Supply chain synergies: a look at comparative advantage across supply chain stages

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Sustainability in Australian food supply chains, Australia *c.f.* Europe

Context → Export
“Productivist” (Dibden *et al*
Dispersed

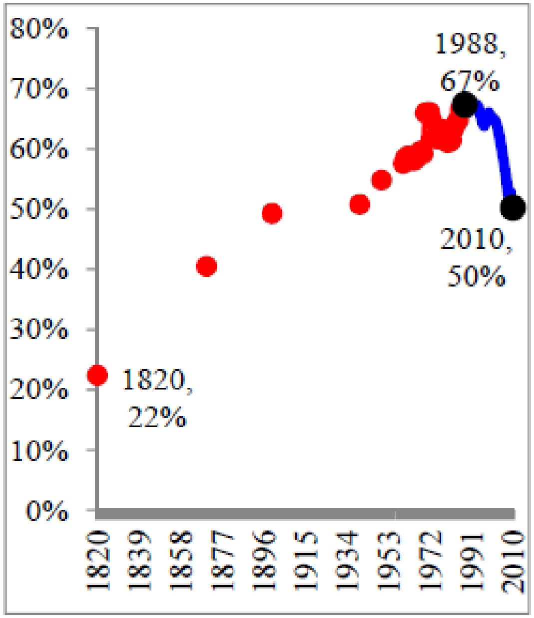
Practices → Concentrated
Scale
Transi ion; corporatisation; privately funded

Measurement → ere (Yakovlev *et al*., 2012; Hassini *et al*., 2012)
e
erformance or performance sustainability?

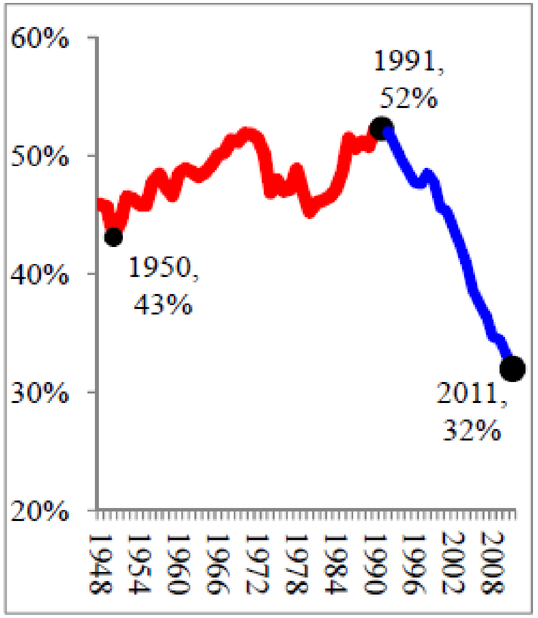
Implications → e
ency
ain policy (Griffith *et al*., 2013)

What can be said about Australia’s FSCs’ predisposition to sustainability?

Can we make comparisons to European FSCs?



G7 share of world GDP
Source: World Bank from 1960; Maddison pre-1960.



