

# **Civil Registration and Vital Statistics in Norway: Example of an advanced system**

**Workshop on Vital Statistics for North and  
Central Asian Countries**

**7-11 October 2019, Bishkek- Kyrgyzstan**

Helge Brunborg  
Statistics Norway

# The Norwegian statistical system (NEW)

- Production of Norwegian statistics more and more based on administrative registers
- This development started when a computerized central population register and unique personal identification numbers were introduced in 1964
- The reliance on administrative registers has spread from statistics on individuals to other areas, such as companies and real property
- Sample surveys are still conducted to collect information about special topics, such as unemployment and living conditions
- But these surveys are also to a large extent based on administrative registers, for
  - Drawing the sample
  - Information about date of birth, marital status, family composition

## Other data sources

- Sample surveys are still conducted to collect information about special topics, such as unemployment and living conditions
- But these surveys are also to a large extent based on administrative registers, for
  - Drawing the sample
  - Information about date of birth, marital status, family composition, education and place or country of birth
- Regular population censuses are not conducted any more

# The three basic administrative registers in Norway

- **Central population register**
- **Register of companies and enterprises**
- **Register of real property**

These registers are linked by unique personal identification numbers and numerical addresses

# What is a population register?

- A system for data on individuals
  - Continuous recording and updating info about each member of the resident population of a country, usually including at least:
    - Name
    - Sex
    - ID number
    - Address or place of usual residence
- OFTEN ALSO:
- Place or country of birth
  - Marital status
  - Parents
  - Nationality
- May yield information on the size and characteristics of the population, for example by sex and age at the end of each year

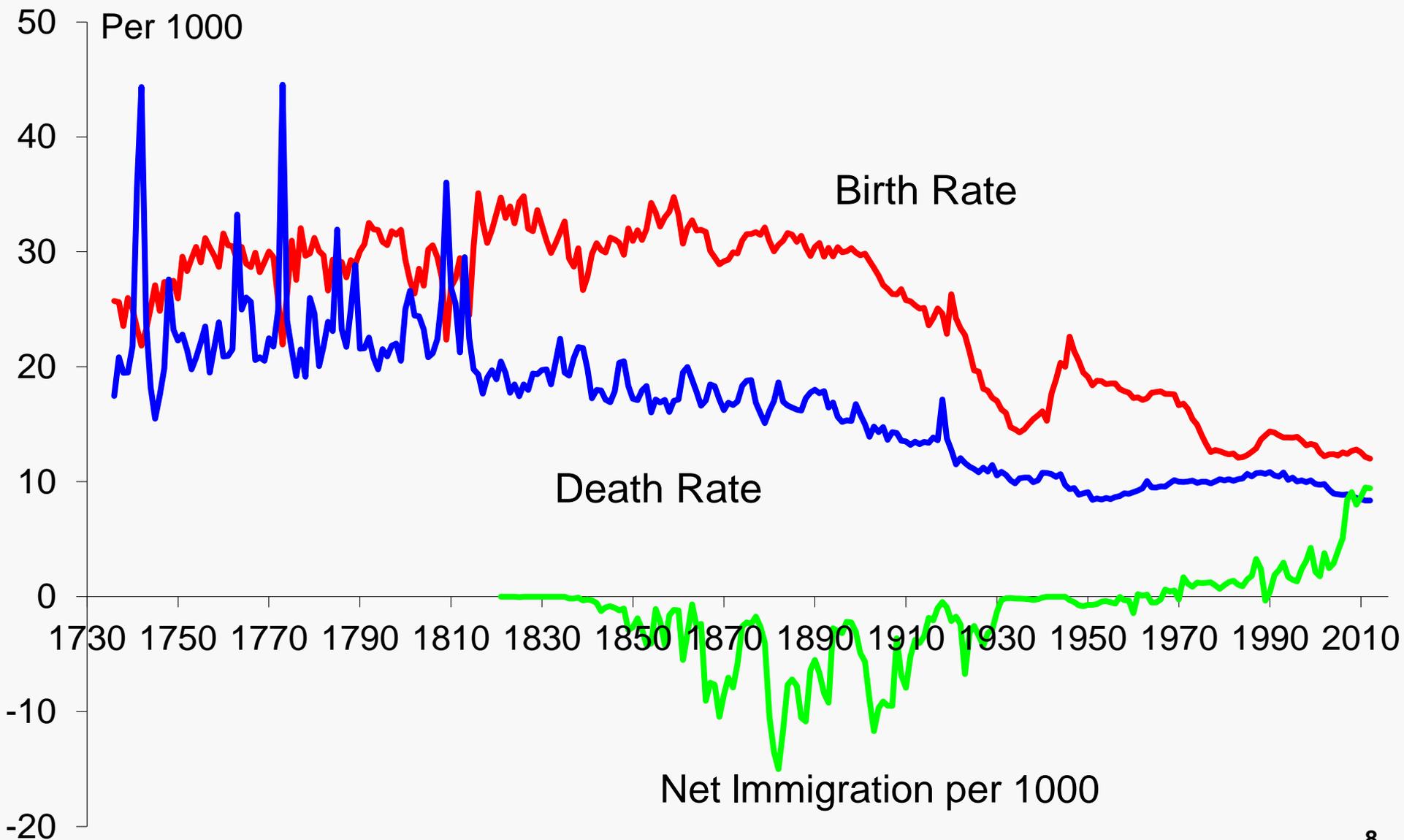
# A register of identity cards or numbers is a population register *only* if:

- It is regularly updated with new births
- Records of dead persons are changed
- Migrations are incorporated (if migration is not negligible)
  - New immigrants should be registered
  - The record of emigrants should be changed
- Useful to include address of usual residence
- Internal moves in the country necessary if the register is going to be used for local area administration and statistics

## Population registration in Norway

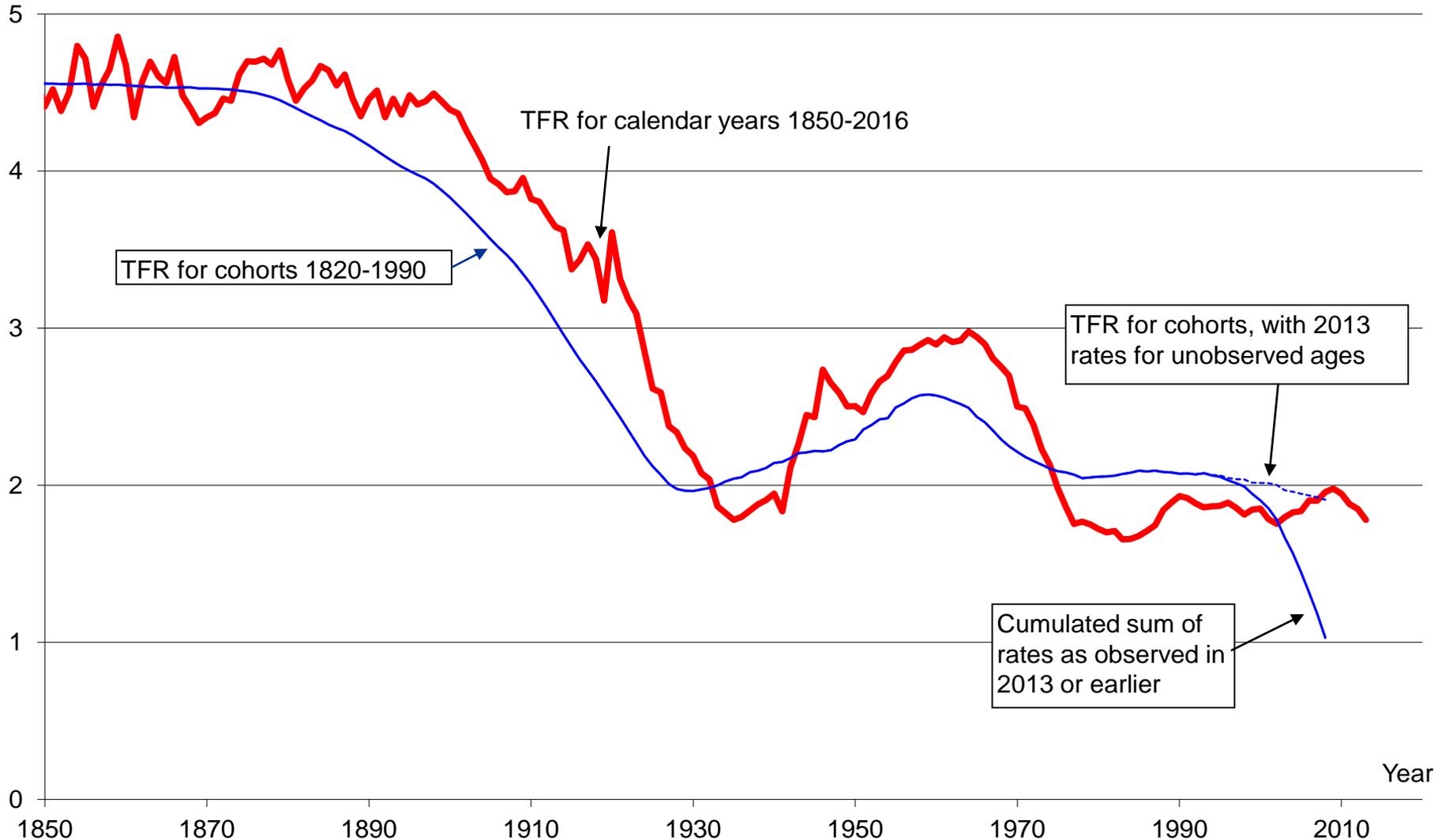
- 1735- Baptisms, marriages and burials recorded in church registers
- 1769 First population census
- 1948 First population register law (local registers only)
- 1964 ID number introduced for all residents of Norway
- 1964 Population Register (CPR) established by Statistics Norway (SN) from the 1960 Population Census
- 1991 CPR transferred from SN to Directorate of Taxes
- 1994 All 435 local offices computerised and on-line with the CPR data base
- 2001 Dwelling numbers introduced and registered (last paper-based census)
- 2011 First register-based population census
- 2020 Modernisation of the population register

