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**INFORGE:
Model description and simulations**

Christian Lutz

GWS (Gesellschaft für Wirtschaftliche Strukturforchung) mbH

Weissenburger Str. 4

Tel.: +49/541/4093312

email: lutz@gws-os.de

D 49076 Osnabrück

Fax: +49/541/4093311

http: www.gws-os.de



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Overview

1. **Model philosophy and data sources**



2. **System of GWS models**

3. **Overview of INFORGE**



4. **Details: Private consumption**



5. **Simulation scenarios**



GWS



1 Philosophy and data sources

≈ **Philosophy**

- ō Evolutionary (not neoclassical)
- ō Bounded rationality of agents on imperfect markets (e.g. mark-up pricing)
- ō Interindustry modeling
- ō Bottom-up structure (macro variables by adding up)
- ō Full integration
- ō Simultaneous model solution
- ō Econometric parameter specification (time series)



≈ **Data sources**

ō Federal Statistical Office

§ Input-Output-Tables (time series 1991 - 2000)

§ System of National Accounts (SNA)

§ Value added and its components
and investment by sectors

§ Consumption by purpose

§ Population

ō Deutsche Bundesbank

§ Interest rates

§ Consumer price index

ō Institute for Employment Research (IAB)

§ Labour supply

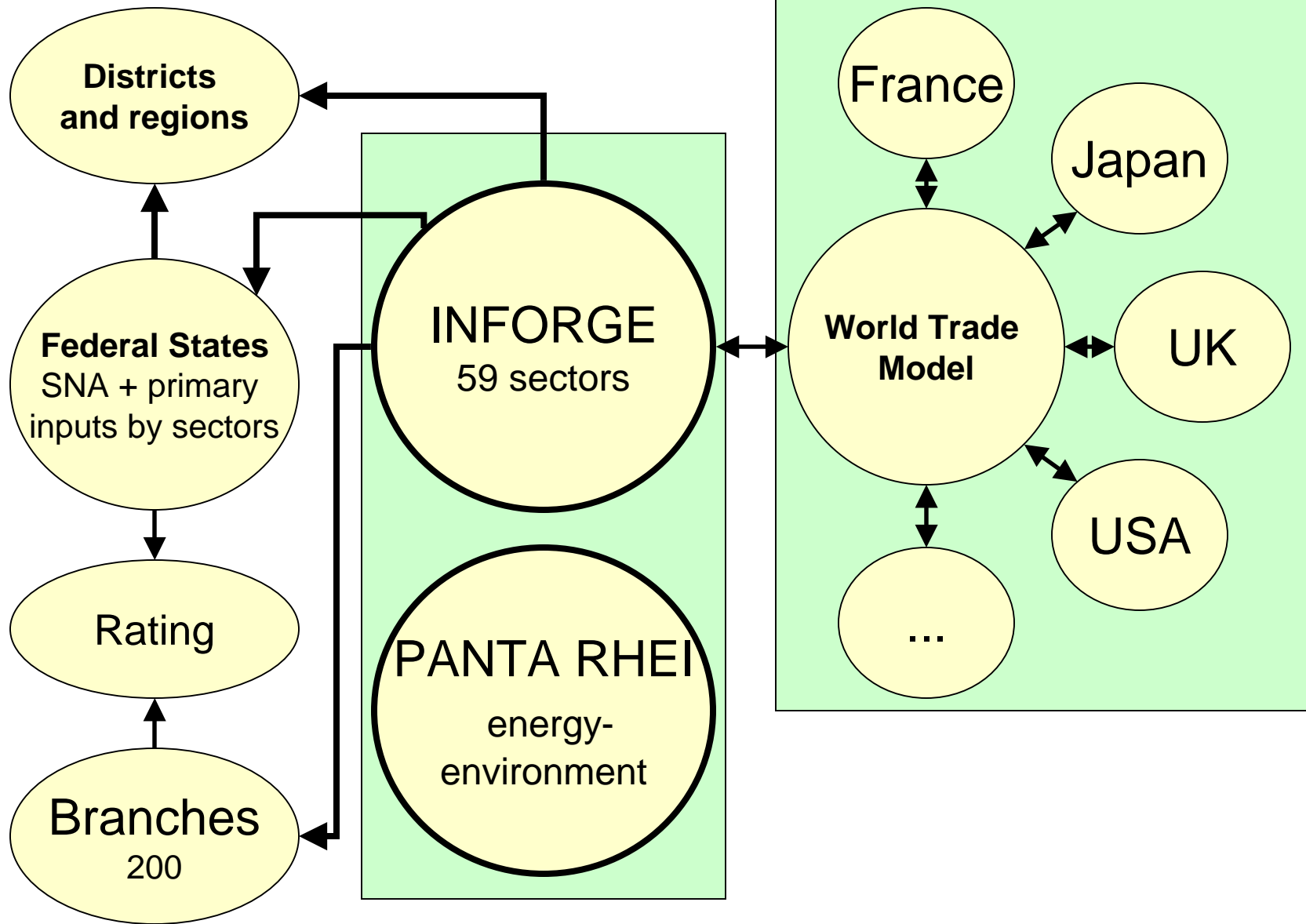
=> Standardized and automatic construction of data set



