

Virtually Mobile

Assessing the Opportunity for MVNOs in India

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1 Abstract

Recent reforms by the Indian telecom regulator are likely to result in the introduction of MVNOs into this market. Despite the high level of competition and low tariffs prevalent in the country, an MVNO can be a relatively low-risk entry option for players. The economic viability of MVNOs will hinge to a very large extent on the wholesale rates that the business manages to negotiate. The youth, enterprise, premium services and heavy data usage segments should be immediate opportunities which the MVNOs can target. Capgemini recommends a thin operating model for MVNOs commencing operations—unless dictated otherwise by the value proposition—so as to be able to break-even at a lower subscriber base. MNOs¹ should view the introduction of MVNOs as an opportunity to reach out to segments they are presently unable to address. Due to a large number of players in the market, MNOs will need to have comprehensive wholesale strategies in place to attract MVNOs onto their network. These operators should provide deep discounts on wholesale rates to remain competitive, and garner additional revenues through other network resources and in-house MVNEs².

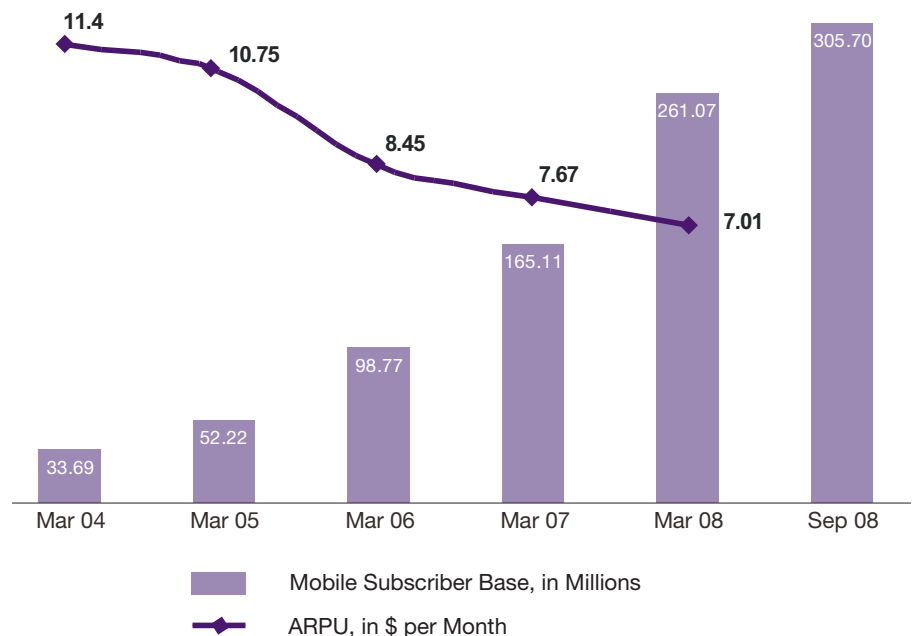
2 Introduction

The Indian mobile telephony market is now the second largest in the world after China, with over 300 million subscribers³ (see Figure 1). The subscriber base for mobile services has been growing at a rapid pace, with some analysts forecasting the number to reach over 500 million by 2010.

This phenomenal growth has piqued the interest of foreign players, who have either entered or are planning to make their foray into the Indian mobile market (see Figure 2). Operators such as Vodafone, Maxis, Etisalat and Telenor have already acquired stakes in existing players, while others have expressed their interest in entering the market through acquisition, or by participating in license auctions.

Against this backdrop, the recent recommendations by the Telecom Regulatory Authority of India (TRAI) on allowing MVNOs to operate in the market, presents another entry opportunity for new players. In this paper, Capgemini analyzes whether MVNOs are likely to succeed in India, and identifies the most attractive market segments that such players could target.

