdata, Metadata, & Geographies

a. Integrated Microdata -- "fitness for use"

➢ Harmonized variables – retain original concept, harmonize all

➢ Data access should maximize potential use of census data

b. Integrated Metadata

➢ Seven tabs: Codes

Description Comparability Universe
Availability Questionnaire Source variables

Codes	Description	Comparability	Universe	Availability	Questionnaire Text	Source Variables

c. Integrated Geographies

➢ Administrative Level 1, 2 by name and/or boundaries

➢ Urban/rural

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Harmonized IPUMS Variables by Topics

HOUSEHOLD CHARACTERISICS

Geography
- First administrative level
- Second administrative level
- Urban-rural status

Dwelling
- Number of rooms
- Toilet access
- Construction materials
- Age of structure
- Living area

Utilities
- Electricity
- Water
- Sewage
- Fuel
- Heating

Amenities
- Automobiles
- Washer
- Television
- Computer
- Phone

Other
- Home or land ownership
- Number of deaths
- Number of international migrants
- Family and household composition

PERSON CHARACTERISTICS

Core Demographic
- Age
- Sex
- Marital status
- Age at marriage
- Relationship to householder

PERSON CHARACTERISTICS

Migration
- Previous residence
- Years in current locality

Fertility/Mortality
- Children ever born
- Children surviving
- Parental mortality

Nativity/Ethnicity
- Place of birth
- Country of birth
- Citizenship
- Year of immigration
- Religion
- Race
- Ethnic group
- Language spoken
- Mother tongue

Education
- School attendance
- Literacy
- Educational attainment
- Years of schooling

Labor Force
- Employment status
- Occupation
- Industry
- Class of worker
- Hours worked
- Total income
- Wage and salary income
- Source of livelihood

Disability
- Disability status
- Type of disability
- Cause of disability

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Table 2. IPUMS Integrated variable: Employment Status (EMPSTAT) - Detailed Codes, Case Count View 13 Selected Samples

Codes: EMPSTAT

Code	Label	ISO 3166 Country Code Year	AR 2010	BD 2011	BR 2010	CN 1990	FR 2011	IN 2004	ID 2010	IR 2006	MX 2010	ZA 2011	ES 2011	US 2010	VN 2009
0	NIU (not in universe)		942,445	1,117,354	1,509,860	3,264,675	3,602,198	59,373	4,587,786	214,837	3,069,677	1,624,114	617,249	608,035	3,746,089
	ACTIVE (in labor force)														
100	EMPLOYED, not specified		·	2,123,058	·	6,775,149	·	·	·	·	·	1,087,397	1,483,557	·	·
110	At work		1,829,108	·	3,879,619	·	8,466,104	226,309	10,272,827	339,173	3,630,588	·	·	1,334,219	7,890,417
111	At work, and 'student'		·	·	·	·	·	·	·	·	55,032	·	·	·	·
112	At work, and 'housework'		·	·	·	·	·	·	·	·	201,360	·	·	·	·
113	At work, and 'seeking work'		·	·	·	·	·	·	·	·	26,020	·	·	·	·
114	At work, and 'retired'		·	·	·	·	·	·	·	·	11,943	·	·	·	·
115	At work, and 'no work'		·	·	·	·	·	·	·	·	·	·	·	·	·
116	At work, and other situation		·	·	·	·	·	·	·	·	61,373	·	·	·	·
117	At work, family holding, not specified		·	·	·	·	·	·	·	·	·	·	·	·	·
118	At work, family holding, not agricultural		·	·	·	·	·	·	·	·	·	·	·	·	·
119	At work, family holding, agricultural		·	·	·	·	·	·	·	·	·	·	·	·	·
120	Have job, not at work in reference period		36,731	·	156,006	·	·	2,901	257,792	21,262	32,411	·	·	29,871	45,629
130	Armed forces		·	·	·	·	·	·	·	·	·	·	·	·	·
131	Armed forces, at work		·	·	·	·	·	·	·	·	·	·	9,630	·	·
132	Armed forces, not at work in reference period		·	·	·	·	·	·	·	·	·	·	101	·	·
140	Marginally employed		·	·	·	·	·	·	·	·	·	·	·	·	·
200	UNEMPLOYED, not specified		117,251	56,753	610,371	61,553	1,299,284	10,672	287,300	62,495	183,725	473,897	·	155,203	56,105
201	Unemployed 6 or more months		·	·	·	·	·	·	·	·	·	·	·	·	·
210	Unemployed, experienced worker		·	·	·	·	·	·	·	·	·	·	512,715	·	·
220	Unemployed, new worker		·	·	·	·	·	·	·	·	·	·	77,860	·	·
230	No work available		·	·	·	·	·	·	·	·	·	270,019	·	·	61,460
240	Inactive unemployed		·	·	·	·	·	1,138	1,026,714	·	·	·	·	·	·
300	INACTIVE (not in labor force)		1,040,710	2,057,472	3,537,202	·	·	·	7,170,630	·	·	963,167	·	924,633	·
310	Housework		·	1,851,082	·	729,891	640,366	105,647	·	305,437	2,489,602	·	·	·	557,280
320	Unable to work/disabled		·	·	·	295,175	·	·	·	·	147,608	·	·	·	151,033
321	Permanent disability		·	·	·	·	·	4,876	·	·	·	·	55,338	·	·
322	Temporary illness		·	·	·	·	·	539	·	·	·	·	·	·	·
323	Disabled or imprisoned		·	·	·	·	·	·	·	·	·	·	·	·	·
330	In school		·	·	·	436,317	1,659,383	155,130	·	222,874	1,392,779	·	·	·	816,753
340	Retirees and living on rent		·	·	·	·	·	6,662	·	·	122,859	·	932,051	·	·
341	Living on rents		·	·	·	·	·	·	·	·	·	·	·	·	·
342	Living on rents or pension		·	·	·	·	·	·	·	55,332	·	·	·	·	·
343	Retirees/pensioners		·	·	·	·	·	·	·	·	·	·	·	·	·
344	Retired		·	·	·	230,000	4,177,059	·	·	·	·	·	·	·	·
350	Elderly		·	·	·	·	·	·	·	·	·	·	·	·	·
351	Elderly or disabled		·	·	·	·	·	·	·	·	·	·	·	·	·
360	Institutionalized		·	·	·	·	·	·	·	·	·	·	·	·	·
361	Prisoner		·	·	·	·	·	·	·	·	·	·	·	·	·
370	Intermittent worker		·	·	·	·	·	·	·	·	·	·	·	·	·
380	Other income recipient		·	·	·	·	·	·	·	·	·	·	·	·	·
390	Inactive, other reasons		·	·	·	43,187	696,943	29,586	·	65,781	445,779	·	·	·	...,559
391	Too young to work		·	·	·	·	·	·	·	·	·	·	·	·	·
392	Dependent		·	·	·	·	·	·	·	·	·	·	·	·	·
999	UNKNOWN/MISSING		·	1	·	·	·	·	·	12,634	67,64	·	·	·	32,047