2 System of GWS Models

- ≈ **INFORGE is the core of a system of econometric models**
 - ō INFORGE
 - § Interindustry model of the German economy
 - § Updated every year
 - ō INFORGE needs world trade data
 - § German exports and import prices
 - § International financial variables
 - ō INFORGE drives other modules and sub-models
 - § PANTA RHEI (energy, environment)
 - § Region sub-models (states, regions)
 - § Sector sub-models (branches)

System of Models

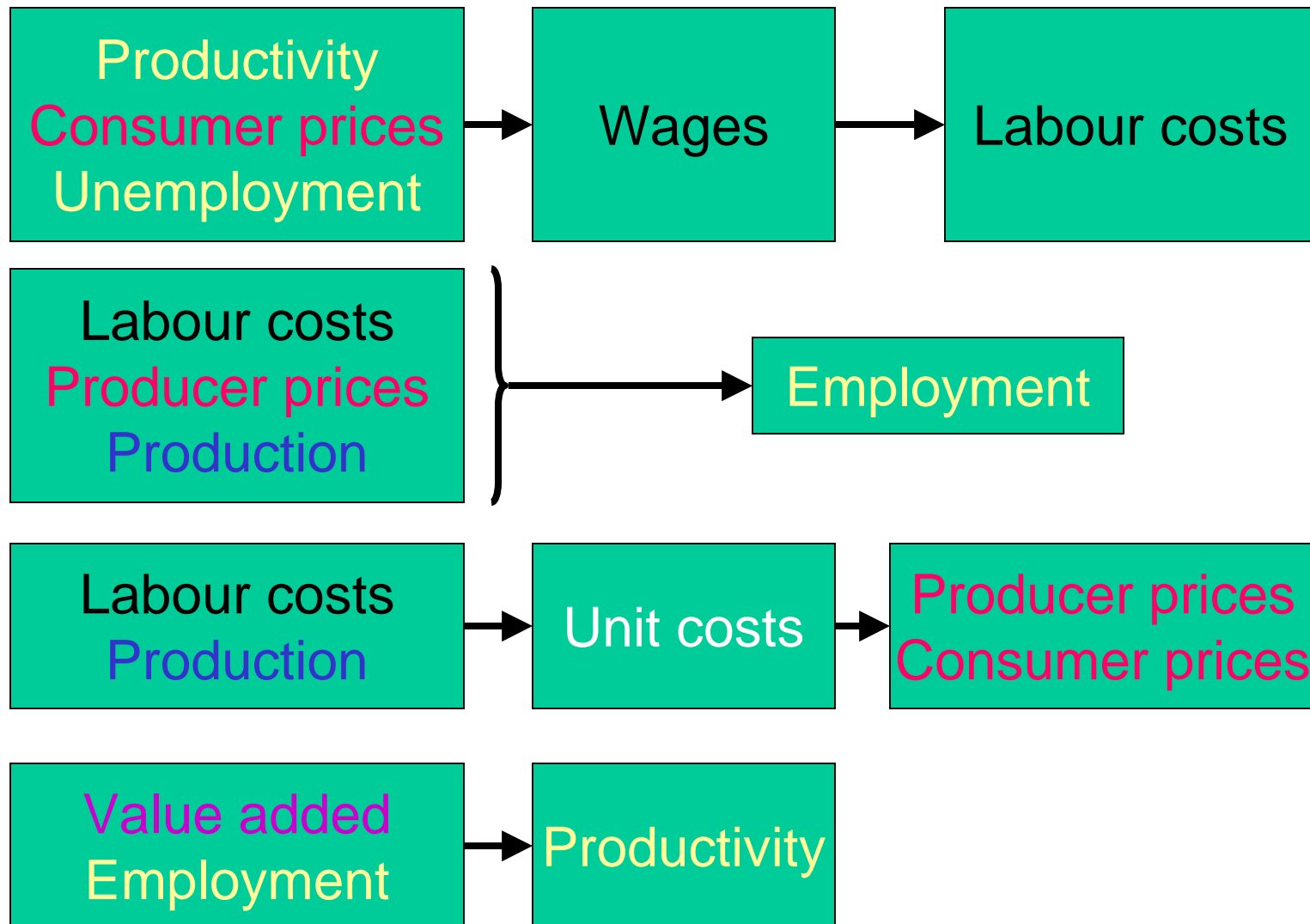


3 Overview of INFORGE

2 Input-Output module (59 sectors)

- o Endogenous final demand:
private consumption, public consumption, construction,
equipment investment, exports, imports
- o Variable input coefficients
- o Endogenous **value added**:
depreciation, wages, profits, employment
- o Endogenous price vectors for gross production,
intermediate demand, every component of final demand
and for value added
- o **Production** =
Intermediate demand + final demand - imports

