

# The potential of National Statistical Institute data for reporting on the WEEE-Directive



Ellen Brinksma - Statistics Netherlands (CBS)

Kees Baldé – Statistics Netherlands (CBS)

Jaco Huisman – United Nations University

Feng Wang – Technical University Delft

# Contents of today's talk

- Introduction to Statistics Netherlands (CBS)
- Proof-of-concept: use of CBS data to estimate amounts of e-waste
  - Determination of amounts Put-On-Market
  - Use of statistical data for indicators in the WEEE Directive
  - Results from the study
- Outlook

# Statistics Netherlands (CBS) - 1

- National statistical institute, est. 1899
- Produces 95% of the official statistics
- Annual budget approx. € 200 mln, 92% by government, 8% commissioned work



The Hague



Heerlen

# Statistics Netherlands (CBS) - 2

- Staff 2011: 2018 ftu
- Data collection, IT, quality assurance, CCS, innovation divisions/groups, board & 2 statistical divisions:
  - Economic Statistics
  - Business, People, and Spatial Statistics



The Hague



Heerlen

# Examples of recent developments



- XBRL, e-questionnaires, internet



- Supermarket scanner data, cell phone data, social network data



- Research programmes on Transport and logistics, Mobility, International Economic Relations



- Quick indicators (aggregates), Early warning indicators



- Visualisations, Website for respondents, Social media

# Statistical Programme

- 5 yr programmes
- Central Committee on Statistics (CCS) *independently* decides on the programme (within budgetary limits)
- CCS is advised by committees that include users
- Relevant, coherent programme, which may change due to, e.g., changing information needs, new EU requirements
- By law: access to government registers – subject to statistical confidentiality (e.g. tax register, merchant register)
- Huge data availability – potential for correlative research

**Note** anyone may request commissioned work from CBS (e.g., correlations), or existing statistical data (for a fee or, often, free)

CBS has a large numbers of partners within and outside government, including PhD programs and full professors.

# An estimation of apparent consumption from Statistics Netherlands data

*Step 1: Derive apparent consumption (amount **Put on Market**) for EEE from statistical data registers at Statistics Netherlands*



# POM – ‘apparent’ consumption approach

Statistics Netherlands data used are

- Prodcod code (domestic production)
  - Mandatory survey at company level
  - 70 fte
  - Published per industrial branch
- Combined Nomenclature; CN (import and export)
  - Custom codes (in EU – standard). Relatable to HS codes (worldwide standard)

Appliances Put On the Market =

Domestic production + (Import – Export)



# Pro's and cons of this approach

## Coverage

- All WEEE categories covered by international trade and Prodcom data
- Historical coverage: from 1996 onwards (microdata stored at SN)

## Independence

- SN is unbiased and delivers undisputed, reliable and accurate data

## Standardization readily achievable because:

- The national statistical institute holds all relevant data
- Classifications already internationally agreed upon, trade statistics and production data are unique

## Possible issues

- *Microdata are confidential (non-disclosure by Dutch law)*
- *Results must be published publicly (Dutch law)*

# Data collection

Company

## Product description :

- Household-type refrigerators (including compression-type, electrical absorption-type) (excluding built-in)
- Laptop PCs and palm-top organisers
- Upright freezers of a capacity <= 900 litres
- Digital cameras
- Etc...

Measures:  
€, Physical measure (pieces and/or kg)


**Centraal Bureau voor de Statistiek**  
 Sector Industrie  
 Antwoordnummer 6250, 6400 WC Heeren  
 Telefoon 045-576400 Fax 045-5706277

**PZ051 2010**  
**Prodcomstatistiek**

Uw CBS-correspondentnummer: **DE 6419 6542**  
**WE 3307 0628** SBI 282900 GK 5

**SBSN**

00033070628  
 020204 201001 RWH 3C13

Wil u controleren of het codenummer in het venster zichtbaar is?

Dit formulier s.v.p. terugzenden voor **15-12-2011** in bijgevoegde portieftoestuurvelop.

Betreft opgave over de hiernaast vermelde periode  periode van  t/m

Contactpersoon voor deze vragenlijst  het

**Algemene toelichting**  
 De gegeven vertrekken in de aangegeven eenheden en in decimaten. Alle herbergen dienen afzonderlijk te worden opgegeven, in duizenden euro's en exclusief BTW te worden opgegeven. Waarde: de aan derden gefactureerde bedragen m.b.t. de levering van goederen en diensten, excl. aan afnemers verleende kortingen, kortingen en verbruiksbelastingen, betaalde transport- en verzekeringskosten en inklaringskosten.

