



CROSS-NATIONAL
DATA CENTER
in Luxembourg

Health and Socioeconomic Status: Exploring LIS/LWS Data

EAPS Health, Morbidity, and Mortality Working Group

“Living Longer, Living Better? Inequality in Health and Longevity”

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Overview of Luxembourg Income Study (LIS)





LIS history in a nutshell

- **Founded in 1983** by two US academics (Professors Tim Smeeding and Lee Rainwater) and a team of multi-disciplinary researchers in Europe out of the need to be able to **compare income distributions** across countries:
 - *Which welfare state policies work in order to protect risk groups, e.g. which public and private transfers provide income in old age?*
 - *What is needed to compare well income data across countries?*
- Originally focused on **income** and **high-income countries**, LIS has gradually expanded its coverage to:
 - **middle-** (since the 2000's – still on-going) and **low-income countries** (very recently)
 - **wealth data** (since the 2000's): LWS Database
- Currently directed by Professor **Peter Lanjouw**, LIS' main strategy and priorities are set by a **Board** including experts from all participating countries (currently presided by Professor **François Bourguignon**)
- LIS is supported in large part by the **Luxembourg government** and the **US NSF**, as well as by other national or supranational funders – supplemented by project-specific grants



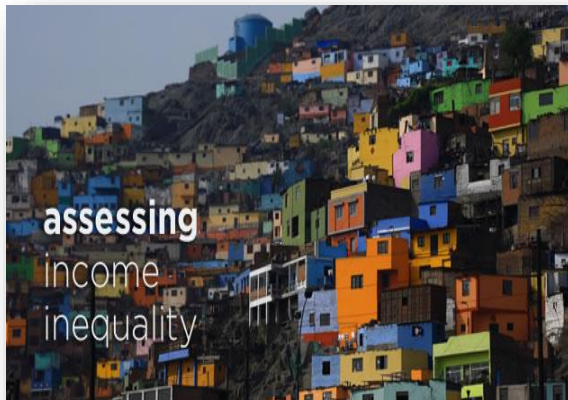
LIS Partners

- Two LIS Satellite Offices:
 - *US LIS Satellite Office* at the **Stone Centre on Socio-Economic Inequality** (CUNY University, New York)
 - *UK LIS Satellite Office* at the **International Inequalities Institute** (LSE, London)
- Several ongoing collaborations:
 - *LISER* (Luxembourg Institute for Socio-Economic Research)
 - *University of Luxembourg*
 - *European Commission (JRC)*
 - *World Bank* (Poverty Global Practice and Development Economics Unit)
 - *OECD* (Income and Wealth Distribution Databases - IDD / WDD)
 - *ERF* (Economic Research Forum)
 - *UN-ECE* (Economic Commission for Europe)
 - *UN-ECLAC* (Economic Commission for Latin America and the Caribbeans)
 - *UN-ESCWA* (Economic and Social Commission for Western Asia)
 - *UN-WIDER* (University World Institute for Development Economics Research)
 - *World Inequality Lab (WIL)* at the Paris School of Economics



LIS mission

To enable, facilitate, promote, and conduct cross-national comparative research on socio-economic outcomes and on the institutional factors that shape those outcomes.





LIS Core activity: harmonisation and provision of data for research

Step 1. We identify appropriate datasets containing income / wealth / consumption microdata representative of a country's population

Data must be neutral, reliable, and high-quality

Step 2. We negotiate with each data provider

Step 3. We collect, harmonize and document the data

LIS' data experts harmonize the data into a common, cross-national template, and create comprehensive documentation

Step 4. We double-check the harmonized data and create some national-level indicators

Step 5. We make the harmonized microdata available to researchers via remote execution, and other user-friendly pathways



LIS: users, products, services

Thousands of data users - and growing

- **remote execution system** enables use around the world (an average of 1,000 researchers submit 80,000 jobs remotely every year, 100,000 last year for the first time!)
- **free access** for **students** in all countries, **data providers** and their staffs and **researchers** from contributing member countries

Pedagogical activities

- **annual Summer Workshop**
- local **workshops**
- **self-teaching packages** and **on-line tutorials**

Research activities and support

- user and research **conferences**
- **visiting scholar** program - LIS(2)ER Visitors Program
- **working paper** series (N=989 papers)
- quarterly **newsletter** (N=34 issues)
- **edited books**



Overview of LIS/LWS Databases



Overview of the *LIS Databases*

Two cross-national harmonised databases that allow international comparative research using micro-data:

- **Luxembourg Income Study** Database- **LIS** (focus on **income**): **975** datasets from **53** countries (1963 to 2024)
- **Luxembourg Wealth Study** Database- **LWS** (focus on **wealth**): **131** datasets from **24** countries (1995 to 2022).

