An Phríomh-Oifig Staidrimh
Central Statistics Office

CSO Seminar on Globalisation Meeting the Measurement Challenges

Michael Connolly
National Accounts Integration and LCU

1.Production and Distribution

2. Investment

3. Productivity

4. Digital Economy

5. Corporate Headquartering

6. ESRG - New Approaches

Consequences for Statistics of Globalisation

- Traditional modes of collecting data required modification – cross border trade in goods
- New approaches to obtaining data – LCU type collection
- One data set for many purposes
- Data linking and coherence
- Quality assurance is critical

An Phríomh-Oifig Staidrimh
Central Statistics Office

Section 1
Production and Distribution

Profits

Compensation - Wages

COGS

COGS.IE

Inventories

Royalties

Production

Turnover

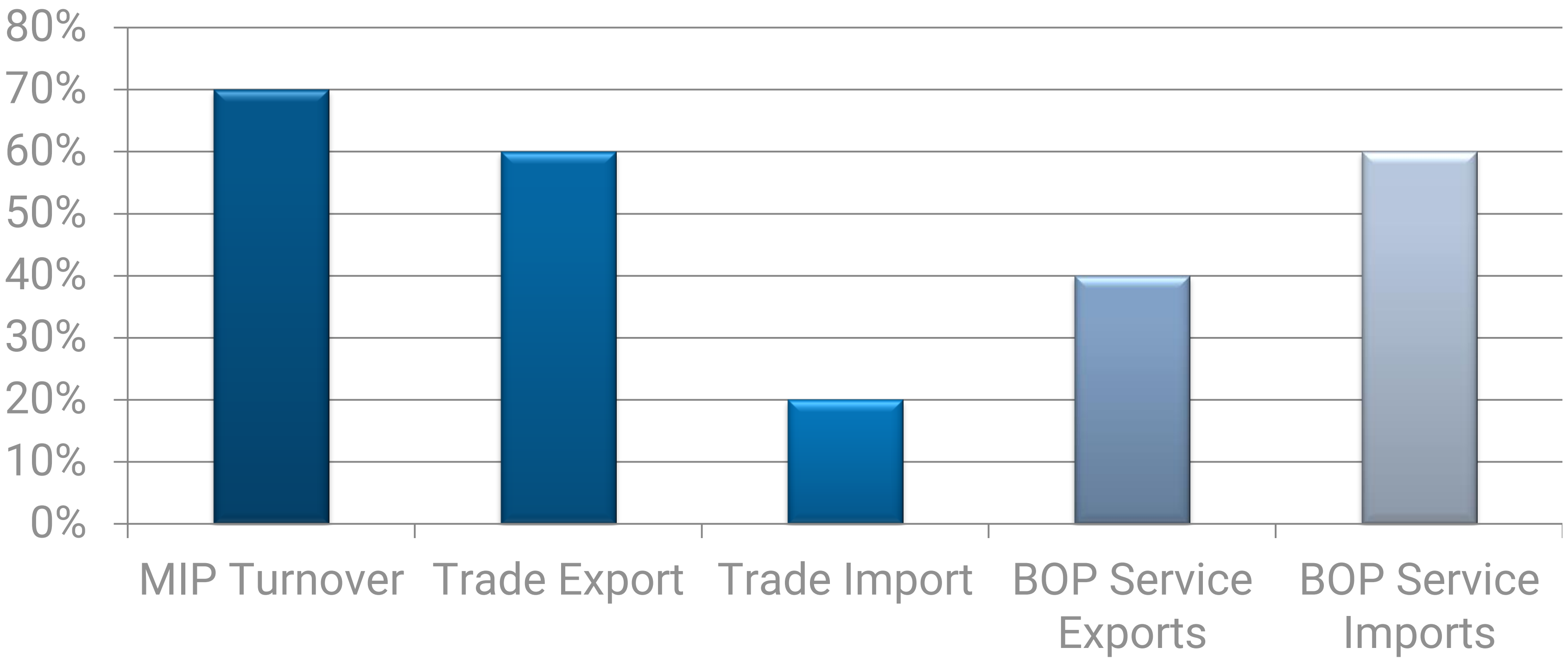
Exports - Goods

Imports - Goods

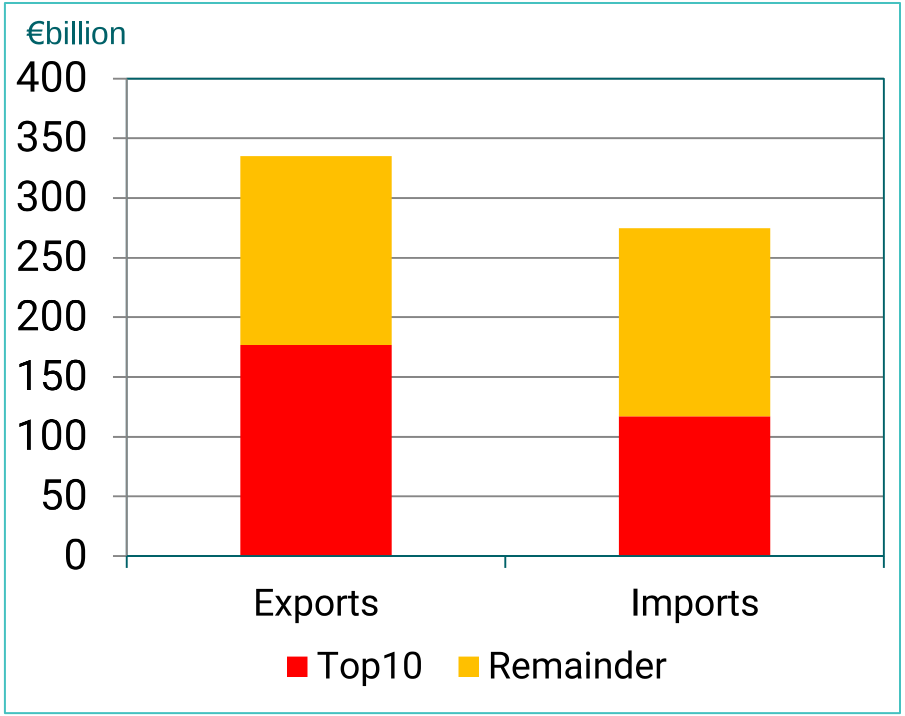
Imports - Services

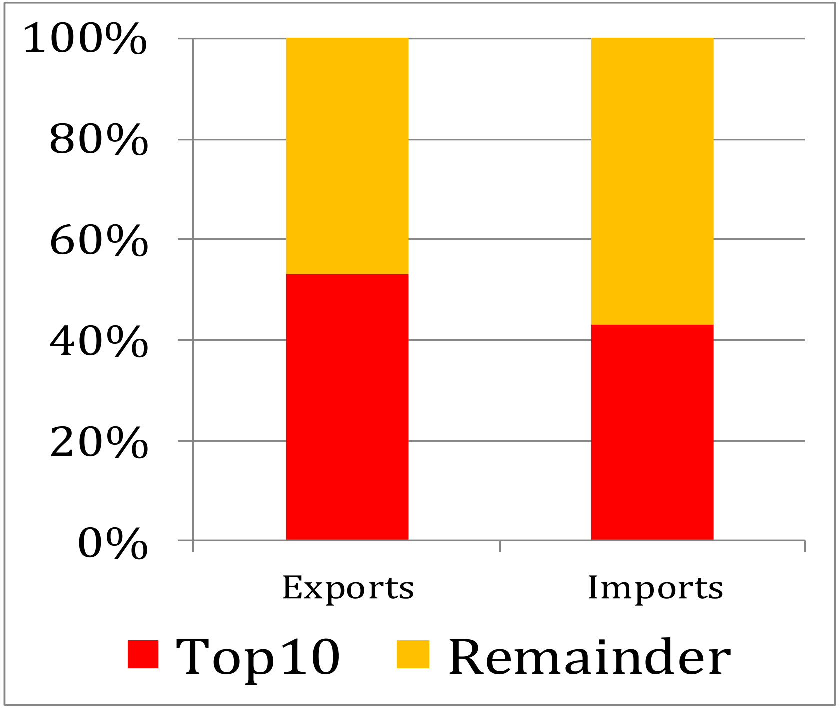
Exports - Services

MNE Dominance - LCU Data 2015



MNE concentration -top 10 Exporting Companies (2016)