2 Labour market and prices

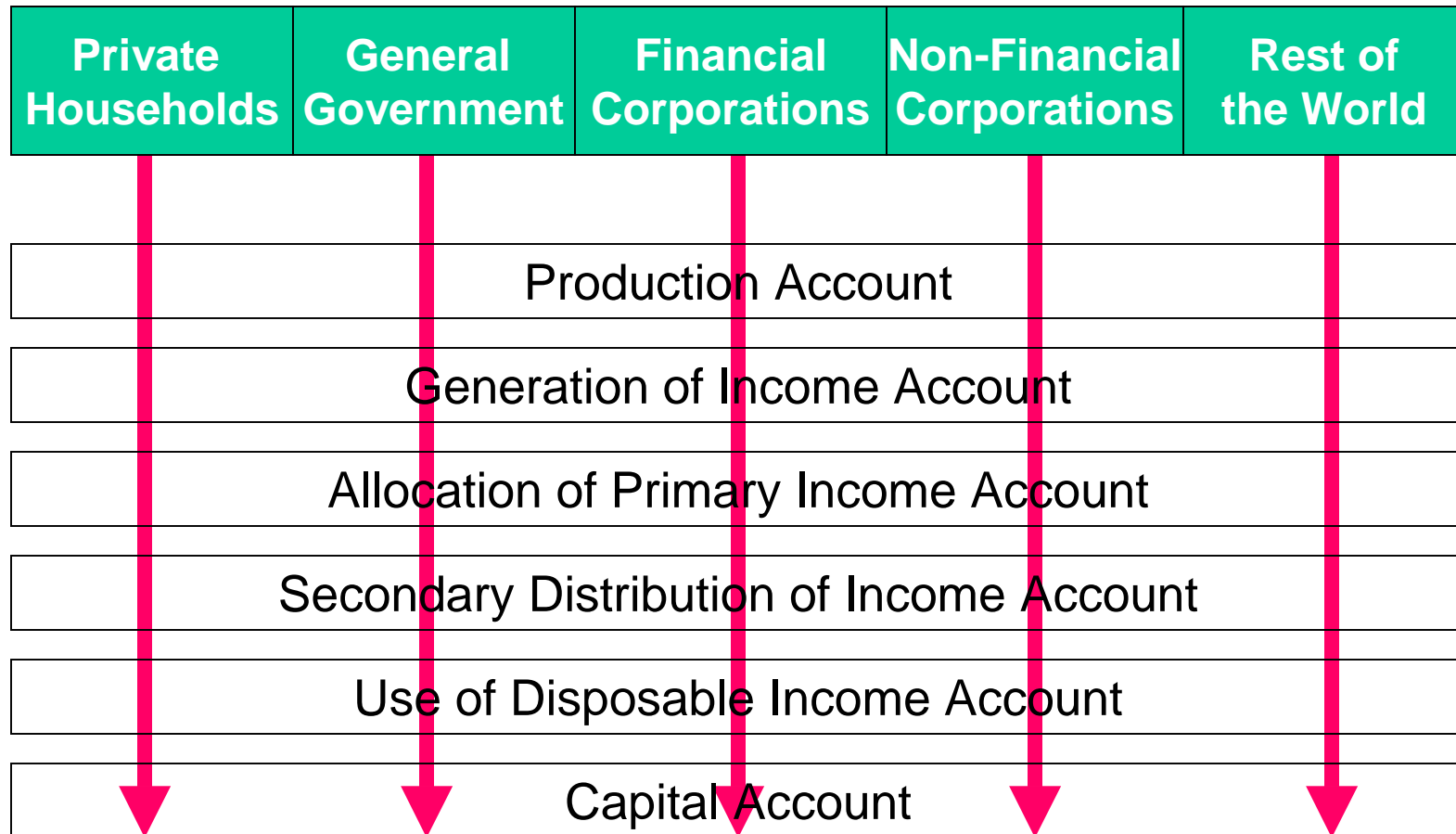


≈ **SNA module**

- Aggregating the components of value added by 59 sectors for
 - § Private households (and non-profit institutions)
 - § General government
 - § Financial corporations
 - § Non-financial corporations
 - § Rest of the world
- Explaining income redistribution between the sectors (social security, taxes, etc.)
- Calculating important macro variables like
 - § Disposable income
 - § Financial surplus/deficit

