



Towards an integrated framework for measuring the digital economy

High Level Seminar on The Digital Economy:
A Policy and Statistical Perspective

Beijing, China
15-17 November 2018

United Nations Statistics Division



Outline of presentation

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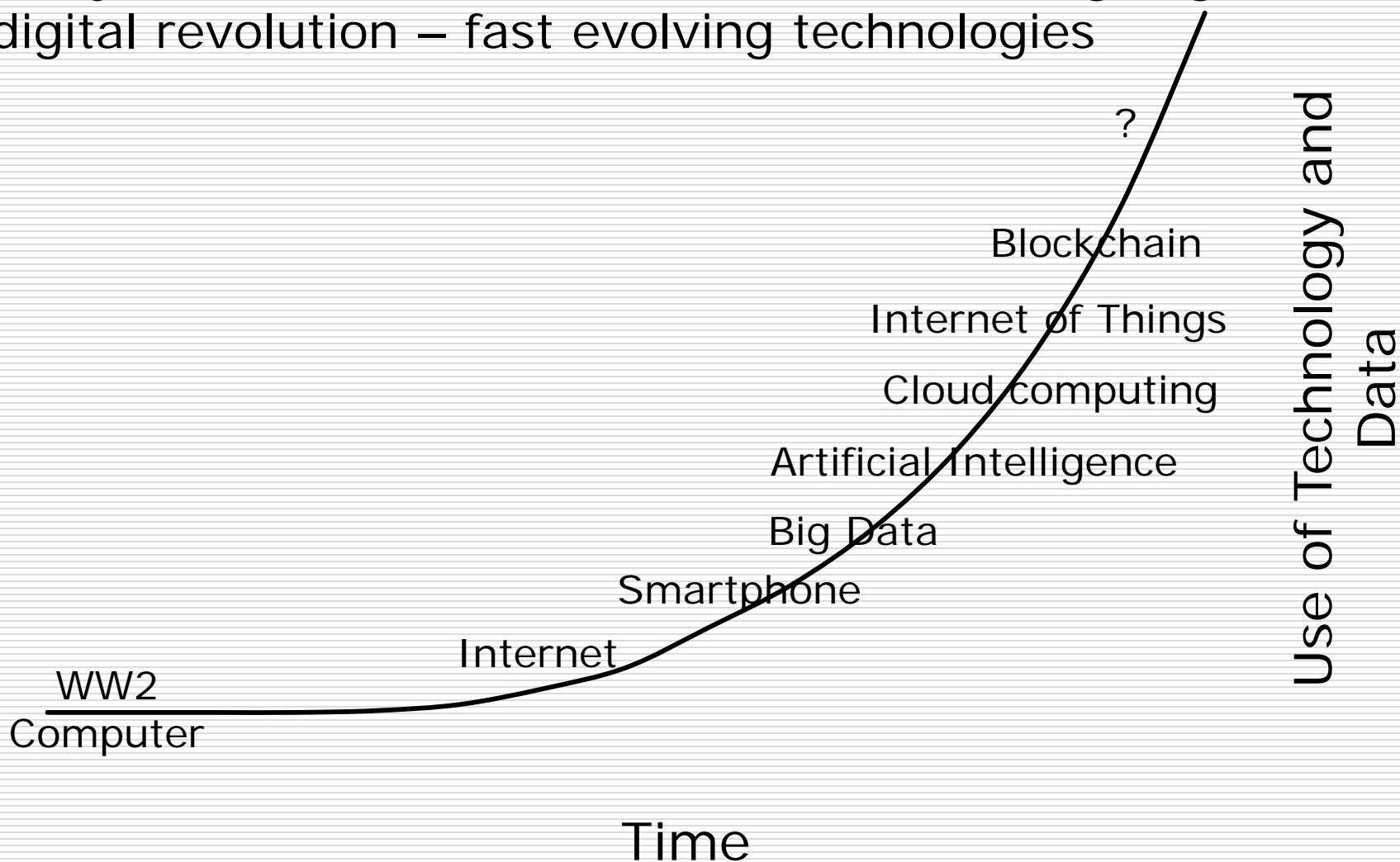
- Background
- What benefits have the digital economy brought?
- What costs have the digital economy brought?
- What are the outcomes?
- Components of policy framework for the digital economy
- Components of statistical framework for the digital economy
- Conclusions



