



ITC

TRADE IMPACT
FOR GOOD

50 YEARS

1964-2014

Services in Global Value Chains

An Initial Analysis of Regional Trends in Services Value Added

APEC Workshop

Advancing Regional Economic Integration in the GVC Era

Howard Plaza Hotel, Taipei, 29 September 2014

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International Trade Centre



What is ITC?



ITC is a trade-related technical assistance agency under the joint auspices of **United Nations Conference on Trade and Development (UNCTAD)** and **the World Trade Organisation (WTO)**.

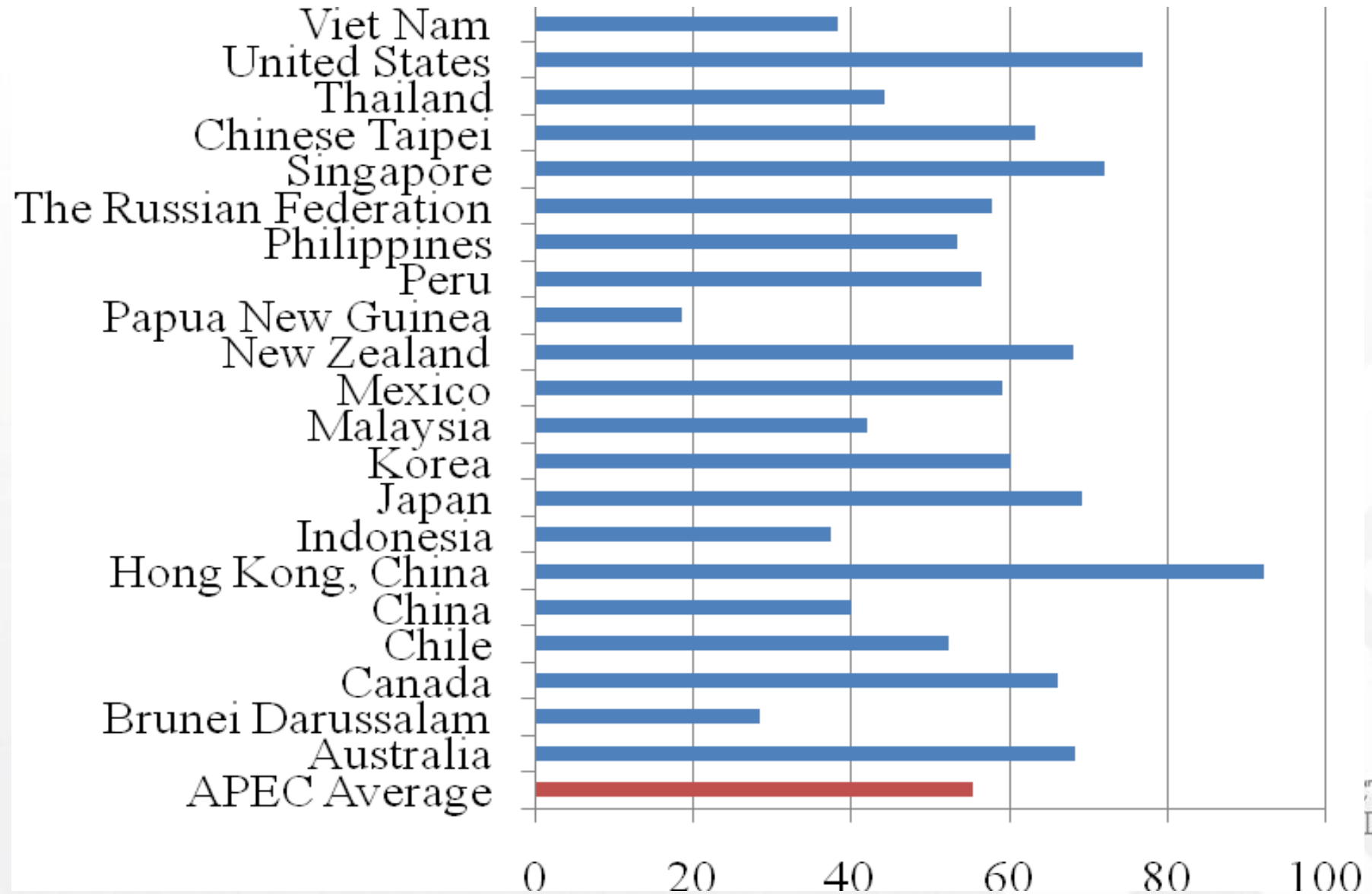
Within the **United Nations** system, ITC is the niche development partner focused on support for **SME competitiveness** to achieve **export success** in developing countries.

Overview of Contents

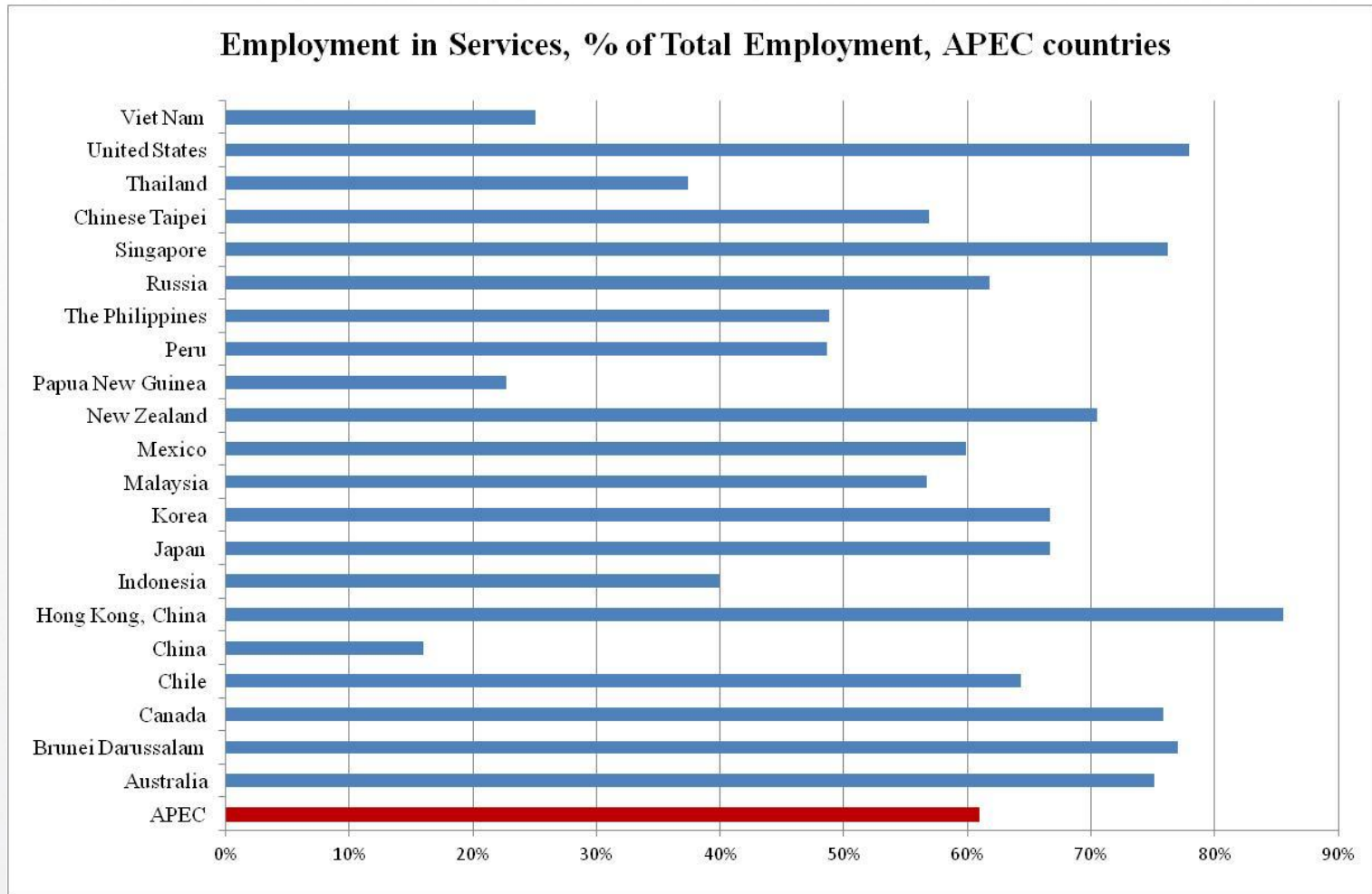
- **Rise of Services** in the global and regional economy
- GVCs = B2B trade in intermediates
 - Measured by **trade in value-added** (TiVA) data
 - **“Servification”** of the economy
- Emergence of **Services GVCs**
- TiVA data: insights for **APEC**
- TiVA data: role played by **Chinese Taipei’s services** industries in GVC participation
- Trade and industry **policy implications**
- Insights for APEC **regional economic integration**

Services Value-added as % of GDP 2009

Source: ABAC 2011

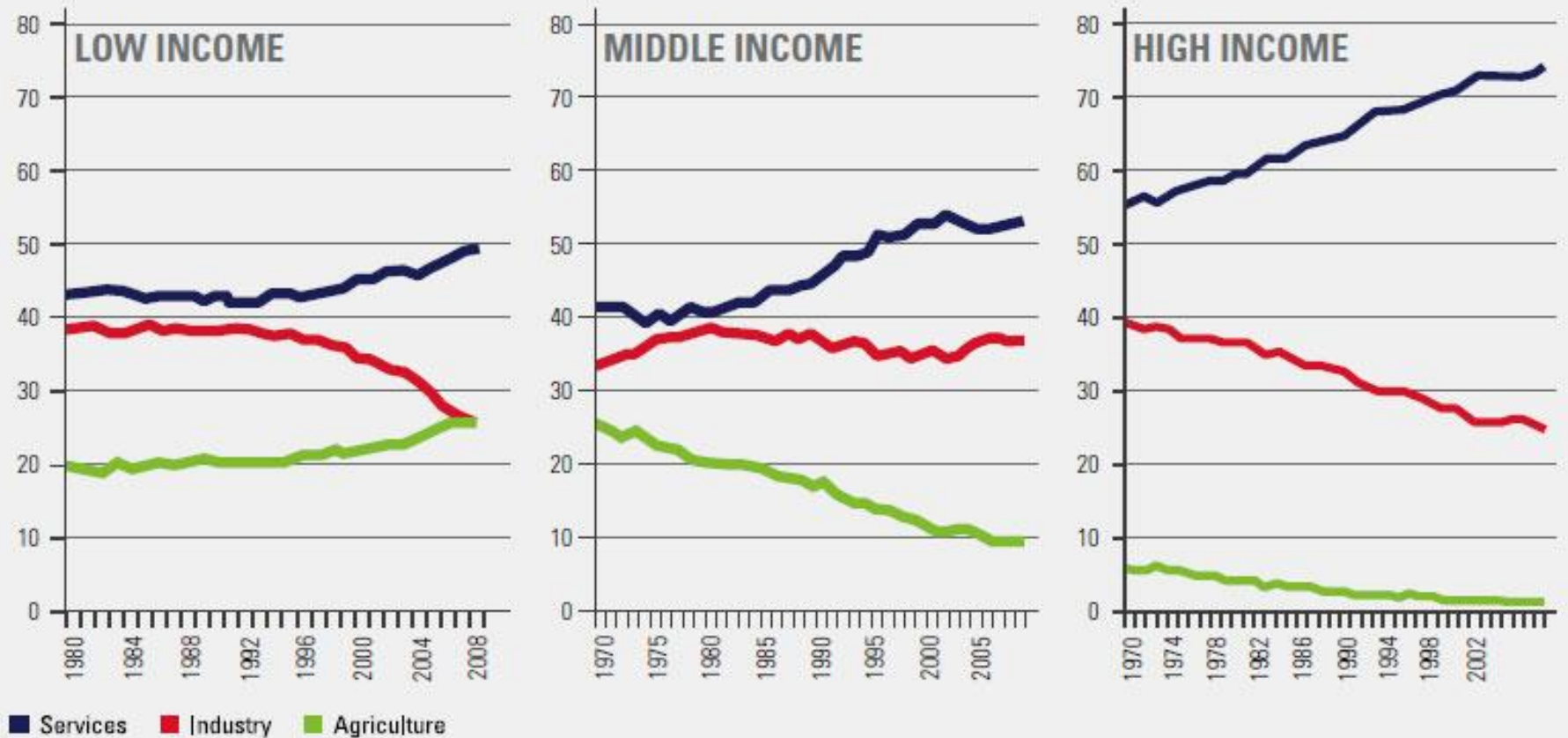


Employment in Services



Development Trajectory

Figure 03 Services Sector Growth (% of GDP) through Economic Evolution



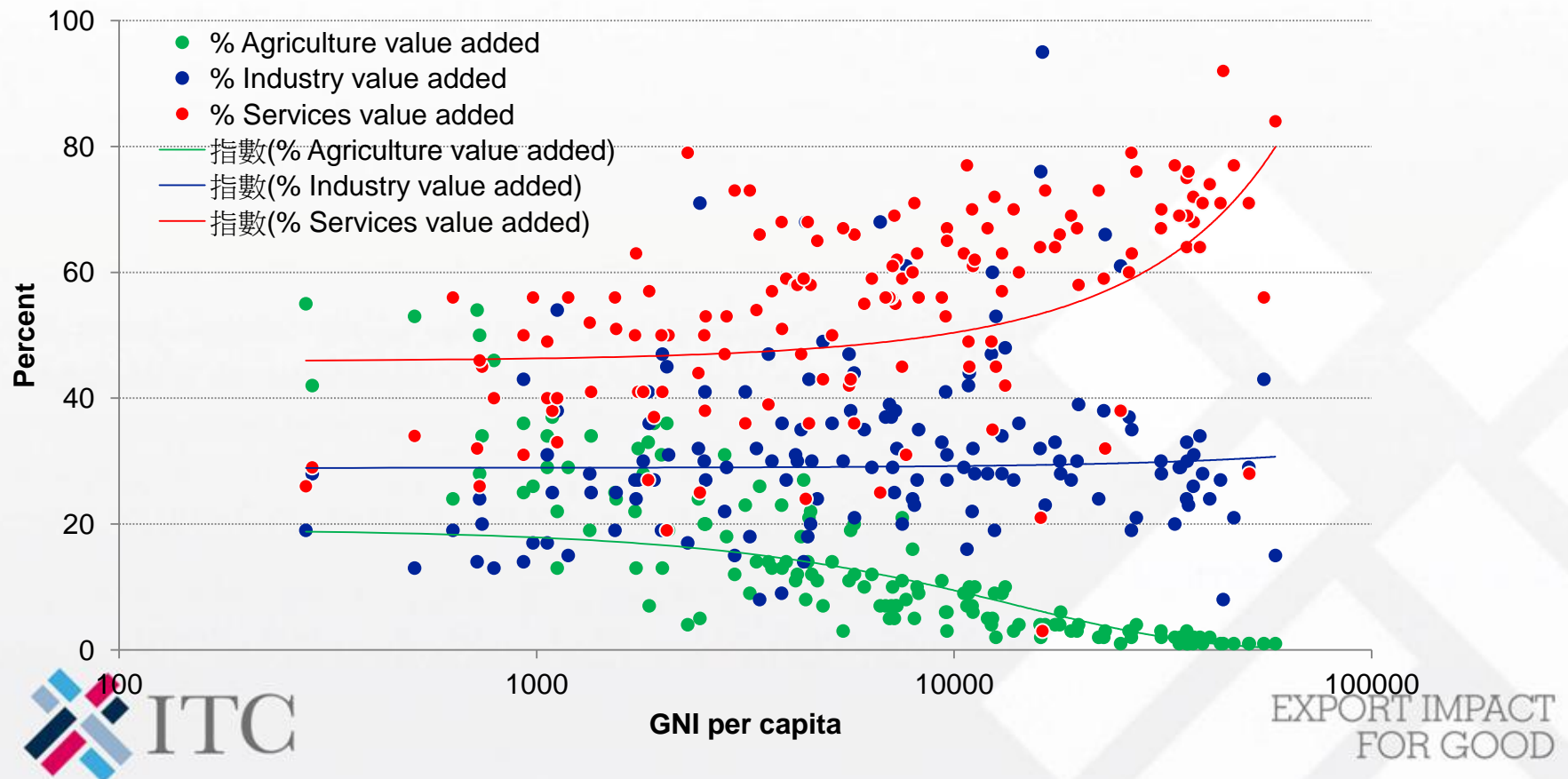
Source: Yi (2011)

Source; World Bank (2011)