# Demographic Transition in Norway

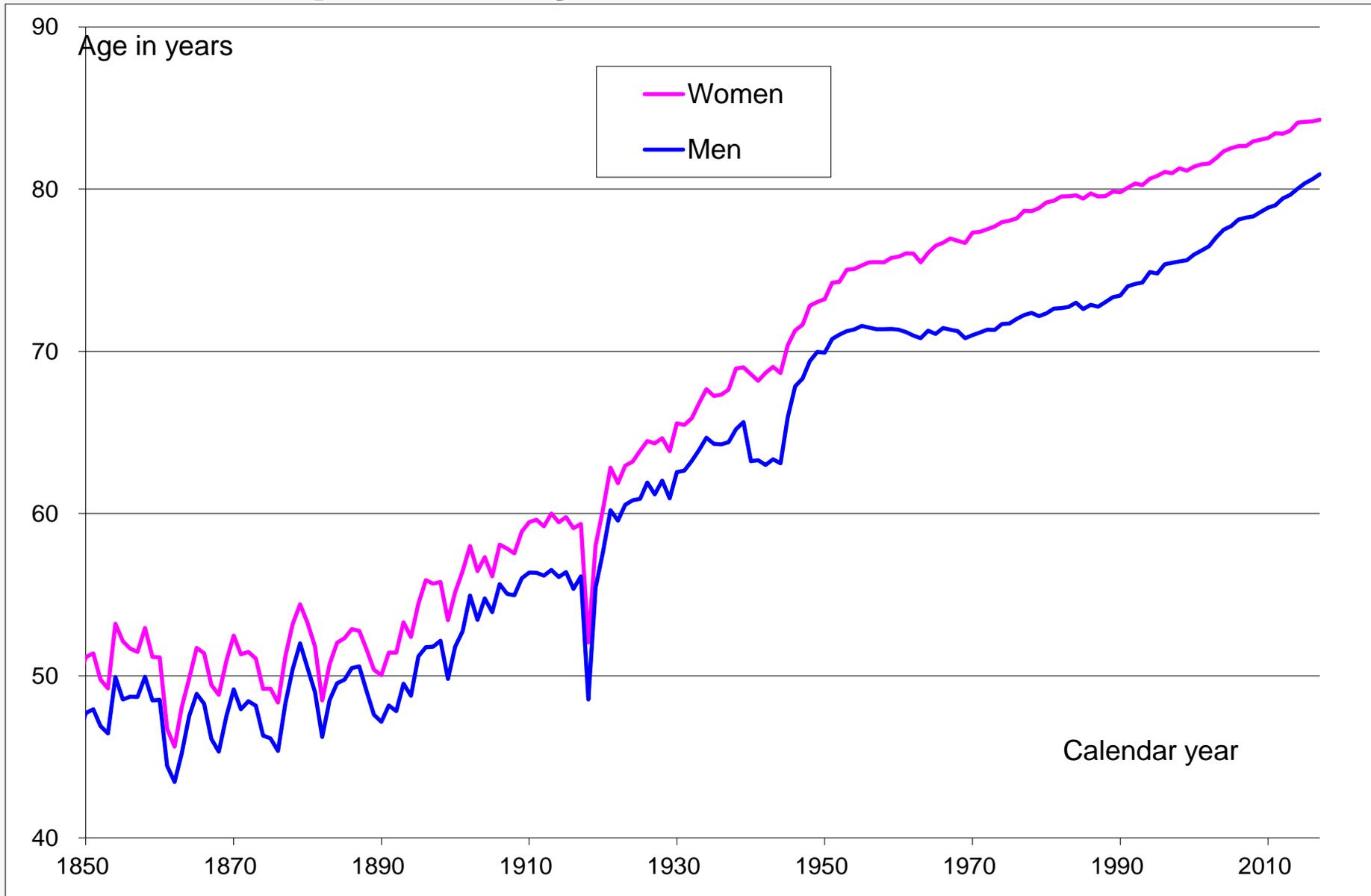


# Total Fertility Rate

Children per woman

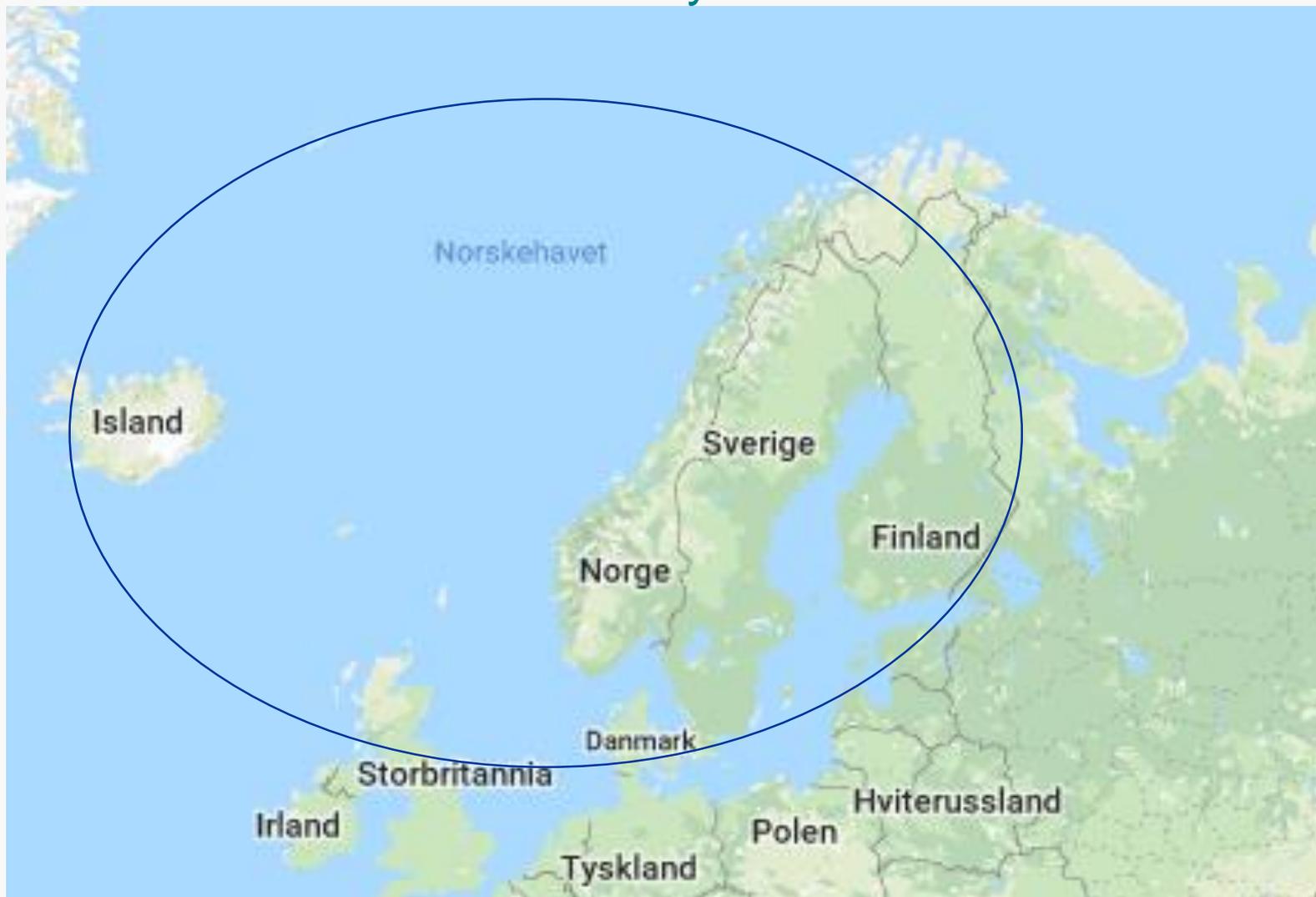


# Life expectancy at birth



# Nordic model of population registration

Nordic countries: Norway, Denmark, Finland, Iceland and Sweden  
Modern system established in the 1960s

