Synergies between environmental goods and services and policy implications

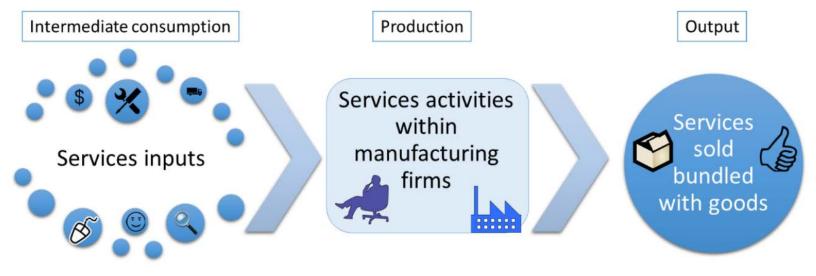
Jehan Sauvage, Counsellor OECD Trade and Agriculture Directorate

APEC Workshop on Environmental Services Hanoi, Viet Nam, 11 May 2017





### The "servicification" of manufacturing

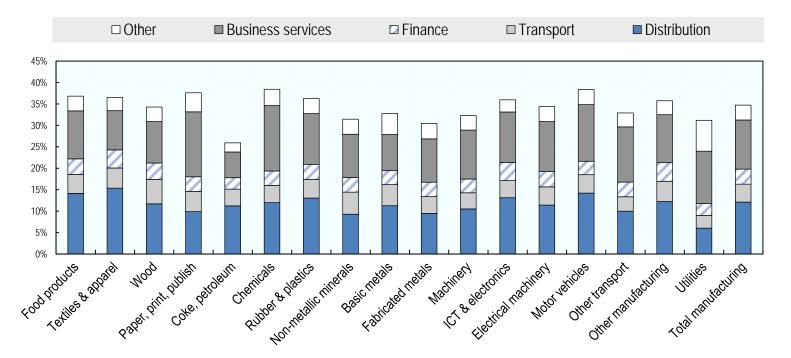


Manufacturing firms use a higher number of services inputs There is more employment within manufacturing firms in support service functions such as R&D, design, logistics, marketing and sales

Manufacturing firms increasingly sell services bundled with goods to increase value



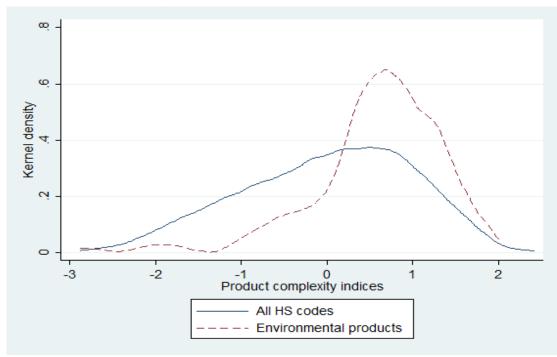
# Services account for about a third of the value added embodied in world gross exports



Source: Miroudot, S. and C. Cadestin (2017), "Services In Global Value Chains: From Inputs to Value-Creating Activities", OECD Trade Policy Papers, No. 197, OECD Publishing, Paris. DOI: <u>http://dx.doi.org/10.1787/465f0d8b-en</u>



#### Environmental products often lie around the top of the complexity ladder

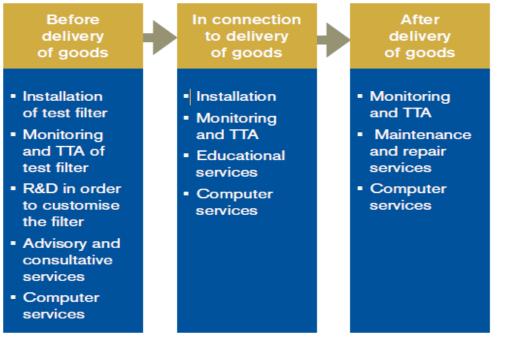


Source: Sauvage, J. and C. Timiliotis (2017), "Trade in services related to the environment", OECD Trade and Environment Working Papers, No. 2017/02, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/dc99bf2b-en



# Services (the software) increase the value of the goods (the hardware): the example of water filters

The example of filters for purifying water (HS 8421.21)



Source: Sweden's National Board of Trade (2014).



