



ITUKALEIDOSCOPE

NANJING 2017

Challenges for a data-driven society

Open Data Development of Countries: Global Status and Trends

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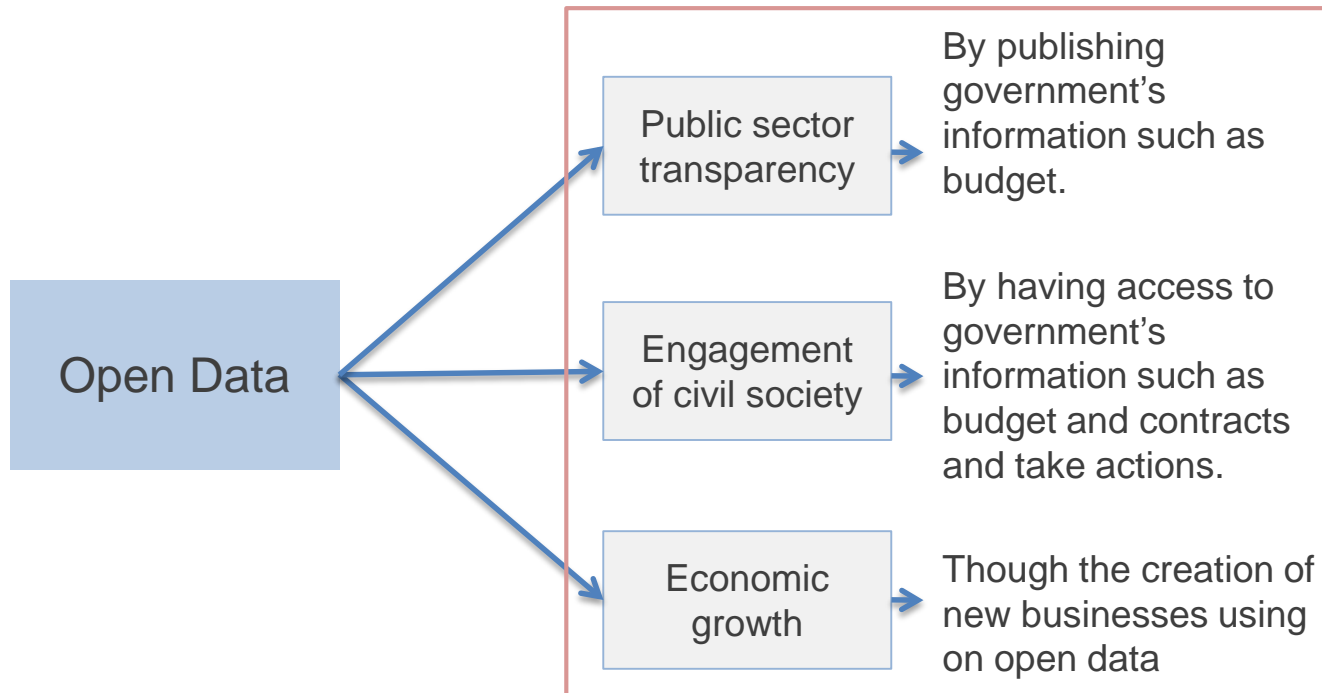
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27-29 November 2017





Open data plays a key role in Government's strategy to deal with challenges of the future

Ways of achieving improvement





The questions that motivated the research

- Can open data have an impact on innovation?
- How successful are government's actions to support economic development through open data?
- Which data can be used to assess the progress on a country level?



Key findings using the ODB and complementary data

General level

- Country's success on open data is based on: good levels of ICT development, freedom, and interest to become more transparent.
- Countries with low ICT development do not profit from open data. However, the evidence is limited, due to the small number of countries observed.

Specific to economic development

- There is a strong correlation between the government's support to entrepreneurs & business and economic impact.



Overview

- Methodology
- Data
- General level analysis: factors that influence success with open data.
 - Global status
- Specific economic development analysis: economic impact through open data readiness entrepreneurs & business.
 - Global status
- Conclusions
- Limitations and further research



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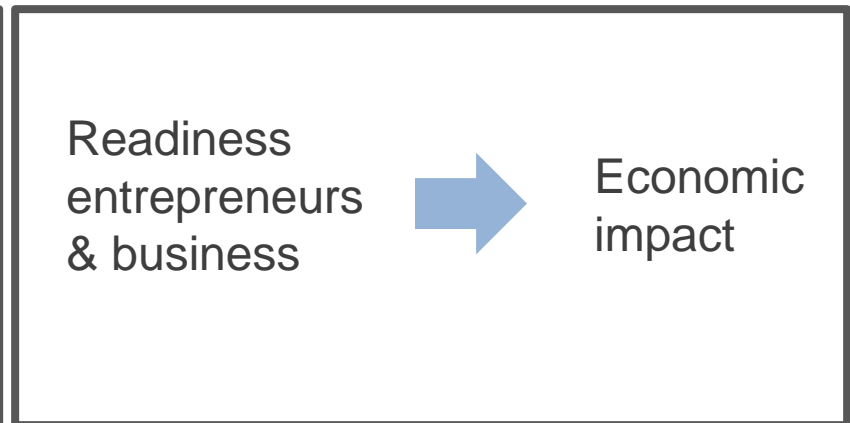
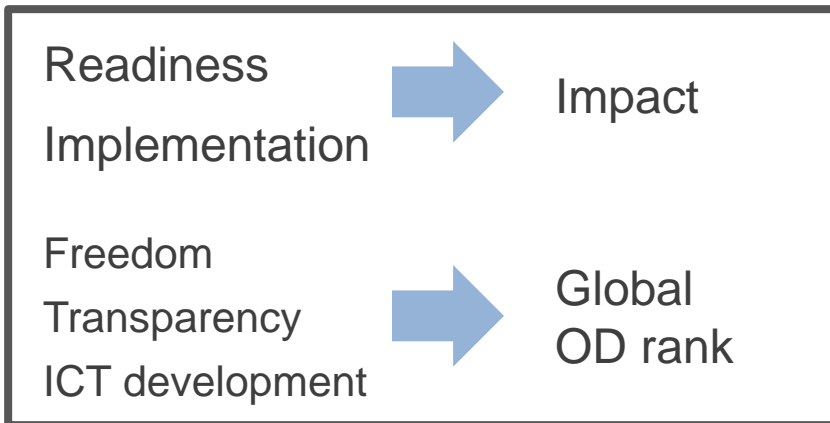


