Konstanzer Managementschriften

Philip Junge

Emerging Markets

Customer Acquisition Strategies for the Mobile Communication Market

Sascha Götte (Hrsg.)

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Hochschule Konstanz Technik, Wirtschaft und Gestaltung
University of Applied Sciences
Brauneggerstraße 55
D-78462 Konstanz
Telefon: +49-7531-206-0
www.htwg-konstanz.de

Gesamtherstellung: Junge Medien, 78647 Trossingen, www.jungemedien-online.de

Foreword by Clemens Jargon

The challenges posed by the dynamics of the market and competition call for survival strategies that are effective over the long term. At the same time many of the old certainties formerly relied up for managing product strategies and designing the product portfolio are irreversibly eroding. In the ITC sector in particular, companies are obliged to ensure their survival in an environment with constantly growing dynamics, and to gear themselves to a future which is and will remain extremely challenging due to intense competitive pressure and well-nigh oligopolitical customer structures.

Facing this challenge requires highly dynamic and flexible forms of product strategy development which are accepted as a task by management and adapted very systematically to the markets that are to be addressed.

A key component of any product strategy is that profitability can be continually improved so as to ensure long-term competitiveness in the marketplace. The strategy must also have sufficient flexibility to respond to changed customer requirements and fluctuating market trends, as exemplified by the emerging markets.

If the development of Infineon's product strategy in the mobile business is reflected in the performance of the competition and the market, an answer would have to be found to various questions:
How can growth along the value added chain be increased on a sustained basis and in support of the core silicon business? This has been taken into account through the concerted development of a software strategy and the expansion of software competences in order to provide complete solutions.
How can we surprise the customer with innovations in the extremely competitive and high-margin high-end and mid-tier market? Huge advances have been made through clearly focusing on customer requirements, selectively choosing features that will retain their value, and in particular focusing on recognizing time-to-market as one of the essential levers for success.
By ensuring a high degree of reuse of existing technologies and making a clear claim to cost leadership, how can we provide innovative solutions in the product portfolio which enable customers to discover new markets themselves, and how can we serve customers with the right products so that they can increase their own earning power? We have achieved singular success in finding answers to these questions with the development of ultra-low-cost solutions for the emerging markets.

To guarantee lasting success in such a fiercely competitive environment, every organization must develop its own way of facing up to the challenges of the future. Financial strength, a healthy innovation portfolio and cost leadership are essential elements of a forward-looking product strategy.

With his well-founded observations on the emerging markets, Philipp Junge has made a valuable contribution to analyzing and presenting the market and customer requirements in a methodical and factual manner, and so has laid an important foundation for underpinning the ultra-low-cost strategy and expanding it further. On behalf of Infineon AG, I wish to thank him most warmly for his contribution and his commitment in dealing with the issue.

Clemens Jargon

Vice President & General Manager Feature Phones
Communication Solutions

Publishers Preface

The introduction of the undergraduate and graduate programs of "Business Administration and Engineering" (Wirtschaftsingenieurwesen) have strongly encouraged research activities in the area of management at the University of Applied Sciences in Konstanz. The research paper series "Konstanzer Managementschriften" is aimed to honour the authors of excellent papers and to make the results accessible to a wider community of interested managers and researchers in printed and electronic form.

The author of this paper, Philip Junge (B.Eng.), has analysed the current situation in the mobile communication industry. After a period of very high growth rates, handset manufacturers are faced with an increasing market saturation - especially in the developed nations. Looking for new growth opportunities, the mobile communication industry has identified emerging markets of developing nations as the key markets for the future.

Philip Junge has analysed the situation in the so called „BRIC"-countries Brazil, Russia, India and China and has developed different potential competitive strategies for the ultra low cost mobile communication segment in these markets. As conclusion Philip Junge provides valuable recommendations to the management of the major players in this industry.

I hope that this paper will be a valid support for the management of mobile communication manufacturers who engage activities in developing markets. Furthermore, I'd like this paper to be a starting point for further research activities in this field.

