# THE MULTINATIONAL CORPORATION IN THE DIGITAL AGE

Multinational Corporations and Corporate Control

Lecture 10

Strategic Leadership and Global Management
Prof. Dr Dodo zu Knyphausen-Aufseß

# GUIDELINE

A fundamental question for research and policy analysis as well as our course is whether, and how, the internationalization strategies of MNCs are impacted by *digitalization*. It is generally argued that digitalization may lead to a retreat in FDI, as it enables MNEs to operate globally and engage in foreign markets without a physical presence. A related point is that MNCs in the digital era will rely less on hierarchical and more on network structures, that they develop into or reinvent themselves as the core of "ecosystems" or "platform" leaders. Below I elaborate on these two aspects.

I have two starting points. The first one reminds you to Bartlett and Ghoshal's concept of a transnational corporation, which obviously represents a network structure—a firm-internal network (slide 3). This concept helps us to see where digital internationalization on the one hand has its foundations in already existing concepts and on the other hand departs in new directions. The second starting point relates to earlier insights regarding the impact of information and communication technologies (ICT) on the structure of (internationalized) firms (slide 4). These basic technologies are now enriched by a plethora of other technologies which are at the heart of today's digitalization discussion (slide 5) and form the current architecture of the digital economy (slide 6), with companies such as Alphabet, Amazon or Meta having an enormous market power (slide 7).

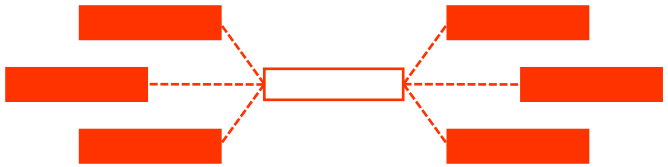
Having laid out these foundations, slides 8-10 now discuss and empirically illustrate directly the question how digitalization affects the foreign asset footprint of corporations. Slides 11-16 focus on the network/ecosystem/platform aspect mentioned above. I introduce and discuss initial definitions (slides 11-12), make a distinction between two types of ecosystems (slide 13) and elaborate on each of these (slides 14-15), before I give you an overview of today's leading digital platforms (slide 16). Slides 17-18 present an initial framework and basic propositions how digitalization may determine the governance of MNCs—the question which is of utmost importance for us. However, to realize the promises of digitalization may not be an easy task if it comes to markets with strong competitors and the need to build up networks of a sufficient size—such as China. Leading U.S. platform-based MNEs have failed to exploit their firm-specific advantages developed in their home market in this battlefield (slide 19). Other, more general risks are discussed on slide 20.

Delivery Hero is a company that is at the intersection of a logistics-based and a digital company—potentially an interesting example to discuss once more the role of distance in international business (slides 21-23).

The appendix presents some interesting, albeit somewhat outdated, information about the digital landscape (slides 25-26) as well as additional insights from a recent review paper regarding the distinction between networks and ecosystems (as well as markets) (slide 27).

# STARTING POINT 1: BARTLETT & GHOSHAL'S NETWORK VIEW OF THE MNC (LECTURE 1)

## Model of the multinational organization



- **Multinational mentality:** Management regards overseas operations as a portfolio of independent businesses
- **Personal control:** Informal HG-Sub relationships overlaid with simple financial controls
- **Decentralized federation:** Many key assets, responsibilities and decisions decentralized

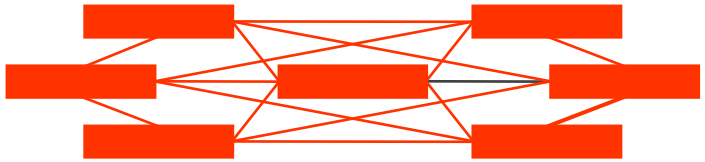
## Model of the global organization

- **Global mentality:** Management treats overseas operations as delivery pipelines to a unified global market
- **Operational control:** Tight central control of decisions, resources and information
- **Centralized hub:** Most strategic assets, resources, responsibilities and decisions centralized

## Model of the international organization

- **International mentality:** Management regards overseas operations as appendages to a central domestic corporation
- **Administrative control:** Formal management planning and control systems allow tighter HQ-Sub linkage
- **Coordinated federation:** Many assets, resources, responsibilities and decisions still decentralized, but controlled by HQ

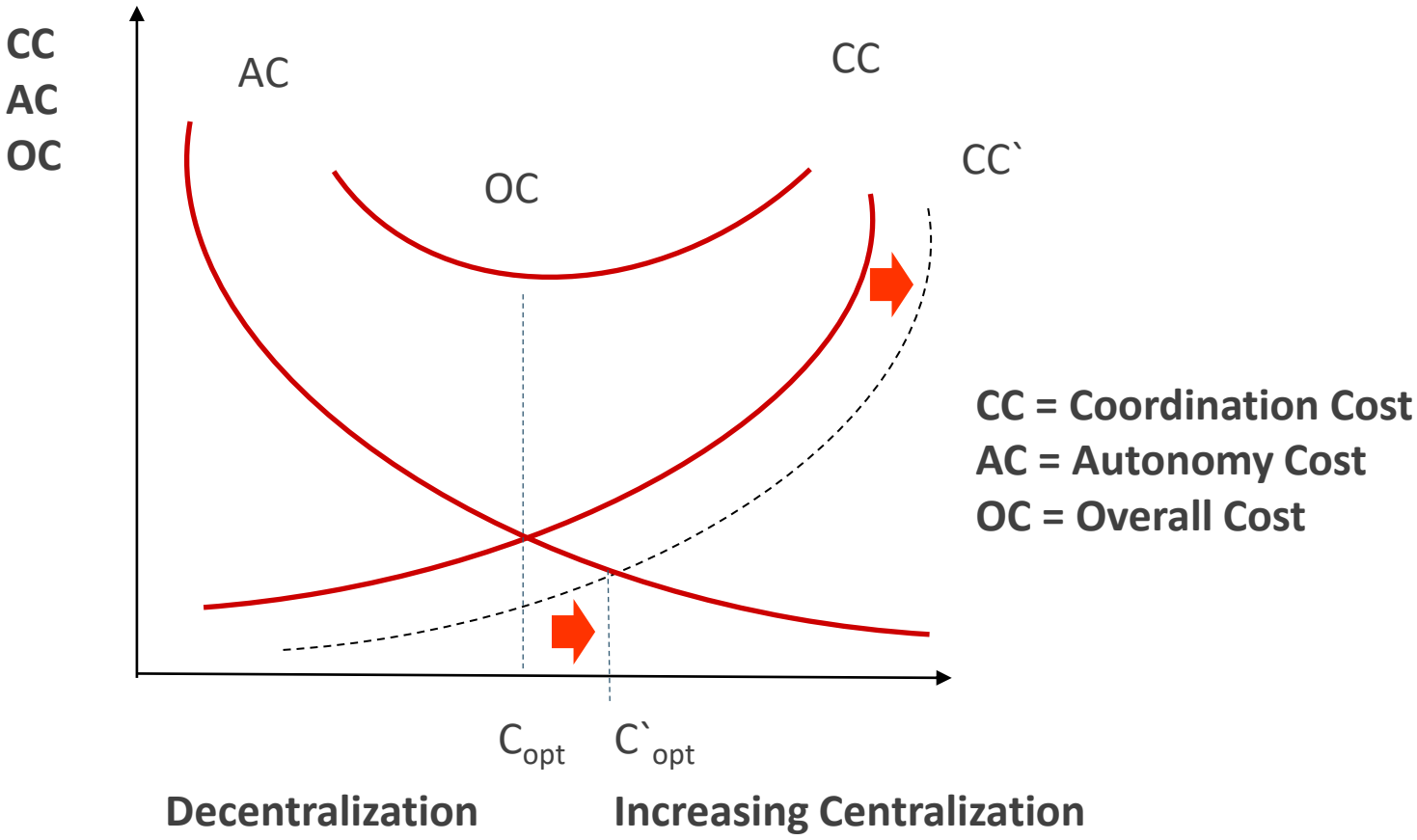
## The transnational solution



- **Complex process of coordination and cooperation in an environment of joint decision making**
- **Large flows of components, products, resources, people and information among independent units**
- **Distributed, specialized resources and capabilities**

Source: Bartlett, C.A./ Ghoshal, S. (1989), Managing Across Borders: The Transnational Solution, Boston 1989, p. 50-52 and p. 89.

