Background and overview of Digital SUTs framework

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The Digitalization question

- *"These days it seems that a growing fraction of innovation is not measured at all. In a world where houses are Airbnb hotels and private cars are Uber taxis, where a free software upgrade renews old computers, and Facebook and YouTube bring hours of daily entertainment to hundreds of millions at no price at all,* ***many suspect GDP is becoming an ever more misleading measure.****"*
  - The Economist Apr 30th 2016

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Changing policy demands require alternative information

- Taxation policies shifting away from traditional sources.
- Changing customer / producer paradigm.
- Evolving skills and modes of working.
- Pivot towards digital service delivery (including for government).

The framework aims to merge information on digitalization with outputs from the System of National Accounts…

GDP is key for international comparability

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Enter the Digital SUTs framework

- No Single definition of the Digital Economy within the digital SUT framework.
- Fundamentally a focus on transactions that are either digitally ordered, digital delivered or platform enabled.
- A suite of indicators, reflecting the multi-dimensional nature of the digital economy.
- The work is now included within a revised System of National Accounts. Compilation handbook out soon.
- Several countries have produced estimates consistent with framework.

	Netherlands (2018)	Canada (2018)	USA (2020)	Ireland (2020)
Priced digital services (excluding cloud)	**5.5%**	**--**	**4.0%**	**--**
Cloud computing services	**0.6%**	**0.2%***	**0.4%**	**--**
Total digital products	**8.4%**	**--**	**9.1%**	**33.5%**

Proportion of total output

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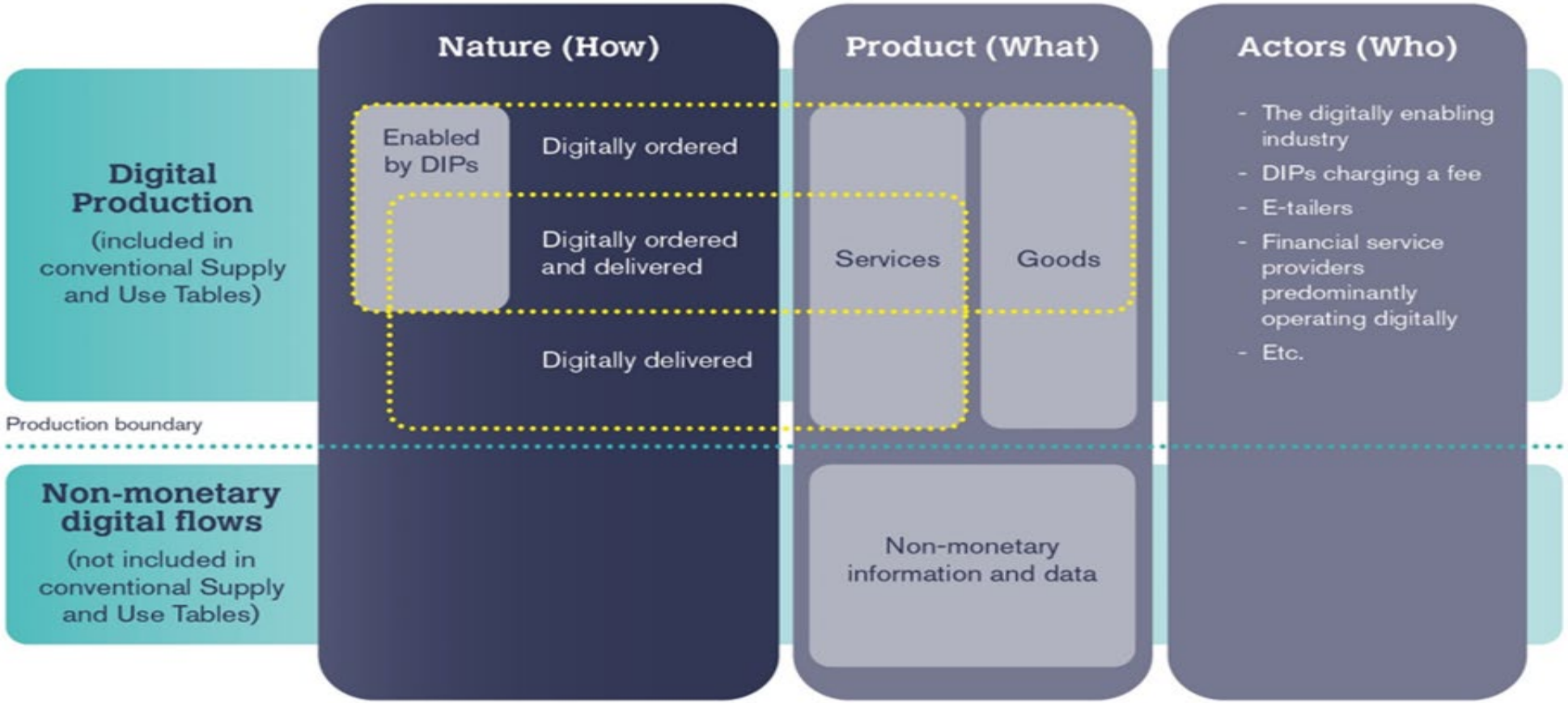
Digital SUTs Framework