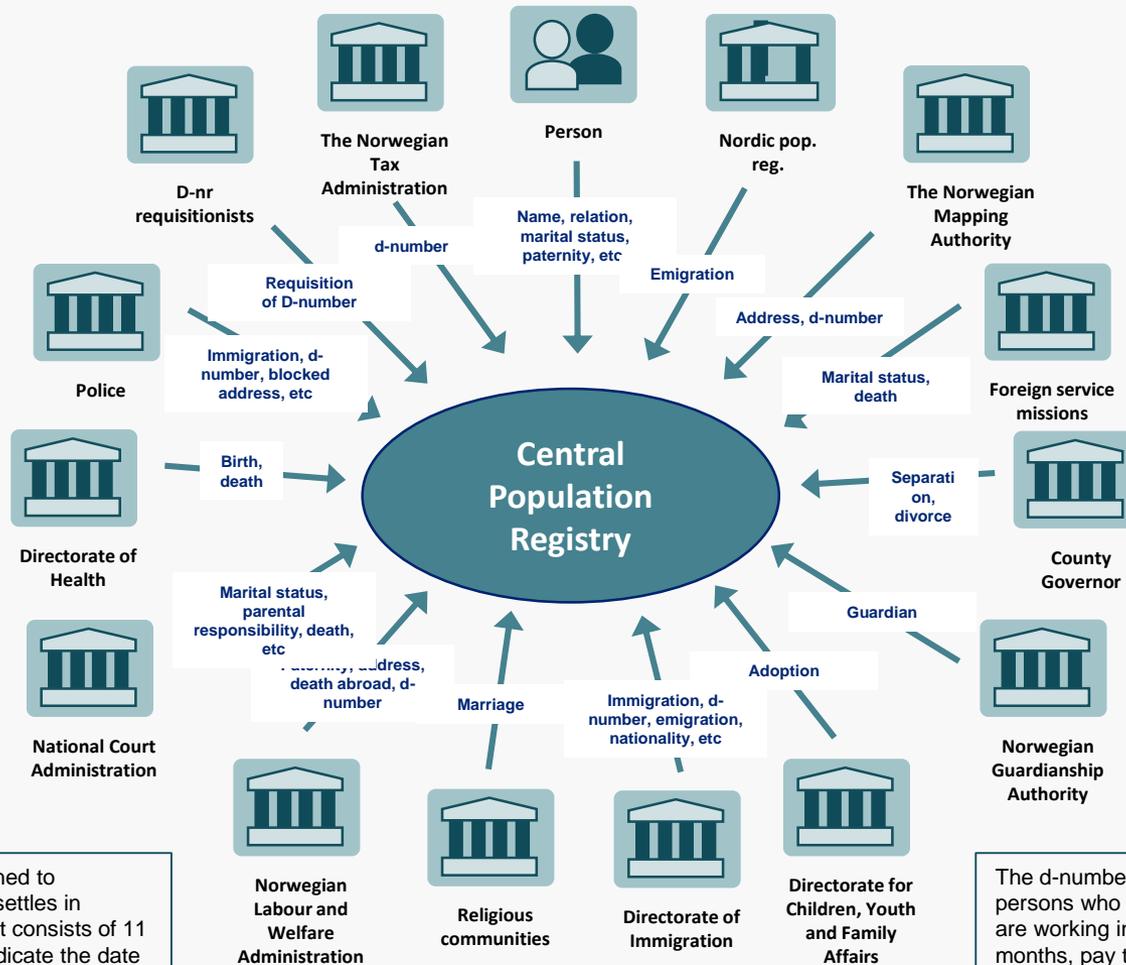


## Characteristics of the Nordic model of population registration

- **Central Population Register with links to local offices**
- **Unique Personal Identification Number (PIN)**
- **CPR continuously updated with data on births, deaths, migrations, address changes, marriages, name changes, citizenship ...**
- CPR and PIN widely used for administrative purposes, by both public and *private* institutions
- Wide use of unique PIN makes it simple to link and use data from different administrative registers, such as social security, taxes, students ...
