



**United
Nations**

Department of
Economic and
Social Affairs

Towards a System of Population and Social Accounts:

Building on past and current practices in social
accounting, statistics and indicators

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United Nations Network of Economic Statisticians

Informal Network meeting, Brussels, 9 November 2022

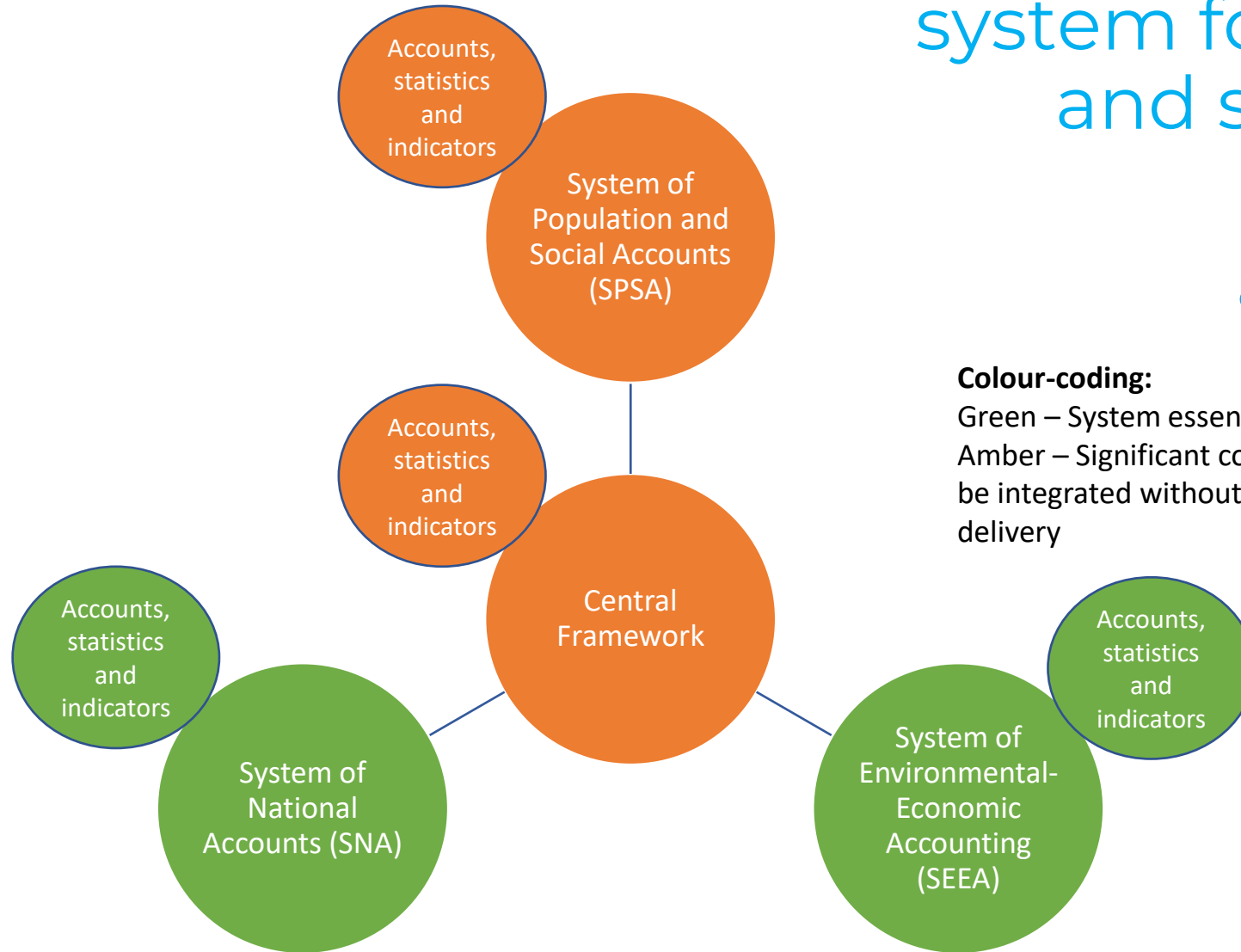


DESA

Statistics Division



Integrated statistical system for inclusive and sustainable wellbeing: a snapshot