There are four blocks of analysis

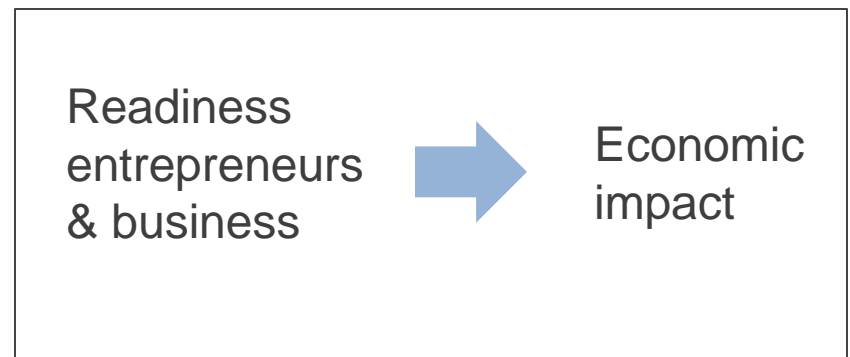
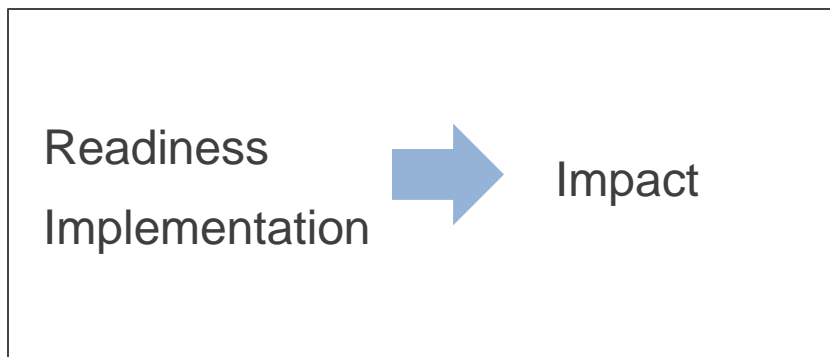
General level

Specific to economic development

Status 2016



Development 2013 - 2016





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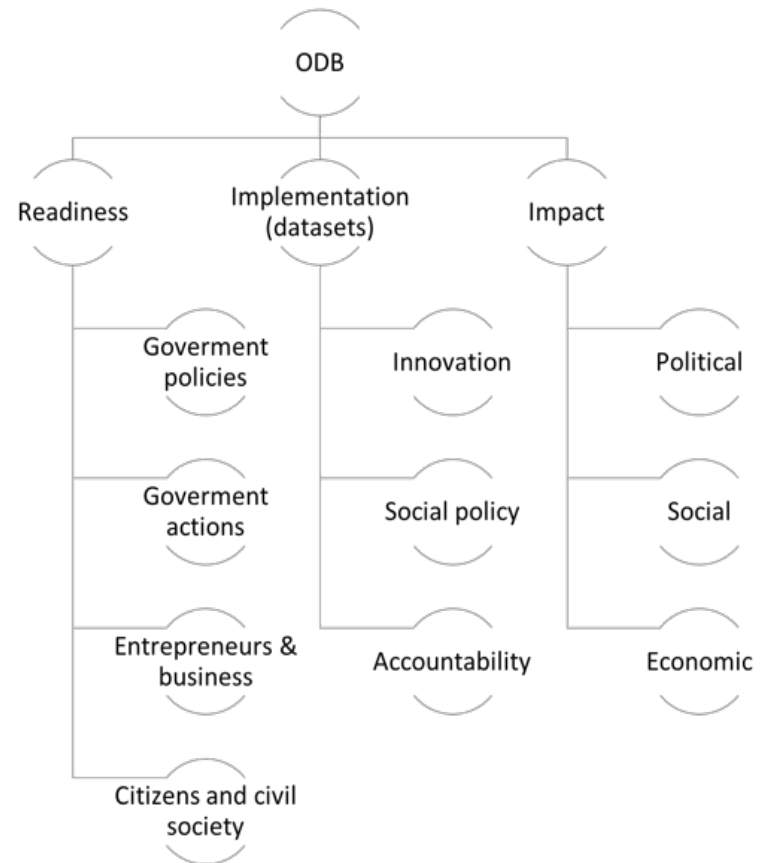
The Open Data Barometer data (ODB)

Primary data:

- Peer-reviewed expert surveys
- Government self-assessment

Secondary data:

- World Economic Forum
- World Bank
- UN e-Government Survey





Complementary data

- ICT Development Index (IDI) 2016 International Telecommunication Union
- Corruption Perceptions Index (CPI) 2016 - Transparency International
- Freedom in the world status 2016-17 - Freedom House
- Gross National Income (GNI) - World Bank
- Global Innovation Index (GII 2017) – WIPO, INSEAD, Cornell. World Bank