Figure 1: Mobile Telephony Subscribers and ARPU in India, (Millions, \$ per Month), 2004-2008
















Source: TRAI, "Indian Telecom Services, Performance Indicators, January-March 2008"; Merrill Lynch, "Global Wireless Matrix", October 2007

1 MNO: Mobile Network Operator.

2 MVNE: Mobile Virtual Network Enabler.

3 Dailywireless.org: "India 2nd Largest Mobile Market", April 2008.

Figure 2: Key Foreign Investments in the Indian Mobile Communications Space

Operator Status at Point of Investment		Investor	Timeframe	Deal Size
	Aircel had operations in 6 circles Licenses for 6 additional circles were pending		Dec-05	<ul style="list-style-type: none"> Investment: US\$800m for 74% stake
	Spice operated in two circles with a total subscriber base of over 1.8m		Apr-06	<ul style="list-style-type: none"> Investment: US\$179m
	Hutchison Essar was the fourth largest player with 24m subscribers		Feb-07	<ul style="list-style-type: none"> Enterprise Value: US\$ 18.8 billion Investment: US\$ 11.1bn
	Shyam Telelink offered basic telephony services in one circle. It had applied for unified access licenses in 22 other states		Sep-07 May-08	<ul style="list-style-type: none"> Investment: US\$11.4m for 10% stake Investment: US\$45m for 21% stake
Swan Telecom	Swan had UASL licenses for 13 circles in India It is expected to launch services in 2009		Sep-08	<ul style="list-style-type: none"> Investment: US\$900m for 45% stake
	Unitech had UASL licenses for 22 circles in India It is expected to launch services in 2009		Oct-08	<ul style="list-style-type: none"> Investment: US\$1.2bn for 60% stake
	Tata Teleservices had a presence in 20 circles with a subscriber base of 25m		Nov-08	<ul style="list-style-type: none"> Investment US\$ 2.7bn for 26% stake

Source: Company Press Releases; News Reports; Tata Indicom & NT Do Co Mo examples

3 MVNO as a Market Entry Option

MVNOs could be a relatively low-risk, low-cost option to enter the Indian market

Regulatory Developments

In August 2008, the TRAI recommended the introduction of MVNOs, and proposed a regulatory framework governing the entry and operations of such players. These recommendations are expected to result in the issue of MVNO licenses in the near future. An early analysis indicates that the proposed regulations are likely to facilitate the easy introduction of MVNOs into the market, although the exit conditions are relatively stringent (see Figure 3).

Figure 3: Summary of Recommendations by the Indian Regulator on MVNOs

Regulatory Parameters	Current Regulations	Implication for MVNOs	
License	<ul style="list-style-type: none"> MVNOs to own individual license with service area same as that of the parent MNO No rollout obligations 	MVNOs are free to have selective rollout within the licensed circle of the parent MNO	↑
Business Model	<ul style="list-style-type: none"> Liberty to enter as a full, intermediate or thin MVNO Scope of service is the same as an MNO while regulation, licensing and entry fee requirements are much lower 	Reduced rollout costs for MVNOs	↑
Service Obligations & Tariffs	<ul style="list-style-type: none"> Parent MNO to have no bearing on prices MVNOs to be directly responsible for customer service, QoS, etc. 	MVNOs free to decide on their pricing structure MVNO will need to push for comprehensive SLAs with MNO	→
MNO - MVNO Relationship	<ul style="list-style-type: none"> No limit to the number of MVNOs attached to a MNO An MVNO can get attached only to one MNO in the same service area MVNO license subject to continuing relationship with MNO 	MNOs will have higher bargaining power as MVNOs will be locked-in to the host operator	↓
Exit Clause	<ul style="list-style-type: none"> 6-months notice to be given to MNO, customers, DoT and TRAI MVNO will be disqualified from obtaining fresh licenses in the same service area PBG shall be forfeited and FBG to be returned after dues are settled⁴ 	MVNOs will need to be selective about regions of service rollout	↓

↑ MVNO Friendly → Neutral to MVNOs ↓ Disadvantageous to MVNOs

Note: (a) PBG=Performance Bank Guarantee; FBG=Financial Bank Guarantee
Source: Capgemini analysis based on TRAI dat

Current MVNO Activity

While there are no MVNO launches yet, Virgin Mobile has entered into a “brand franchisee” agreement with existing MNO Tata Teleservices to offer mobile services to the youth segment. Under this arrangement, Tata sells “Virgin” branded mobile handsets and services, as well as owns and bills the subscriber, while Virgin brings in expertise in brand management, offer development and content services. Many other players have announced their intent to enter the market through the MVNO route, notably the Indian retail giant Future Group, and the Mfonex group from the UK.