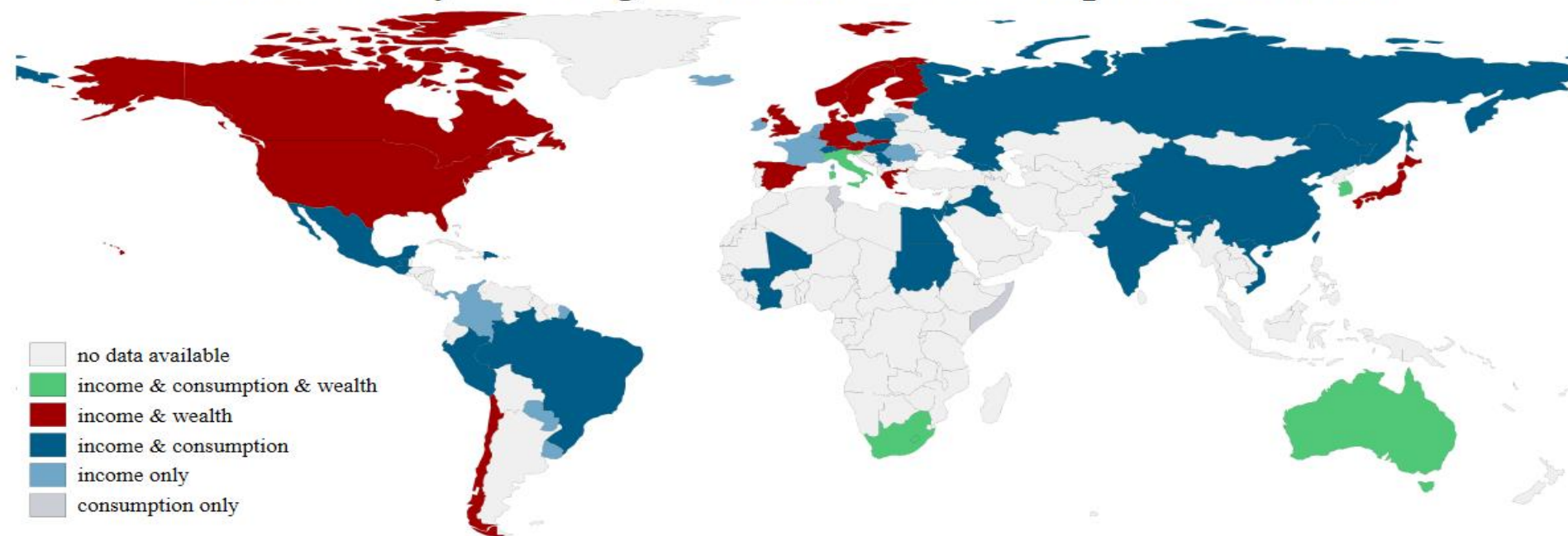
Additionally:

- **ERF-LIS (MENA Region)** Database: **29** datasets from **7** countries (1996 to 2019).

Upcoming:

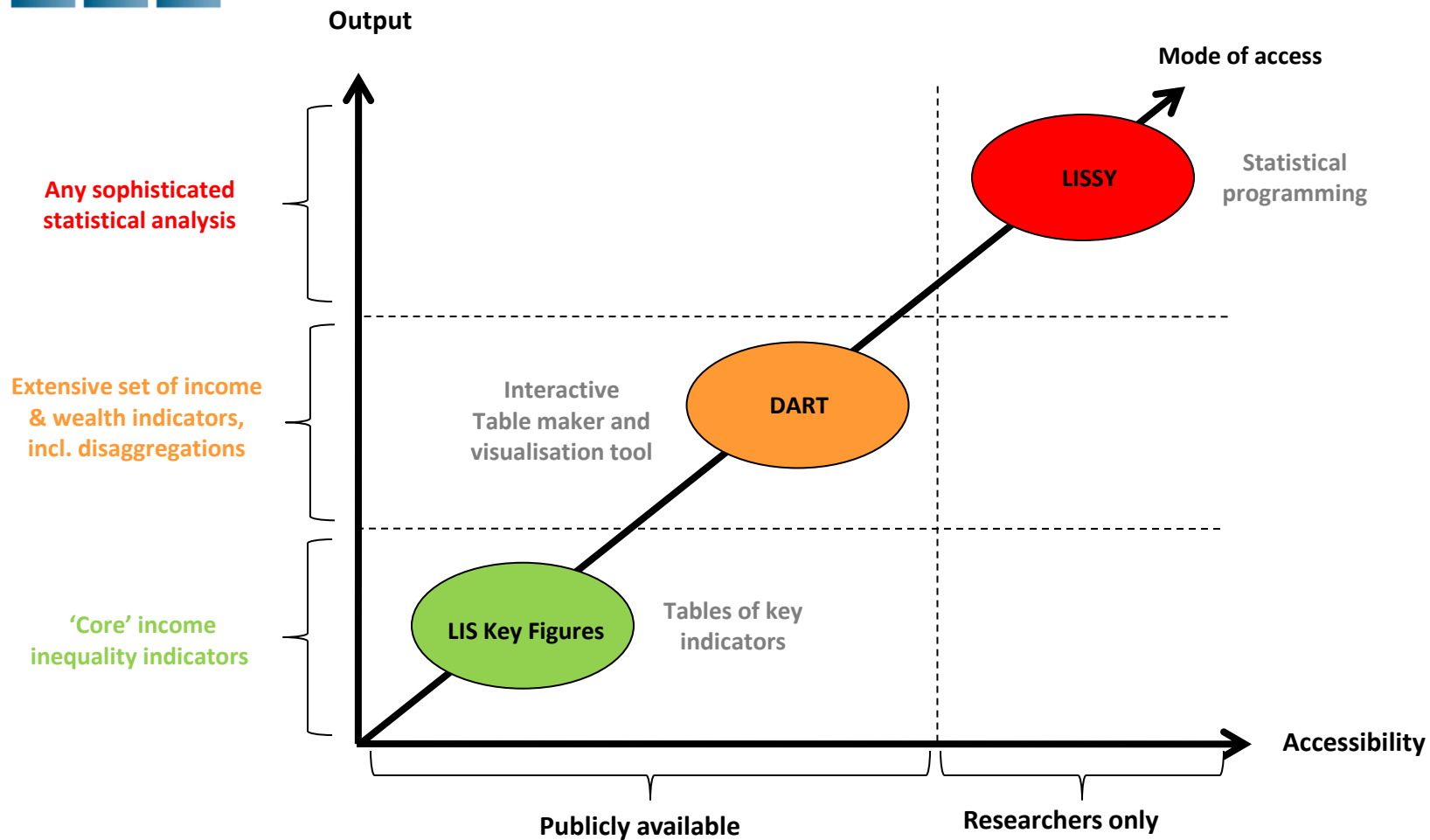
- **Luxembourg Consumption Study** Database- **LCS** (focus on **Consumption**): foreseen to be released in 2026

LIS country coverage - Income / Consumption / Wealth





Data access





LISS: remote-execution system

- Fully automated, running 24 hours/day and 7 days/week
- Job Submission Interface (**JSI**): send statistical batch programs (SAS, SPSS, Stata or R) automatically processed and reports back aggregated results
- Micro-databases **cannot be downloaded** and no direct access to the data is permitted. **Only aggregated results** from statistical requests are sent back to the users
- Access to LISSY is granted to researchers, incl. students, working for an academic, government or non-profit organization under the condition that use of the micro-data is restricted to **research purposes** only



LISSY: remote-execution system



connect

please provide userid and password

Lissy UserInterface version 1.0



Job Session Job Archive

edit job recent jobs

Project LIS Package Stata Subject test

Job can be sent to the server.

