

The prerequisites for profitable entry business



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Introduction

This paper summarizes the growth potential and profitability challenges which the operators in new growth markets are facing. Targeted at interest groups in the mobile industry, this white paper outlines the enormous potential existing in the entry-level subscriber segment and sets out the prerequisites for business models in low average revenue per user (ARPU) segments.

The ARPU in Europe varies between EUR 15 and EUR 25 per month. In most new growth, low penetration countries it is between EUR 10 to EUR 15 per month. In some markets, the industry average is even under EUR 10 per subscriber per month.

However, when expanding to entry-level segments, the maximum affordable monthly mobile spending is less than EUR 5. Therefore, it is obvious that the traditional business model and average cost level are not sufficient even in low ARPU markets.

It is evident that there is no single set of applicable rules for cost reduction. The objective of the cost model illustrated in this paper is to provide a framework for further work and analysis. The focus of this paper is on the business model cost elements. It discusses ways to reduce operational expenditure (OPEX) and capital expenditure (CAPEX) in order to

minimize average cost per user (ACPU) and enable profitable business from segments with low ARPU.

Nokia believes that lowering the total cost of ownership for consumers in the entry-level segment will create growth opportunities in low mobile penetration markets. Nokia is therefore committed to increasing efficiencies and cost savings in order to be able to provide consumers with affordable and attractive products, which cater to their needs.

Executive summary

The global subscriber base is estimated to have grown to 1.125 billion users in 2002. Nokia estimates this number to reach 1.6 billion by the end of 2005. The growth of the cellular service market is driven not only by new services but also by reducing the total cost of the service offering, thus enabling the next billion subscribers to enter the mobile era.

Traditionally, ARPU has been one of the key factors in mobile operator market valuation. The game is now changing. New subscribers in developing countries are likely to bring less ARPU than existing ones. This poses a challenge to profitability. While technology enables new, advanced services, this entry-level segment sees remarkable value in basic mobile voice and messaging services alone. Different subscriber segments set increasingly different requirements, yet the operator should be able to make a profit from each segment.

Without a difference in the costs within the existing service offering, subscribers with the lowest ARPU are not profitable. Nokia GSM terminals and system solutions provide the lowest total cost, offering the operators the means to target new entry-level subscriber segments profitably.

Nokia sees this opportunity to create growth in the handset market and is actively working with operators to offer affordable products with optimized features and applications for entry-level consumers. Nokia believes that lowering the total cost of ownership for consumers in the entry-level segment will create growth opportunities. As a result, Nokia is committed to increasing efficiencies and cost savings in order to be able to offer direct benefits for consumers by delivering affordable and attractive products, which cater to their needs.

There is no single formula for achieving the low cost level. The low cost business case is characterized by low subscriber acquisition and retention costs, low service offering OPEX and low network cost per subscriber. Affordable and attractive terminals, alternative distribution channels and innovative promotions combine to create the foundations for decreased expenditure on subscriber acquisition and retention.

Quantity and complexity are the drivers of the service offering OPEX. Avoiding complexity reduces customer care costs. The emphasis should be on reducing the number of contacts and on limiting the cost per contact. This is normally achieved by tariffing and automated service solutions. Billing should also be considered as a significant cost item in prepaid solutions. The costs occur mainly through the refill process. Various cost cutting solutions are emerging and becoming increasingly attractive, as the amount per refill transaction is declining.

Last, but not least, are the network related costs – not only the initial deployment cost but also the running costs, such as site rental, maintenance and leased lines. Changing subscriber peak time behavior can minimize these costs by limiting how much capacity should be installed to serve one user, for example. Nonetheless, utilizing spectral and hardware efficiency enhancing capacity features will make the most out of the infrastructure by handling subscriber traffic at the lowest total cost.

