



High level Arab Regional Forum

Digital Economy

Opportunities and Challenges for Arab National Economies

"OVER THE TOP" CASE



ECONOMIC IMPACT OF OVER-THE-TOP (OTT) SERVICES





What are OTT services?

Some definitions of OTT (Over-the-top)

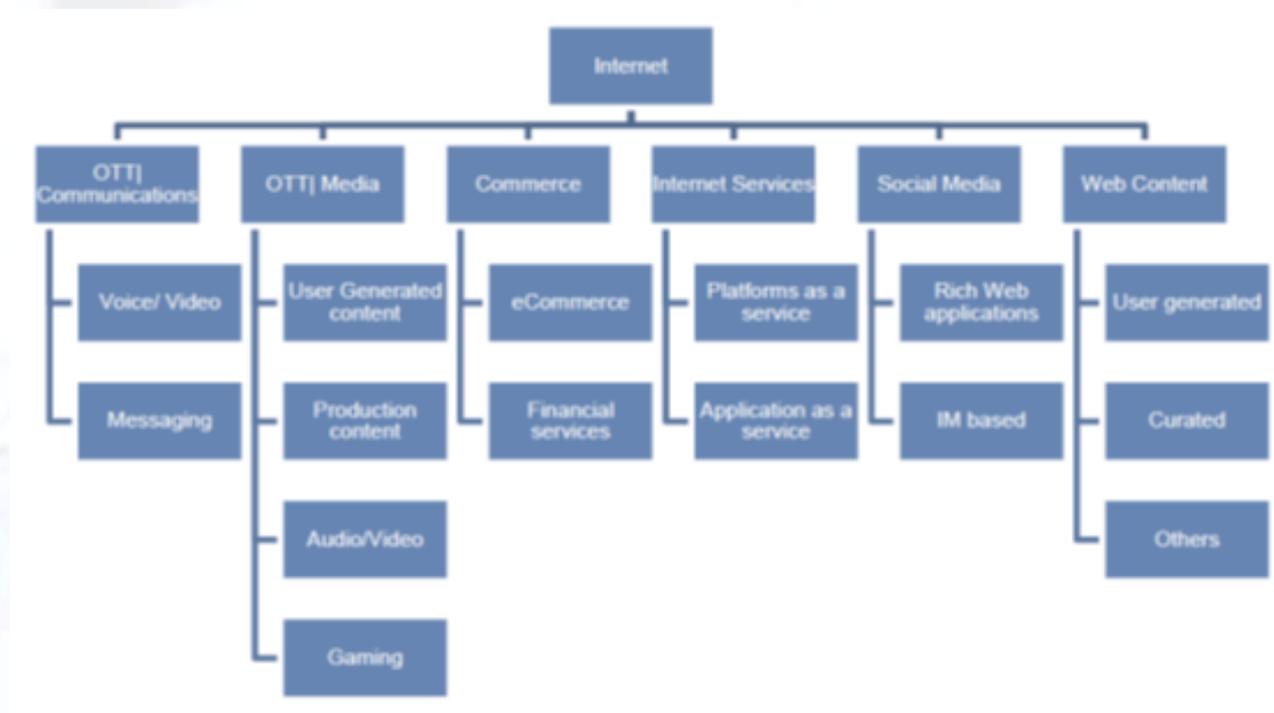


- “OTT Communication refers to services whose primary applications lie in communications but use the internet as the transport medium. This is especially relevant to telecom operators since these services operate in a similar space as traditional voice and messaging services.”
- Detecon(2013),
“The rise of OTT players – what is the appropriate regulatory response?”
- “OTT services [consist]of (a) OTT-0 services, which are OTT services that qualify as [regulated] ECS, (b) OTT-1 services, which are OTT services that do not qualify as ECS but ... potentially compete with ECSs and (c) OTT-2 services [the rest.]”
- BEREC (2015), “Report on OTT services”
- OTT services are online services that compete to some degree with traditional telecommunications or broadcasting services.
- WIK/TNO (2015), “Over-the-Top (OTT) players: Market dynamics ...”



