

GROWTH OF MVNOs & THE IMPACT ON MOBILE SERVICES SECTOR

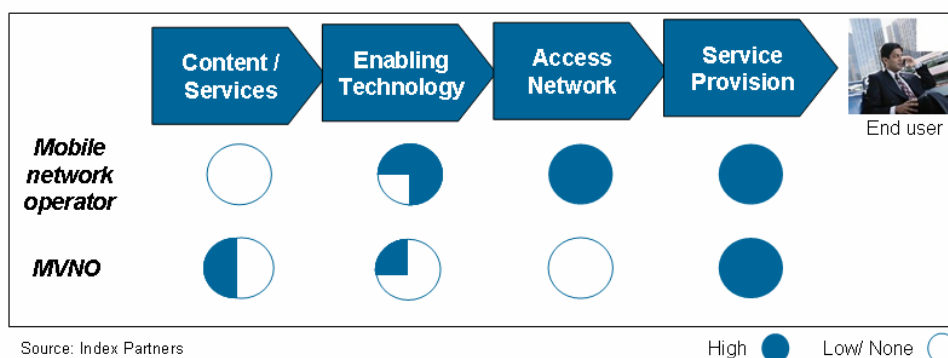
Mobile Virtual Network Operators (MVNOs) are rapidly acquiring critical mass in the global mobile services sector. An estimated ~100-120 MVNOs presently operate in Europe and another ~20-30 in the USA. Their combined revenues are projected to increase from \$3 billion in 2004 to \$40 billion in 2009. However, the profile and industry-impact of MVNOs vary significantly across markets, as outlined below.

1. Introduction

MVNO is a mobile voice and data services provider without any mobile network or spectrum (license) assets. It sources access (on a per-minute or per-megabyte basis) from a host network operator under a commercial, bilateral agreement (typically referred to as Service Provisioning Agreement or "SPA") and resells it under its own brand.

MVNOs typically manage a few critical functions in-house and outsource the rest. At a minimum, they deliver their own SIM cards and often directly control branding, marketing, billing and customer care functions. The diagram below summarises the position of MVNOs in the mobile services value chain.

Participation of Network Operator and MVNO in Mobile Services Value Chain



2. Growth Drivers

The rapid growth of MVNOs has been driven primarily by the following recent changes in the industry:

- **Regulatory changes**, notably in the EU, directing network operators to lease out network capacity at a "fair price", coupled with introduction of number portability and changes in interconnection, call termination and call origination fee structures
- **Maturity of markets** making acquisition of "marginal" subscribers challenging (and sometimes uneconomical) for operators
- **Growth of data/ content services** that enhances the ability to offer differentiated and customised services (vis-à-vis undifferentiated voice services)
- **Reducing investment and competence barriers to entry** with the growth of Mobile Virtual Network Enablers ("MVNE") that offer specialised components of mobile services such as CRM, provisioning, order management, service assurance, billing (in some cases), fulfilment and even content management and settlement on a per-user fee basis. Examples of MVNEs include firms such as Telcordia, Convergys, BCGI, InPhonic, Comverse, Formula Telecom Solutions, TMNG, and Sentori.

These factors are creating an opportunity for several businesses with relevant leverageable assets to enter the MVNO sector. This is summarised in the table below.

Key categories of (existing/ potential) participants in the MVNO business

Type of business	Relevant asset	Example	Rationale
Community Owners	Strong brand equity	<ul style="list-style-type: none"> • Coca-Cola • Virgin • Apple 	<ul style="list-style-type: none"> • New revenue source leveraging as well as reinforcing brand power ("halo effect"), particularly to "niche" consumer segments
	Established customer (billing) relationship	<ul style="list-style-type: none"> • American Express • Nectar 	<ul style="list-style-type: none"> • New revenue source to selectively extend and enhance existing relationship
Distribution powerhouses	established retail infrastructure to reach broad identifiable sections of the population	<ul style="list-style-type: none"> • Tesco • M&S • Lloyd TSB 	<ul style="list-style-type: none"> • Leverage retail infrastructure to acquire subscribers and distribute handset/ SIM cards at low cost • Extend service portfolio to promote customer loyalty
Infotainment providers	Library of information and entertainment assets suited for "delivery/ experience" in mobile devices	<ul style="list-style-type: none"> • Yahoo • ESPN • MTV 	<ul style="list-style-type: none"> • Extend offerings to anytime, anywhere format by maintaining control on quality and customer experience factors
Communication bundlers	Communication service providers without a mobile offering in their core service bundle	<ul style="list-style-type: none"> • BT • NTL 	<ul style="list-style-type: none"> • Augment revenue stream with inclusion of a complementary service that is growing rapidly

