Multinational Networks: Constructing International Business Groups using ORBIS

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Motivation and Objectives

- Access the quality of ownership information in ORBIS for economic analysis
- Benchmark the Global Ultimate Owner
- Identify the Economic Head of the Business Group
- Qualitative assessment of the representativeness of the Business Groups using the ORBIS database
- Link Production Structures
Outcomes

- Benchmarking BG coverage and ownership information in ORBIS
- Database on business groups: International and Domestic Business Groups Database (IDBG)
- Link intra-firm multinational production structures
- Documentation of main findings
  - Analysis of the database
  - Benchmarking exercise
Project Development

- Phase 1: Benchmark Business Groups in ORBIS [July 2011]

- Phase 2: [September 2011]
  - Identification of GUO using the Weakest Link Approach
  - Identification of the Economic Group Head
  - Construction of the database

- Phase 3: Benchmark Phase 2 (cooperation with Eurostat)

- Phase 4: Link intra-firm multinational production structure [Fall 2011]

- Documentation of main findings
  - July 2011: Phase 1
Phase 1: Benchmark Business Groups in ORBIS
Assessment of ORBIS coverage of Business Groups

• ORBIS coverage of the entire ownership network

• Companies benchmarked:
  – world’s largest financial and non-financial TNCs (UNCTAD)
  – Top 1000 EU and top 1000 non-EU companies investing in R&D
  – Non-listed companies

• Sources:
  – Companies websites and annual reports
  – World Investment Report (UNCTAD)
  – Industrial and R&D Investment Scoreboard
Results (1): Distribution of Business Groups

- 1: 53.79%
- 2-5: 32.65%
- 6-10: 6.65%
- 11-20: 3.59%
- 21-50: 2.18%
- 51-100: 0.64%
- 101-200: 0.29%
- 201-500: 0.14%
- 501-1000: 0.05%
- >1000: 0.04%
Results (2)

• Validation through companies websites proved unfruitful:
  – Incomplete information
  – Aggregate information
  – Companies report brands rather than legal entities

• Coverage of subsidiaries increases through time
Phase 2: Construction of the International and Domestic Business Groups Database (IDBG)
• Coverage: 2006-2009, yearly data

• Identification of the Global Ultimate Owner (BvD/benchmark OECD) and Economic Group Head:
  – Domestic/International
  – Country of Headquarters
  – Economic Activity Codes
  – Type of company
  – Total number of subsidiaries owned (active)

• Subsidiaries:
  – Country of location
  – Economic Activity Codes
  – Status of the Subsidiary (active/inactive, description, date)
  – Company type
Definitions:

• Business Group (BG):
  An entity with one headquarters and at least one affiliate

• Domestic Business Group:
  A BG with all subsidiaries located in the same country as the its headquarters

• International Business Group:
  A BG for which the Group Head and subsidiaries are located in different countries

• Global Ultimate Owner:
  Shareholder with the largest amount of voting shares = direct + indirect

• Economic Head:
  The shareholder with the largest number of total voting shares which is not a financial company (for non financial companies).
Identifying the GUO using the weakest link approach

- Building the network of ownership: bottom-up approach (start at immediate shareholders)
  
- Applying the Weakest Link concept:
  - Avoids double counting
  - Allows to deal with intervals of declared voting shares
  - Top-down approach

- Defining the perimeter of the Business Group: applying the concept of control
Example (1)

- **A** owns more than 50% of **B** and **C**. **B** and **C** are under direct control of **A**.
- **D** is indirectly controlled by **A**:  
  \[
  \min (55,30) = 30 \\
  \min (70,30) = 30 \\
  \frac{60}{60}
  \]
- **E** is indirectly controlled by **A**:  
  \[
  \min (70,55) = 55 \\
  \min (60,30) = \frac{30}{85}
  \]
Example (2): Dealing with Complex Ownership Structures

Source: Bortolotti and Faccio (2009)
Phase 3:
Benchmark of IDBG
2nd round of Benchmarking Activities

- Comparison of Global Ultimate Owners identified by the Weakest Link Approach with BvD’s reported GUOs
- Comparison of GUOs with Economic Head
- Assess Economic Heads (in cooperation with Eurostat)
- Assessment of coverage of large BG
Phase 4: Linking Intra-firm Multinational Production Structures
Multinational Production Networks

• Identify possible buyer-supplier relationships (GVCs) inside the MNE:
  – Between the economic head and its subsidiaries
  – Between subsidiaries belonging to the same business group

• Contribution to “Mapping of GVCs” project (WPGI and WPTC)
• Benchmark findings

• Types of GUOs
  – Domestic / international
  – Banks and financial companies, industrial companies, state entities, individuals/families

• Cross country and cross sector differences in the number and geographical distribution of affiliates

• Evolving patterns of ownership

• Evolving patterns of affiliate location
Thank you very much for your attention!

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