

# Global Value Chains and 4th Industrial Revolution: Towards a Consumer- Centered Economy

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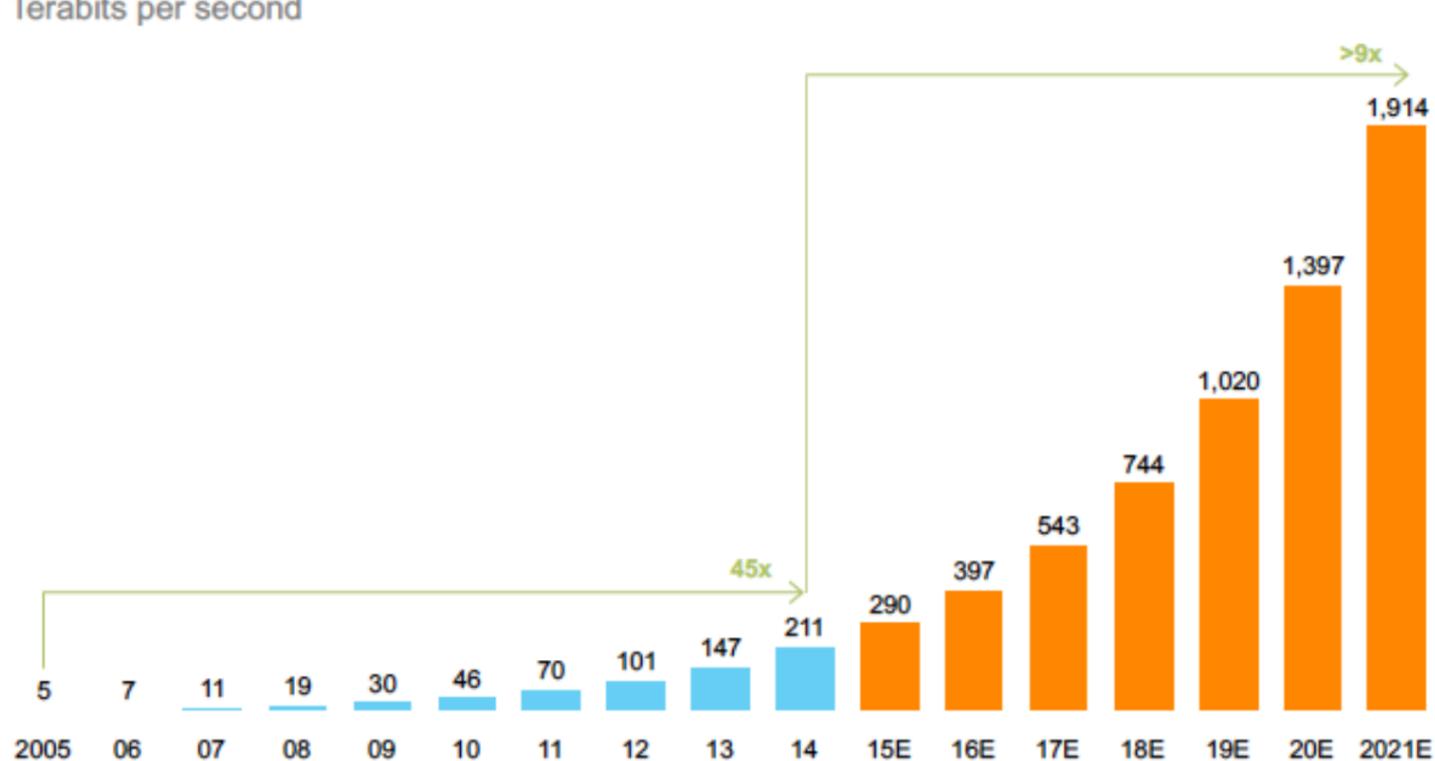


# Dramatic Increase in Cross-Border Data Flows

**Cross-border bandwidth has grown 45 times larger over the past decade—  
and may grow another nine times larger by 2021**