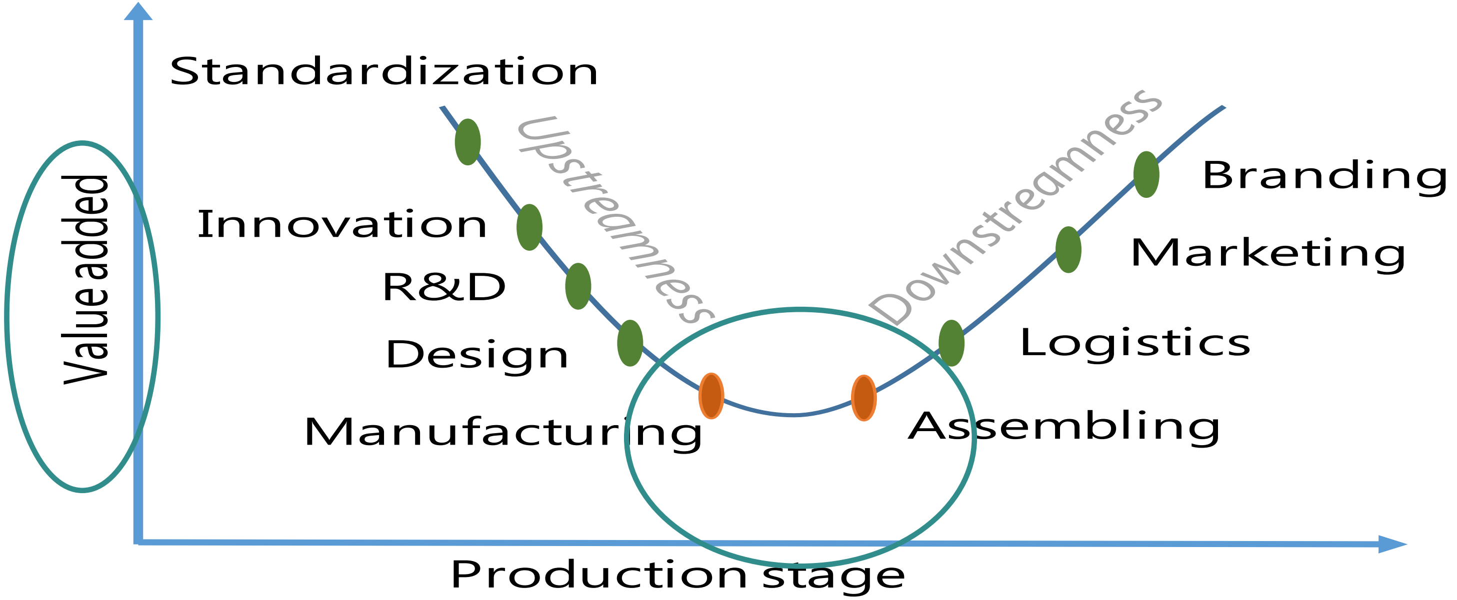


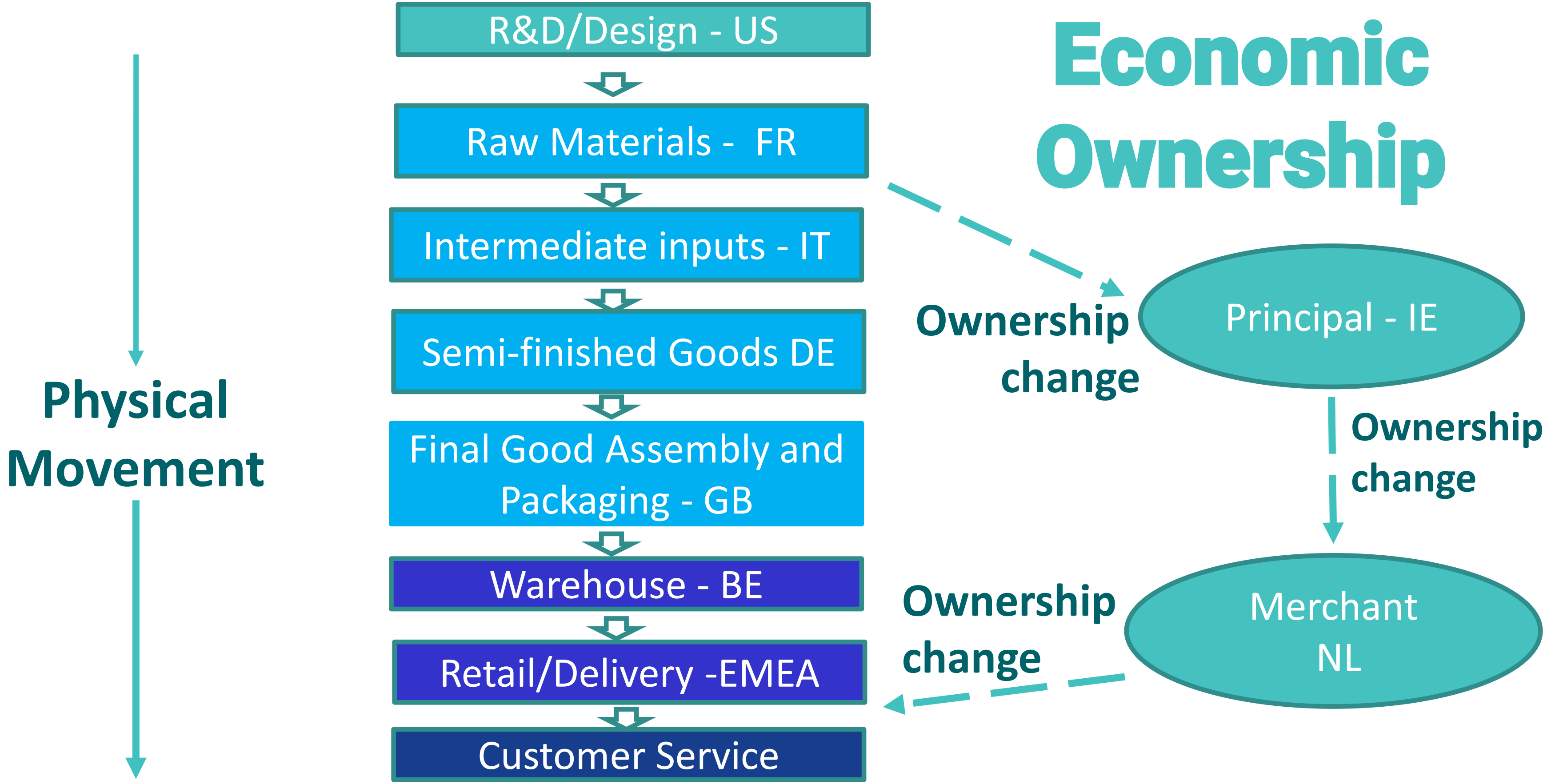


Sources

- LCU Surveys
- International Trade - Exports & Imports of Goods
- Corporation Tax and Self Employed Tax Files
- EHECS

