TALL SOM FORTELLER

The Statbus system

Statistisk sentralbyrå
Statistics Norway

Agenda

History of Statbus. Background and clarifications

Units in Statbus

Characteristics of the units

Configuration, Data quality

Users- and user maintenance

History of Statbus

- 2008-2015: Project in Kyrgyzstan creating an *administrative* business register.
  - Project failed for political reasons
  - Leftover funds to be used for developing a *statistical* business register
- 2016: Requirement specification written with the help of NSOs in Kyrgyzstan and Uganda
- 2017 – end of 2021: development of system
- 2022: Fixing leftovers

Administrative vs statistical business registers

- Administrative register – for governance
  - Register new businesses
  - Tax purposes
  - ..
- Statistical register
  - For drawing samples to surveys
  - Use as key for connecting other sources
  - To create statistics
  - …
- Statistical register = adm. Register with some units and a few indicators added

International standards/guidelines for SBRs

- United Nations Guidelines on Statistical Business Registers (still in draft version)
- UNECE's Guidelines on Statistical Business Registers (2015)
- AfDB's Guidelines for Building Statistical Business Registers in Africa (2014)

Requirements for an SBR

- Quality
  - Full coverage
  - High quality
  - Documentation
- Should contain the units as defined in the UNSD's recommendations
- Should contain stratification variables necessary to define relevant statistical populations
- Should also
  - Contain information on enterprise groups and globalisation
  - Be integrated with administrative register

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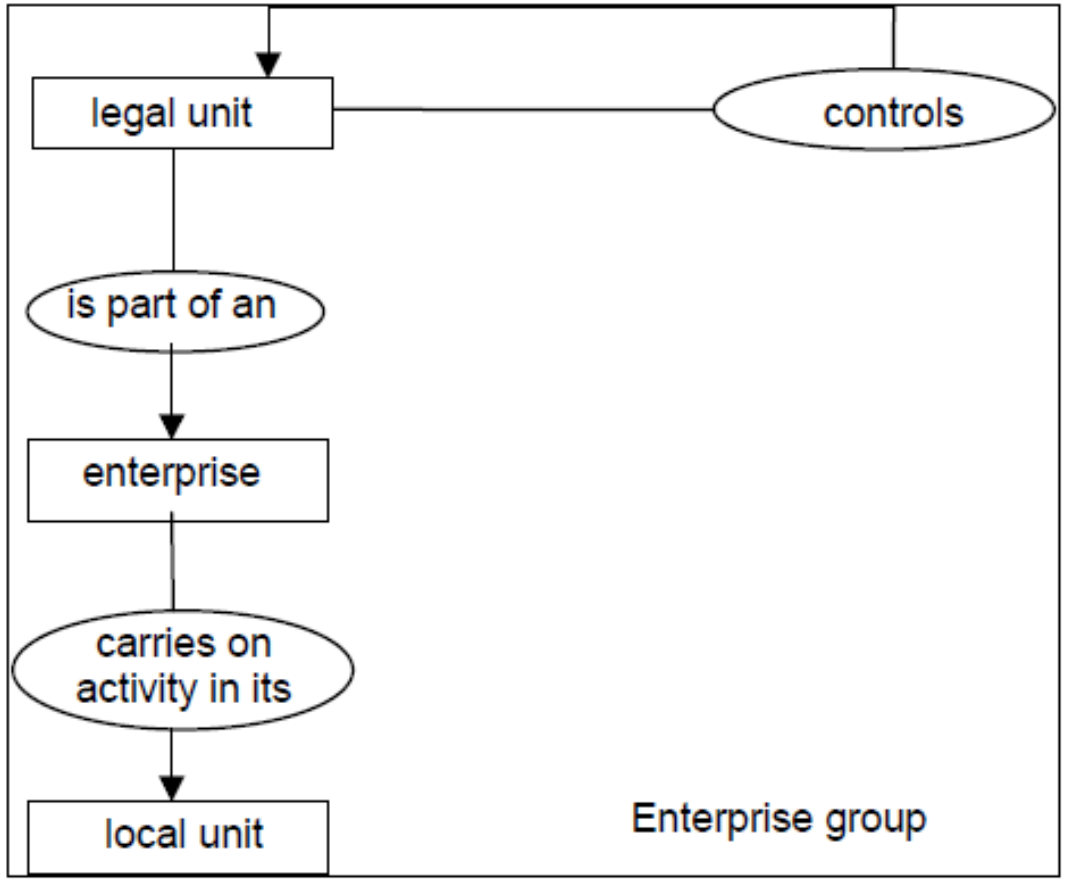
Units in Statbus

Main units in an SBR

- Legal units
  - = The units registered in administrative sources
  - Controls itself
  - Is equal to an enterprise or is part of an enterprise (mostly there is a 1-1 correspondence between enterprise and legal unit)
- Local units: Where the activities are carried out
- Enterprise groups