Colour-coding:

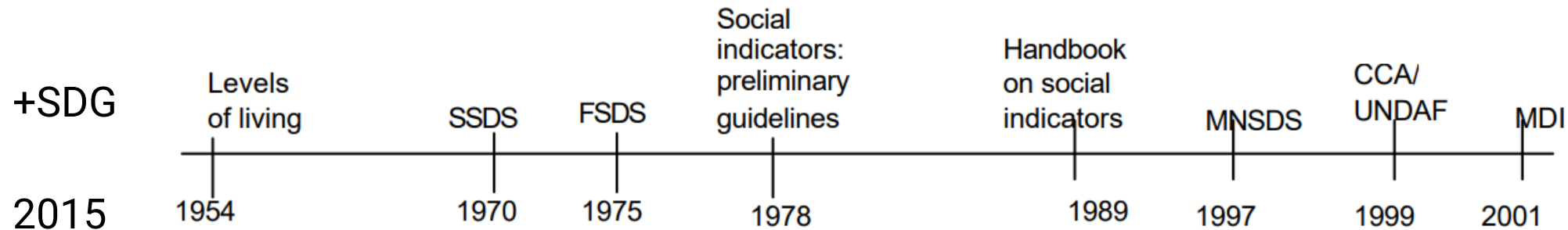
Green – System essentially exists

Amber – Significant components already exist and can be integrated without interrupting current statistical delivery



Efforts towards a systematic development of social accounting, statistics and indicators

- Timeline - overview of the Statistical Commission initiatives



SSDS = System of Social and Demographic Statistics FSDS = Framework of Social and Demographic Statistics MNSDS = Minimum National Social Data Set CCA/UNDAF = Common Country Assessment /United Nations Development Assistance Framework MDI = Millennium Development indicators SDG = Sustainable Development Goals

- United Nations Expert Group Meeting on the Scope and Content of Social Statistics 9-12 September 2008 United Nations, New York, ESA/STAT/AC.161/1



Efforts towards a systematic development of social accounting, statistics and indicators

- 1954 International definition and measurement of standards and levels of living
 - “component approach”, aimed at measuring levels of living through a series of twelve components - physical wellbeing, related material elements such as consumption, as well as “non-material” factors such as the satisfaction of cultural or educational needs, etc.
- 1970 System of Social and Demographic Statistics, released in 1975 (main author Sir Richard Stone, also the author of the System of National Accounts
 - an attempt to establish, in the demographic area, a system complementing the system of national accounts
 - desirability of establishing a closer relationship between social and economic statistics, particularly those relative to the system of national accounts



Efforts towards a systematic development of social accounting, statistics and indicators

- System of Social and Demographic Statistics:
 - link stocks and flows of individuals and groups of individuals to economic information and in particular the provision of services.
 - information on individuals organized in matrices
 - economic information (e.g., the distribution of income, consumption and accumulation/wealth) organized as an extension of the System of National Accounts
 - time accounts included
 - regional and geographical information included
 - consistent classifications, definitions and concepts realized
 - record linkages advocated
 - longitudinal data advocated

Efforts towards a systematic development of social accounting, statistics and indicators

System of Social and Demographic Statistics (SSDS) – 11 sub-systems – ready to be represented in accounts – and done since by specialized UN agencies (e.g., ILO, UNWHO, UNESCO)

1. The size and structure of the population, births, deaths and migration
2. Family formation, families and households
3. Social class stratification and mobility
4. Distribution of income, consumption, accumulation and net worth
5. Housing and the environment
6. Allocation of time and the use of leisure
7. Social security and welfare services
8. Learning activities and educational services
9. Earning activities, employment services and the inactive
10. Health and health services
11. Public order and safety, offenders and their victims