Background

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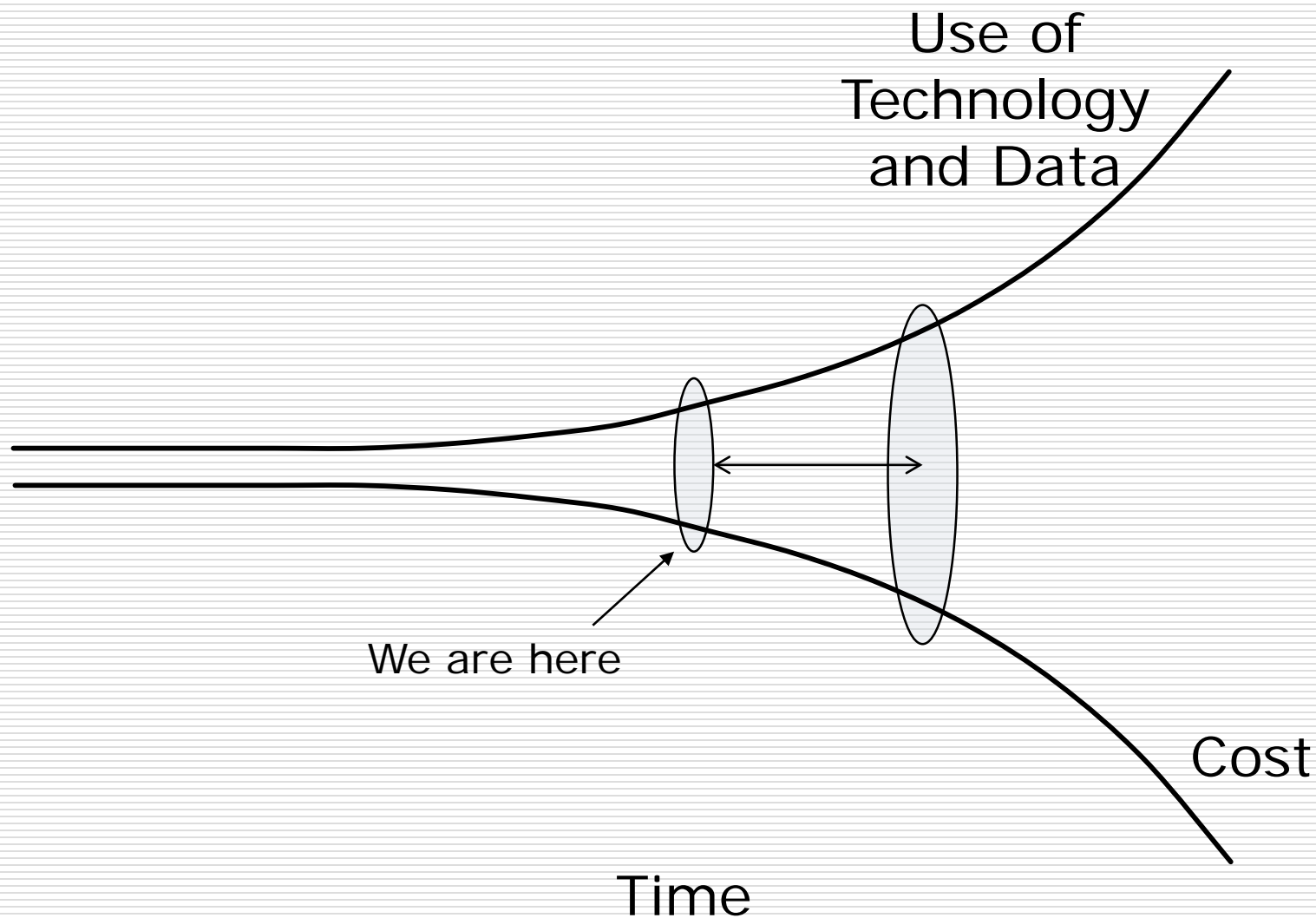
- Many economies around the world are undergoing a digital revolution – fast evolving technologies





Available timeframe to create a framework

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What benefits have the digital economy brought?



What benefits have the digital economy brought?

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- Digital economy can make a significant contribution to the realization of the 2030 Agenda for Sustainable Development





What benefits have the digital economy brought?

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- Wide variety of goods and services





What benefits have the digital economy brought?

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- Innovations in financial markets and new methods of payment



venmo

coinbase



ethereum





What benefits have the digital economy brought?

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- Rising automation





What costs have the digital economy brought?



What costs have the digital economy brought?

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Digital divides within and between countries

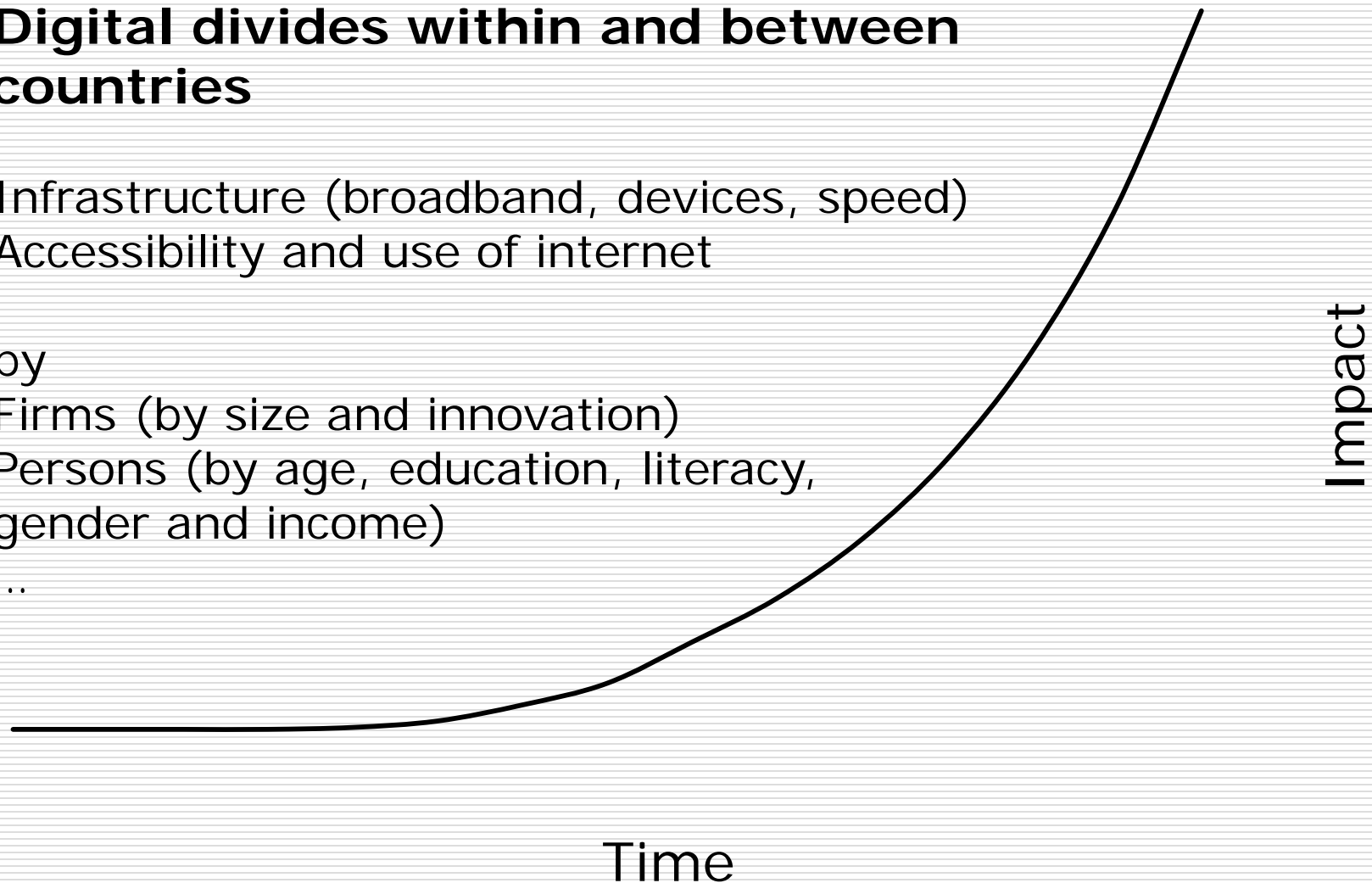
Infrastructure (broadband, devices, speed)
Accessibility and use of internet