# STARTING POINT 2: ECONOMIC & ORGANIZATIONAL IMPLICATIONS OF ICT TECHNOLOGIES




**CC = Coordination Cost**
**AC = Autonomy Cost**
**OC = Overall Cost**

Source: Meckl , R.(2014) Internationales Management, 3rd ed., München: Vahlen, 151

# BEYOND ICT: KEY- AND OTHER IMPORTANT TECHNOLOGIES IN THE INTERNET AGE

Monitoring

Virtual and Augmented Realities

Robotics

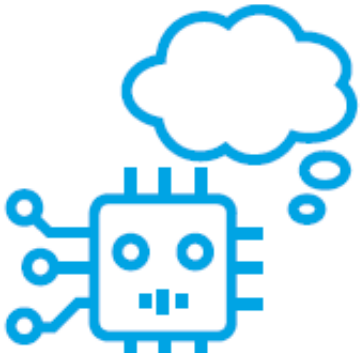
3D Printing

Blockchain

**Other**

**Internet of Things**


**Big Data**



**Artificial Intelligence**

**Cyber Security**

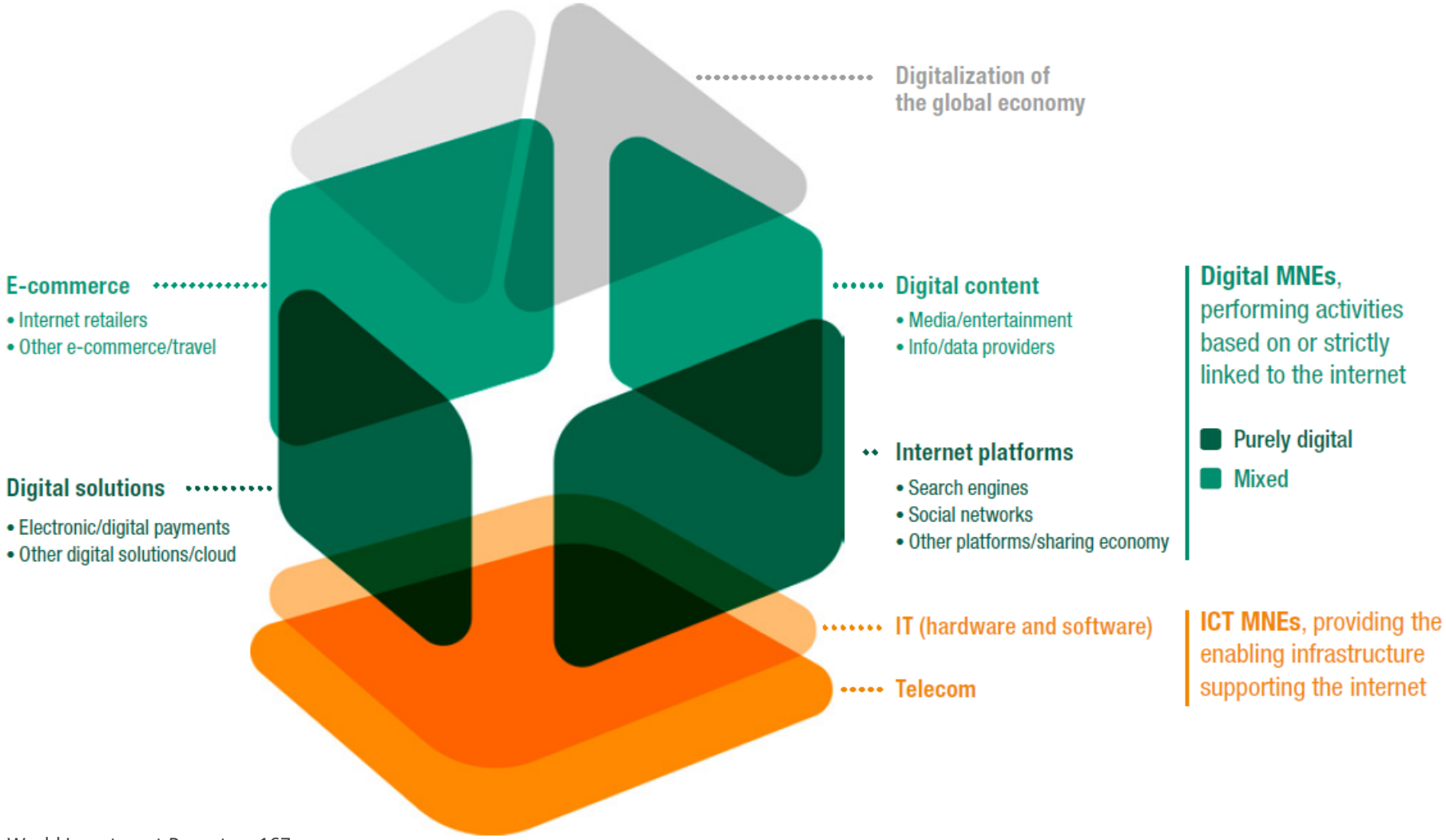
**Key**

Internet, E-Mail and Data-Transfer Services

**Basic**

Source: Wissenschaftlicher Beirat der Bundesregierung „Globale Umweltveränderungen“; Hauptgutachten „Unsere gemeinsame digitale Zukunft“, 2019, p. 70
(Download https://www.wbgu.de/de/publikationen/publikation/unsere-gemeinsame-digitale-zukunft)

# THE ARCHITECTURE OF THE DIGITAL ECONOMY




Source. UNCTAD (2017) World Investment Report, p. 167

# THE WORLD'S LARGEST INTERNET COMPANIES, 2022

**Main sources of revenue:**

- Sale of advertising space (2, 4, 7, 14)
- Transaction-based commission fees (10, 15)
- Commissions from sellers (1, 3, 5, 7, 9, 11, 13, 15)
- Sale of software and IT services (12)
- Direct sale or sale of content rights (6, 8)