Source: https://international.ipums.org/international-action/variables/EMPSTAT#codes_section . Note: Illustrative only. Some codes omitted for brevity.

Comparability — Argentina [top]

The 1970 census asks what the person did during "the greater part of the week", specifically during "four normal work days". This definition may under-report labor force participation in comparison to later years. The 1980 sample asks simply what the person did last week, and the work responses are listed first on the form. The 1991 and 2001 samples are more specific, since they consider any economic activity performed in the previous week as work.

The 2010 census asked whether each person had worked at least one hour in the week prior to the census. Persons who reported doing informal work in the last week were considered as "at work." Persons who did not report having work in the last week were asked whether they had looked for work in the past 4 weeks; if so, they were considered unemployed rather than inactive.

The 1970 and 1980 samples distinguish experienced workers from new workers, defined as persons seeking work for the first time.

The 2001 sample includes more detail in the unharmonized source variable, differentiating between persons who are both retired and in school and among different kinds of unemployed persons.

The age universe for the question rose from age 10 or older in the 1970 sample, to age 14 or older in subsequent years.

Comparability — Armenia [top]

Employed persons are those who worked one hour or more during the reference w... persons are those who were actively seeking a job at the time of the census.

Comparability — Austria [top]

Value added: Household technical variables (including official or IPUMS household weights)

IPUMS INTERNATIONAL

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SELECT HARMONIZED VARIABLES

| HOUSEHOLD ▾ | PERSON ▾ | A-Z ▾ | SEARCH |

CHANGE SAMPLES

◉ HARMONIZED VARIABLES
○ SOURCE VARIABLES

HELP
DISPLAY OPTIONS
COUNTRY ABBREVIATIONS

AN "X" INDICATES THE VARIABLE IS AVAILABLE IN THAT DATASET.

⊖ TECHNICAL HOUSEHOLD VARIABLES -- HOUSEHOLD   [TOP]

Add to cart	Variable	Variable Label	Type	AT 1971	AT 1981	AT 1991	AT 2001	AT 2011
✖	RECTYPE	Record type	H	X	X	X	X	X
☑	COUNTRY	Country [preselected]	H	X	X	X	X	X
☑	YEAR	Year [preselected]	H	X	X	X	X	X
☑	SAMPLE	IPUMS sample identifier [preselected]	H	X	X	X	X	X
☑	SERIAL	Household serial number [preselected]	H	X	X	X	X	X
➕	PERSONS	Number of person records in the household	H	X	X	X	X	X
➕	HHWT	Household weight	H	X	X	X	X	X
➕	SUBSAMP	Subsample number	H	X	X	X	X	X
➕	HHDONATE	Donated household	H	X	X	.	X	.
➕	STRATA	Strata identifier	H	X	X	X	X	X

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Value added: Person technical & constructed variables (including official or IPUMS weights)

Add to cart	Variable	Variable Label	Type	AT 1971	AT 1981	AT 1991	AT 2001	AT 2011
☑	PERNUM	Person number [preselected]	P	X	X	X	X	X
☑	PERWT	Person weight [preselected]	P	X	X	X	X	X