by

Firms (by size and innovation)

Persons (by age, education, literacy,
gender and income)

...



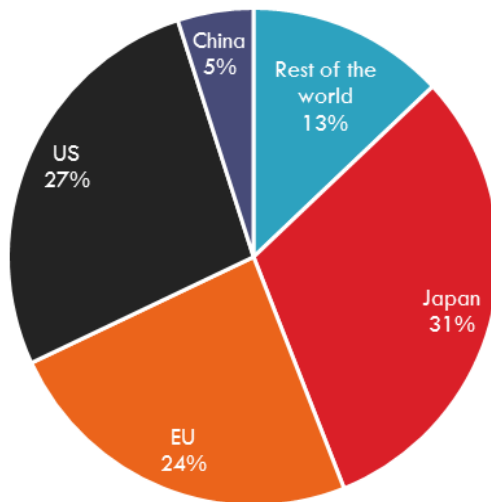


What costs have the digital economy brought?

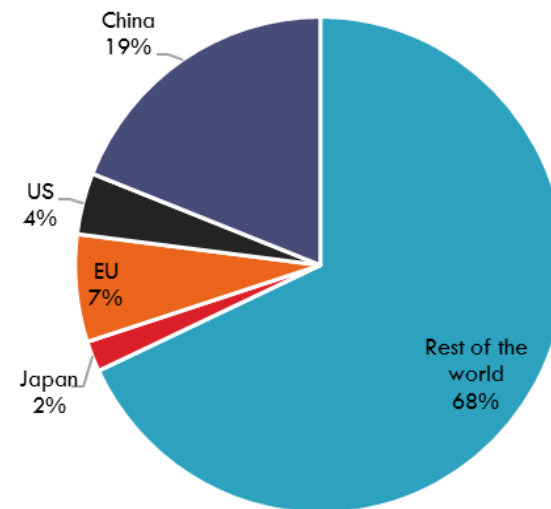
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- A few firms and countries dominate innovation in many frontier technologies

Share of triadic patent applications



Share of global population



Source: World Economic and Social Survey 2018



What costs have the digital economy brought?

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■ Erosion of privacy

Canada Data Agency Faces Blowback Over Plan to Collect Bank Records

[WSJ wsj.com/articles/canada-data-agency-faces-blowback-over-plan-to-collect-bank-records-1541716675](https://www.wsj.com/articles/canada-data-agency-faces-blowback-over-plan-to-collect-bank-records-1541716675)

November 8, 2018



Anil Arora, chief statistician for Statistics Canada, speaking last year in Montreal. Photo: Christine Muschi/Bloomberg News

By
Nov. 8, 2018 5:37 p.m. ET

OTTAWA—Canada's national statistics agency is under attack from lawmakers, privacy advocates and the public over a plan to collect citizens' detailed banking information to help it generate better data.

Statistics Canada proposes accessing banking records for 500,000 randomly selected Canadian households and stripping out identifying information. The agency says it needs the records to improve the accuracy and timeliness of its data on spending patterns as more transactions move online and fewer people respond to traditional household surveys.

Lawmakers have expressed concern the data could be accessed by hackers or handed over to other government agencies, a practice Statistics Canada said it doesn't allow. Jean-Guy Dagenais, a Conservative Party senator, called the initiative a "useless intrusion into Canadians' private lives."

Estimates of household spending are used to determine the relative weight of the goods included in Canada's consumer-price index, which measures changes in inflation. The index's readings guide rate policy at Canada's central bank and are instrumental in determining wage increases at public- and private-sector organizations.

"What we are facing is huge gaps in our understanding of the extent to which Canadians are using digital services" such as Airbnb and Netflix, Canada's chief statistician, Anil Arora, told a Senate committee on Thursday. "The traditional methods [of data collection] aren't working." He said 60% of people asked by Statistics Canada to complete diaries about their household spending habits don't respond.

The controversy demonstrates the distrust many statistical agencies face as they pursue top-quality economic data, which governments take into account when crafting policy and investors use to make split-second decisions on fixed-

Source: Wall Street Journal, 8 Nov 2018



What are the outcomes?