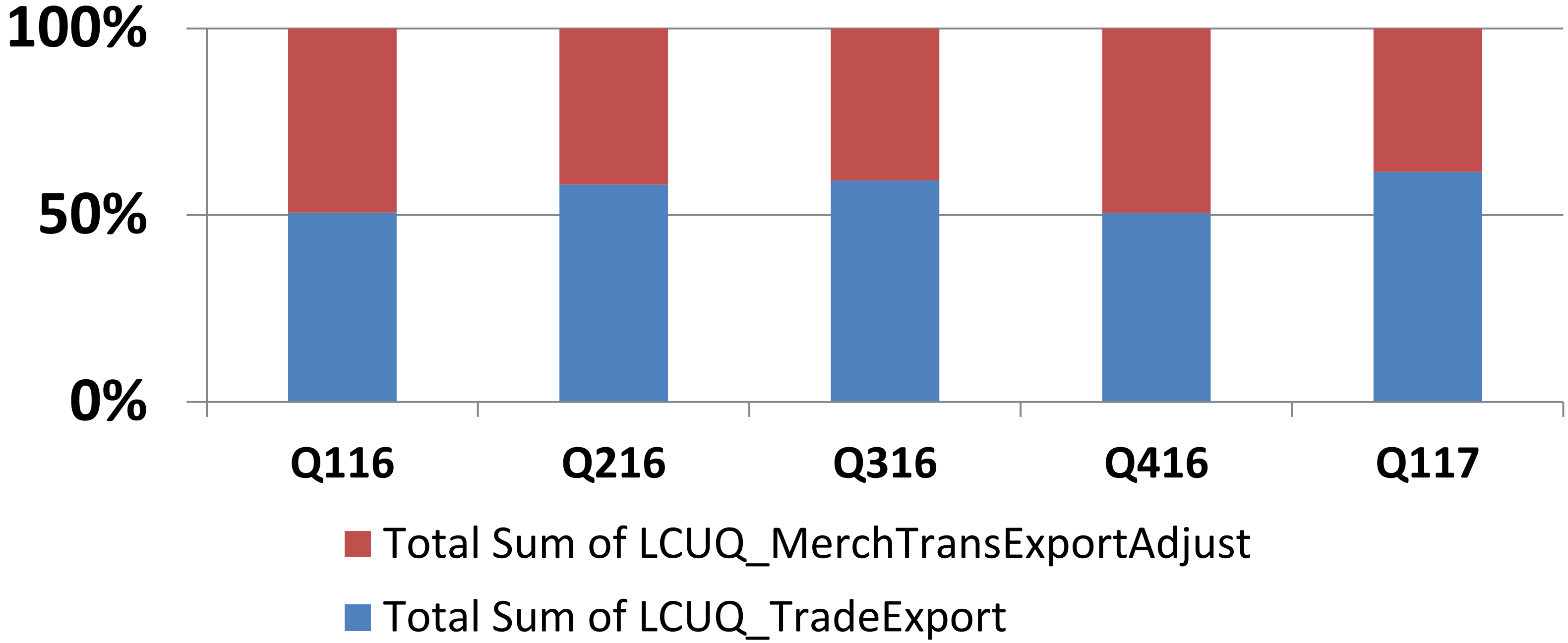
GVC Framework



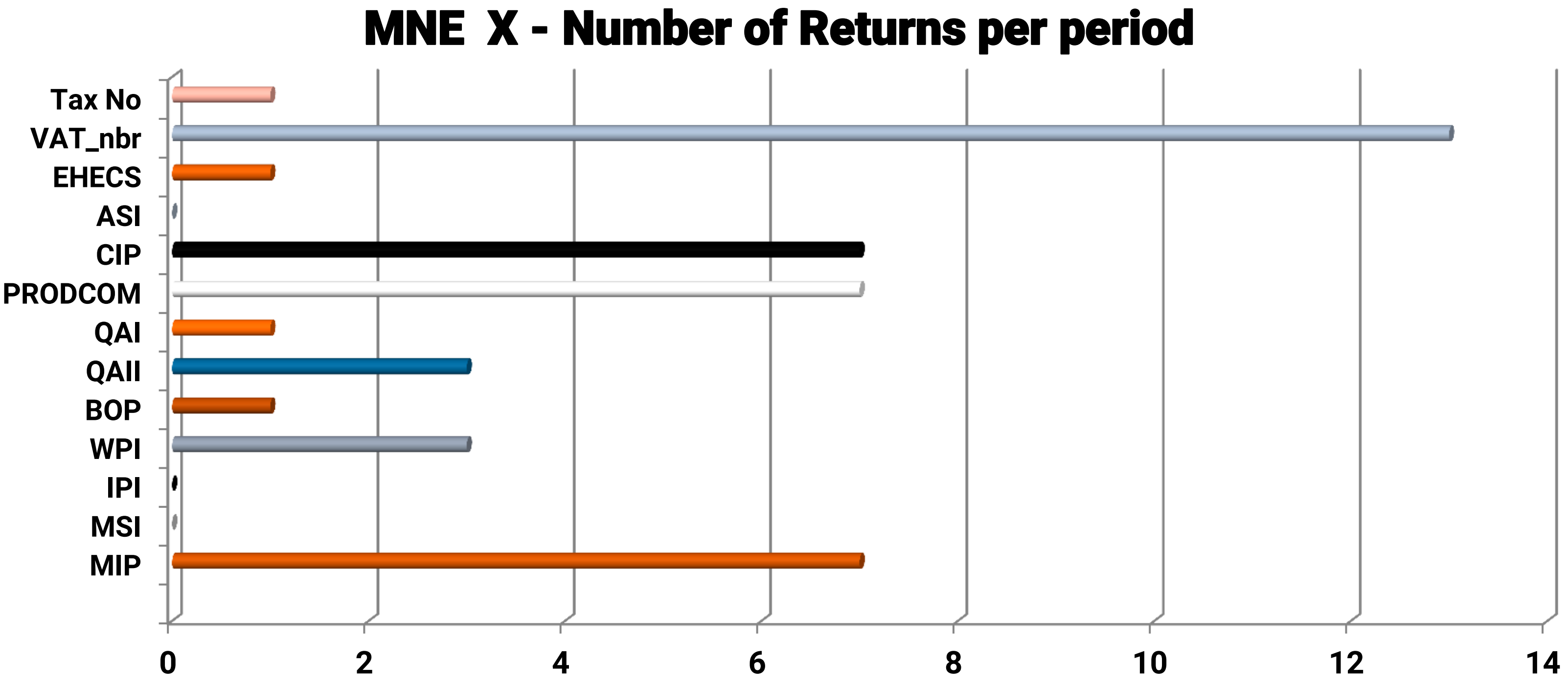

R&D/Design - US
Raw Materials - FR
Intermediate inputs - IT
Semi-finished Goods DE
Final Good Assembly and Packaging - GB
Warehouse - BE
Retail/Delivery -EMEA
Customer Service
Physical Movement
Economic Ownership
Ownership change
Principal - IE
Ownership change
Merchant NL
Ownership change

Row Labels	2,016 Q1	Q2	Q3	Q4	2016 Total	2,017 Q1	Q2	Q3	2017 Total
Industry_A									
Sum of LCUQ_TradeImport	11	10	10	13	45	14	15	0	29
Sum of LCUQ_MerchTransImportAdjust	180	170	260	350	960	275	280	0	555
Sum of LCUQ_NetTrade_Import	191	180	270	363	1,005	289	295	0	584
Sum of LCUQ_COGS	201	186	273	368	1,028	291	629	0	920
Sum of LCUQ_COGSIE	0	0	0	0	0	0	0	0	0
Sum of LCUQ_MaterialsCost	222	182	273	366	1,042	336	624	0	961
Sum of LCUQ_Turnover	526	600	699	830	2,655	827	790	0	1,618
Sum of LCUQ_TradeExport	24	28	22	25	99	30	31	0	61
Sum of LCUQ_MerchTransExportAdjust	500	570	675	800	2,545	800	785	0	1,585
Sum of LCUQ_GoodsSold	526	600	699	830	2,655	827	790	0	1,618
Sum of LCUQ_GoodsSoldIE	0	0	0	0	0	0	0	0	0
Sum of LCUQ_NetTrade_Export	524	598	697	825	2,644	830	816	0	1,646
Sum of LCUQ_BOPgap	52	51	52	55	209	56	55	0	111

Conceptual Adjustments to Goods Exports



Statistical Unit and MNE



How do we do it?