| Rank | Company | Revenue USD billions | F.Y. | Employees | Market cap. USD billions | Headquarters | Founded | Industry |
|---|---|---|---|---|---|---|---|---|
| 1 | Amazon | $469.82 | 2021 | 1,608,000 | $1,691 | Seattle | 1994 | Ecommerce |
| 2 | Alphabet | $257.64 | 2021 | 156,500 | $1,917 | Mountain View | 1998 | Internet |
| 3 | JD.com | $149.32 | 2021 | 385,357 | $109.62 | Beijing | 1998 | Ecommerce |
| 4 | Meta | $117.93 | 2021 | 71,970 | $935.64 | Menlo Park | 2004 | Social Media |
| 5 | Alibaba | $109.48 | 2021 | 251,462 | $330.67 | Hangzhou | 1999 | Ecommerce |
| 6 | Tencent | $87.85 | 2021 | 112,771 | $562.84 | Shenzhen | 1998 | Internet |
| 7 | ByteDance | $58 | 2021 | 110,000 | $353 | Beijing | 2012 | Social Media |
| 8 | Netflix | $29.7 | 2021 | 12,135 | $267.46 | Los Gatos | 1997 | Entertainment |
| 9 | Meituan | $27.77 | 2021 | 100,033 | $177.34 | Beijing | 2010 | Ecommerce |
| 10 | PayPal | $25.37 | 2021 | 30,900 | $220.26 | San Jose | 1998 | Financial Services |
| 11 | Wildberries | $22.26 | 2022 | 154,000 | $14.52 | Moscow | 2004 | Ecommerce |
| 12 | Salesforce.com | $21.25 | 2021 | 49,000 | $212.34 | San Francisco | 1999 | Software |
| 13 | Suning.com | $21.09 | 2021 | 69,398 | $13.47 | Nanjing | 1990 | Ecommerce |
| 14 | Baidu | $19.54 | 2021 | 45,500 | $51.77 | Beijing | 2000 | Internet |
| 15 | Otto Group | $18.27 | 2020 | 49,895 | - | Hamburg | 2005 | Ecommerce |

Sources: Wikipedia (https://en.wikipedia.org/wiki/List_of_largest_Internet_companies), Internet research

# WHY DIGITALIZATION CAN LIGHTEN FOREIGN ASSET FOOTPRINTS OF MNCs

**Online marketplaces:**

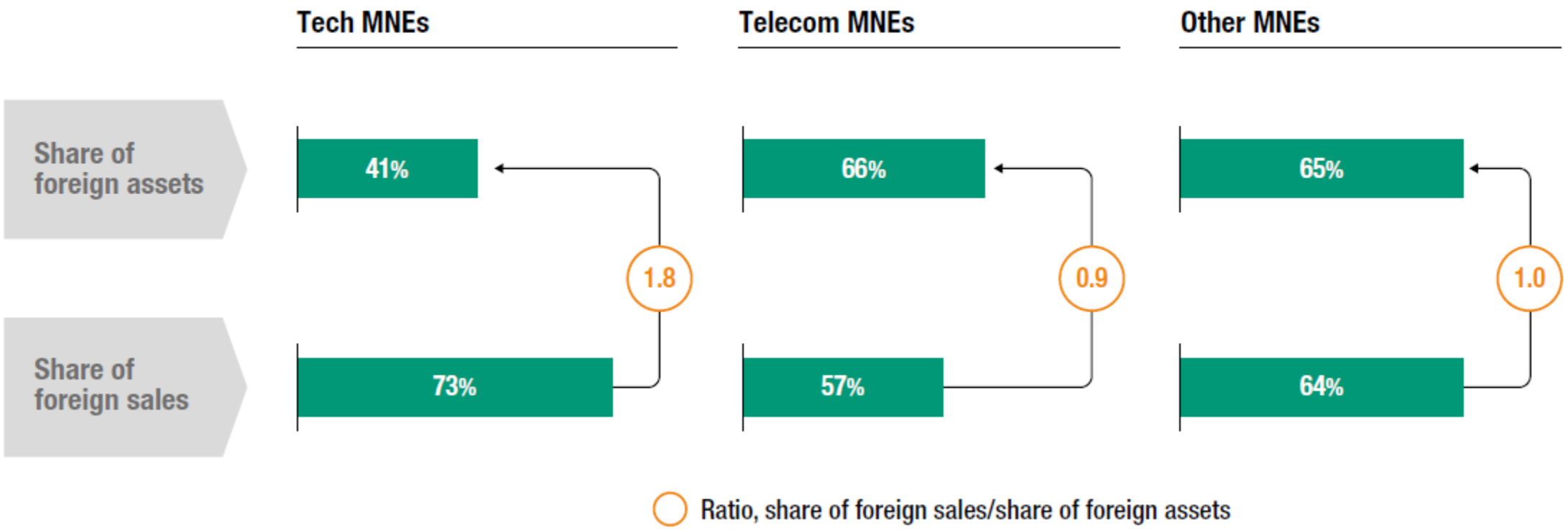
Traditional MNCs reach foreign consumers in downstream parts of the value chain through market-seeking FDI (e.g. retail distribution chains or sales and marketing operations) or through building overseas production operations that sell through local distributors. Digital MNCs can dispense with much of that effort. They reach consumers online and often distribute through third-party channels. In smaller markets, they often maintain only local corporate offices, for minimal representation purposes.

**Digital value chains:**

Digitalization affects not only downstream functions but often the process of production. Digitalization of production and operations is occurring in many forms: fully digital products and services (e.g. internet platforms), digitalized physical products (e.g. digital content) and the digitalization of selected parts of the production process.

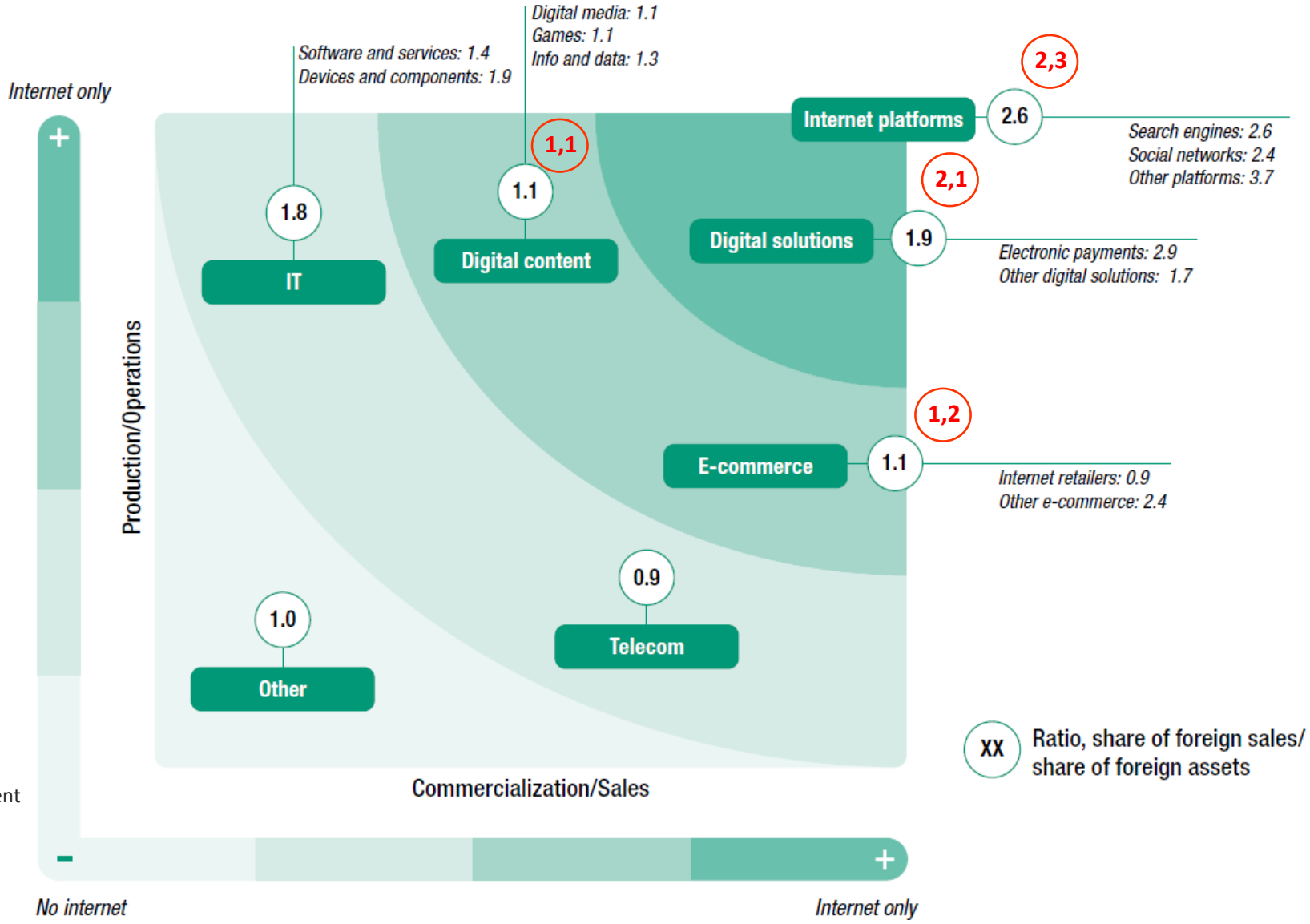
Source: World Investment Report 2017, p. 164