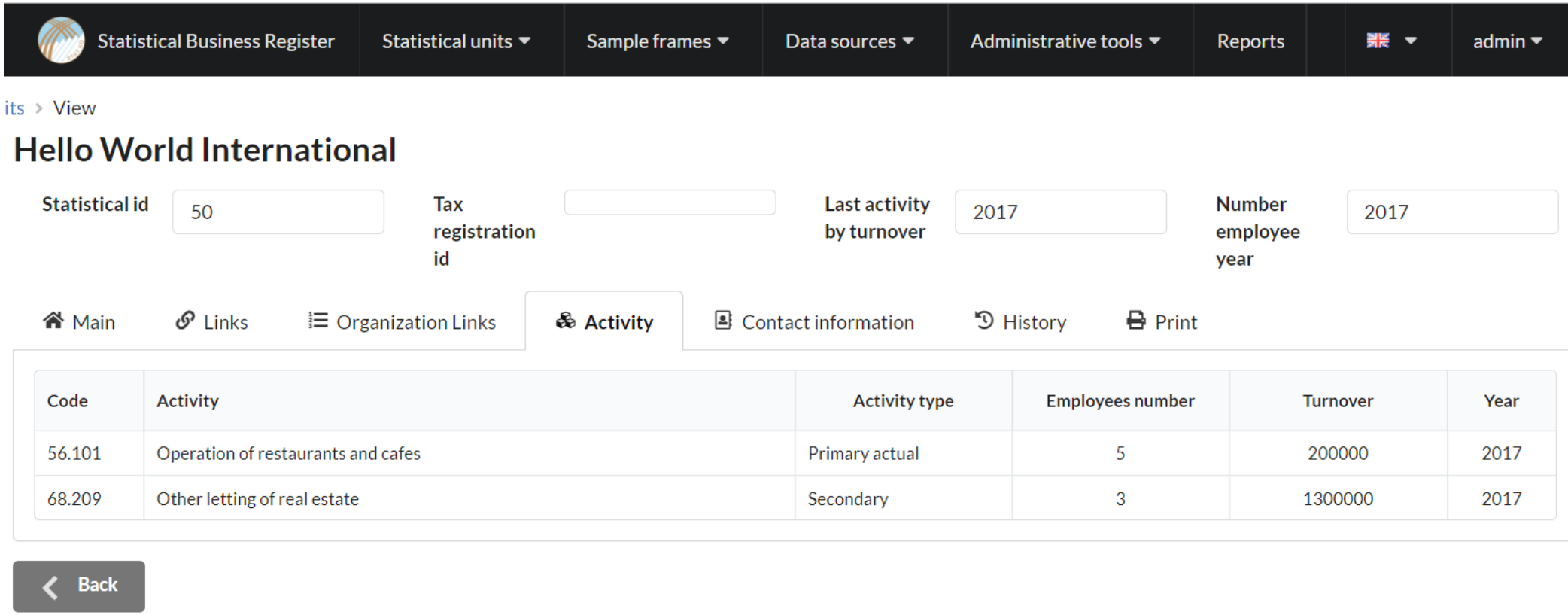


“Derived” units

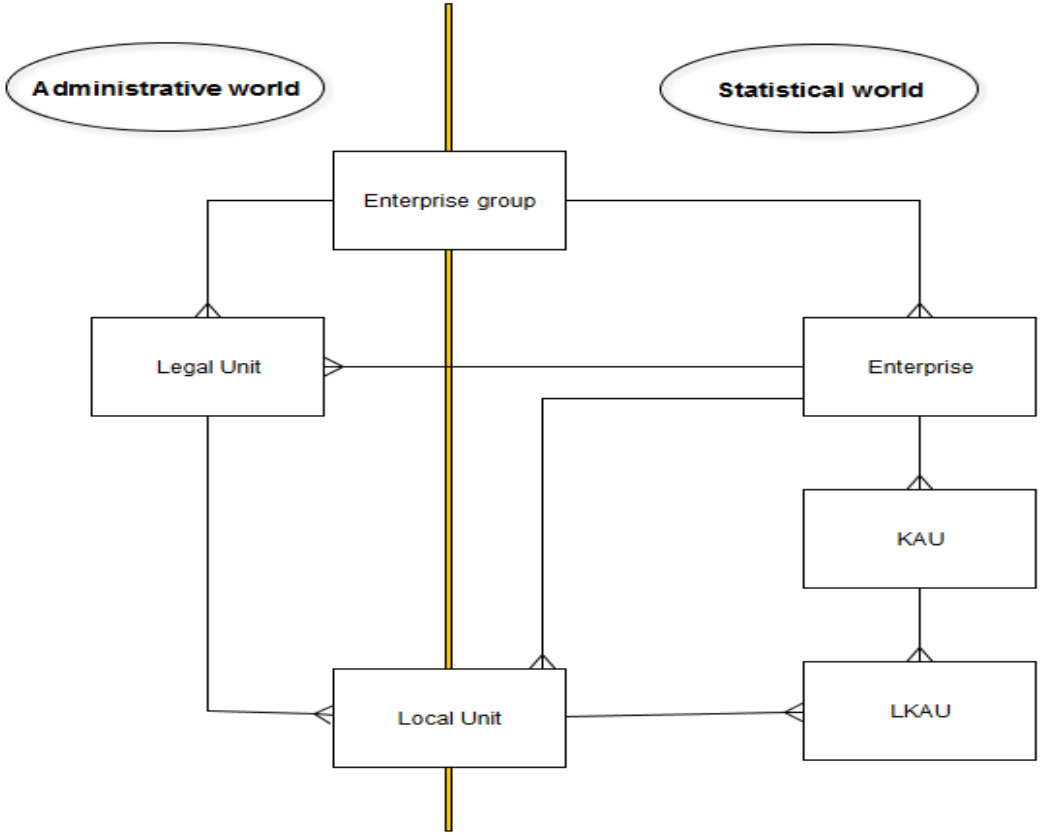
- KAU – Kind-of-Activity Unit: an enterprise or part of an enterprise that engages in only one kind of productive activity or in which the principal productive activity accounts for most of the value added
- LKAU – Local Kind-of-Activity Unit: The part of a KAU which corresponds to a local unit. (= “establishment”)