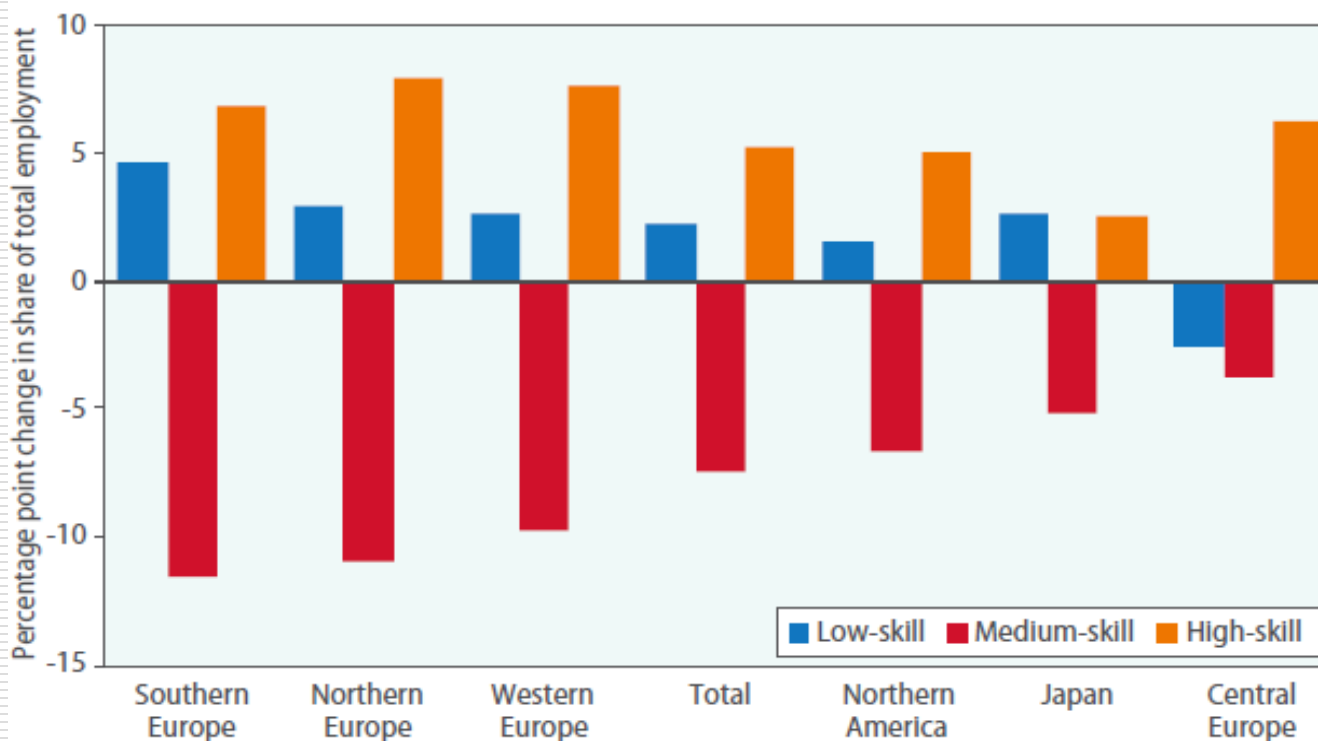


What are the outcomes?

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- Polarized labour markets

Polarization of labour markets in OECD countries, 1995–2015



Source: World Economic and Social Survey 2018

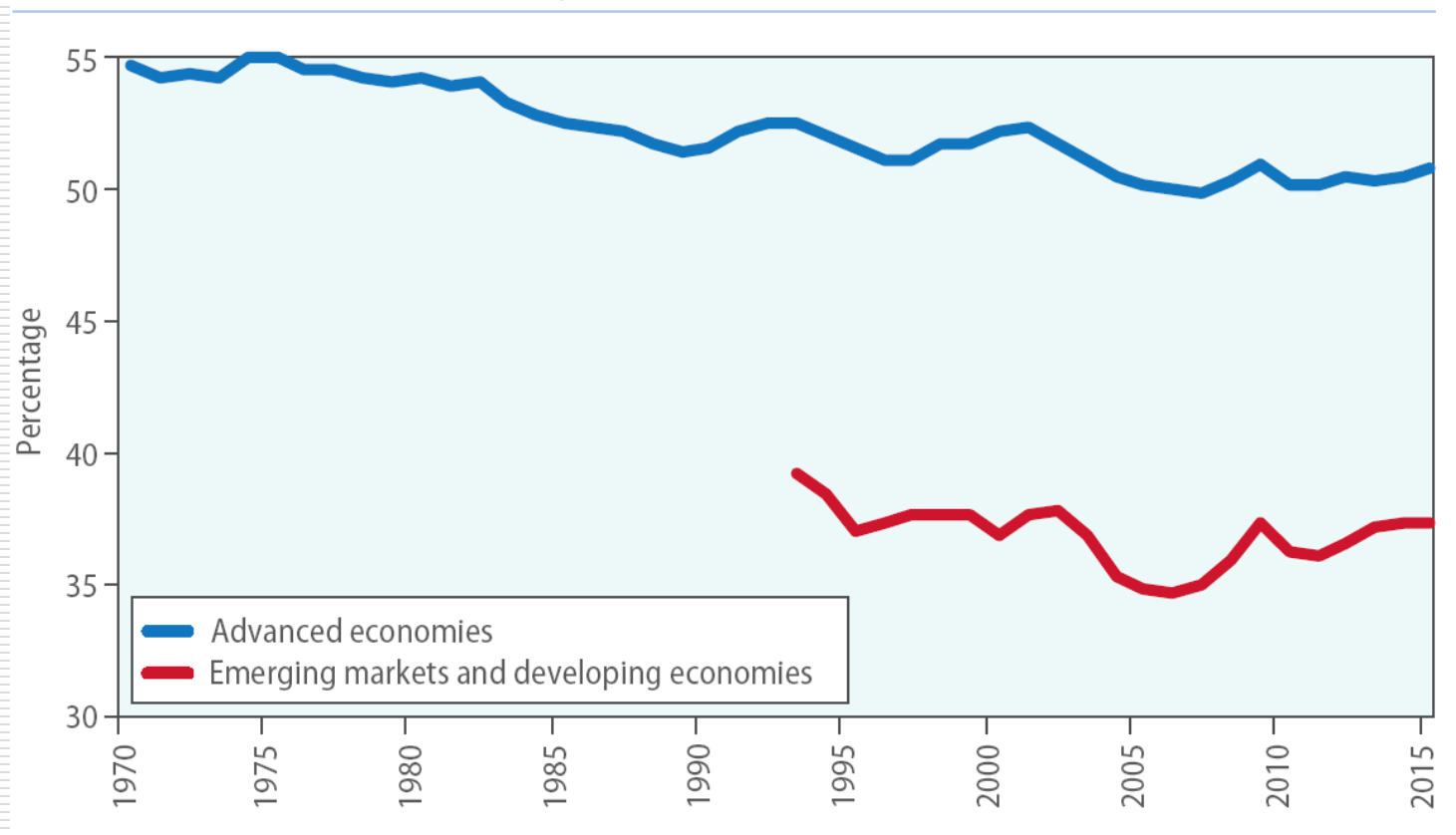


What are the outcomes?