The framework aims to merge information on digitalization with the System of National Accounts…

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Digital transactions

- **Digitally ordered** defined as "*The sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders*".
- **Digitally delivered** defined as "transactions that are delivered remotely over computer networks". - It has been well established in several publications that conceptually a good cannot be digitally delivered see (IMF, OECD, UNCTAD and WTO, 2023).

- Both definitions are consistent with framework on digital trade.

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Digital products

From a product perspective, the framework compiles aggregate expenditure on

- **ICT goods and digital services.** Products that "*must primarily be intended to fulfil or enable the function of information processing and communication by electronic means, including transmission and display*" (UNSD, 2015). This definition is taken from the 'alternative structures' section (part 5) of the Central Product Classification - CPC 2.1 (UNSD, 2015) and is considered the product equivalent to the ICT sector outlined in the International Standard Industrial Classification (ISIC Rev.4) (UNSD, 2008).

Two additional separately record specific digital services, that are of considerable policy interest;

- **Digital intermediation services (DIS)**
- **Cloud computing services (CCS).**

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Digital industries

- **Digitally enabling industries:** This industry category corresponds to the ICT sector identified within the International Standard Industrial Classification (ISIC Rev.4) (UNSD, 2008)
- **DIPs charging a fee:** This includes units *that operate online interfaces that facilitate, for a fee, the direct interaction between multiple buyers and multiple sellers, without the platform taking economic ownership of the goods or rendering the services that are being sold (intermediated).* Examples would include UBER, AirBnB, Booking.com
- **Data and advertising driven digital platforms**: Units operating exclusively as digital platforms whose main source of revenue is either the data collected from the platform and/or the sale of advertising space on the platform. Examples include, Facebook, Youtube, Google.
- **Producers' dependent on intermediation platforms:** This includes units that receive orders for their goods or services via the intermediation platforms mentioned above. Examples include "GRAB" drivers, Producer who sell via ETSY.
- **E-tailers:** Includes traders engaged in purchasing and reselling goods (i.e. retailers) who receive most of their orders digitally. (ASOS, Suning)
- **Producers predominately providing financial and insurance services digitally.** This includes financial service providers, including insurance, reinsurance, and pension schemes/funds, which are operating predominantly online, examples include (Paypal, WISE, E-banks, etc.)
- **Other producers only operating digitally.** This includes units operating exclusively online that are not included in one of the previous six digital industries.

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Estimates from developed countries

Percentage of output, digitally ordered or digitally deliverable

	Canada (2018)	Netherlands (2018)	Ireland (2020)
Digitally Ordered	6.8%	16.1%	21.7%
Digitally Delivered	2.4%	22.6%*	31.0%*

* Digitally deliverable

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Priority indicators for developing countries

Using Digital SUTs in developing countries.

- SUTs are **NOT** required.
- Most countries have used aggregate **estimates created during standard compilation of national accounts** – Household final consumption, total exports, total output, etc.,
- Fundamental requirement is finding appropriate information that can be applied to the National Account output;
  - a single row,
  - a single industry,
  - a group of industries
  - whole economy.