- Use of indicators to link data
- Central Business Register Identifier
  - Enterprise Number
  - Local Unit
- VAT Number
- Corporation Tax number
- Company Registration Office (CRO)
- PREM Number - Employer Tax registration Number

An Phríomh-Oifig Staidrimh Central Statistics Office

Section 2: Investment

Investment

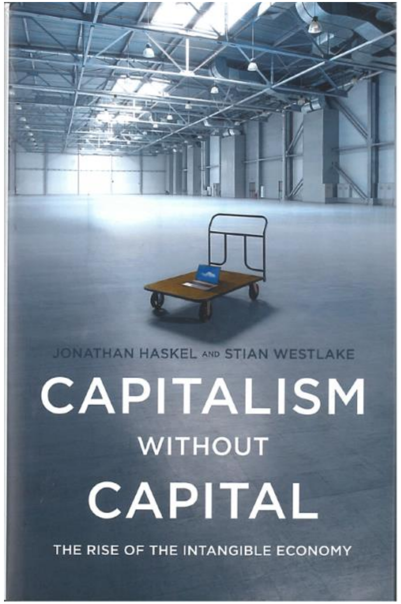
- Intangibles
  - R&D
  - Software
- Machinery and Equipment
- Dwellings
- Transport
- Buildings and Structures
- Cultivated Assets

Data Sources

- LCU Surveys
- International Trade

Challenges

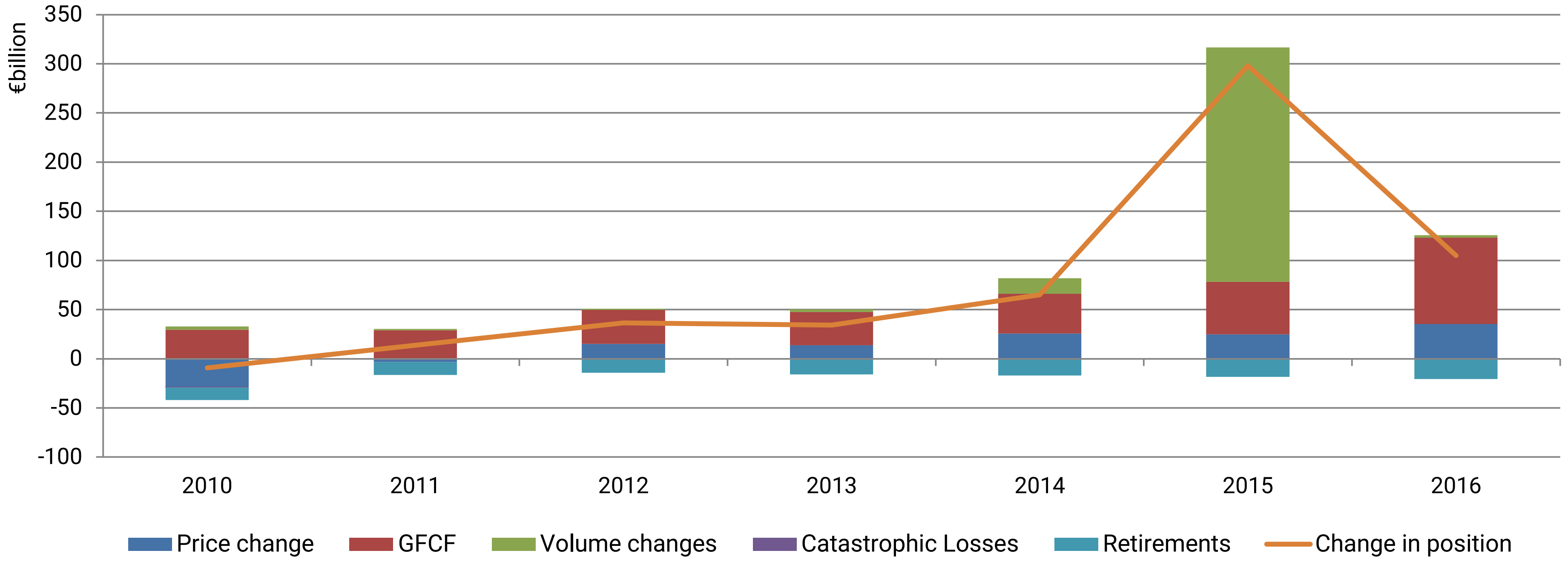
- BEPS
- Double Irish - phasing out
- Stateless companies - eliminated
- Corporate relocations and purchases of IPP
- Increasing importance of intangible assets
- Investment frontier - R&D and previously software
- Branding and other intangible assets
- Human capital



How

- LCU Outreach
- Tax files - incentivised R&D
- Identify corporate model – Corporate Restructuring
- Change in economic ownership
- On shoring IPP - royalty payments cease / exports of royalties