Player responses to the proposed MVNO policy have largely been positive, with most existing mobile network operators indicating that they will be supportive of MVNOs once they are introduced. Leading global telcos with no current presence in the Indian mobile market have also have expressed positive views on the prospect of MVNOs in the market. In comparison, some MNOs such as Bharti Airtel and BPL Mobile have expressed sentiments against the introduction of MVNOs in the market (see Figure 4), citing that the market is already very competitive and that the current spectrum crunch will make it difficult to accommodate more players.

⁴ Exchange rate assumed: 1 USD= 45 INR.

Figure 4: Operator Opinions on MVNOs in the Indian Market

	Players	Attitude towards MVNOs
Incumbents	Reliance	✓
	BSNL	✓
	Tata Teleservices	✓
	Bharti Airtel	✗
	BPL Mobile	✗
Foreign Players	Orange - France Telecom Group	✓
	Verizon Business	✓
	BT Global Communications	✓
	Lyca Mobile	✓

Source: Responses to TRAI consultation paper; Various news articles

MVNO as an Entry Option in the Indian Market

The introduction of MVNOs can provide an attractive opportunity for those wishing to enter the market. The relatively relaxed licensing terms along with lower license costs (\$1.6 million⁴ for a nationwide license) facilitate easy entry. Additionally, the absence of rollout obligations or any mandates on coverage will allow “cherry-picking” of the markets and target segments by the players. These considerations present MVNOs as a relatively low-risk, low-cost option to enter the market compared with acquiring 2G or 3G licenses (see Figure 5).

Figure 5: Assessment of Different Market Entry Options in India

	Greenfield	Acquisition	MVNO
Ease of Availing License	Availing a 3G license in the auction in late 2008 is expected to be challenging	Existing players possess 2G licenses. However, getting a 3G license is not guaranteed	The process for getting requisite licenses is less challenging for MVNOs
Speed of Service Rollout	Services can be rolled out through green - field rollout or tower - sharing agreements	Existing operations of acquired company can be leveraged	With ready operations, services can be rolled out quickly
Investment Level	Greenfield rollout would involve high CAPEX/OPEX to set up network and distribution	Acquisition would involve high investments as candidates are currently priced at a premium	Targeted rollouts depending on the investment level can be carried out
Risk	The high level of investment required, rollout obligations and exit barriers would be a source of risk	Acquisition target can be overpriced	Risk is limited by the possibility of scaling up operations as per requirement
Control Over Operations	Overseas entrants can fully leverage their brand and operational expertise	Overseas entrants can fully leverage their brand and operational expertise	Overseas entrants can fully leverage their brand, however network control is limited by operator
Overall Attractiveness			

Low Attractiveness High Attractiveness

Source: Capgemini analysis based on regulatory data

However, the introduction of new players through fresh 2G and 3G licenses is likely to intensify competition, thereby making new subscriber acquisition more difficult and expensive. Moreover, with the market growth expected to plateau after 2010, MVNOs will have to rely exclusively on churn from other networks for customer acquisition. As such, MVNOs should carefully plan their launch and identify target segments, so as to ride on the wave of growth before the market saturates and competition intensifies.

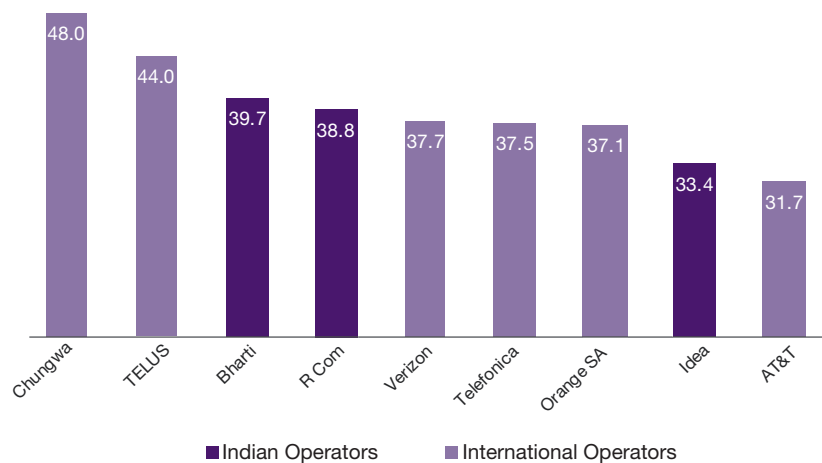
Drivers for the MVNO Model

There has been some amount of skepticism expressed about the feasibility of the MVNO model in the Indian market. Some have questioned the economic viability and positioning of MVNOs, given the rock-bottom end-user tariffs and the high levels of competition in the market. However, Capgemini believes that there are a number of market factors that are likely to make the MVNO model viable in India.