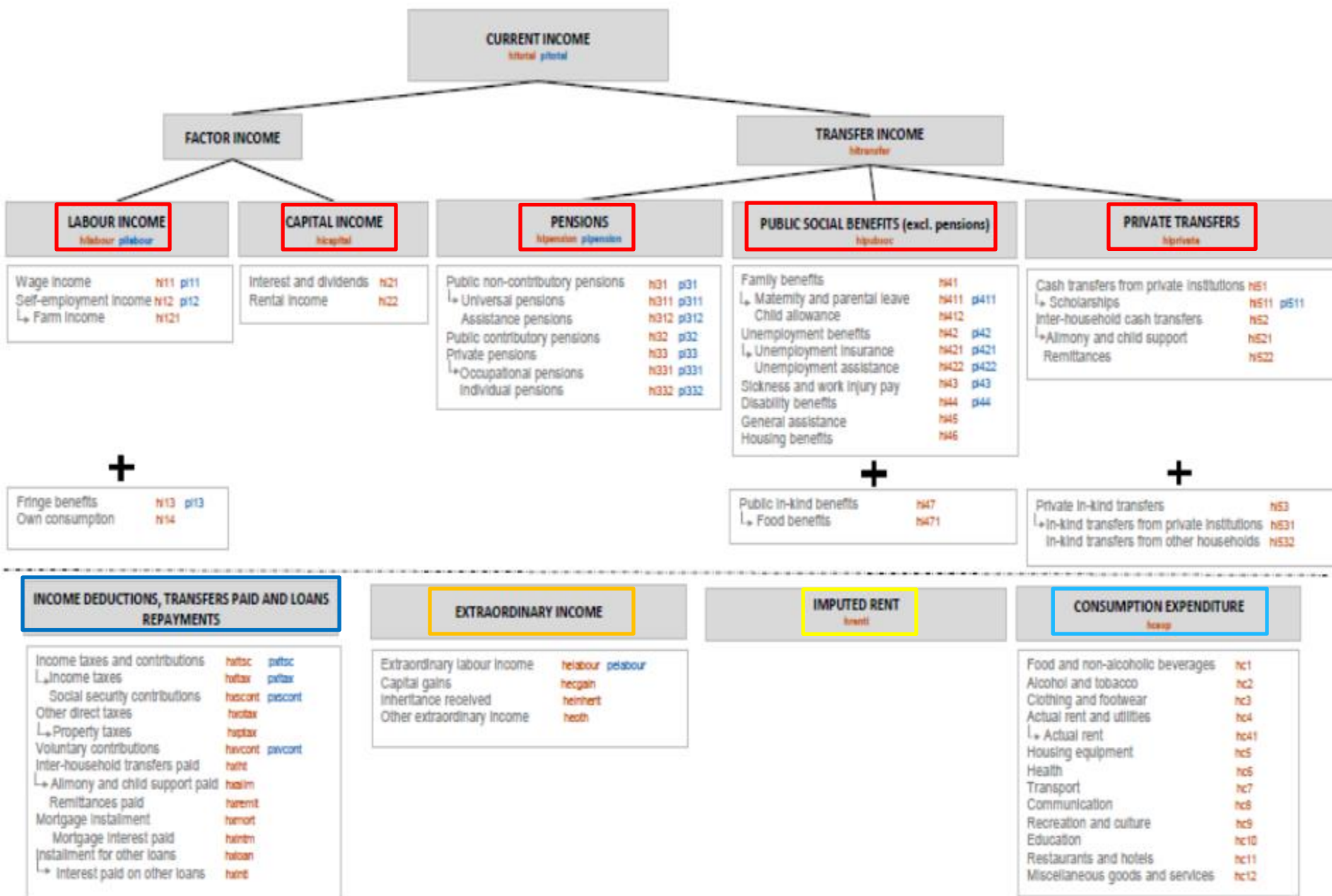
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	H-FILE	P-FILE		H-FILE	P-FILE
TECHNICAL VARIABLES			Immigration	immigrant (dummy)	immigr
household identifier	hid	hid		citizenship	citizen
person identifier		pid		country of birth	ctrybrth
unique country/year number	did	did		years since arrived in country	ysresid
country/year identifier	dname	dname		ethnicity/race	ethnic_c
country name	cname	cname		internal migration	migrat_c
2-letter country abbreviation	iso2	iso2		other immigration characteristics	immigr_c
3-letter country abbreviation	iso3	iso3			
reference year	year	year			
data wave	wave	wave	Education	education (3-category recode)	educ
weight	hpopwgt	ppopwgt		highest completed education level	educlev
normalised weight	hwgt	pwgt		highest education level	educ_c
additional weight	hwgta	pwgta		enrolled in education (dummy)	enroll
currency units	currency	currency		years of education	edyrs
gross/net income information	grossnet	grossnet		illiterate (dummy)	illiterate
income imputation (dummy)	fhimpu	fpimpu		education of mother	edmom_c
implicate number	inum	inum		education of father	eddad_c
GEOGRAPHY AND HOUSING			LABOUR MARKET		
region	region_c		Labour market activity	employed (dummy)	emp
rural area (dummy)	rural			ILO employed (dummy)	emp_ilo
size of locality of residence	locsz_c			labour force status	lfs
type of area	area_c			farming activity (dummy)	farming
owned/rented housing	own			informal activity (dummy)	informal
type of dwelling	dweltyp			maternity/paternity/parental leave (dummy)	parleave
HOUSEHOLD COMPOSITION AND LIVING ARRANGEMENTS				full-year full-time (dummy)	fyft
household composition	hhtype			total weekly hours worked	hourstot
head living with partner (dummy)	hpartner			annual weeks worked	weeks
number of household members	nhhmem			multiple jobs holder (dummy)	secjob
number of household members 65 or older	nhhmem65		years of total work experience	wexptl	
number of household members 17 or younger	nhhmem17		Characteristics of main job	status in employment, main job	status1
number of household members 13 or younger	nhhmem13			industry (3-category recode), main job	inda1
number of household members with labour income	nearn			industry (9-category recode), main job	indb1
relationship to household head		relation		industry (17-category ISIC 3.1), main job	indc1
living with partner (dummy)		partner		industry (21-category ISIC 4), main job	indd1
living with parents		parents		industry, main job	ind1_c
number of own children living in household		nchildren		public sector (dummy), main job	public1
age of youngest own child living in household		ageyoch		occupation (3-category recode), main job	occa1
SOCIO-DEMOGRAPHIC CHARACTERISTICS				occupation (10-category ISCO), main job	occb1
Demographic characteristics				occupation, main job	occ1_c
age in years		age		temporary employment (dummy), main job	temp1
gender		sex		part-time employment (dummy), main job	ptime1
marital status		marital		weekly hours worked, main job	hours1
Health				gross hourly wage, main job	gross1
disabled (dummy)		disabled		net hourly wage, main job	net1
subjective health status		health_c			