Used cross-border bandwidth, global  
Terabits per second

Actual Forecast



Source: TeleGraphy; McKinsey Global Institute analysis



# Connectivity and Data Revolution

Connectivity is currently taken so next level:

- Between individuals (e.g. social media; firms and consumers)
- Between individuals and machines (e.g. cobot)
- Between machines (Internet of Things)

Combined with data-heavy new technologies:

- Cloud computing
- Big data analytics
- 3D printing

**What impact on global value chains and trade?**



**I. The Rise of Services**

**II. Towards a Consumer-Centered Economy**



# **I. The Rise of the Services**



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# LEVERAGING SERVICES FOR DEVELOPMENT

*Prospects and Policies*



Edited by Matthias Helble and Ben Shepherd

Published: 3 July, 2019, available for free:

<https://www.adb.org/sites/default/files/publication/506216/adbi-leveraging-services-development-prospects-policies.pdf>

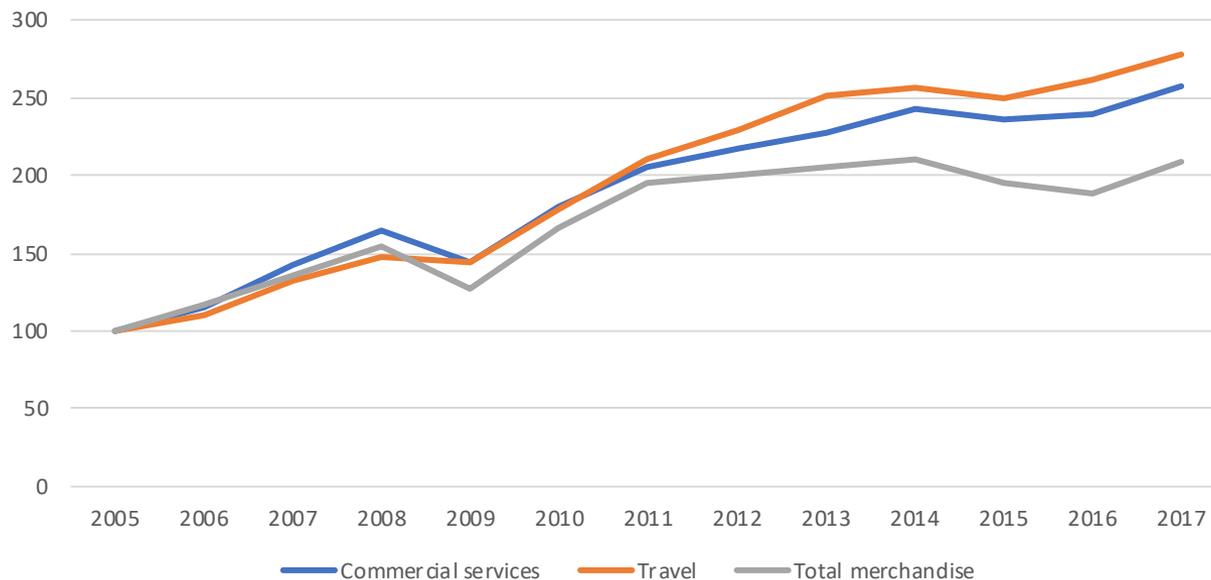
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# Increasing Services Trade in Asia

- Services are increasingly **tradable** thanks to new technologies.
- Services are increasingly **traded**, also among developing countries.

Asia's Exports for Commercial Services, Merchandise and Travel to the World (indexed 2005=100)