Healthy Profit Margins Comparable with Leading Global Players

In spite of operating in a low ARPU market, most Indian mobile operators enjoy healthy EBITDA margins, which are comparable to other operators globally (see Figure 6). This will provide the necessary buffer to operators to host MVNOs on their networks by offering attractive terms and conditions. Competitive agreements with operators will in turn allow MVNOs to offer attractive value propositions to their customers.

Figure 6: Comparison of Operator EBITDA Margins (%), Selected Operators, 4Q 2007



Source: Fitch Ratings, "Global Wireless Review", May 2008. Macquarie Research, "India Telecom, GSM Subs", July 2008

New Players Desiring to Expand Market Share Rapidly

New 2G licenses have been allocated to at least four pan-India players, and more players will be added to the market after the 3G license auctions. This takes the number of operators in some circles beyond ten. For example, it is expected that after the issue of 3G licenses, there will be around fourteen players in every metro circle, with around ten of them with less than 15% market share⁵. Many of these new players, in an attempt to rapidly gain market share are likely to encourage MVNOs on their networks. Examples from other markets indicate that new entrants tend to attract MVNOs in an attempt to maximize subscriber additions; Germany is a case in point where E-Plus, the last operator to enter the market, adopted an MVNO strategy to grab a sizeable chunk of the market.

⁴ Exchange rate assumed: 1 USD= 45 INR.

⁵ ABN Amro, "Wireless Telco Services", July 2008.

Geographical Variation in Performance of MNOs

There is a vast regional variation in the performance of operators. For example, Vodafone Essar has a leading market share in certain Class A and B circles like Gujarat and Haryana, where they have 43% and 31% market share respectively⁶. However, the operator has a minority share in Class C circles like Assam and North East, where they account for less than 1% of the subscriber base⁷, having commenced operations relatively late. It is probable that to address the opportunities in circles where they have not been performing well, such operators will try to have regional MVNOs in their fold to challenge the leaders. Similarly, there might be certain smaller, less lucrative circles, where incumbents might not want to invest heavily in subscriber acquisition and distribution, and prefer to have MVNOs on the network instead.

Introduction of Mobile Number Portability and 3G

There are a number of proposed regulatory reforms which are likely to directly and indirectly help potential MVNOs. A prominent factor is the introduction of mobile number portability in mid-2009⁸. Portability would aid MVNOs to wean away customers, especially high-ARPU long-term contract subscribers, from the incumbents.

Similarly, the 3G auctions slated for late 2008 are expected to partly resolve the current spectrum crunch which could otherwise have constrained the operators from having MVNOs on their networks. 3G networks will also enable the MVNOs to try and differentiate through services which might otherwise not be supported by 2G networks.

⁶ &7 COAI data for September 2008.

⁸ The Hindu Business Line, "TRAI for Mobile Number Portability by June 2009", April 2008.

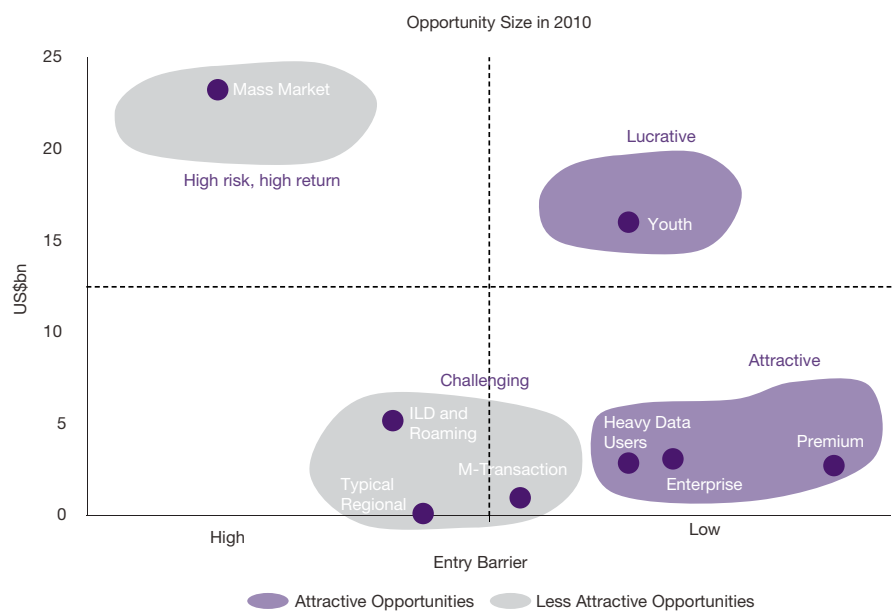
4 Potential Target Market Segments for MVNOs