Efforts towards a systematic development of social accounting, statistics and indicators: example population stock and flow

Table 3.2. The male population of England and Wales: the 1960 vintage
(Thousands)

State at new year θ		State at new year $\theta + 1$	England and Wales						Total	
			Outside world	1961 Age 0	1962 Age 1	1963 Age 2	1964 Age 3	1965 Age 4		1966 Age 5
Outside world		8.9	1.5	0.5	0.3	0.2	0.2	0.2	0.2	
England and Wales	1960. Age 0	395.3								395.3
	1961. Age 1	0.0	393.8							393.8
	1962. Age 2	1.7		393.3						395.0
	1963. Age 3	0.3			394.7					395.0
	1964. Age 4	-0.8				394.8				394.0
	1965. Age 5	-0.8					393.8			393.0
	1966. Age 6	-0.8						392.8		392.0
Total			395.3	393.8	395.0	395.0	394.0	393.0	392.0	



Efforts towards a systematic development of social accounting, statistics and indicators: : example population stock and flow by educational detail

Table 3.3. The male population of England and Wales classified by age and school attendance, 1965
(Thousands)

State at new year 1965 \ State at new year 1966		Outside world	England and Wales													Total		
			Age 0		Age 1		Age 2		Age 3		Age 4		Ages 5-15		Ages 16-19		Ages 20+	
			Not at school	At school	Not at school	At school	Not at school	At school	Not at school	At school	Not at school	At school	Not at school	At school	Not at school		At school	
Outside world		8.3	1.5	0.5	0.3		0.3		0.2		0.2	1.6	1.4		268.0	282.3		
England and Wales	Age 0 Not at school	434.9														434.9		
	Age 1 Not at school		440.7													440.7		
	Age 2 Not at school	0.5		426.2												426.7		
	Age 2 At school			1.3												1.3		
	Age 3 Not at school	0.3			406.7											407.0		
	Age 3 At school				11.5	1.5										13.0		
	Age 4 Not at school	0.7					292.5									291.8		
	Age 4 At school						101.4	12.8								114.2		
	Ages 5-15 Not at school	1.4							8.5		11.9	121.9				143.7		
	Ages 5-15 At school	-5.3							272.8	112.5	8.9	3325.6				3714.5		
Ages 16-19 Not at school	-2.1									139.5	116.2	1005.5	104.6		1363.7			
Ages 16-19 At school											106.1		90.8		196.9			
Ages 20+ Not at school	21.9												331.9	2.1	15413.2	15769.1		
Total		459.2	442.2	428.0	418.5	1.5	394.2	12.8	281.5	112.5	160.5	3671.4	1338.8	197.5	15681.2	23599.8		

Further disaggregation of population stock and flows measuring population change -> Inclusive and Sustainable Development

Population age structure is changing rapidly around the world

Many economic activities vary by age and gender, and these age and gender differences are changing, too.

consumption, labor earnings, savings, unpaid care work, use of health care and education services, etc.

These changes have important implications for:

- Economic growth;
- Sustainability of systems of financial support from the family, the state, and financial markets.
- Inequality by age, gender, socioeconomic group, and generation.

Deriving National Transfer Accounts (**NTA**) from SNA for consistency between socio-demographic statistics and national accounts

