

# The Race for Scale: Market Power, Regulation and the App Economy

(GSR-16 Discussion Paper)

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## Agenda

- What it is the App Economy?
- Is the App Economy affecting or encouraging technology developments?
- How do we measure the App Economy?
- Possible regulatory approaches and recommendations

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# What it is the App Economy?

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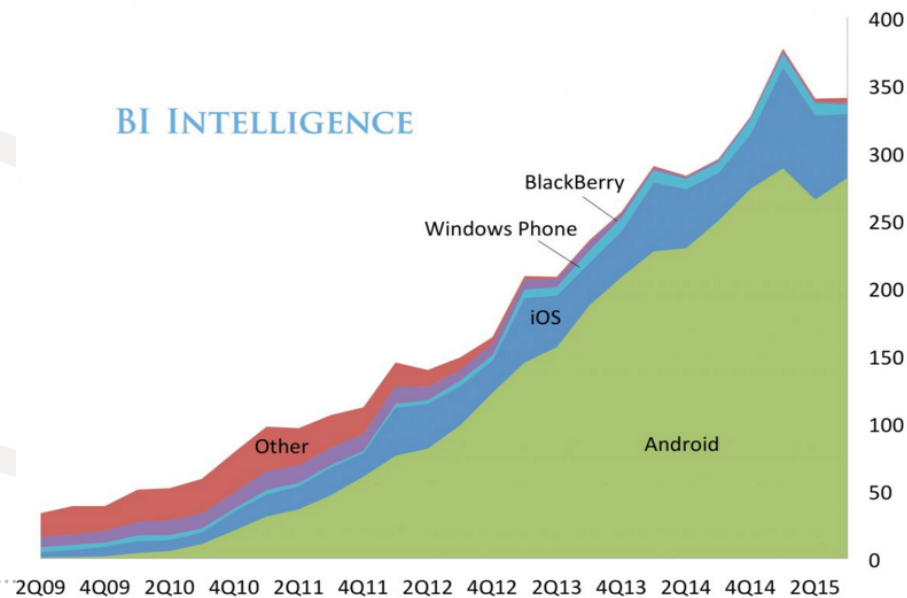
## What it is the App Economy?

- The information and communication technologies (ICT) sector is an important part of modern economies and numerous studies point to the positive impact that these technologies have on economic growth both in developed and developing countries.
- A new era began, in 2007 when Apple launched the first smartphone; the App Economy...

*The App Economy is the sum of all economic activity, products and services, required to deliver app functionality to end users via broadband services.*

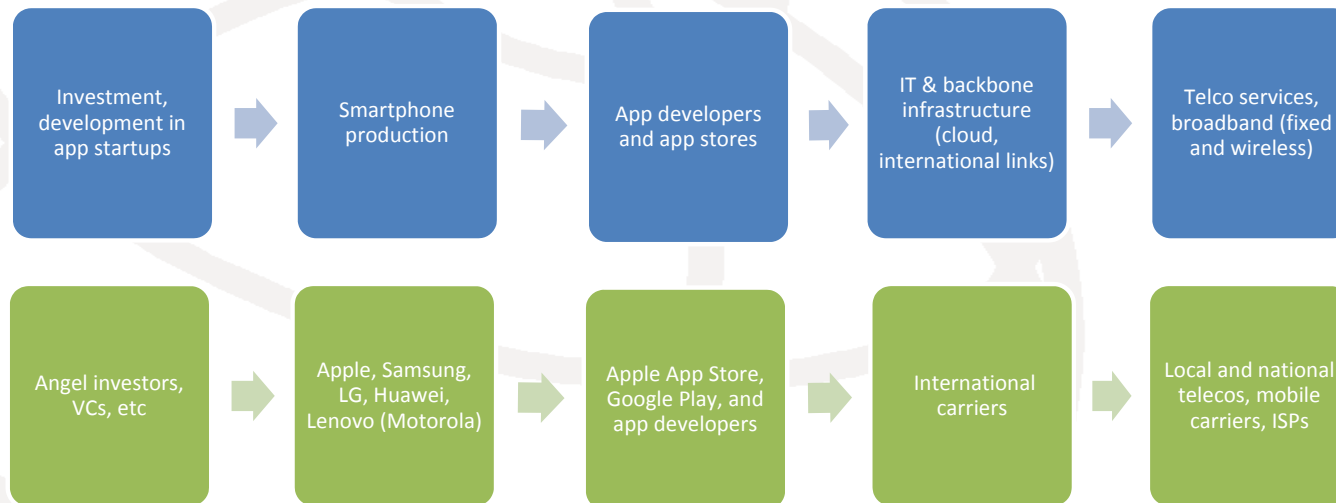
## Structure of the App Economy: Market Concentration