The entry of new operators will make it easier for MVNOs to find host networks

Attractive Segments

Capgemini evaluated various market segments that MVNOs could potentially target. The analysis indicates that the youth, lifestyle, enterprise and data-driven segments emerge as the most attractive opportunities. While some of the other opportunities such as mass-market and ILD⁹ and roaming services are substantial in terms of size, they are characterized by relatively high entry barriers (see Figure 7).

Figure 7: MVNO Opportunity “Clusters”



Source: Capgemini analysis

Youth Segment

The youth population in India, comprised of the 15-24 year age group, stands at about 224 million and is expected to grow further to around 238 million by year 2015¹⁰. With more than 27 million youth belonging to households with an average annual income of \$15,000 and above¹¹, this is likely to be a segment which MVNOs can target aggressively. Capgemini estimates show that the market for mobile services for youth is likely to be a US\$15.4 billion opportunity by 2010¹².

Capgemini believes that MVNOs can potentially adopt a three-pronged strategy for this segment: creating brand appeal amongst the youth, subsidizing trendy handsets and offering customized tariff plans. MVNOs should try and create brands targeted specifically at the youth segment, similar to what Virgin Mobile is currently attempting to do through a brand franchisee model with Tata

⁹ ILD: International Long Distance.

^{10&11} Euromonitor International from National Statistics, August 2008.

¹² Capgemini Analysis.

The youth, enterprise, and premium service segments are immediate opportunities for MVNOs in India

Teleservices. Additionally, they could provide customized voice and data plans, tailoring them to specific youth calling patterns and their inclination to use data services. These MVNOs can also look at bundling trendy handsets with their offers, as the bundled handsets currently in the market are fairly basic with limited functionality.

Premium Segment

Operators in India have positioned themselves as mass market players, thereby depriving potentially high-end customers from any sense of exclusiveness. The services currently offered lack premium offerings such as preferential customer care, higher guarantees on QoS¹³, premium bundled handsets and other personalized services.

There is a sizable population in India which could potentially be targeted with such premium services. There are currently more than 7 million people in households with annual income between US\$23,000 and US\$45,000¹⁴. This segment is likely to be attractive for the higher ARPU it promises. For example, the ARPU from the more expensive PDA users in the country is 11 times the ARPU from a CDMA user¹⁵. Capgemini estimates the market for this segment to be worth around US\$2.5 billion by 2010¹⁶.

Enterprise Segment

The spending on mobile communication for enterprises in the Indian market is expected to grow to US\$2.7 billion by the year 2010¹⁷. A number of these enterprises have requirements in the telecom space that are not core operator skill sets, such as managed mobility, M2M services and mobile enterprise applications. ICT service providers could launch MVNOs on similar lines as Embarq and Earthlink, which target the business and professional segment, and provide additional enterprise services for differentiation. Particularly, global telcos present in India in the enterprise ICT services space could expand their service portfolio by offering enterprise mobility services as MVNOs.

Heavy Data Usage Segment

The data and content market in India is still in the process of maturing. As of Q2 07, only 8% of the total revenues came from data services in India, while the corresponding figures for the more mature UK and US markets were 25% and 14% respectively¹⁸. However, the market is expected to grow at around 44% CAGR between 2007 and 2010, to become worth around US\$2.7 billion¹⁹.

