

Regulatory heterogeneity: comparing NTMs in agri-food trade across countries

Marie-Luise Rau (LEI), Karl Shutes (LEI) and
Heloisa Lee Burnquist & team (ESALQ-USP)



Contents

- Introduction - EU project “NTM impact”
- Framework for comparing requirements in agri-food trade
- Selected results of analysis
- Concluding remarks

Introduction - EU project “NTM impact”

- Collecting information on requirements in agri-food trade that constitute non-tariff measure (NTMs)
- Comparative analysis of difference in requirements using the data collected:
 - Developing framework for comparing requirements
 - Index of regulatory heterogeneity
- From the exporters’ point of view:
 - We argue that regulatory heterogeneity causes costs in trade – note: we don’t look into compliance costs
 - The relative difference matters.

Introduction - project partners in data collection

- University of Sao Paulo (USP) (Brazil)
- Landbouw-Economisch Instituut (LEI) (The Netherlands)
- Laval University (ULaval) (Canada)
- Institute for Agricultural Market Studies (IKAR) (Russia)
- Chinese Academy of Sciences (CCAP) (China)
- Instituto Nacional de Tecnologia Agropecuaria (INTA) (Argentina)
- Research and Information System for Developing Countries (RIS) (India)
- Rheinische Friedrich-Wilhelms-Universität Bonn (Germany)
- Slovak Agricultural University (SAU) (Slovakia)
- University of Otago (Otago) (New Zealand)
- Virginia Polytechnic Institute and State University (VT) (United States)
- University of Sydney (UNSYD) (Australia)
- Otsuki/Kimura (Japan)

Introduction – scope and coverage

■ Country coverage

- 10 countries: Argentina, Australia, Brazil, Canada, China, (India), Japan, New Zealand, Russia, US
- EU: one entity
- Codex Alimentarius

■ Product coverage

- beef (0201/0202), pig meat (0203), cheese (0406), potatoes (0701), tomatoes (0702), peppers (070960) and aubergines (070930), apples (080801) and pears (080802), barley (1003), maize/corn (1005) and rapeseed (1205)

■ Set of requirements applicable in 2010 (snap shot)

Framework for comparing requirements in trade

General principles

Requirements for food businesses

Product:

Pre-market approval
Ingredients/contents
Food additives/supplements
GMOs
Maximum residue limits (MRLs):

- Contaminants
- Biological hazards
- Veterinary drugs
- Pesticides

Absence of pests/disease

Process:

Hygiene, traceability
End-product treatment/irradiation

Presentation:

Labelling, Publicity/marketing
Risk communication

Conformity assessment

Controls and monitoring requirements

Approved third country
Approved firm/pre-listing
Certificates
Laboratories, sampling and analysis
Border inspection tests

Requirements for countries/authorities

Authorities

Competent authorities
Risk protection plan/risk communication
Checks before exporting
Eligibility/equivalence criteria

Country:

Disease-free status, quarantine
Procedures to implement and relax bans

Source: Rau et al. (2010)

Framework for comparing requirements in trade

- Comparing requirements across countries
 - Relevant vs. irrelevant / binding vs. non-binding
 - Matching of requirements and products
 - Detailed versus aggregate information
 - Information contents: numerical elements, text and no regulation
- Data collection: questionnaires for project partners, documentation, logbooks & commenting