Prof. Dr. Sascha Götte
HTWG Konstanz

Authors Preface

There was hardly another development which influenced the life on earth as much as the development of the communication technology in the last decades. The advantages of mobile communication brought the branch enormeous growth rates. This development led to a situation, where today, especially in the developed nations, the biggest part of the population is accessible anywhere and anytime. For some years an increasing saturation has been looming in the markets especially in the developed nations. Very high penetration rates made the markets become buyer markets in which new marketing strategies are needed in order for companies to be able to distance themselves from their competitors. Against the background of this situation ICT companies all over the world started to look for new growth opportunities.

The continuous spread of mobile communication as well as the progress in technological development led to a constantly decreasing price of processes and telephone components. This decline in prices made it possible for handset manufacturers to open up a new market which holds an enormeous potential in the eyes of the mobile telecommunication industry: The so called "emerging markets" of the developing nations.

These markets at the "bottom of the pyramid" offer an enormous growth potential. 85 percent of the world's population live in these countries, but only 20 percent of these people have a mobile handset. Today, these markets already account for 80 percent of the world-wide new subscriber sales. To exploit this potential will be the one central challenge for the mobile communication industry for the next years. Hence one derived challenge is to build the most simple handsets to prices which are affordable to the poorest people in the world. But the wealth, which the telecommunication industry wishes to find in emerging markets, lies concealed behind a number of barriers and hindrances which have to be overcome in order to be able to skim the full potential of these markets. These hindrances can only partially be overcome by private sector organizations. Government policy and the deregulation of markets remains the other major enabler of the spread of mobile technology throughout the poor in emerging markets. For example in 16 of 50 developing countries, taxes on mobile phones and services represent more than 20% of the total cost of ownership.

Still, the most promising emerging markets, Brazil, Russia, India and China have already taken the most important steps towards a deregulated private sector telecommunications market. The acquisition of customers in these nations is of utmost importance to all firms in the telecommunication industry. These four nations account for more than half of the volumes of the world's overall new subscribers and for two thirds of new subscribers of the developing regions. Furthermore the economic development in these regions is so strong that it is possible in less than 40 years for the four national economies of these nations to be bigger than the ones of the G6 countries.

With this book I want to direct the gaze of all readers towards these markets which hold an enormous potential for the whole industry. Furthermore, I want to introduce some generic strategic approaches which can help firms to successfully participate in these markets.

Konstanz, summer 2006 Philip Junge

The Digital Divide

It was an idea born in those far-off days of the internet bubble: the worry that as people in the rich world embraced new computing and communications technology, people in the poor world would be left stranded on the wrong side of the "digital divide".

On March 15th, 2005 the UN launched a "Digital Solidarity Fund" to address the uneven distribution of information and communication technologies and to "enable excluded people and countries to enter the new area of the information society."

However, the idea that plugging poor countries into the internet will help them to rapidly become developed is highly unrealistic. The problem of the digital divide is not a problem itself, but one of deeper, more important divides as well: A computer is not useful if you have no food or electricity and cannot read.

This sort of thing is the wrong way to go about addressing the inequality in access to digital technologies: The better way would be to promote bottom-up development by promoting the spread of mobile phones.

Plenty of evidence suggests that the mobile phone is the technology with the greatest impact on development. Farmers and fishermen for example could use mobile phones to call several markets and work out where they can get the best price for their products. A recent report finds that additional 10% penetration rate in developing countries increase the GDP growth by 0.6%.

Excerpt from The Economist, March 12th 2005, p.12

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LIST OF ABBREVIATIONS

AMR	Adaptive Muntirate Codec
B2B	Business to Business
B2C	Business to Consumer
BOM	Bill of Marterial
BOP	Bottom of the Pyramid
BRIC	Brazil, Russia, India and China
CCA	Comparative Competitive Advantage
COM	Communicaton
DRAM	Dynamic Random Access Memory
EBIT	Earnings Before Interest and Taxes
EMEA	Europe, Middle East and Africa
GDP	Gross Domestic Product
GNI	Gross Nominal Income
HW	Hardware
ICT	Information Communication Telecommunication
IMF	International Monetary Fund
MP	Memory Products
NYSE	New York Stock Exchange
ODM	Original Design Manufacturer
OEM	Original Equipment Manufacturer
PCB	Printed Circuit Board
PEST	Political, Economical, Sociological and Technological
POC	Push to talk over Cellular
PPP	Purchasing Power Parity
PTT	Push to Talk
SW	Software
UI	User Interface
ULC	Ultra Low Cost
R&D	Research & Development
SGM	Sales Group Marketing
SWOT	Strengths / Weaknesses / Opportunities / Threats
TGC	Transaction Governance Capacity
TI	Texas Instruments
ULC1	Name of Infineon's first platform for ULC markets
USP	Unique Selling Proposition
ZFB	Zeitschrift für Betriebswirtschaft