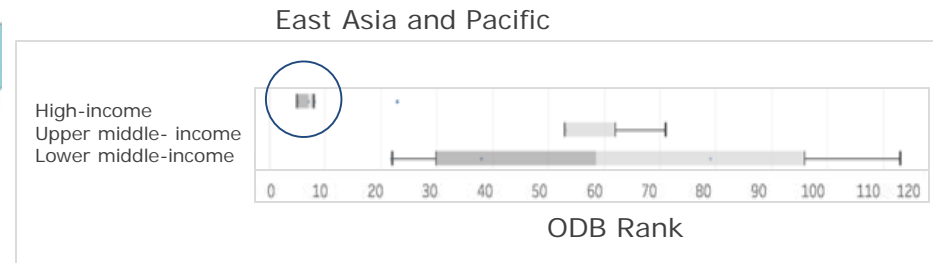
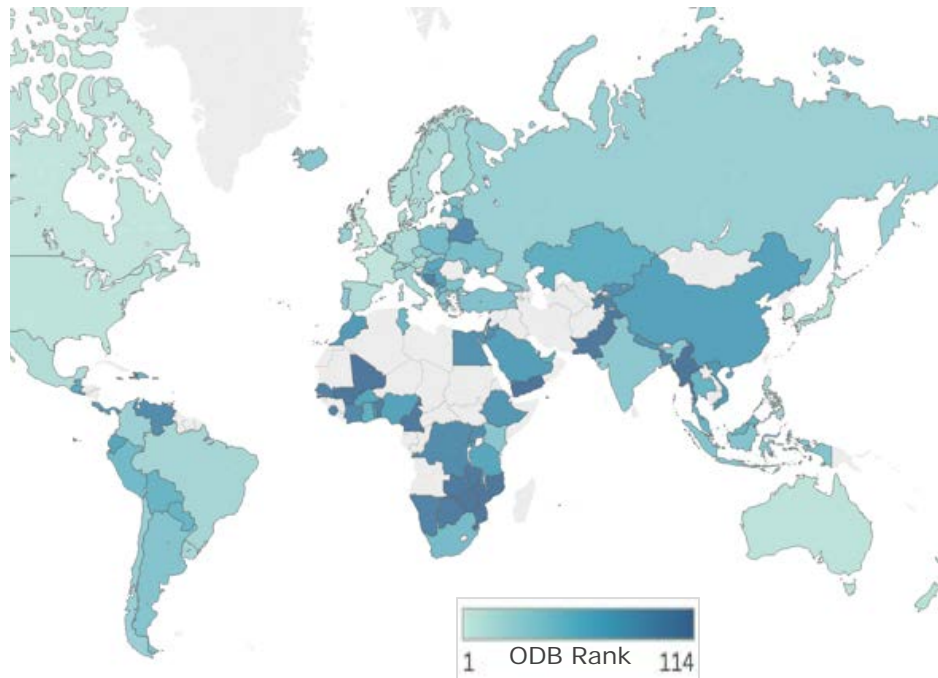


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The open data rank follows expected results regarding regions and income levels of countries



- Performance of countries within the same region varies.
- Countries' income level explains some of these differences.

Notes : 115 countries 4th ed. ODB.

Geographical regions: North America, East Asia and Pacific, Middle East & North Africa, South Asia, Latin America & Caribbean, Europe & Central Asia and Sub-Saharan Africa.

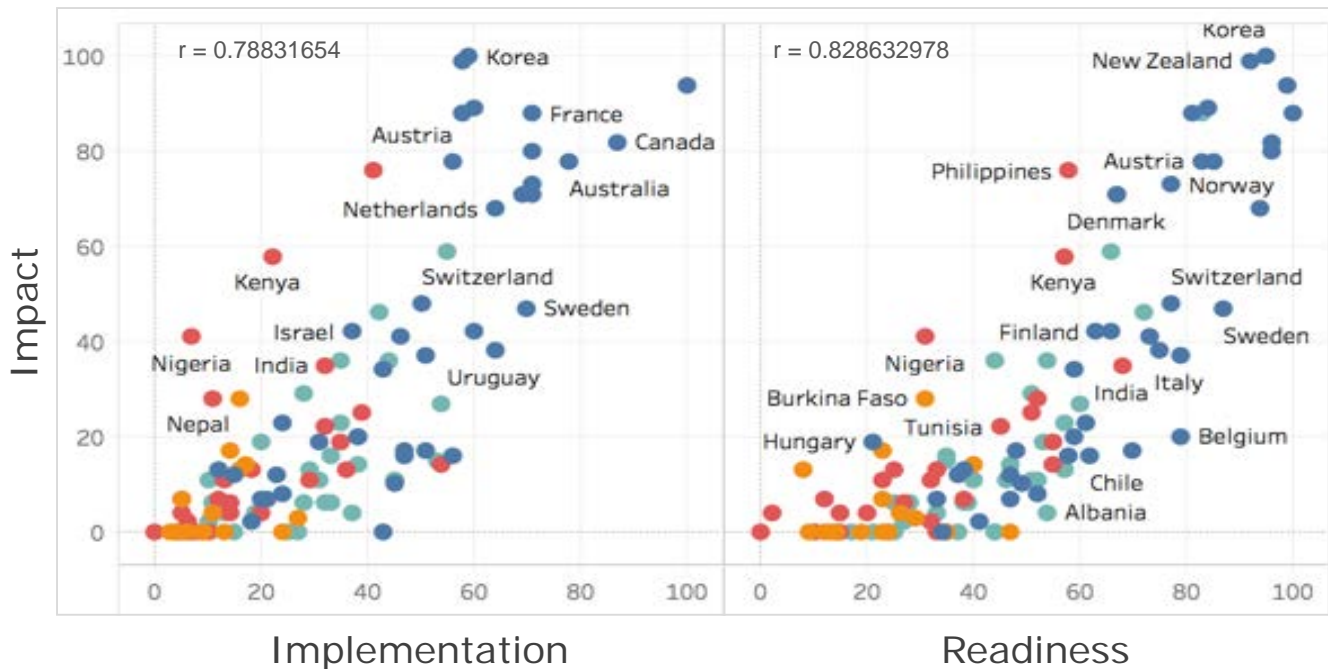
Income categories Gross National income (GNI): High-income, upper middle- income, lower middle-income, and low-income.



There is a clear correlation between readiness, implementation and the measures of impact



■ High-income
 ■ Upper middle-income
 ■ Lower middle-income
 ■ Low-income



Higher level of readiness than implementation by the countries.