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- Rising share of capital income and falling sharing of labour income resulting in income and wealth inequality

Trends of labour share of income, 1970–2015



Source: World Economic and Social Survey 2018

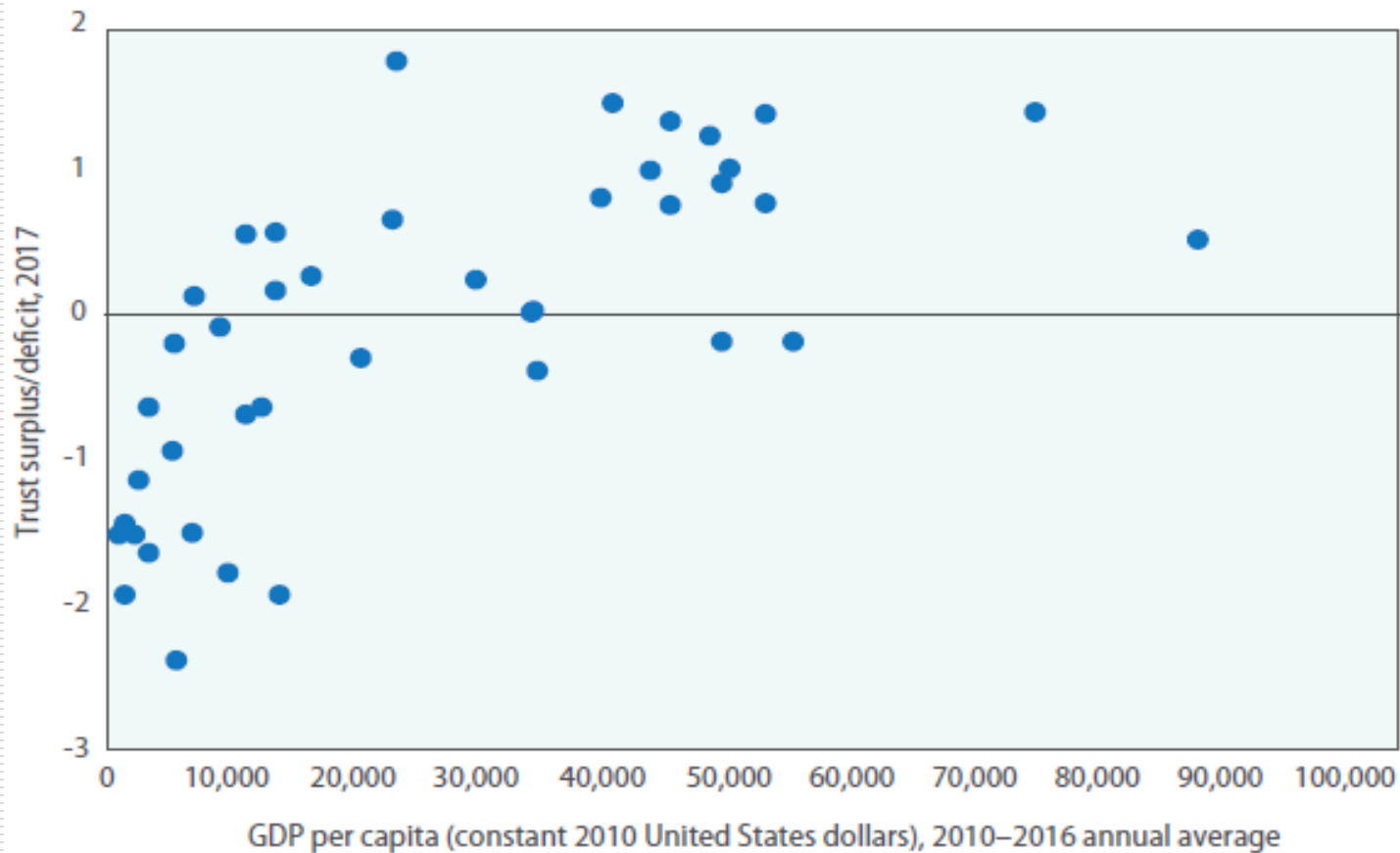


What are the outcomes?

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- Digital trust deficit

Digital trust surplus/deficit across countries



Note: Trust surplus/deficit is defined as the gap between users' digital trust environment experience and their tolerance for friction of digital commerce engagement. A higher trust surplus level suggests that users are more patient online and willing to engage with new technologies.