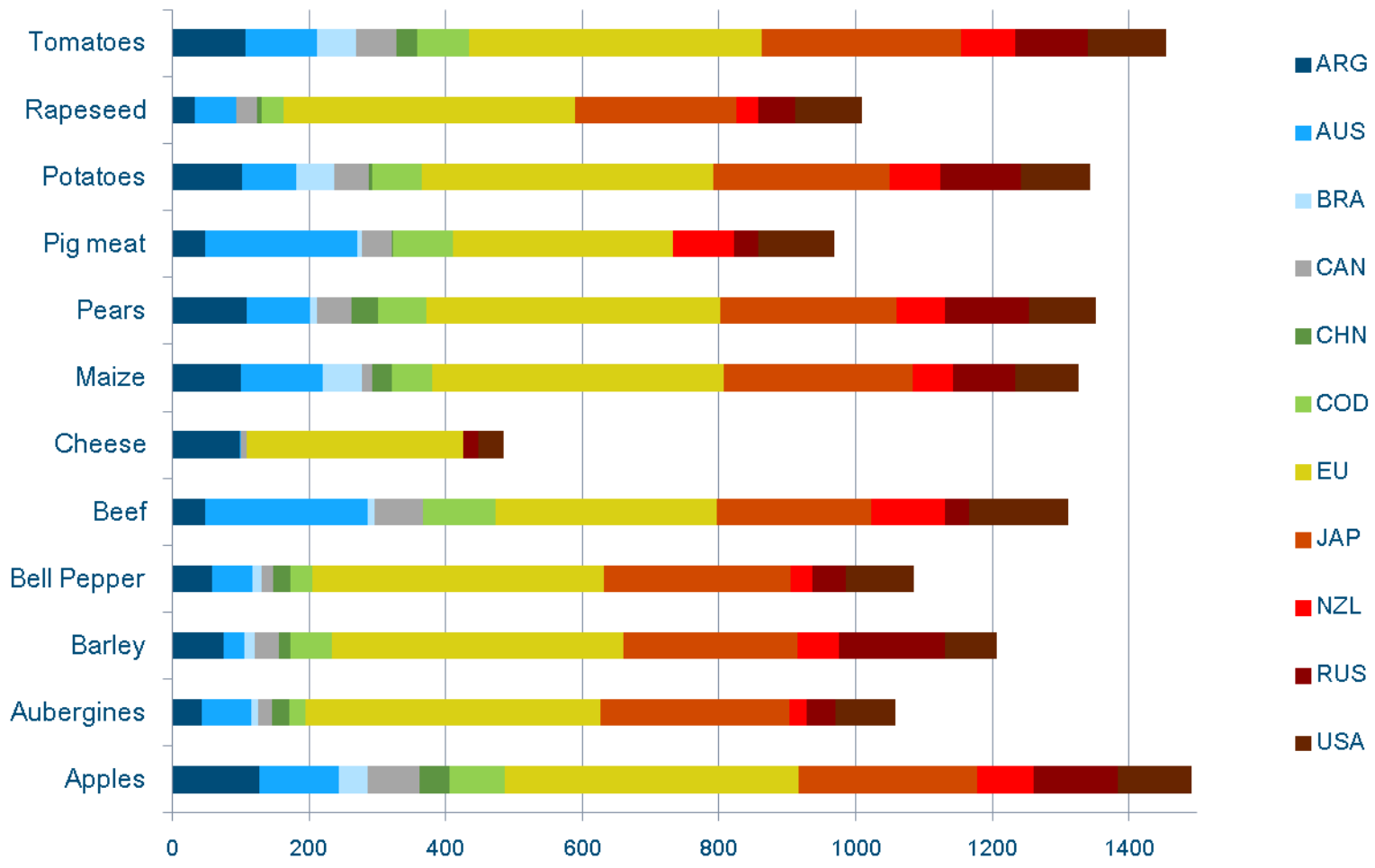
Framework for comparing requirements in trade

- Index of heterogeneity in trade (HIT)
 - The HIT captures different types of information: binary, ordered and quantitative data
 - Bilateral index: exporting and importing country, specific to the direction of trade flow
 - The HIT takes values between 0 = identical regulations and 1 = maximum dissimilarity
 - The HIT does not give the stringency of requirements
- Calculation of regulatory dissimilarity between importing country j and exporting country k for specific requirement i :