Doubling penetration at half the cost

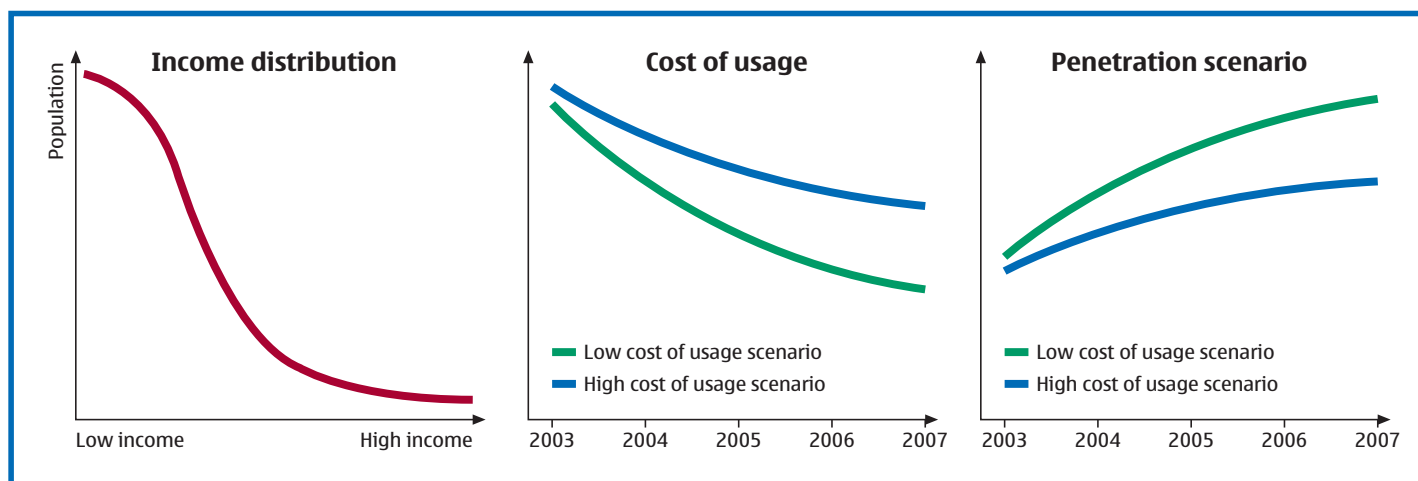


Figure 1.

Penetration growth in emerging markets depends on the total cost of service usage. The subscriber growth potential lies mainly in low-income groups – the entry-level segment. These consumers, whose average monthly income can be under EUR 150 or even below, currently perceive mobile services as too expensive and so do not subscribe. In many cases, the conventional business models do not support extremely low cost levels which effectively slows down growth. Once mobile services become sufficiently affordable, the current mobile subscriber penetration could even be doubled.

One of the scenarios in Figure 1 shows a slowly declining cost of usage, resulting in moderate penetration growth, while the other results in a faster development. The total cost of usage for the subscriber consists of the terminal price and the usage fees, i.e. the tariffs. The latter is affected by the operator business model and can also be stated as “**operator costs + operator profit margin**”. Securing profits requires new business models, entry-level terminals and network solutions. Nokia is well positioned and committed to cater for these entry-segment users with its affordable and attractively styled products with easy-to-use features. (Figure 1)

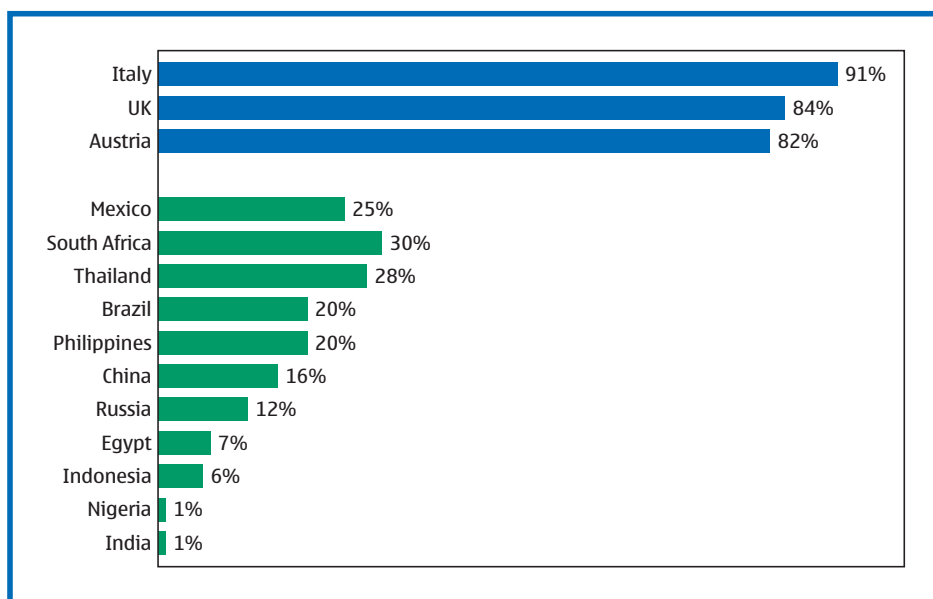


Figure 2.

Figure 2 illustrates the current mobile subscriber penetration in selected markets. In the low penetration markets, operators seeking growth need to target low-income consumers. There is clearly significant growth potential in this segment but tapping into it calls for new business models in order to secure profit growth.

The main cost drivers in the operator business model

There is no simple formula to describe the operator cost structure. Rather than seeking a simple recipe, the low ARPU business model can be characterized by subscriber acquisition and retention costs, service offering expenditure and network deployment and operating expenditure. (Figure 3)

It is rare for a single operator to be able to decide whether to subsidize handsets or not. It is difficult, if not impossible, to avoid subsidizing if the competition is doing so. The mix of affordable and attractive terminals, alternative distribution channels and innovative promotion lay the foundation for decreased expenditure on subscriber acquisition and retention.