Additions and other changes to Ireland's Capital Assets 2010 - 2016

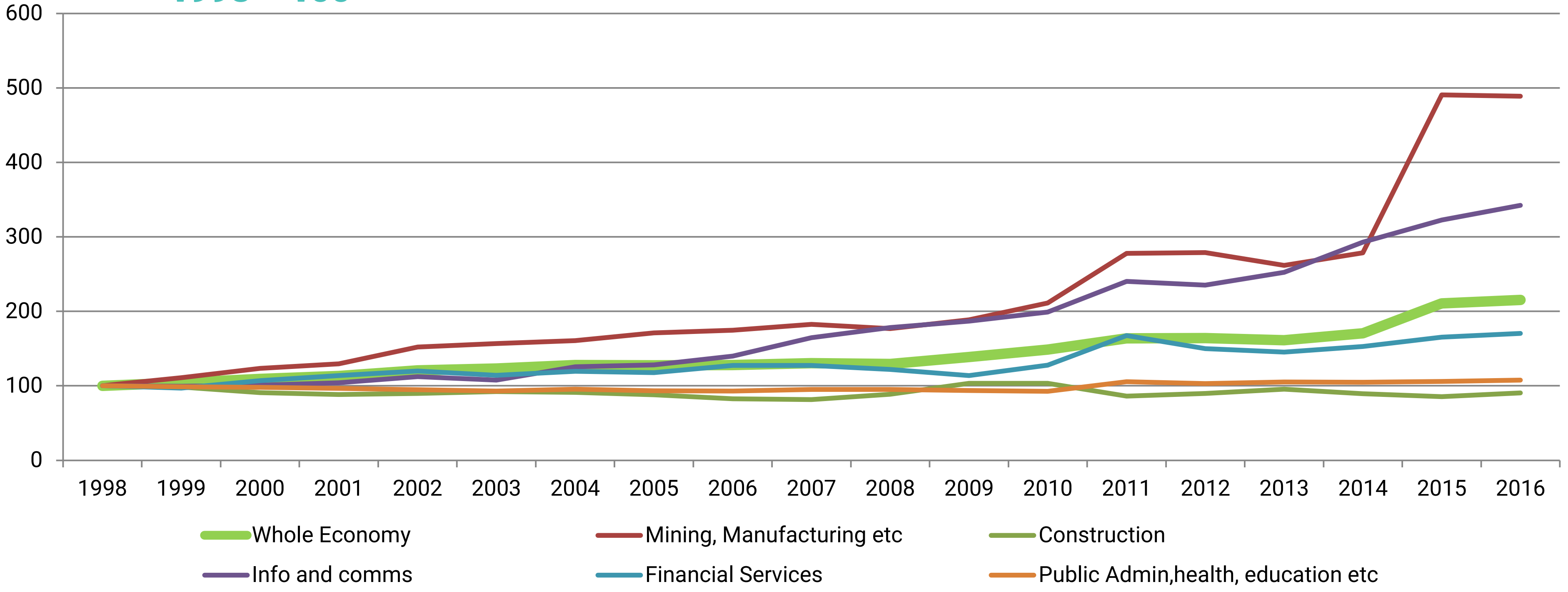


An Phríomh-Oifig Staidrimh
Central Statistics Office

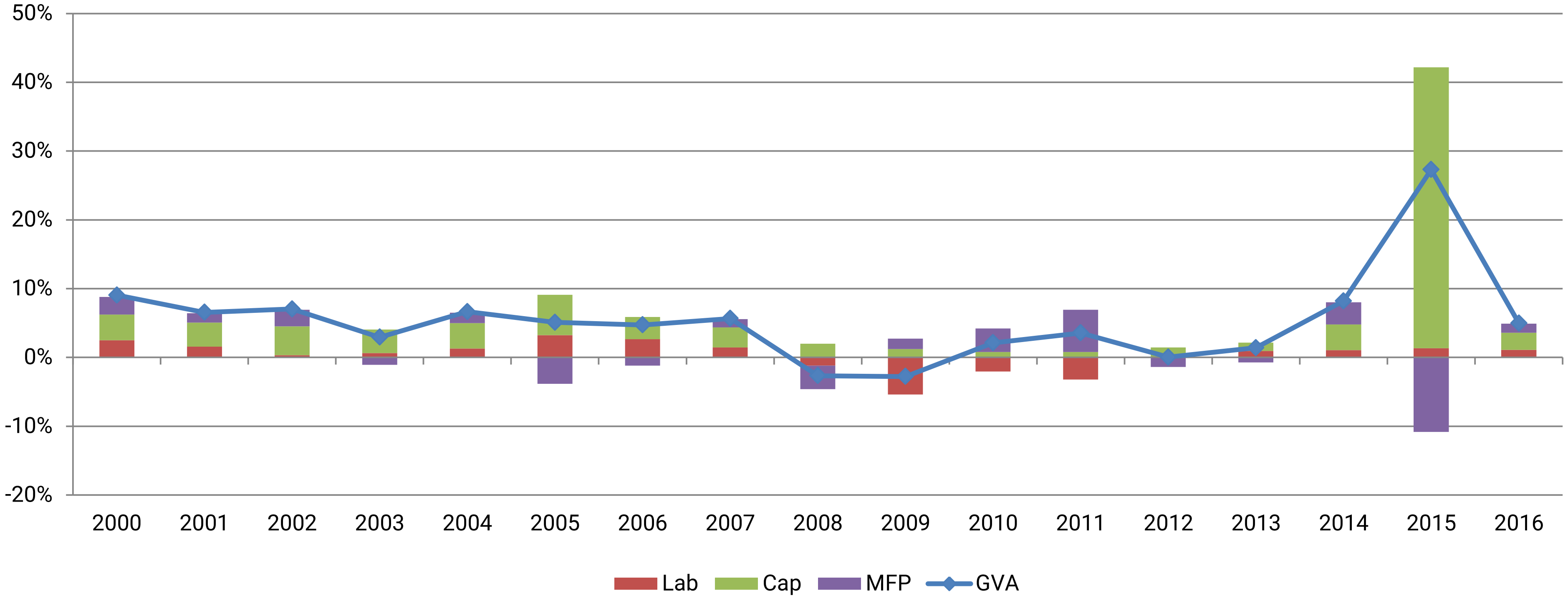
Section 3: Productivity

GVA Per Hour: 1998 to 2016

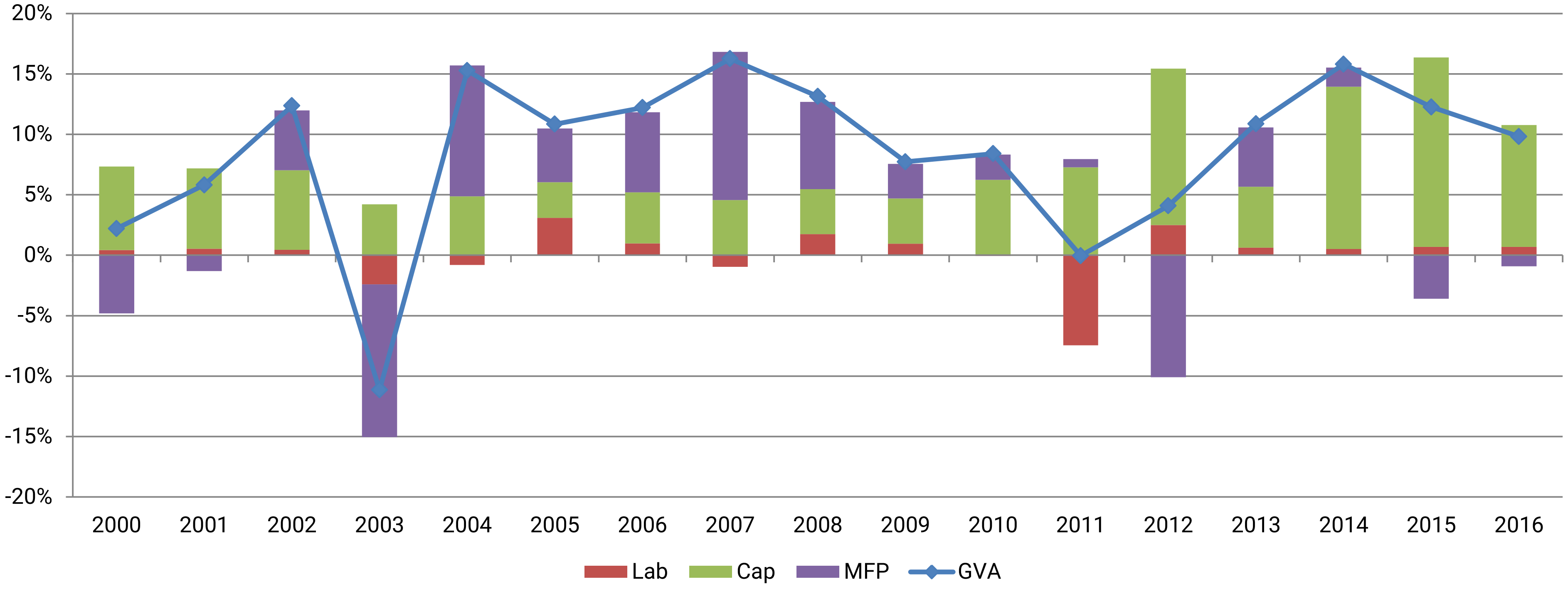
1998 = 100



Multi Factor Productivity 2000 - 2016



