Perspective

Karim Sabbagh
Bahjat El-Darwiche
Jonathan Fiske
Hana Habayeb

# Deregulation 2.0
# *How Service-Based Competition Can Drive Growth in The MENA Telecom Industry*

***Contact Information***


***Beirut***
**Bahjat El-Darwiche**
Principal
+961-1-985655
bahjat.eldarwiche@booz.com

***Dubai***
**Karim Sabbagh**
Partner
+971-4-390-0260
karim.sabbagh@booz.com

**Jonathan Fiske**
Senior Associate
+971-4-390-0260
jonathan.fiske@booz.com

**Hana Habayeb**
Associate
+971-4-390-0260
hana.habayeb@booz.com



*Eddy Skaff also contributed to this article.*

*Originally published as: "Deregulation 2.0: How Service-Based Competition Can Drive Growth in the MENA Telecom Industry," by Bahjat El-Darwiche, Jonathan Fiske, Hana Habayeb, and Karim Sabbagh, Booz Allen Hamilton, 2008.*

# HOW SERVICE-BASED COMPETITION CAN DRIVE GROWTH IN THE MENA TELECOM INDUSTRY

*Over the past decade, countries in the Middle East and North Africa (MENA) region have undergone a significant transition, from monopolistic to liberalized telecom markets. As of March 2008, every market in the region has at least two mobile network operators.*[1] *Fixed-network markets have also begun to be liberalized, albeit at a slower pace (see Exhibit 1, page 2). However, the region is starting to see stagnation in the value added to market development by competing facilities-based operators. The next wave of competitive development may be reinforced by service-based operators—i.e., telecom providers that do not operate their own networks. Service-based operators largely rely on traditional, facilities-based operators' networks, and develop their business on the service side.*[2]

Increased competition in the region has driven market players to be more efficient and offer better services. Providers now compete for customers by improving their product portfolio and introducing more attractive prices, better customer care, and an improved customer experience.

The liberalization of markets has enabled operators to expand regionally and to bring their shareholders greater value from international operations. For the consumer, competition has meant improved access to services, lower prices, and broader product choice.

# LIMITATIONS OF FACILITIES-BASED COMPETITION

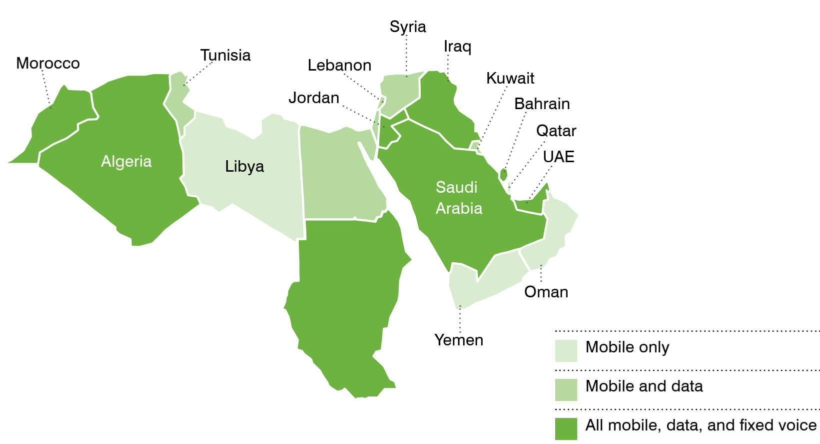
In some MENA countries, the introduction of additional network-based operators may not be a feasible option to further stimulate market development. First, investors (incumbents and new entrants alike) may be reluctant to enter markets with high hurdles to investment, due to their size and saturation; furthermore, some regulators and local authorities limit entry due to scarce resources or adverse impacts, such as the following.

*Market limitations:* Some markets in the region are too small to feasibly support more network-based operators, due to high investment requirements and decreasing returns. Service-based operators have lower capital requirements and therefore may become profitable with lower subscriber numbers and revenues. Allowing service-based competition can also encourage the entrance of smaller investors where large investments in the network are not economical.

*Technical limitations:* For facilities-based operators, spectrum availability is an issue. Unless a country is able to provide further spectrum, licensing mobile network operators (MNOs) is not feasible. Generally, up to five mobile operators can reasonably be expected in each country if spectrum is used efficiently. Service-based competition allows for a greater number of operators that do not require spectrum allocations of their own.