Quantity and complexity are the drivers of the service offering expenditure. Avoiding complexity reduces customer care costs, whereas the emphasis should be on reducing the number of contacts and on limiting the cost per contact. This is typically pursued by tariffing and automated service solutions. Billing should also be considered as a significant cost item in prepaid solutions. The costs occur mainly through the refill process. Various cost cutting solutions are emerging and becoming more and more attractive, as the amount per refill transaction is declining.

In addition to the initial deployment capital investment, the network also has running costs, such as site rental, maintenance and leased lines. Changing the subscriber peak time behavior can minimize these costs in terms of how much capacity should be installed to serve one user. Nonetheless, utilizing spectral and hardware efficiency enhancing capacity features will make the most out of the infrastructure by handling subscriber traffic at the lowest total cost.

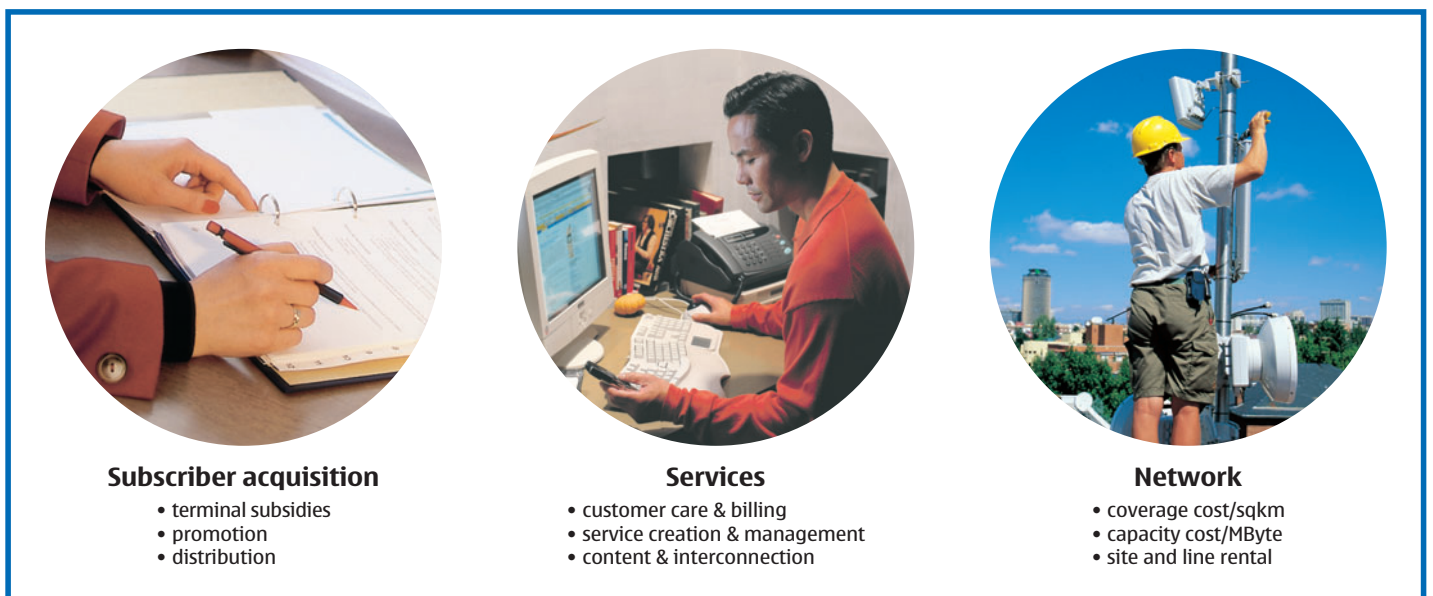


Figure 3.

Margin expectations in basic wireless communication

Free cashflow can be considered as one of the most important business measures. In the following models, however, it is assumed that the Earnings Before Interest Taxes and Depreciation of Assets (EBITDA) and finance free, pre-tax profit can be used to define the framework for profitable business.

The first assumption in this approach is that the EBITDA margin requirement is set to 40% and finance free, pre-tax profit to 25% of the revenues. In other words, from each Euro earned, 60 cents could be spent on operating expenditure items and 15 cents on depreciating the investments. To simplify matters, the interconnection cost has been left out of this analysis.

As defined earlier, the main OPEX items are related to subscriber acquisition and retention, the service offering and network OPEX. This is assuming that the OPEX budget would be split equally between the service offering, including customer care and billing, for example, and subscriber acquisition and network OPEX. (Note: If the interconnection cost had been included, it would have been in service OPEX.)

Applying this cost structure to different ARPU levels reveals the challenge. The targeted 40% EBITDA margin would call for EUR 3 OPEX per subscriber per month. In addition, the requirement for 25% profit margin would dictate that only EUR0.75 could be allocated to depreciating the investments and would thus define the CAPEX per user limits (Figure 4). The implication of these budgetary conditions on operational measures is explained in the following chapters.