$$C + S = Y^l + Y^k + Y^p + \tau$$

Consumption + Savings = Primary Income + Transfers

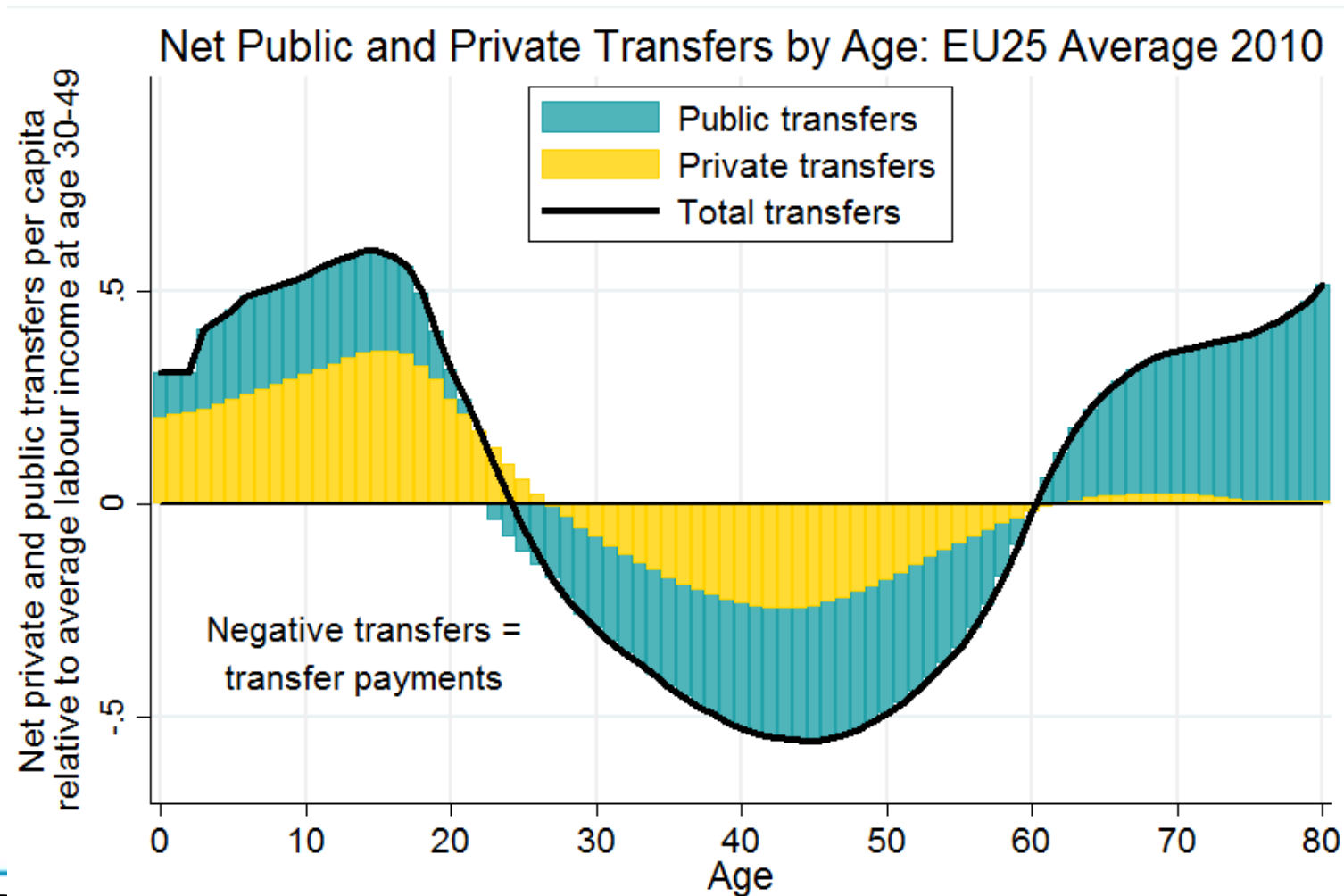
$$C(x) + S(x) = Y^l(x) + Y^k(x) + Y^p(x) + \tau(x)$$

Disaggregate **by age**

$$C(x) - Y^l(x) = [Y^k(x) + Y^p(x) - S] + \tau^g(x) + \tau^f(x)$$

Life cycle deficit = Asset-based reallocations + Public Transfers + **Private Transfers**

Net public transfers (benefits less taxes) and private transfers in Europe.