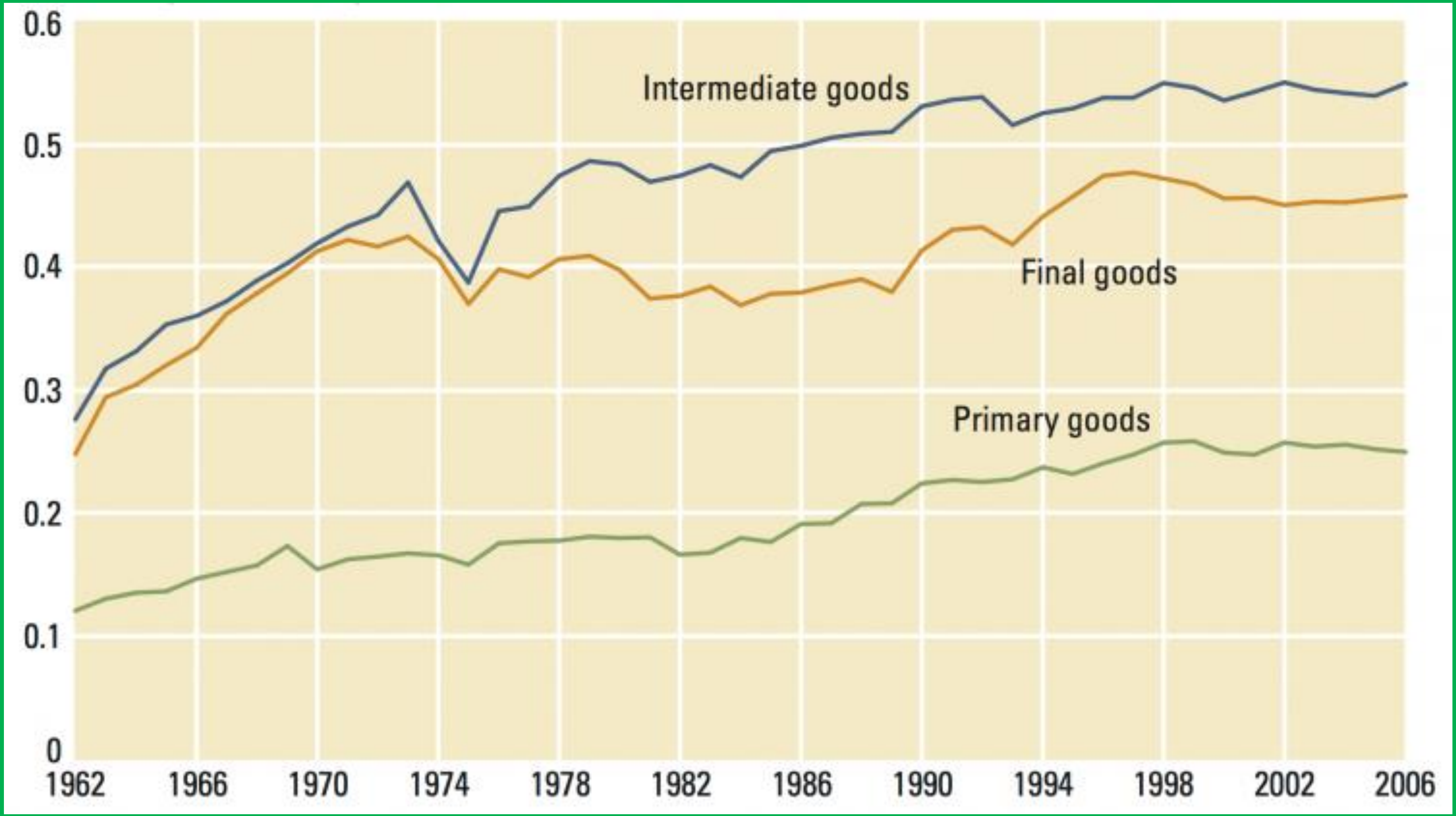
G7 share of world exports
Source: WTO online database.

World exports & manufacturing
Source: UNSTAT online database.