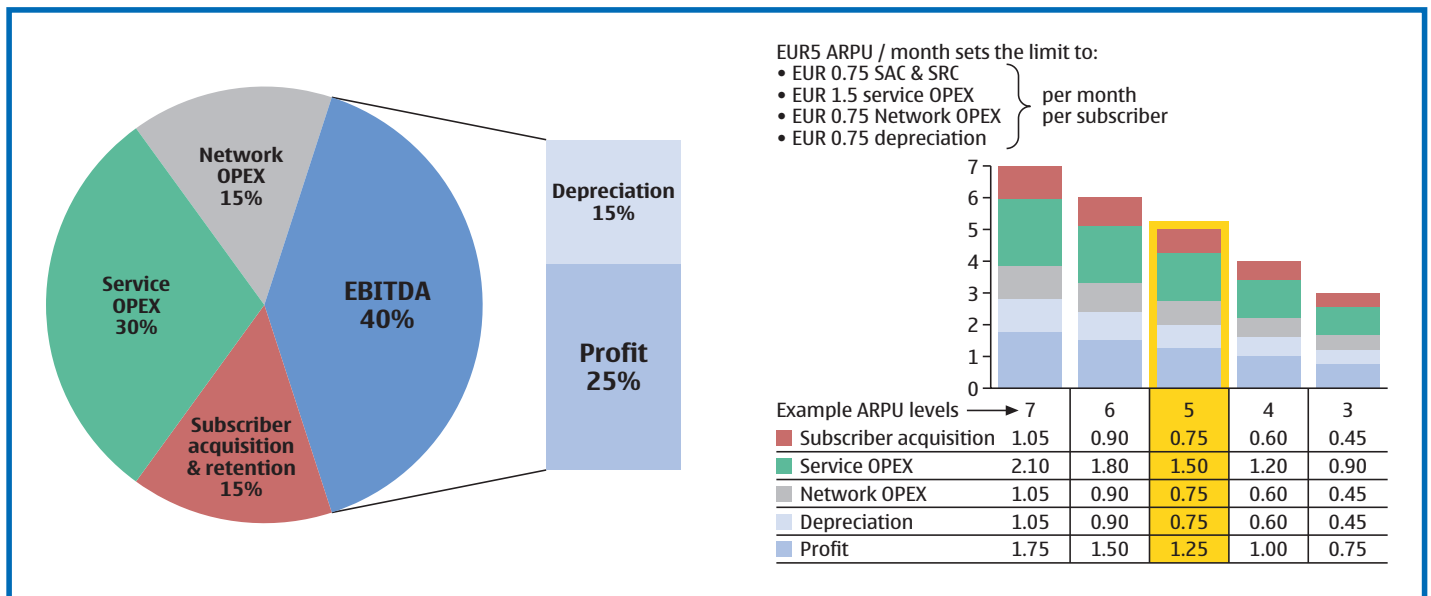


Figure 4.

Feasible assumptions for profitable low ARPU business case

These assumptions apply to new incremental subscribers at an ARPU level of around EUR 5 per month. The numbers here do not illustrate the entire business case but rather the marginal costs. The statements and assumptions below do not provide the means to implement these cost targets but instead show in a simplified way the required performance in order to gain profitable business from the EUR5 ARPU segment.

Subscriber acquisition and retention

For each subscriber, the cost occurs when customer acquisition or retention takes place. The acquisition takes place only once, whereas the churn defines the customer contract duration. The higher the churn, the shorter the customer contract period. In other words, the higher the churn the less can be spent on subscriber acquisition and retention.

For example, with a 36 month customer contract duration, the budget of EUR 0.75 would allow EUR 27 for subscriber acquisition and retention. This should cover potential terminal subsidies, distribution channel commissions and promotion. (Figure 5)

Service Operational Expenditure

The service offering related operational expenditure items for the low ARPU entry segment are mainly related to billing and customer care. The remaining items cover service creation and management, administrative overhead and content and interconnection fees. In order to simplify this analysis, it has been assumed that net interconnection is positive and that no content fee expenditure exists.