Zelfvervaardigde producten	Prodcom	Eenheid	Verkoop hoeveelheid	Waarde x 1 000
Goederen die geheel voor eigen rekening zijn vervaardigd, hetzij in de eigen onderneming, hetzij in loondienst door derden, alsmede uit assemblage van voor eigen rekening ingekochte onderdelen.				
Distilleer-rectificeerstoestellen; generatoren voor water-luchtgas en acetyleenontwikkelers e.d., werkend met water, incl. bijbehorende zuiveringsstoestellen	28.29.11.00	stuks		
Toestellen voor het filteren of zuiveren van water	28.29.12.00	stuks		
Toestellen voor het filteren of zuiveren van dranken, excl. voor waterzuivering	28.29.12.50	stuks		
Toestellen voor het filteren of zuiveren van vloeistoffen, excl. voor water of dranken	28.29.12.70	stuks		
Smeermotoren en brandstoftellers voor motoren met vonk- of zelfontsteking	28.29.13.10	stuks		
Luchtfilters voor zuigermotoren met vonk- of zelfontsteking	28.29.13.50	stuks		
Machines en toestellen voor het reinigen en/of drogen van flessen en andere bergingsmiddelen	28.29.21.20	stuks		
Machines voor het vullen, sluiten, capsuleren of etiketteren van verpakkingen en het persen van koolzuur in drank	28.29.21.50	stuks		
Verpakkingsmachines, excl. voor het vullen, sluiten, capsuleren of etiketteren van verpakkingen en het persen van koolzuur in dranken	28.29.21.70	stuks		
Risicopompen (gevuurd en ongevuurd)	28.29.22.10	stuks		
Spuilpistolen en dergelijke toestellen	28.29.22.20	stuks		
Zand- en stoomstraaltoestellen e.d.	28.29.22.30	stuks		
Mechanische toestellen voor het spuiten, verspreiden of verstruiken van vloeistoffen en/of poeders, excl. voor de land- of tuinbouw	28.29.22.40	stuks		
Metaloplossers, pakkingen; mechanische pakkingen	28.29.23.00	1000 st		
Toestellen voor het continu wegen van goederen op transportbanden	28.29.31.30	stuks		
Toestellen voor het afwegen van constante hoeveelheden eventueel gecombineerd met een uitrusting voor zakken, dozen e.d.	28.29.31.50	stuks		
Personeelweegstoestellen, incl. babyweegstoestellen; huishoudweegschalen	28.29.32.00	stuks		
Transporteren				

PZ051 2010-1 pagina 1

W 3307 0628

# Codes per collection categorie

COLLECTION CATEGORY	NUMBER OF CN CODES	NUMBER OF PRC CODES
A LHA	18	10
B CF	19	9
C SHA	202	96
D IT	27	18
E Screens	19	8
F Lamps	14	9
G PROF	22	12
Total	323	163

## Puzzle

- > 4600 PCC / 9000 CN codes each year
- Which are relevant?
- Changes over time
- Units not homogenous (kg, 1000 kg, pieces, thousands)
- Average weights