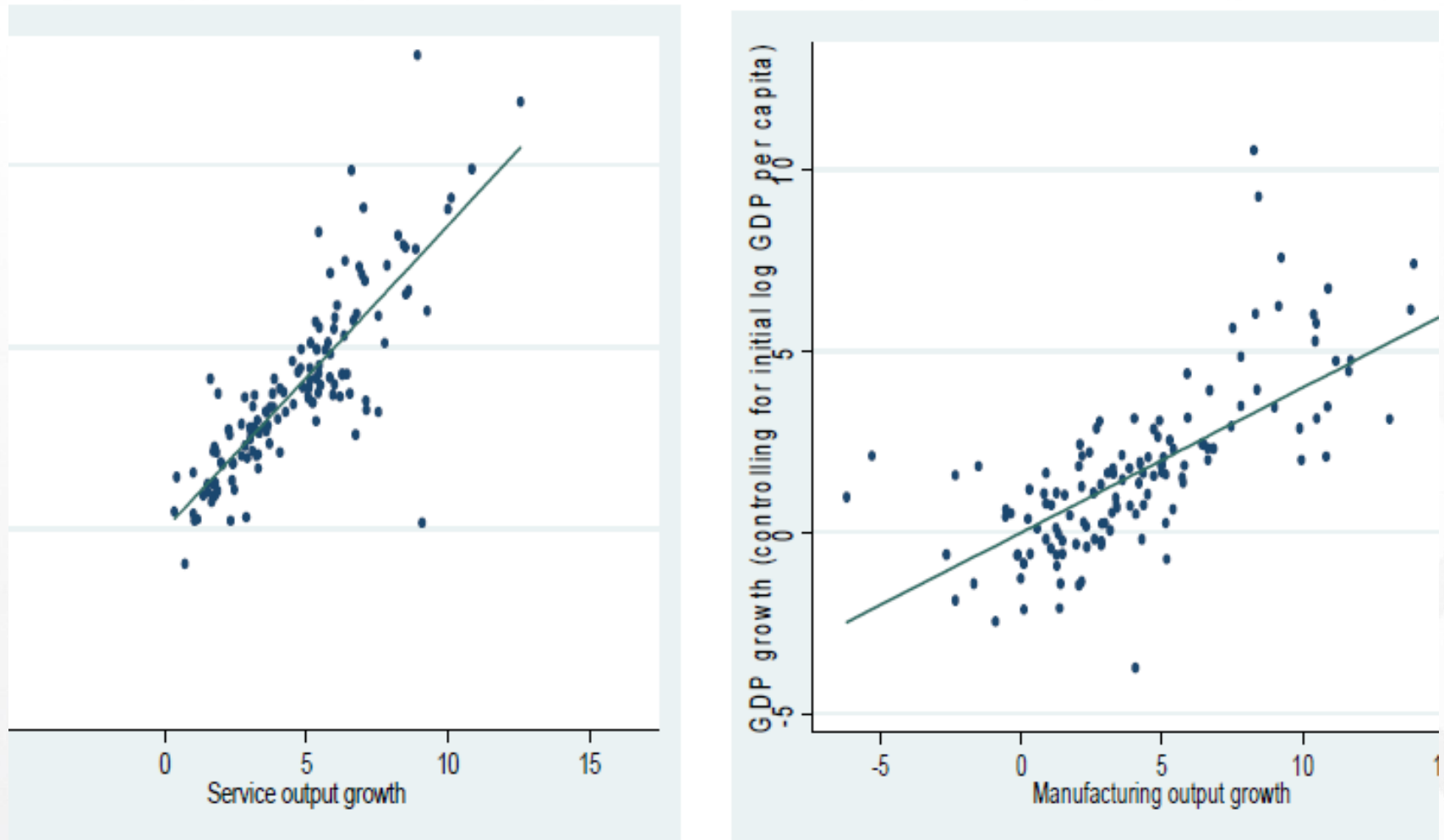


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same story per capita



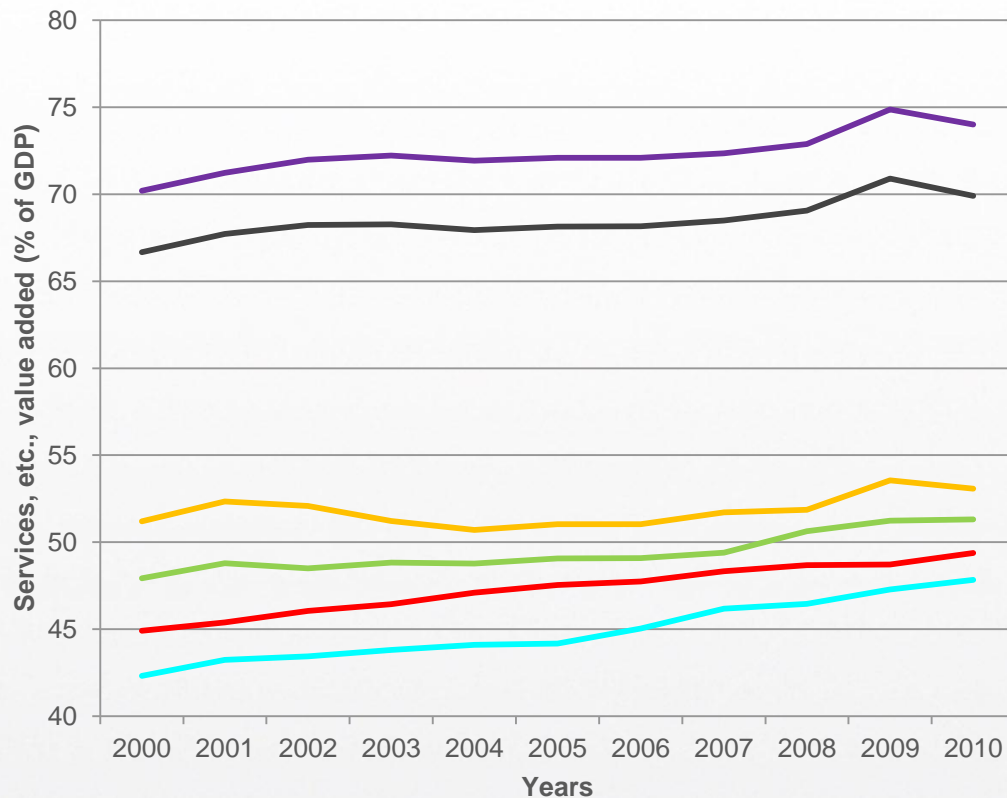
Services are driving development



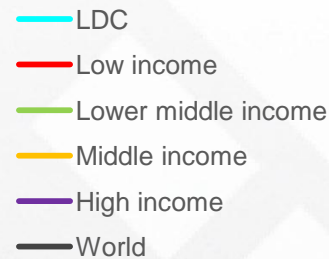
New services development model

- Services-led growth has mushroomed in South Asia, where there has been an explosion of business services, seemingly independent of manufacturing. Outsourcing offers new development opportunities
- Countries are shifting towards services sooner, at a lower per capita GDP than had been the case in the traditional development trajectory.
- Services can provide an alternative engine for development, enabling some latecomers to 'leapfrog' the traditional approach.

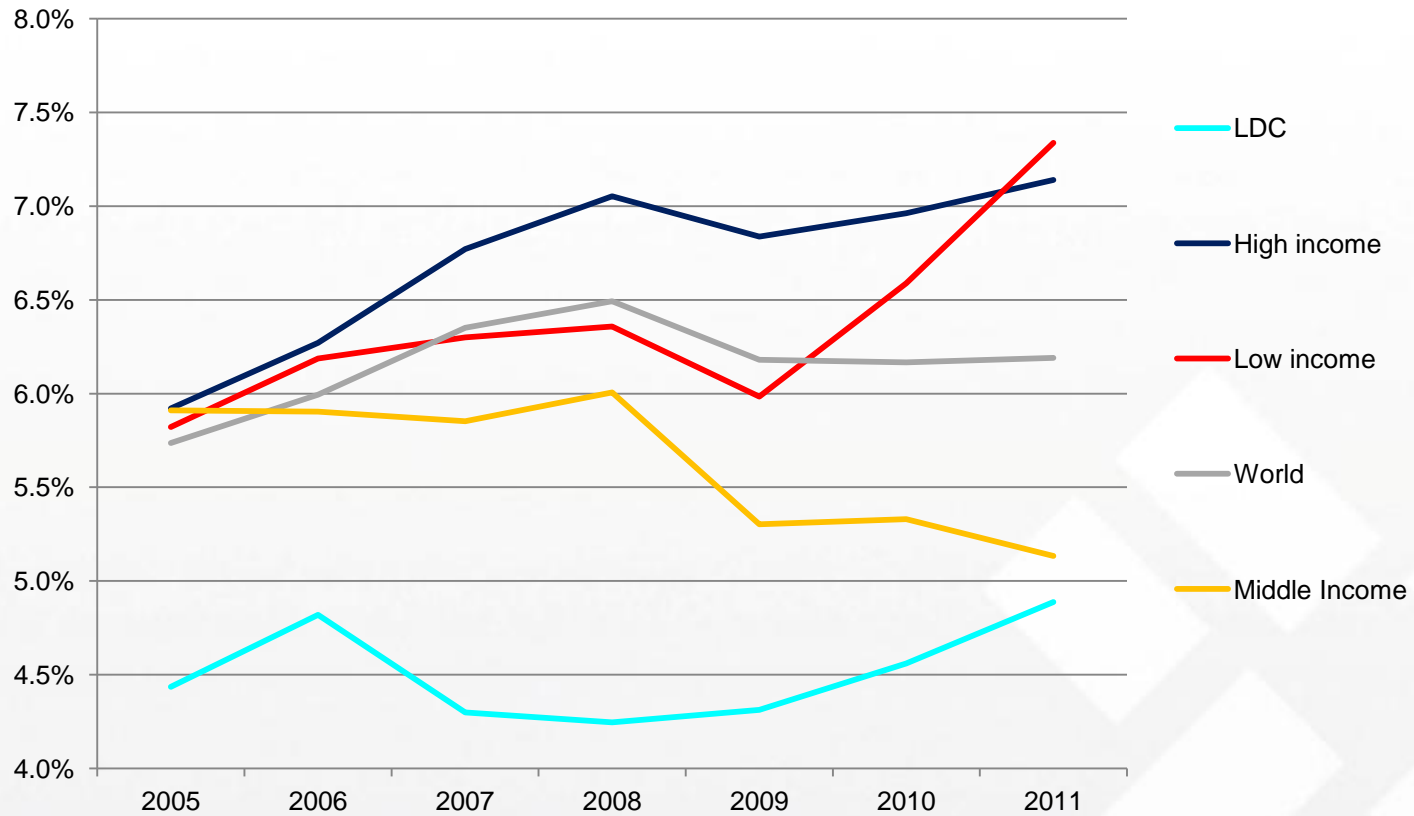
Services sector growing fastest in LDCs



	Average Growth Rates 2000-2010
<i>LDC</i>	13.06%
<i>LIC</i>	9.97%
<i>LMIC</i>	7.06%
<i>MIC</i>	3.66%
<i>HIC</i>	5.43%
<i>World</i>	4.86%



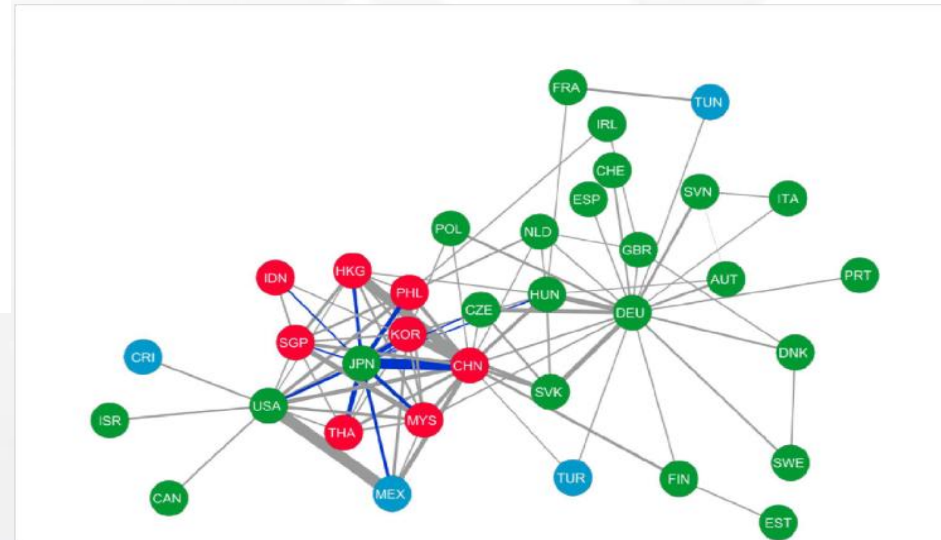
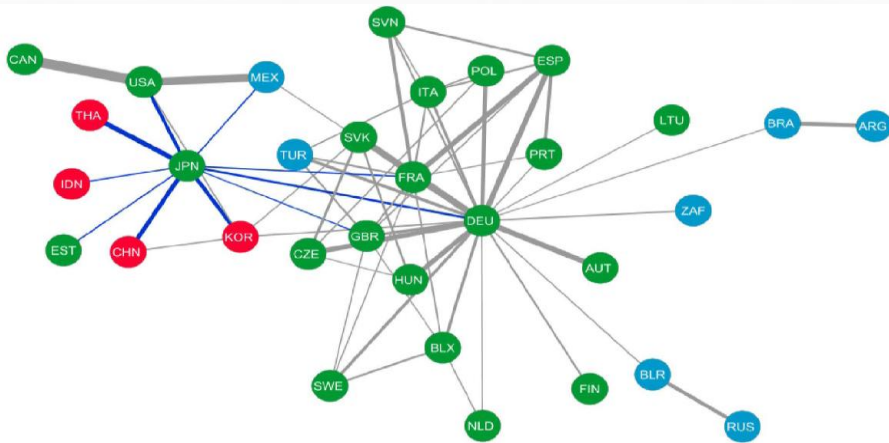
Contribution of services exports to GDP



GVCs; B2B trade in intermediates

- International trade can no longer be understood in terms of export or import of finished goods or services produced by one firm, at one location, in one country and thereafter delivered to an unrelated party in another country.
- Production of goods and increasingly of services involves a combination of intermediate inputs including services activities, sourced globally, to make up a finished output for the final consumer market.
- Any business function can become a core competence, or be outsourced (to another separate provider). Most can also be offshored (i.e. outsourced to an offshore location), leading to new competitive opportunities for both country and firm level specialization.
- **Supply chain activity is everywhere but has been most pronounced in geographically integrated regions, such as the European Union and East Asia.**

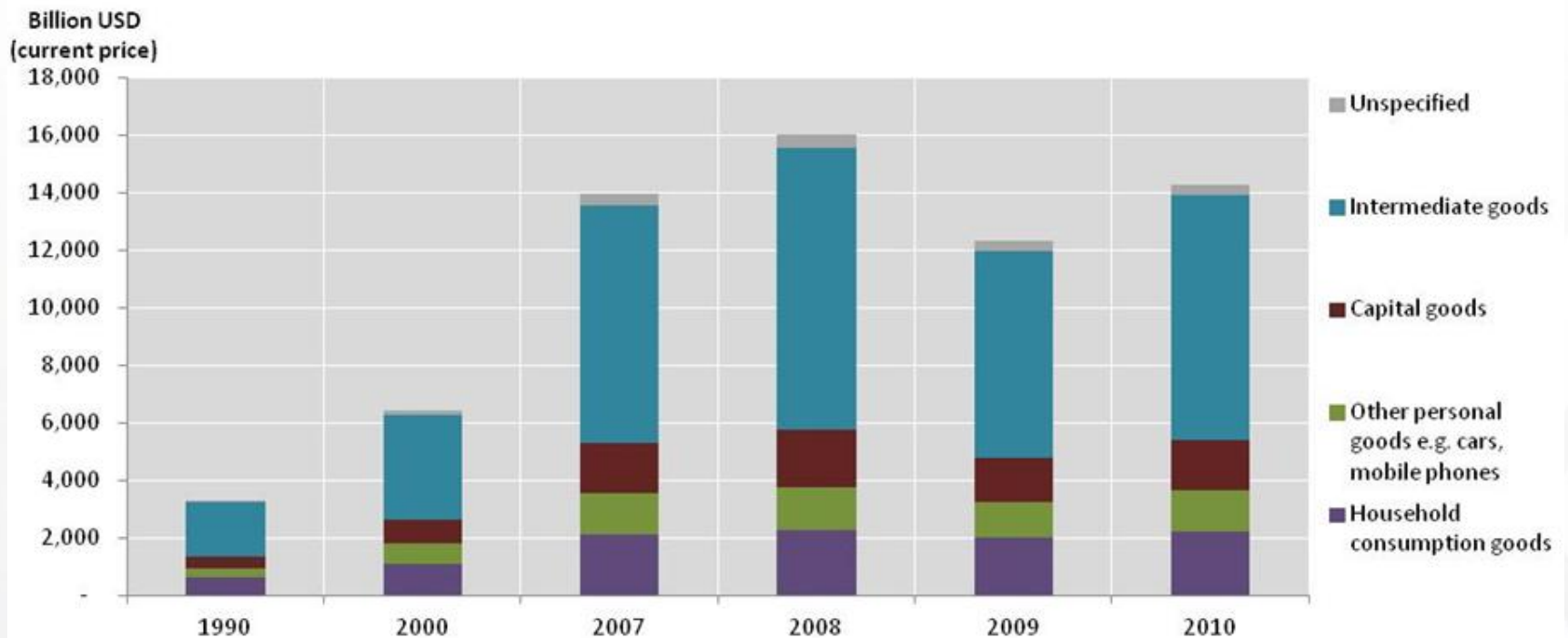
There is a strong regional dimension to the GVC phenomenon, which the TiVA data allows us to picture more clearly.