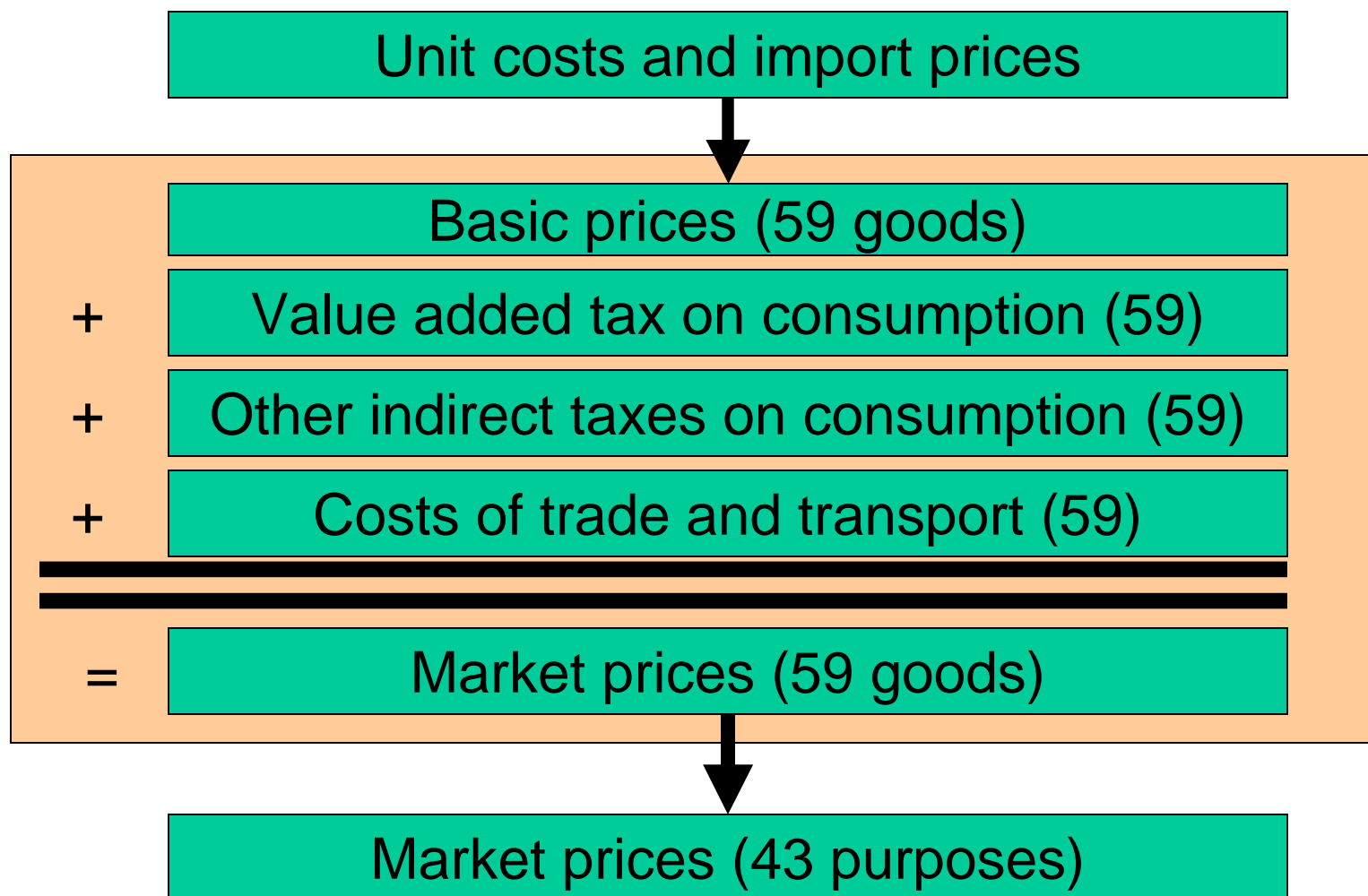


≈ **SNA module**



4 Details: Private consumption

² Consumer prices



- ≈ **Final consumption expenditures of households**
 - ⊖ Total Consumption expenditures explained by
 - § Disposable income of households (SNA),
 - § Consumer price index (CPI)
 - § and interest rates
 - ⊖ Shares of 43 consumption purposes are estimated by
 - § Consumer prices by purpose/CPI,
 - § Trends
 - § and demography
 - ⊖ Bridge matrix to convert consumption expenditure by purpose to consumption expenditures by 59 goods

5 Simulations

Changes against the base simulation

≈ Value added tax increase

- ⊖ Increase of 10% from 2003 on (base run: constant)
- ⊖ Additional revenues do not increase government expenditures

≈ Income tax reduction

- ⊖ Linear decrease of tax rate from 2006 to 2015 up to 5%

≈ Labour supply reduction

- ⊖ Linear decrease from 2003 to 2015 up to 1%