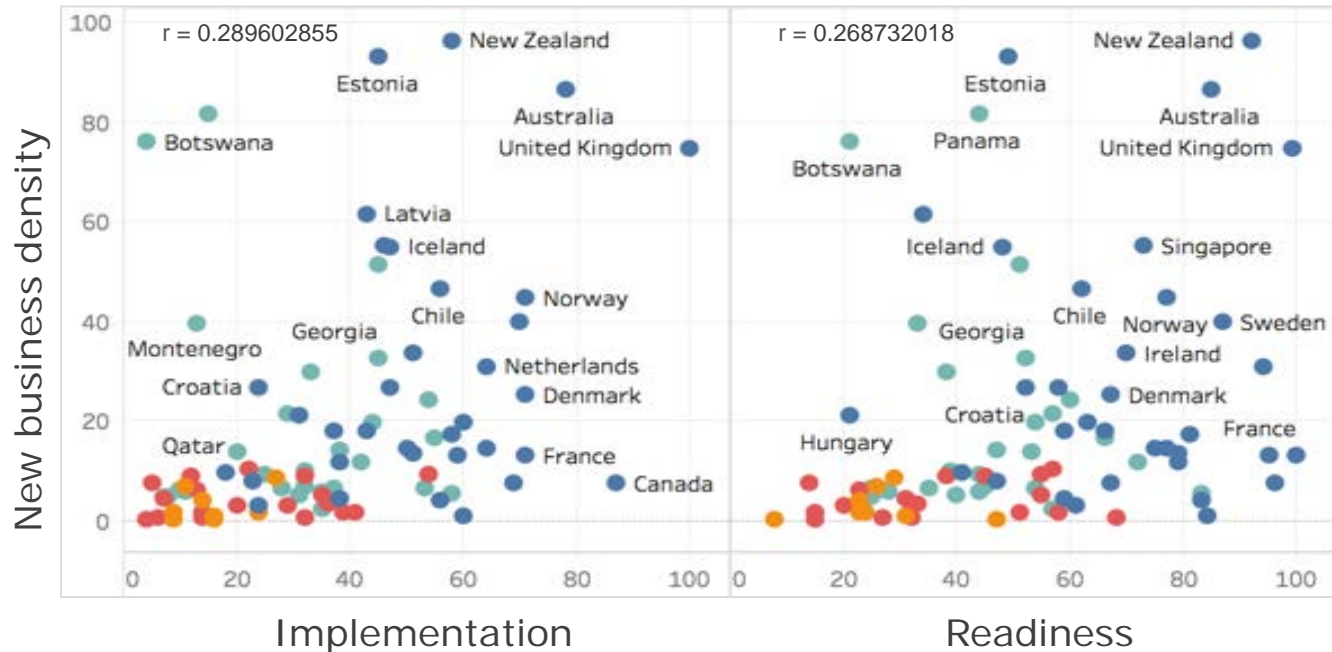
Low-income countries do not show any impact regardless the level of readiness and implementation.



New business density per country reveals a more complex relationship than with the ODB impact



■ High-income
 ■ Upper middle-income
 ■ Lower middle-income
 ■ Low-income



- There is not one canonical measure of innovation.
- Innovation is measured using an independent measures of the GII to compared it to the measures of the ODB impact.
- ODB assess OD impact and innovation based on expert survey results only.

Note: 'New business density' -new registrations per thousand population 15–64 years old in 2014.

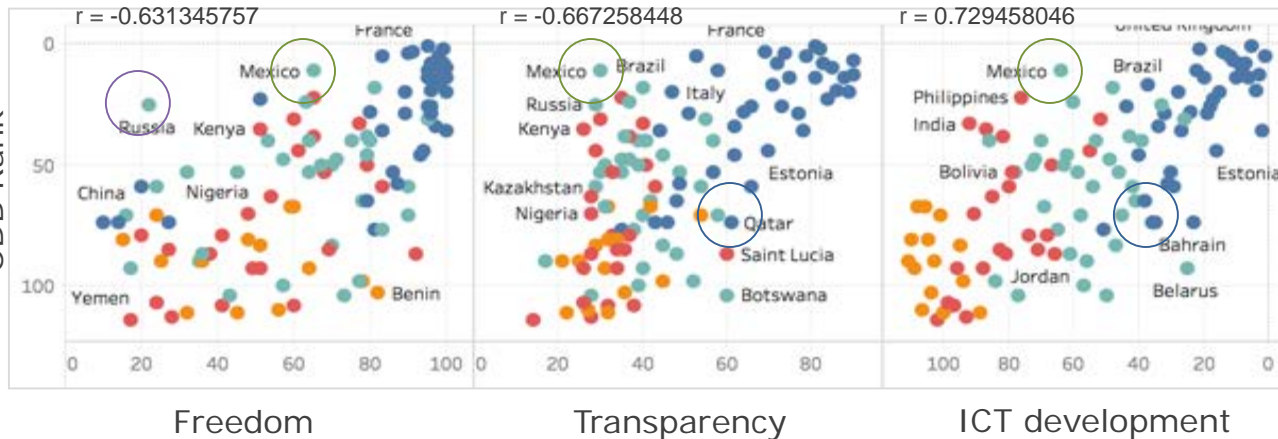


The ODB rank is strongly related with the levels of ICT development, freedom and transparency



■ High-income
 ■ Upper middle-income
 ■ Lower middle-income
 ■ Low-income

ODB Rank



Upper-middle income: wide range in level of freedom influences open data rank

Lower middle-income: wide variation in the freedom status, and low ICT development.

Low-income: The lowest level of ICT development, and ODB rank. Limitations to access to data.