B2B trade in intermediates



is twice as important as trade in final products (and has been for a long time)



World Trade by End Use 1990-2010

Source: Sebastien Miradout, OECD, 2011 (export flow)

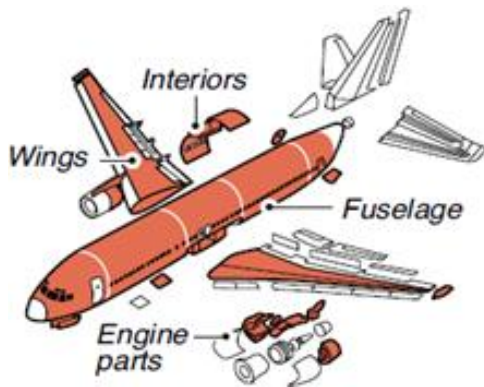
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There is lively debate on likely future industry trends, but general evidence suggests that industry continues to internationalise, the production process continues to fragment across borders and the GVC phenomenon is here to stay

Boeing has transformed itself into a systems integrator and has outsourced an increasing proportion of its aircraft production

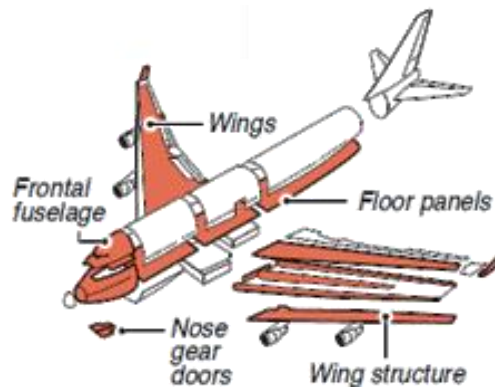
737 Classic at start of production

10% outsourced



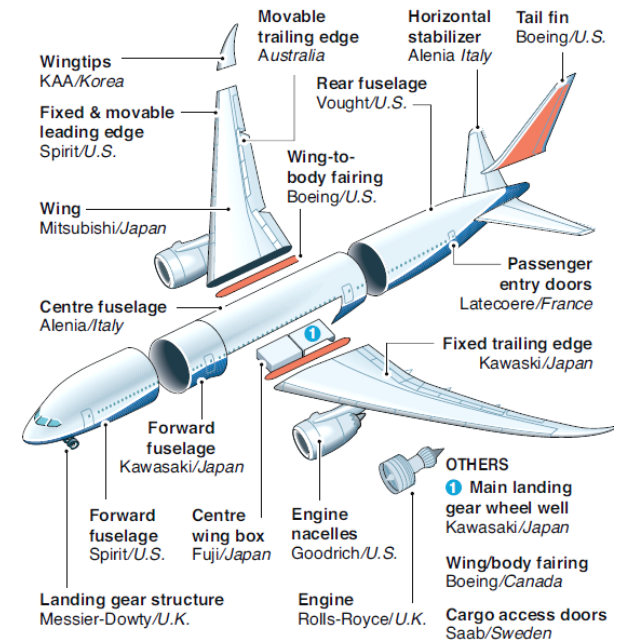
747 series at start of production

20% outsourced



787 Dreamliner at start of production

80% outsourced



Parts built by Boeing in-house

Embodied Services Value Nokia N95



Source:
ETLA, The Research Institute of the Finnish Economy



China assembles all iPods, but it only gets about \$4 per unit – or just over 1% of the US retail price of \$300

451 parts that go into the iPod

Hard Drive by Toshiba → Japanese company, most of its hard drives made in the Philippines and China; it costs about \$73 - \$54 in parts and labor -- so the value that Toshiba added to the hard drive was \$19 plus its own direct labor costs

Video/multimedia processor chip by Broadcom → American company with manufactures facilities in Taiwan. This component costs \$8.

Controller chip by Portal Player → American company with manufactures .This component costs \$5 .

-Final assembly → done in China, costs only about \$4 a unit

The unaccounted-for parts and labor costs involved in making the iPod came to about \$110

The largest share of the value added in the iPod goes to enterprises in the United States → \$163 of the iPod's \$299 retail value in the United States was captured by American companies and workers, breaking it down to \$75 for distribution and retail costs, \$80 to Apple, and \$8 to various domestic component makers.

The retail value of the 30-gigabyte video iPod that the authors examined was \$299 in June, 2007

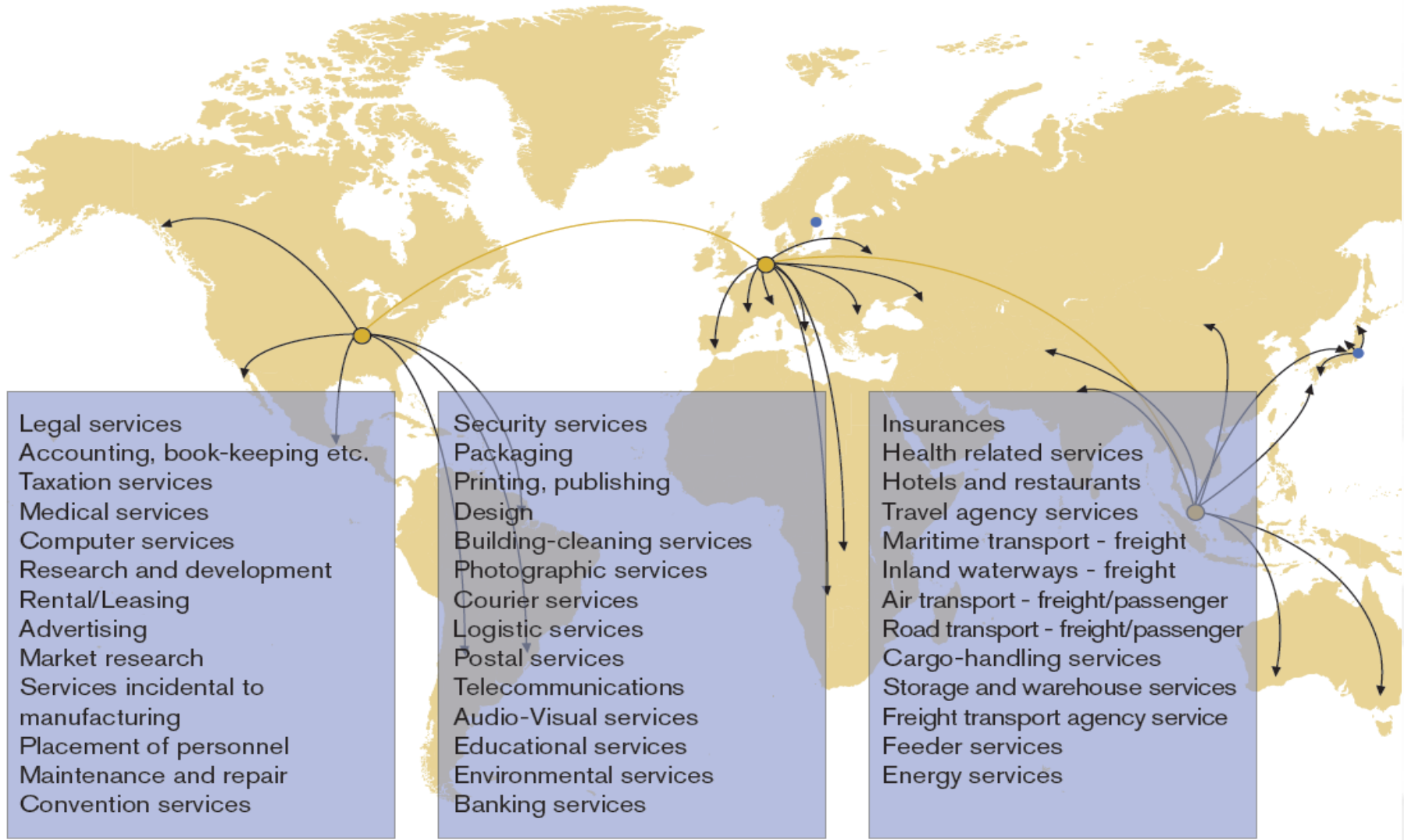


The bulk of the iPod's value is in the conception and design of the iPod. That is why Apple gets \$80 for each of these video iPods it sells, which is by far the largest piece of value added in the entire supply chain. Apple figured out how to combine 451 mostly generic parts into a valuable product.

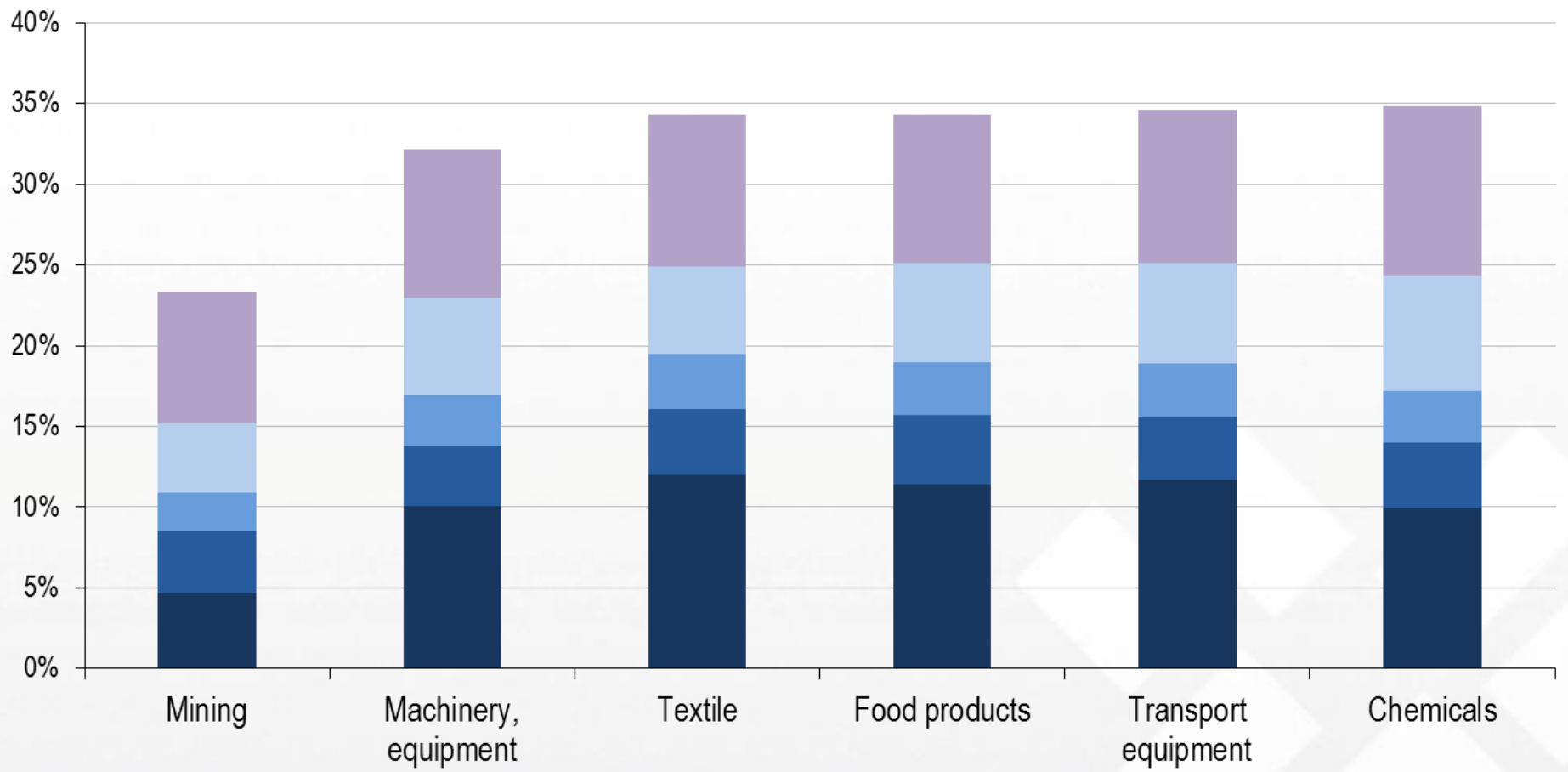
Swedish National Board of Trade : “servicification”

The example of Sandvik - Heavy Tools Manufacturer

Picture 1: Services needed for effective supply chain and delivery of goods



Services are “embodied” indirectly in goods exports



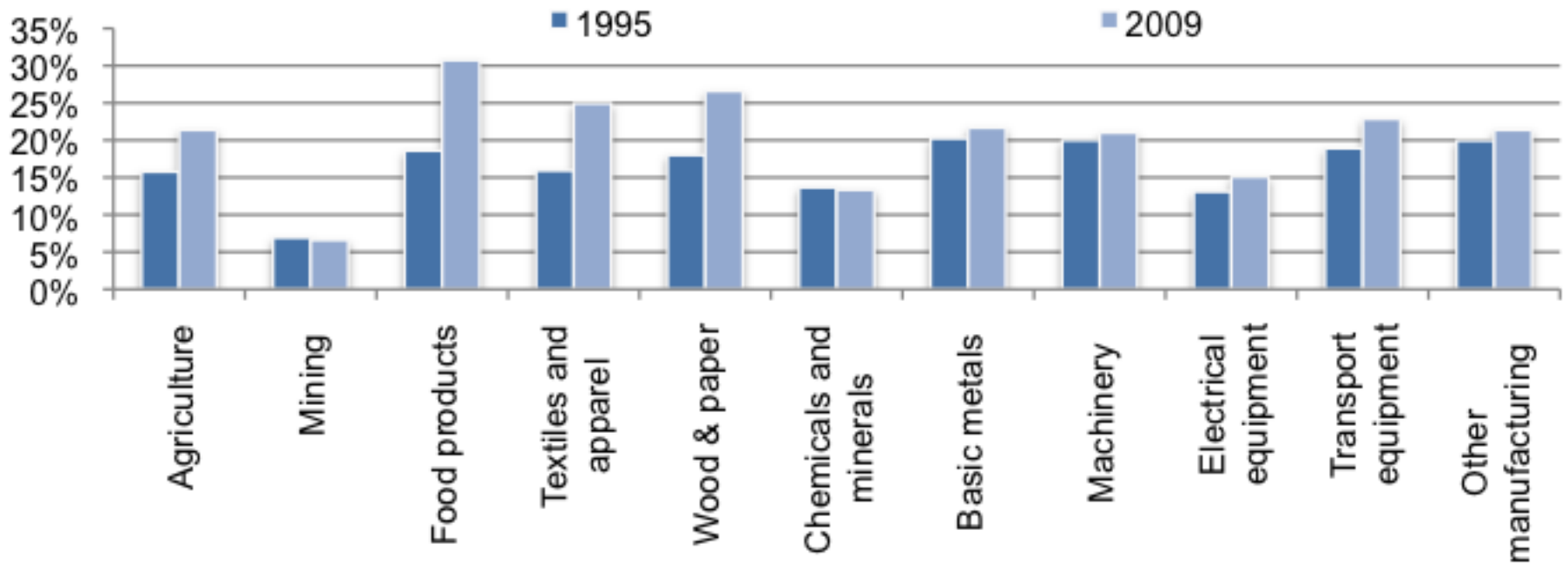
■ Distribution and repair* ■ Transport and storage ■ Finance ■ Business services ■ Other



Source: OECD Trade and Agriculture Directorate

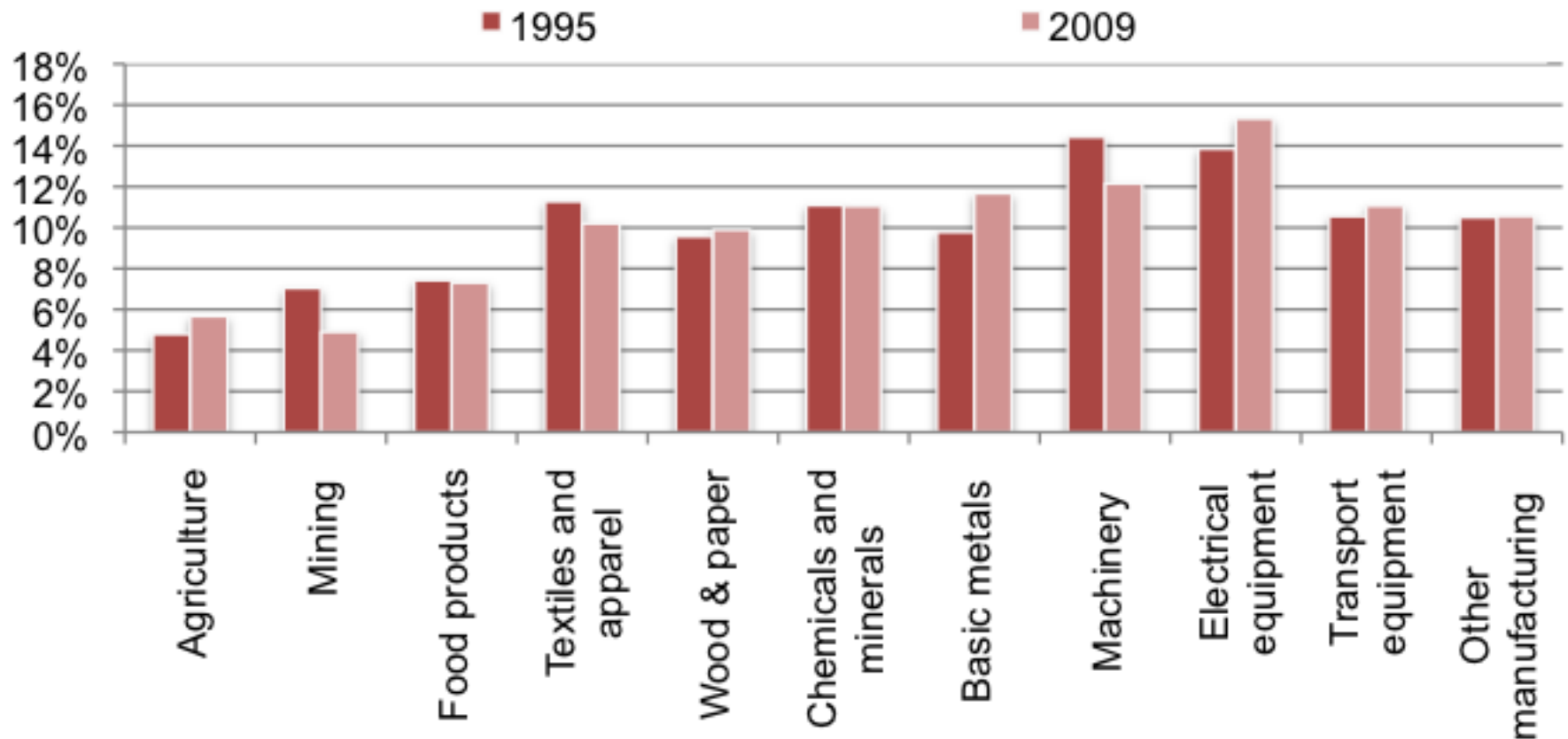
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Chinese Taipei: Domestic services content in goods exports, by industry %