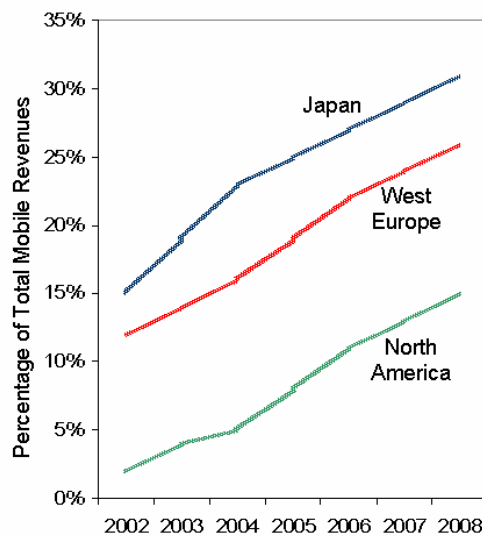
Source: Index Partners

Accordingly, MVNO is evolving to be a business of value-added delivery of mobile services rather than simple reselling of wireless minutes. While MVNOs traditionally concentrate on voice-centric pre-paid segments (e.g. Virgin), new MVNOs are increasingly focusing on data-rich post-paid services (e.g. ESPN). Data-based services offer scope for greater differentiation and customisation for niche consumer segments, implying the likely growth of specialised MVNOs with the rollout of 3G networks.

The growth of data and content services in mobile sector will significantly increase the scope for competitive differentiation, and thereby likely to attract several MVNO participants with new innovative business models

Data source: Ovum, TIA, Wilkofsky Gruven Associates

Growth of Data Revenues in Mobile Services



3. Impact on Mobile Network Operators

The rapid growth of MVNOs is likely to have an overall positive impact on the mobile services sector. MVNOs are expected to capture an estimated 15-20% of the mobile services revenues and marginally erode average cash flow value of network operators¹ (*net impact of ~-2% based on ~4% tariff decline for outgoing calls, partly offset by consequent increased usage*).

A carefully crafted MVNO partnerships offer significant benefits for host operators, such as:

- I. **20-30% lower cost of subscriber acquisition** by leveraging MVNOs' existing brand equity, consumer franchise, sales and distribution infrastructure as well as a undivided management focus on sales and marketing (as they do not need to focus on network operations issues). For example, ESPN is likely to leverage its existing reach to an estimated 97 million American sports fans (through its TV and radio programs, the Web and the magazine) to launch ESPN Mobile in early 2006. In general, MVNOs are more brand and marketing savvy than network operators, and thereby have a lower subscriber acquisition cost.
- II. **Enlarged network user base** by reaching complementary (often niche) user segments through other "relevant" brands (extensions). For example, Sprint PCS of the US has MVNO partnerships with Virgin Mobile US to target the youth market with a prepaid model and ESPN to target high-end, tech-savvy users who are likely to consume heavy data and (niche) content services – both outside Sprint's traditional focus segments [*"We think MVNOs will be key to our growth and that of the wireless industry, as they are a means to allow other brands to appeal to customers that we cannot reach"* VP of strategic partners for Sprint PCS]. Cingular established a MVNO partnership with 7-11 to target casual users who cannot be reached profitably through traditional channels [*"7-Eleven attracts customers whom traditional Cingular distribution channels may not tap"* VP Marketing for Cingular]. Furthermore, a MVNO strategy allows network operators to reach price-sensitive users without compromising the brand-appeal for core franchise; examples include Vodafone's use of Campuz in Europe to service students (at less than 30% of average Vodafone tariffs) and Cingular's use of Primus Wireless to target migrant workers by offering international calls that are ~90% cheaper than other major cellular providers.
- III. **Improved network utilisation** by careful choice of MVNO partners that target segments with complementary usage profiles. An example is Vodafone's partnership with Campuz to service students who typically use mobile during off-peak hours (evenings and weekends) to connect with the friends that they are together with during peak-hours. This generates significant off-peak traffic without significantly constraining the network during peak-hours when Vodafone's core business subscribers typically use the network. Such innovative strategies significantly improve network utilisation and reduce the overall cost of network operations.
- IV. **Additional revenue streams** from partner fees, call termination charges, stimulate use of complementary services. Most operators typically retain a major share of the call termination fees which are often significant for certain pre-paid segments (e.g. parents call their student children more than vice-versa). Furthermore, specialised MVNO partners stimulate data demand in the market; an example is EarthLink Wireless in the US (which sells data-bundled packages only) and Amp'd Mobile in the US (which offers media-rich services).