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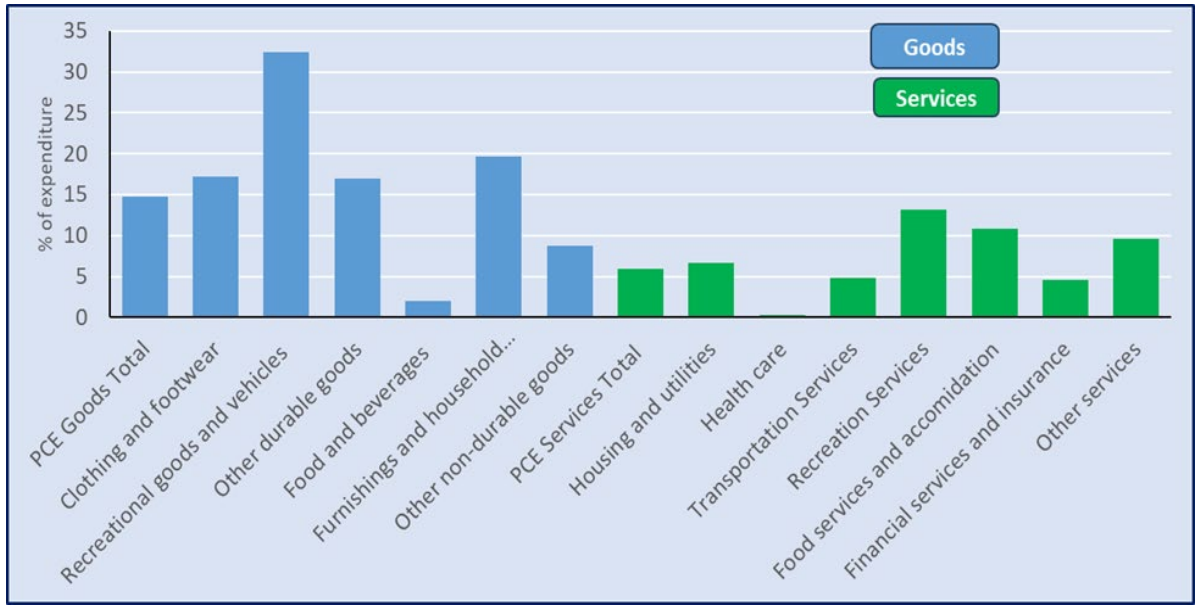
Priority indicators for developing countries

- Proportion of total household final consumption digitally ordered or digitally deliverable
- Proportions of output that were digitally ordered or are digitally deliverable
- Estimates of output and gross value added produced by identified digital industries
- International trade transactions digitally ordered and/or digitally deliverable