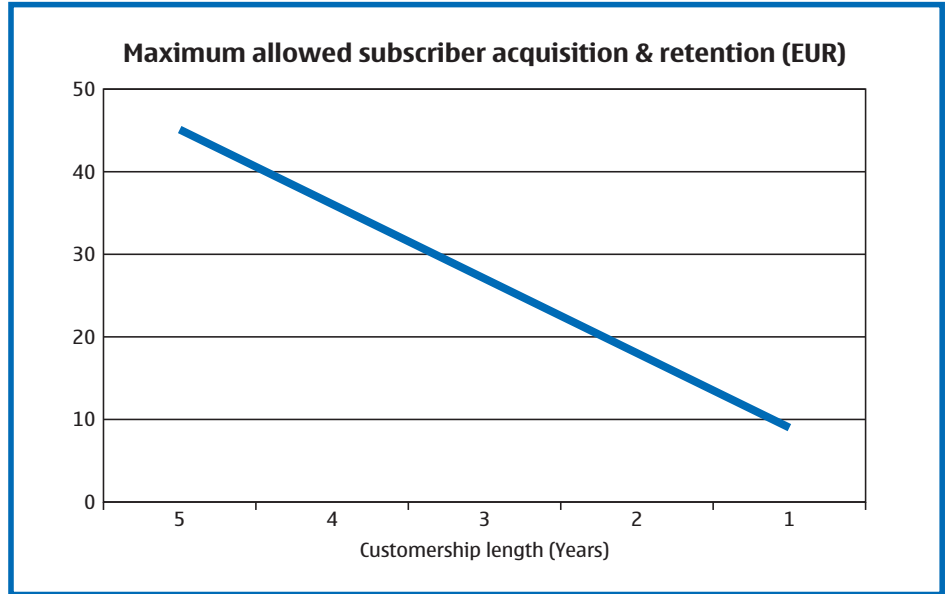


Figure 5.

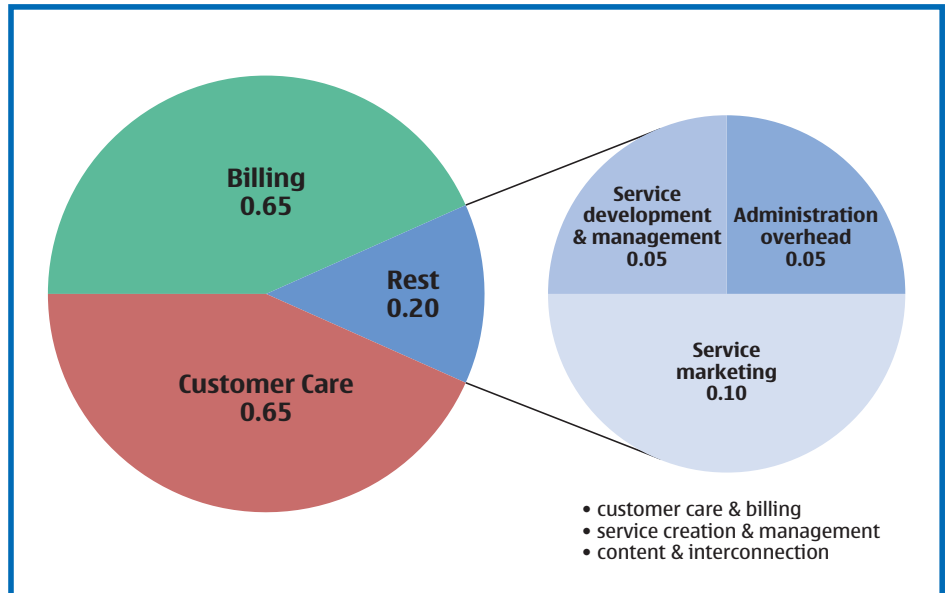


Figure 6.

The rest of the amount in Figure 6 is very indirect in nature. Targeting one million entry subscribers, EUR 2.4 million can be spent in total on service development, service marketing and

administrative overhead. This, of course, does not describe the drivers and cost structures in detail, but gives a perspective of the available resources for these functions. (Figure 6)

Customer care

Customer care costs are directly driven by the number of subscribers and the number of contacts per subscriber. The expenditure is defined as the total number of contacts and the cost per contact. A high cost per contact (even >EUR 10 per customer care center call) does not allow many calls per year per subscriber.

Ideally, both the number of contacts per user and the cost per contact would be reduced. Supporting self-configuration and account management as well as making more targeted promotions and minimizing tariff confusion certainly helps in achieving this. (Figure 7)