- The dominance of the existing big app companies as the home to the two dominant app platforms may prove to be a barrier to the growth of the app economy in developing countries.
- However, despite this concentration, other countries such as, in Asia have shown that a vibrant national app economy can be developed based on the specific preferences of the domestic market (e.g. China).



# The App Economy Value Chain

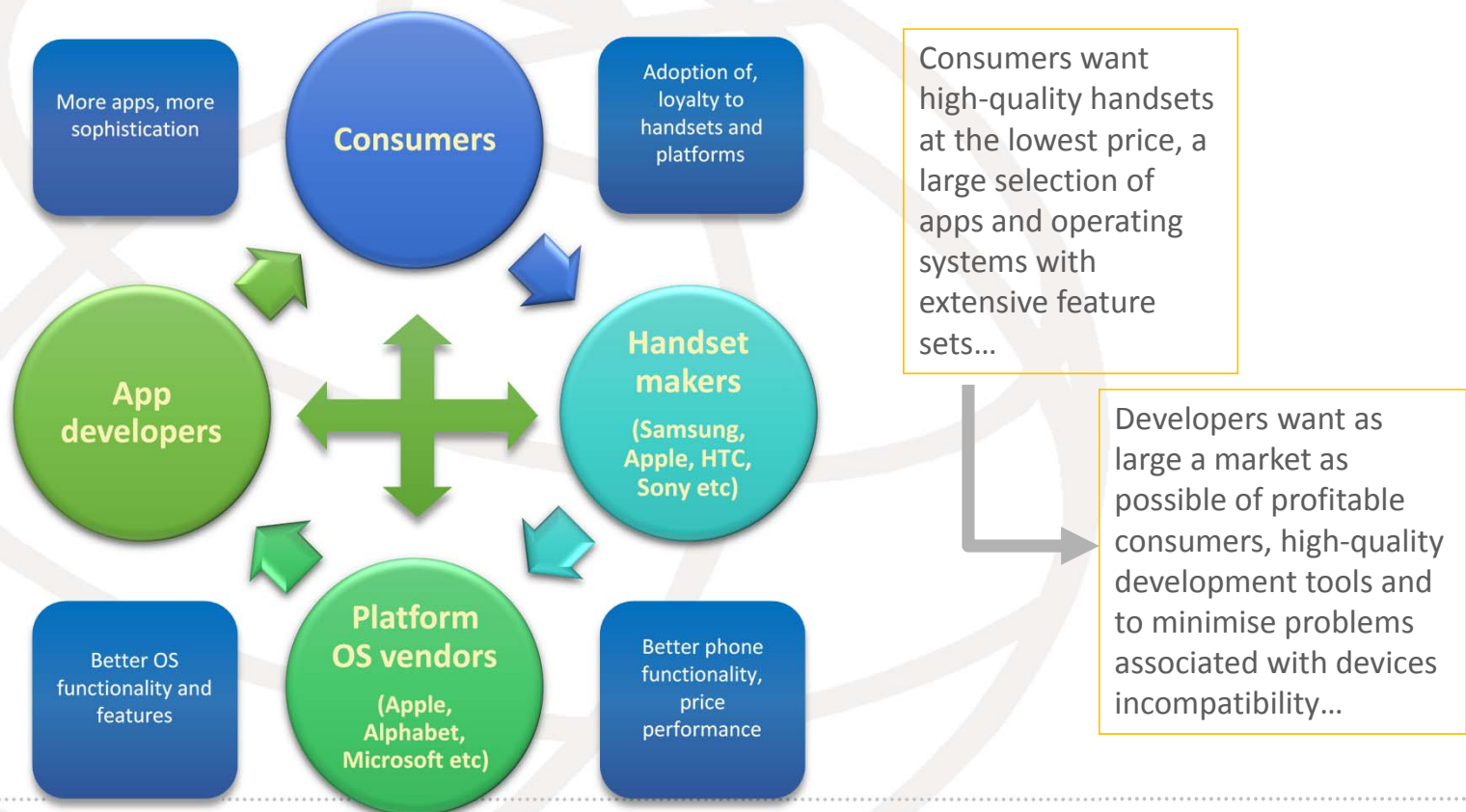
One starting point for developing a definition of the app economy is to understand the app value chain.