MVNOs also have several positive effects on the overall industry as they create an efficient cost benchmark in the industry and help accelerate rollout and adoption of specialised data services. However, the threat of voice-revenue cannibalisation and increased churn remains, particularly with the recent growth in "no frills" MVNOs that focus only on price and undercut the wireless operators. This is particularly alarming given that MVNOs traditionally thrive in the most competitive markets in the world, namely, UK, Scandinavia, Netherlands and now the US².

Consequently, a proactive and well-executed MVNO strategy is likely to create significant competitive advantage for network operators. This involves selection of appropriate partners than can profitably reach complementary segments and the development of sustainable partnership agreements (an optimal mix of revenue sharing and equity ownership). Moreover, it is important for network operators to out-speed competitors in developing a portfolio of exclusive partners from the widest choice of potential brands. The importance of such strategy is underscored by the findings from a recent research by Arthur D. Little in France which indicated that MVNOs' impact on cash flow is -3% for host and -9% for non-host operators.

¹ Suggested by a 2004 research study by Arthur D. Little (for a low-cost MVNO in the French market)

² MVNOs currently service ~25% mobile subscribers in Denmark

4. Operational and Economic Models

MVNOs deploy lean infrastructure to operate select functions in-house (primarily sales, administration and, in most cases, customer care/ billing) and outsource other functions. This has spawned the growth of a new cluster of firms known as Mobile Virtual Network Enablers (“MVNE”) that offer services such as CRM, provisioning, order management, service assurance, billing (in some cases), fulfilment and even content management and settlement. Examples of MVNEs include firms such as Telcordia, Convergys, BCGI, InPhonic, Comverse, Formula Telecom Solutions, TMNG, and Sentori.

The outsourcing-heavy model lowers the investment and competence barriers and provides a scalable platform that is critical for effective participation in the rapidly growing mobile industry. However, the “range” of functions outsourced vary widely and is primarily optimised to ensure low cost, speed-to-market, seamless scalability, operational control and access to specific competence (that is not available or sustainable in-house) and technology upgrades. Most MVNOs tend to control billing functions using network-grade OSS to be able to quickly provision new services and redesign price packages in response to market changes (rather than being constrained to the pricing schedules offered by the wholesale operator). A few MVNOs, on the other hand, outsource virtually every component of operation thereby blurring the lines between MVNEs and MVNOs; examples include Liberty Wireless (a MVNO in the USA that is operated by InPhonic) and 7-Eleven (whose US-based MVNO is operated by Ztar Mobile, a MVNE). Consequently, different MVNO models have emerged based on the degree of outsourcing used.

MVNO Business Models: Degree of ownership and control over key elements of MVNO business

Element	Licensor model	Agency model	Full-service model
Brand	●	●	●
Billing relationship	●	●	●
SIM card	○	●	●
Sales & distribution	◐	◐	●
Customer care	○	◐	●
Handset	○	◐	●
Pricing and service packages	○	○	●

Source: Index Partners

High ● Low/ None ○

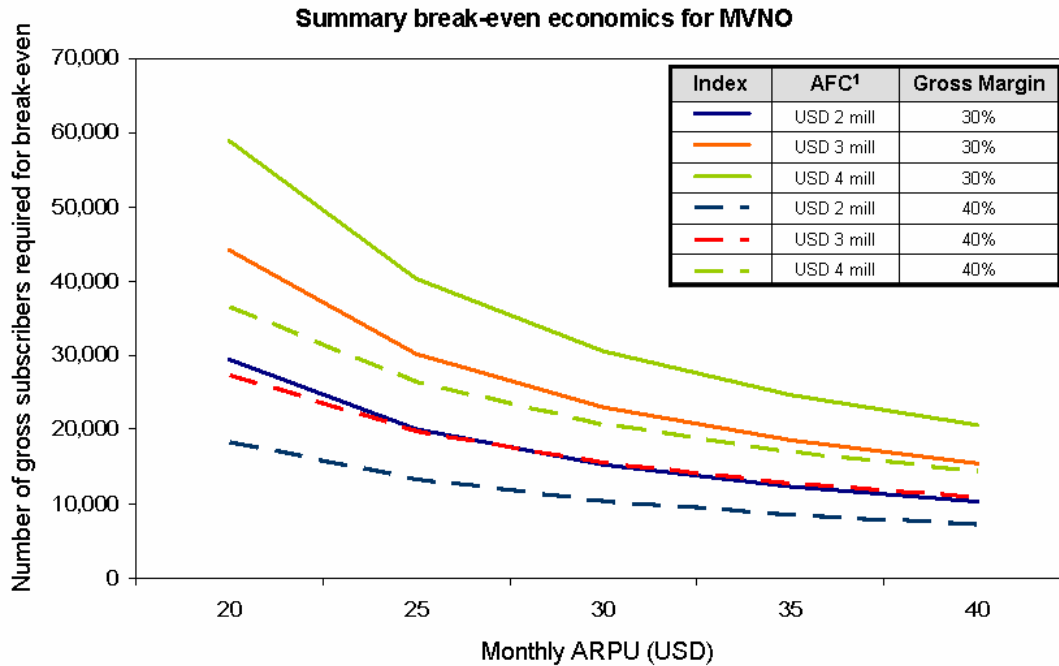
In general, most MVNOs tend to focus on brand and marketing functions, control all relevant subscriber touch-points and outsource the technology elements that remain opaque to subscribers. Accordingly, “marketing/ branding” and “managing partner relations” are key competence areas for MVNOs.

