Macroeconomic Issues in the Digital Economy

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Outline

Definition of the Digital Economy

- G20 : A broad range of economic activities that include
  - using digitized information and knowledge as the key factor of production
  - using modern information networks as an important activity space
  - using the effective use of ICT as an important driver of productivity growth and economic structural optimization

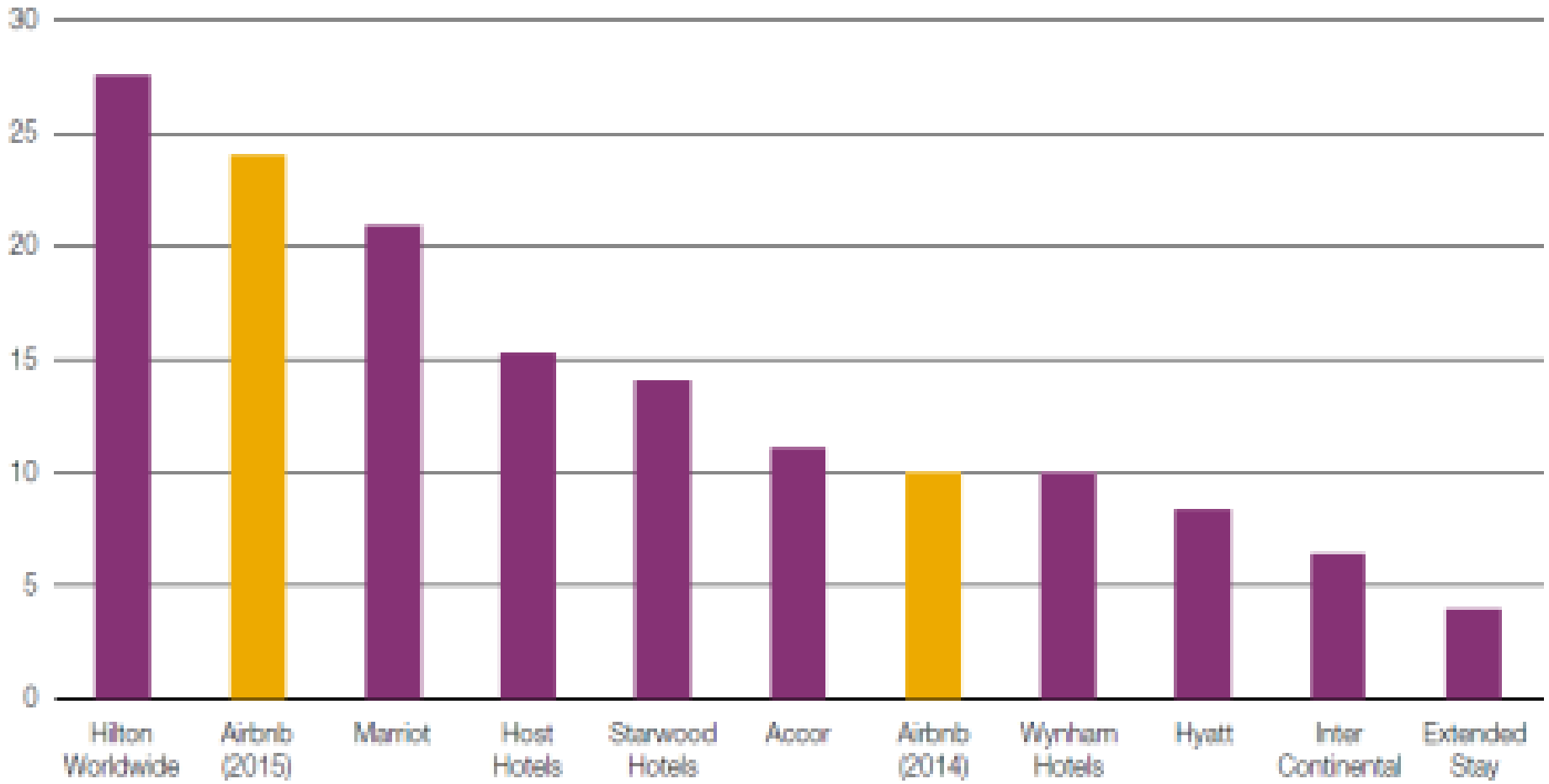
Digital Economics: Goldfarb and Tucker (2017)

- Search costs are lower in digital environments because it is easier to find and compare information online than offline.
- Digital goods can be replicated at zero cost, meaning that they can be consumed by one person without reducing the amount or quality available to others. (non-rival)
- The cost of transportation for digital goods and information is approximately zero.
- Digital technologies make it easy to track any one individual's behavior. Reductions in tracking costs enable personalization and the creation of one-to-one markets.
- Digital technologies have also made it easier to verify identity and also create a digital reputation.