Source: Systems Knowledge Concepts ([www.skc.net.au](http://www.skc.net.au))

All the economic activity in the app value chain that is required to deliver apps and their associated network functionality to end users.

## The 'virtuous cycle' of the App Economy ecosystem





**Is the App Economy affecting  
or encouraging technology  
developments?**

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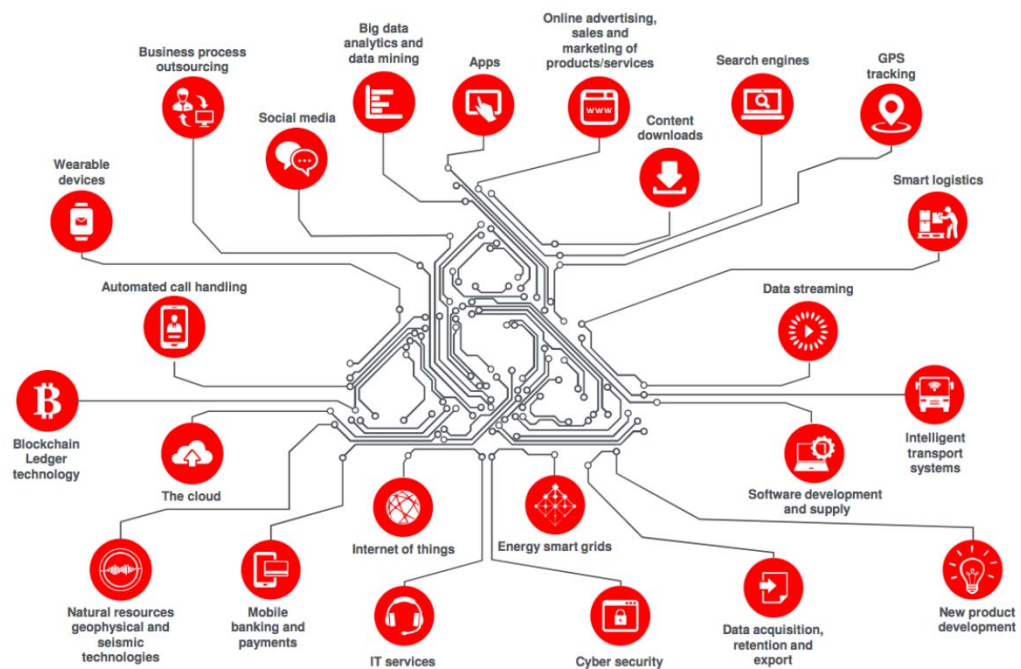


## The App economy is complex and interconnected

- The possibilities are infinite and everyone and everything gets connected as innovation increases and the costs of sensors fall (e.g. driverless transport)
- Lower cost of devices or incorporating chipsets means that things not just people are connected
- In contrast, usable wireless spectrum is finite!
- Higher data speeds and more capacity requires better spectrum utilization
- More will need to be done with what is available – sharing will be part of that!
- Early work with government and regulators is key to ensure operators can exploit such technologies and ensure sustainable returns for the benefits of consumers

# Is the App Economy affecting or encouraging technology developments?

There are many ways that App Economy is affecting ICT technology developments (the cloud, smartphones, spectrum productivity, the move to IP wireless networks)...



## The App Economy is impacting all industries

- The App Economy is impacting all industries and the improving functionality and increasing ubiquity of smart mobile devices is accelerating this effect...



## The App Economy is impacting all industries

- Some examples:
  - **Education** – growth of Massive Open Online Courses (MOOC), online-only enrolments, e-training
  - **Retail** – all major retailers now offer online shopping and many online only retailers have appeared.
  - **Banking** – with significant reductions in the use of physical bank branches, cheques, and increasing use of online systems for payment of bills, digital financial services, and all general transactions.
  - **Governments services and systems** – with most aspects of government support and engagement moving to on-line, such as payments, mailing and post offices (delivering online shopping), transport offices, taxation arrangements, etc....