Indirect domestic services content has increased across all industries, rising on average from 16% in 1995 to 21% in 2009. Noticeable increases were in *Food, Textiles and apparels* and *Wood & paper*, for all of which indirect services content increased by 50% or more – but are still below the global average

Chinese Taipei: Foreign Services content in goods exports, by industry, %

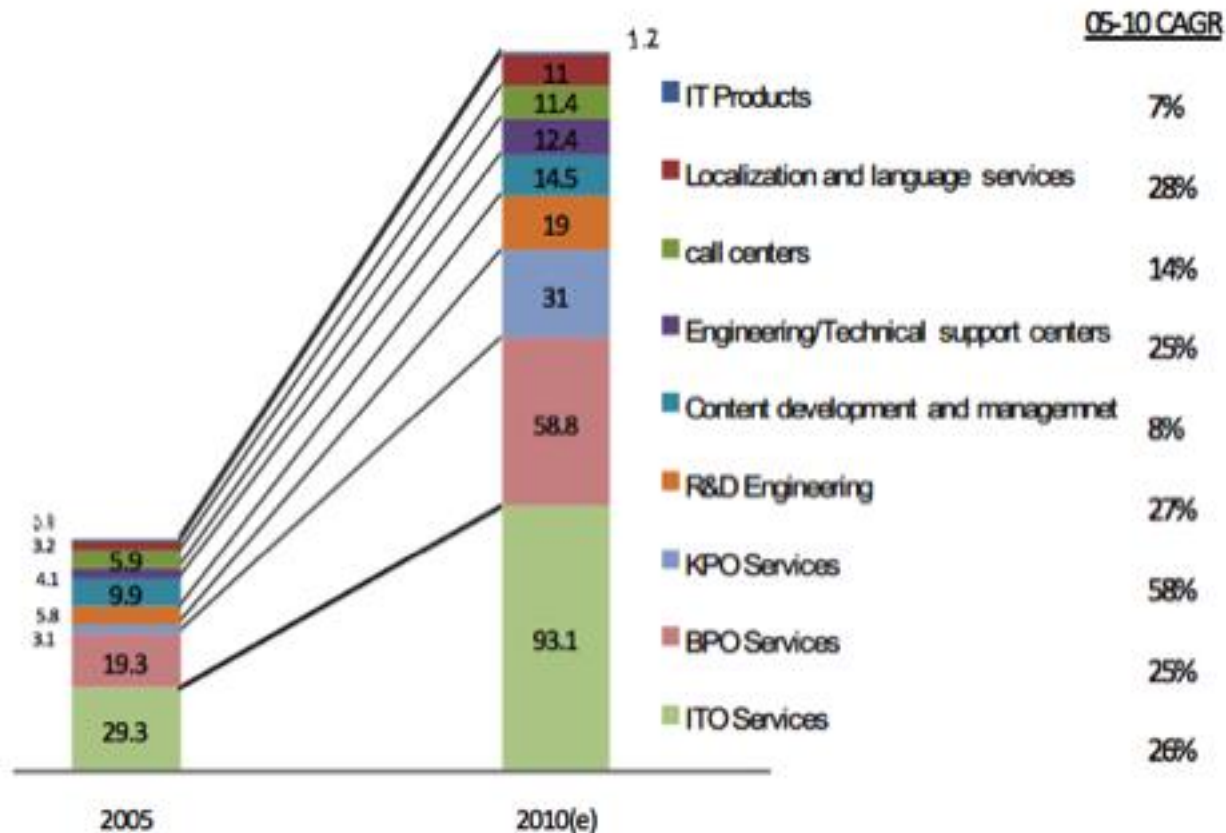


In contrast, indirect foreign services content has remained more stable between 1995-2009, averaging 10%. Largest contractions in foreign services content were in : *mining* (-30%) and *machinery* (-16%). Largest growth in foreign services content was in : *basic metals* (19%) and in Taiwan's largest export industry *Electrical equipment* (11%).

Emergence of Services Value Chains

- This is a more recent phenomenon, but globalisation is bringing about a similar transformation in services as took place in manufacturing.
- Telecommunications reforms and the application of digital technology to a widening range of business services is driving a rapid emergence of **supply chains in services, often better known as services outsourcing or BPO.**
- Traditionally, services providers were constrained by their inability to capture, store and possess the value of the intangible. There were few opportunities to create step by step “pathways” to market as services tend to be delivered and consumed simultaneously.
- The application of information technology has radically changed this; there is now a constant quest in the services sector to segment out any business function in which knowledge can be commoditised and packaged as a “product”, and where ownership can be established, production can be scaled up and trade can take place separately from production.
- The innovative business process transformation is involving SMEs as well as creating globally integrated services firms.
- Services intermediates (generally known as knowledge-intensive B2B business services) are now **the fastest growing component of world trade** today

services outsourcing trebled in value 2005-10



Source: (OECD, 2008)

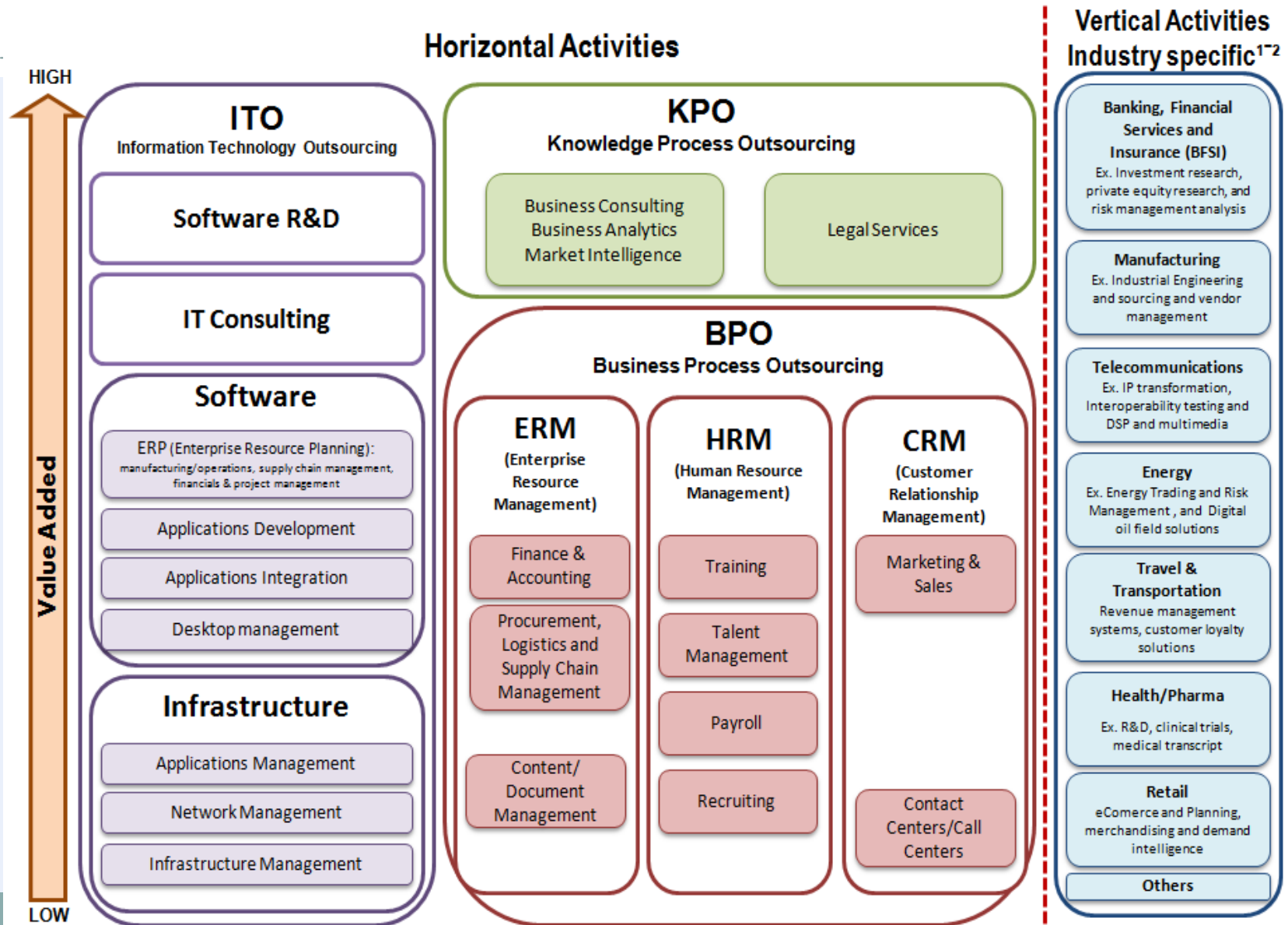
Notes: (e) Global offshore services market, 2005-2010 (\$bn)



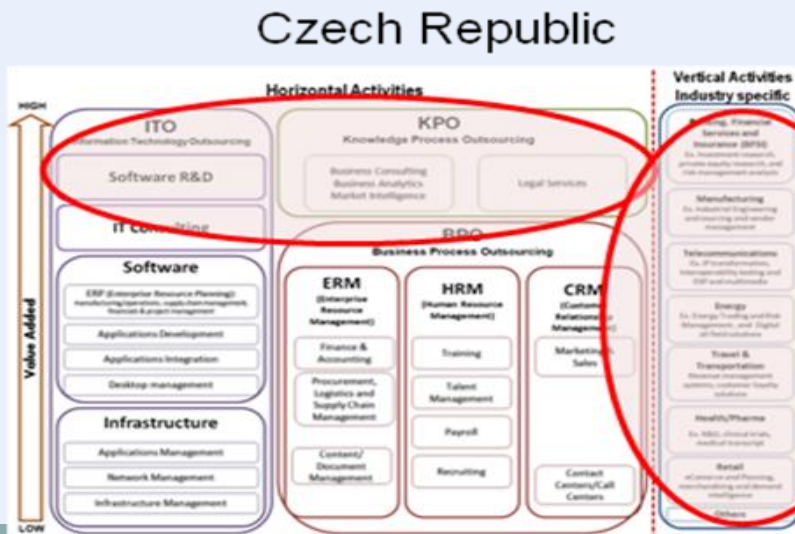
The fastest growing six sectors averaged annual growth rates ranging from 25-58%. BPO and ITO continue to dominate, although new niche areas, including engineering grew fast, and KPO fastest.

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A Services Value Chain



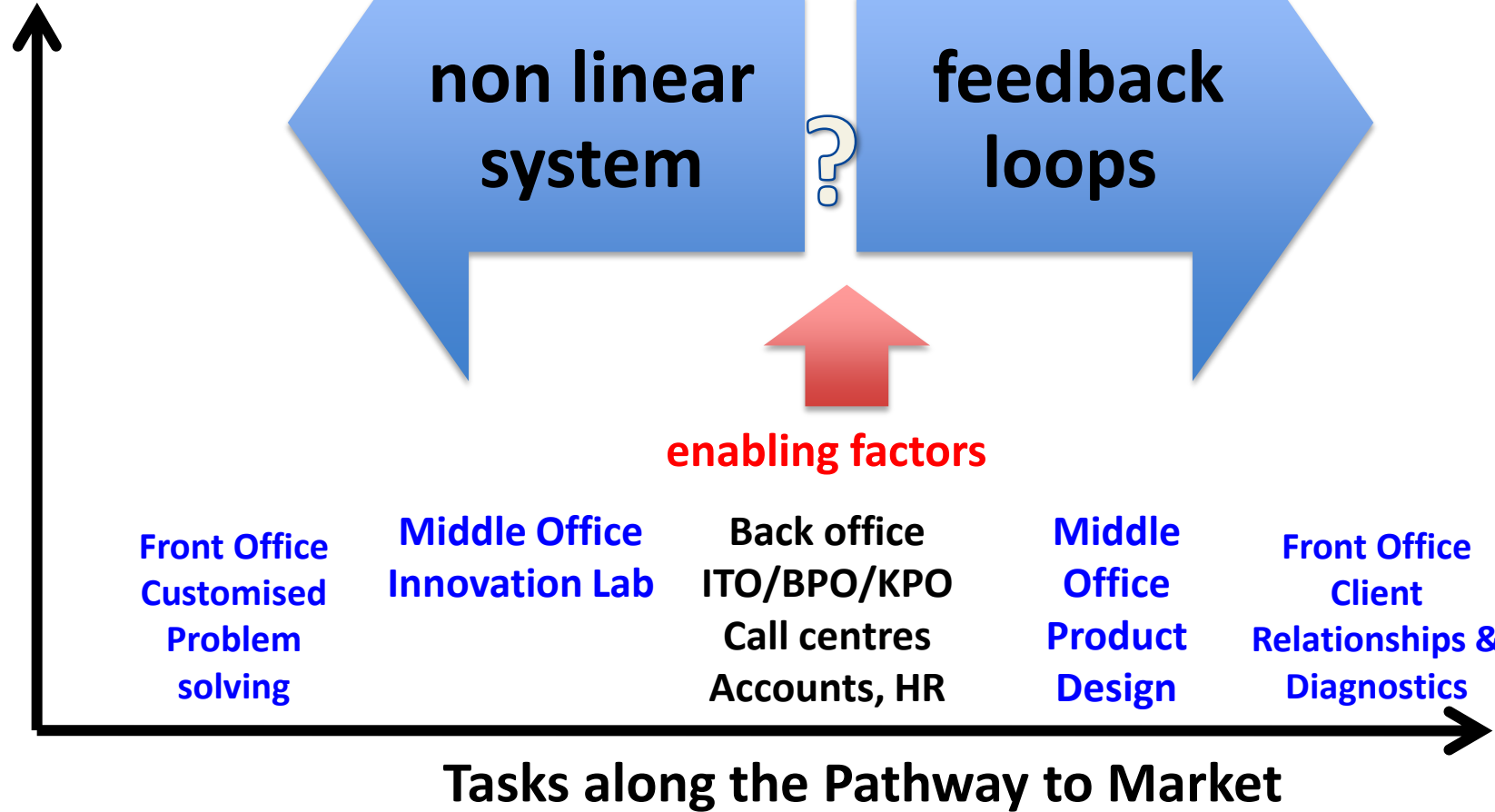
Mapping Selected Countries in the Offshore Services Value Chain



Example of a Services Supply Chain



Knowledge-intensity



What do Services Value Chains look like?

Measuring Trade in Value-Added

In 2011, the WTO and IDE/JETRO pioneered the way with a ground-breaking study on “trade in tasks” which showed how the emergence of GVCs radically challenges the concepts behind traditional measurements of trade flows.

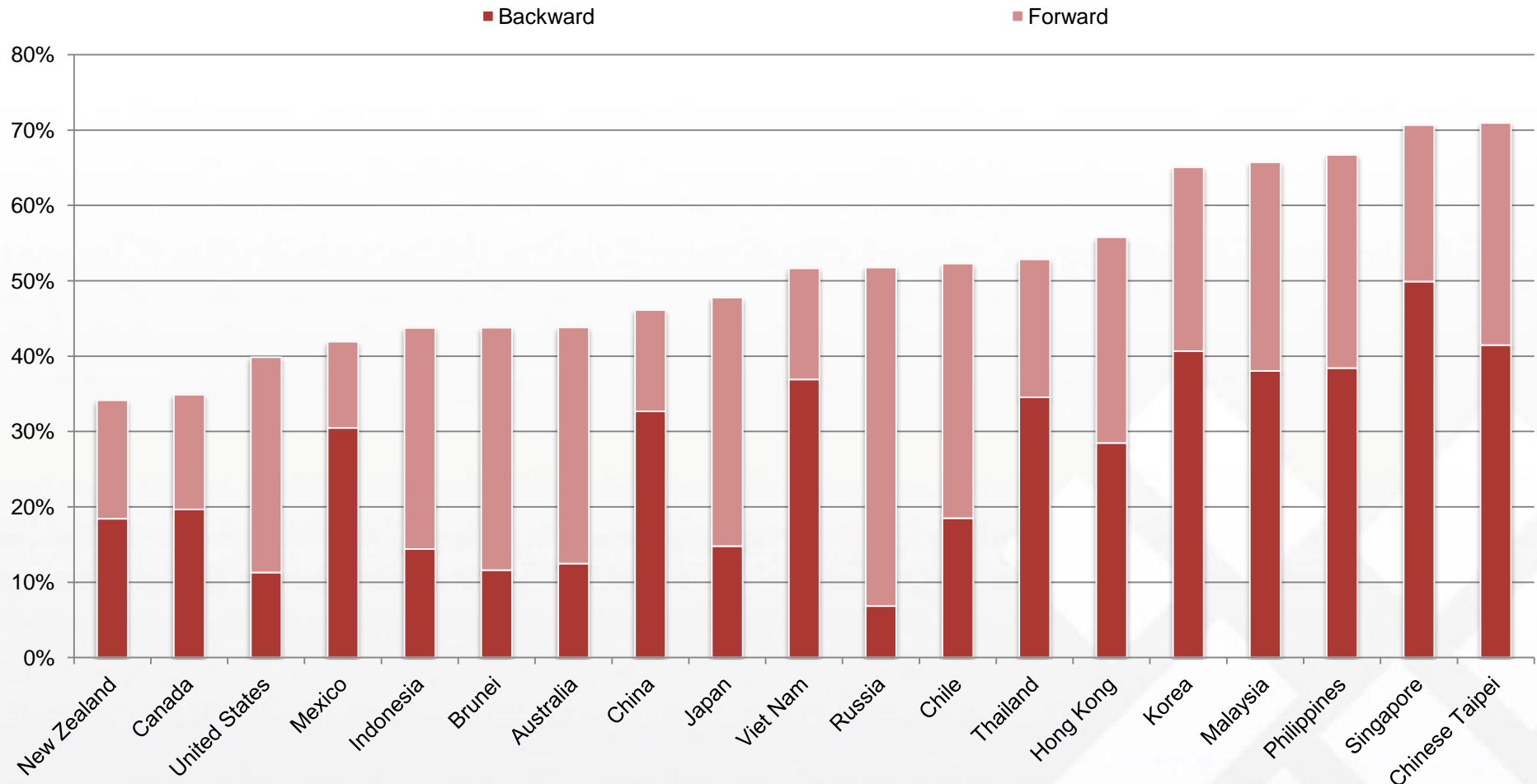
The study highlighted the fact that as trade in intermediates becomes more important, traditional trade statistics become less meaningful, as they fail to reflect value-added (ie the value of exports minus imported inputs).