Source: World Economic and Social Survey 2018



Components of policy framework for the digital economy



Components of policy framework for the digital economy

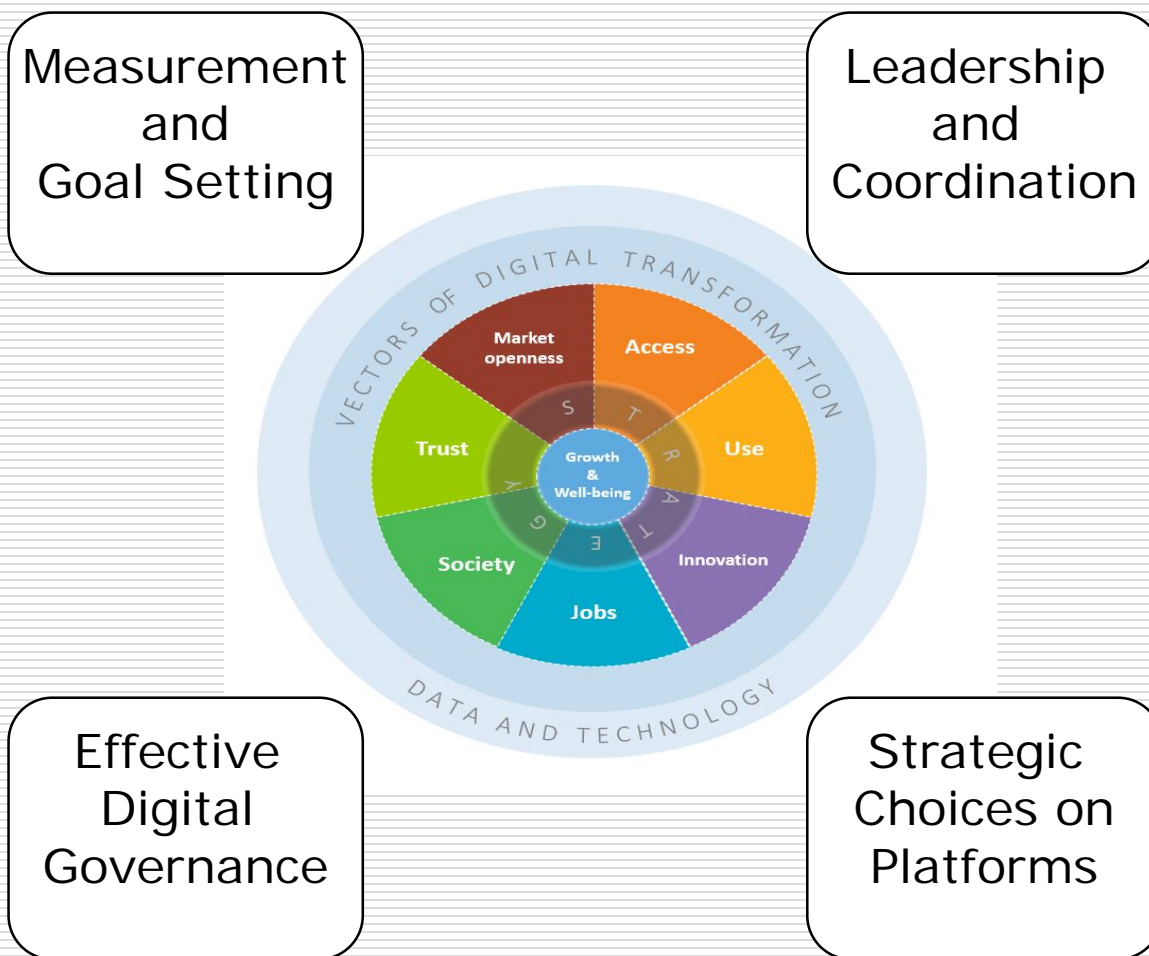
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- Policy making process has to be integrated
- A flexible, forward-looking and integrated policy framework that cuts across policy silos is needed



Components of policy framework for the digital economy

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Source: OECD Going Digital
UNDP Framing Policies for the Digital Economy UNIDO Technology Foresight in Asia



Components of statistical framework for the digital economy



Components of statistical framework for the digital economy

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- Consistent, timely and reliable statistics on the digital economy are needed
- An integrated statistics approach can help to ensure harmonization



Components of statistical framework for the digital economy

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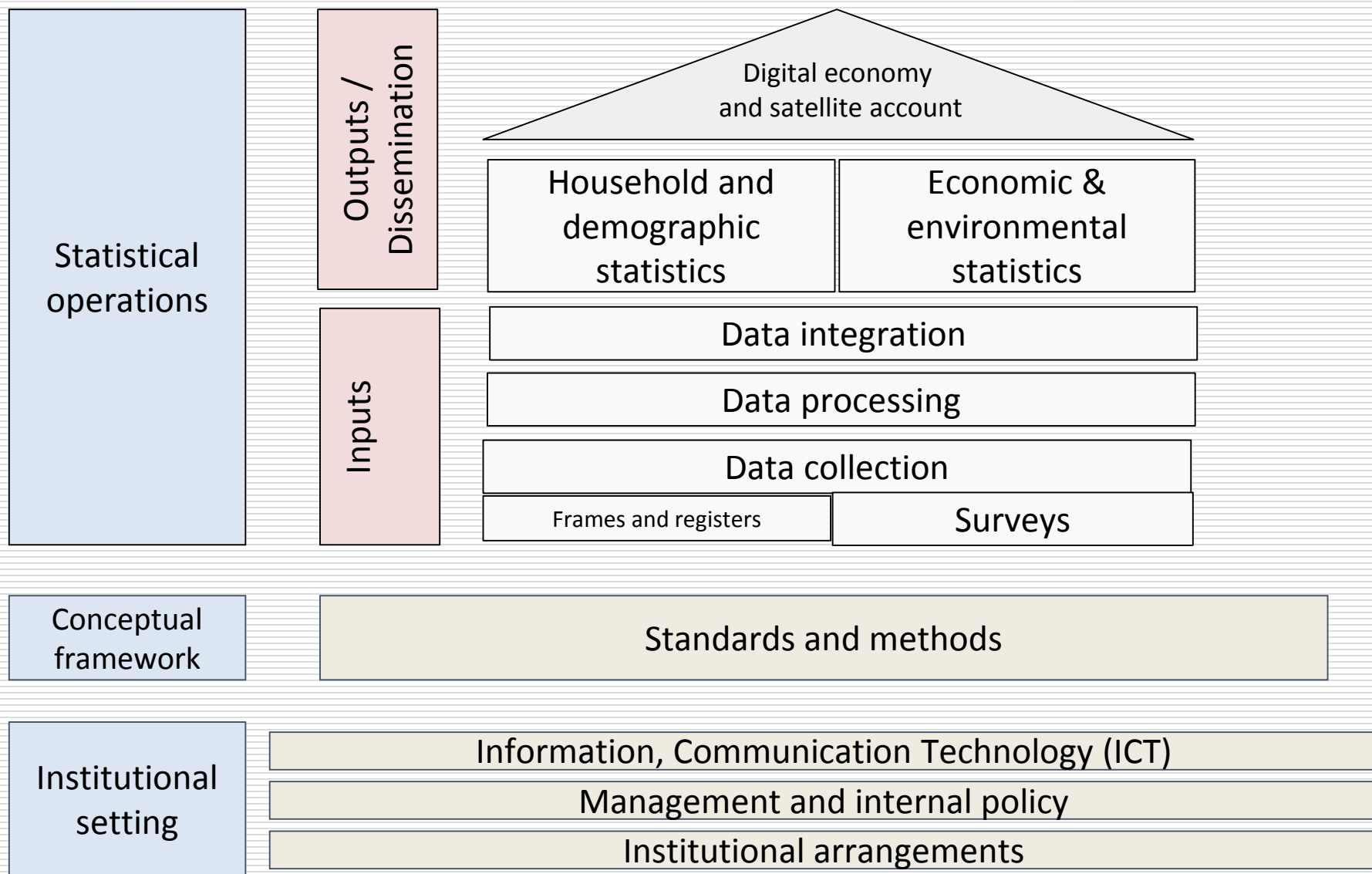
Building blocks