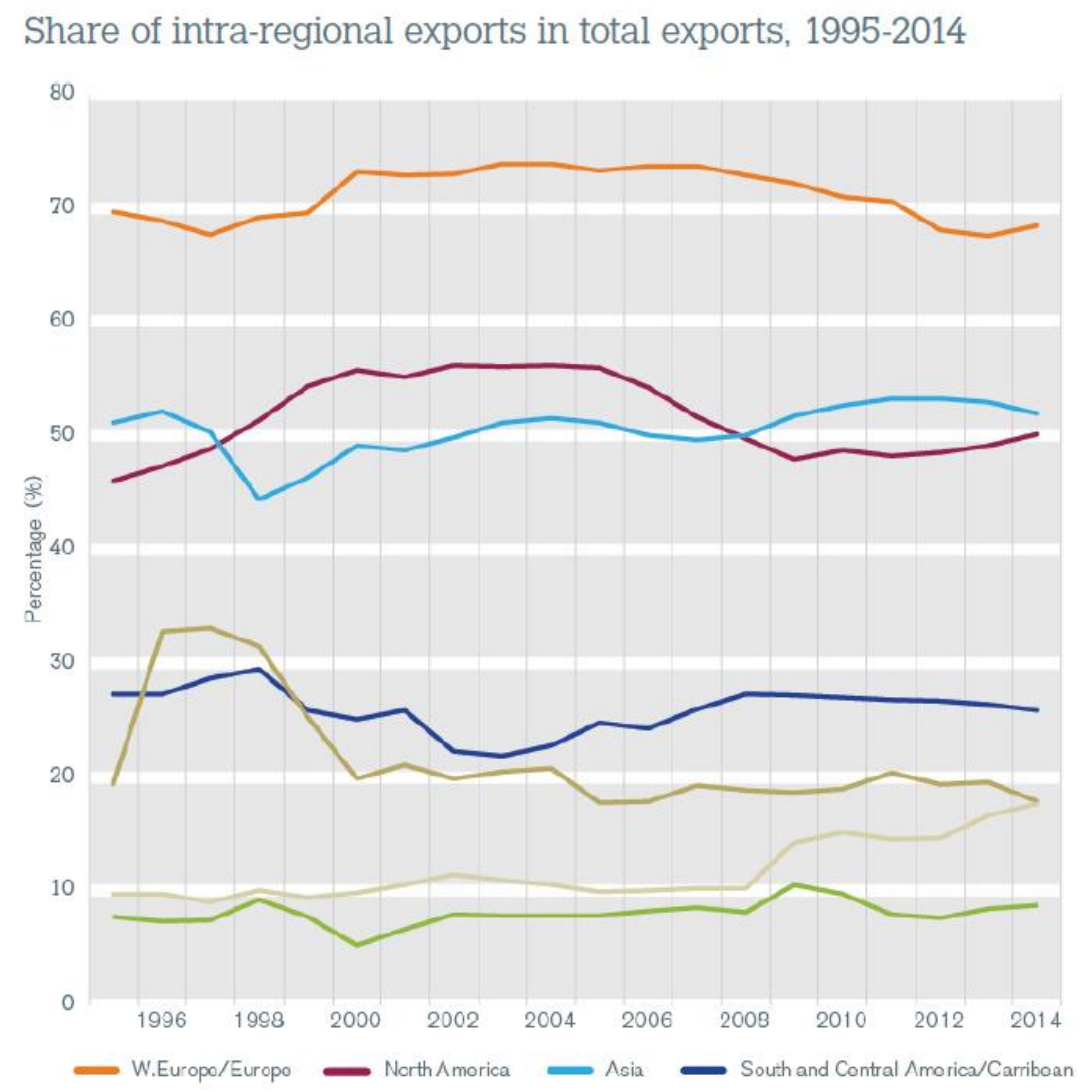
On trade: the two cost-based “unbundlings” of globalisation:

1. Reduction in shipping costs (1870s)
2. Reduction in communication costs (1990s)

Source: Baldwin (2011)



Source: UN World Development Report (2006)



Source: OECD (2015)

Regional clusters:

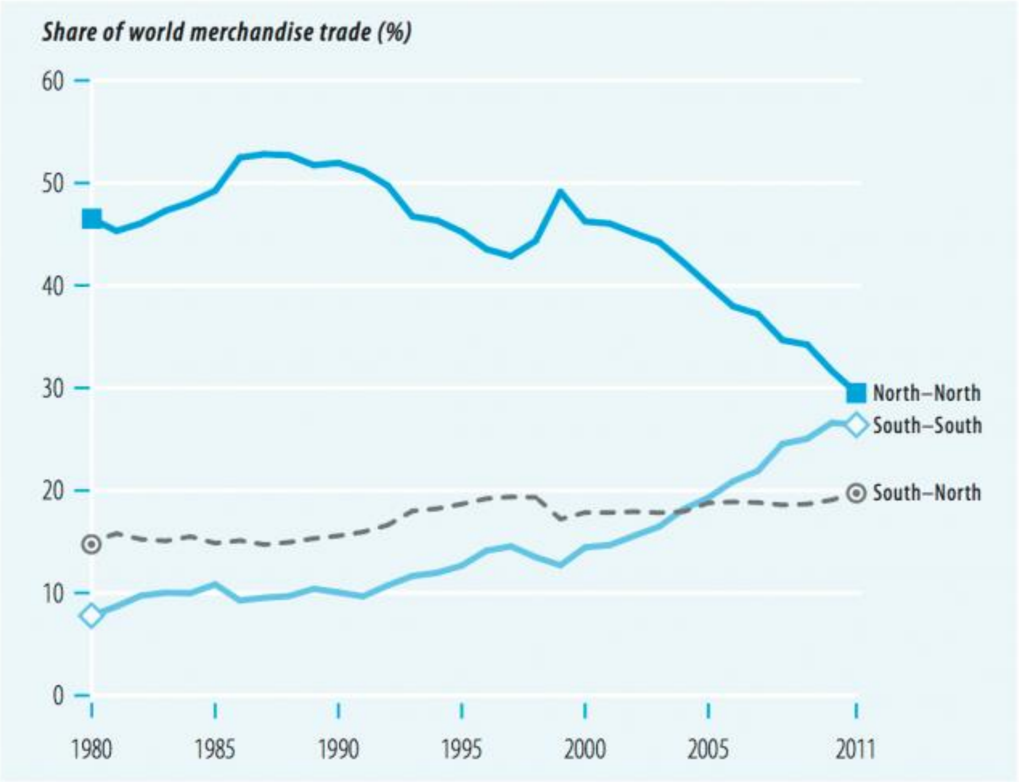
1st unbundling ⇒ local but national

2nd unbundling ⇒ regional but close by

(Baldwin, 2011)

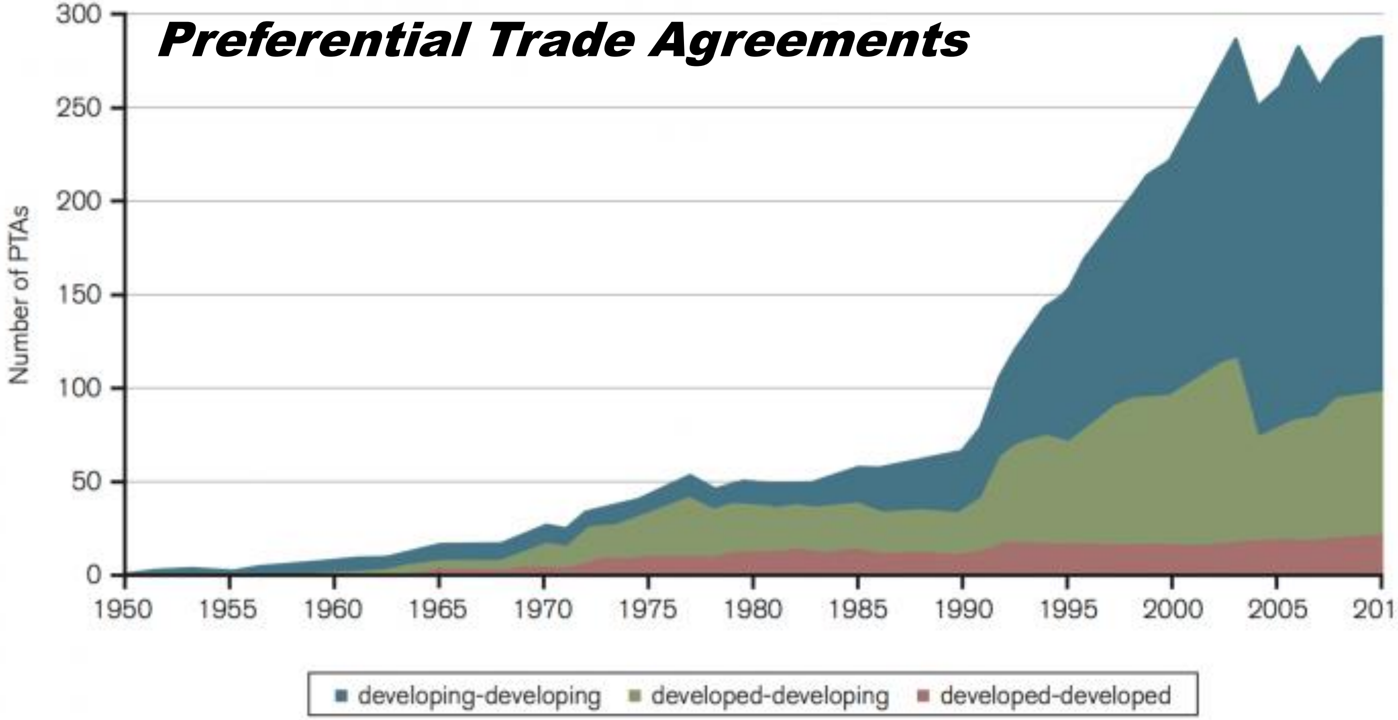
⇒ cross-border M&E

(Sun *et al.*, 2012)