What are OTT services: Possible classification

- There are a great many distinct online services.
- In one recent study, only the first two groupings of online services should be viewed as being OTT services.



Source: Baldry, Steingröver, and Hessler (2013), “The rise of OTT players – what is the appropriate regulatory response?” (see also TRAI India)

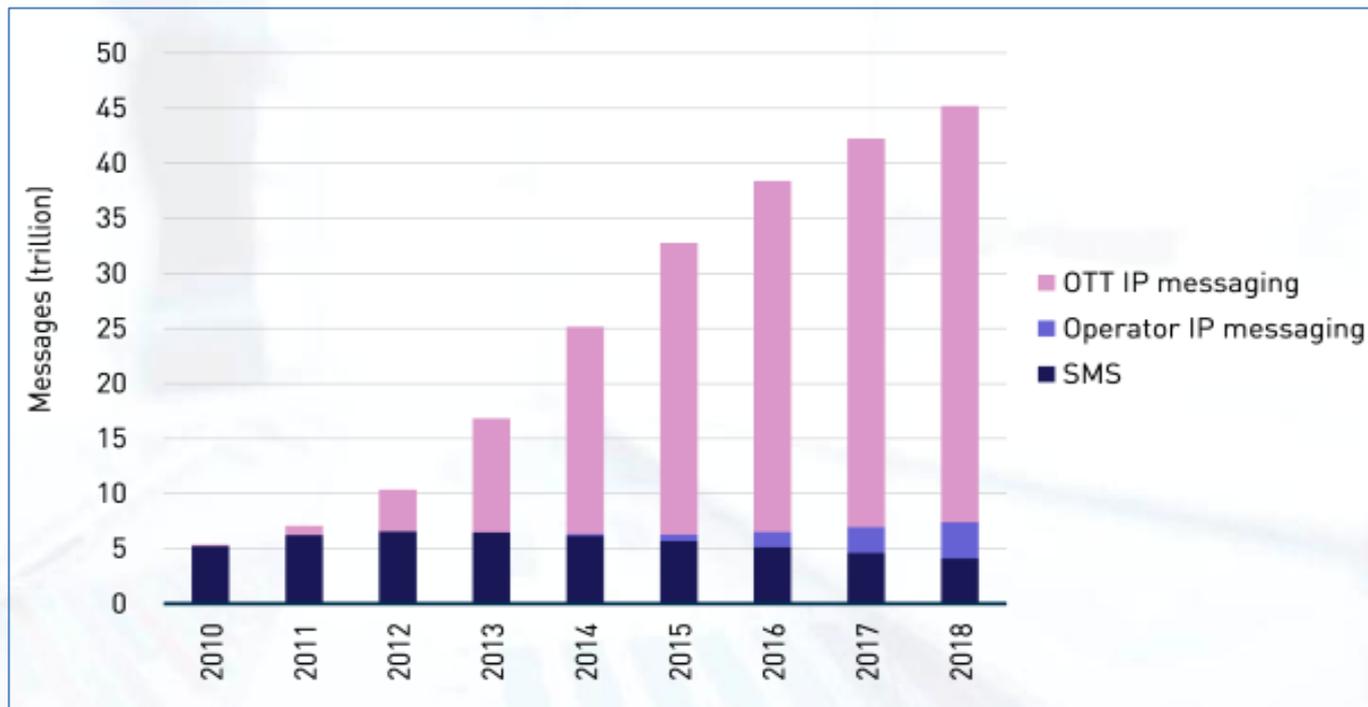
Possible examples of OTT services



- There are many IP-based services that appear to compete with existing, traditional telecommunications or broadcasting services such as:
 - Voice services
 - SMS services
 - Teleconferencing
 - Broadcast (linear) video
 - Video on demand
- “The best known examples of OTT are Skype, Viber, WhatsApp, Chat On, Snapchat, Instagram, Kik, Google Talk, Hike, Line, WeChat, Tango, ecommerce sites (Amazon, Flipkart etc.), Ola, Facebook messenger, Black Berry Messenger, iMessage, online video games and movies (Netflix, Pandora).”
 - *India TRAI (2015), Regulatory Framework for Over-the-top (OTT) services*