- **Common conceptual framework**
- **Institutional arrangements** (legislative, organizational, budgetary, managerial and customer relationship arrangements) further support the environment for integration
- **Statistical production process** as an integrated production chain from the collection of basic data to the dissemination of statistics



Components of statistical framework for the digital economy

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Components of statistical framework for the digital economy

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Digital economy
and satellite account

Standards and methods

Conceptual framework

System of
**National
Accounts**
2008



European Commission



International Monetary Fund



Organisation for Economic
Co-operation and Development



United Nations



World Bank

Ensures the consistency of
the
concepts, definitions and
classifications



Components of statistical framework for the digital economy

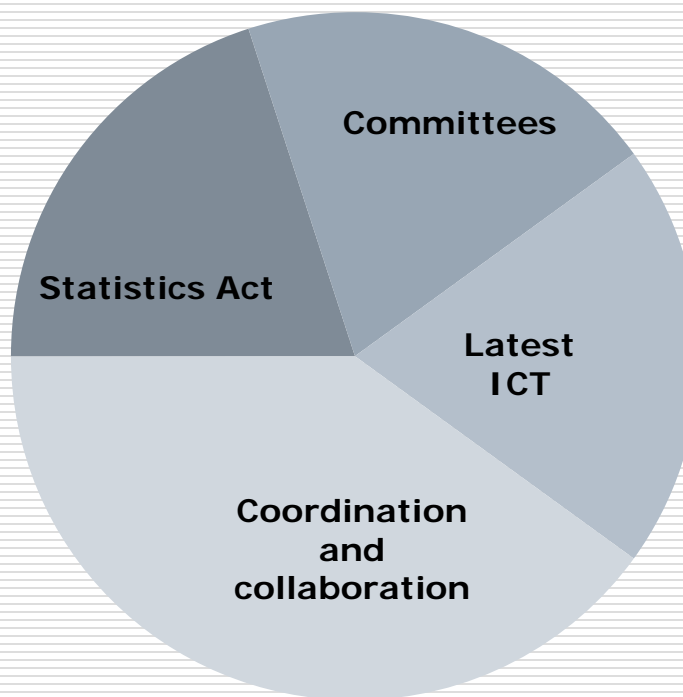
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Institutional setting

Information,
Communication
Technology (ICT)