Introduction

This part of the paper will outline the basic problems of the mobile phone industry within the global competition. Using these results, the objectives of this paper will then be derived. The next chapter will introduce the basic structure of this paper. As the topic of this work is a very broad one and as it is not possible to conduct the analysis proposed in part A for all emerging markets, the subsequent chapter will delimit the analysis topic.

1. Problem Definition

The problem definition is devided in three chapters. First, the phenomenon of globalization will be discussed. In the next step, the consequences for the global mobile handset industry, which lead to the "call for action" in emerging markets will be identified. The final chapter of this section will then define the term "emerging market" and evaluate their potential for the global mobile handset market.

1.1. The phenomenon of Globalization

"Once one said that the sun would never set over the British Empire. In fact, today, it does set over the British Empire, but indeed it doesn't over the world empires of global companies." (Lester Brown, American economist)

"Globalization" - Today, one will hardly find another term which is used that frequently to justify political and corporate decisions. At first glance, the attention which is given to the phenomenon of globalization in the present time is barely traceable, because one might argue that such a development of an increasing political and economical interweavement is nothing new or special. One might say that in mediaeval times fleets were already trading goods across the continents. But never before has globalization has reached its present dimensions.

"Now, more than ever before we are all connected to each other and to things near and far in the world around us. Where it once took weeks or months to travel across a single country, we can now travel around the globe in only hours or days. Where it once took weeks or months to receive news about important events, we now see them as they are occurring through live satellite broadcasts. Where it once took weeks to correspond with others in distant places, they are now only moments away by phone or the internet" (Kotler, 2005, p.239)

The development of the information and telecommunication technology connects people and information all over the world in real time. Distances seem to blur and the marketpla-

ces of businesses now seem to be open for competitors from all over the world. Furthermore economical and political developments like the completion of the “single European market” or the formation of further regional economic zones in almost all continents, the opening of the eastern European economic zone and the deregulation of former state owned branches, have amplified this effect.

For the first time in history, we indeed live in a truly global world, where unrestrained world-spanning political, economical and sociological inter-exchange between the nations takes place.

1.2. Globalization and the Call for action in Emerging Markets

Globalization is a term used to describe the changes in societies and the world economy that are the result of dramatically increased trade and cultural exchange. In specifically economic contexts, it refers almost exclusively to the effects of trade, particularly trade liberalization or "free trade". (Wikipedia 2005[b])

Even though the common definition of globalization doesn’t contain any valuation of the term, there are hardly any other developments that are connected that closely to its immanent opportunities and threats.

It is obvious that globalization offers large opportunities of growth in new markets. But on the other hand, it also threatens the “home markets” of companies, as foreign companies now share the same opportunities of expanding into new markets. This leads to an enormous performance pressure for most of the companies in almost all markets.

Another crucial problem, which aggravates the competitive environment in the global economy, is the increasing saturation of most markets. In the mobile communication industry, penetration rates of mobile phones are about to reach 100% in many developed nations. Against the background of this situation companies are looking for new possibilities to secure their continuity. In this context Emerging Markets all over the world have come to the focus of global companies.