Efforts towards a systematic development of social accounting, statistics and indicators

- FSDS – “Improving social statistics in developing countries: conceptual framework and methods, released in 1979
 - outlined a conceptual framework setting the scope and desirable priority areas of an integrated framework – a SSDS-light for developing countries
 - structure and coherence distinguished a framework from a disjointed list of statistical series is structure and coherence.
 - use of consistent classifications and definitions throughout the entire body of statistics
 - development of suitable aggregates



Efforts towards a systematic development of social accounting, statistics and indicators

- In 1985 the debate
 - whether work on an overall system should be considered an essential element of the work on social indicators
 - to develop an overall system and systematize social and related statistics and indicators being an essential element in the work on social indicators.
 - whether social indicators should be developed for specific purposes without reference to a fixed general framework
 - To develop social indicators for specific purposes –for example, concerning special population groups or policy concerns –could be developed from underlying basic statistics without reference to a fixed general framework.
- Outcome
 - Progress on social statistics and indicators for special population groups (women, persons with disabilities, youth, migrants, older persons, children, etc.) and specific themes (education, health, culture, governance, poverty, etc.)
 - Important role for Population and housing census programs supported by the *Principles and Recommendations for Population and Housing Censuses – 2008 Revision 2 and 2017 Revision 3*



Principal indicators of levels of living (1954)	MNSDS (1997)
1. Expectation of life at birth	1. Life expectancy at birth, by sex
2. Infant mortality rate	2. Infant mortality, by sex
3. National average food supplies in terms of calories at the “retail level” compared with estimated calorie requirements	3. Child mortality, by sex
4. Proportion of children 5-14 years of age enrolled in schools	4. Maternal mortality
5. Percentage of population literate, above some appropriate age, total and by sex	5. Monetary value of the basket of food needed for minimum nutritional requirement
6. Proportion of economically active population unemployed	6. Average numbers of years of schooling completed, by urban/rural, sex and, where possible, by income classes
7. Percentage distribution of economically active population by principal industrial and occupational categories	7. Unemployment rate, by sex
8. “Personal consumption” as a proportion of national income and index of change therein	8. Employment-population ratio, by sex and, where appropriate, formal and informal sector
	9. GDP per capita
	10. Household income per capita (level and distribution)
	11. Number of people per room, excluding kitchen and bathroom
	12. Access to safe water
	13. Access to sanitation
	14. Population estimates by sex, age and where appropriate and feasible, ethnic group
	15. Contraceptive prevalence rate



Why accounting? example for labour market accounts

- Contradictory results between data sources (establishment and household surveys, registers, population statistics (gross flows- birth, death, emigration, immigration)
- Fragmented approach leads to overlaps and gaps and lacks comprehensive use the labour market data
- Difficulties and limitations in describing labour market dynamics and connections
- Links between labour market data and other statistical systems are missing – national accounts, and population or education statistics.

ILO definition of labour accounts: "provide a logical framework for obtaining internally consistent estimates of key labour market variables and their distribution over the population ..(which) .. are necessary for the description and analysis of the state and dynamics of the labour market and its interaction with the rest of the economy"

Reference - Labour Accounts: A Step Forward to a Coherent and Timely Description of the Labour Market- 2002 - Brigitte Buhmann, Wim Leunis , Alain Vuille and Kirsten Wismer