GVA Decomposition: Information and Communications



An Phríomh-Oifig Staidrimh
Central Statistics Office

Section 4
Digital Economy

Google
Image Search

Spotify

LinkedIn

amazon

App Store
& iTunes

ebay

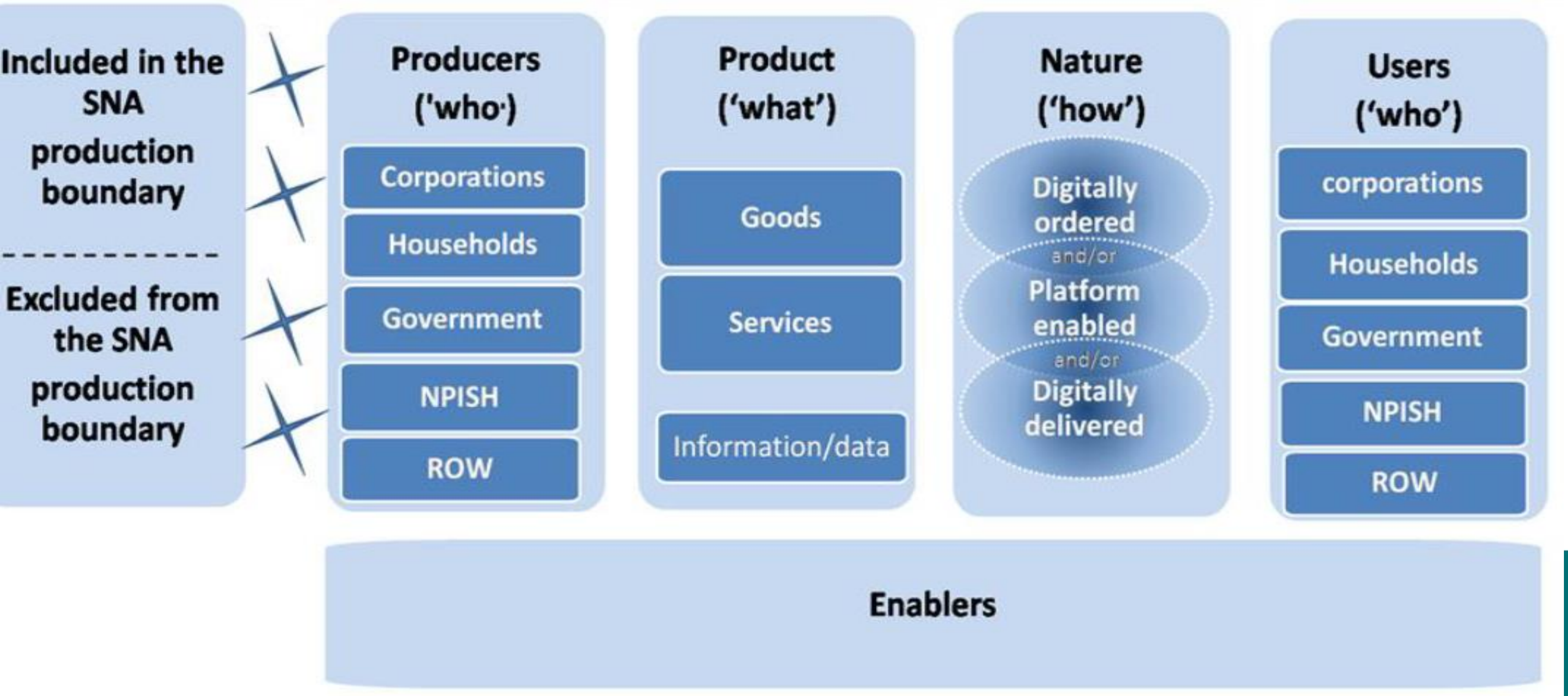
twitter

NETFLIX

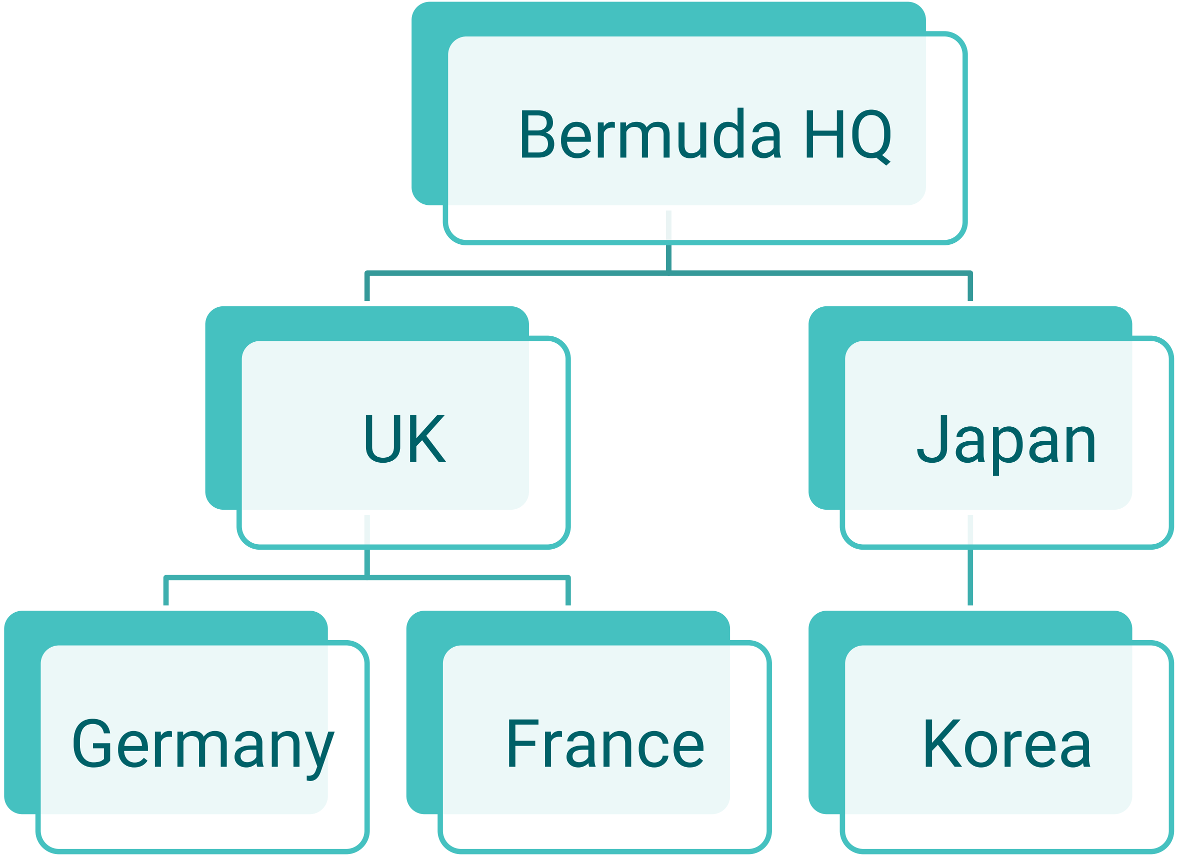
airbnb

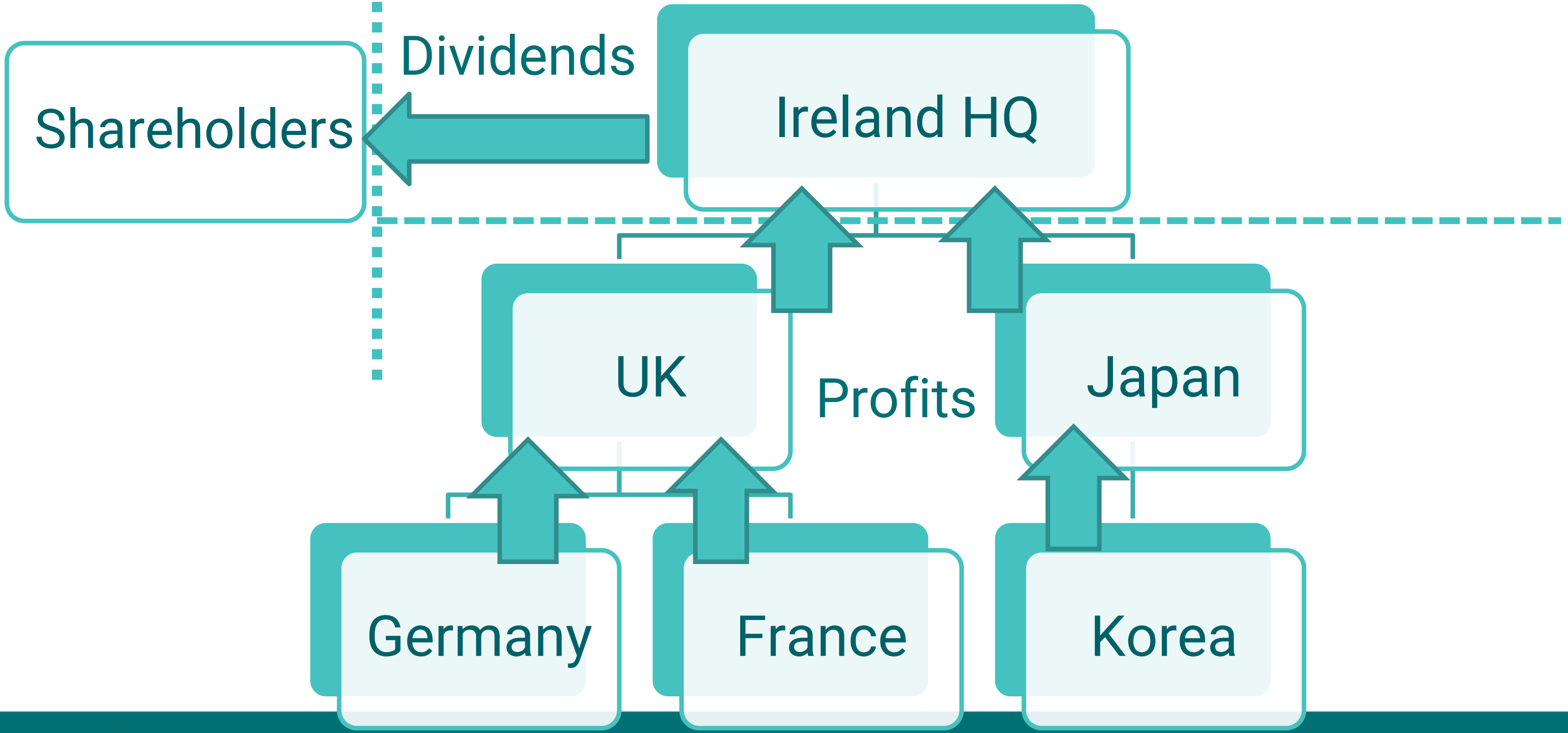
holidaylettings™