- ICT Development Index (IDI) 2016 - ITU
- Corruption Perceptions Index (CPI) 2016
- Freedom in the world status 2016-17



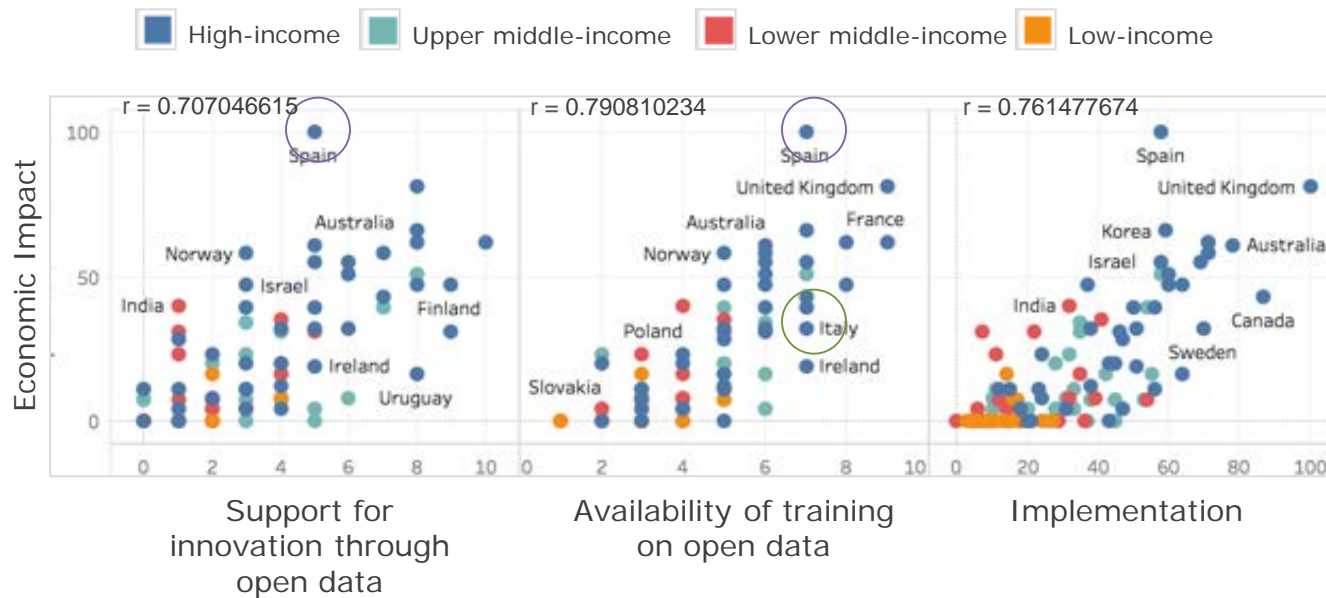


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Open data entrepreneur & business readiness and the economic impact are related



High and middle-income: Strong correlation between economic impact and the factors to support business readiness

Low income: no economic impact.

- Entrepreneurs & business readiness:**
- Availability of training on open data
 - Support for innovation through open data



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Conclusions

- Can open data have an impact on innovation?

Good levels of ICT development, freedom, and interest to become more transparent are basics for success with open data.

- How successful are government's actions to support economic development through open data?

There is a strong correlation between the government's support to entrepreneurs & business and economic impact.

- Which data can be used to assess the progress on a country level?

Reliable datasets such as ODB, IDI, GII, CPI, Freedom Index, World Bank, Global Open Data Index (GODI), Open Data Charter



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Limitations

- Time frame of four years might be too short to notice influence on the economic impact through these measures.
- ODB assesses the impact and innovation of open data relying on expert survey.
- There is not one canonical measure of innovation for open data.



Further research

Further study should investigate whether:

- The time frame of four years is too short to notice influence on the economic impact through these measures
- The measures themselves have been ineffective
- The starting levels on open data readiness have been more important in further development than actual changes during the four years of observation.



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Questions?



Thank you!

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Additional slides



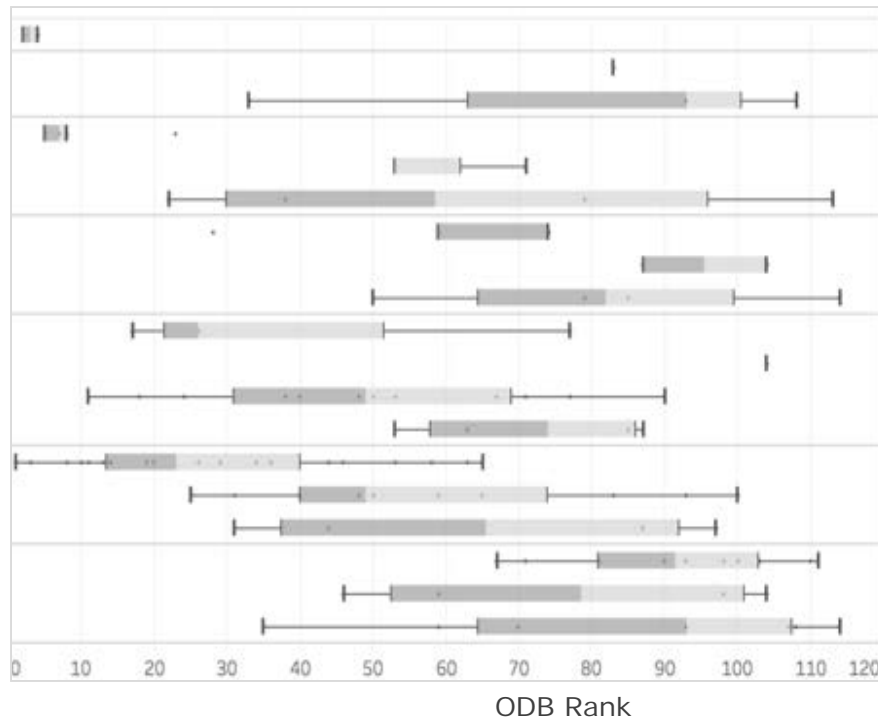
Complementary data used for the analysis

Data	Description
ICT Development Index (IDI) 2016 International Telecommunication Union (ITU)	Based on eleven indicators contained in the categories ICT access, use and skills.
Corruption Perceptions Index (CPI) 2016 Transparency International	Based on perception of the level of corruption of the country's public sector.
Freedom in the world status 2016-17 Freedom House	The Levels of political rights and civil liberties by individuals in the country (Free, Partly Free, or Not Free)
Gross National Income (GNI) per capita World Bank	
Global Innovation Index (GII 2017) WIPO, INSEAD, Cornell.	New business density' per country. Secondary source: World Bank, Doing Business 2016, Entrepreneurship



The open data rank follows expected results regarding regions and income levels of countries