KAUs and LKAUs in Statbus

- Not explicitly defined
- Retrieved by looking at the activity at enterprise/local unit levels



Map of units



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Characteristics of the units

ID fields

- Computer generated ID – used internally in the database
- StatID – The ID used at the NSO
- Tax ID – ID of the tax authorities (to facilitate linking with tax data)
- External ID: Consists of 3 parts
  - External ID type: name of source (e.g. “customs” or “license office”)
  - External ID date
  - External ID: The actual ID given by the external ID type
- (RefNo: Link to paper questionnaire)

ID fields – food for thoughts

- Are 4 ID fields enough?
- What if there is a national ID only?
- Do we need refNo?

Biographic variables

- Name, short name
- Address fields
  - Address as registered
  - Actual address
  - Postal address
- Telephone, web address, email

Stratification variables

- Activities
  - Unlimited number of activities for a unit
  - Turnover and number of employees can be given at activity level
  - Activities also have info on year of commencement of activity
- Sector code
- Legal form
- Region hierarchy

Economic variables

- Number of employees
- Number of people employed
- Turnover

Status variable

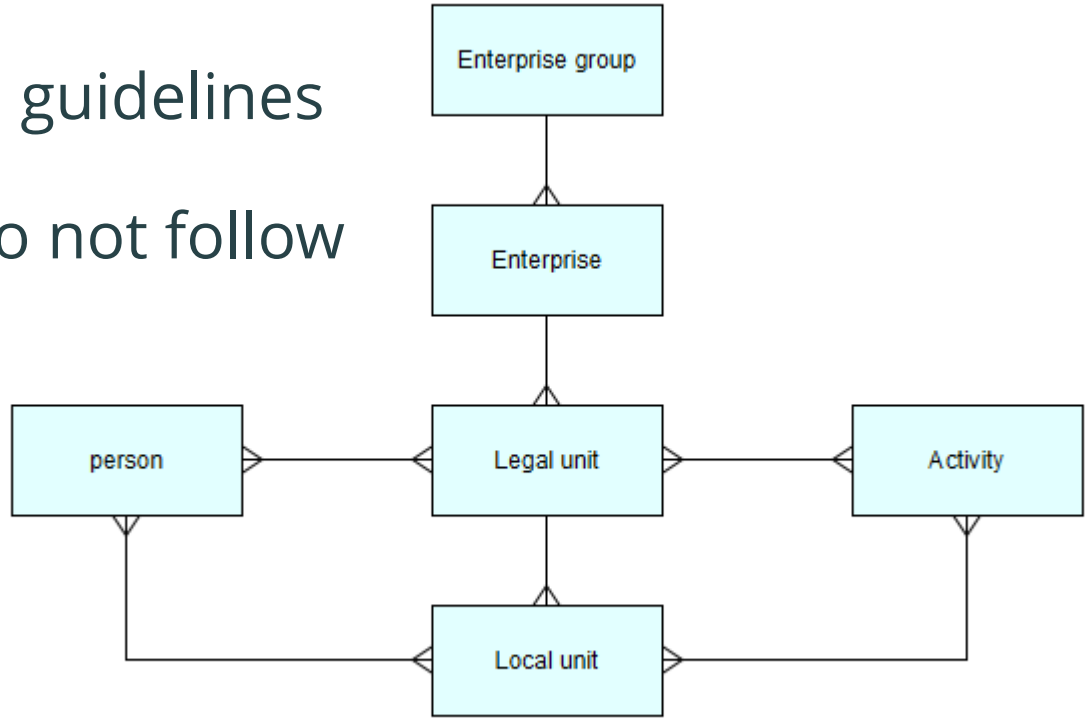
- Whether unit is active, not yet active, dormant, liquidated, in liquidation phace stc

Variables – food for thoughts

- Three addresses? Is this necessary?
- Do we need more contact info fields?
- More economic variables?
  - Value added?
  - Employees by gender?
  - …?