Digitally ordered or digitally deliverable Household consumption

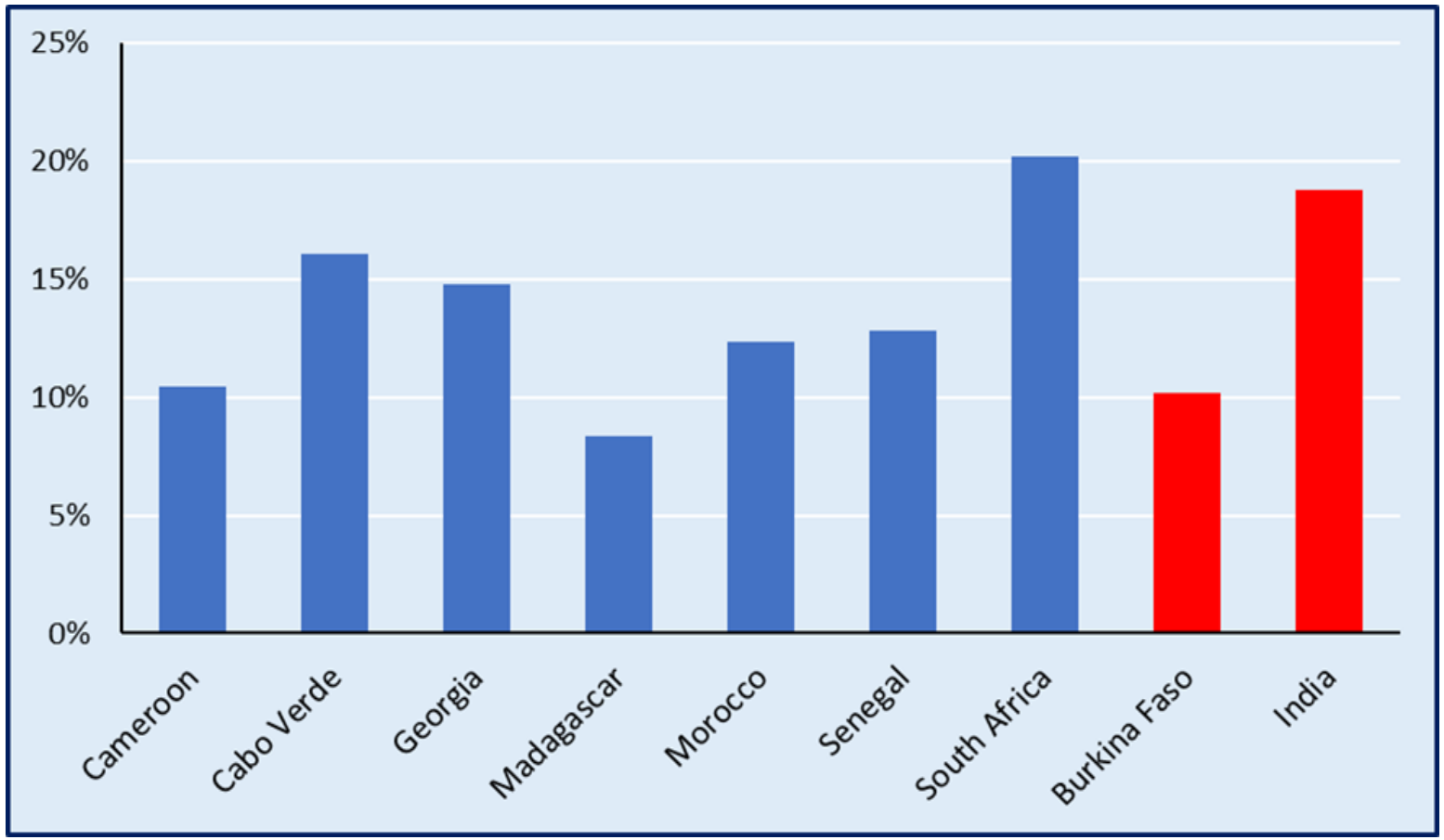


- Information on the level of digital ordering is required.
- This is difficult, but many recent examples using business surveys: UK, USA, Egypt, Indonesia, Malysia, Mexico, the Philippines, Thailand, etc..
- *Measuring the value of E-commerce* (UNCTAD, 2023), contains many examples

- Digitally deliverable, practically easier since it is product based.
- List of products considered digitally deliverable outlined in in Handbook on measuring Digital trade & Handbook on compiling Digital SUTs

Digitally delivered Household Final Consumption Expenditure

Proportion of Household Final Consumption Expenditure considered digitally deliverable; selected countries, 2018



- Theoretically, digitally deliverable outputs can be created using existing information.
- Supply – Use Tables (blue columns) Proportions applied to product classification
- Household Consumption (Red columns) Proportions applied to expenditure classification
- Proportions generated via classification concordance
  - Central Product Classification (CPC) → Classification of Product by Activity (CPA)
  - Central Product Classification (CPC) → Classification of individual consumption by purpose (COICOP)