# EMPIRICAL EVIDENCE (2015): TECH MNES ARE RELATIVELY "ASSET POOR"…




Source: UNCTAD FDI/MNE database, company reports and data from Orbis BvD, Thomson ONE

# … AND THIS IS EVEN MORE THE CASE FOR DIGITAL MNC




Note:
Numbers in general represent 2015 data; numbers in red circles represent 2022 data

Sources: World Investment Report 2017, p. 171; Trentini, C., de Camargo Mainente, J., Santos-Paulino, A. (2022), The evolution of digital MNEs: An empirical note. *Transnational Corporations* 29, 163-187

# PLATFORMS AND ECOSYSTEMS

- "*Platforms* constitute a shared set of technologies, components, services, architecture, and relationships that serve as a common foundation for diverse sets of actors to converge and create value."
- "*Platform-based ecosystems* .. denote these sets of actors who are aligned to pursue a focal value proposition (…) and who exhibit varying types of mutual dependencies borne out of their co-specialization and complementarities in the platform context, implying, in turn, different roles for actors to play in the ecosystem (for example, orchestrator, integrator, complementor)."
- How these notions are related to the concept of *networks*, remains unclear (see next slide as well as the appendix)

Source. Nambisan, S., Zahra, S. A., & Luo, Y. (2019) Global platforms and ecosystems: Implications for international business theories. *Journal of International Business Studies* 50, 1464-1486 (1465)

# ECOSYSTEMS VERSUS NETWORKED FIRMS

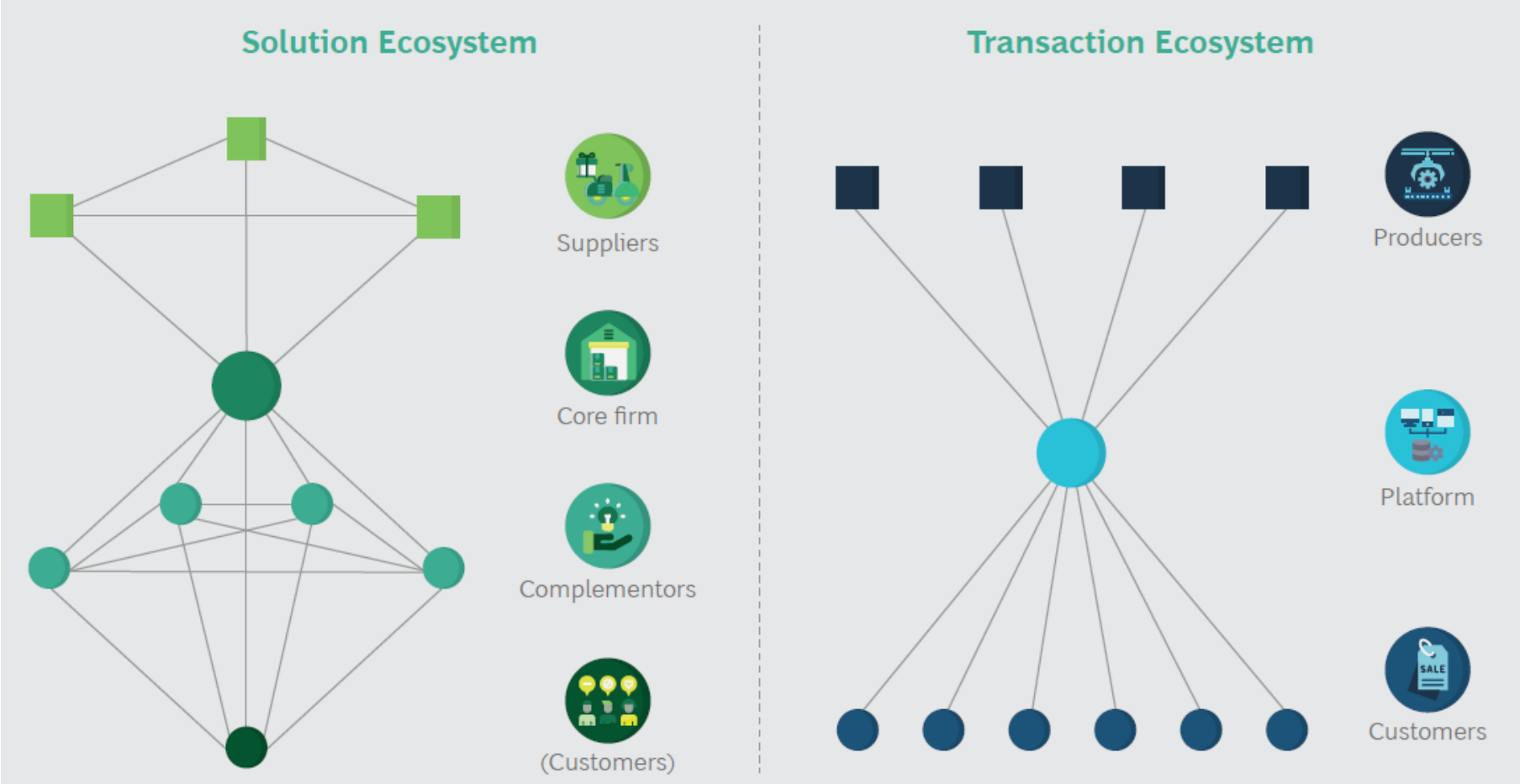
| | Ecosystems | Networked firms |
|---|---|---|
| Premise | Value creation requires multiple co-specialized partners. A coordinated market yields higher returns | Firms are embedded in a network of relationships. Coordinated production yields lower costs |
| Challenge | Create greatest value for the platform ecosystem as a whole | Achieve least-cost coordination of disaggregated and geographically dispersed value chain activities |
| Structure | Multilateral<br>The ecosystem leader acts as an orchestrator | Hub and spoke<br>The hub firm acts as a broker |
| Partners | Autonomous actors possess complementary assets and come from diverse industries | Upstream and downstream partners at different stages of the same value chain |
| Objective | Align interdependent partners<br>Co-create value for the entire ecosystem | Access resources that reside in the network<br>Capture value for the hub firm |

Source. Li, J., Chen, L., Yi, J., Mao, J., & Liao, J. (2019) Ecosystem-specific advantages in international digital commerce. *Journal of International Business Studies* 50, 1448-1463 (1453)

Other authors use more fuzzy constructs. For example, Banalieva and Dhanaraj (2019)* introduce the concept of the network as an ownership advantage ($O_n$), illustrated by the Uber example: "The increasing returns or the network effects make the user base, typically the number of subscribers in the network, a major determinant of the cost structure of the service, its ability to develop new ideas, and a potential barrier for new entrants. Thus, as firms shift away from products to platform ecosystems, digitalization enables firms to internationalize through digital networks with foreign partners (…)."