The current Indian market for data is constrained by the absence of 3G services. However, the auction of 3G licenses in early 2009 is likely to alleviate the problem. MVNOs targeting this segment can look at addressing the current shortcomings which have been holding the content market back. Potential MVNOs could look at providing attractive data access plans bundled with customized handsets. They can also consider offering dual-mode Internet access plans wherein users could consume their data usage credits over cellular and Wi-Fi networks.

¹³ QoS: Quality of Service.

¹⁴ Euromonitor International.

¹⁵ findarticles.com: "Reliance attempts higher ARPU through high-end wireless data services", 2006.

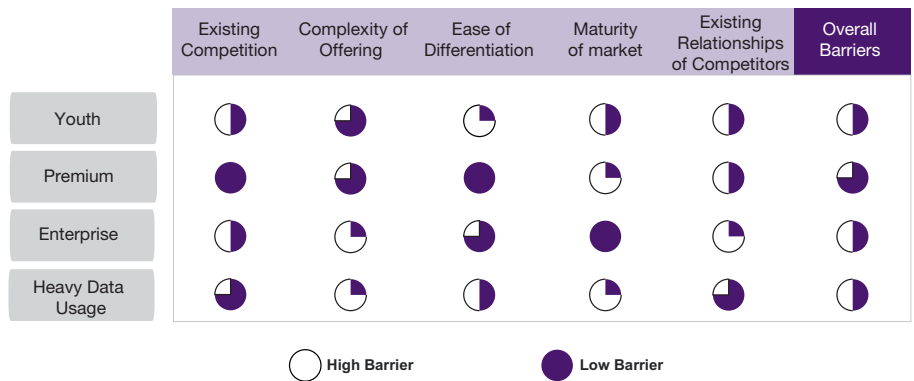
¹⁶ Capgemini Analysis.

¹⁷ Thehindubusinessline.com, "Zooming in on new game", April 2008.

¹⁸ Merrill Lynch, "Emerging Markets Wireless-Now it is an ARPU Story", 2007.

¹⁹ Capgemini Analysis.

Figure 8: Entry Barriers for Different MVNO Opportunities



Source: Capgemini TME Strategy Lab analysis

Entry Barriers for MVNOs

They are entry barriers for different MVNO opportunities (see Figure 8).

In the youth segment, the biggest challenge for MVNOs would be the differentiation of services vis-à-vis the competition. Incumbents have already identified the segment as an attractive one and launched specific schemes such as Vodafone’s “Campus Pack”, Airtel’s “Mobile Campus” and Idea’s “Spice Gang” geared towards this segment.

As far as the premium segment is concerned, the Indian market is currently not mature enough, with consumers largely unaware of such offerings. Consequently, the players would need to educate customers about their services in parallel with building a premium brand.

For the enterprise and heavy data usage segments, a significant barrier which will limit the number of potential players will be the domain-specific expertise that is required to serve and differentiate the offerings. Additionally, for the enterprise segment, existing relationships of incumbents with enterprises will also serve as a major entry barrier.

However, these constraints also give rise to opportunities for potential players who are able to successfully bring down the entry barriers. For example, while complexity of offerings and importance of existing client relationships will act as deterrents for most players in entering the enterprise segment, there are players such as system integrators and mobile application providers, who have existing strengths which successfully bring down these very barriers.

5 Business Case for a Youth MVNO

Capgemini assessed the business case for an MVNO to profit in the Indian market. For the sake of analysis, the most potentially attractive of all opportunities was considered—an MVNO launched in 10 cities²⁰ across the country targeting the youth segment. This analysis assumed that the MVNO adopts a “thin” operating model, wherein it undertakes branding and distribution activities without owning any network elements.