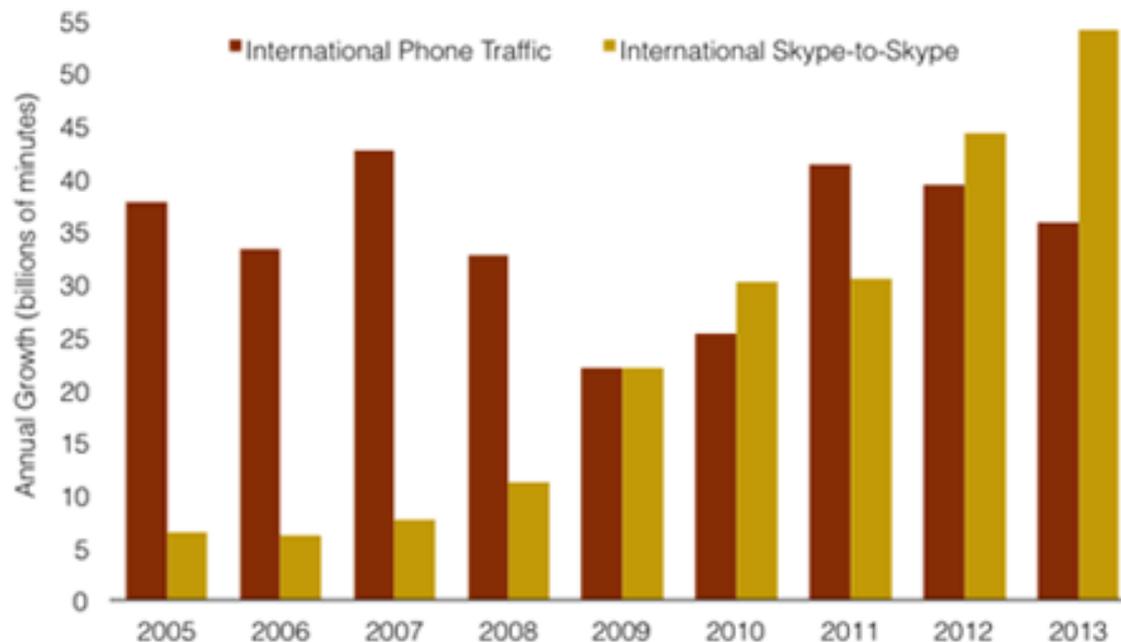
Trends suggest substitution of online messaging for SMS



Source: Analysys Mason (2014)