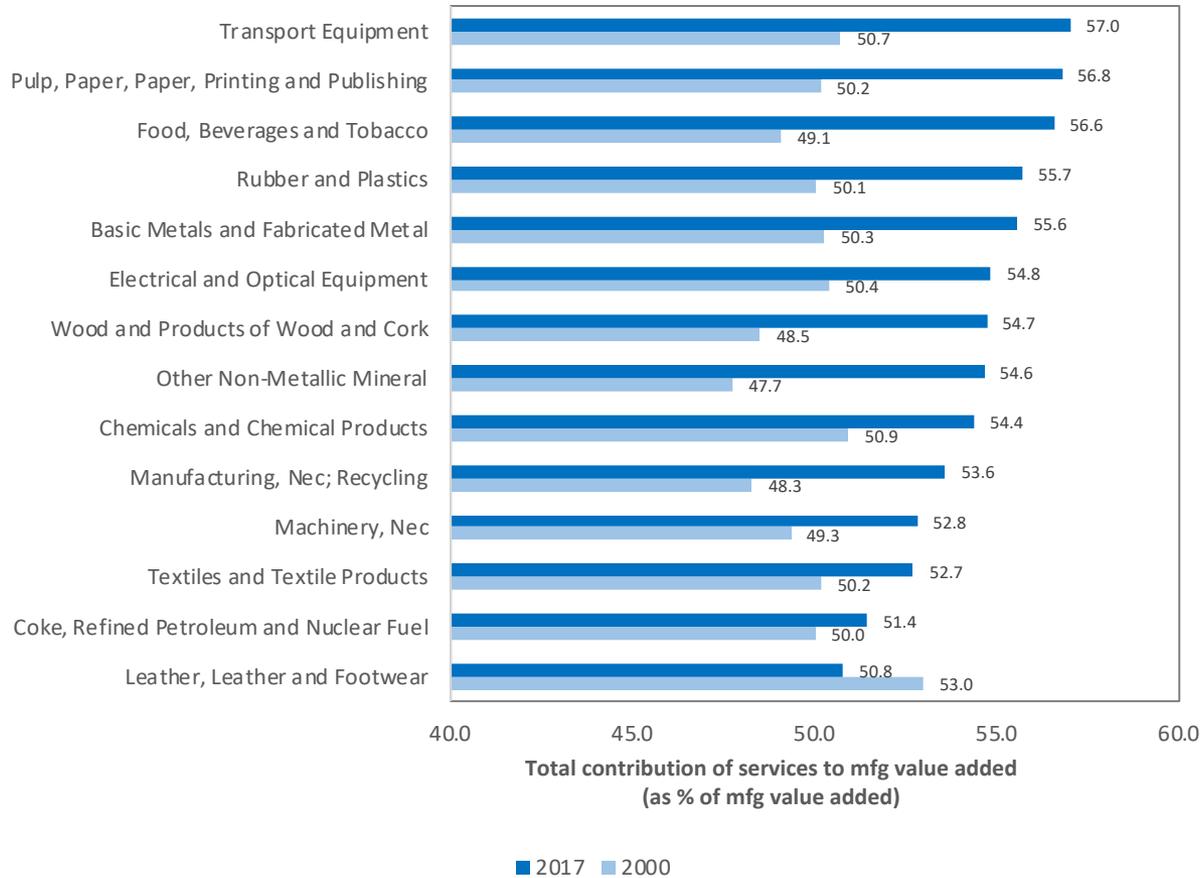


Source: WTO (2018) and authors' calculation



# Manufacturing and Services Intertwined

**Total (direct and indirect) contribution