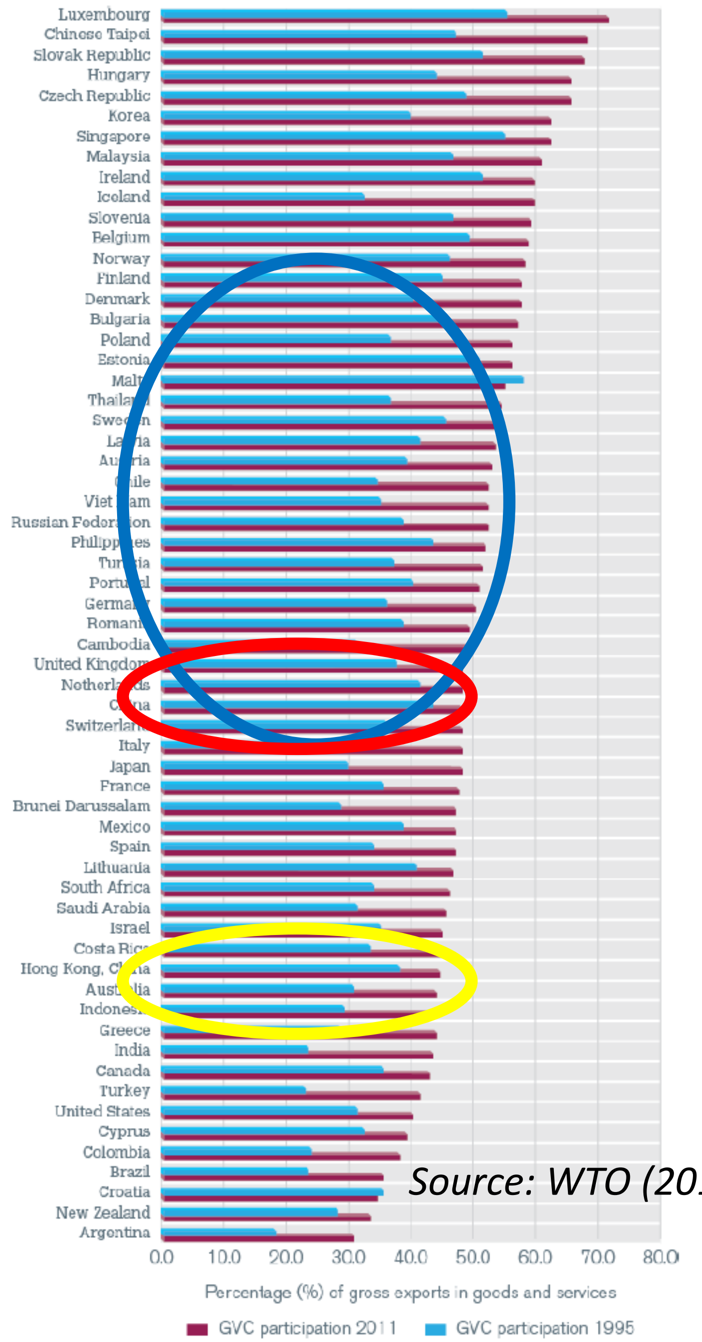
Note: North in 1980 refers to Australia, Canada, Japan, New Zealand, the United States and Western Europe.
Source: HDRO calculations based on UNSD (2012).