*Social and environmental impacts:* The deployment of networks has adverse social and environmental impacts, such as disruption to traffic or increased pollution caused by construction, that may be mitigated by infrastructure-sharing agreements and requirements. The regulators' role should by no means be to restrict facilities-based competition. Instead, by going a step further than infrastructure sharing and allowing service-based competition, regulators will enable opportunities for operators to consider alternatives to the rollout of a facilities-based network.

***Exhibit 1***
***Telecom Competitive Landscape in the MENA Region, 2008***




Sources: Arab Advisors Group; Booz & Company

# MOVING FORWARD

The introduction of service-based competition may well be the primary enabler in further stimulating market development. Service-based competitors operate by relying on the existing infrastructure of network operators; buying wholesale minutes, capacity, or services; and tailoring and providing services to their own customers. It is important for incumbents to recognize how they may benefit from such opportunities, for regulators to open the markets effectively, and for investors to enter them prudently.

A few regulators in the MENA region have already started facilitating the entry of service-based operators. Most countries in the region have liberalized Internet resale, and they are increasingly adopting local loop unbundling regulation. Jordan has just liberalized market entry for MVNOs, Oman has done so for mobile and Internet resellers, and Bahrain is expected to follow suit shortly *(see Exhibit 2)*. Only fixed-voice liberalization remains a real concern, with carrier selection regulation in place only in Bahrain, Jordan, Morocco, and the UAE, and fixed-voice resale permitted in just Bahrain, Jordan, Egypt, and Morocco. Service-based competition is no longer a mirage on the horizon but an emerging reality. Market players need to capture the opportunities early to fully benefit from the market's potential.

***Exhibit 2***
***Paving the Way for Service-Based Competition in the MENA Region, 2007***

| | Local Loop Unbundling Variations | Carrier Selection | Mobile Resale or MVNO | Fixed-Voice Resale | Internet Resale |
|---|---|---|---|---|---|
| Algeria | Planned | Not implemented | Not implemented | Not implemented | Implemented |
| Bahrain | Implemented | Implemented | Planned | Implemented | Implemented |
| Egypt | Implemented | Planned | Not implemented | Implemented | Implemented |
| Jordan | Planned | Implemented | Implemented | Implemented | Implemented |
| Kuwait | Not implemented | Not implemented | Not implemented | Not implemented | Implemented |
| Lebanon | Implemented | Not implemented | Not implemented | Not implemented | Implemented |
| Libya | Not implemented | Not implemented | Not implemented | Not implemented | Not implemented |
| Morocco | Implemented | Implemented | Not implemented | Implemented [2] | Implemented |
| Oman | Planned | Planned | Implemented | Planned | Implemented [1] |
| Qatar | Not implemented | Not implemented | Not implemented | Not implemented | Not implemented |
| Saudi Arabia | Implemented | Planned | Not implemented | Not implemented | Implemented |
| Syria | Not implemented | Not implemented | Not implemented | Not implemented | Implemented |
| Tunisia | Planned | Not implemented | Not implemented | Not implemented | Implemented |
| UAE | Implemented [1] | Implemented | Not implemented | Not implemented | Not implemented |
| Yemen | Not implemented | Not implemented | Not implemented | Not implemented | Not implemented |

Implemented
Not implemented
Planned

[1] Implemented by regulator but not requested by any operators
[2] Not mandated but permitted if commercially negotiated between operators
Sources: Regulator interviews; regulators' Web sites; Booz & Company

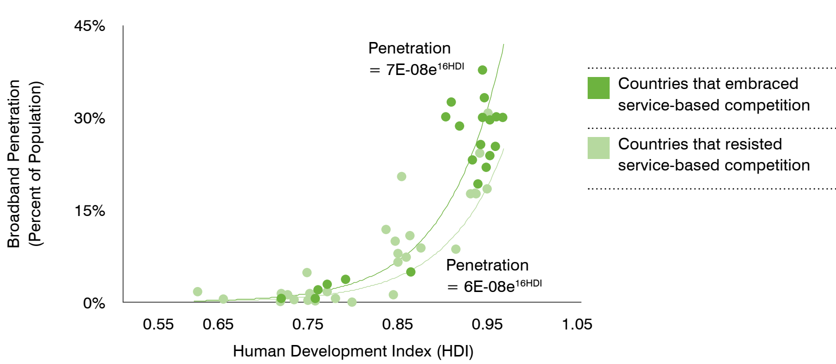
# IMPACT ON THE TELECOM SECTOR

The introduction of service-based competition is likely to galvanize the momentum initially generated by the development of facilities-based competition. It will mean incremental and selective investments, greater penetration of services, and therefore a greater, positive multiplier effect on the rest of the economy.