from tripadvisor®

Potential Framework: Dimensions of the digital economy

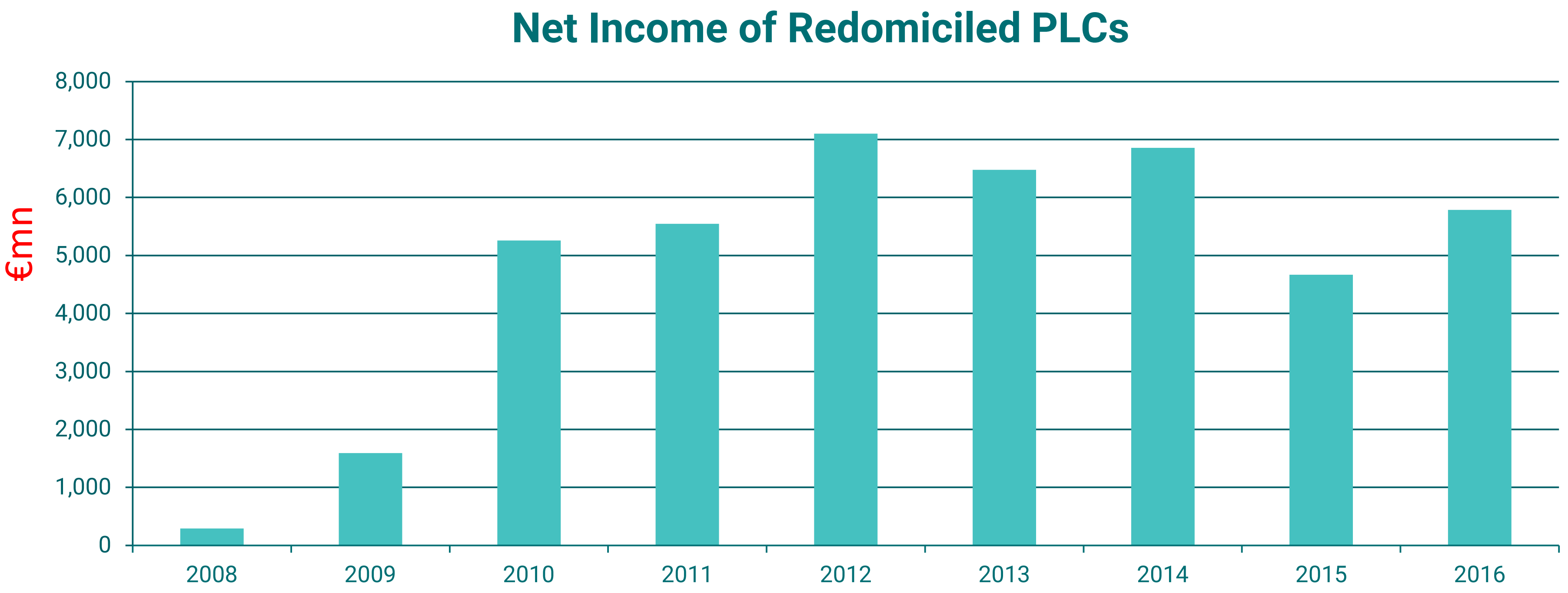


Section 5: Redomiciled PLCs


Bermuda HQ
UK
Japan
Germany
France
Korea


Dividends
Shareholders
Ireland HQ
UK
Profits
Japan
Germany
France
Korea

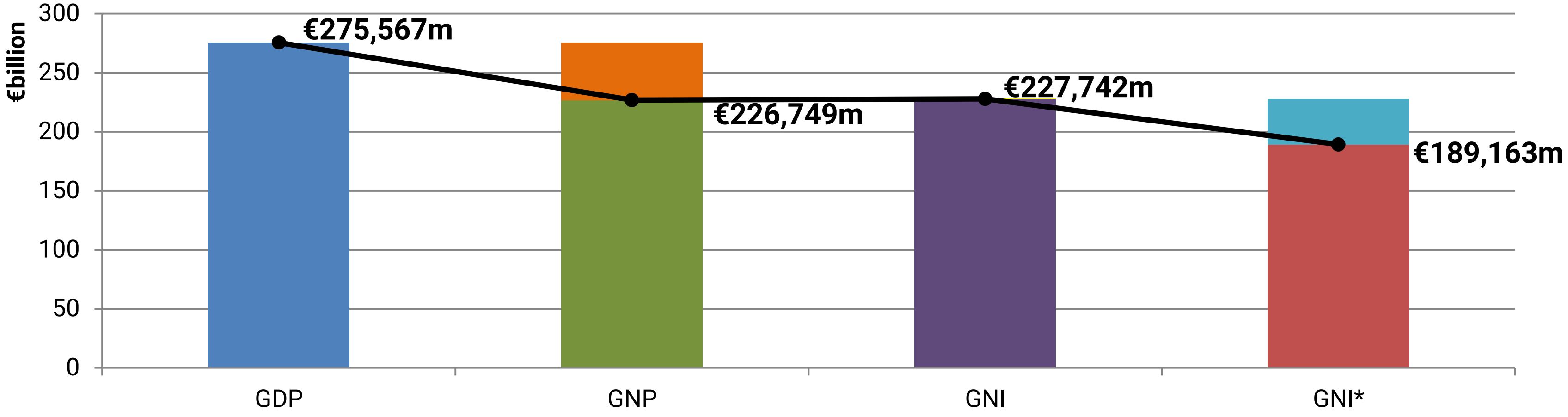
Total Profits - Dividends = Net Income of Redomiciled PLCs