North America	High-income
South Asia	Low- income Lower middle-income
East Asia and Pacific	High-income Upper middle- income Lower middle-income
Middle East & North Africa	High-income Upper middle- income Lower middle-income
Latin America & Caribbean	High-income Low-income Upper middle- income Lower middle-income
Europe & Central Asia	High-income Upper middle- income Lower middle-income
Sub-Saharan Africa	Low-income Upper middle- income Lower middle-income



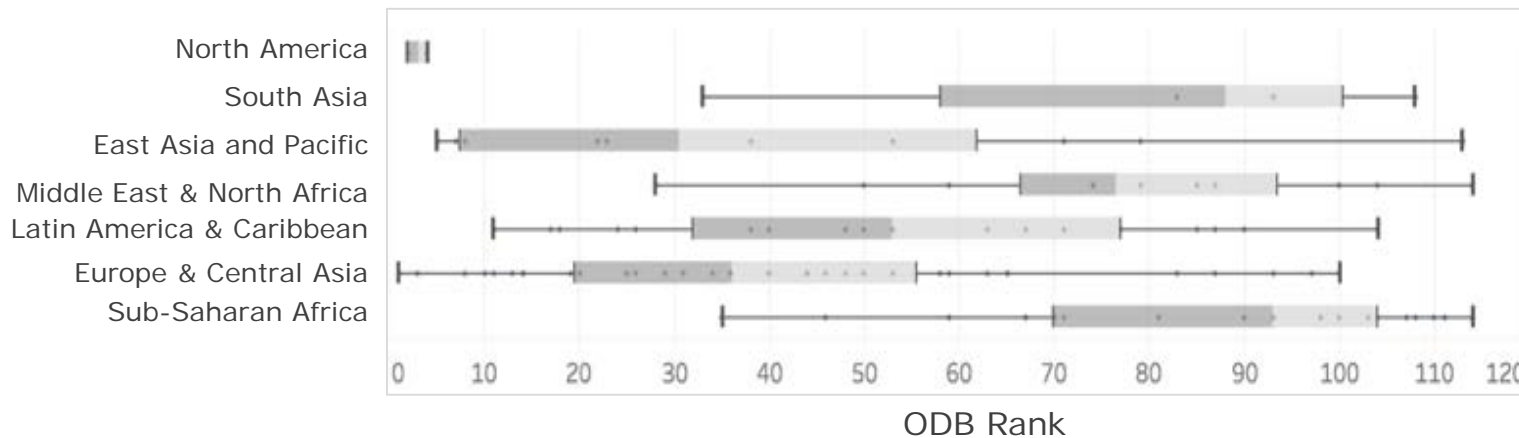
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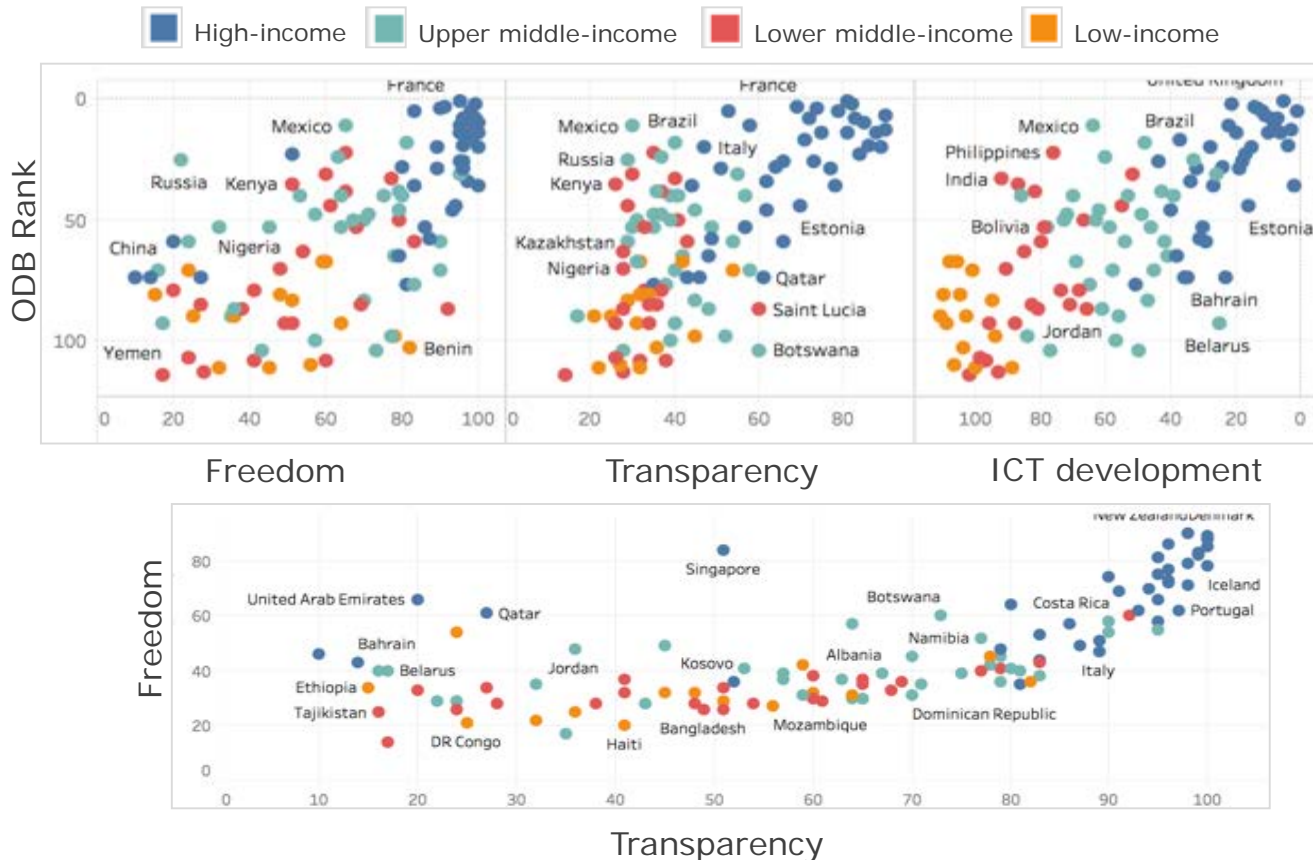
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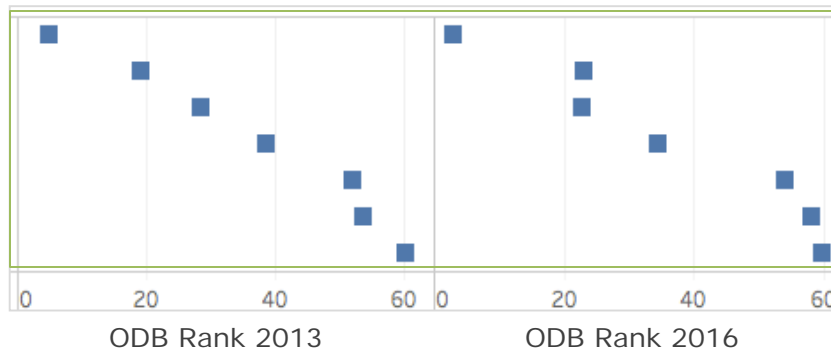
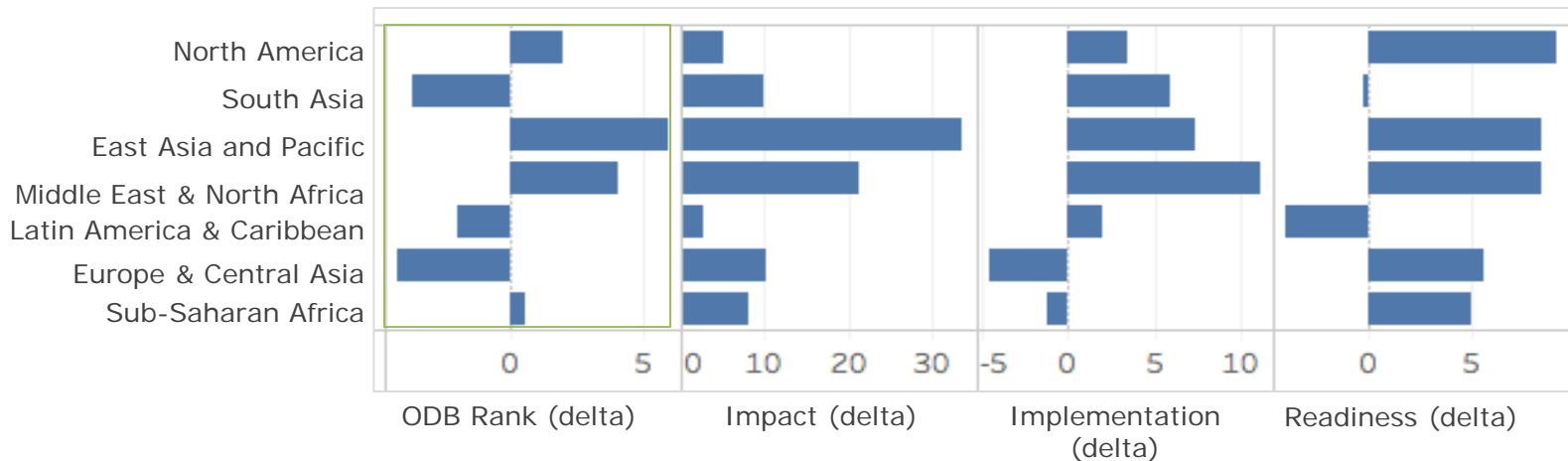