*Investment:* The entrance of service-based competition can stimulate retail services and the utilization of existing networks. Facilities-based incumbents are therefore encouraged to invest in improving and upgrading their infrastructure. For example, in Europe, several late-entrant network operators, such as Germany's E-Plus and the Netherlands' Telfort, have focused on attracting MVNOs to their networks as part of their strategy. More notably, service-based providers themselves are investing in the sector. They usually enter the market with some level of investment in areas such as software, retail, and distribution. Upon achieving success, they can start building up their operations and scaling up their investments.

An investigation of the levels of investment in the telecom sector in OECD[3] countries illuminates the impact of service-based competition. Although most countries saw reduced investments in the sector in the early 2000s, due to the telecom market crash, countries that opened up to service-based mobile competition were able to mitigate the effect of the slowdown. For instance, between 1997 and 2001, the OECD two-year compound annual growth rate (CAGR) of telecom investments fell by 6 percent. However, the U.K., which welcomed its first MVNO in 1999, saw the same rate fall by only 3 percent. The drop was even more dramatic between 1998 and 2002, when the two-year CAGR for OECD countries fell by 22 percent. During that period, however, Denmark and Norway (both of

***Exhibit 3***
***Relationship between Service-Based Competition and Broadband Penetration, 2007: Selected International Countries***




Sources: International Telecommunication Union (ITU); Telegeography; Global Insight; Booz & Company which saw MVNOs enter in 2000) experienced reductions of only 12 percent and 10 percent, respectively.[4]

The impact on investment is less profound in cases in which facilities-based competition is less prevalent. Nowhere is this clearer than in Germany, where Deutsche Telekom (DT) threatened not to roll out a fiber network unless it was given a regulatory holiday. DT planned to invest US$3.5 billion in an ultra-high-speed fiber network that would allow it to introduce VDSL—the next-generation DSL service, which would allow it to improve customers' experience with multimedia and high-bandwidth applications. It argued that by fully opening its network to service-based providers, it would not be able to recoup its initial investments. Eventually, the German parliament passed a law granting DT such a regulatory holiday.[5] In Korea, however, where Korea Telecom does not have a monopoly over the infrastructure, introducing service-based competition was not as contentious, and even the cable local loop is being unbundled.

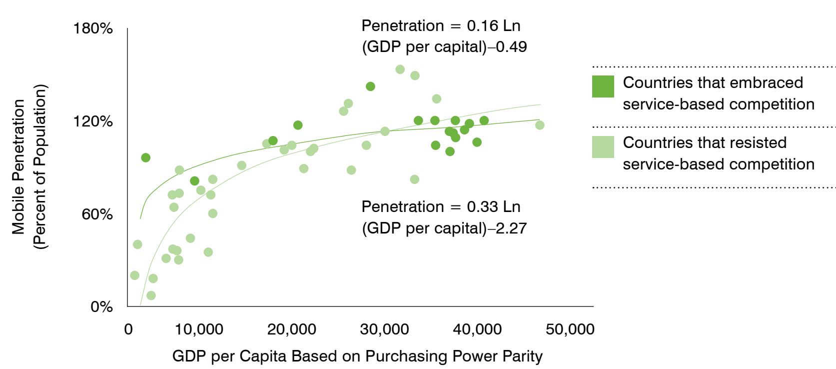
Therefore it is imperative for regulators to recognize that although introducing service-based competition stimulates investment, it must be done only after effective facilities-based competition is in place.

*Penetration:* Competition is a major driver of improvements in penetration. As there are limitations to the number of facilities-based operators that will enter a market, service-based competition offers an effective way of reinvigorating competition. An analysis of more than 50 European, Asian, African, and North and South American countries reveals that fostering service-based competition makes for significant increases in broadband penetration. A similar analysis of the effect of service-based competition on mobile penetration reveals that in the early stages of economic development, service-based competition can improve mobile penetration *(see Exhibits 3 and 4)*.