- Widely used for statistics and research
- Close *cooperation* between public institutions
- PIN considered and treated as sensitive information
- Safeguarded through legislation and a data inspector

# Transfer of data TO the CPR

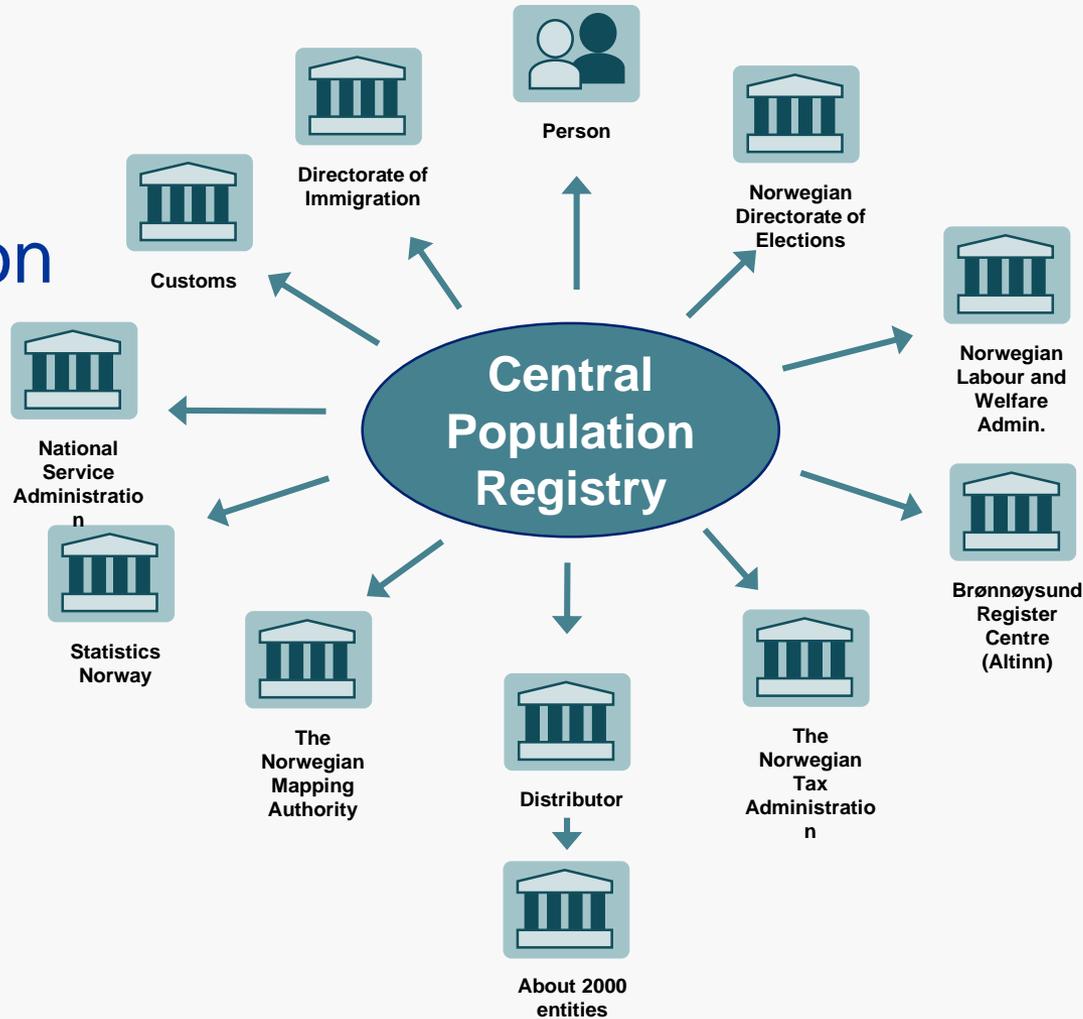
Source: The Norwegian Tax Administration



A national identity number is assigned to everybody born in Norway or who settles in Norway for more than six months. It consists of 11 digits, of which the first six digits indicate the date of birth.