Understanding current patterns of production and trade, and the economic significance of APEC economies’ participation or lack of participation in GVCs, requires analysis using the new WTO/OECD Trade in Value-Added (TiVA) data released in 2012.

OECD/WTO TiVA data

- TiVA data tracks the source of value that is added by each country/industry in the production of goods or services for export, avoiding double counting and revealing the role of imports in exports
- TiVA database provides a breakdown of gross exports by industries and source
 - **Domestic Value Added**
 - Direct (pure services exports e.g. transport services, business services, financial intermediation)
 - Indirect (originating from domestic services intermediates)
 - Re-imported domestic services value added
 - **Foreign Value Added** by source country
- The data base covers large aggregated industry groups; in the services sector it covers ISIC 45 (**construction**), ISIC 50 to 55 (**wholesale and retail trade, hotels and restaurants**), ISIC 60 to 64 (**transport and storage, post and telecommunication**), ISIC 65 to 67 (**financial intermediation**), ISIC 70 to 74 (**real estate, renting and business activities**) and ISIC 75 to 95 (**community, social and personal services**).
- Not all countries have input/output tables on which this data is based. Country coverage is therefore limited.

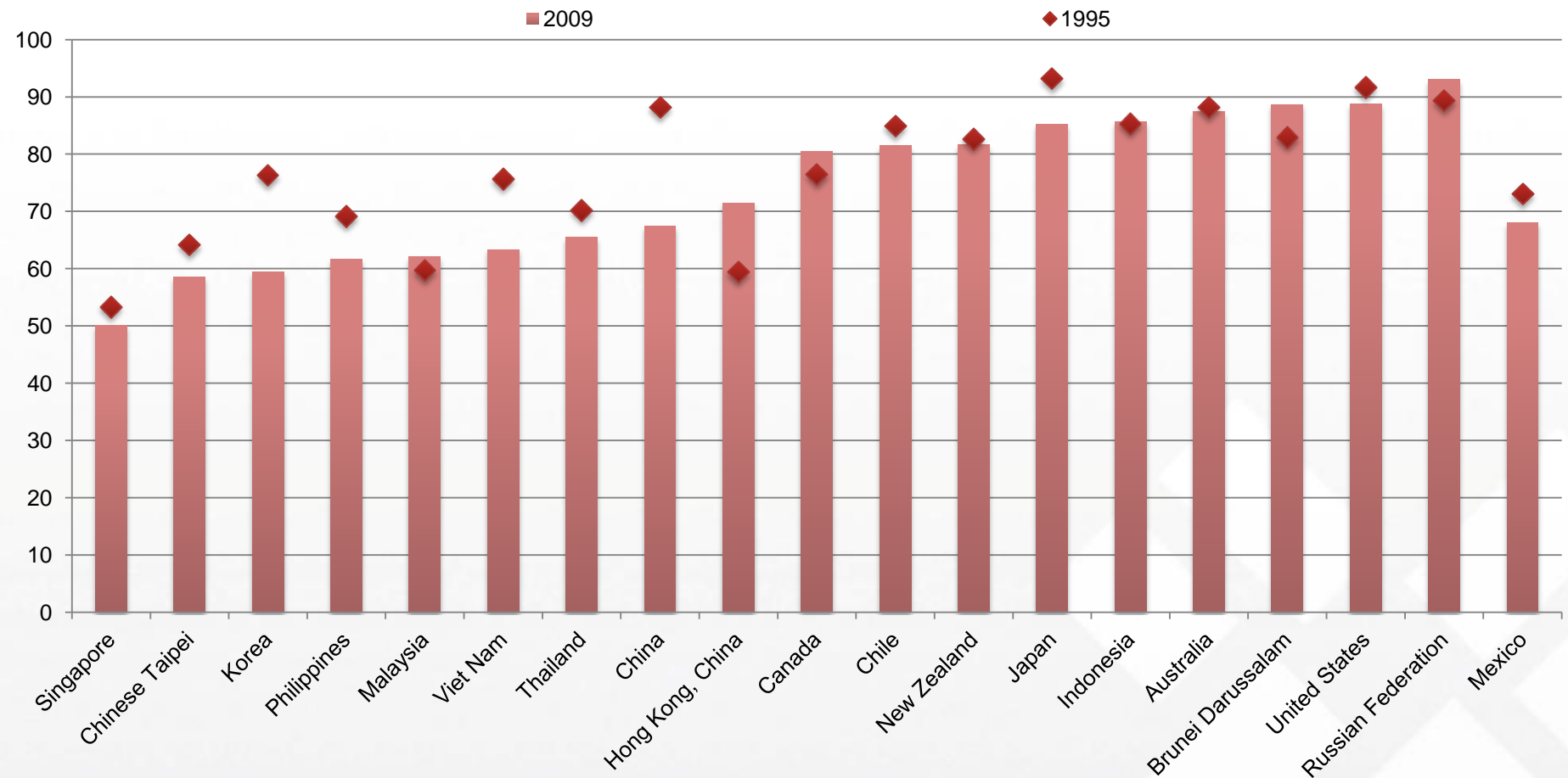
GVC Participation Rate as % of gross exports, 2009



Chinese Taipei has highest GVC participation rate

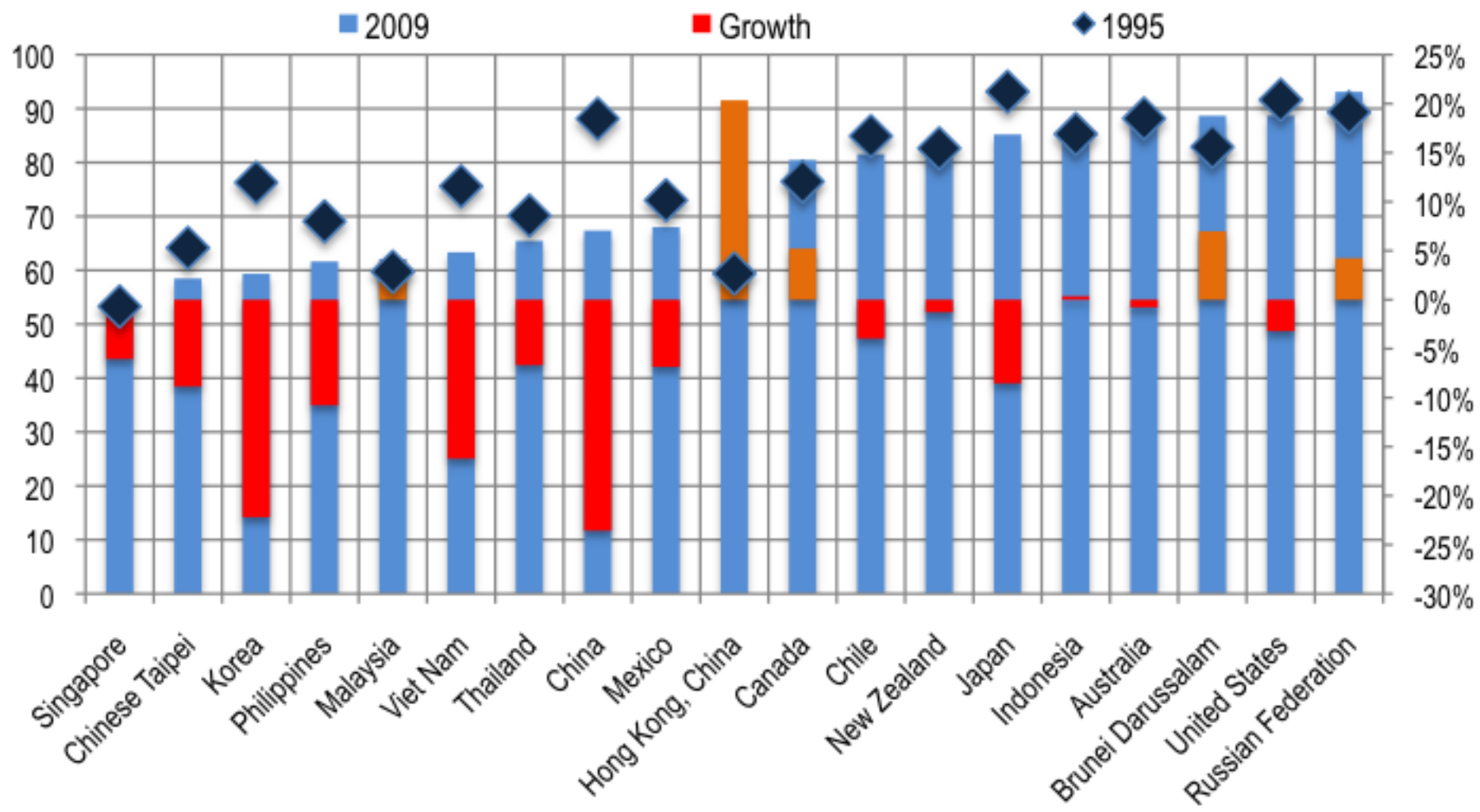
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Domestic value added as a % of gross exports

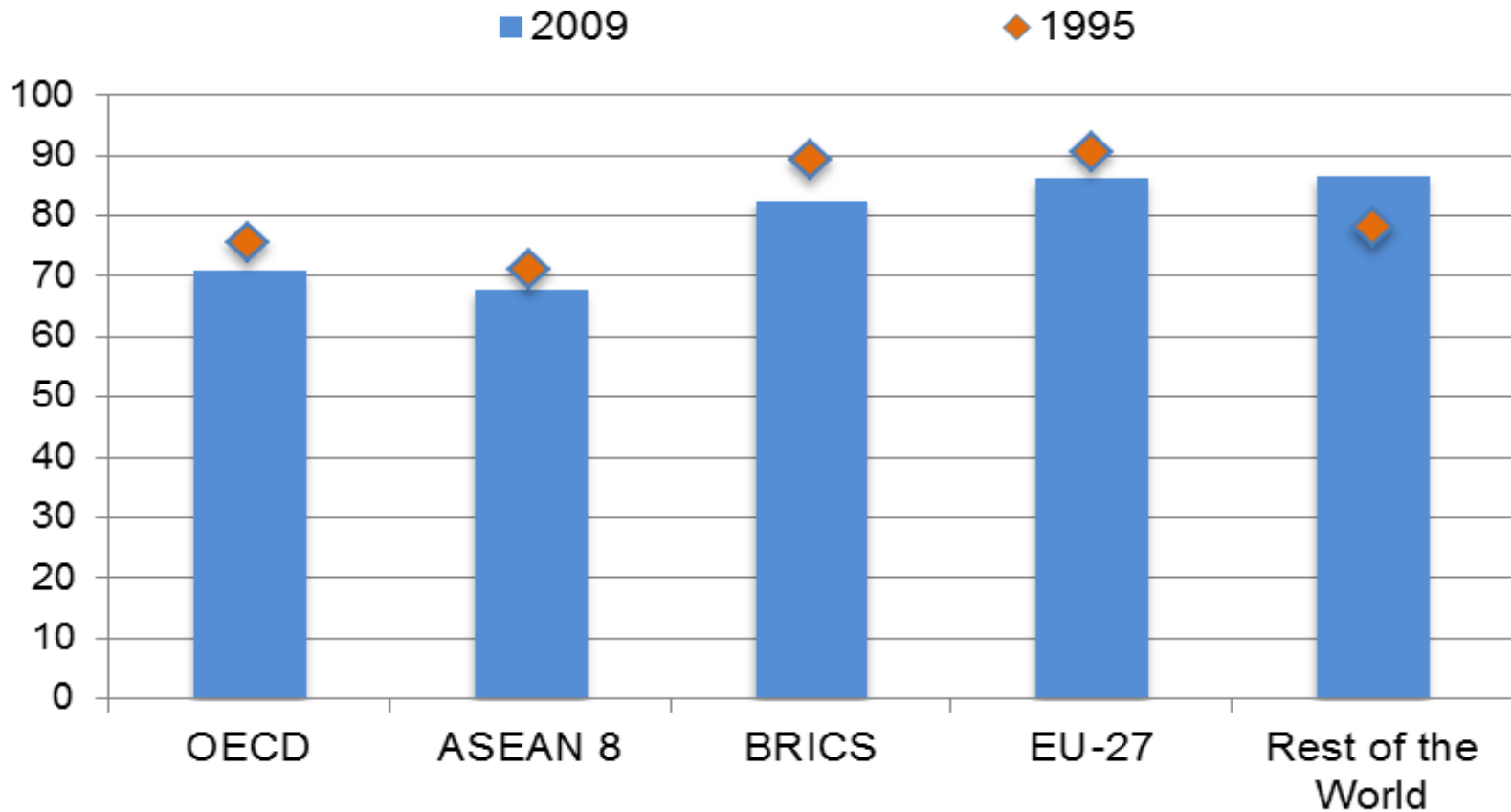


For Chinese Taipei domestic value added in exports was 58% in 2009, significantly lower than the OECD average of 70% and the APEC average (74%) and lower than in 1995: This reflects a very high degree of integration with the global and regional economy

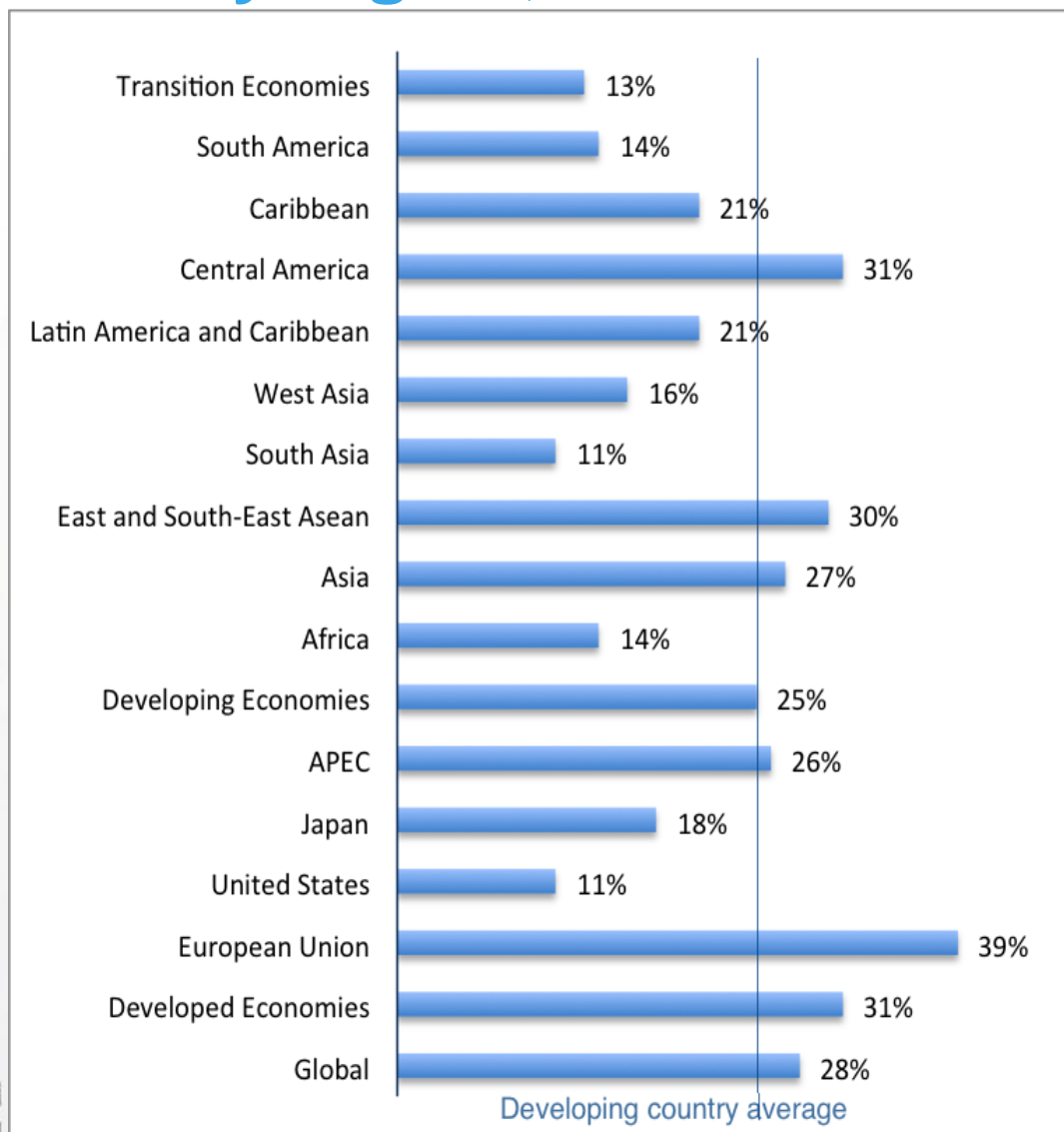
Declining trend in domestic content of exports