*Economic impact:* The economic impact of increased investment and penetration is significant. Due to a multiplier effect on the rest of the economy, increased investment augments sector spending, creates employment, and drives economic growth. The increase in telecom service use improves information and communications technology (ICT) literacy, encourages entrepreneurship, and enables an ICT workforce. Although the total effect on economic performance and employment is difficult to measure, a 2006 World Bank study demonstrated that an improvement in ICT use in enterprises in developing countries can improve profitability by more than 5 percent, productivity by 1 percent, and the investment rate by 2.5 percent.[6]

*Impact on operators:* Operators, incumbents and new entrants alike,

***Exhibit 4***
***Relationship between Service-Based Competition and Mobile Penetration, 2007: Selected International Countries***




Sources: International Telecommunication Union (ITU); Telegeography; International Monetary Fund; Booz & Company are affected by service-based competition's impact on the sector and its economics. The following are three of the most significant effects:

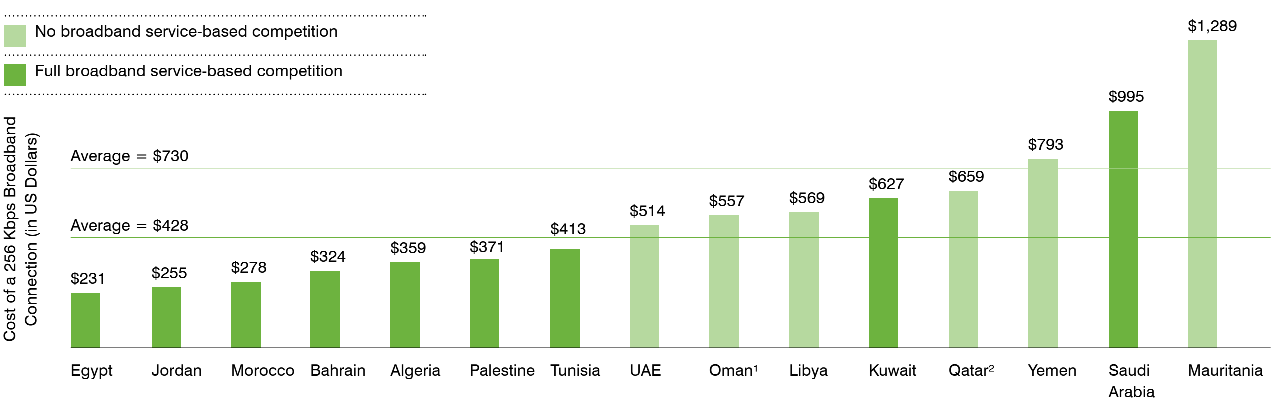
- *Prices:* The increase in retail competition is likely to impact prices, as operators try to bring more attractive offerings to consumers. A brief look at the cost of entry-level DSL in the MENA region provides some evidence: The average annual cost of a basic broadband connection in a market with effective retail competition is US$300 lower than that of a connection in a monopoly or duopoly market *(see Exhibit 5)*. These price reductions can diminish operator revenues.

  Operators' efforts to attract and retain customers through optimized tariffs is reflective of their commitment to consumers. Better, differentiated offers; packages that target particular niche markets; and improved customer service are all outcomes of improved competition in this regard.

- *Service usage:* The use of data services over mobile is indicative of the extent to which mobile users take advantage of services available to them. It is apparent that operators in countries with service-based mobile competition are more successful at encouraging customers to use mobile data services, because increased competition compels operators to investigate avenues for improving revenues as prices for traditional services come under pressure. In a study of a select number of countries, it was found that those encouraging service-based competition saw data taking up around 19 percent of incumbents' mobile average revenue per user, compared with 13 percent for others.[7]

- *Subscriber acquisition:* New entrants to facilities-based markets invest heavily in rolling out their networks. In many competitive markets, attracting subscribers to the network may be challenging, leaving significant excess capacity on the network. Some operators may choose to embrace service-based competitors in order to stimulate traffic on their own networks and make a wholesale profit. In less than two years, Germany's E-Plus, a mobile network operator, managed to attract more than 3 million network users in the form of service-based operators' subscribers.[8]

***Exhibit 5***
***Annual Cost of a Broadband Connection, 2007***




[1] Oman prices are for a 384 Kbps connection
[2] Qatar prices are for a 512 Kbps connection
Sources: Tariffica; Ovum; Arab Advisors Group; operators' Web sites; Booz & Company

# SERVICE-BASED COMPETITION POSSIBILITIES

Companies can choose from different models of service-based competition. In the fixed market, these can range from operators offering computer-to-computer Voice over Internet protocol (VoIP) services, to operators relying on simple resale, to voice operators relying on carrier pre-selection or full-fledged local loop unbundling. In the mobile market, it can range from operators relying on simple resale to full MVNOs.

The relationship between service-based operators and network operators depends on a number of factors. These include the degree of infrastructure ownership attributable to service-based operators, and the extent of services provided by the network operator. The greater the access a service-based operator has to existing infrastructure, the greater the commercial flexibility it has in developing services and setting tariffs *(see Exhibit 6)*.