The level of freedom is more related to the ODB rank than the levels of ICT development and transparency





East Asia & Pacific is the one region with the biggest improvement in the impact



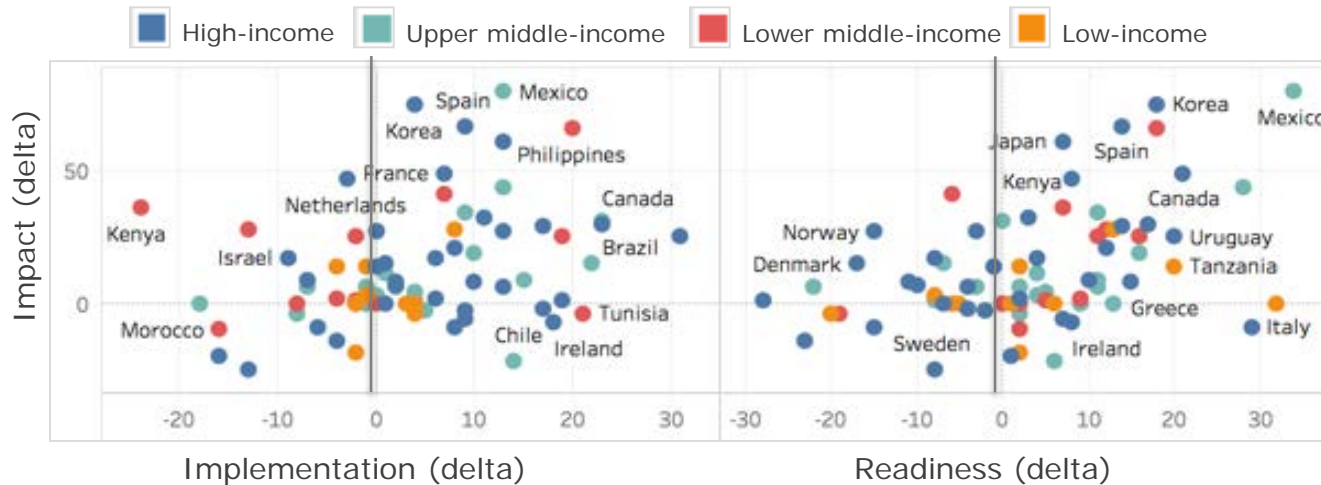
- **East Asia & Pacific** and **Latin America & Caribbean** big improvement in readiness and implementation.
- **East Asia & Pacific**: biggest improvement in the impact, however lower improvement in implementation than Latin America & Caribbean.
- **Europe & Central Asia** no changes regarding readiness. Worsen in the ODB rank.