### But which services matter the most for the environment?

**Core environmental services** (e.g. wastewater treatment and solid-waste management)

**Environmentally related services** (e.g. environmental consulting and engineering)

Other services incidentally related to the environment (e.g. legal or accounting services that happen to benefit the environmental industry)

Source: Sauvage, J. and C. Timiliotis (2017), "Trade in services related to the environment", OECD Trade and Environment Working Papers, No. 2017/02, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/dc99bf2b-en

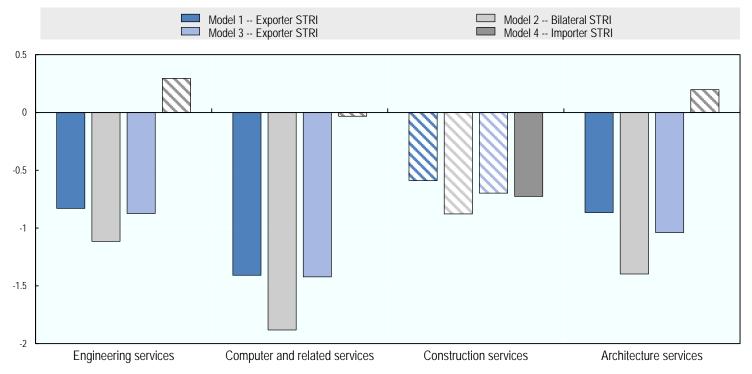


# The environmental purpose of a service remains a matter of degree

- Not all activities matter the same for the prevention and abatement of pollution.
- The determination of what matters ought to be based on a set of objective but flexible criteria:
  - Market operation: how critical is the related service to the provision of the core env service or environmental good?
  - Relativity: how important relative to other services is a particular activity for the provision of the core env service or environmental good?



# Defining the scope of environmentally related services: an empirical exercise



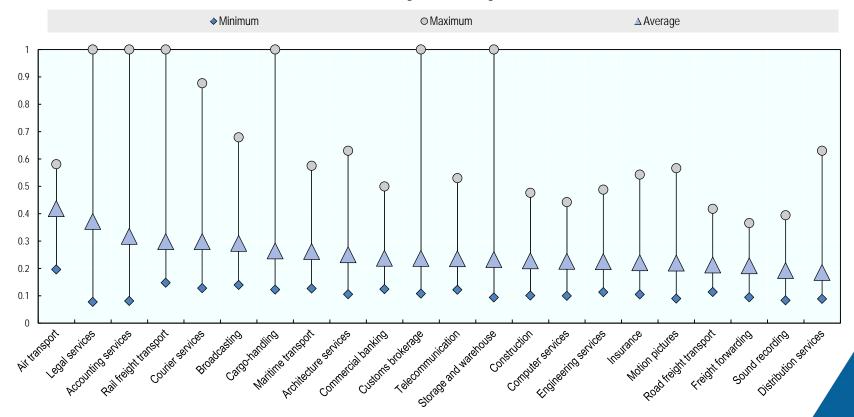
Source: Sauvage, J. and C. Timiliotis (2017), "Trade in services related to the environment", OECD Trade and Environment Working Papers, No. 2017/02

Note: Estimated coefficients on restrictions to services trade, by model specification and sector. Bars with stripes are those for which the estimated coefficients are not statistically significant at conventional levels (1%, 5% and 10%).

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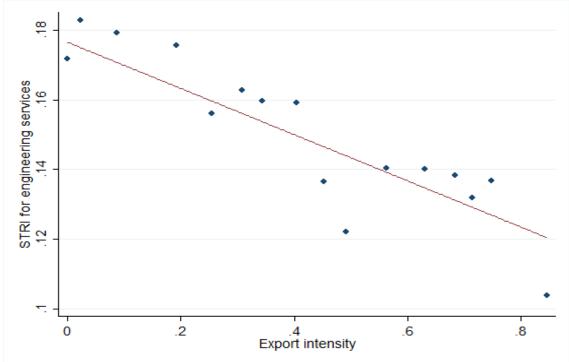


#### Background: The OECD's Services Trade Restrictiveness Index (STRI)





# The specific case of environmental engineering and consulting (E&C) services

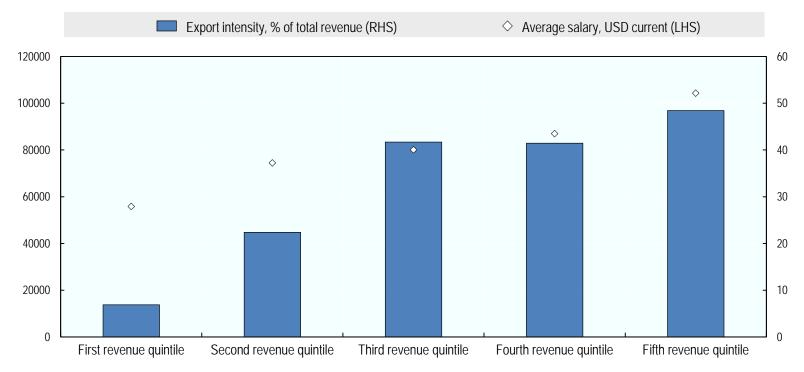


Source: Sauvage, J. and C. Timiliotis (2017), "Trade in services related to the environment", OECD Trade and Environment Working Papers, No. 2017/02, OECD Publishing, Paris. DOI: <u>http://dx.doi.org/10.1787/dc99bf2b-en</u>