Digital Sharing Economy

Source : Bearing Consulting

Market capitalisation of AirBnB(£ Billions)



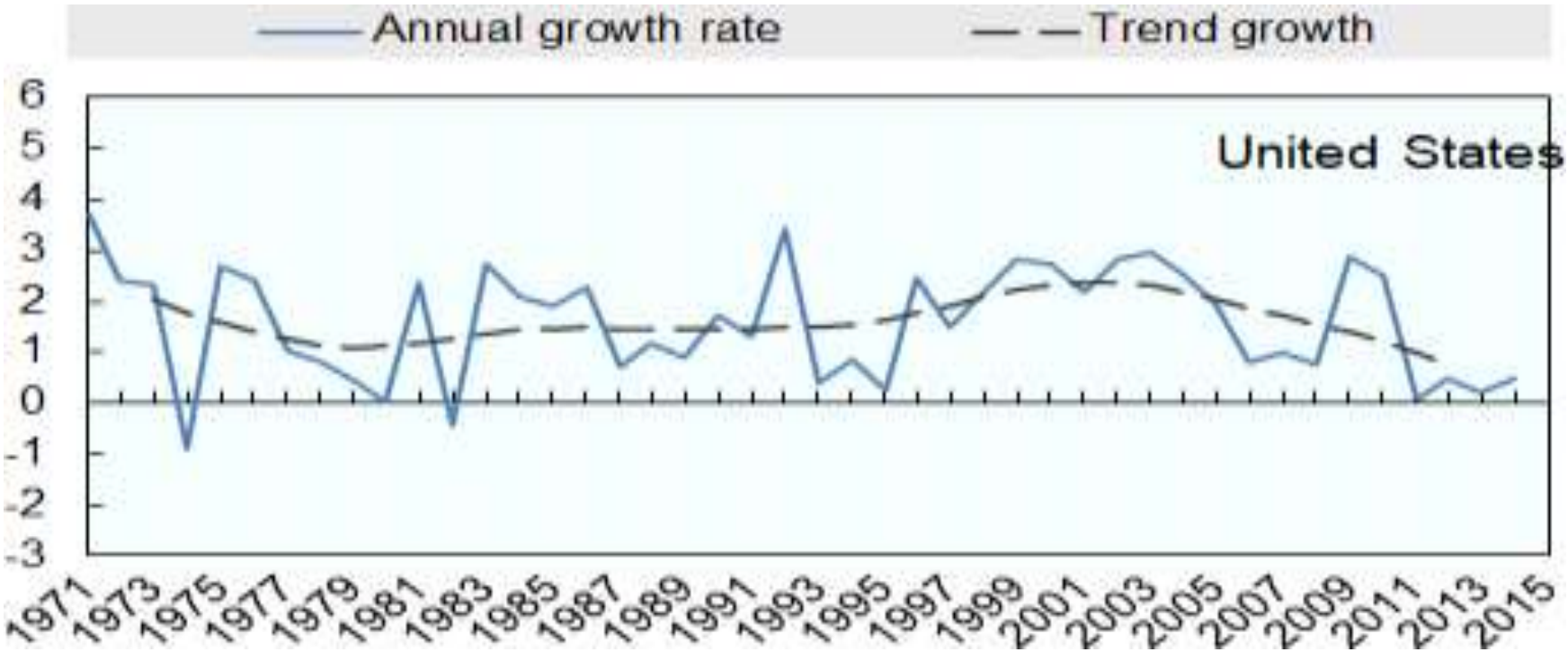
Source : Davidson, L.,(2015). 'Airbnb boss calls the UK the "center of the sharing economy"

Digital Economy and GDP

- GDP measures the monetary value of final goods and services produced in a country in a given period of time.
- James Tebrake (2017)
  - The digital economy is so pervasive that it can affect most aspects of the national accounts.
  - The change in the nature of the product, the way they are deliverd and consumed and who delivers them are having a significant impact on national accounting.
  - The digital economy is an important challenge for national accounts because our traditional data sources and methods need a fundamental re-think.

Productivity Puzzle

- The productivity slowdown has ocurred at a time of rapid technological change, increasing production in global value chains, and rising education levels in the labor force.