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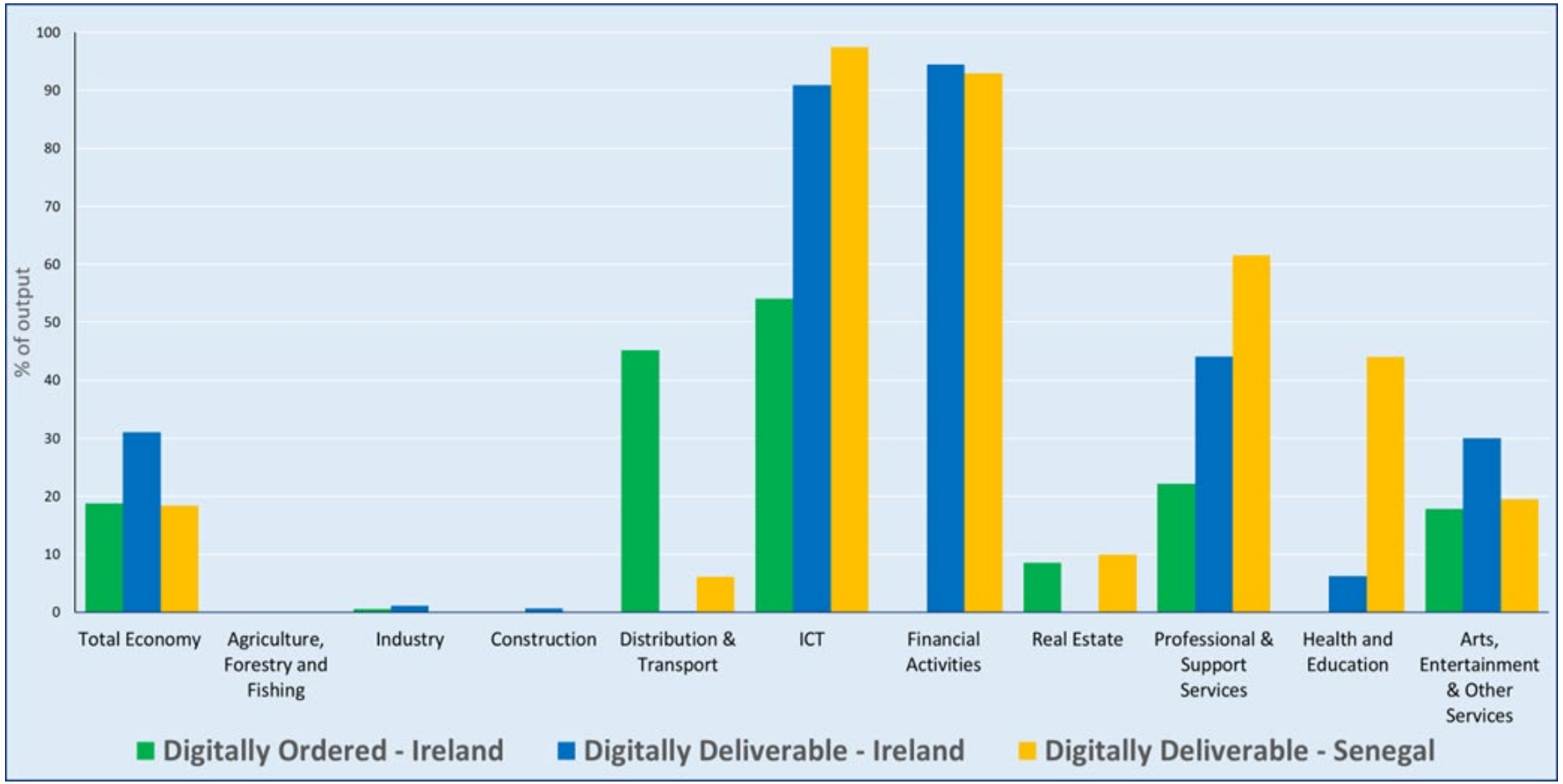
Digitally ordered and digitally deliverable output

Percentage of output digitally deliverable, Ireland, 2020, Senegal, 2018



Senegal estimates created using publicly available data and basic concordance.

Estimate can be improved via the use of additional detailed unpublished statistics