On the purely resale side of the spectrum, service-based operators can offer only services agreed upon with the infrastructure provider. Usually these are sold to the new entrant on a *retail-minus*[9] basis. Market entry is relatively easy, and limited technical ability is required. As infrastructure access increases, the service-based operator can introduce more of its own soft infrastructure (e.g., software), taking greater control over the services offering. In such cases, it typically buys access on a *cost-plus*[10] basis, giving it further flexibility on the pricing perspective. Such operators require a high degree of technical maturity in order to compete successfully.

Regardless of their structure, service-based providers have no major infrastructure fixed costs, as they do not need to own and manage networks. They can therefore recover their initial investments relatively quickly. Free from network-management concerns, resellers have an agility that allows them better scope

*Exhibit 6*
*Level of Service Provider Control of Network Infrastructure*

| | FIXED-LINE ELEMENTS LEASED | MOBILE NETWORK ELEMENTS LEASED |
|---|---|---|
| **Network operator** | None | None |
| **Full-service provider/full MVNO** | Local loop unbundling | Network elements |
| **Enhanced service provider** | Line sharing | Applications and services |
| **Service provider** | Bitstream access | Activation and billing |
| **Simple reseller** | DSL resale | Customer interface |

SBO Flexibility — FBO Control

INFRASTRUCTURE-BASED COMPETITION — SERVICE-BASED COMPETITION

Source: Booz & Company

for service differentiation and customer experience improvement. Resellers can enter the market more quickly, focus on segmenting it, and target particular niches and their needs, all of which contributes toward improving customer experiences and additional growth.

Several global service-based competition plays have emerged over the past decade:

*Low cost:* The low-cost approach was first introduced by fixed-voice resellers through carrier selection and carrier pre-selection. It was then picked up by Internet resellers using local loop unbundling or resale through bitstream unbundling. Tele2 is a pioneer in fixed-line reselling, growing from a small reseller in Stockholm to a Europe-wide force to be reckoned with. Today, it is approaching 20 percent market share in many of the markets in which it operates. Tele2 began moving into low-cost, no-frills mobile resale in the early 2000s and has emulated its success in the fixed market, easily attracting its competitors' customers. More recently, VoIP providers have made waves across the voice market, with companies such as Skype and Vonage offering no-frills, low-cost voice services over IP. Considering the lower-than-average incomes across a portion of the MENA region's countries, the low-cost approach merits further consideration.

*Brand plays:* Particularly in mobile, brand plays have been successful in attracting customers to service-based competitors. Relying on their marketing savvy and the strength of their brands, companies have approached network operators to create attractive mobile offerings. Virgin Mobile was able to accomplish this successfully in the U.K. There are similar opportunities in the region, particularly with the growth of a number of strong regional brands.

*Portfolio expansion:* This approach is typically adopted by players in the industry looking to expand. Fixed-network operators could acquire mobile reselling licenses, while mobile network operators could similarly acquire fixed-service licenses,[11] in order to offer their customers the benefits of convergence, allowing them to meet all of their telecom needs with one provider. Distributors can also move up the telecom value chain: The Carphone Warehouse, for instance, started as a mobile service retailer, offering subscriptions to a number of service providers. Eventually, it became a mobile reseller in its own right with the launch of Fresh. More recently, it has become a broadband service provider, offering its own services over BT's unbundled local loops.

*Brand extension:* This is a strategy that has been adopted mostly in the mobile market by retailers with strong distribution networks. Tesco, Aldi, and Tchibo are all retailers that successfully entered the mobile reseller business due to their established access to customers. Customers can obtain a branded SIM card, similar to a branded credit card, from these retailers. In such cases, the reseller has minimal technological experience, and tends to enter into simple resale agreements with the operator, fully relying on its network, billing, and customer-care facilities.

*Niche players:* Niche players offer targeted and tailored offerings to particular age, interest, or ethnic groups. Many successful niche players in fully liberalized markets have focused on the youth market, such as Boost in the United States. Given the fact that young people make up well over 50 percent of the MENA region's population, this is a valuable market to target. Another example of a niche player is that of Movida in the U.S., which is an MVNO that specifically targets the Hispanic community.[12]

# LESSONS FOR INVESTORS

Experience has shown that regardless of the strategy adopted, *first movers* tend to maintain their market positions as the leading mobile resellers or MVNOs. This was the case for Tele2 as a fixed reseller throughout Europe, and Virgin Mobile in the U.K., whereas others entering saturated markets quite late faced considerable hardship.