Source : OECD Productivity Database

Potential Mis-measurement Issues

- Some concerns about the measurement of GDP have arisen in a variety of areas.
  - New forms of intermediation service
  - Consumers as producers
  - Consumer durables and investment
  - Free and subsidised consumer products
  - Free assets produced by households
  - Prices and Volumes

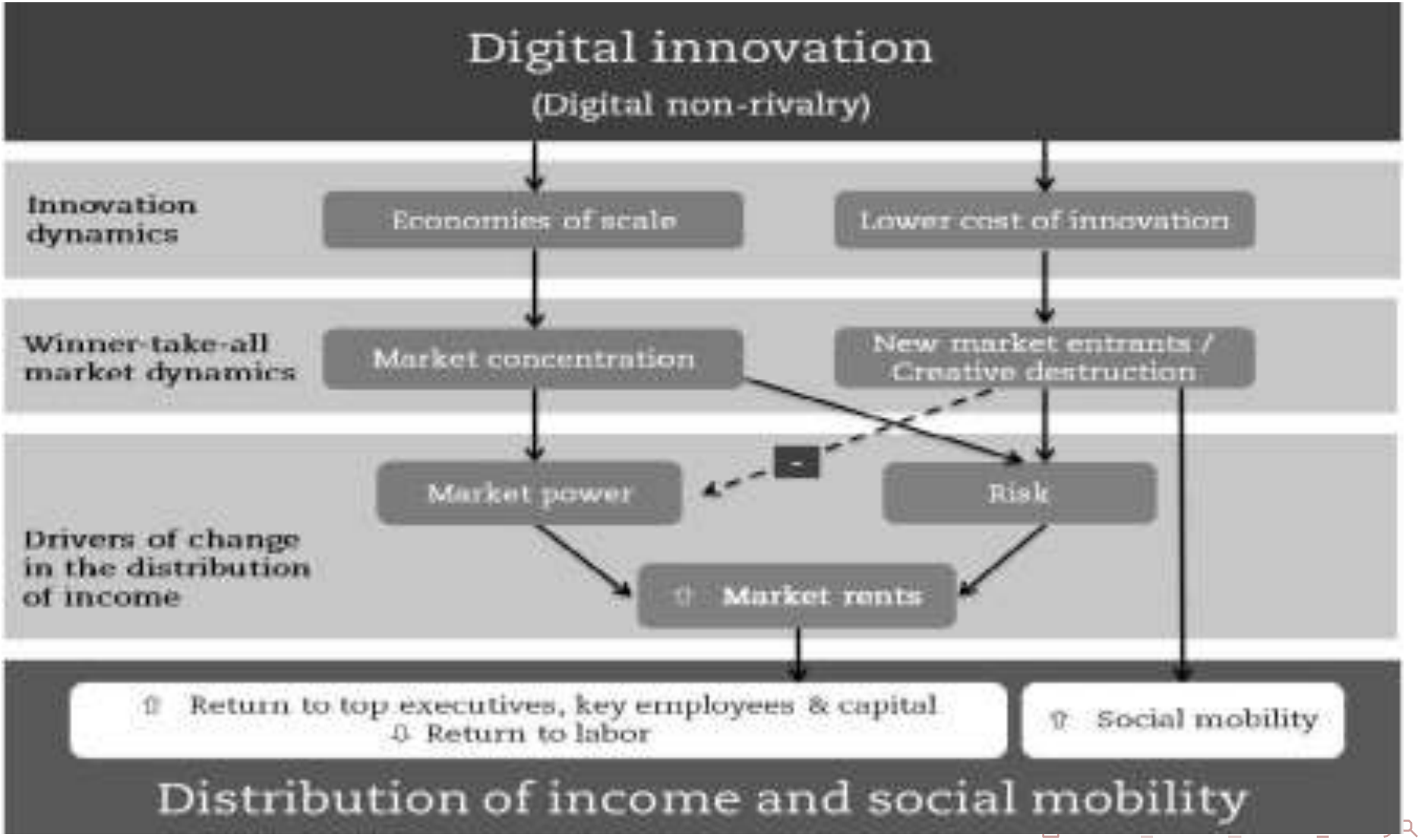
OUTLINE

Inequality Drivers

- Technological change has played a central role in driving up the skill premium, resulting in increased labor income inequality.
- In advanced economies, offshoring has been cited as an important driver of the decline in manufacturing and rising skill premium.
- Foreign capital inflows in relatively higher skill-intensive sectors pushe up the demand for and wages of higher skilled workers.
- A decline in trade union membership could reduce the relative bargaining power of labor, exacerbating wage inequality.
- The progressivity of tax systems has declined in some advanced economies over the past few decades.

DIGITAL INNOVATION AND DISTRIBUTION OF INCOME

- Guellec and Paunov(2017)



Policy Implications

- Tax instruments might sometimes be counter-productive when it comes to addressing innovation-related income inequalities.
- Innovation policies may be biased in favor of incumbents. Relevant policies include special clauses to support start-ups and special conditions for small firms to access public markets.
- The development of dedicated markets for IPR can facilitate the use of IPR protected inventions by third parties against payment of fees.
- To facilitate competition, the benfits from exploiting data need to be shared more equally.