of services to manufacturing value added by sector (2000 and 2017)**

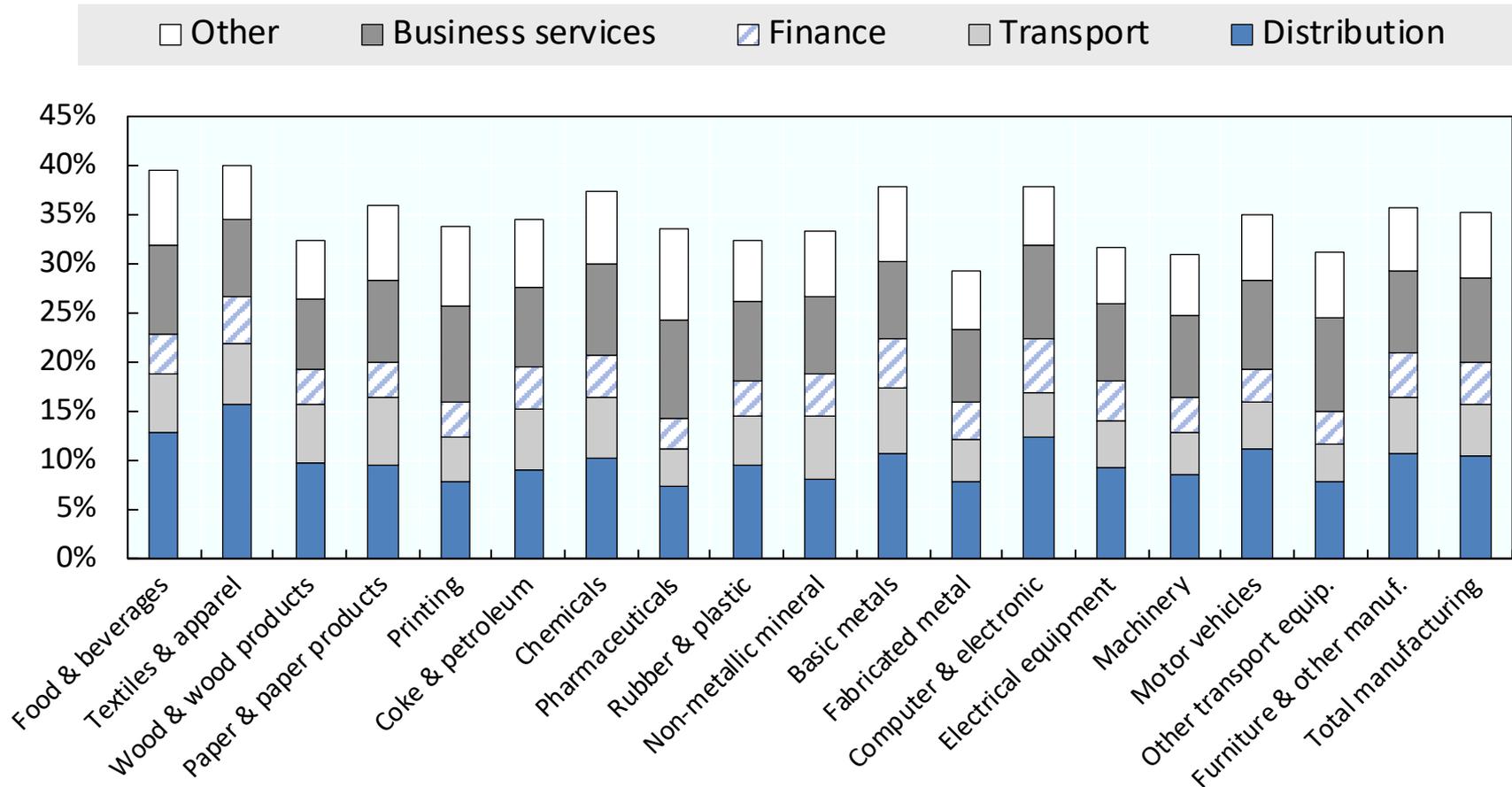


Source: Mercer-Blackman and Ablaza (2019)