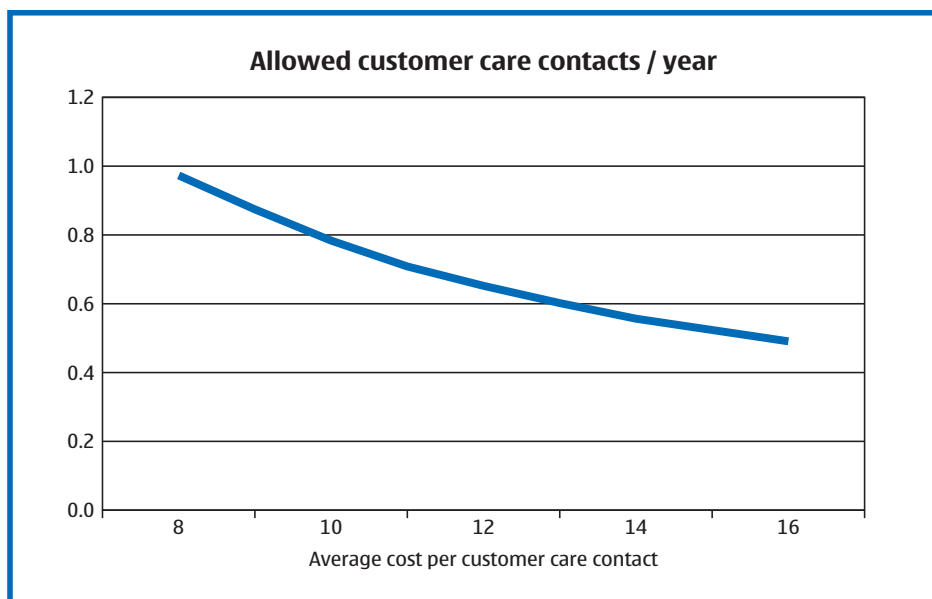


Figure 7.

Billing: Prepaid refill

For the prepaid subscribers, there are no costs associated with printing and posting monthly invoices and default payments. On the other hand, prepaid account refill is a major cost item – at least when put in the context of low ARPU levels.

The dilemma is the high relative cost per refill in small denomination cards, which are needed for low-income segments.

The typical cost is approximately EUR 1 to EUR 3 per refill. This could be significantly reduced by removing the use of paper refill vouchers (scratch cards) and by seeking alternative low commission distribution channels. (Figure 8)

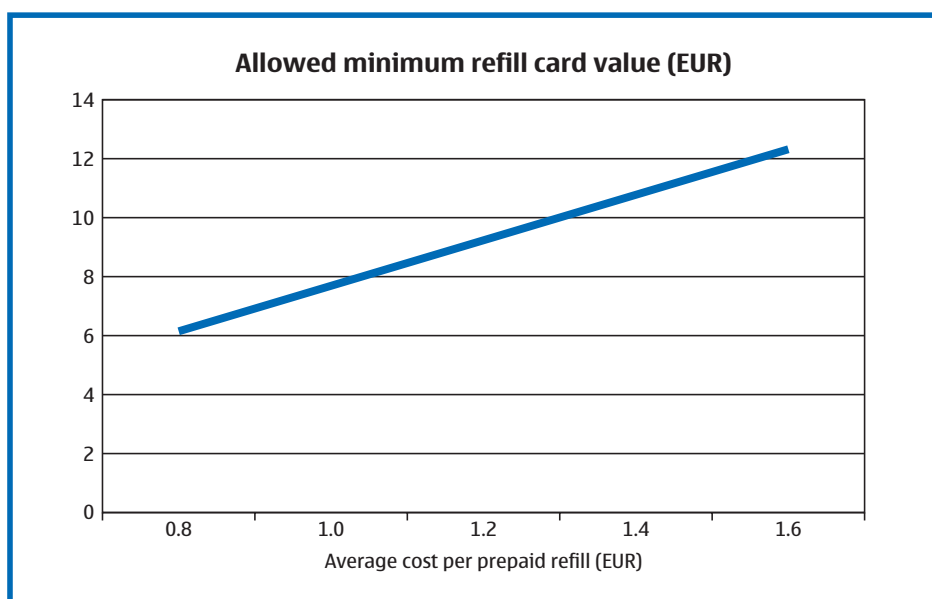


Figure 8.

Network expenditure

Radio network deployment expenditure is driven by capacity and coverage requirements. The core network deployment is mainly driven by topology, services, traffic and subscriber number. Typically, the radio network accounts for 80% of the cost, with the core network accounting for the rest.

Taking this assumption further and looking at it from the network OPEX point of view, we can draw certain conclusions about the maximum number of sites allowed per subscriber. This figure is useful when evaluating viable network expansion scenarios for incremental low ARPU subscribers. (Figure 9)

The number of required subscribers per base station site depends on the average radio network OPEX per site. This ratio also depends on the cost budget per subscriber, which in this case was EUR 0.75 (for the EUR5 ARPU subscriber). Note also that Figure 9 assumes that radio network OPEX is 80% of the total network OPEX. Radio network OPEX includes site rentals, leased lines, maintenance, and power consumption. The higher the OPEX per site, the more subscribers are required per site in order to meet the OPEX costs.