⊕⊕ CONSTRUCTED FAMILY INTERRELATIONSHIP VARIABLES -- PERSON   (GROUP CONTINUED ON NEXT PAGE…)   [TOP]

Add to cart	Variable	Variable Label	Type	AT 1971	AT 1981	AT 1991	AT 2001	AT 2011
⊕	MOMLOC	Mother's location in household	P	X	X	X	X	.
⊕	POPLOC	Father's location in household	P	X	X	X	X	.
⊕	SPLOC	Spouse's location in household	P	X	X	X	X	.
⊕	PARRULE	Rule for linking parent	P	X	X	X	X	.
⊕	SPRULE	Rule for linking spouse	P	X	X	X	X	.
⊕	STEPMOM	Probable stepmother	P	X	X	X	X	.
⊕	STEPPOP	Probable stepfather	P	X	X	X	X	.
⊕	POLYMAL	Man with more than one wife linked	P	X	X	X	X	.
⊕	POLY2ND	Woman is second or higher order wife	P	X	X	X	X	.
⊕	FAMUNIT	Family unit membership	P	X	X	X	X	.
⊕	FAMSIZE	Number of own family members in household	P	X	X	X	X	.
⊕	NCHILD	Number of own children in household	P	X	X	X	X	.
⊕	NCHLT5	Number of own children under age 5 in household	P	X	X	X	X	.

IPUMS GEOGRAPHY OVERVIEW

IPUMS provides geographic information to facilitate cross-temporal and cross-national comparative analyses. Multiple census years are available for most countries in the database, and geography variables are harmonized taking into consideration changes in administrative boundaries over time.

GIS BOUNDARY FILES DOWNLOAD

IPUMS boundary files (shapefiles) facilitate subnational, national and international data mapping. The attribute data in all shapefiles corresponds to a specific geographic variable in the IPUMS International microdata for mapping purposes.

LIST OF ALL GEOGRAPHY VARIABLES

A comprehensive table that lists geography variables across all the countries database. The table lists spatially harmonized and year-specific geo   as well as map (JPEG) images for all mappable geography variables.

Integrated Geography

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Outline: IPUMS-International: Big, Integrated Population Microdata for Russia?, Europe and the World

1. **IPUMS-International: the first 18 years**
   ❖ From 7 countries (2001) to 85 (2017) and beyond (funded through 2020)

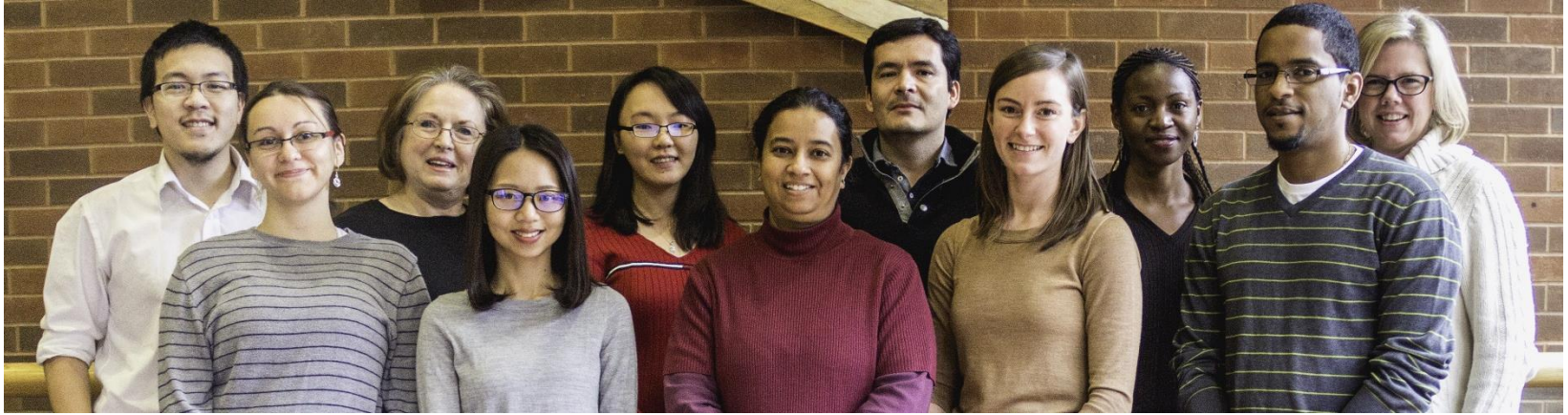2. **What is IPUMS-International used for? bibliography.ipums.org**
   ❖ ~1500 citations; search by country, topic, and/or keyword

3. **How do you get data?**

4. **How does the IPUMS microdata factory work?**

5. **6 IPUMS secrets**
   ❖ Help
   ❖ Revise and resubmit an extract
   ❖ Tabulator: ananlyze data online
   ❖ Teaching with IPUMS – special features for group work
   ❖ Attach characteristics for Mother, Father, Spouse, Householder
   ❖ Unharmonized variables – if you don't trust IPUMS integration!

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Thank you!

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