Trends suggest substitution of VoIP for international calls

Increase in International Phone and Skype Traffic



Source: TeleGeography

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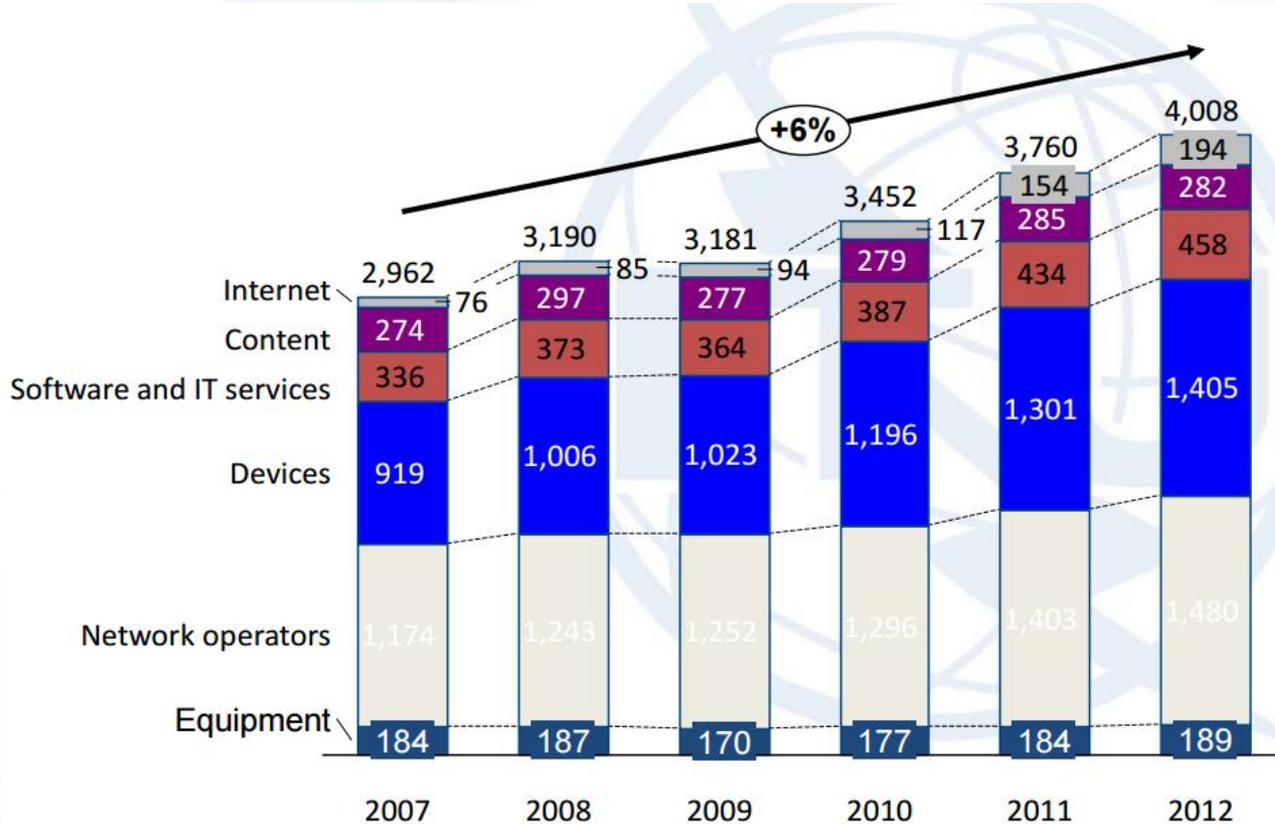
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Opportunities and impacts
associated with OTT services

Evolution of Revenue growth in IT industry



CAGR
2007-2012

+20.6%

+0.6%

+6.4%

+8.9%

+4.7%

+0.5%

Illustrative companies



Benefits of OTT services

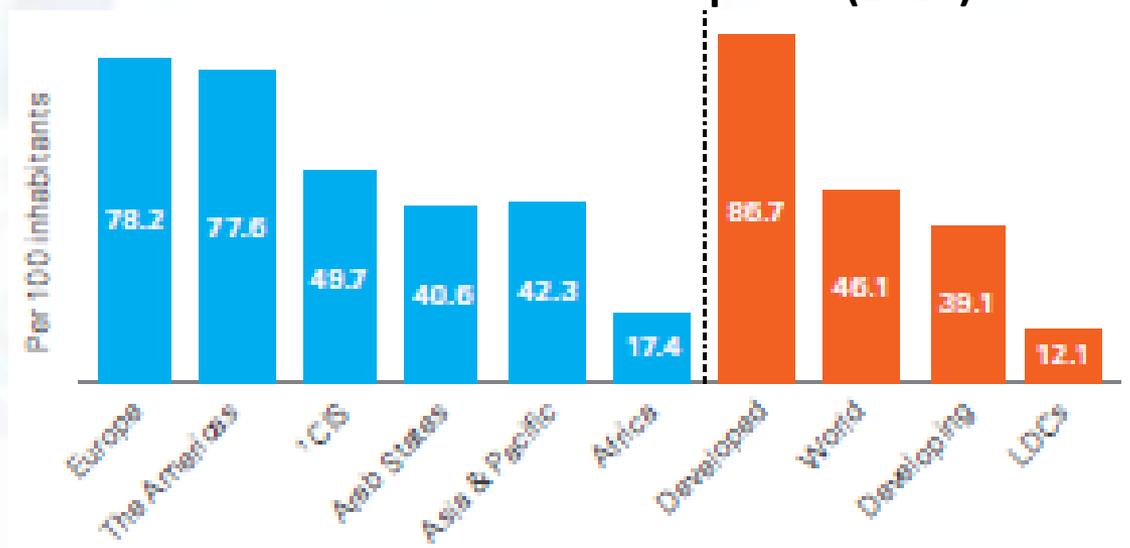
- Historically, the benefits of the economic transformation driven by online and OTT services tended to be concentrated in developed countries.
- As the process of digitisation accelerates, and as more and more people worldwide are connected to the Internet, these benefits accrue to developed and developing countries alike.
- Positive effects flow down to small businesses and to individuals.
- At the same time, OTT services disrupt many traditional arrangements.
- OTT applications may substitute to some degree for traditional telephony and broadcasting, but they also offer many capabilities that go well beyond traditional services.