Note: 77 countries were consider (1st to 4th editions ODB).

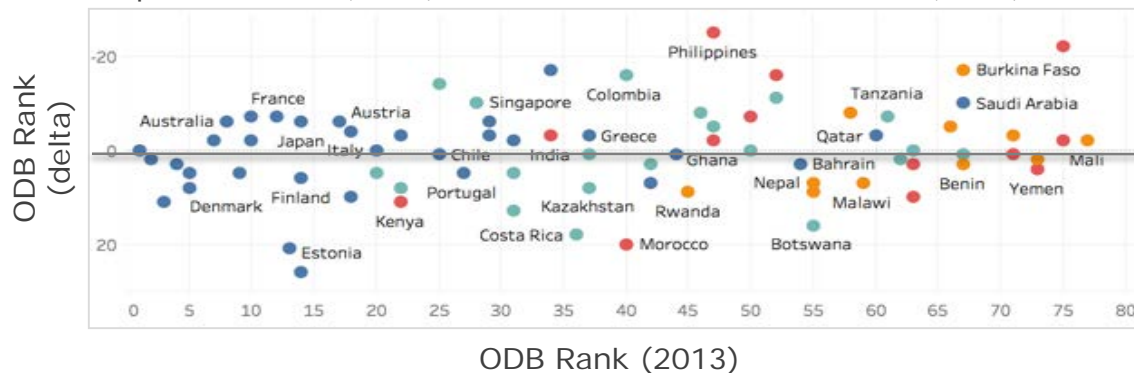




East Asia & Pacific is the one region with the biggest improvement in the impact



- **Scandinavian countries** that used to be at the top of the ODB ranking lost rank, because of implementation and readiness sub-indexes.



Delta change: 2016 - 2013

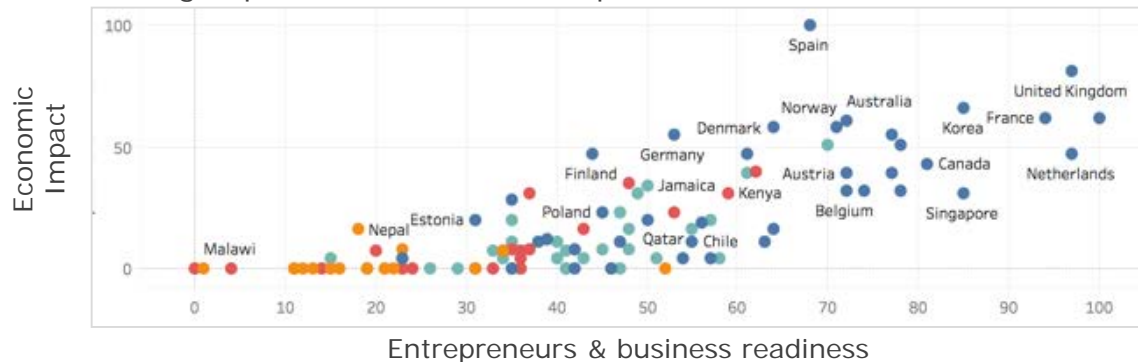
Note: 77 countries were consider (1st to 4th editions ODB).





There is a relation between open data entrepreneurship and the economic impact, but with exceptions

■ High-income ■ Upper middle-income ■ Lower middle-income ■ Low-income

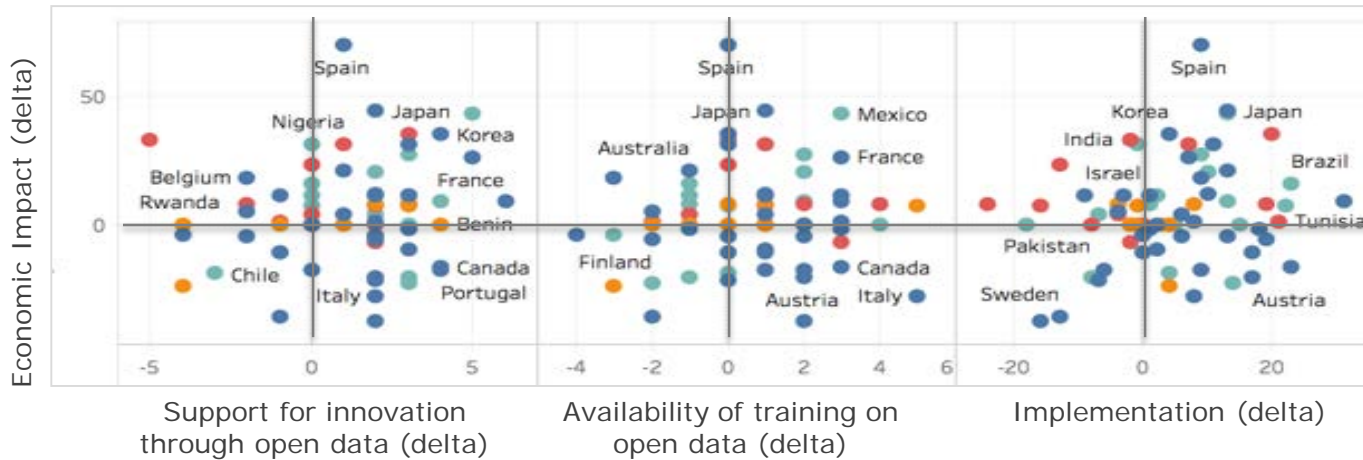


- Entrepreneurs & business readiness:**
- Availability of training on open data
 - Support for innovation through open data





It is unclear whether changes in implementation and readiness have led to changes in the economic impact



No obvious relationship between the change in the sub-indexes and the overall economic impact measure. Possible reasons:

- Four years is not long enough time to notice a direct influence on the economic impact through these measures.
- The starting level has been more relevant, than the recent development, especially for those at the top rank back in 2013.

Delta change: 2016 - 2013

Entrepreneurs & business readiness:

- Availability of training on open data
- Support for innovation through open data