Cost Components

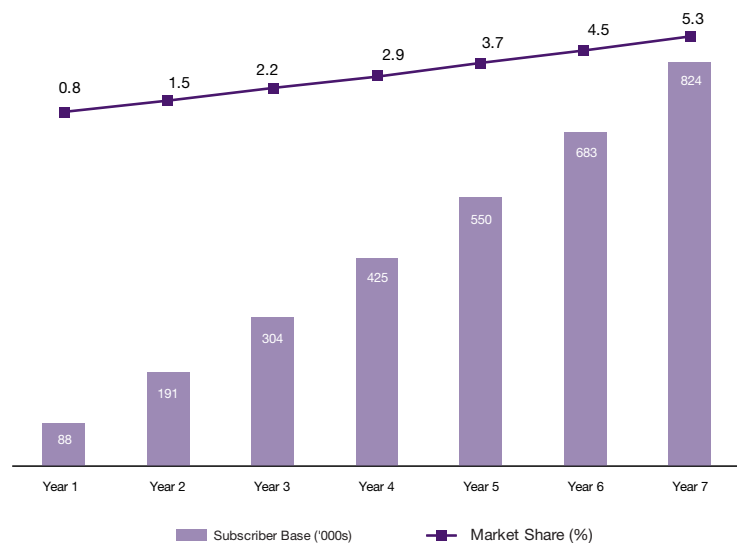
As a “thin” MVNO, the predominant cost component is the wholesale price of minutes, which accounts for as much as 45% of the total costs by the sixth year of operation. Typical to an MVNO, the CAPEX component is modelled to be at a high of around 18% of total costs in the first year, subsequently falling to less than 10% by the fifth year of operation.

As the value proposition relies heavily on bundling attractive handsets with wireless connections, the handset subsidies have been modeled to increase from € 20 per new subscriber to €26 per subscriber in the seven year period.

Market Sizing

In the business case, it is assumed that the MVNO manages to have a subscriber base of around 0.8 million users by the seventh year of its operation, which translates to around 5% of its target customer segment (see Figure 9).

Figure 9: Subscriber Base for a Youth-Focused MVNO in India



Source: Capgemini analysis

²⁰ Cities for launch of services include Mumbai, Kolkata, Chennai, Delhi, Pune, Ahmedabad, Bengaluru, Hyderabad, Chandigarh and Lucknow.

Wholesale price of minutes will define the long-term sustainability of the MVNO model in India

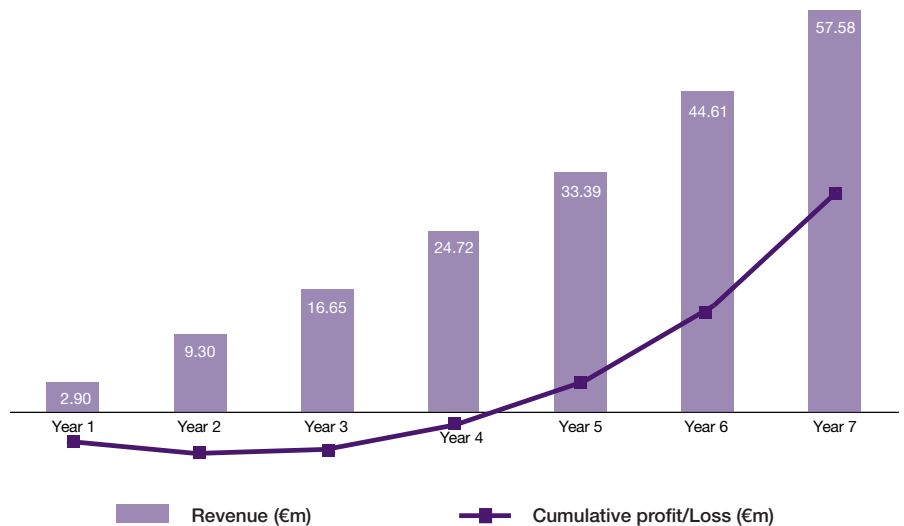
Revenue

In line with the trend in the market, the average revenue has been modeled to decrease by 5% every year for the first five years, after which it stabilizes. The upside in the revenue potential comes from the greater minutes of usage of the subscriber base, assumed to be 50% higher than the current market figure. With the maturing of the market, data revenue as a percentage of voice revenue is expected to grow from 8% to 12%.

Results and Conclusion

Capgemini's business case shows that such a youth-focused MVNO is indeed viable. The business model indicates that the MVNO should be able to break even around the fourth year of operation (see Figure 10). However, the break-even period will heavily depend on the wholesale rates that the business manages to negotiate.

Figure 10: Revenue and Payback Period for Youth-Based MVNO in India



Source: Capgemini analysis

6 Recommendations

MVNO Strategies

Selection of Operating Model

Operating models would largely be defined by the services and applications being provided by the MVNO. For example, an MVNO providing ILD and international roaming services might be compelled to go for a full MVNO model, as it would need to negotiate independent termination and carrier charges and also route its calls differently from its host operator.