An Phríomh-Oifig Staidrimh Central Statistics Office

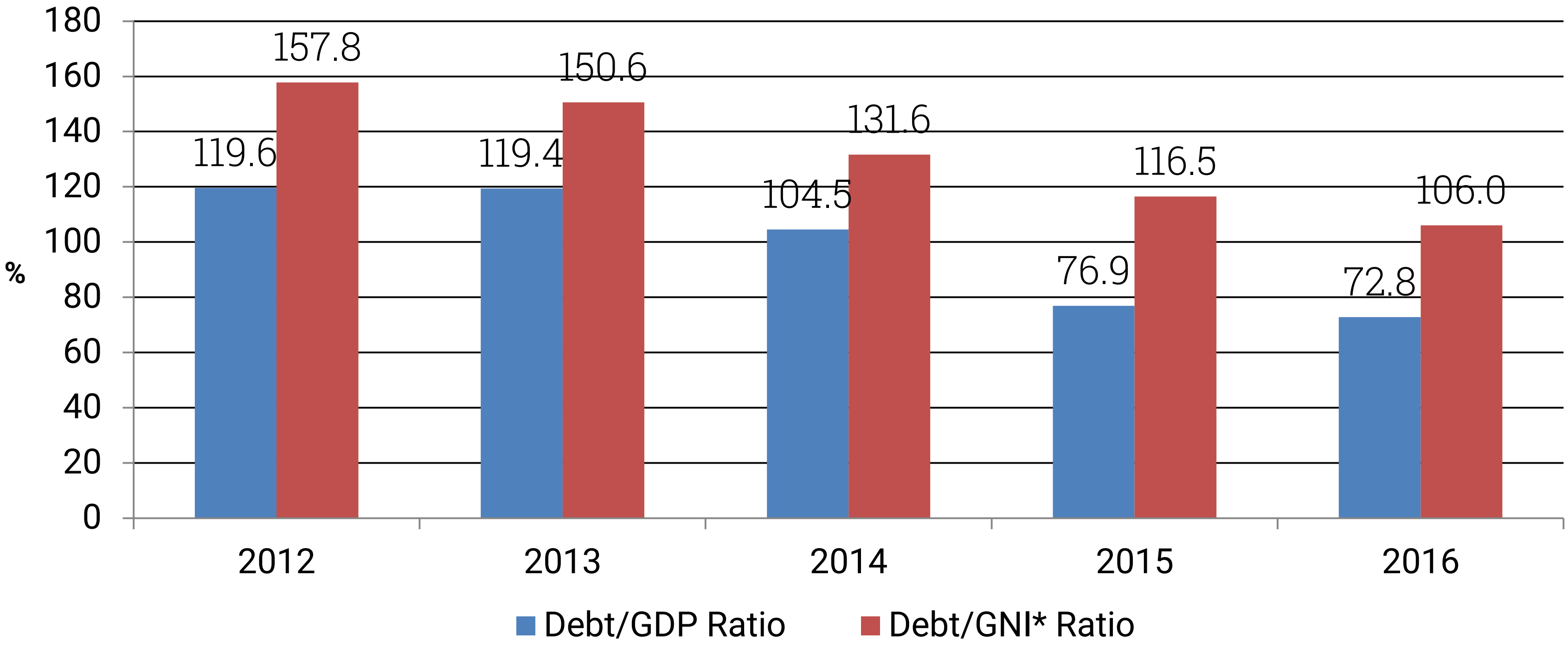
Section 6: A New Approach

Modified GNI (GNI*) - 2016



GDP €275,567m + Net Factor Flows - €48,818m = GNP €226,749m + EU Taxes and Subsidies + €994m = GNI €227,742m + Adj. for aircraft, IP depreciation and redomiciled companies - €38,579m = GNI* €189,163m

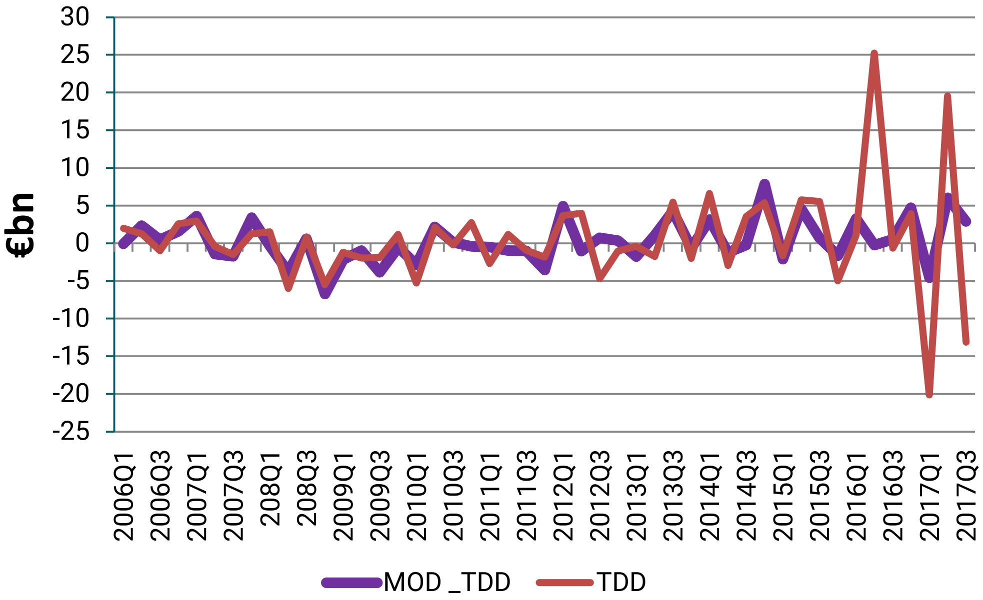
Debt to GDP/GNI* Ratios



Total Domestic Demand v's Modified Total Domestic Demand

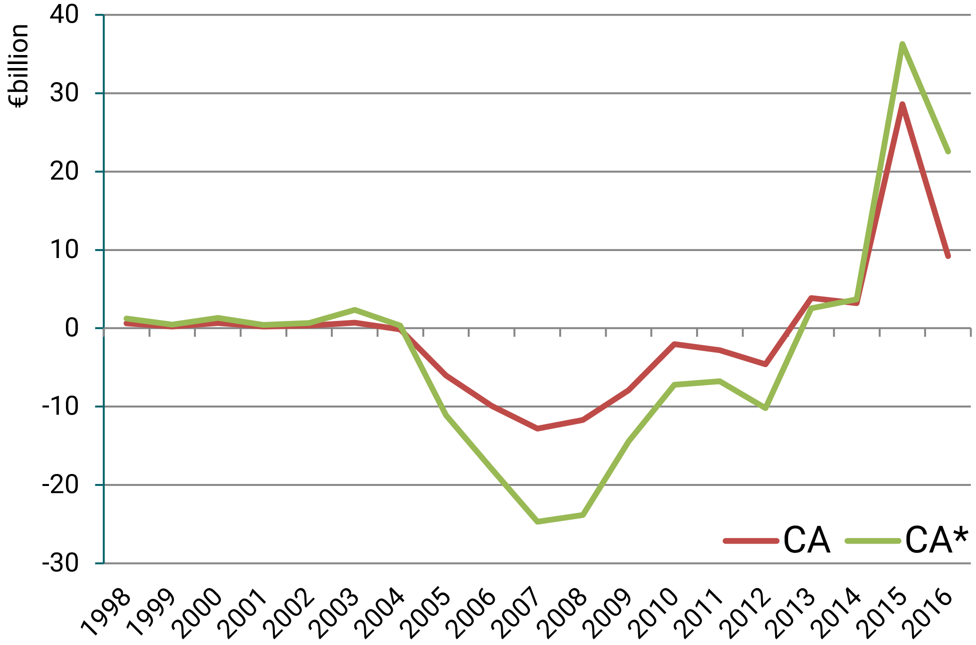
Total Domestic Demand includes Personal and Government Consumption Expenditure, and Investment (capital formation)

Modified Total Domestic Demand excludes Intellectual Property Products and Aircraft for leasing from Investment



BOP Current Account v's Current Account*

BOP Modified Current Account (CA*) excludes the impact of depreciation and imports relating to IP and Aircraft and also excludes net income of redomiciled PLCs



Further Indicators

- Annual GNI* in constant prices
- Quarterly GNI* in constant prices
    - Entail – quarterly depreciation
- Structural indicator - micro ownership based data

Summary

- Impact of Globalisation constantly evolving
- CSO strategy around LCU
- Importance of intangibles in Investment
- Productivity analysis for publication
- Value of new indicators to “deglobalise” GNI, etc.
- Challenge of micro based structural variables

An Phríomh-Oifig Staidrimh

Central Statistics Office