* cf. slide 18-19

# TWO TYPES OF ECOSYSTEMS (OR NETWORKS?)




**Platform as a venue for innovation**

**Platform as a multi-sided marketplace**

Source. Pidun, U., Reeves, M. & Schüssler, M. (2019) Do you need a business ecosystem? Boston Consulting Group Bruce Henderson Institute

# PLATFORM AS A VENUE FOR INNOVATION

| Description | Illustrative examples | Key concepts and constructs |
|---|---|---|
| Platform comprises of a shared set of technologies, components, tools and services, often arranged in modular architechture, that forms the foundation for the development of complementary (often co-created) products and services and their value proposition for users/customers.<br><br>Platform leader is responsible for the ecosystem‘s governance (but can also share the responsibility with other ecosystem members) and offers one or more value appropriation (capture) mechanisms for ecosystem members. | Apple (iOS)<br>Google (Android)<br>Ford (SYNC)<br>GE (Predix)<br>John Deere (JDLink)<br>Microsoft (Xbox)<br>Sony (Playstation) | *Platform architecture:*<br>Modularity; Openness of the design interface; Core and peripheral components; etc.<br><br>*Orchestration of the ecosystem*:<br>Distribution of decision rights; Architecture of participation; Shared world-view and shared collective identity; Innovation leverage; Sharing of IP and IP rights management; Distribition of (financial) rewards/value to complementors; etc.<br><br>*Roles & Strategies:*<br>Platform leader and complementor; Platform leader strategies (e.g. technology leadership; innovation coherence); Complementor strategy (e.g., multihoming); etc. |

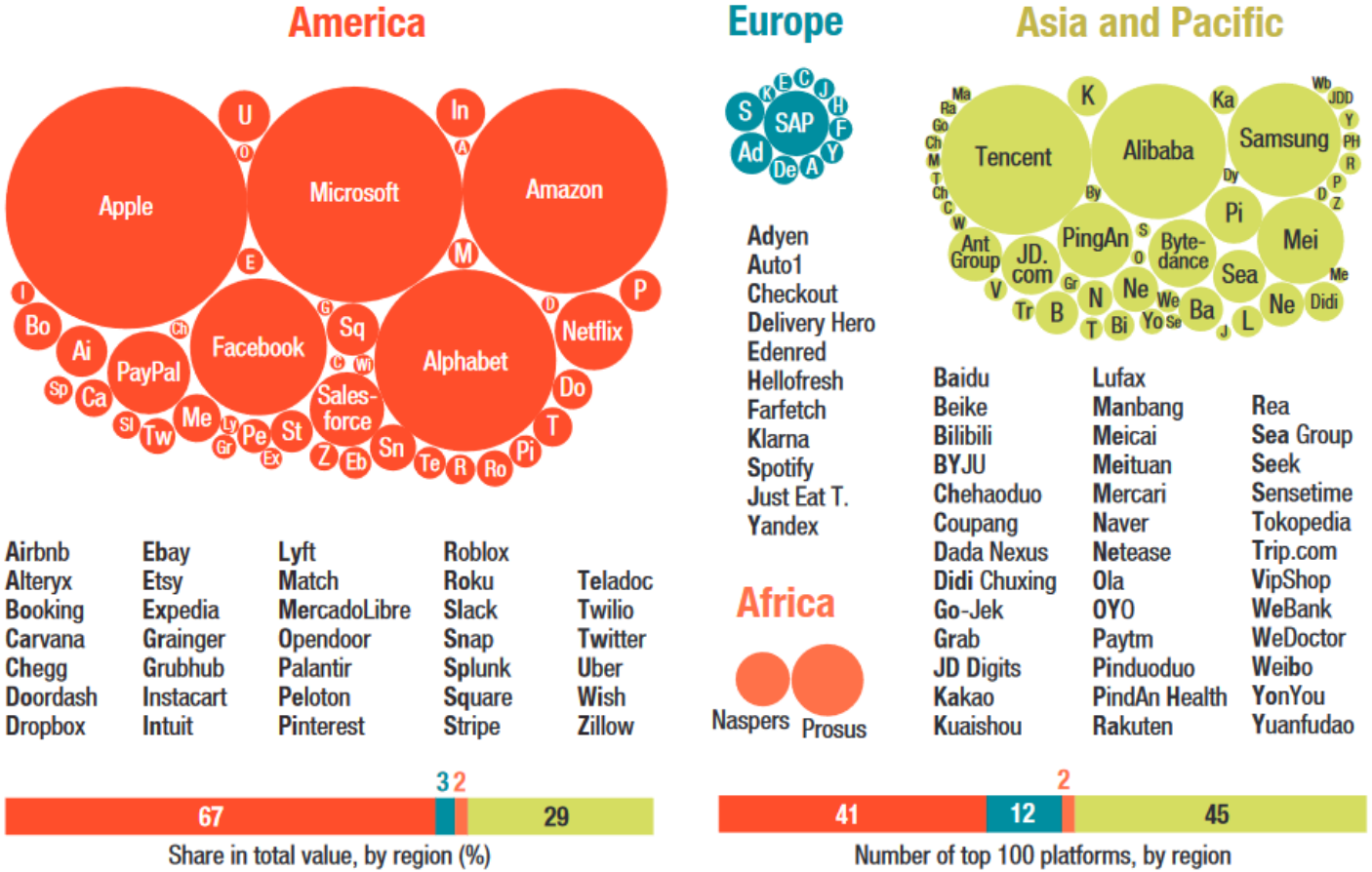
Source. Nambisan (et al.) (2019), 1467 (modified)

# PLATFORM AS A MULTI-SIDED MARKETPLACE

| Description | Illustrative examples | Key concepts and constructs |
|---|---|---|
| Platform comprises of technology architectures and rules that allow for regulated participation—interactions and/or transactions—of different user groups in a multi-sided market.<br><br>Platform leader creates/organizes the network comprising of all participants, designs/ implements tools for participation to interact and/or exchange value, and use data to make the best match among the different "sides" for each interaction.<br><br>Ecosystem consists of the platform leader, the user groups ("sides"), and other service partners who create and deliver value.<br><br>Platform highly susceptible to network effects ("same-side" and "cross-side") | Uber<br>Airbnb<br>Ebay<br>Alibaba<br>Amazon<br>YouTube<br>Twitter<br>Facebook<br>Kickstarter<br>Indiegogo<br>LinkedIn<br>Match.com<br>Monster.com | *Regulated participation of mutiple sides (user groups):*<br>Interaction/transaction rules; matching of sides; etc.<br><br>Economics of multi-sided markets: Same-side (direct) and cross-side (indirect) network effects; Pricing strategies & Revenue sharing; etc.<br><br>Platform envelopment |

Source: Nambisan (et al.) (2019), 1468 (modified)