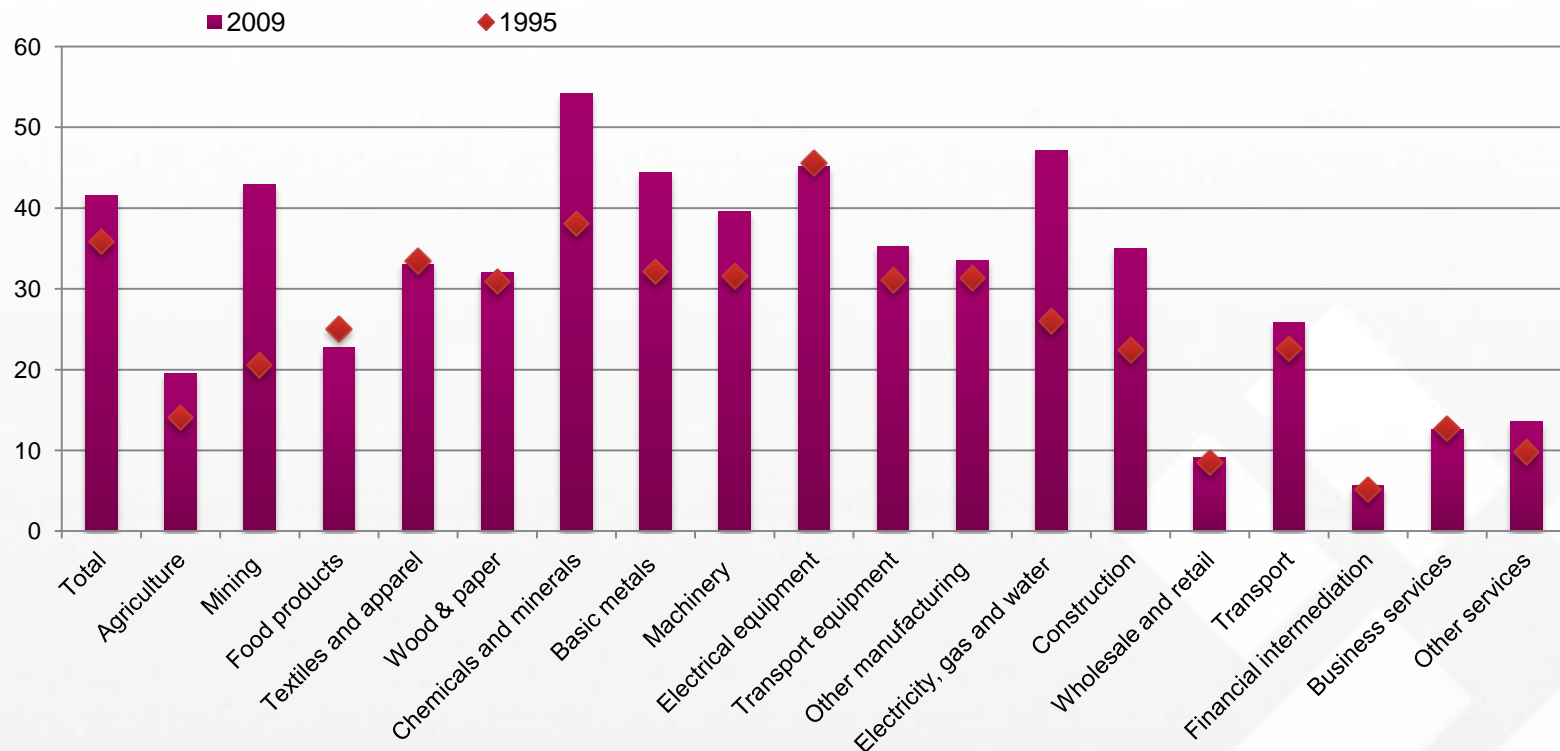
Domestic Value Added as % of Gross Exports: BRICS, EU27, OECD, Rest of World, ASEAN



Share of Foreign Value Added in gross exports by region, 2010



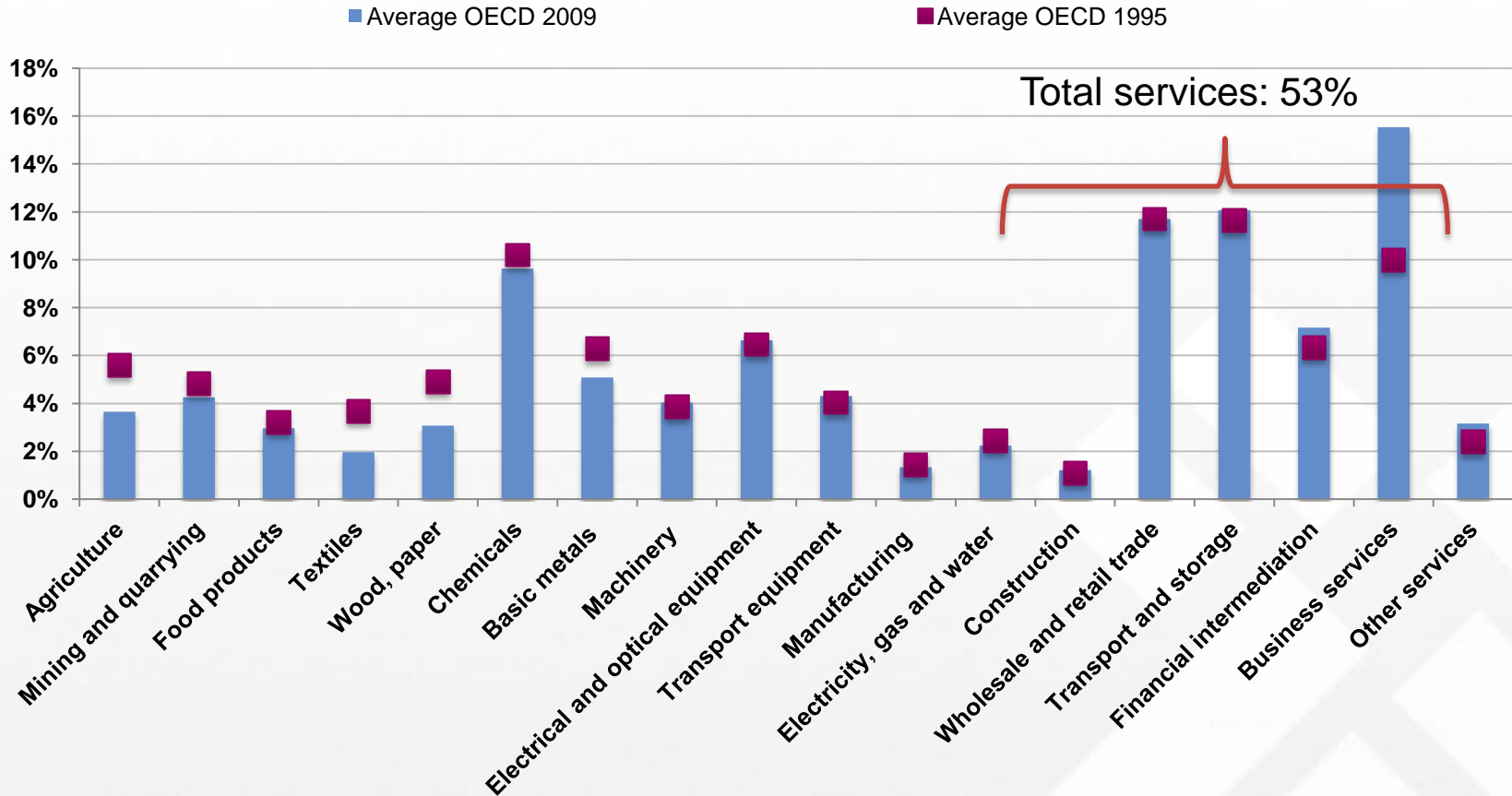
Chinese Taipei: Foreign Value-added content of gross exports, by industry, %



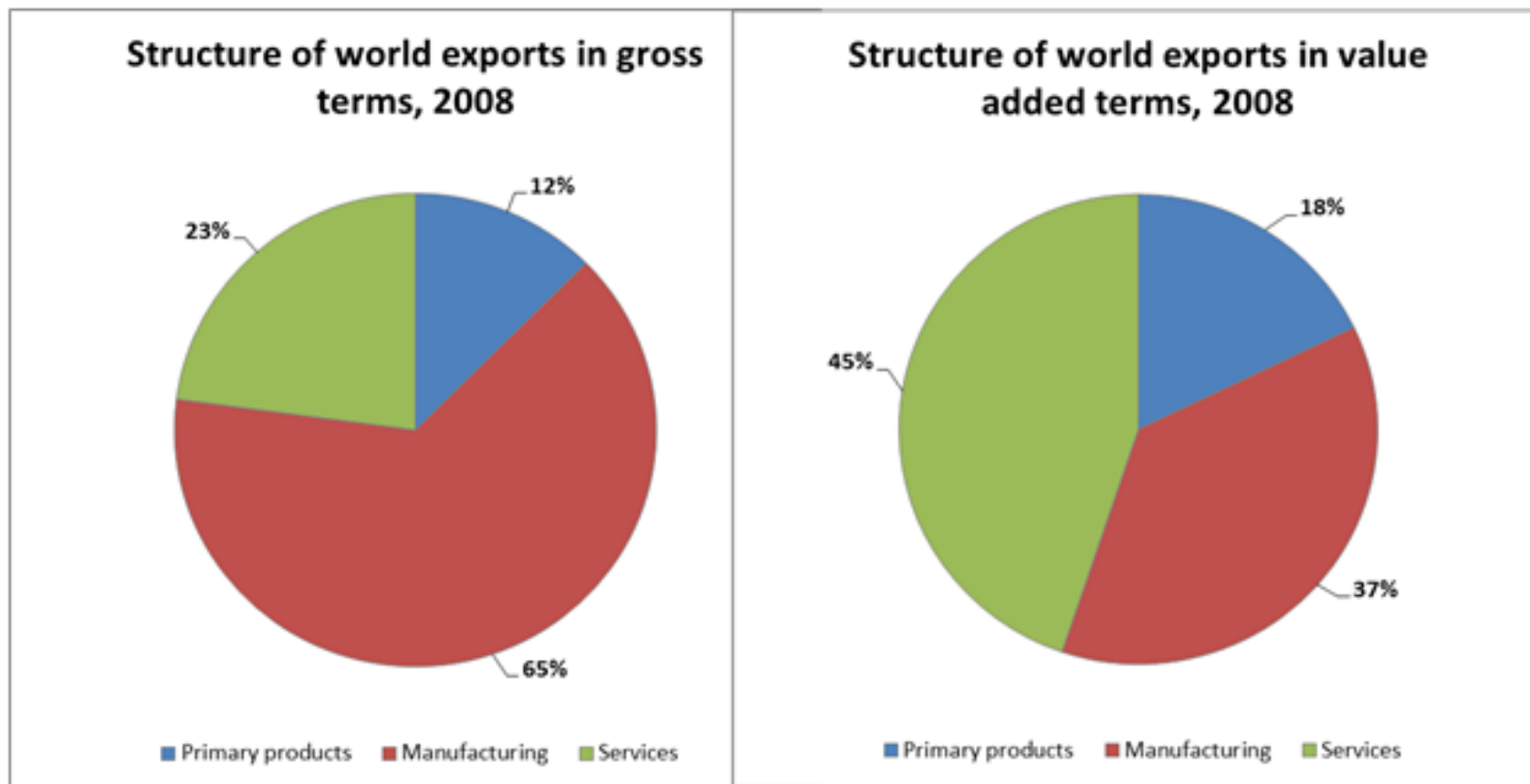
- The foreign value added content is highest in exports of: *Chemicals and minerals* (54%), *Electricity, gas and water supply* (47%) and *Electrical equipment* (45%). Foreign value added content of exports increased across most industries between 1995-2009, apart from *Food* (-9%), *Electrical Equipment* (-1%) and *Textiles and apparel* (-1%). Export industries that have experienced the highest growth in foreign content are: *Mining* (109%) and *Electricity gas and water supply* (84%). Overall growth was 16%, significantly higher than the average growth rate of 4% across all other APEC economies.



OECD: Sector Shares of Exported Domestic Value Added



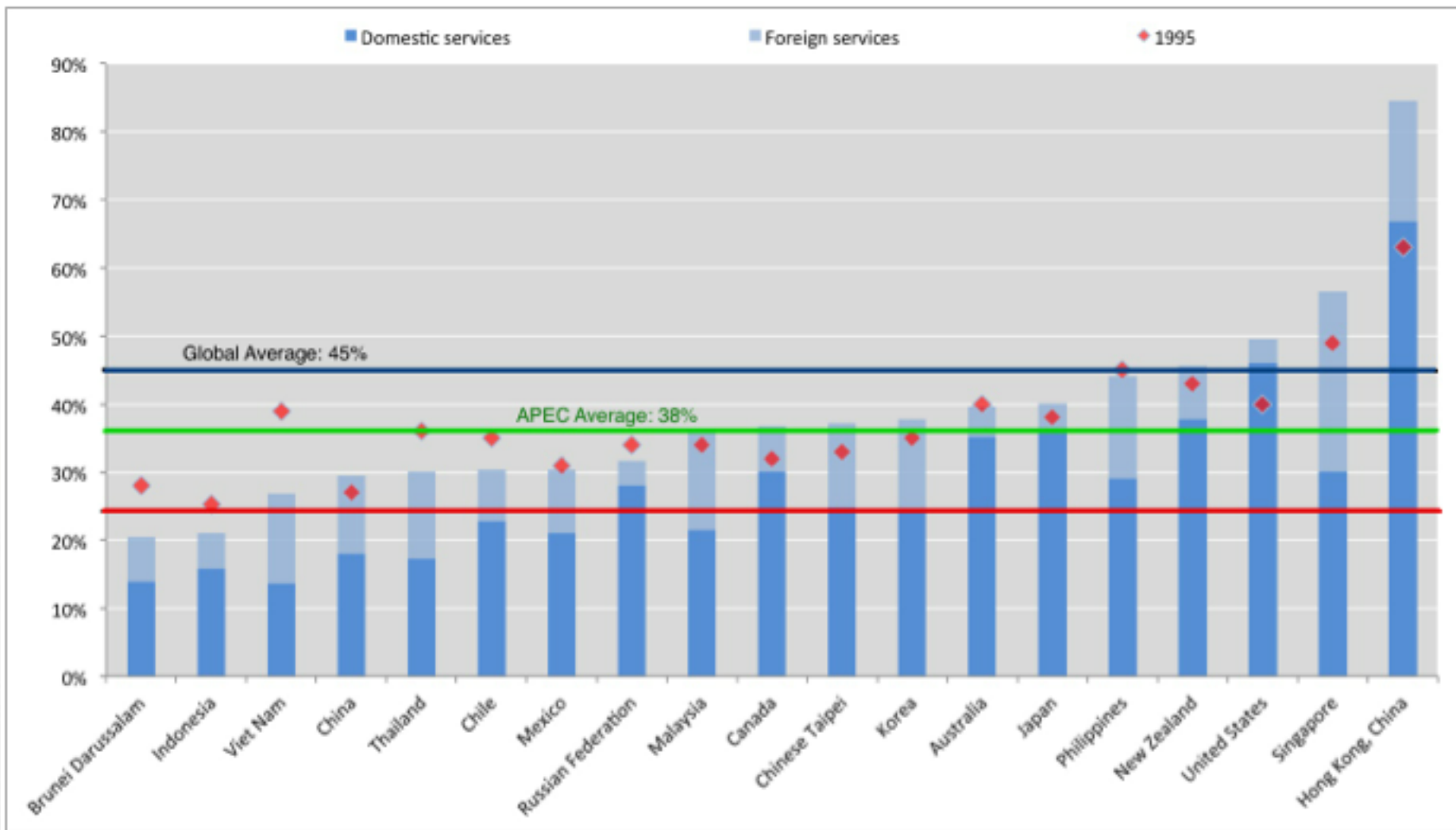
Services double in importance



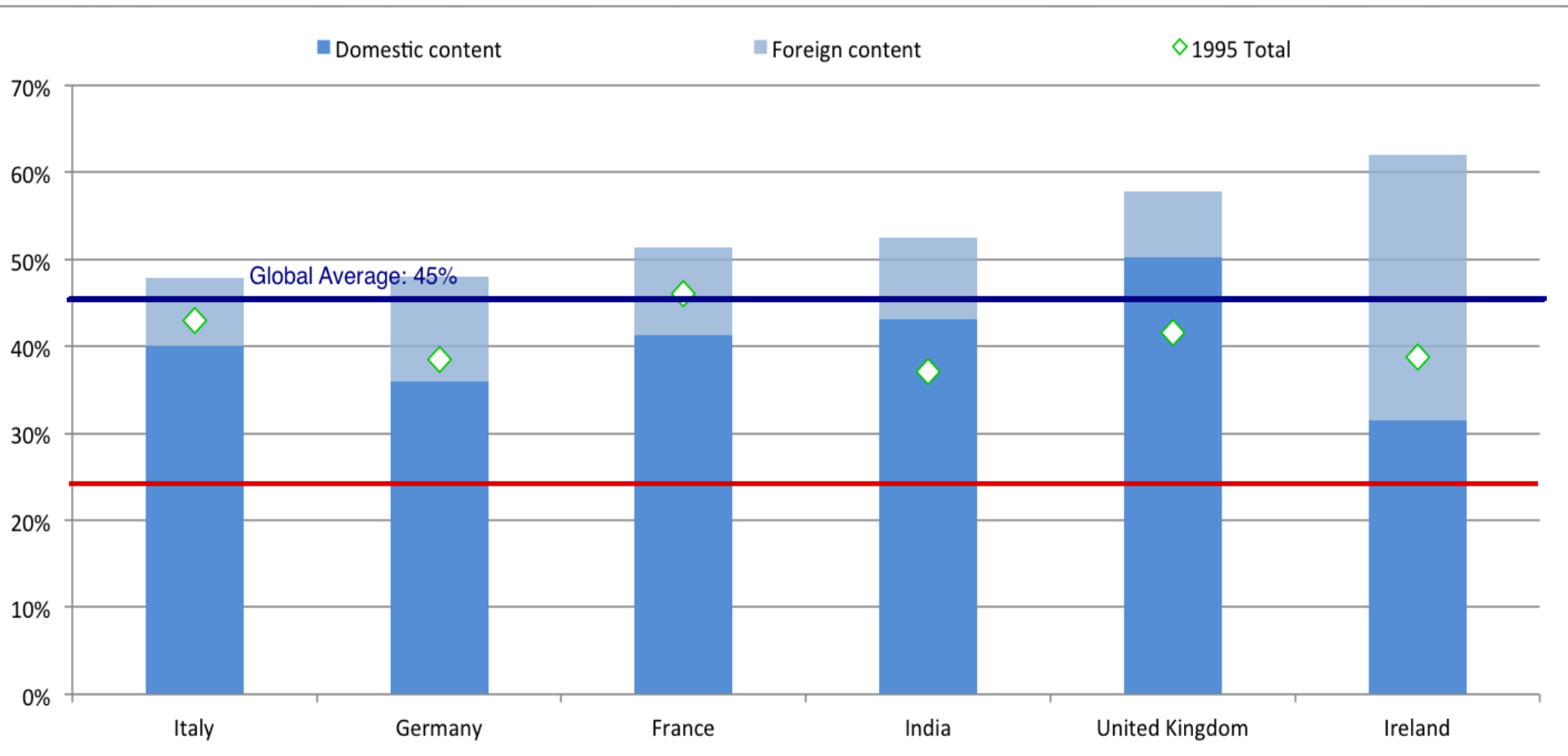
Source: Escaith (2013)