Linking variables

- Links between units according to guidelines
- Links for units in public sector (do not follow the “standard)
- (arrows ending in “crows feet” = many-relation)



Date and year variables

- Registration in Statbus (automatic)
- Registration at NSO
  - Might be older than Statbus
- Registration at Tax- and “external ID” authorities
- Registration date of unit
- Date of change of status
- Date and year of turnover validity
- Date and year of number of employees
- Suspension-, reorganisation and liquidation dates
- Date of links between units

Configuration

The appsettings file – mandatory fields

- Setting what variables are mandatory (“true”) or not (“false”)
- Some variables are grouped and have separate areas (example: “StatUnit” and “Addresses”)
- Notice details about address:
  - It is mandatory for a unit to have an address
  - The only address information (in the addresses area) that is mandatory is the “GeographicalCodes”
  - Hence each unit MUST have a geographical code, while no other address info is mandatory

appsettings.Production.json

```
},
"DbMandatoryFields": {
  "StatUnit": {
    "StatId": true,
    "StatIdDate": true,
    "ExternalId": false,
    "ExternalIdType": false,
    "ExternalIdDate": false,
    "Name": true,
    "ShortName": false,
    "Address": true,
    "TelephoneNo": false,
    "Activities": false,
    "RegistrationDate": false,
    "RegistrationReasonId": false,
    "ActualAddress": false,
    "Persons": false,
    "Employees": false,
    "NumOfPeopleEmp": false,
    "EmployeesYear": false,
    "EmployeesDate": false,
    "TaxRegId": false,
    "TaxRegDate": false,
    "Turnover": false,
    "TurnoverYear": false,
    "TurnoverDate": false,
    "StatusDate": false,
    "FreeEconZone": false,
    "Classified": false,
    "SizeId": false,
    "DataSourceClassificationId": false,
    "UnitStatusId": true
  },
  "Addresses": {
    "AddressPart1": false,
    "AddressPart2": false,
    "AddressPart3": false,
    "GeographicalCodes": true,
    "Latitude": false,
    "Longitude": false
  },
```

The appsettings file – mandatory fields

- General settings for Units
- Settings for different kinds of units
- Additional settings for
  - Persons
  - Addresses
  - activities

The appsettings file settings for connections between units

- CheckRelatedActivities – if true: all units *must* have at least one activity
- checkRelatedPerson and checkAddress: similar
- Orphan: sets whether
  - A local unit can exist without a “parent” legal Unit
  - A legal unit can exist without a “parent” enterprise
  - Whether a legal unit can exist without having any local units
  - …

appsettings.Production.json

```
56    },
57    "StatUnitAnalysisRules": {
58      "Connections": {
59        "CheckRelatedActivities": true,
60        "CheckRelatedPersons": false,
61        "CheckAddress": false
62      },
63      "Orphan": {
64        "CheckOrphanLocalUnits": false,
65        "CheckOrphanLegalUnits": false,
66        "CheckLegalUnitRelatedLocalUnits": false,
67        "CheckEnterpriseRelatedLegalUnits": false,
68        "CheckEnterpriseGroupRelatedEnterprises": false
69      },
```

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Appsettings file – custom Analysis Checks

- Additional quality checks can be entered into the database
- If customAnalysisCheck is true, these checks are applied

```
    "CheckTelephoneNo": false,
    "CheckAddressId": false,
    "CheckEmailAddress": false,
    "MinimalIdenticalFieldsCount": 2
  },
  "CustomAnalysisChecks": true
},
"ValidationSettings": {
  "ValidateStatIdChecksum": false,
  "StatIdUnique": false
}
}
```

- Example: Check whether size matches number of employees:

```
INSERT INTO [dbo].[CustomAnalysisChecks]
           ([Name]
           ,[Query]
           ,[TargetUnitTypes])
     VALUES
           ('Size vs number of people employed'
           ,'select * from statunits where size <> 3 and employees >= 200'
           ,'LegalUnit')
GO
```

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Configuration – languages

- Web site: languages must be handled prior to build- and installation of system
- Classifications: also up to 3 languages. To be uploaded as classifications are uploaded

Users and user maintenance

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