It is imperative that mobile service-based operators form an appropriate *strategic partnership* with network operators. Such a partnership model enabled the continued success of Virgin Mobile in the U.K., where it operates on T-Mobile's network. Virgin Mobile Singapore's agreement with SingTel forced it to pay high wholesale prices in a market with declining retail prices, contributing to its early demise.

On the fixed side, it is more difficult to choose among different partnerships, mainly because of the incumbent's dominance over most fixed infrastructure. Typically, dominant operators are required to offer unbundling, and to offer resellers access. Prices are generally fixed by access offers and closely monitored by regulators to ensure that operators do not behave in a discriminatory manner.

*A distinct positioning with a clear value proposition* is important for providers to distinguish themselves from their competition, especially where the service provider targets specific market segments. Protecting such a narrow proposition is important. For example, the low-cost broadband provider Tele2 would often publicly challenge incumbents' claims to have lower rates, even taking them to court and accusing them of false advertising.[13]

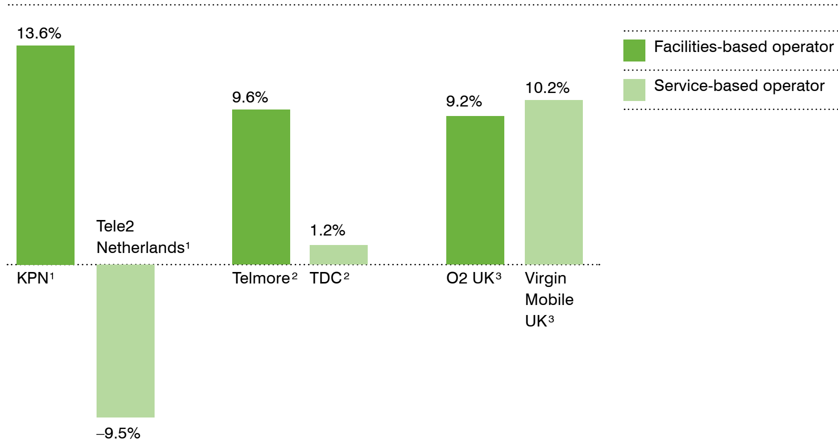
*Powerful brands* often drive the success of service-based operators. Whether it is an existing brand such as Virgin in the U.K., or a new brand such as Boost, branding is closely linked to success. These brands did well thanks to their popular appeal, and their associations with youth and coolness. But not just any well-known brand will do: The Shell brand was not widely adopted by mobile users in Hong Kong, and the Shell mobile reseller failed within six months. It is likely that consumers in this instance had difficulty associating mobile phones with the Shell brand.

*Access to consumers* explains the success of service-based operators such as Aldi Talk and Tchibo, as Aldi and Tchibo are two dominant German retailers with well-established distribution networks. Although not typically associated with technology or mobility, the retailers have extensive distribution networks (along with their trusted names), which drove the success of their mobile ventures.

*Region-wide reach* is an emerging idea in the MENA region, based on the cultural, linguistic, and geographic proximity of its countries. Consumers frequently move from one country to another. Resellers can use their agility to capitalize on this mobility by targeting users in several countries at once, expanding their potential market.

High returns have attracted even skeptical investors to telecommunications markets, but a *cautious approach* is warranted. Investors enter the market assuming that their service-based ventures are going to be instantly profitable. But launching a successful service-based operation is no easy venture. Their margins are generally lower than those of facilities-based operators *(see Exhibit 7)*, and in addition to good positioning, access, and branding, they require careful business and strategic planning.

***Exhibit 7***
***Operator Pre-Tax Profit Margins***




[1] Interim results, October 2007
[2] Full financial year results, 2006
[3] Data from 2005, as Virgin Mobile was acquired by NTL: Telewest in 2006
Sources: Factset; companies' annual reports; Experian; Booz & Company

# REGULATORS' ROLES

As part of their mandate, regulators often aim to enable greater sector development through increased penetration and investment, as well as greater consumer welfare through better quality of service, competitive pricing, and innovative offerings. They can achieve these objectives, among other things, by opening markets to service-based competition.

*Market size:* Once the market is ready for competition, regulators should not seek to restrict it by determining the number of licensees the market can sustain and licensing accordingly. This is especially true for service-provider licenses. Such management undermines the potential of maximizing consumer welfare. Prior to liberalization, regulators' key role is to protect consumer welfare while encouraging and allowing incumbents to prepare for competition in a fair way. Once the market is liberalized, regulatory must enable market entry and market participation and manage anticompetitive behavior.