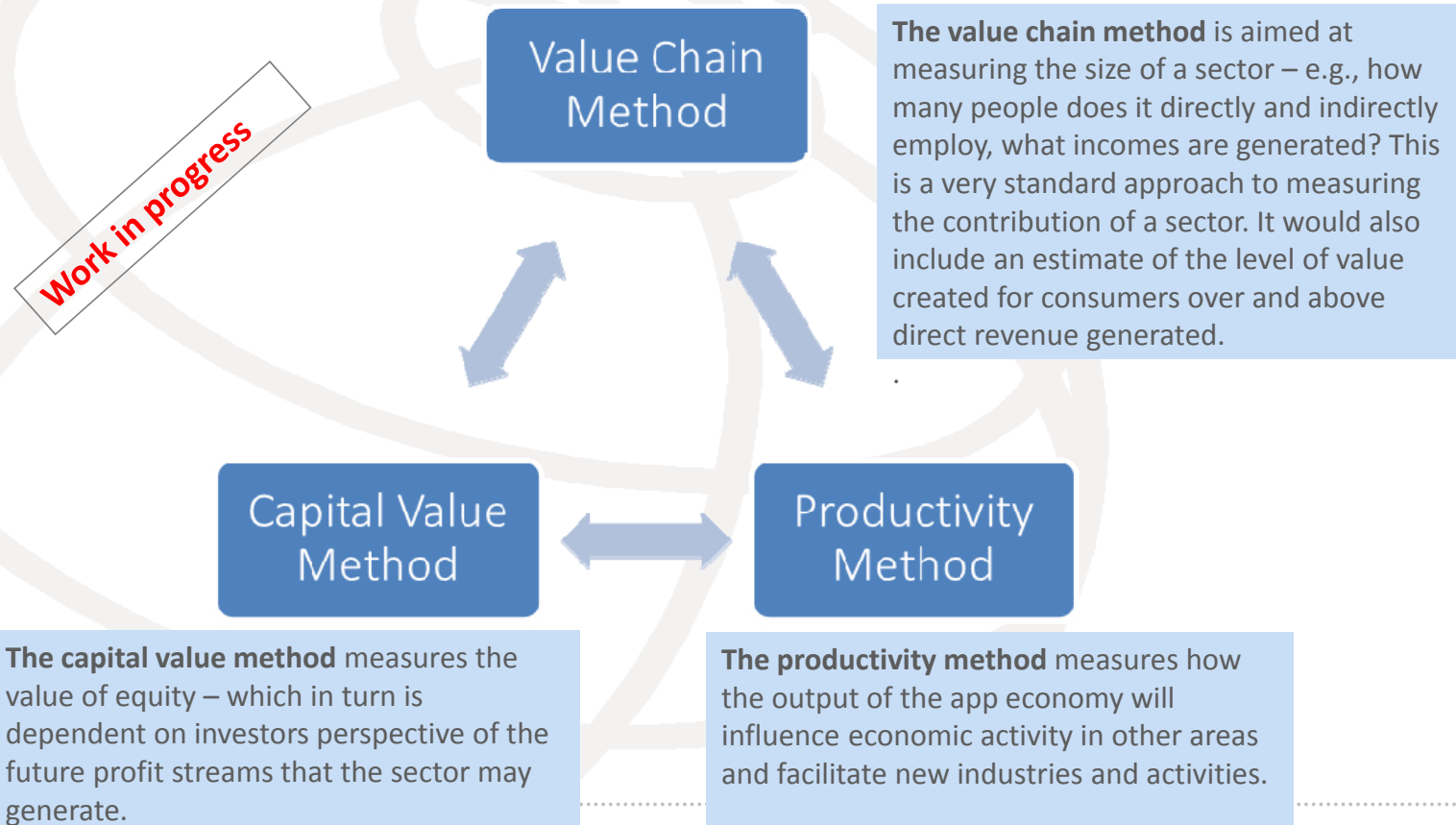


# How do we measure the App Economy?

## How do we measure the App Economy?

- The traditional measure of economic benefit or increases in social welfare is 'value added'.
- The apps economy is about a 'barter economy' – app companies offer services and functionality in return for attention and personal information.
- Since the statistical collections that directly measure the value of the app economy are not available, it is suggested, as first attempt, three different ways in which the impact of the sector can be measured:
  - The Value Chain and Consumer Surplus Method
  - Capital Value Method
  - Productivity Method
- The emergence of the App Economy has prompted widespread industrial change. However, quantifying the scale and scope of these changes is complex.
- There are significant economic impacts of the App economy especially when it is estimated that in Europe up to 2% of the labour force (depending on the market) is already engaged in the App Economy.