# GEOGRAPHICAL DISTRIBUTION OF THE TOP 100 GLOBAL DIGITAL PLATFORMS, BY MARKET CAPITALIZATION 2021

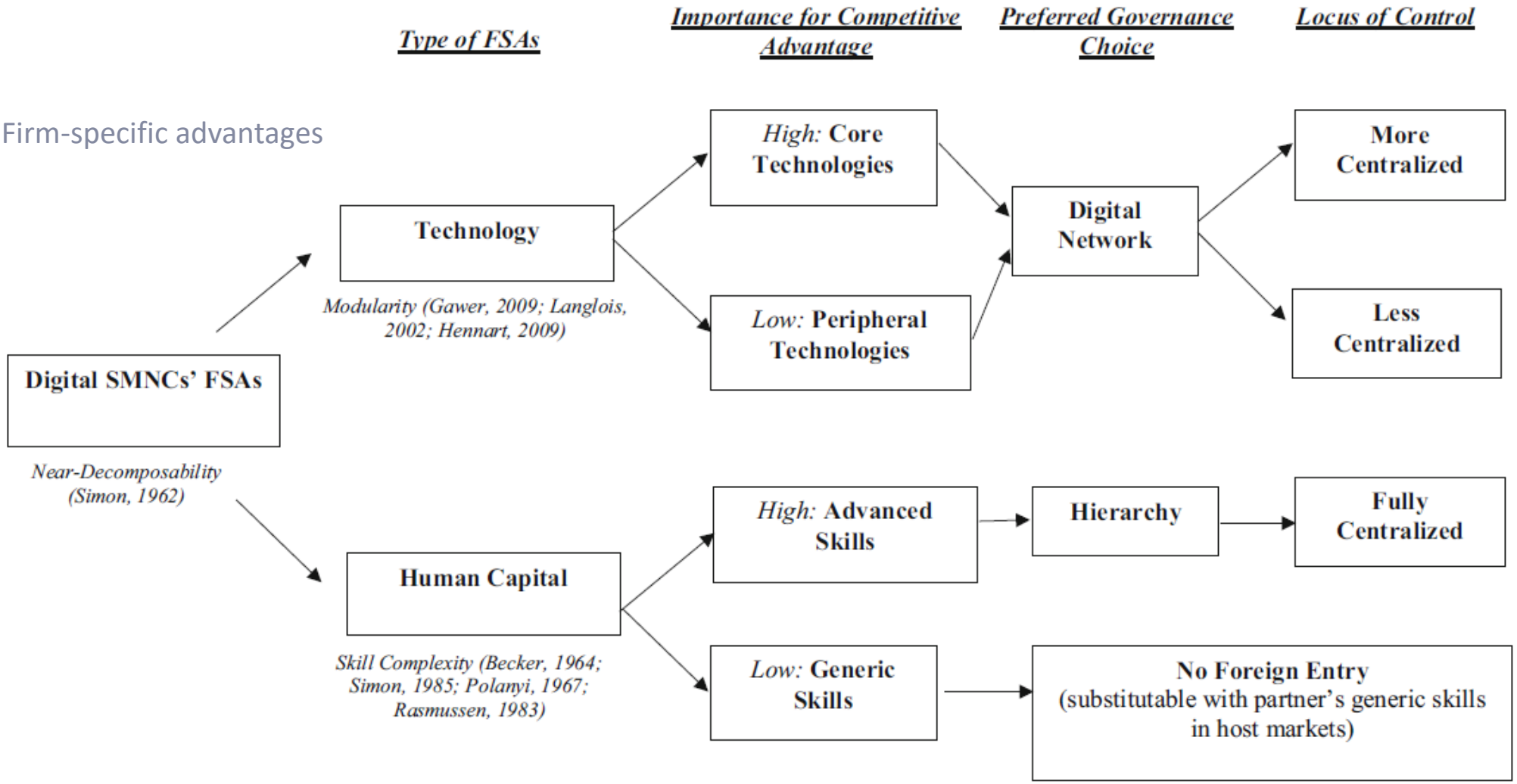



*Source:* Holger Schmidt, available at www.netzoekonom.de/vortraege/#tab-id-1 (data as of May 2021).
*Note:* As a reference, the market capitalization of Apple is $2.22 trillion, while for Mercado Libre it is $88.7 billion, $80.2 billion for Baidu and $59.7 billion for Spotify.

Cited in: United Nations, Digital Economy Report 2021, p. 22

# HOW DIGITALIZATION AFFECTS THE MNC – A FRAMEWORK

FSAs = Firm-specific advantages




Source. Banalieva, E. R. & Dhanaraj, C. (2019) Internalization theory for the digital firm. *Journal of International Business Studies* 50, 1372-1385 (p. 1374)

# HOW DIGITALIZATION AFFECTS THE MNC – PROPOSITIONS

1. Digitalization enables the near-decomposability [i.e., modularity] of a firm‘s FSAs into technology and human capital components.

2a. Digitalization increases the cross-border transferability of a firm‘s technology FSAs by enhancing its modularity and the firm‘s ability to bundle it with a local firm‘s FSA.

2b. Digitalization increases cross-border appropriability hazards for a firm‘s technology FSAs, but also enhances the firm‘s ability to contain imitation by “walling-in“ through integrating complex technology, proprietary components, encryption, and network effects.

3. Digitalization increases a firm‘s ability to bundle its advanced and generic human capital FSAs with those in host markets through the digital platform. While digitalization increases the firm specifity of advanced human capital skills, it reduces the firm specifity of generic human capital skills.

4a. Digitalization enhances a firm‘s ability to exploit its core (peripheral) technology FSAs in foreign markets with a more (less) centrally controlled digital network.

4b. Digitalization enhances a firm‘s ability to exploit advanced (generic) human capital FSAs in foreign markets at lower costs by internalizing (externalizing) them. *Concept of “Aqui-hiring”.*

Source. Banalieva, E. R. & Dhanaraj, C. (2019) Internalization theory for the digital firm. *Journal of International Business Studies* 50, 1372-1385

# CASE STUDIES: WHY US PLATFORM GIANTS FAILED IN CHINA

| Case* | Year of entry | Mode of entry | Year of exit | Mode of exit |
|---|---|---|---|---|
| eBay | 2003 | Acquisition (eachnet.com) | 2006 | Sold to Tom Online |
| Amazon | 2004 | Acquisition (joyn.com) | 2019 | Shut down |
| Expedia | 2004 | Acquisition (elong.com) | 2015 | Sold |
| Uber | 2014 | Wholly owned subsidiaries | 2016 | Sold to Dedi |