Benefits of OTT services

Improved (mobile) broadband, handsets and tablets are major drivers of demand for online and OTT services

- In many countries, broadband is affordable and widely available.
- Nonetheless, gaps persist between developing and developed countries.

Mobile broadband subscriptions (2015)



Source: ITU (2015)

The impact of OTT services on societal welfare

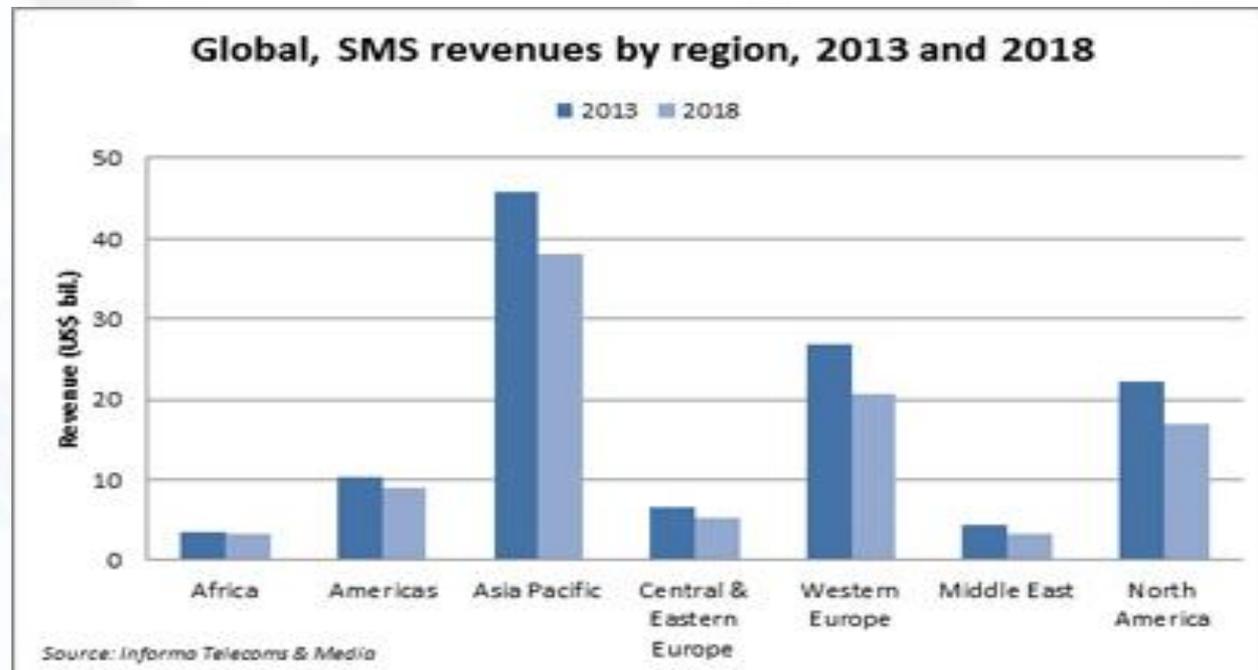


- Concerns are often raised about disruption caused by OTT services.
 - lost revenues to service providers due especially to substitution,
 - increased costs to service providers due especially to increased traffic,
 - lost tax revenues to national governments, and
 - transfers of welfare between different countries.
- The very considerable gains to consumer welfare are often forgotten.
 - Online services tend to intensify competition, and thus to reduce the spread between cost and price (i.e. the profit margin).
 - They reduce market inefficiencies caused by imperfectly informed consumers.
- Societal welfare is generally defined as the sum of producer welfare and consumer welfare.