Note: Export intensity is the share of a firm's revenue that is generated by its foreign affiliates. Values for both variables were averaged over 16 bins. Trade and Agriculture Directorate | Organisation for Economic Co-operation and Development (OECD) | www.oecd.org/tad | tad.contact@oecd.org



### Exporting firms are larger, more productive, and pay higher salaries



Source: Sauvage, J. and C. Timiliotis (2017), "Trade in services related to the environment", OECD Trade and Environment Working Papers, No. 2017/02, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/dc99bf2b-en



#### Firms continue to conduct most of their business in their home region

Environmental C&E revenue by home region and destination market, %

#### Markets served through commercial presence

Home region	Western Europe	Eastern Europe	Asia-Middle East	Asia-Pacific	North America	Latin America
Asia-Pacific	6.4%	0.2%	2.8%	43.2%	44.2%	3.2%
North America	7.0%	0.7%	2.6%	6.6%	80.5%	2.6%
Western Europe	52.8%	2.6%	4.3%	5.9%	27.8%	6.7%

Source: Sauvage, J. and C. Timiliotis (2017), "Trade in services related to the environment", OECD Trade and Environment Working Papers, No. 2017/02, OECD Publishing, Paris. DOI: <u>http://dx.doi.org/10.1787/dc99bf2b-en</u>



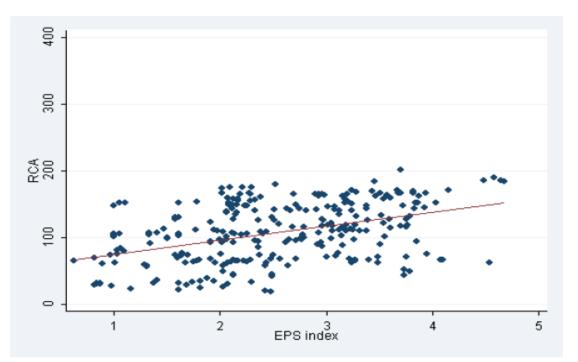
### >> Policy implications

- 1. Overcoming the silo problem in trade negotiations.
- 2. Accelerating efforts to liberalise trade in services related to the environment.
- 3. Changing commercial realities call for a broader approach to liberalising environmental services.
- 4. The scope of environmentally related services ought to be kept open and flexible, though still based on considerations of environmental end-use or purpose.



#### Mutually reinforcing trade and environmental policies

Environmental policy stringency and revealed comparative advantage in environmental products

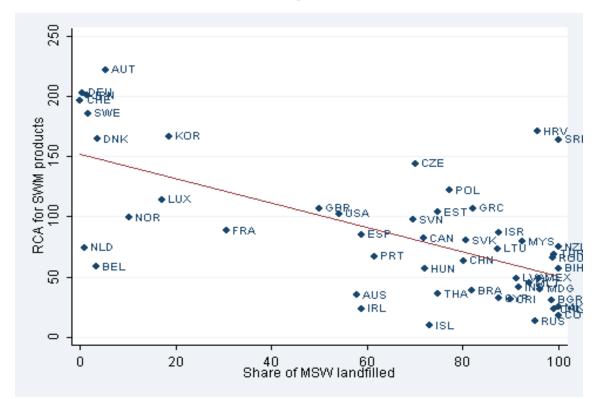


Source: Sauvage, J. (2014), "The Stringency of Environmental Regulations and Trade in Environmental Goods", OECD Trade and Environment Working Papers, No. 2014/03, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/5jxrjn7xsnmq-en

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#### Economies that recycle or recover more waste tend to be relatively large exporters of SWM



Source: Sauvage, J. (2014), "The Stringency of Environmental Regulations and Trade in Environmental Goods", OECD Trade and Environment Working Papers, No. 2014/03, OECD Publishing, Paris. DOI: <u>http://dx.doi.org/10.1787/5jxrjn7xsnmq-en</u> Trade and Agriculture Directorate | Organisation for Economic Co-operation and Development (OECD) | www.oecd.org/tad | tad.contact@oecd.org





We look forward to answering any questions you may have!



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