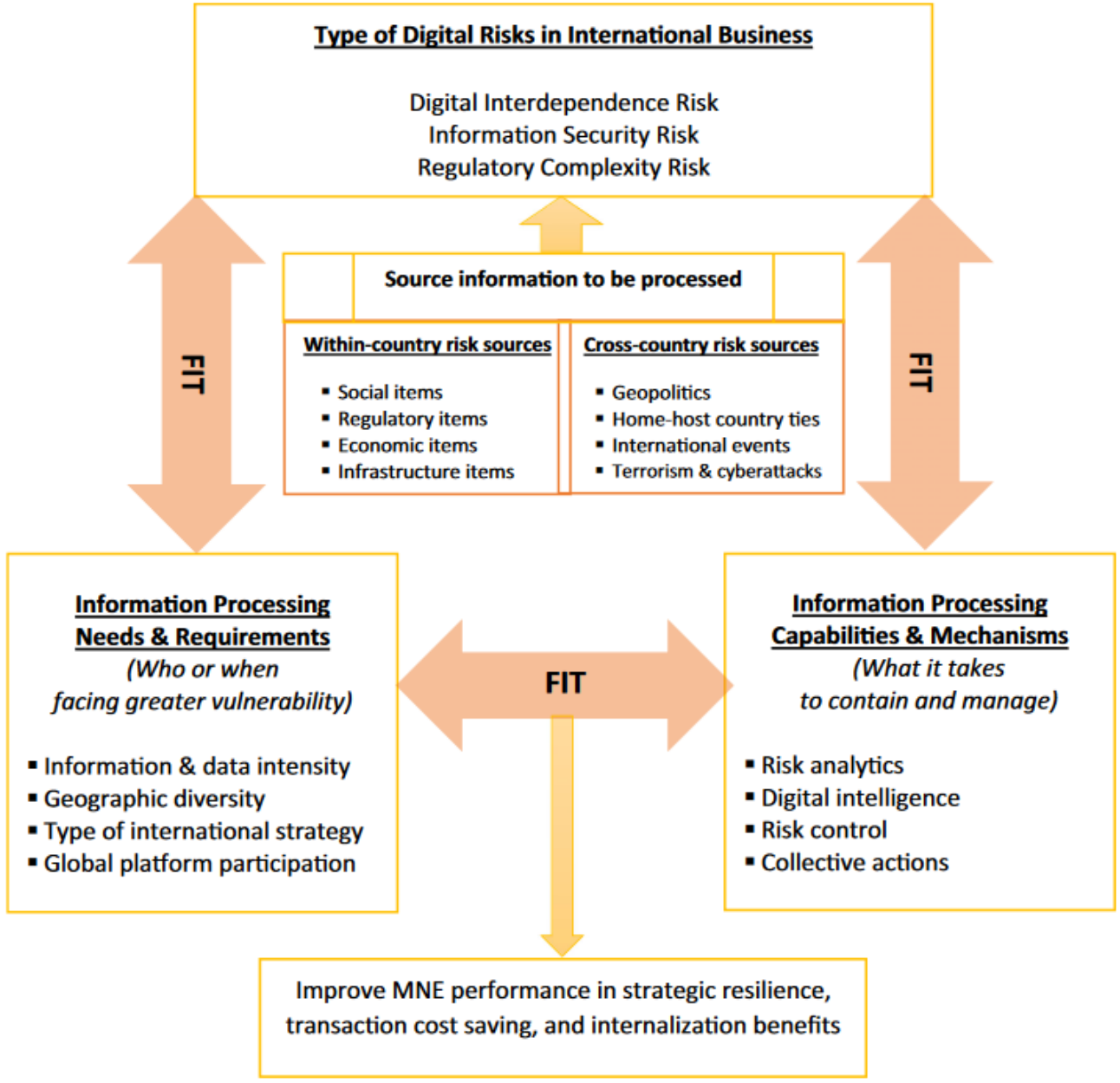
**Reasons (according to Zeng et al., 2019):**

- Failure to mobilize the external resources necessary to generate network effects on the demand side. FSAs alone did not materialize.
- Failure to learn from local partners. “There is so much valuable local indigenous knowledge and so much talent out there. However, the only talent they could recognize was someone who could speak good English. That was not right. We needed to broaden or scope to understand the value of our local network.“ (Amazon informant)
- Too much control by the corporate headquarters; failure to allow continous experimentation and customer engagement that makes up subsidiary entrepreneurship

* Note also the case of Google in China. In this as well as in the Facebook case (https://www.theguardian.com/world/2018/jul/26/facebooks-china-venture-innovation-hub-fails), problems of censorship and of strong cometition from Chinese companies can be identified as main reasons for the failure of both U.S. companies.

Source. Zeng, J., Khan, Z., & De Silva, M. (2019) The emergence of multi-sided platform MNEs: Internalization theory and networks. *International Business Review* (fortcoming)

# DON‘T FORGET: DIGITALIZATION ALSO ENTAILS RISKS




Source. Luo; Y. (2022) A general framework of digitization risks in international business. *Journal of International Business Studies* 53, 344-361 (p. 348)

# About Delivery Hero

## Who we are

In May 2011 Niklas Östberg founded Delivery Hero and began his journey of building a leading global business in online food ordering. His founding team, completed by members of Team Europe, shared decades of knowledge of working with internet companies. Just as importantly, they shared a vision for the future of online food ordering. Together with a hand-picked, passionate team they managed to truly catapult the business to where it is today.

Delivery Hero and its headquarters are located in Berlin, boasting around 1,500 employees in HQ alone. Diversity is a key pillar for our success. Employees with over 100 nationalities across 5 continents work for us, enabling us to exchange best practice from markets from each corner of the world.

# Delivery Hero at a glance

Source. Company Presentation, August 2023

## Introduction to Delivery Hero

- **Corporate group:** Headquartered in Berlin, Germany, with 51k employees globally
- **Operational presence:** >70 countries
- **Business models:** World's leading local delivery platform operating marketplace, own-delivery and dark store businesses
- **Public listing:** IPO in 2017. Well diversified, top-class investor base with key shareholder Prosus (25% - 30% shareholdings)