# Services Embodies in Manufacturing

Services inputs embodied in manufacturing output, by industry, 2014

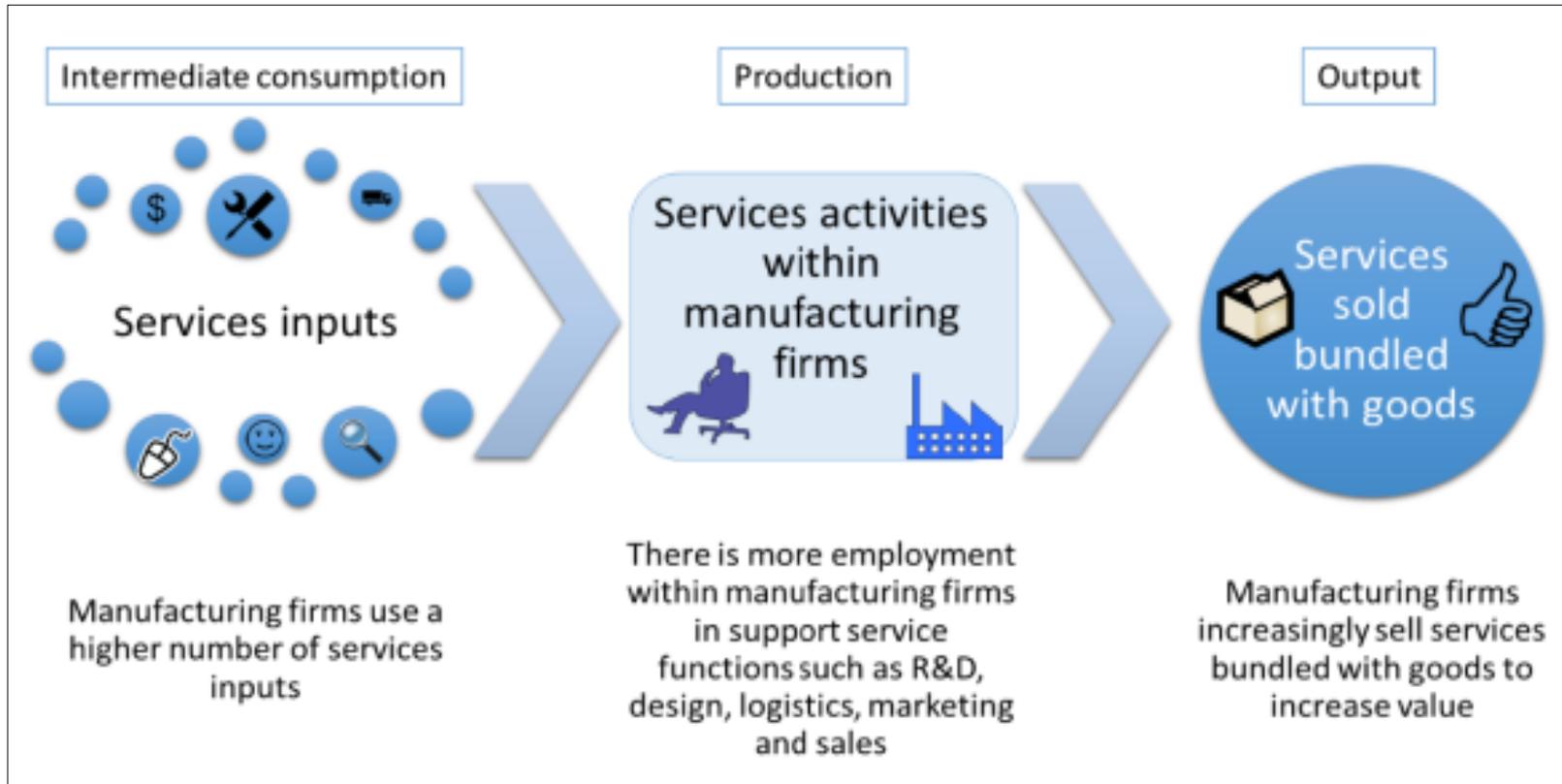


Source: Miroudot (2019)



# Servicification of Manufacturing

## Taxonomy of services activities in manufacturing GVCs



Source: Miroudot and Cadestin (2017)



# Factory-less Goods Producers

- Manufacturers that outsource entire production process.
- Debate on whether they should be part of the manufacturing sector.
- But most statistical offices are unable to identify them.



Source: Miroudot (2019)



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## **II. Towards a Consumer-Centered Economy**



Do you know who knows...

- Where you live?
- Where you work?
- Who your friends are?
- Your interests? Your next travel destination?
- Your health status?



# The Consumer-Centered Economy

In digital economy vast amount of consumer information is collected.

4<sup>th</sup> Industrial Revolution also allows to integrate this information in all stages of the value creation:

- **Pre-production:** Consumer feedback enters the R&D process.
- **Production:** Customers' preferences are directly integrated into product or services (or even provide services directly).
- **Post-production:** Marketing and after-sales services take into account consumers' profiles and previous product choices.