Non-flow variables
LWS Database only

	H-FILE	P-FILE
WEALTH RELATED VARIABLES		
<i>Contingent assets and liabilities</i>		
expects to receive inheritance/gift	cir	
amount of expected inheritance/gift	cia	
expects to give inheritance/gift	cig	
home equity line of credit (dummy)	chc	
amount of home equity line of credit	cha	
non-home equity lines of credit (dummy)	cnc	
amount of non-home equity lines of credit	cna	
<i>Assets acquired in the past</i>		
purchase price of principal residence	ppr	
year of purchase of principal residence	ppy	
inheritance/gift received (dummy)	pir	
amount of inheritance/gift received (1/4)	pia1/4	
year inheritance/gift received (1/4)	piy1/4	
type of inheritance/gift received (1/4)	pit1/4	
from whom inheritance/gift received (1/4)	piw1/4	
household member who received inheritance/gift (1/4)	pim1/4	
<i>Additional information</i>		
years of contributions to social security system		ssyc
business indicator/type of business (1/3)	bus(1/3)_c	
BEHAVIORAL VARIABLES		
<i>Attitudes toward household finance</i>		
savings behaviour		basb
savings purpose (1/9)		basp1/9
financial risk taking (1/3)		bafr(1/3)_c
financial planning (1/2)		bafr(1/2)_c
financial literacy (1/4)		baf1(1/4)_c
financial information (1/5)		baf1(1/5)_c
<i>Other behavioral variables</i>		
possession of credit cards (dummy)	bope	
number of credit cards	bonc_c	
amount needed to cover unexpected expenses	boue	
ability to get emergency financial aid (dummy)	boea	
loan consolidation (dummy)	bolc	
objective credit constraints (1/2)	bocc(1/2)_c	
subjective credit constraints	bocs_c	
constraints in debt repayment (1/2)	bocd(1/2)_c	
expectations about household finances	boef_c	
expectations about the economy (1/2)	boee(1/2)_c	