There are basically two factors to be defined when developing a budget for low ARPU subscribers – the depreciation period and the network load per subscriber. Low ARPU subscribers represent relatively low minutes per user and thus a low network load. The curve in the Figure 10 illustrates the maximum allowed CAPEX per user, assuming that the monthly depreciation per user can be EUR 0.75. (Figure 10)

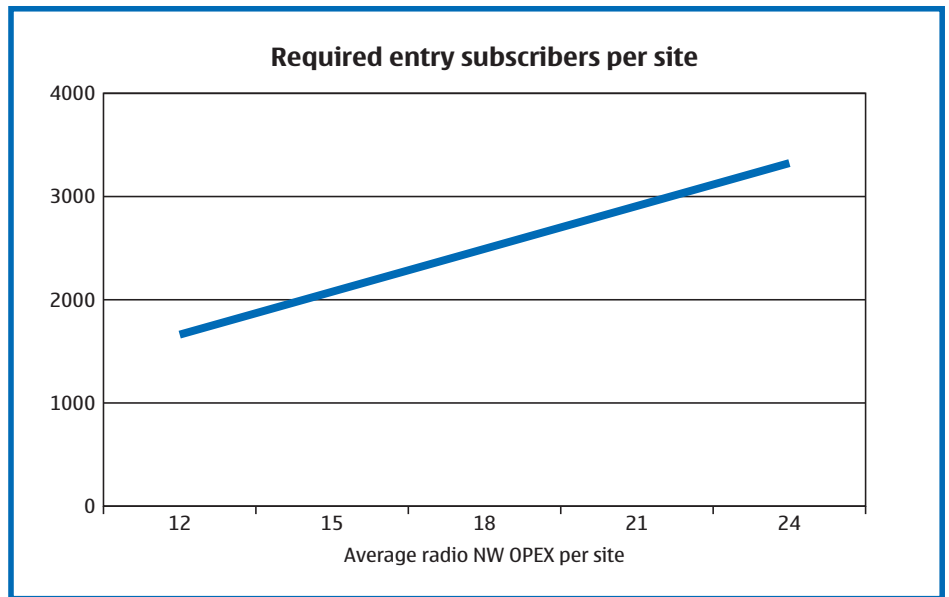


Figure 9.

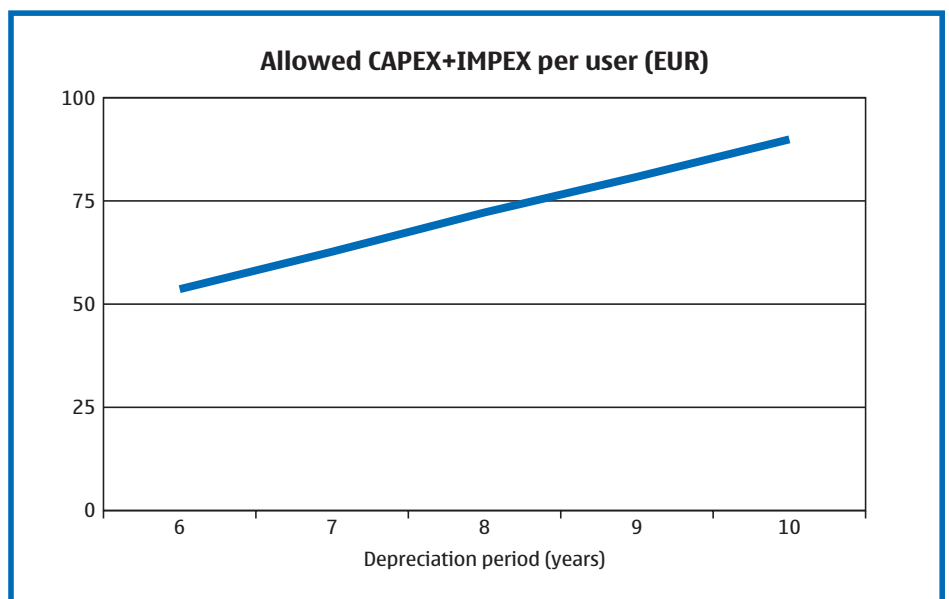


Figure 10.

Entry-level segment impact on business case valuation

Previous chapters explained the parameters to create a profitable low ARPU segment. This chapter analyses the impact of the profitable low ARPU segment on total business profitability.

From the operator point of view, there are two strategic options: either target the low ARPU subscriber or settle for moderate growth by focusing only on the current high and medium ARPU segments.

Figure 11 presents an imaginary case with three scenarios. They all represent a greenfield operator starting business at the beginning of the period in question. The annual profitability improves constantly and the company is destined to make a profit in year 3. At this point of time, the operator has penetrated the high and medium ARPU segments and sees only little growth in the following few years. Continuing on this track would secure annual profitability. (Figure 11)

The other option is to target even greater return by acquiring low ARPU users. Figure 12 shows the upside offered by this low ARPU users. Targeting the low ARPU users with a business model that fits into the budgetary frame introduced earlier would provide earlier break-even and higher valuation of the entire business. (Figure 12)