The d-number is an identity number assigned to persons who do not live in Norway but who have are working in the country for less than six months, pay taxes, own property, have applied for asylum, etc.

# Distribution of data FROM the CPR



Source: The Norwegian Tax Administration

# Most important *flow* variables registered by the CPR

- Births
- Deaths
- Marital changes (marriages incl. same-sex marriages, separations, divorces, annulments...)
- Emigrations and immigrations
- Internal moves
- Address changes
- Name changes
- Citizenship changes
- Gender changes
- PIN changes

# Most important *status* (stock) variables in the CPR

- Personal Identification Number (includes date of birth and sex)
- Residence status (resident, deceased, emigrated, no permanent address, disappeared)
- Address
- Municipality
- Dwelling number
- Place of birth (municipality or country)
- Name (incl. first and middle names)
- Surname prior to marriage
- Citizenship
- Country of immigration
- Country of emigration
- Marital status
- PIN of spouse, mother and father
  - Links between siblings, cousins, children and grandparents ...

All changes in these and several variables are registered, including the data of change

# All individual historical data are kept

- Number of **residents**: 5.2 million
- Persons in the CPR: More than 8 million
- Nobody (no record) is deleted physically
  - but status (resident, dead, emigrated) may be changed
- Official date of *registration* and date of *entry* recorded for every data entry

# Other person registers

- Population censuses 1960, 1970, 1980, 1990 and 2001
- Cause of death
- Cancer cases
- Tuberculosis cases
- Medical personnel
- Soldiers
- Refugees and other immigrants
- Bank accounts
- Insurance registers
- Medical prescriptions

# Population statistics

- Population statistics is made by Statistics Norway (SSB) from a *statistical* population register.
- This register is updated from the CPR every night, five times a week
- It includes some additional and/or derived variables
- Otherwise it is identical to the CPR

# Combining registers and sample surveys & censuses

- Drawing sample population for surveys
- Preprinting of census questionnaires
- Collecting data from registers instead of asking questions (date of birth, marital status, citizenship, education, income ...)
- Identifying household members and other relatives
- Adding longitudinal data
  - comparing desired number of children with the actual number at a later year
- Constructing new variables

# Statistics and research - examples

1. Conducting register-based censuses
  2. Distribution of women by number of children, including childlessness
  3. Total fertility rate by education
  4. Life expectancy by occupation and by education
  5. Making life histories from
    - a. Births
      - Spacing of births
    - b. Marriages and divorces
    - c. Migrations
- For how long have immigrants been living in Norway?
  - How many people reimmigrate to Norway?

## Importance of an address system

- General public: Finding out where people live, postal services
- Enough to report an address change only once – saving time and costs and avoiding discrepancies
- Emergencies: Ambulances, police ...
- Elections
- Planning for schooling, health etc: population by age in an area
- Quality of CPR and other registers
- Statistics and research
- The address ID may be used as the key when matching different registers, e.g. real property register and CPR

# Stages in the establishment of an address system

- Assigning *street names* and *area names* if no streets
- Assigning building numbers according to a national system
- Putting up street signs and number plates
- Drawing street and area names on maps
- Entering the address for each individual into the CPR
- Introducing numerical addresses and establishing an address register
  
- Assigning numbers to each dwelling/apartment according to a national system
- Entering dwelling numbers into the CPR and the address register
- For the future: Measuring geographic coordinates and entering them into the address register

# Conclusions

- Establishing the population register is only the first step
- The real challenge is to keep the register up to date, with regular updates of events like births, deaths and migrations, and identifying and removing errors
- This takes time. Patience, hard work and a long-term perspective are needed to obtain a high-quality register.
- Cooperation and use of the register by many institutions contribute to the gradual improvement of the register