



Digital Platforms: A Literature Review and Policy Implications for Development

7th Conference on the
Regulation of Infrastructures
Florence School of Regulation
Robert Schuman Centre
San Domenico di Fiesole, 21-
22 June, 2018

Part I

Literature Review and Assessment Framework For Developing Countries



-
- Functional/Technical vs. Economic **Definition**
 - Business **Models**
 - **Enabling** Factors
 - Competitive **Dynamics**





Digital Platforms: Technical/ Functional vs. Economic Definition

Functional/Technical definition:

- DP as a **set of components used in common across a product family** whose **functionality can be extended to third parties**.
- Little value to users **without complementary products / services**.

Economic definition:

- Digital platform is part of a production process.
- Related to the supply-chain, or **multi-sided industry platform**.
- Platform manager teams external resources from complementors.

Private Sector MSP Business Models

- Commission-based
- Subscription-based
- Advertisement-based
(mobile advertisement
+600% in China)
- Services-based



Digital Platforms Enablers (I): Physical and Behavioral

- **Evolutionary process mixing physical and behavioral enablers.** **Physical** enablers include digital infrastructure (broadband, fixed and mobile internet networks), consumer appliances, payment tools, geo-localization, cloud services, security, and ancillary enablers (e.g. distribution, logistics, intermediary goods).
- Examples of **behavioral enablers** include:
 - Consumers shift their core attitudes from buying goods to accessing services and “servitized” products (**access-based consumption**),
 - leading to a **peer-to-peer economy** where platforms increasingly mediate interactions,
 - coordinated by **peer-based trust relationship**.
 - Individuals casually participate in economic activities through **privately owned resources (assets, labor), which would otherwise remain idle (collaborative consumption)**.



hello tractor

Digital Platforms Enablers (II)



Digital Platforms Enablers (III)