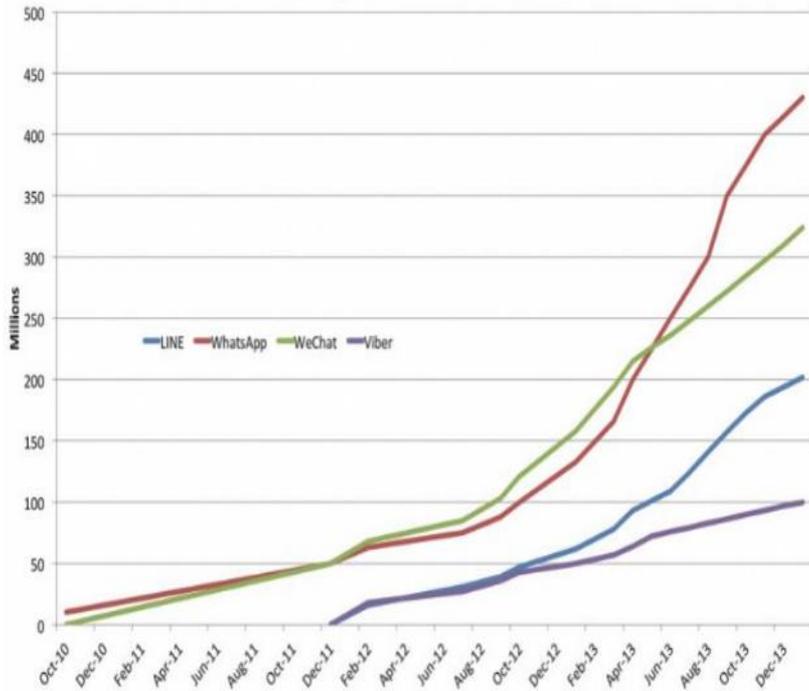
The impact of OTT services on societal welfare

- There seems to be little doubt that revenue is declining for a number of traditional services, and especially for SMS.
- The cause is not proven, but the usage trends already noted are suggestive of substitution that is consistent with these concerns.



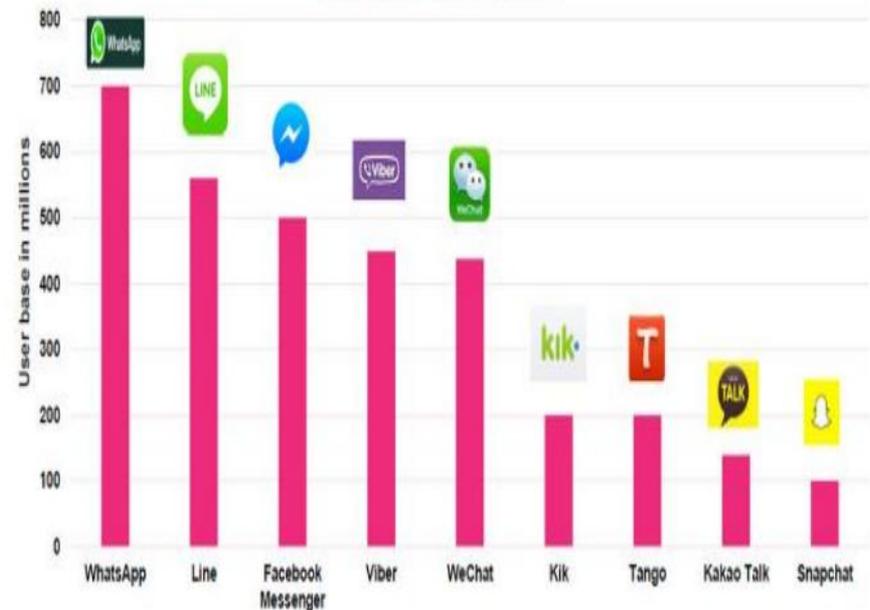
Impact on traditional service revenues

WhatsApp, WeChat, LINE, And Viber
Monthly Active Users (Global)