Management and internal
policy

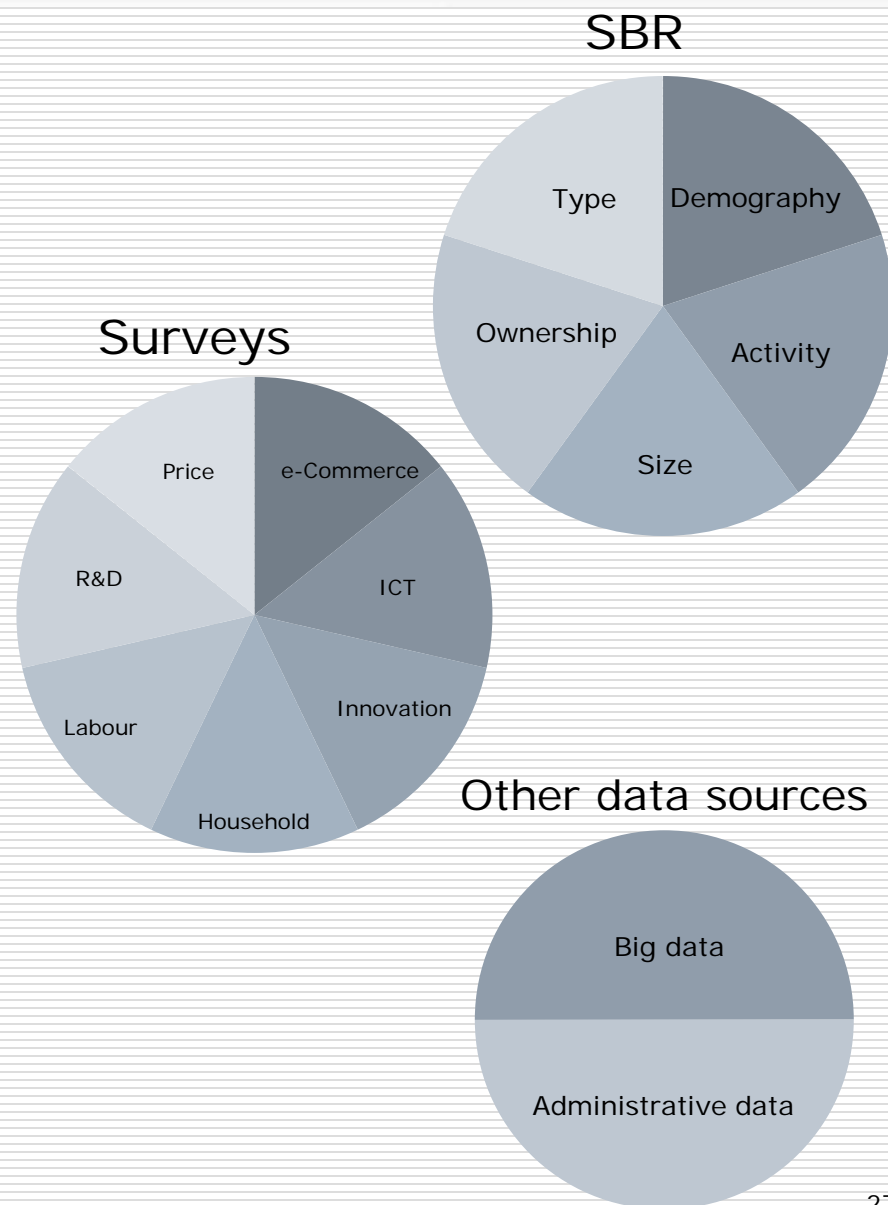
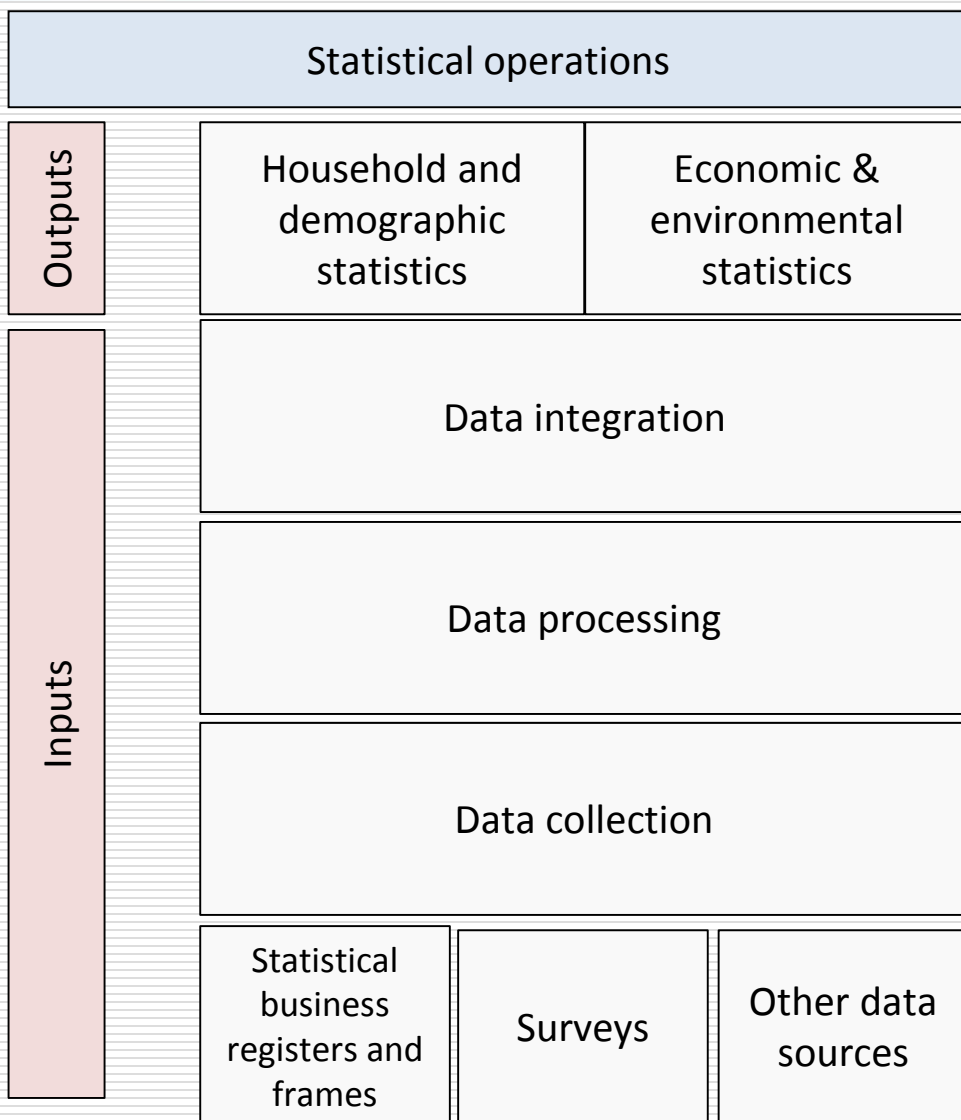
Institutional arrangements





Components of statistical framework for the digital economy

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Conclusions

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- Benefits, costs and outcomes
 - The digital economy can bring great economic and societal benefits
 - Digital divides within and between economies
 - Polarized labor markets, inequalities, lack of trust
- Policy
 - A flexible policy framework is needed to determine how to maximize the benefits, while mitigating its negative effects
- Statistics
 - An integrated statistical framework for the digital economy is needed to complement the policy framework
- Way forward
 - New global user-centered consultation mechanism complementing domain specific regional and international consultation mechanisms (such as for national accounts, business and trade statistics and prices)



Email sna@un.org if you have any questions



Thank you

谢谢