*License type:* Service-based competition has driven regulators to streamline and adapt their licensing procedures to come in line with commercial developments. Rather than distinguish between licenses on the basis of services offered, regulators are making a facilities/service distinction. Regions and countries such as the EU, India, Jordan, Malaysia, and Nigeria have moved toward unified licensing regimes. The purpose is to encourage the development of broad options for telecom service provisioning. A distinction between facilities licenses and service licenses (which permit any type of service to be offered) allows service-based operators greater flexibility in service offerings and fosters greater market development.

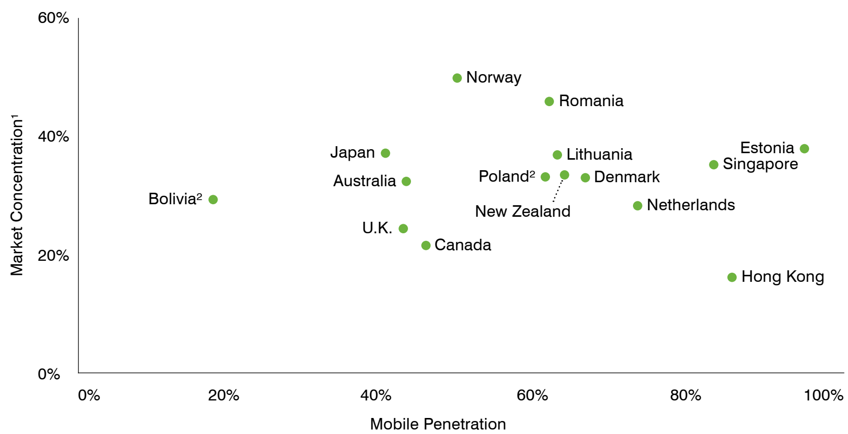
*Timing:* The timing of liberalization can play a role in market development. Giving facilities-based operators some time before opening up to service-based competition can boost long-term sector development. Regulators can do so by allowing a grace period for rollout and establishment before opening the market to full-service competition. Because infrastructure development is capital intensive, a grace period between licenses can help providers establish a position in the market to build a revenue base for cost recovery.

Another reason to allow facilities-based operators time to establish is the ease with which service competition can develop if greater infrastructure competition is in place. The timing of service-based competition entrance within the liberalization plan impacts the entrants' competitive position. If three or more networks are in place at the time of entry, it is likely they will compete to host a service-based operator in order to maintain on-net revenues. If there are only two operators in a market, an unspoken agreement can arise in which they both decide not to host resellers, often necessitating forced network access regulation. However, once there are three or more facilities-based operators, greater uncertainty can exist between operators with unspoken agreements. There is a higher risk one might undermine this agreement and introduce resellers to target selected competitors' market segments. As market concentration decreases, resellers tend to be introduced without much necessary regulation *(see Exhibit 8)*.

The regulator could state service competition will be introduced in a predetermined number of months or years after the licensing of the newest network operator. This motivates the new network entrant to quickly establish a market presence. Regulators need to gauge the timing fairly, for it should not be used to delay liberalization; prolonged processes can adversely affect the benefits that consumers should receive from competition.

*Required regulation:* Regulators need to be aware of the need for a supportive regulatory framework. For instance, a carrier selection framework is the backbone of a successful fixed-voice service-based competition environment. Local loop unbundling is essential for data service-based competition. Similarly for mobile, regulation such as mobile number portability and effective resale frameworks are a must if competition is to be fair and effective.

***Exhibit 8***
***Market Concentration at First MVNO Launch***




[1] Concentration is defined by the Hirfindahl-Hirschman (HHI), which considers the number of operators in a market and their respective market shares. HHI of 100 percent indicates a monopoly.
[2] Bolivia and Poland's MVNOs are actually owned by the incumbent telecom operators.
Sources: Informa Research Services; regulators' Web sites; Booz & Company

# THE MARKET POTENTIAL

Introducing service-based competition has the potential to drive telecom sector development in the MENA region. The effective introduction of service-based competition can be beneficial to national markets; it can more than double forecasted broadband penetration and result in a tangible increase in mobile penetration. Increased competition will result in greater consumer choice, both in terms of operators and services. Service-based operators' agility and strategies will result in more vibrant and innovative sectors. The end result is greater telecommunications service usage, and an overall positive economic and social impact.

In considering the significant positive impact that service-based competition may have on telecommunications markets, issues in facilities-based markets must not be neglected. The success of service-based competition is closely tied to the existence of facilities-based competition. In cases where facilities-based markets are monopolies or duopolies, regulators must work in earnest towards facilities-based market liberalization. This in turn will provide a further boost to sector investments, revenues, and performance.