Flow variables (LIS/LWS Databases)



Flow variables (*LWS Database only*)

ASSETS AND LIABILITIES			
ASSETS ha		LIABILITIES hl	
Non-financial assets	han	Main breakdown of liabilities (by purpose)	
↳ Real estate	hanr	Real estate liabilities	hlr
↳ Principal residence	hanrp	↳ Principal residence loans	hlrp
Other real estate	hanro	Other real estate loans	hlro
Non-housing assets	hann	Non-housing liabilities	hln
↳ Business equity	hannb	↳ Investment loans	hlnl
↳ Consumer goods	hannc	↳ Consumer goods loans	hinc
↳ Vehicles	hanncv	↳ Vehicle loans	hincv
Other durables and valuables	hanncd	Other loans for goods and consumption	hincd
Other non-financial assets	hanno	Education loans	hine
Financial assets (excl. pensions)	haf	Other non-housing liabilities	hino
↳ Deposit accounts and cash	hafc	Alternative breakdown of liabilities (by security)	
Financial investments	hafi	↳ Institutional loans secured by real estate	hlisr
↳ Bonds and other debt securities	hafib	↳ Secured by principal residence	hlisrp
Stocks and other equity	hafis	Secured by other real estate	hlisro
Investment funds and alternative investments	hafii	↳ Loans not secured by real estate	hlisn
Other non-pension financial assets	hafo	↳ Guaranteed institutional loans	hlisng
Pension assets and other long-term savings	has	Non-guaranteed institutional loans	hlisnn
↳ Life insurance and voluntary individual pensions	hasi		
↳ Life insurance accounts	hasil		
Individual voluntary pension accounts	hasip		
Occupational pensions	haso		
↳ Occupational pensions (DB schemes)	hasodb		
Occupational pensions (DC schemes)	hasodc		
Social security pension entitlements	hass		
↳ Social security (DB schemes)	hassdb		
Social security (DC schemes)	hassdc		



ex. Country specific variables (socio-demographics)

health_c: subjective health status

health_uk18:

1 very good

2 good

3 fair

4 bad

5 very bad

health_us20:

1 excellent

2 very good

3 good

4 fair

5 poor

health_de19:

1 very good

2 good

3 satisfactory

4 poor

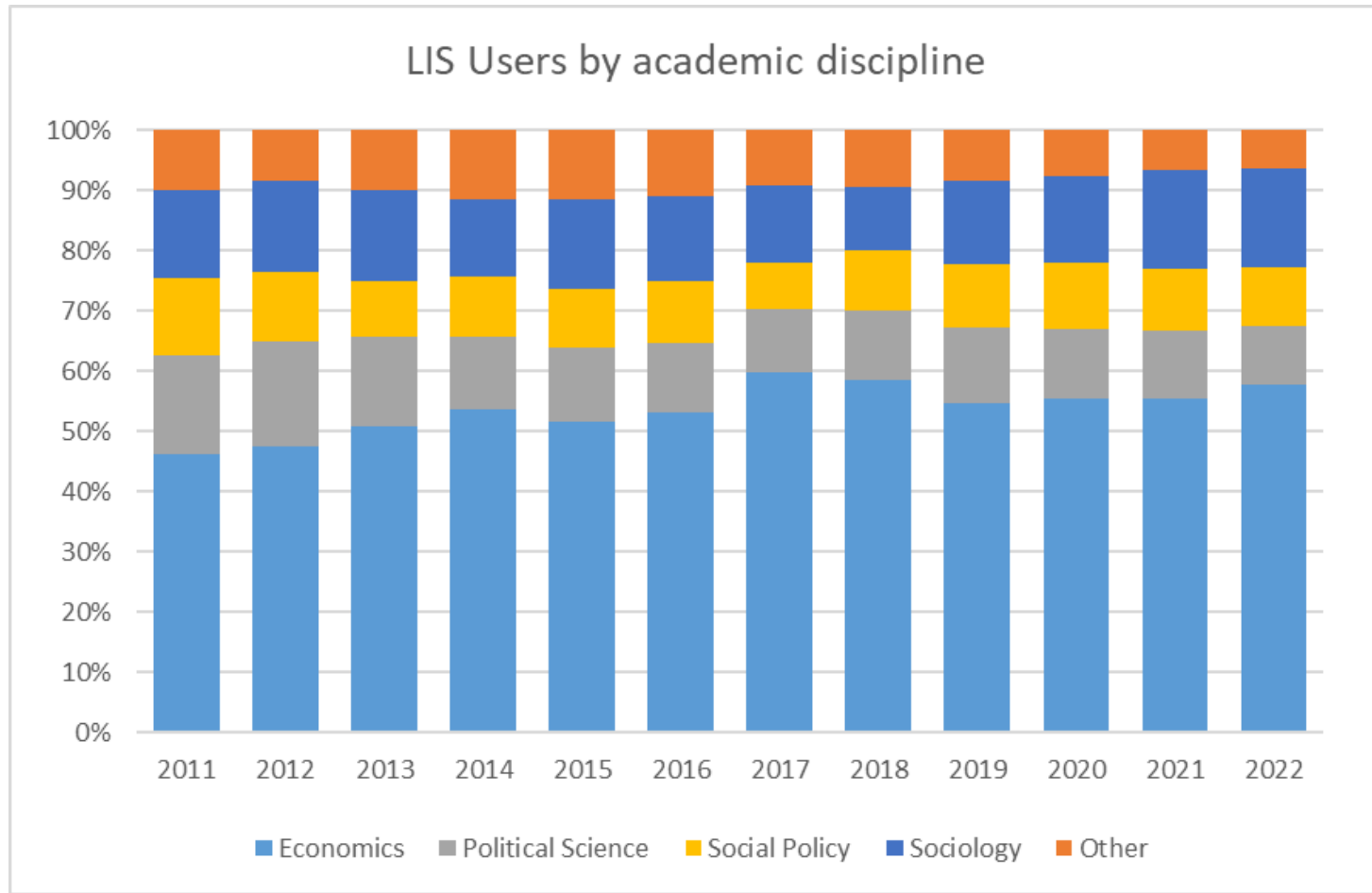
5 bad



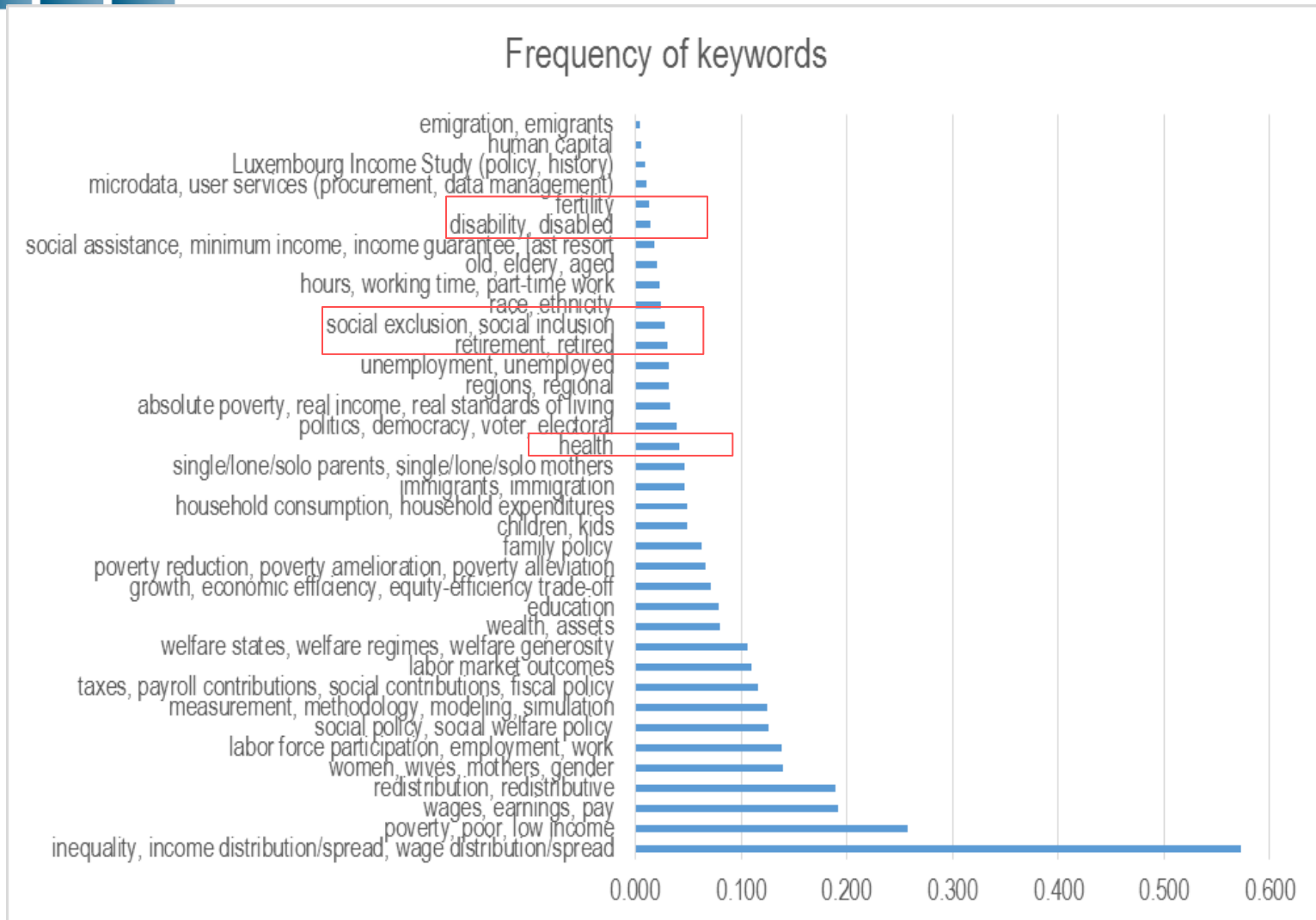
Research with LIS/LWS data



Distribution of LIS users by academic discipline



Frequency of topics in keywords





LIS microdata in conjunction with external data

- "macro-macro"
 - *mainly pooled time-series-cross-sectional models; LIS/LWS microdata aggregated, for either dependent or independent variables*
- "macro-micro"
 - *multi-level models; LIS/LWS data (households or persons) nested in countries to assess "effect" of country-level variables on micro-level outcomes and/or micro-level slopes*
- "micro-micro"
 - *statistical matching models; LIS/LWS microdata can be matched/merged with other individual-level data that include e.g. subjective wellbeing variables*



Research done with LIS data on health and related issues

- Looking at LIS Working Papers, health outcomes often come from external sources (mortality registries, SHARE, national health surveys).
- Papers focused on redistribution and poverty measure the impact of medical spending or in-kind health benefits rather than self-reported health; subjective health status in LIS data utilized as covariate.
- Key takeaways from LIS Working Papers on health and related issues:
 - *Health costs reshape who is poor; accounting for out-of-pocket changes poverty/redistribution.*
 - *Relative deprivation links to mortality; individual deprivation dominates area inequality.*
 - *Valuing in-kind health benefits shifts measured living standards.*
 - *Care sectors are large, gendered, migrant-reliant; penalties persist.*
 - *Ageing & policy design shape later-life income and health-care use.*



What's available (outside LIS core variables) — at a glance

Visiting Scholars @ LIS can access pre-harmonized health & well-being content in original LIS source datasets.

- Deprivation items (e.g. housing, environment, safety).
- Health (e.g. COVID-19, women's health (child birth), health condition limiting activity).
- Subjective well-being & social capital (e.g. life satisfaction, trust, networks).
- Child well-being (schooling, health, vaccination, reasons for non-attendance)
- Other: access to transport/schools, work environment/stress, childcare



Who to contact?

- LISSY Registration issues/general inquiries:
admin@lisdatacenter.org
- Data & LISSY issues:
usersupport@lisdatacenter.org
- Publications/Working Papers:
publication@lisdatacenter.org
- LIS staff, available [here](#)



Thank you for your attention
Any questions are welcome !

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