In 2008, services were nearly half of world trade in value added

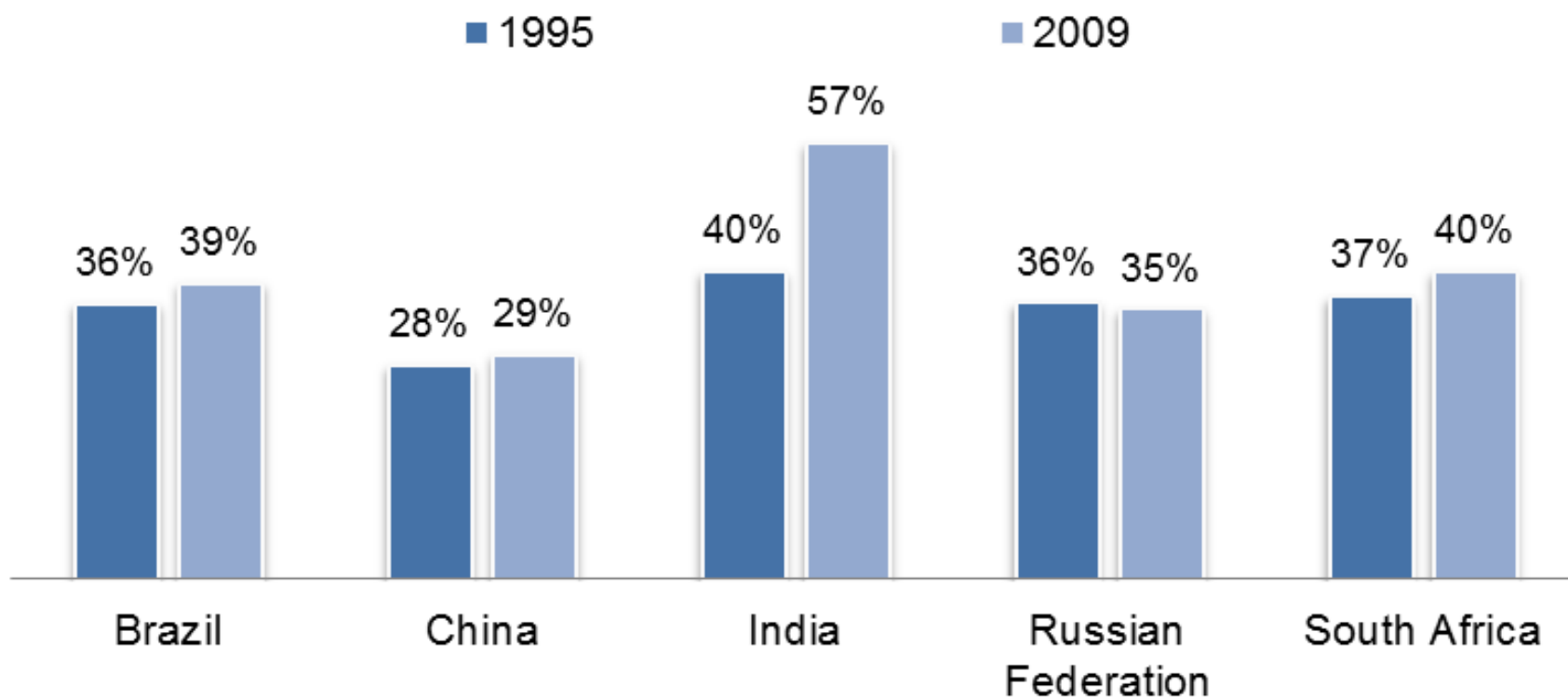
Services Content in APEC Exports trebles



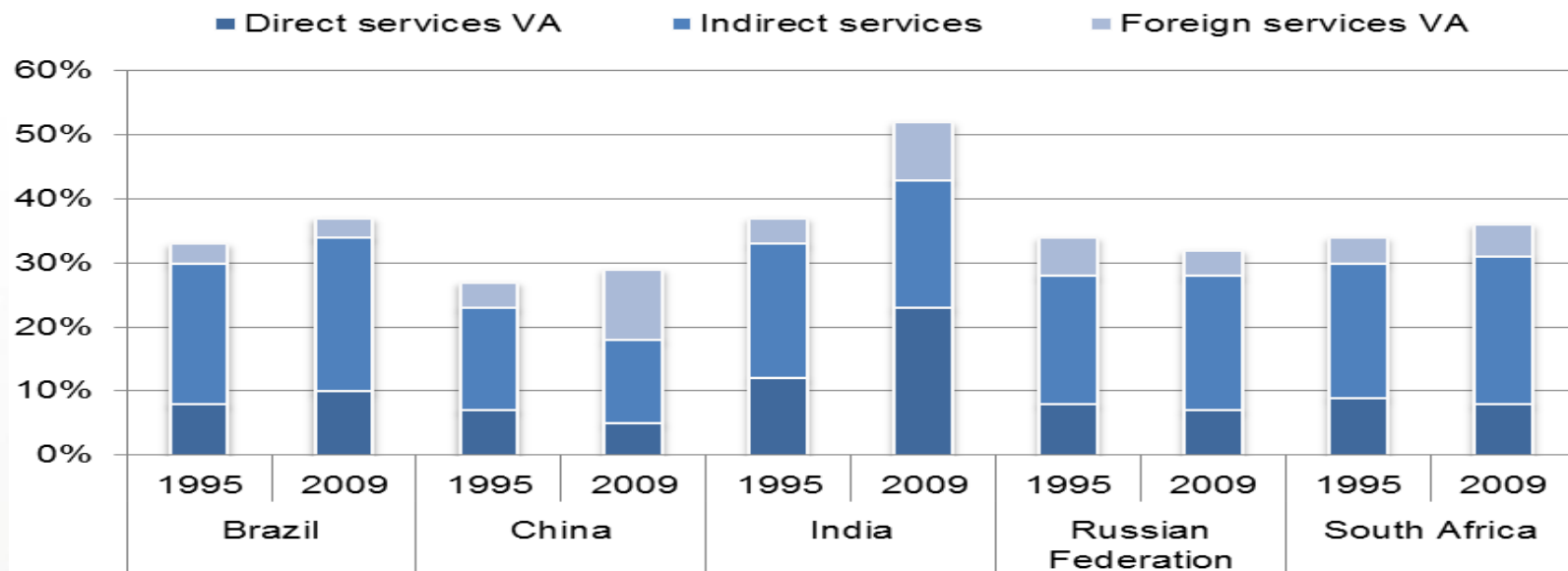
For comparison, some non-APEC economies (services % of exported VA)



Comparison with BRICS (services% of exported VA)



Share of services value added by source, as % of gross exports BRICS



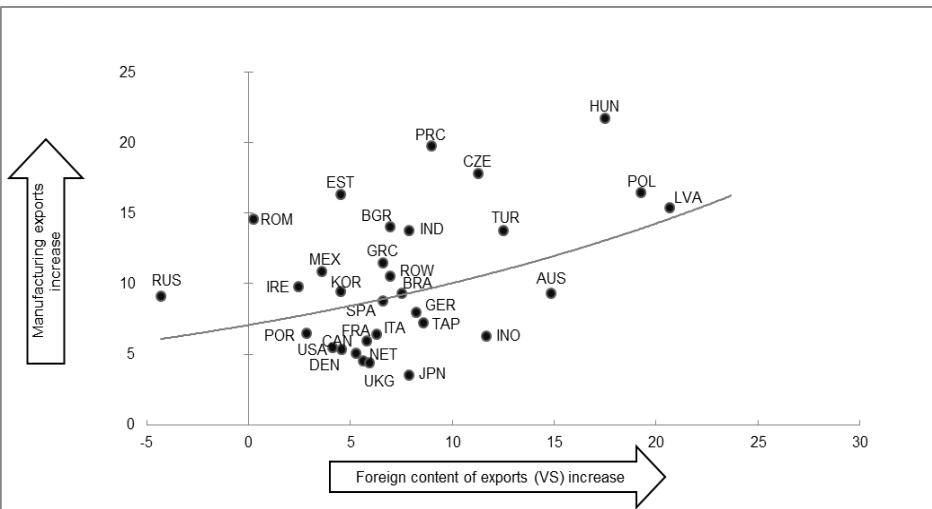
	Direct services VA growth	Indirect services growth	Foreign services VA growth
Brazil	25%	9%	0%
China	-29%	-19%	175%
India	92%	-5%	125%
Russia	-13%	5%	-33%
S. Africa	-11%	10%	25%

SMEs have a role in GVCs

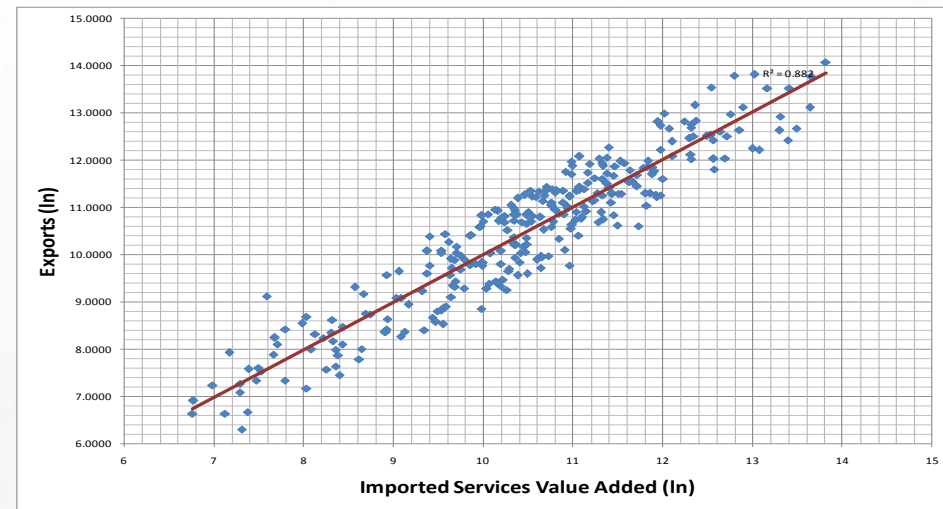
- The purchasing and investment decisions of lead multinational corporations may have been driving the creation of GVCs worldwide, but the most numerous players, to which activities are outsourced, are SMEs.
- The services supply chain story in particular is about SMEs. Firm size and production scale tend to matter less in services markets than “nimbleness” and project by project flexibility, presenting particular opportunities to smaller firms. OECD evidence that since 1997, more services SMEs have been involved in international alliances than manufacturing SMEs; by 2000, there were nearly 4 times as many services SMEs engaged in international alliances than manufacturing SMEs
- Benefits of participating in GVCs have not been evenly spread. Trade barriers and regulatory cost burdens impact particularly heavily on smaller firms; they have fewer internal resources and face greater difficulties in access to trade financing, identifying partners for GVC operations; processing international payments and meeting qualifications, licensing and technical standards and procedures

TiVA Findings: Imports grow exports (protection prejudices export performance)

in both manufacturing and services

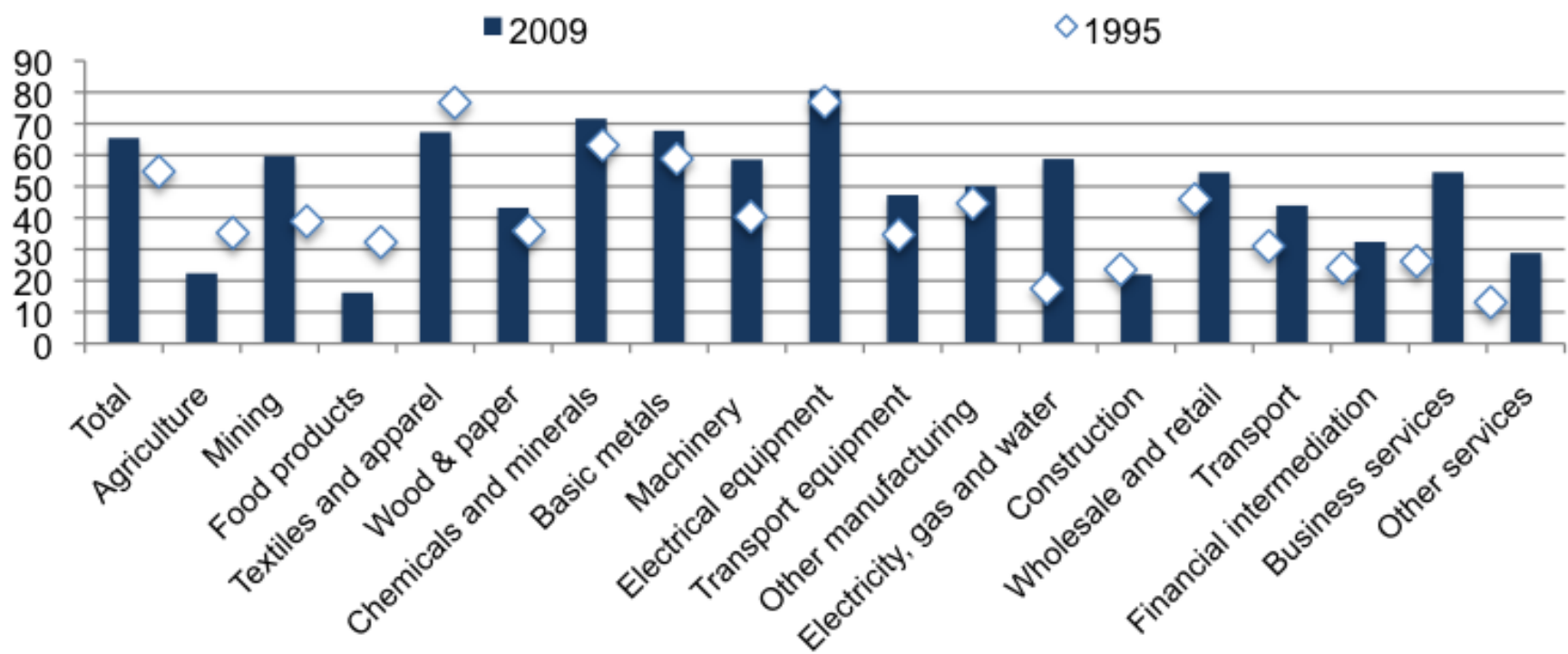


Source: Huberth Escaith, WTO 2012



Source: Yose Rizal Damuri, CSIS, 2014

Chinese Taipei: Share of imported intermediate inputs that are exported, by import category, %