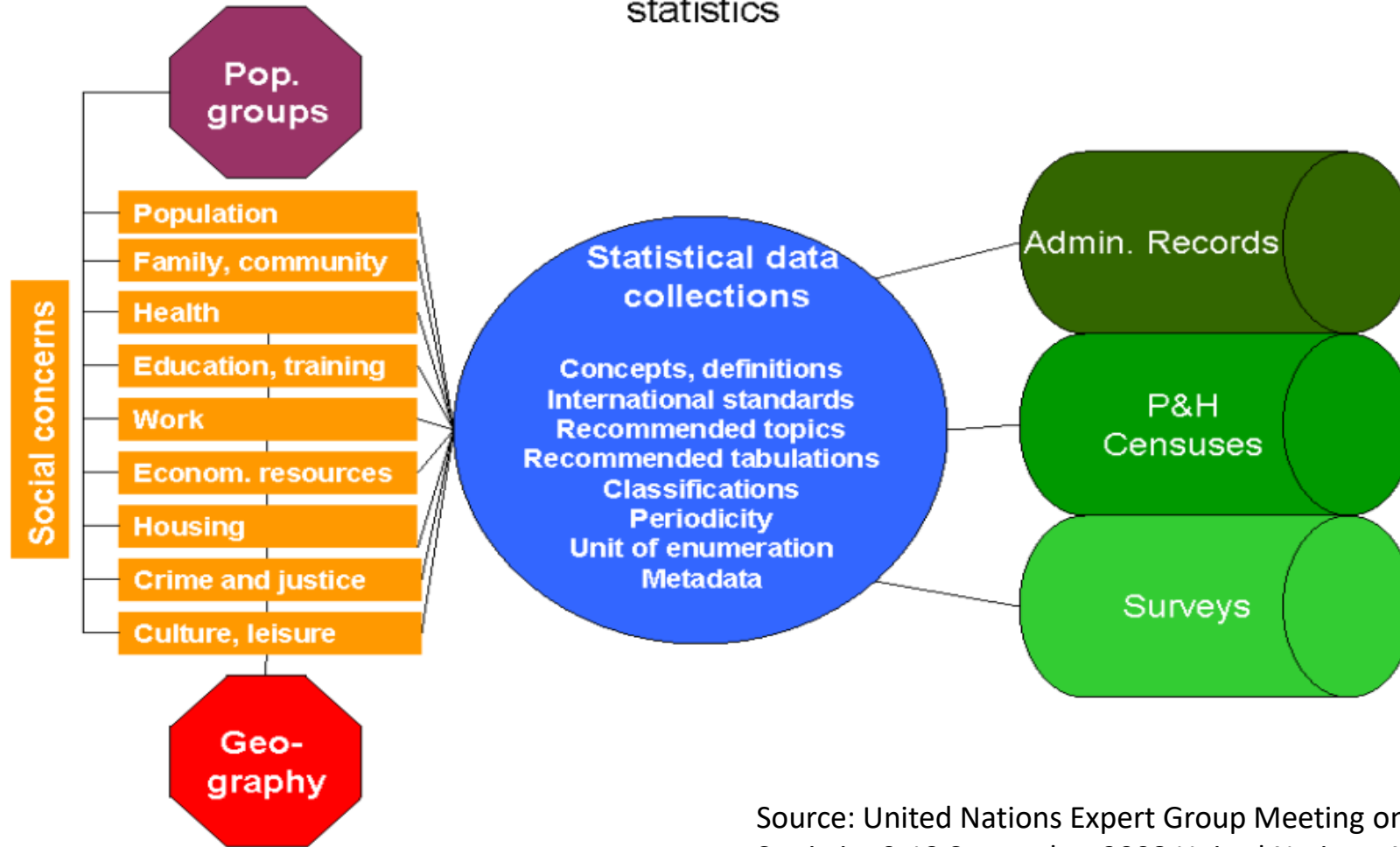


Why accounting? example for labour market accounts

Steps to be taken:

- Defining of accounting identity equations
 - $\text{Jobs} = \text{employed persons} - \text{employed persons on leave} + \text{secondary jobs}$
 - $\text{Total hours worked} = \text{number of jobs} * \text{actual hours per job}$
 - $\text{Total compensation} = \text{number of jobs} * \text{compensation per job}$
- Harmonizing definitions and classifications in source statistics
- Identifying measurement errors
- Balancing

Graph 1. Complete scheme and components of social statistics



Source: United Nations Expert Group Meeting on the Scope and Content of Social Statistics 9-12 September 2008 United Nations, New York, ESA/STAT/AC.161/1