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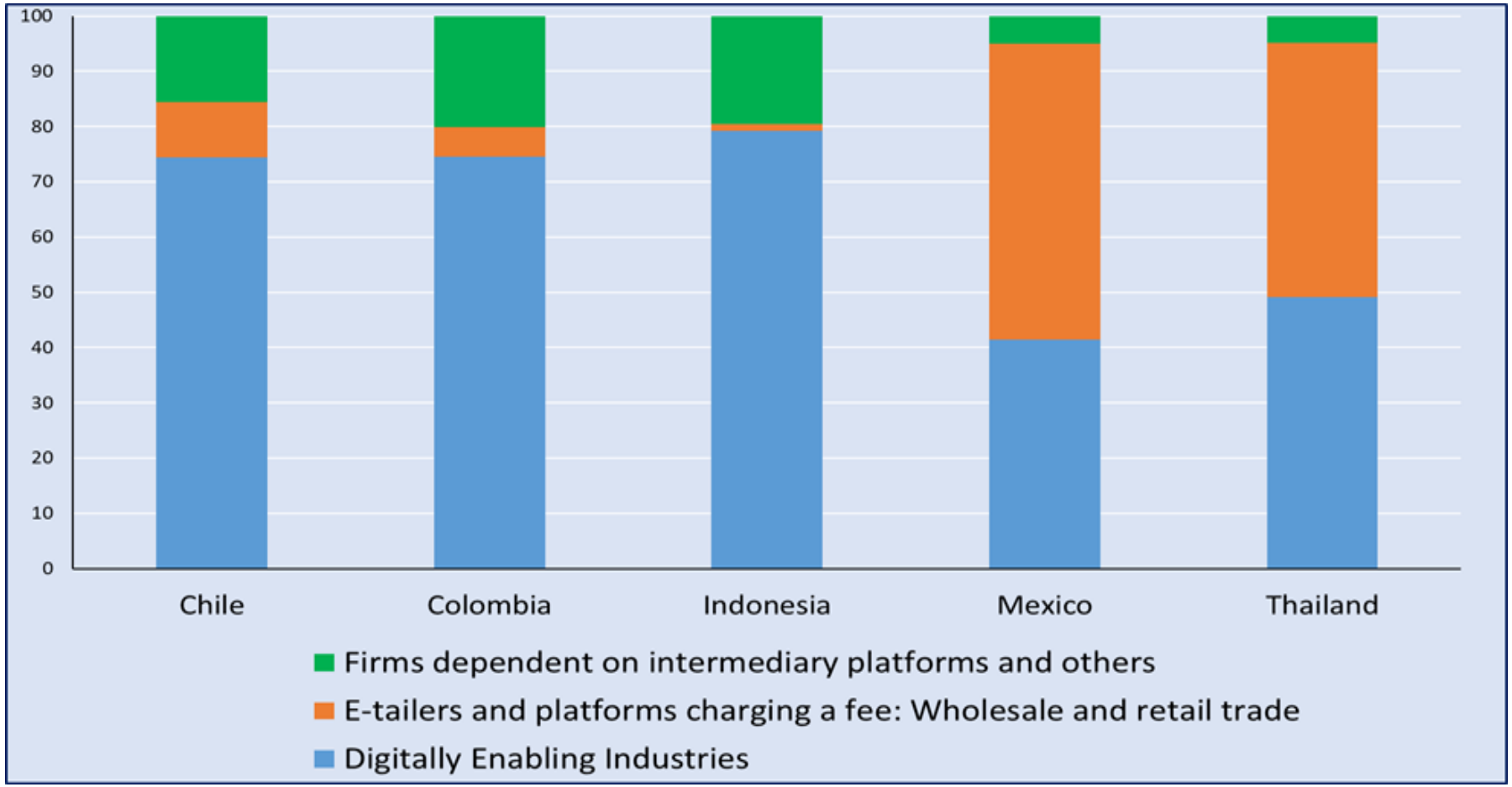
Digital industries

Value added of digital industry, contribution to total digital industries value added, selected countries, 2018.



Applied survey information, compiler knowledge, and modelling to existing national account estimates.