Global OTT Messaging Services

2014 user base in millions



Source: DETECON Consulting & Deutsche Telecom Group, "The rise of OTT players – what is the appropriate regulatory response?", 2014



Impact on traditional service revenues



- The policy implications of possible substitution are subject to multiple interpretations.
- One can argue that technological progress inevitably implies the existence, not only of winners, but also of losers.
 - Firms that operated steamship lines did not necessarily benefit from the introduction of steam-based locomotives.
 - Firms dependent on horse-drawn transportation did not necessarily benefit from the introduction of automobiles powered by internal combustion engines.
- One can alternatively argue that OTT services are effectively pumping money out of the network operators at the very moment when substantial investments in fibre-based infrastructure and LTE are required.



Impact on Telecom Operators revenue



- OTT services have complex effects on network operator costs, revenue, traffic, and profits – many different things are happening at once.
 - Traffic growth is respectable, but the rate of growth is not out of control.
 - Substitution results in lower effective prices to consumers, which not only transfers gain to consumers, but also motivates them to consume more service – this not only benefits the consumers, but also generates new revenue for network operators.
 - Globally, the number of network users continues to increase, due in part to improving price/performance, thus also driving new revenues.
 - At the same time, the steady improvement in the price/performance of network and computing equipment lowers unit costs for network operators.
- The relative magnitudes differ from case to case, but the news for network operators is by no means all bad.



Opportunities and challenges for national economies

Inputs	<p style="text-align: center;"><u>Strengths</u></p> <ul style="list-style-type: none"> • Increasing speed, capability, price/performance (Moore’s Law), and adoption of broadband services. • Increasing speed, capability and price/performance (Moore’s Law) of devices (smart phones, tablets ...). • Increased capability of online platforms. • Growing network effects due to increased adoption. 	<p style="text-align: center;"><u>Weaknesses</u></p> <ul style="list-style-type: none"> • Remaining limitations in fixed and mobile broadband coverage, adoption, and speed. • Inconsistent global approaches to the scope of regulation, to jurisdiction, to specific regulatory rules, to privacy, to network security, and to taxation. • Limited capacity to create or operate OTT services in many countries.
	Outputs	<p style="text-align: center;"><u>Opportunities</u></p> <ul style="list-style-type: none"> • Gains in market efficiency. • Consequent gains in GDP and in (skilled) employment. • Economies of scale and scope. • Lower unit costs. • Lower transaction costs. • Overall acceleration of business. • Enhanced innovation.