Trade costs between firms and consumers have fallen.



# Examples of Consumer-Centered Economy

Car manufacturing: VW offers 117 steering wheels and 341 front seats for the Golf model.

Garment: Japanese producer offers tailor-made T-shirt for 12 USD.



Source: Nikkei Asian Review (2018)

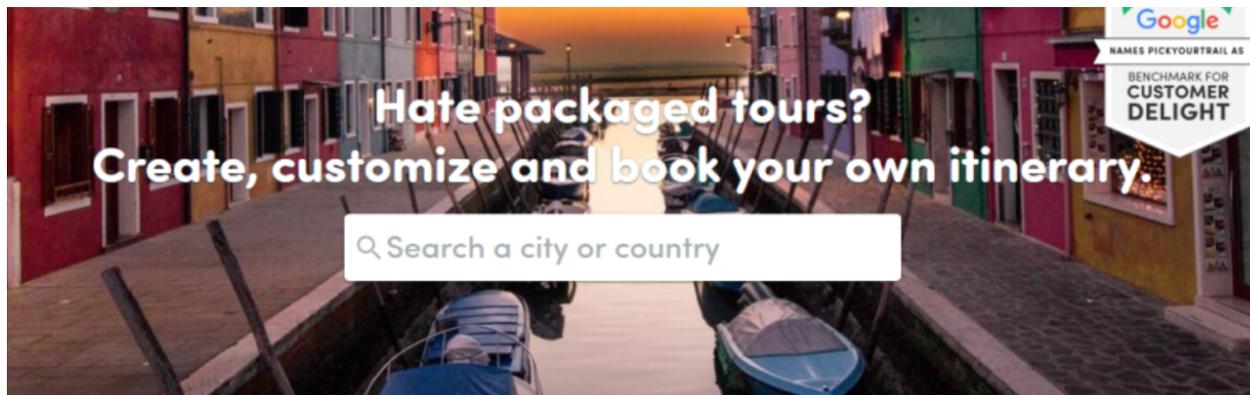


## Other examples:

- Customized shoes
- Bespoke skincare
- TV watching
- Customized vacation
- Personalized health care
- Personalized education
- ...



Source: MIT Technology Review (2017)



Source: Pickyourtrail (2019)



## Main Implications for the Manufacturing Industry

- i. From exchange of goods to exchange of **services and information**.
- ii. From transport connectivity to **information connectivity**.
- iii. From producing to markets to **producing to consumers**.
- iv. From static value chains to **complex, rapidly changing value chains**.
- v. From centralized mass production to **customized local production**.
- vi. From competition on costs to **competition on many dimensions**.
- vii. From low skilled jobs in manufacturing to **high skilled jobs in services**.



# Trade Policy of the 21<sup>st</sup> Century

- Facilitate free flow of data across borders (while protecting consumers and avoiding cyber attacks)
- Promote freer flow of services
- Provide multilateral framework for e-commerce
- Trade facilitation for digital trade
- Ensure protection of IP rights
- Implications for Asia:
  - Provide skills for a service-based economy
  - Promote seamless connectivity (e.g. shipping connectivity of Bangladesh same as for Senegal)
  - Promote access to finance



# Summary and Conclusion

- Increasing relevance of services trade in global value chains.
- 4<sup>th</sup> Industrial Revolution moves the consumer to the center of economic activity.
- Competitiveness of firms in global value chains mainly depends on ability to handle complex production processes.
- Cheap mass production will become less important.
- 4<sup>th</sup> Industrial Revolution gives opportunity for more local production.
- Old paradigms of trade policy as well as economic development need to be rethought.



**Thank you very much for your attention.**

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**Services Book:**

**<https://www.adb.org/sites/default/files/publication/506216/adbi-leveraging-services-development-prospects-policies.pdf>**

**Consumer-Centered Economy Paper:**

**[https://doi.org/10.1162/asep\\_a\\_00632](https://doi.org/10.1162/asep_a_00632)**