MVNOs maintain close *control* on functions that are central to their niche market strategy (even if the function outsourced). For example, ESPN Mobile has strict SLAs with MVNEs to ensure that its client base of passionate sports enthusiasts are able to seamlessly download sport clips, thereby aligning consumer experience with expectations from the brand. [“For ESPN, the brand and QoS around that brand [are] critical, so we have to ensure the partners we pick are in synch with our goals, as we have a passionate fan base, so it’s qualitatively different than other brands”, senior marketing executive from ESPN].

MVNOs derive distinct economic advantages from their outsourcing-heavy strategies (as discussed above) and complementary leverage-able assets. These include:

- Lower start-up investments (no network or spectrum investments)
- Lower operating overheads (due to significant outsourcing)
- Lower subscriber acquisition cost (due to existing brand, consumer franchise or sales & distribution assets)
- Low churn levels by creating a superior customer experience (e.g. pricing packages, customer support, etc.) or by offering a customised suite of services (e.g. ESPN clips/ news targeted to sports enthusiasts) or a well-defined value proposition (e.g. no-frills, low-cost service)

Consequently, most MVNOs enjoy a relatively low break-even level of 20-50,000 subscribers even with relatively low ARPU (USD 20-25 per month) and gross margin levels (30-35%). The break-even profile for a range of ARPU, margin and start-up capex scenarios is summarised in the diagram below.



Note: 1) AFC = Average Annual Fixed Costs (for customer care, overheads, etc.); 2) Key assumptions: a) Subscriber acquisition cost = USD 300 (primarily handset subsidy and dealer commission); b) monthly churn = 2%; c) WACC = 10%; d) Ratio of active to gross subs = 80%
Source: Index Partners

The business case for MVNOs, however, is driven by the structure of specific market, e.g. mobile penetration level, number service providers and their level of fragmentation/ concentration, pricing regime, etc.

5. MVNO - Network Operator Relationship Issues

Selection of the network *partner* is probably the most critical outsourcing decision for MVNOs. The key decision factors include the existence of an explicit MVNO strategy and alignment of network features with MVNOs point of differentiation (e.g. a MVNO such as ESPN requires operators with significant *reliability* and *availability* of network capacity that allow mass-downloading of sports clips). Network quality and coverage of host network are becoming qualifying hygiene factors rather than differentiators (as most network operators have achieved near 100% coverage in developed markets). Finally, the choice is also influenced by the ability to agree on principal contract terms that address long-term issues and implications of “co-existence” with a growing portfolio of “complementary” service providers within the host network. Some of these are summarised below.

Contract Element	Issue
Subscriber definition & terms	• Payment terms based on active vs gross subscribers
Ownership of subscriber base	• Migration of subscribers to an alternative network
Pricing decisions & revenue sharing	• Impact of discounted (e.g. community pricing) on revenue proceeds to network provider
Rollout of new services	• Timing and range consistent with offerings of host network provider to its own subscriber base
Target segment definition	• Clarity to protect non-overlap with host network • Exclusivity to ensure no direct competitor allowed on host network

6. Implications for Industry Participants

The MVNO business model is here to stay and thrive. Leveraged appropriately, it presents significant opportunities for network operators to sustain profitable growth, notably in maturing markets. However, an inappropriate strategy could expose network operators to revenue erosion and churn problems. Correspondingly, MVNOs themselves need to develop robust go-to-market strategies with innovative offerings for niche under-served segments. Finally, developing a network of compatible partnerships (with technology and content suppliers) remains one of the most critical success factors for both MVNOs. Successful planning and execution of these strategies require distinctive insights on several issues such as:

- How will the pricing and competitive landscape evolve in specific end-user segments?
- Who are the most appropriate MVNO partners for the under-served segments with strong profit potential?
- What are the critical components of the service agreement and their impact of the relevant MVNO and network providers?
- What is the valuation impact of a specific MVNO business on a network operator?

Answering these questions require rigorous, independent, timely and insightful analyses of relevant issues within the telecom, media and technology industries. Index Partners leverages its knowledge and experience across these converging sectors to help investors and companies assess specific business / investment opportunities.

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