Source: UN Human Development Report (2013)



Source: WTO (2011)

Contributions to global value chains by selected economies



Source: WTO (2016)

Participation in global value chains by selected economies, 1995-2011

Source: WTO (2016)

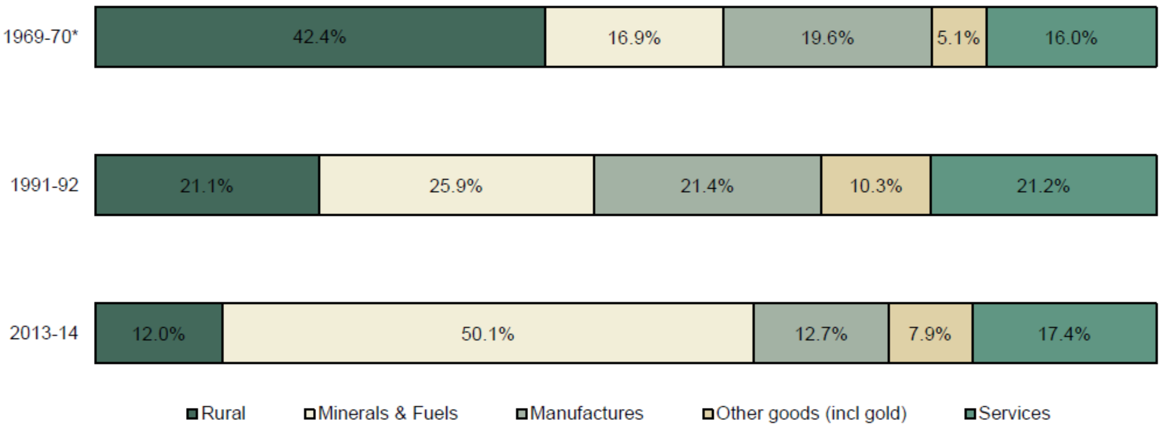
AUSTRALIA'S TOP 10 GOODS & SERVICES EXPORTS, 2016 (a)
(A$ million)

(DFAT, 2017)

Rank	Commodity	Value	% share
	Total (b)	**330,313**	
1	Iron ores & concentrates	53,703	16.3
2	Coal (c)	42,326	12.8
3	Education-related travel services (d)	21,966	6.7
4	Gold	18,857	5.7
5	Natural gas	17,911	5.4
6	Personal travel (excl education) services	17,412	5.3
7	Beef, f.c.f.	7,401	2.2
8	Aluminium ores & conc (incl alumina)	6,460	2.0
9	Wheat	4,853	1.5
10	Professional services	4,782	1.4