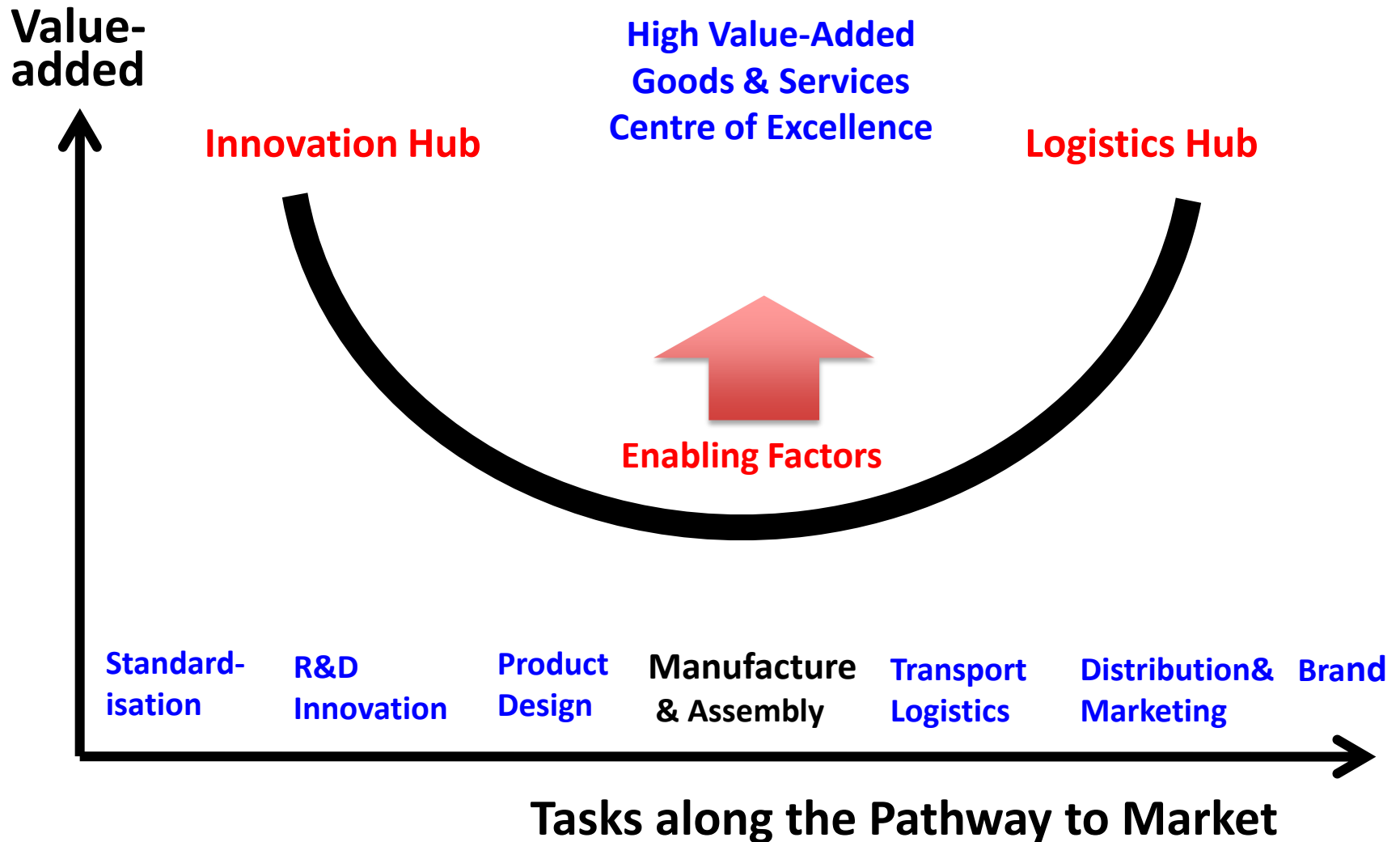


Nearly 2/3 of all intermediate imports were re-exported in 2009, a 19% increase since 1995 and notably higher than the OECD average of 44%. The highest proportion of re-exported imports was in *Electrical equipment* (80%) *Chemical and minerals* (71%) and, despite a 12% drop since 1995, *Textiles and apparels* (67%).



Policy thoughts

- Attracting global services supply chain tasks is a policy objective in itself
- Meanwhile the services sector is deeply interlinked with the goods sectors; the key policy message in “servicification” is that services are so important as intermediate inputs in all other sectors that efficiency in domestic services industries is critical to overall performance in all export sectors.
- A strategy for growth in APEC economies’ industry engagement in increasingly high value-added manufacturing for the global market will require a focus on developing capacity across all the intermediate services inputs.
- The policy challenge is to get the enabling factors right, so that business can move into higher value-added tasks. This requires a dedicated focus on all of the factors being shown in the research literature and emerging from the business community as driving services trade performance.
 - One of the best conceptual frameworks for understanding this is the “Smiley Face”, originally drawn by Stan Chih of ACER computers.



“Smiley Face”: Role of **Services** in Goods Value Chains (pre and post manufacture)

“Servicification”: Everyone is in services

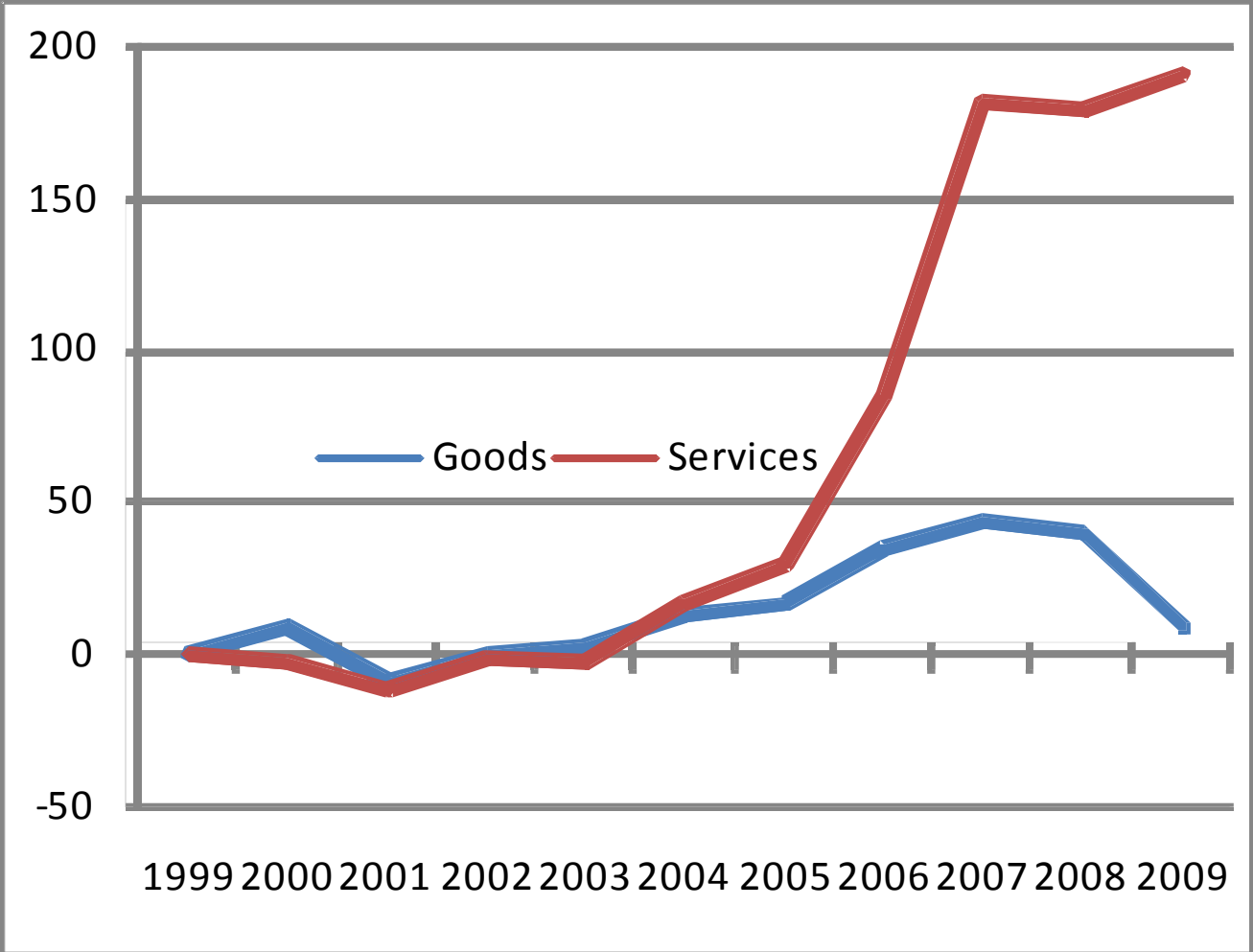
Drivers of Services Competitiveness

(largely exogenous ie policy driven)

1. **Human Capital** (talent, education, skills, ideas, culture of customer focus)
2. Investment in **Intangible Assets** (corporate IP including business methodologies) and supportive environment for **Innovation**
3. Enabling **Digital** and other **Infrastructure**
4. Quality of **Institutions** & Efficiency of Domestic **Regulation**
5. **Connectedness** with the International Markets (trade & investment reform, standards, mutual recognition)
6. Organised **Services Business Advocacy** and public/private **Stakeholder Consultation**
7. Deliberate National **Policy Focus**

eg Philippines take-off after telecoms reform

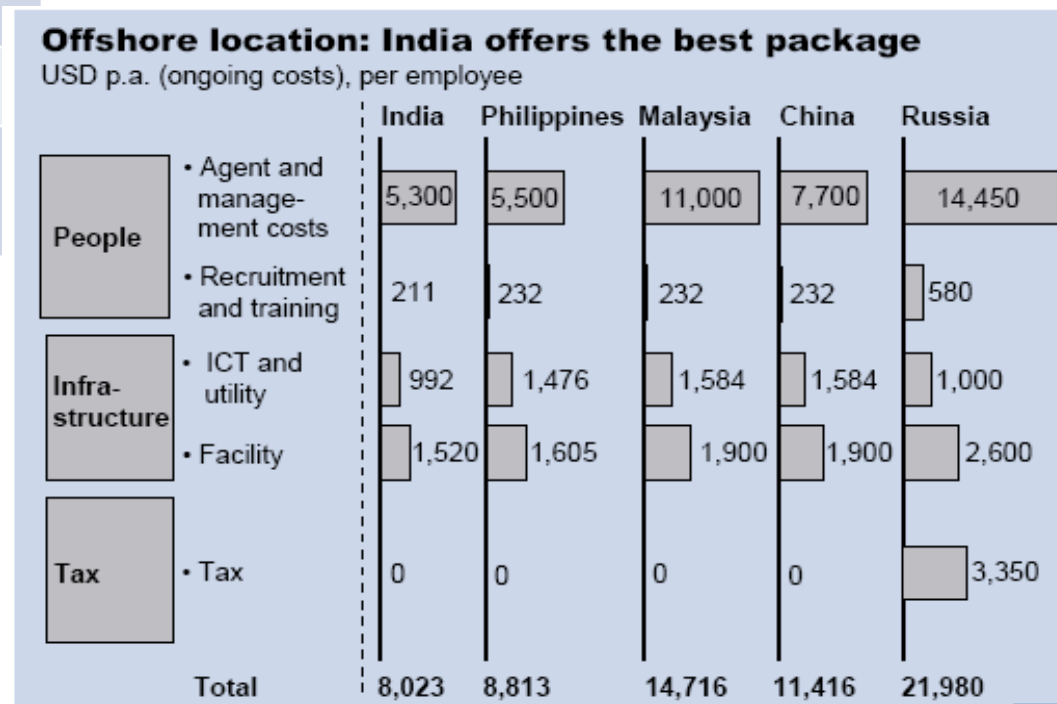
(% growth compared to 1999, 1999=0)



Country	Salary of Graduates US \$ p.a.	Total Number of graduates p.a.
India	2400	2,000,000
China	2000	950,000
Philippines	2900	380,000
Mexico	1400	137,600
Ireland	19500	43,200
Malaysia	7200	30,000
Singapore	16500	12,500

Competitive advantage due to low high skilled manpower costs

The talent pool is the key facilitator



Services aspects of APEC action plan to alleviate GVC choke-points, improve GVC resilience and increase the GVC readiness of APEC economies

- **Effort at country-specific and all-of-APEC level to undertake cross-sectoral analysis and build understanding of the services insights in the new TiVA data**
- Deeper commitment to connectedness with the global and regional market (even more openness to trade, investment, information, people movement)
 - **much bigger focus on services**
 - attention to “new issues”/ e commerce/ data transfer/ localisation requirements/ competition policy/ movement of natural persons / “industry” policies
- Greater connectivity of standards, including mutual recognition for services providers
- Intensified effort on domestic regulatory efficiency and best practice benchmarking and public private dialogue for GVC enabling environment
 - **PECC/EC/GOS meeting proposed for early 2015**
 - **PECC sees a need for progress on services regulatory better practice; this should be part of the APEC Structural Reform Ministers agenda in 2015**
- New mechanisms to help meet GVC trade financing needs, including for services SMEs
- Renewed focus on key ingredients for **climbing the value-added ladder** (human capital, skills, digital infrastructure, collaboration for innovation)
- Support for (national and regional) mechanisms for **services sector stakeholder consultation**, especially to give voice to services SMEs
 - **ABAC/PECC calls for a first ever regional meeting of Services Coalitions, in first half of 2015**
- Regional collaboration among Trade Promotion Organisations to facilitate SME access to GVCs.



services
network

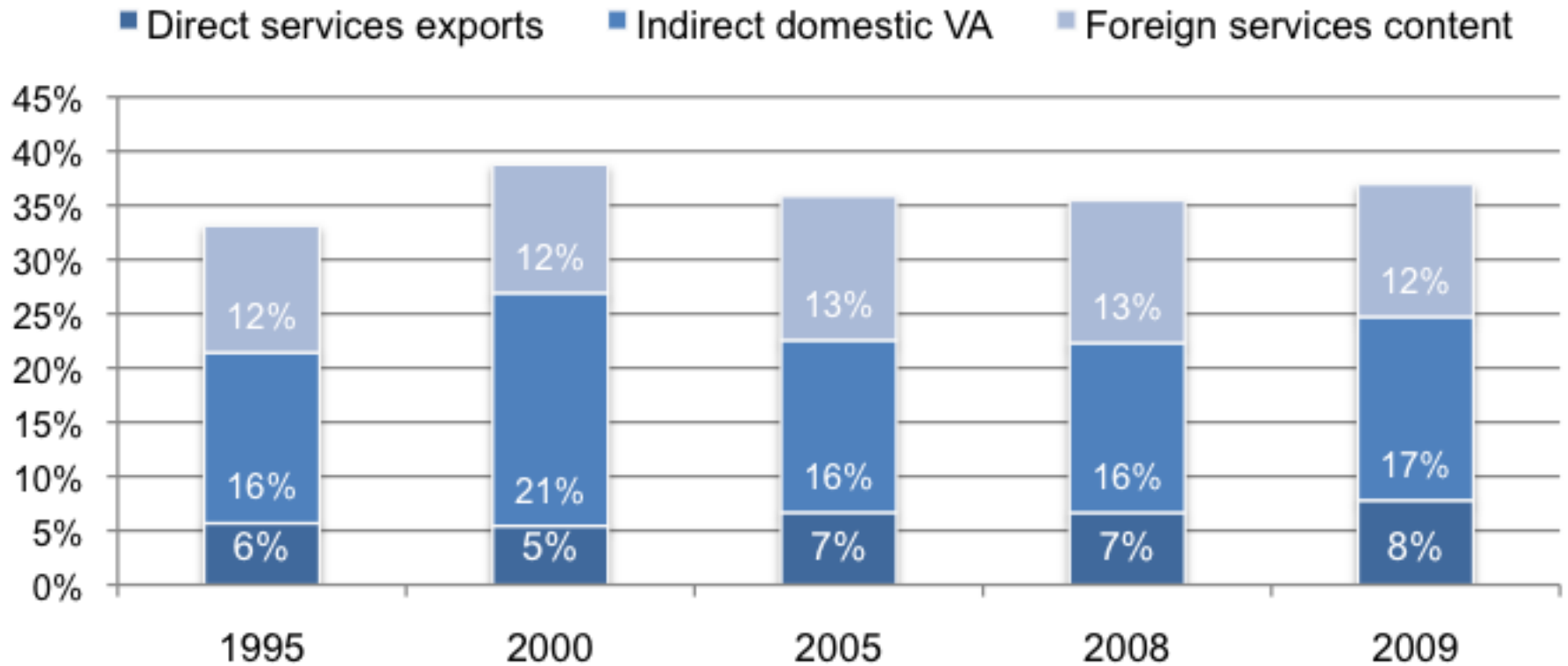


global
services
network

One more thought about Chinese Taipei



Chinese Taipei: Services Value added as % of gross exports



Chinese Taipei: TiVA results 1995-2009

Total gross exports growth – 83%

Goods gross exports growth – 76%

Services gross exports growth- 146%

Fastest growing exports:

financial intermediation (337%)

other services (211%)

chemicals (159%)

electrical equipment (129%)

Total value added growth – 67%

Goods value added growth – 55%

Services value added growth- 151%

Fastest growing exports:

financial intermediation (335%)

other services (198%)

electrical equipment (131%)

chemicals (91%)

BOP: In the past decade to 2013, services grew more rapidly at 113% compared with 84% for total exports. *Computer and information services* grew from a very small base at a growth rate over the period of 710%. Also from a small base, *Royalties and licences* grew by 251% over the decade and by 432% over 2008-2013.

Chinese Taipei: TiVA results

The **global** data shows that on average direct services content share grew 9% over the period 1995-2009. Average share of indirect services content grew 6%. Average share of foreign services share grew 20%.

For **OECD** countries, the trend is more pronounced. The average share of direct services value added content in gross exports was roughly constant over 1995-2009. But indirect services content in gross exports grew by 9%. And foreign services content grew by 30%.

For **Chinese Taipei**, the bulk of the growth in services value added in exports has been in direct services exports. In general, there has not been as significant an overall increase in the share of indirect services VA in Taipei's exports. Big exceptions are in 'other services' where indirect services value added has grown by 145%, reflecting increased participation in services B2B trade. And exports of Transport equipment where indirect services VA grew by 63%. But what about the other goods sectors?

Question: Is this a potential **alert** for Chinese Taipei, in terms of 'climbing the value added ladder' towards servicification?