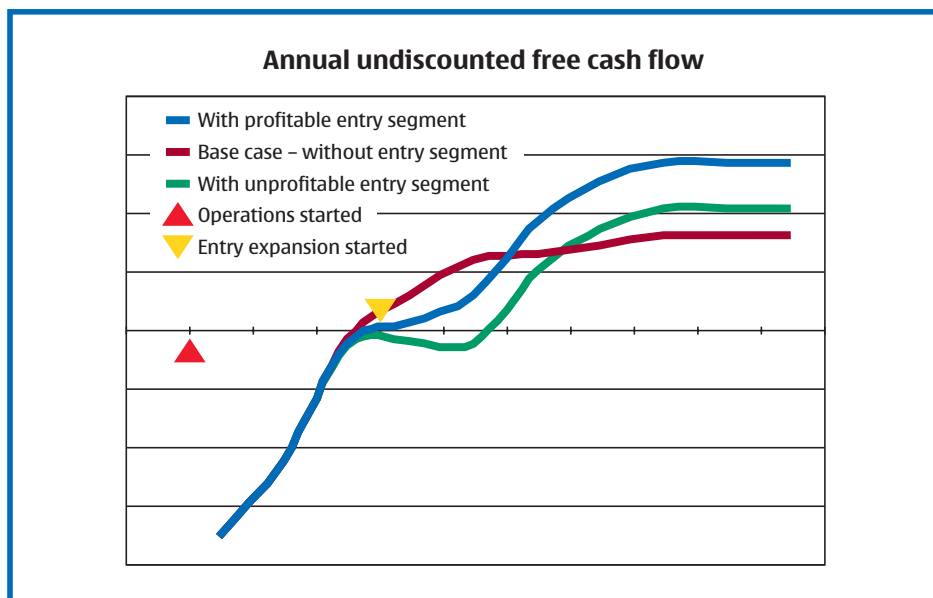


Figure 11.

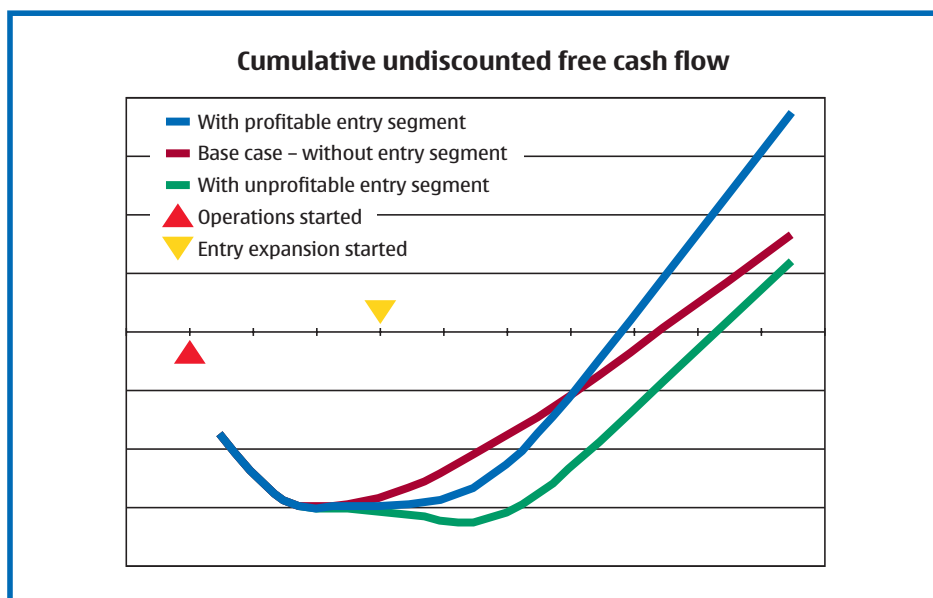


Figure 12.

Conclusions

The entry-level, low ARPU segment can boost the business case. There is huge growth potential ahead in terms of penetration. This untapped market can be targeted profitably and that segment can significantly increase profits and thus boost business valuation. ARPU is no longer the only valid measure for mobile operator business; absolute profit is equally valid.

Reduced cost of ownership increases penetration. The price elasticity in the low-income segments is high. Reducing the cost of services increases the addressable population dramatically. Cost of ownership should be reduced.

Each incremental subscriber needs to be profitable. The low ARPU segment should be targeted profitably. The profit maximization equation calls for profitability for all new subscribers. Once incremental subscribers start making losses, the total profit level starts to decline.

Long customer contract periods or low acquisition cost. It is true that the subscriber acquisition and retention cost should be minimized. Ideally, it should be eliminated. In that case, churn would no longer be a major problem as the net effect would be positive. The longer the subscriber stays with the operator, the more the operator can afford in spending on acquisition.

Prepaid refill and customer care have high OPEX impact. Prepaid refill and customer care are not the main threats to profitability with ARPU users. Once they are present in the low ARPU segments, these two costs rise above others due to their necessity and direct nature. The question is more related to implementation and how to differentiate the service level for low ARPU users.

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