$$DS_{ijk}^{\text{HIT}} = \frac{|x_{ij} - x_{ik}|}{\max(x_i) - \min(x_i)}$$

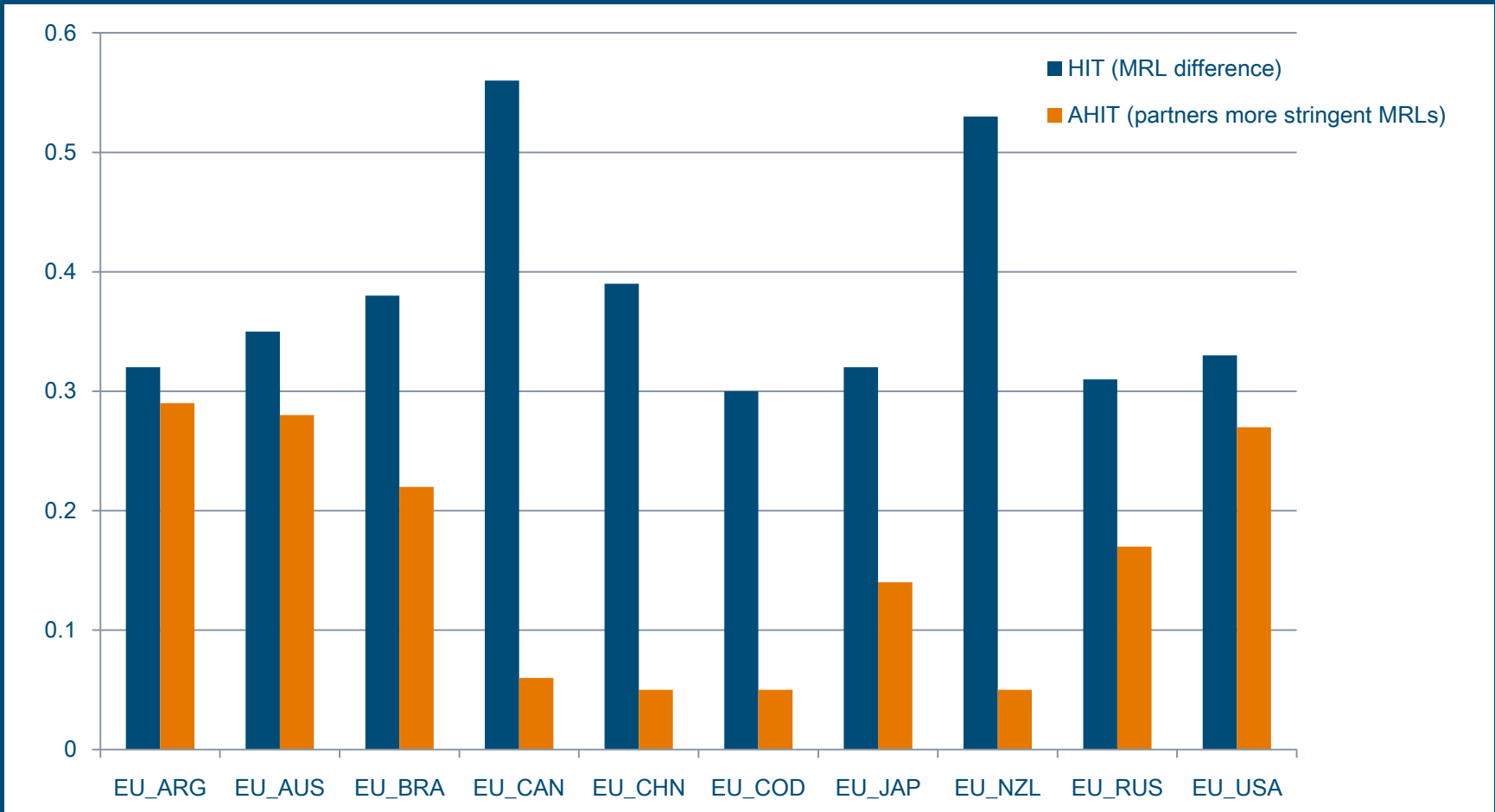
Selected results: number of pesticides regulated