## How do we measure the App Economy? An attempt...



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A large, light gray, stylized globe graphic is centered on the page. It is composed of several overlapping, thick, curved lines that form a spherical shape, representing a globe or a network of connections.

# Possible regulatory approaches

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# The debate on optimal regulatory approaches

## Different perspectives on the app economy and its regulation

### REGULATORS



- Security
- Rules
- Law
- Risk management
- Cyber-war
- Cyber-crime
- Protection of assets
- Protection of society
- Protection of privacy
- Protection of traditional market players
- Labor protection
- Syndicates
- Control
- Enablement of international digital spaces
- Enablement of cross national technologies
- Norms
- Consumer protection
- Enablement of a digital single market



### DIGITAL



- Free economy
- Boundless communication
- Full transparency
- Business opportunities
- High rewards
- Freedom of ideas
- Money
- Open society
- Open economy
- Open government
- New ideas
- New ways of working
- Flexibility
- Connectivity
- Global village
- Innovation
- Entrepreneurship

## Key regulatory questions for the ICT sector



How to **define appropriate legal and regulatory provisions** while at the same time recognizing that the applicable body of law **must not hamper the spread of innovation and progress within the digital economy?**



How to **ensure consumer security, product quality and other protections in transactions**, while at the same time **avoiding over-regulating new collaborative business models?**



While initially it may seem that the sharing economy promotes competition against legacy providers, there is a danger, as these businesses grow, that they may be tempted to exercise their own expanding market power. So, **how to balance regulations for established businesses and new, innovative businesses?**



Globally, a range of organizations are arguing the case for less rather than more regulation for the sharing economy. **Where is the market failure we need to address?**

## Is *ex ante* regulation needed in the future or is *ex post* regulation sufficient for the app economy?

### Ex post:

After the event regulation relating to  
specific allegations of market abuse

#### Advantages:

- Attempts to stop conduct only shown to be harmful
- Lower information and monitoring requirements
- Least disruptive regulatory approach for emerging markets

#### Disadvantages:

- Triggered only after anti competitive conduct has occurred
- Securing information from accused firm is difficult
- General competition provisions may be unsuitable for industry specific issues

### Ex ante:

Anticipatory intervention mainly  
concerned with market structure

#### Advantages:

- Sets forward looking expectations for firm behaviour
- Provides industry certainty by setting clear rules
- Promotes a greater degree of transparency

#### Disadvantages:

- Can lead to excessive or unnecessary regulation
- Can create market distortions through regulatory arbitrage
- Regulatory processes are costly and prone to capture by regulated entities

## Recommendations (1/2)

- Undertake a **review of the regulations applicable to network operators and OTT players**
- **Update the licence conditions** and as required provide deeming provisions for non-resident OTT providers etc.
- **Assess and continually monitor** the state of competition in the market
- **Collaborate with tax authorities**
- **Promote and facilitate ubiquitous broadband** (especially wireless broadband)

## Recommendations (2/2)

- Ensure adequate and up to date **data protection, privacy and cyber security legislation** based on global exemplars
- Establish **co-ordination procedures between other sector regulators**
- Engage in **greater public awareness and advocacy campaigns** in relation to digital/ICT services
- Regulators must **engage more broadly with education and training sector**



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# GSR 16 Discussion Paper: The Race for Scale: Market Power, Regulation and the App Economy

Main  
Topics

- BACKGROUND AND DEFINITION
- APP ECONOMY VALUE CHAIN AND GLOBALISATION OF APP DEVELOPMENT
- ECONOMICS OF THE APP ECONOMY
- MEASURING THE BROAD ECONOMIC IMPACTS OF THE APP ECONOMY
- REGULATORY IMPLICATIONS OF THE APP ECONOMY
- CHALLENGE TO TELECOMMUNICATIONS CARRIERS
- REGULATORY CHALLENGES BEYOND THE TELECOMMUNICATIONS INDUSTRY

The results from this study are available at:

[www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx](http://www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx)

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