## Diversified brand portfolio


## Strong financial performance (FY 2022)

**€44.6bn (+17% YoY)**
GMV[1]

**€9.6bn (+32% YoY)**
Total Segment Revenue

## FY 2023 Outlook

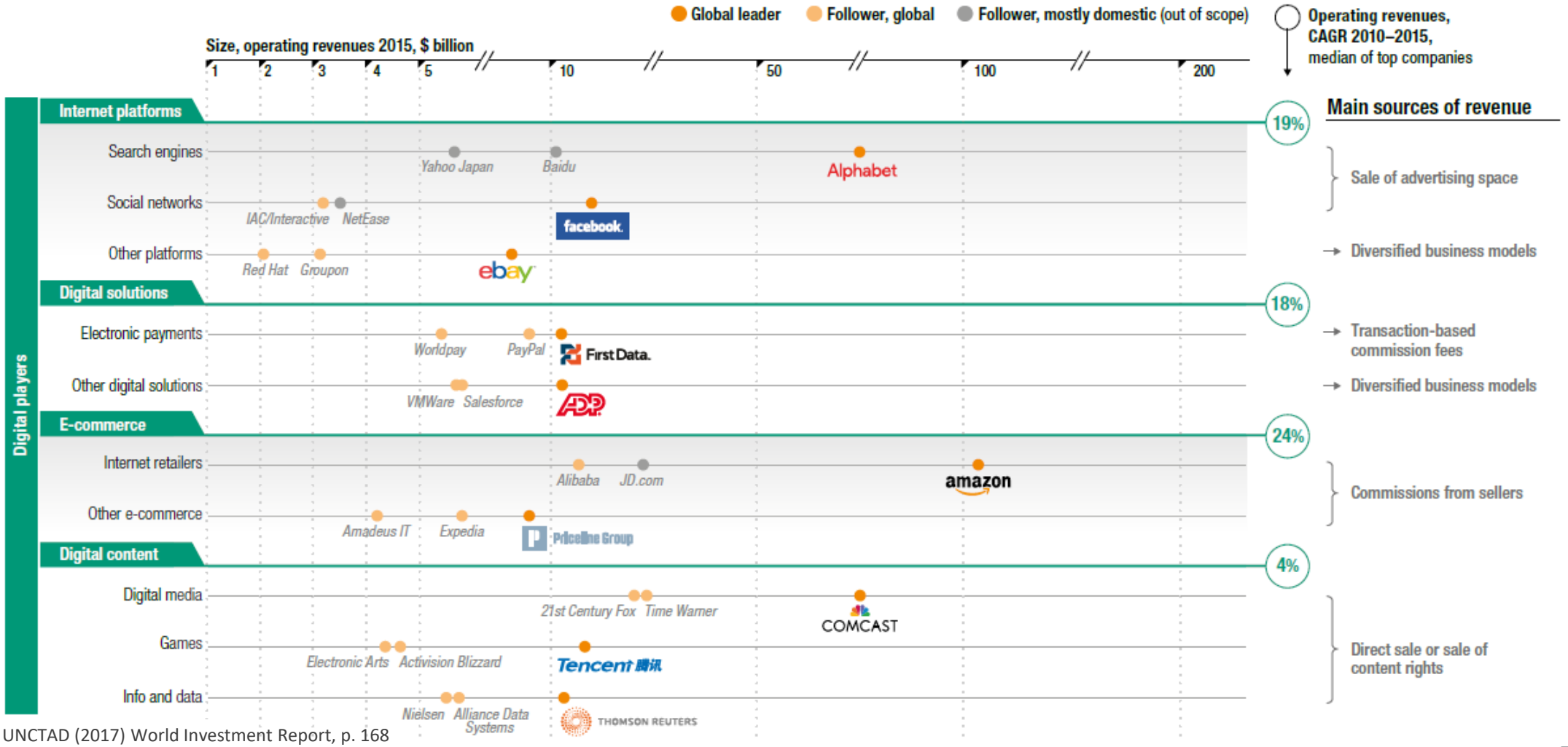
- **GMV: 5-7% YoY in constant currency**, *with GMV growth accelerating throughout the year*
- **Total Segment Revenue: Around 15% YoY in constant currency**, *with revenue growth accelerating throughout the year*
- **Adj. EBITDA as % of GMV: FY 2023 > 0.5% of GMV**
  **H2 2023 > 1.0% of GMV**
- **Free Cash Flow: Break-even during H2 2023**

1. GMV is Gross Merchandise Value (GMV) and represents the total value paid by customers (including VAT, delivery fees, other fees and subsidies)

MULTINATIONAL CORPORATIONS AND CORPORATE CONTROL
LECTURE 10

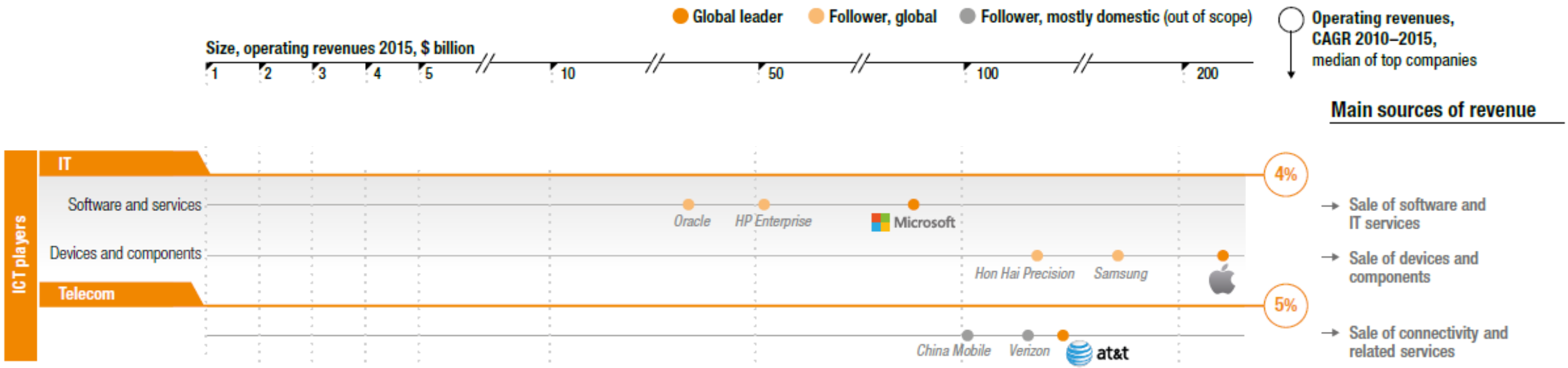
# APPENDIX

# CATEGORIES OF DIGITAL AND ICT FIRMS: LARGEST PLAYERS AND REVENUE SOURCES, 2015 (1)



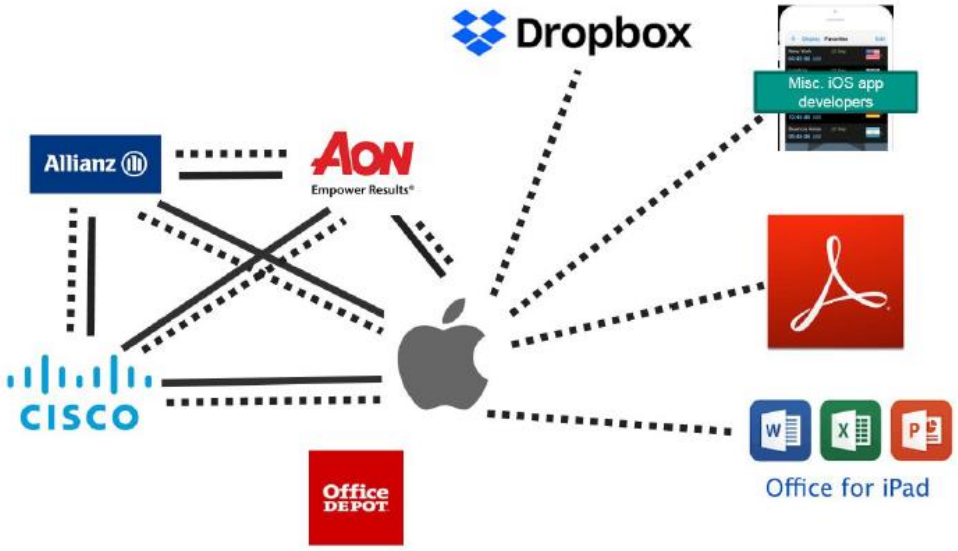

Source. UNCTAD (2017) World Investment Report, p. 168

# CATEGORIES OF DIGITAL AND ICT FIRMS: LARGEST PLAYERS AND REVENUE SOURCES, 2015 (2)




Source. UNCTAD (2017) World Investment Report, p. 168

# FURTHER INSIGHTS REGARDING THE DISTINCTION BETWEEN NETWORKS AND ECOSYSTEMS (AND MARKETS)




Thick lines: inter-organizational network relationships
Dashed lines: non-generic complementarities

| | Market | Ecosystem | Organizational network |
|---|---|---|---|
| Mechanisms for coordination | Price | Non-generic complementarities in the absence of full hierarchical control | Formal contract or informal collaboration + Non-generic complementarities |
| Example | Firm buys paper from a stationary supplier based on a market price | Firm builds proprietary hardware; independent developers write software optimized for this hardware. Customer combines the two for a final product | A hardware and a software firms form a formal alliance to engage in joint R&D |

Source. Shipilov, A. & Gawer, A. (2020) Integrating research on inter-organizational networks and ecosystem. *Academy of Management Annals* 14, 92-121 (p. 96)