Service-based competition holds significant potential for the region. This is a critical consideration, as today's consumers demand greater services, interactivity, and personalization, and believe connectivity to be an expected standard. Operators, investors, and regulators alike should act in order for the market's full potential to be realized.

## Endnotes

[1] As of March 2008, every market in the region has licensed at least two mobile operators.

[2] Service-based operators can sometimes have varying degrees of ownership in infrastructure but do not operate full networks.

[3] Organisation for Economic Co-operation and Development.

[4] International Telecommunication Union (ITU) data; Booz & Company analysis.

[5] The EU objected to this German law and after failed negotiations, took Germany to the European Court of Justice to force its repeal.

[6] World Bank, "Information and Communications for Development 2006: Global Trends and Policies" report.

[7] Booz & Company; Informa. Countries considered: Austria, Bahrain, Belgium, Egypt, France, Germany, Italy, Jordan, Netherlands, Norway, Poland, Spain, United Kingdom.

[8] EMC World Cellular Database.

[9] The service-based operator buys services at the rate sold by the network operator to the retail market, minus a certain margin.

[10] The service-based operator buys access at a rate slightly higher than what it costs the network operator to provide such access.

[11] In countries where universal licensing regimes are in place, this is a much simpler process, not requiring the same level of licensing.

[12] More than 40 million Hispanics live in the United States.

[13] In 2005, a court ordered Deutsche Telekom to withdraw an advertising campaign that made false claims about how much customers could save by switching to its fixed services. "As Tele2 Owns More, Risks Rise," International Herald Tribune, October 30, 2005.

### *About the Authors*

**Karim Sabbagh** is a partner at Booz & Company based in Dubai and Riyadh. He leads the firm's communications, media, and technology practice in the Middle East. He specializes in sector-level development strategies, institutional and regulatory reforms, large-scale privatization programs, and strategy-based transformations focused on strategic planning, partnerships and alliances, marketing, and business process redesign.

**Bahjat El-Darwiche** is a principal with Booz & Company based in Beirut. He specializes in communications and technology and has led engagements in the areas of telecom sector liberalization and growth strategy development, policymaking and regulatory management, business development and strategic investments, corporate and business planning, and privatization and restructuring.

**Jonathan Fiske** is a senior associate with Booz & Company based in Dubai. He specializes in regulatory affairs, including regulatory management, licensing, sector policymaking, liberalization, and regulatory development.

**Hana Habayeb** is an associate with Booz & Company based in Dubai. She specializes in telecom policy, regulation, and strategy, with a background in market liberalization, policy setting, regulatory reform, regulatory strategy, and governance.

The most recent list of our office addresses and telephone numbers can be found on our website, **www.booz.com**

Worldwide Offices

**Asia**
Beijing
Hong Kong
Mumbai
Seoul
Shanghai
Taipei
Tokyo

**Australia, New Zealand & Southeast Asia**
Adelaide
Auckland
Bangkok
Brisbane
Canberra
Jakarta
Kuala Lumpur
Melbourne
Sydney

**Europe**
Amsterdam
Berlin
Copenhagen
Dublin
Düsseldorf
Frankfurt
Helsinki
London
Madrid
Milan
Moscow
Munich
Oslo
Paris
Rome
Stockholm
Stuttgart
Vienna
Warsaw
Zurich

**Middle East**
Abu Dhabi
Beirut
Cairo
Dubai
Riyadh

**North America**
Atlanta
Chicago
Cleveland
Dallas
Detroit
Florham Park
Houston
Los Angeles
McLean
Mexico City
New York City
Parsippany
San Francisco

**South America**
Buenos Aires
Rio de Janeiro
Santiago
São Paulo

**Booz & Company is a leading global management consulting firm, helping the world's top businesses, governments, and organizations.**

**Our founder, Edwin Booz, defined the profession when he established the first management consulting firm in 1914.**

**Today, with more than 3,300 people in 58 offices around the world, we bring foresight and knowledge, deep functional expertise, and a practical approach to building capabilities and delivering real impact.**

**We work closely with our clients to create and deliver essential advantage. For our management magazine strategy+business, visit www.strategy-business.com.**

**For the Ideation Center, Booz & Company's leading think tank in the Middle East, visit www.ideationcenter.com.**

**Visit www.booz.com and www.booz.com/me to learn more about Booz & Company.**

Printed in USA