Nevertheless, Capgemini believes that MVNOs should try and maintain lean operations by outsourcing most functions to MVNEs, while continuing to build capabilities such as distribution and customer care, which could enable them to differentiate their services. By opting for the “thin” model the players would be able to break-even with a lower subscriber base. However, for higher NPV, they should have necessary agreements in place with their host operator allowing them to move to an intermediate/full MVNO model, once they have achieved a critical mass and are confident about the long-term sustainability of their venture.

Selection of MNO

MVNOs will need to select their MNO partners carefully, as regulations make it difficult for MVNOs to change their MNO partner once they have entered into an agreement. With regulation mandating that MVNOs will have to maintain required levels of QoS, network coverage and availability of spectrum will be the prime criteria for MNO selection. Additionally, the MVNO should ideally look at partnering with operators with whom there is minimum overlap of offerings, so as to have a long-term sustainable relationship. However, Capgemini believes that wholesale rates will be critical in the choice of MNO partners as they will define the long-term profitability of the MVNO venture.

Although proposed regulations allow for different MVNO relationships in different circles, due to cost and operational issues it is likely that MVNOs would want the same partner across all circles they operate in.

Since regulations are likely to result in lock-in with an MNO, MVNOs should attempt to negotiate deals in which operators have a stake in the success of the MVNO. This will ensure better support and long-term cooperation from the operators. This can be achieved by providing equity stakes to the MNO or by negotiating payment terms depending on the MVNO performance.

MNO Strategies

Comprehensive Wholesale Strategies

Because of the number of players in the market, Capgemini foresees a lot of competition in the wholesale market as well. The new entrants into the market are likely to be the most aggressive in this respect, with their wholesale strategies geared towards quickly gaining market share and increasing network utilization through the MVNO model.

Operators should view the introduction of MVNOs as an opportunity to unlock additional revenue streams

However, Capgemini believes that operators can still strike financially lucrative deals in spite of having to give deep discounts of up to 50% of retail prices for their wholesale segments²¹. Operators should attempt to sell other network resources such as HLR²² at higher margins and provide in-house MVNE solutions, so as to capture a greater share of the value created in the system.







MVNO Partner Selection



The key parameter for the selection of partner MVNOs will be their ability to effectively target customer segments that the operator is unable to serve efficiently. Additionally there will be operational and financial parameters such as spare network capacity and long term financial viability which are also likely to be important considerations (see Figure 11).

However, in the Indian context, MNOs should not restrict their MVNO relationships only to players with vastly different propositions, as prospective MVNOs would always be able to find partners who provide competitive offers. Instead, they should try and build up a multi-proposition MVNO portfolio, so that churn in their target segment results in customer acquisition on a partner MVNO, allowing customers to be retained on the network.

In conclusion, the introduction of the MVNO model in India will be an opportunity for new players as well as existing operators. MVNO prospects that target the correct market segments, leveraging capabilities in service development, distribution and brand will be able to build up viable businesses. For long-term sustainability of these MVNOs, strategic decisions pertaining to the selection of MNO partners and negotiation of price for wholesale minutes will be critical. MNOs too should view the development as an opportunity to unlock additional revenue streams through the sale of wholesale minutes and the provision of a range of complementary services to these players.

Figure 11: MVNO Partner Selection

	Key Parameters to Consider While Selecting MVNOs	Level of Impact on Partner Selection	Key Points
Operational Parameters	Network Capacity		MNOs would want MVNOs in circles where they have excess capacity
	Level of Control over MVNO Operations		Control over MVNO operations will allow operators to maintain competitive advantage
Target Segment	Ability to Target Complementary Segments		MNOs would want MVNO partners to target segments they are unable to serve competitively
	Ability to Serve Segments Requiring Specific Expertise		MNOs are likely to be keen to have MVNOs on the network which cater to segments which require specific expertise
Financial Parameters	Additional Revenue Opportunities from MVNO		MVNOs might provide operators with additional revenue stream by subscribing to additional services
	Long Term Financial Viability		Operators are likely to be favorable to only those MVNOs which they believe have long-term financial viability

 Low Impact
  High Impact

Source: Capgemini analysis

21 Capgemini Analysis
22 HLR: Home Location Register.

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