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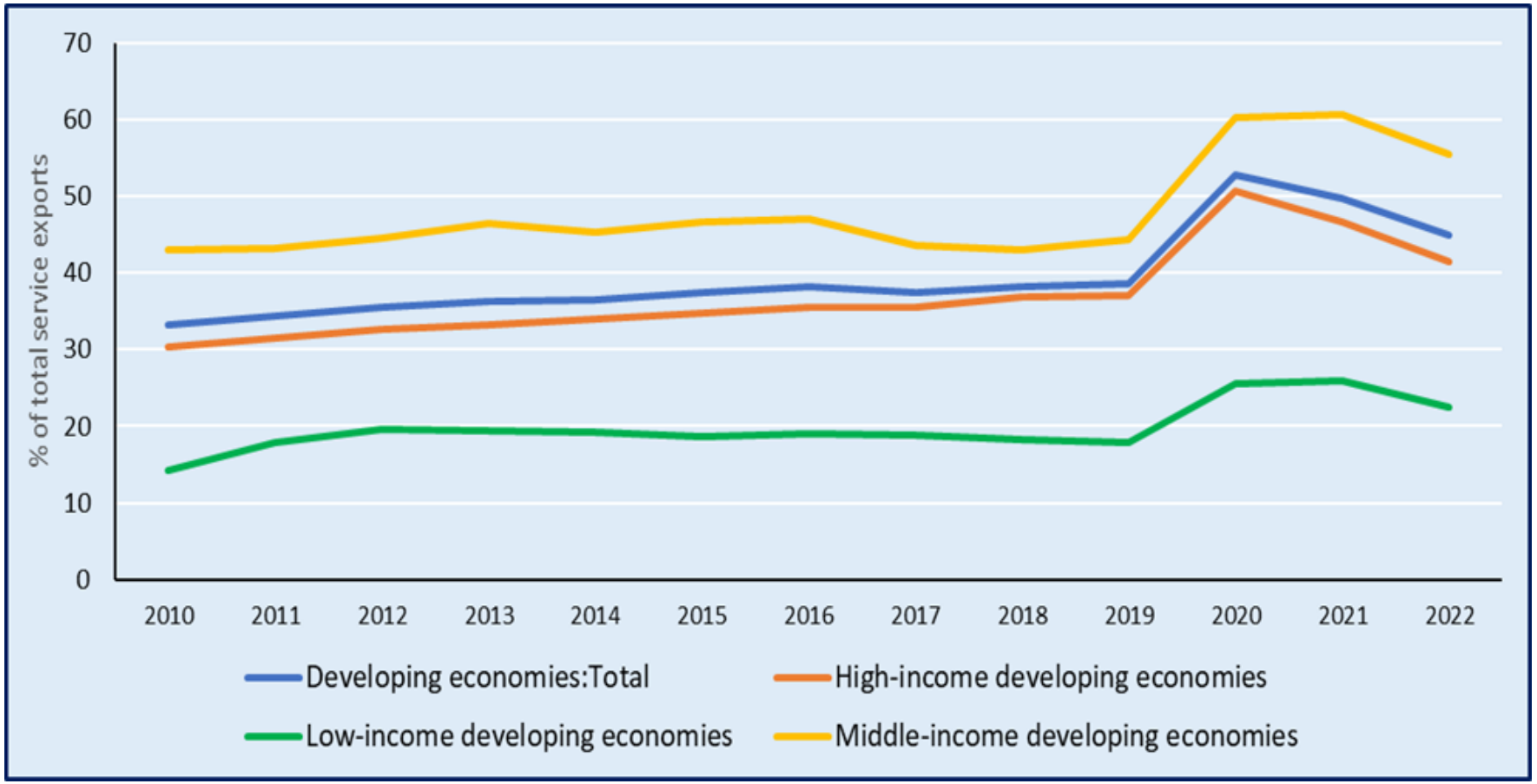
Digitally deliverable exports

Digitally deliverable exports, Developing countries (2010 – 2022), percentage of total exports in services



Digitally deliverable exports collected jointly by UNCTAD and the WTO.

Considered part of Digital SUTs but can be compiled using traditional export data.

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Path forward

Path forward

- **Look at the current availability of statistics that can be used as inputs to key indicators in the Digital SUTs framework.** This paper highlights that some indicators can be created using data and information already at the disposal of many developing countries

- **Business ICT usage surveys can be a key source for information needed to complement/break down aggregates from the SUTs/National Accounts.** More developing countries are obtaining this information, improving best practice in this area.

- **It is not necessary to complete the full Digital SUTs matrix or even use SUTs as a starting point for this compilation.** Rather, there are Digital SUT outputs are obtainable using aggregates usually compiled as part of the conventional production of GDP.

- **Countries should share experiences and initial estimates they compile through fora such as the UNCTAD Working Group on Measuring and e-commerce and the digital economy.** The flexibility of the framework means that countries can share different perspectives (transactional/ industry / product) as they become available. Publishing experimental estimates facilitates discussion and improvement for all

- **The work of UNCTAD's Task Group on measuring e-commerce value (TG-eCOM) will potentially support the compilation of Digital SUTs.** Digital ordering is one of the key concepts within the frameworks for Digital SUTs and digital trade. Due to the alignment of concepts, the work of the TG-eCOM to broaden the availability of robust and internationally comparable statistics on ecommerce value will also support the availability of statistics that can be used in the context of Digital SUTs.

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Thank you!

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