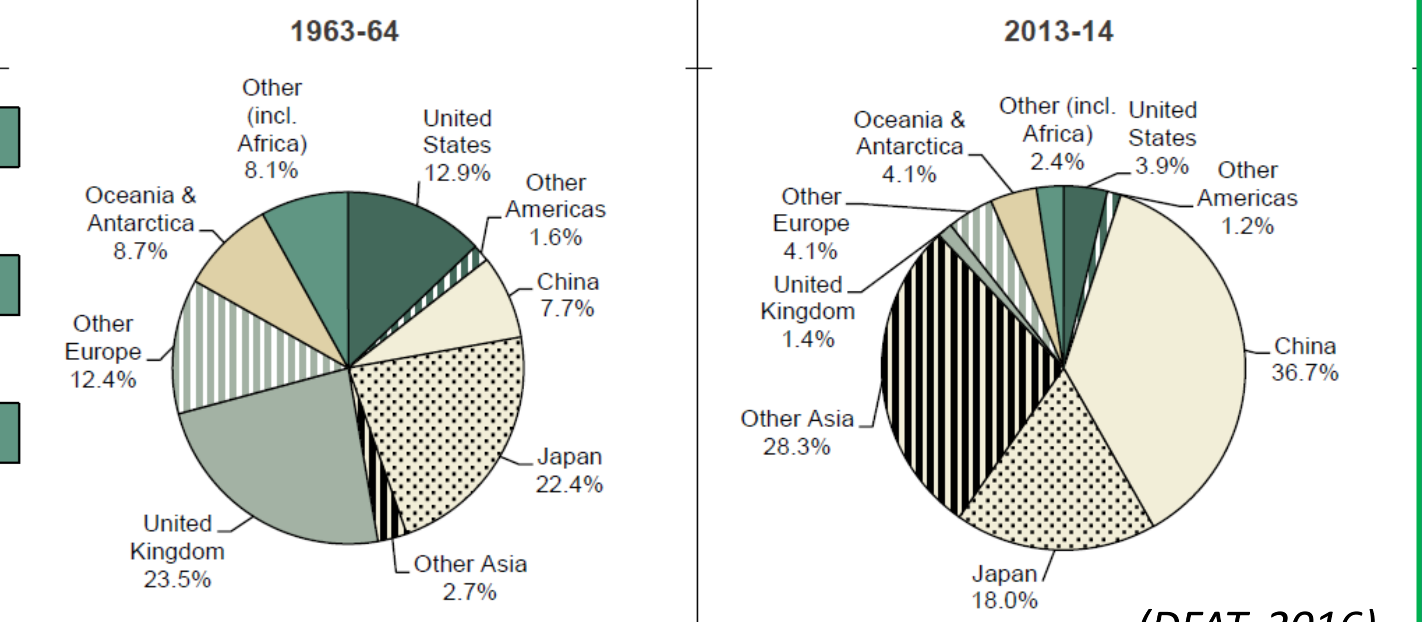
Suited to SC trade

Composition of Australian exports



(DFAT, 2016)

Destination of Australian exports



(DFAT, 2016)

Australian agriculture and food

State of nature

- Largely unsubsidised
- Strongly export-oriented
- Agr exports probably not re-exported
- Neoliberal policy settings