Source: Marcus





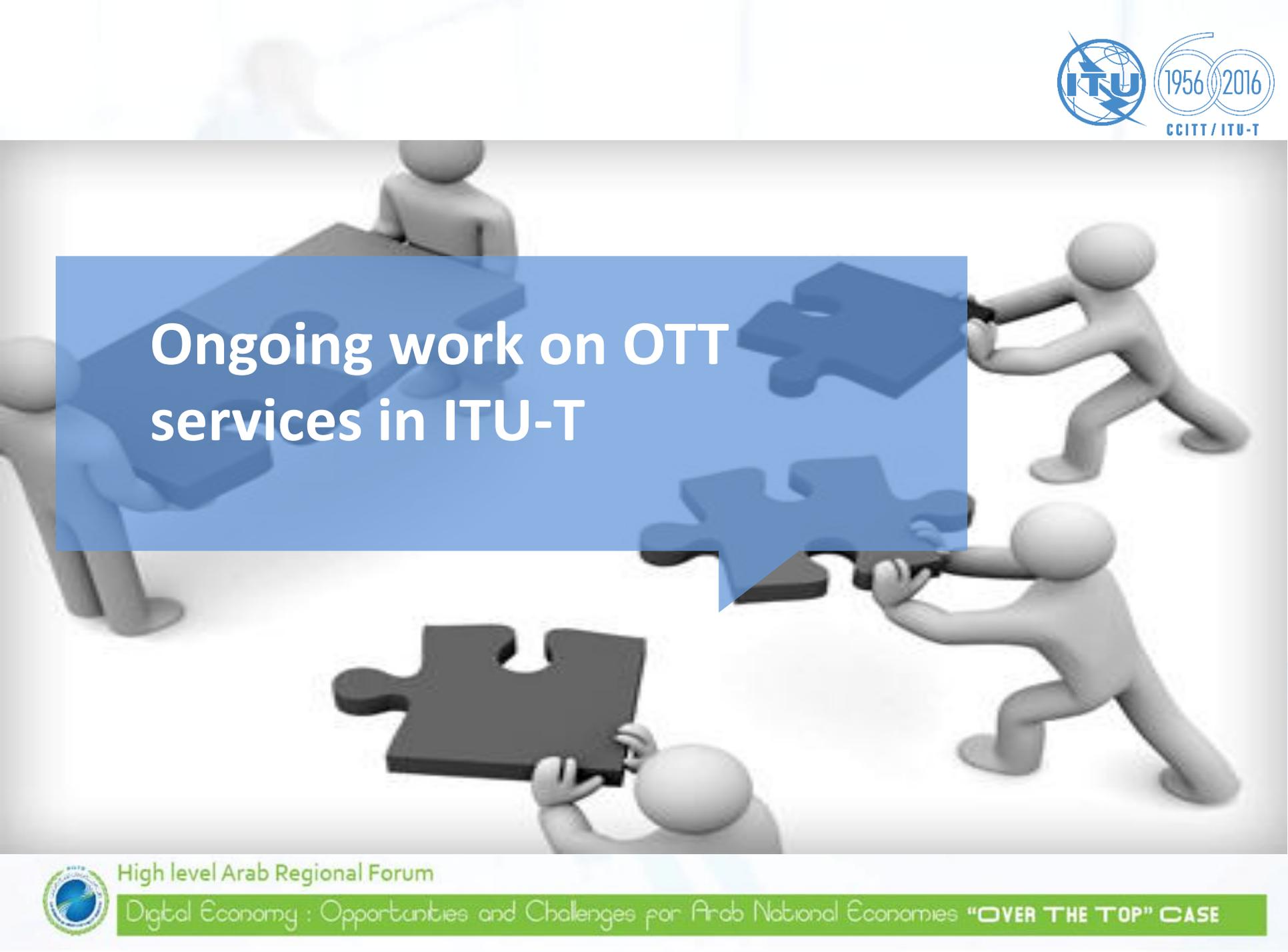
Policy challenges and Examples
of Policy approaches taken

Policy Challenges



- **Authorisation and licensing:** To which services should these apply?
- **Country of jurisdiction:** Whose rules govern? The country of origin, or the country of consumption?
- **Competition law and economics:** Are current rules appropriate for OTTs?
- **Quality of Service (QoS) :** Providers of OTT services are rarely subject to equivalent obligations, and may not be able to assure QoS anyway.
- **Promoting the creation, operation and use of OTT and related online services:** Ubiquitous access is clearly important.
- **Security and privacy:** OTT services raise issues in these complicated areas, but not necessarily the same issues as traditional services.
- **VoIP caller ID “spoofing”, OTT bypass, and other forms of VoIP abuse.**





Ongoing work on OTT services in ITU-T

Activities in ITU-T Study Group 3 on Economic and Policy Issues



- **ITU-T Study Group 3 (SG-3)** approved in June 2015 a new question 9/3 “Economic and regulatory impact of the Internet, convergence (services or infrastructure) and new services, such as OTT, on international telecommunication services and networks”
- ITU-T Study Group 3 (SG-3) committed to a work item under question 9/3 on a study of the economic impact of over-the-top (OTT) services. The text was agreed in the last SG3 Meeting (March 2016) as baseline for a technical report.
- ITU-T Study Group 3 (SG-3) in its last meeting agreed on a base text for an ITU-T Recommendation on the economic impact of OTTs. The text will be discussed in a RGM end of 2016 (TBD)
- ITU-T Study Group 3 (SG-3) agreed on two new work items under question 9/3 :
 - Guidelines on OTT-MNO Partnerships
 - OTT bypass



Thank you



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