ARG AUS BRA CAN CHN COD EU JAP NZL RUS USA



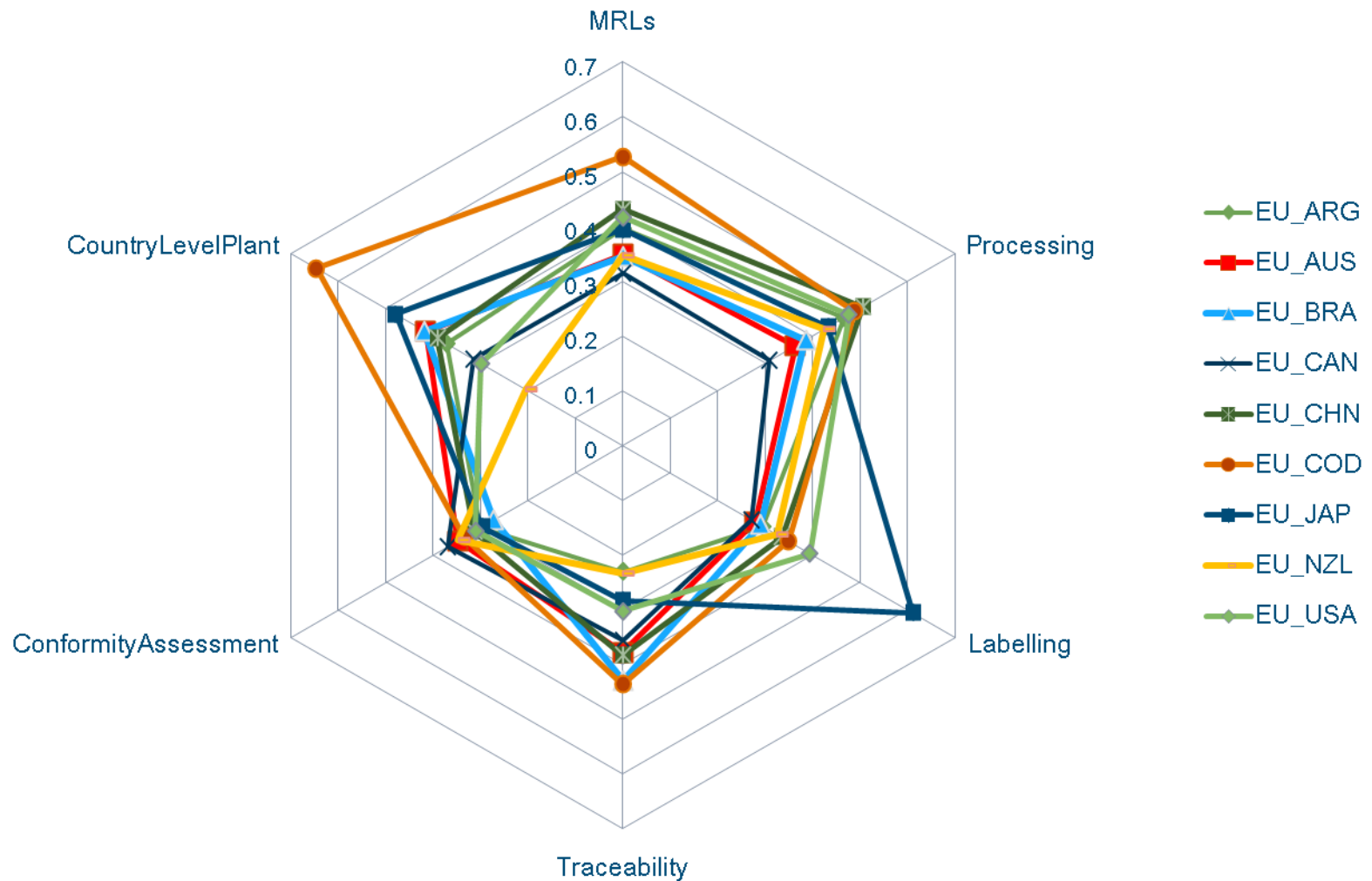
Selected results: Pesticide MRLs - apples

HIT index: EU apple exports to partners



Source: Burnquist et al. (2011)

Selected results: overview – EU apple exports



Source: Rau et al. (forthcoming)

Concluding remarks

- Comparing requirements across countries is challenging: common framework prerequisite and combining different types of information
- Index of regulatory heterogeneity in trade (HIT)
 - Analyzing the data in a systematic and comparable way
 - Different options: product, country, requirements
- Further analysis of the impact of regulatory difference applying the new database and the HIT index

Thank you!

Project webpage: <http://www.ntm-impact.eu>

E-mail: marieluise.rau@wur.nl