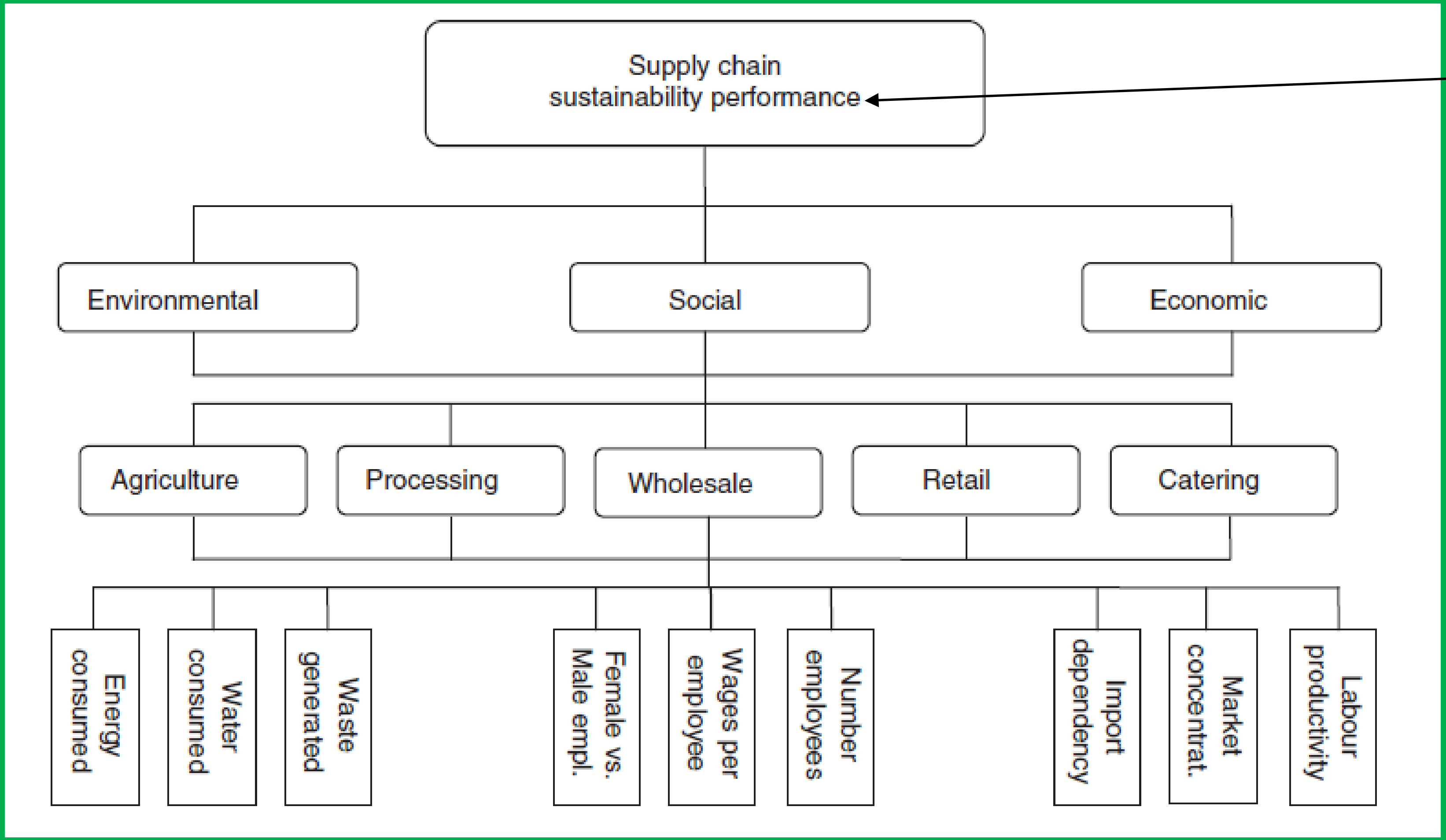
Trends

- New Technologies
- Market incentive-driven
- Extreme market concentration
- International neoliberal agenda
- Industry-funded research
- Attention to domestic market

"Productivism" (Lawrence et al., 2013)

Measurement of sustainability: a construct *(Yakovleva et al., 2012)*

What about performance sustainability?



Contradicted by productivism? Precluded by international trade configuration?

Measurement of factors contributing to sustainability: a construct *(Beske et al., 2014)*

SSCM Practices
Orientation
Supply chain management
Triple bottom line ☒
Supply chain continuity
Long-term relationships ☒
Partner development
Partner selection
Collaboration
Joint development
Technical integration
Logistical integration
Enhanced communication
Risk management
Individual monitoring
Pressure group managemen
Standards and certification
Pro-activity
Learning
Stakeholder management
Innovation
Life cycle assessment

Enabled by productivism?

Supply chain configuration: Short Food Supply Chains

Meaning of food in SFSCs	Meaning of production-distribution system in SFSCs
"fresh", "diverse", "organic", "slow" , "quality", "seasonal", "traditional", "local", "regional", "taste", "delicious", "food heritage", "cultural identity", "fair", "sustainable"	"small scale", "short", "traditional", "local", "environmentally sustainable", "embedded", "fair", "transparency", "traceability", "corporate social responsibility", "local economy", "lower emissions", "rural-urban linkages", "self-esteem" "social acknowledgement", "prestige of food producers", "sustainability"

Galli and Brunori (2013)

Supply chain configuration

Long food supply chains

- Favour export competitiveness
- Make best use of local resources
- Favour scale
- Suit logistics
- Provide year-around supply
- Low consumer prices
- Quality guarantees

Short food supply chains

- Intuitive association with environmental care, community
- Provision of certain credence quality attributes
- Resilience via lack of tech and infr. reliance; networks; social capital
- Elements of food security

(Galli *et al.*, 2015)
(Smith *et al.*, 2016)

Possible roles of "two models" of supply chain configuration

Tesco stocking local products in UK; efforts in Australia rare, at small scale (Pearson and Bailey, 2009)

Market access and logistics occasioned by reliance on Long Chains (Bloom and Hinrichs, 2010)

Sponsorship and support in Australia from large scale agriculture:

- New niche and small scale products and services (focus in technology)
- Entrepreneurship
    - Federal: Export generation (e.g. ATMAC funds)
    - State: Job creation (e.g. NSW Ag Tech Cluster)
    - Industry: directed/culture change (e.g. SproutX)

Leading (following?) comments

- Australia's agr export orientation may not be in supply chain trade
- Australia's food SC structure is in step with market and policy incentives, with "chain good" corrections
- Sustainability measures and Australian food SCs:
  - EITHER rate it badly OR are unsuitable
- Presence of sustainability-boosting practices in Australian food SCs
  - EITHER rate it well OR are unsuitable
- Australian SFSC mimic competitive behaviour of LFSC

UNLIKE EUROPE

- Resilience is reduced by SC elements of productivism

LIKE EUROPE

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