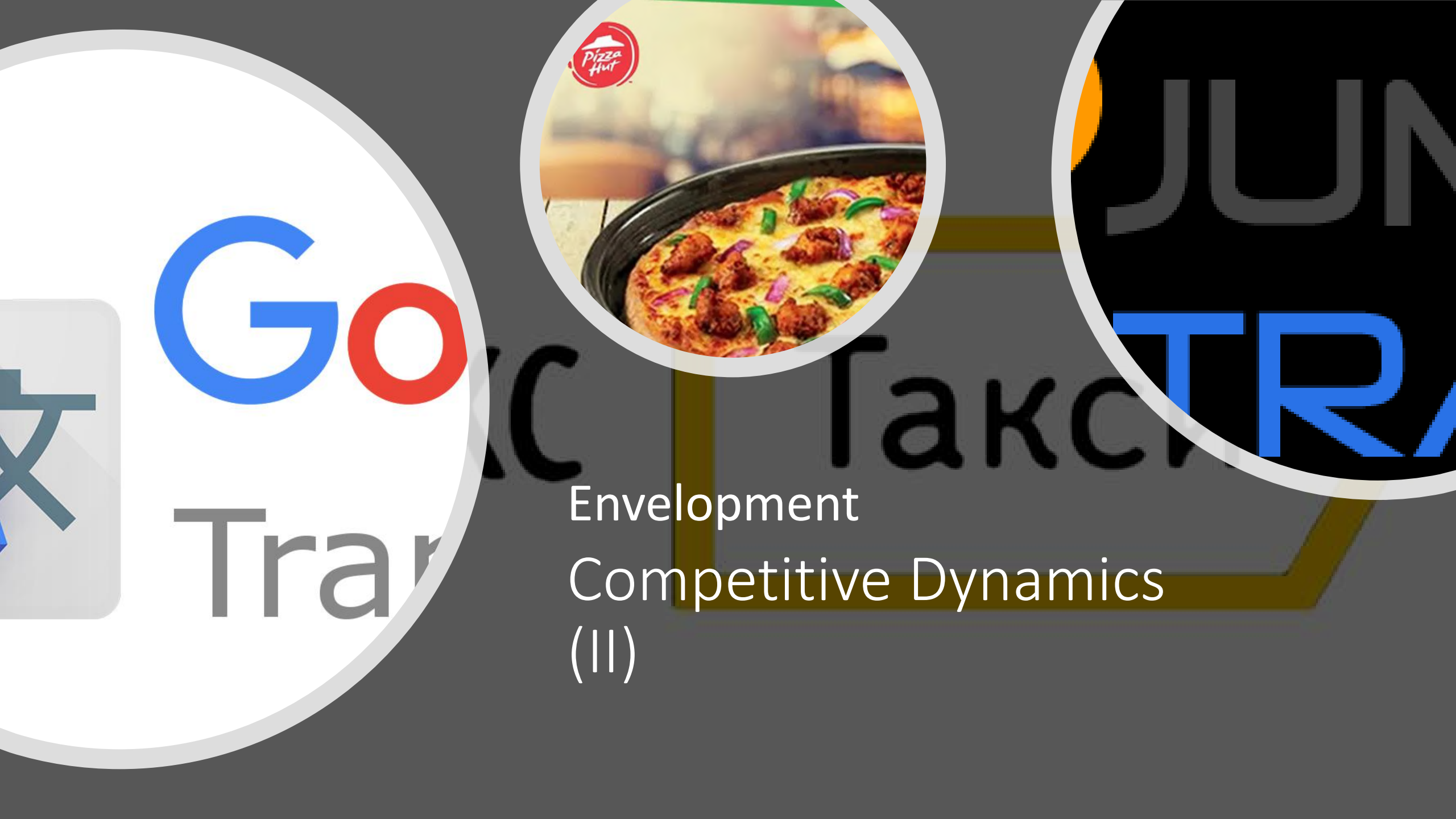


Alibaba and its ecosystem

Competitive Dynamics (I) Network Effects



- In two sided platforms, network effects arise when the attractiveness for one side increases as the number of customers on the opposite side of the platform increases
- Two sided platforms reduce **transaction costs** (WDR2016)
- Winner takes all – Winner takes some



Envelopment
Competitive Dynamics
(II)

Competitive Dynamics (III)

Partnerships



Part II

A Research Agenda for Development

Literature Review Area	Key Elements	Research Agenda for Emerging Markets
Definition of Digital Platform	Economic Definition of MSP	<ul style="list-style-type: none">Digital Consumer BehaviorTaxation policy
	Functional/Technical Definition	<ul style="list-style-type: none">GaaPGovernment Platforms and Consumer behaviorPrivate sector displacement vs private sector crowd in digital government platforms
Enabling Factors	Physical Enablers	<ul style="list-style-type: none">Broadband DevelopmentConsumer EquipmentDistribution and logisticsGeo-localisation servicesDigital paymentsCloud-based services and security
	Market Enablers	<ul style="list-style-type: none">Peer-to-peer feedbackLong tail marketingMulti-hominessCritical mass effectsServitized productsCollaborative consumption

Literature Review Area	Key Elements	Research Agenda for Emerging Markets
Business Dynamics	Network Effects	<ul style="list-style-type: none"> • Winner-takes-some vs winner-takes all • Inter-platform competition • Non-discriminatory access to the platform from third parties and in-platform services • Dominance and use of data as an essential facility
	Envelopment	<ul style="list-style-type: none"> • Competition effect on third party services and related goods and services markets
	Partnerships	<ul style="list-style-type: none"> • Competition effect on third party services and related goods and services markets, through collusion and anti-competitive behavior • Cross-platform data transfer/exchange and potential anticompetitive effect on third party services
Policy Concerns	Demand side policies	<ul style="list-style-type: none"> • Cost-benefit analysis of demand stimulation policies and interventions
	Data protection, data privacy and data portability	<ul style="list-style-type: none"> • Regulatory, legal and institutional analysis in emerging markets



Thank You
crossotto@worldbank.org