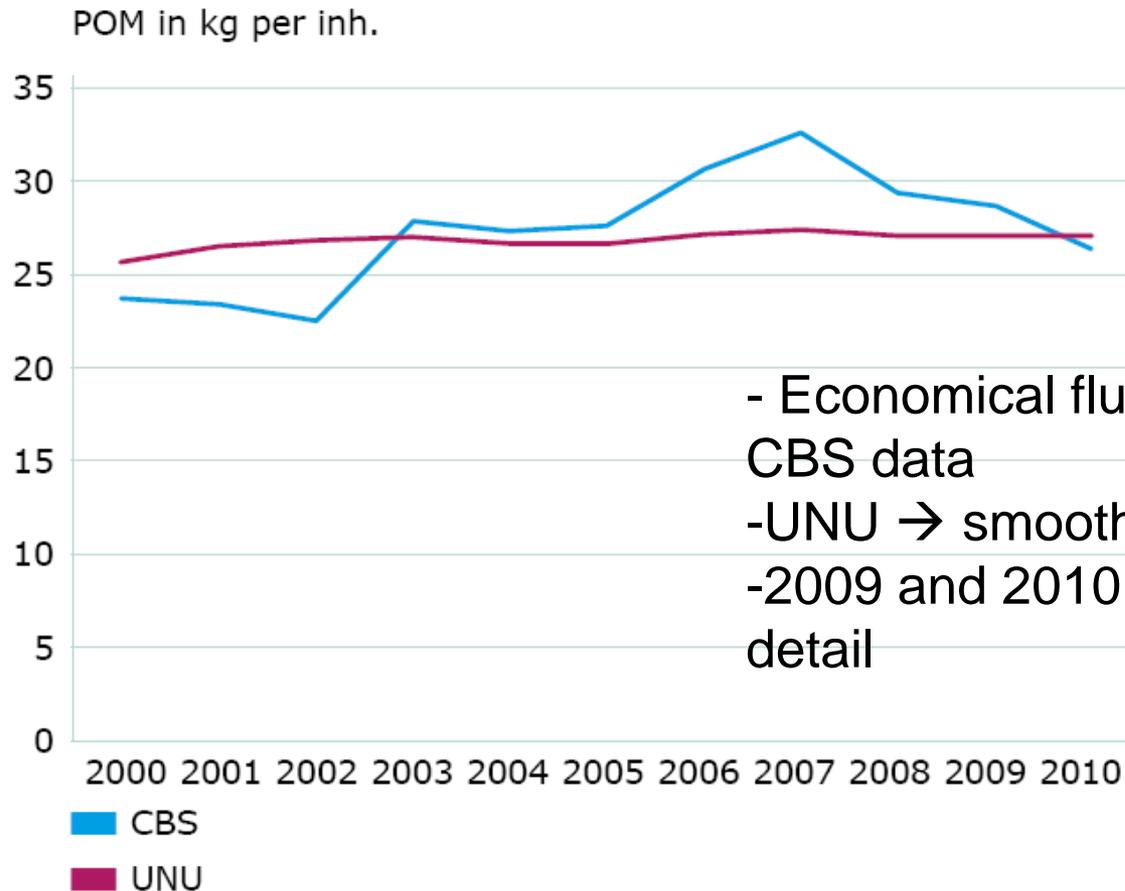
# Challenges

- Assess the correct weights
  - Calculated from microdata in the international trade register
  - Cross-checked with other sources
- Additional fixes were made to improve data quality
  - Fix a few distribution centers in data
  - Price checks (2nd hand goods, or wrong entries)
- Delivered: Put on Market in kg and pieces for 1996 - 2010

# Results: Put on market 2010 compared with UNU model

COLLECTION CATEGORY		STATISTICS NL	UNU (multiple sources)	Comments
<b>A</b>	<b>LHA</b>	6.7	7.9	In CBS, partly included in cat. G
<b>B</b>	<b>CF</b>	2.7	3.9	In CBS, partly included in cat. G
<b>C</b>	<b>SHA</b>	7.6	7.5	
<b>D</b>	<b>IT</b>	2.9	3.0	
<b>E</b>	<b>Screens</b>	1.9	2.5	
<b>F</b>	<b>Lamps</b>	0.9	0.3	In CBS difficult to separate fittings and lamps
<b>G</b>	<b>PROF</b>	2.3	1.5	See comments Cat. A and B
<b>Total</b>		<b>25.1</b>	<b>26.5</b>	

# Results: Put on market time series



- Economical fluctuations are visible in CBS data
- UNU → smoothed data
- 2009 and 2010 are checked in more detail

# Outlook (1)

- An efficient method was developed based on the use of databases available at Statistics Netherlands
- Agrees well with UNU method
- Small corrections were needed, involving all actors improves data quality
- Unbiased, independent results

## Outlook (2)

- Results are based on international standard data => best chance for internationally comparable data
- Use existing UNU-keys as a basis
- Harmonization between countries is the major step to be made

## Outlook (3)

- Method can be repeated in future (cost efficient, removes need for separate company surveys)
  - Small scope issues within current classification remain, further work desired
- Method can be transferred to other national statistical institutes.
  - Amount of work depends on quality of statistical databases.

# The End

*Thank you for your attention*

**More information on Statistics Netherlands:**

[www.cbs.nl](http://www.cbs.nl)

[www.statline.nl](http://www.statline.nl)