1.3. Definition of Emerging Markets and Evaluation of their Potential for the global Mobile Phone Market

Yet there is no universally valid definition of “emerging markets”. Listed below is an excerpt of the variety of presently existing definitions:

“Financial markets in countries with developing economies. These markets are immature compared to those of the world's major financial centers, but are becoming increasingly sophisticated and integrated into international markets; they provide potentially high returns but intensely volatile.“ (Equanto 2005)

"Is a term which broadly categorizes countries in the midst of developing their financial markets and economic infrastructures. This development is viewed in terms of freer, more liquid markets, which facilitate trade. Privatization of former state owned or administered businesses is a key factor in this process."(Oasismanagement 2005)

"The term emerging markets is commonly used to describe business and market activity in industrializing or emerging regions of the world. It is sometimes loosely used as a replacement for emerging economies, but really signifies a business phenomenon that is not fully described by or constrained to geography or economic strength. Examples of emerging markets include China, India, South Korea, Brazil, Malaysia, countries in Eastern Europe, and parts of Africa." (Wikipedia 2005[c])

The three definitions do not have much in common other than the fact, that the term "emerging market" is often used to describe the markets of emerging economies. Based on my research, I recommend a definition for emerging markets which is more closely related to certain industries or products. A third world market with only little or no economic development, or even an already developed market can as well be emerging markets for certain industries or products, as soon as the demand for these products in these markets escalates. From this point of view, firms and industries can create their own "emerging markets" as soon as they come up with a highly demanded product of no or low penetration rate in these markets. In this definition, we could use "new markets", or "growing markets" as a synonym for emerging markets.

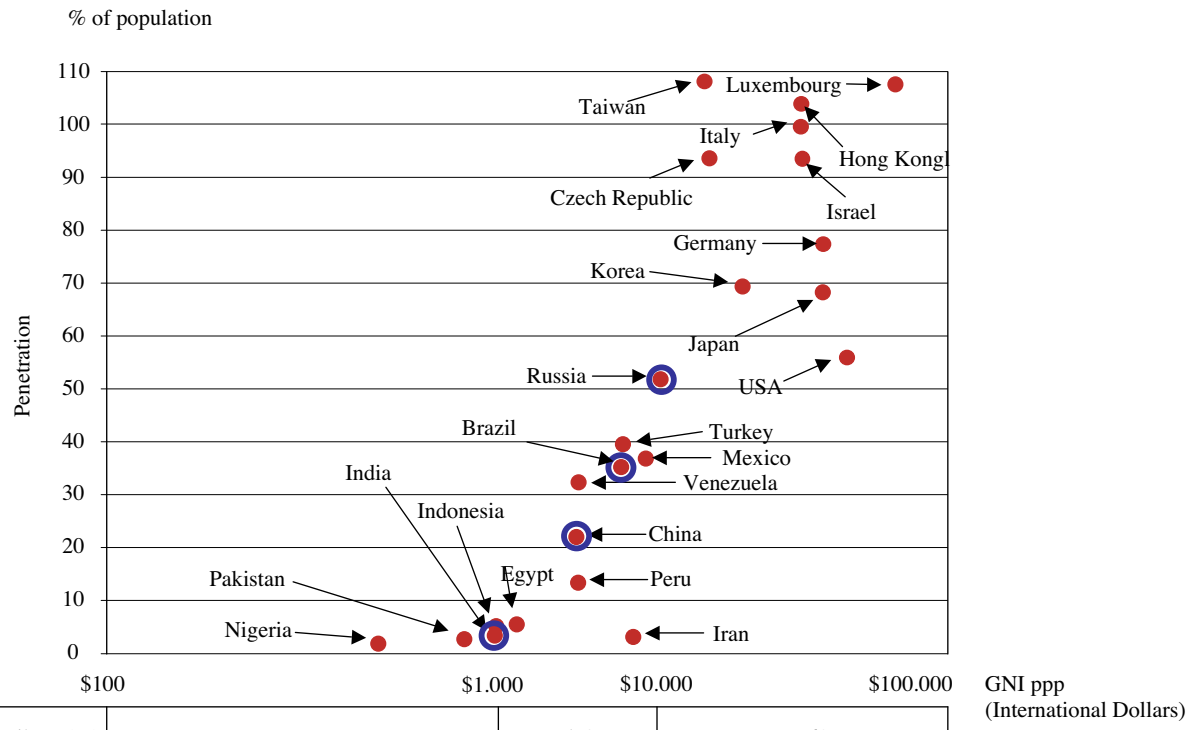
In "competitive strategy" (1998), Michael Porter gives a definition of emerging industries, which will be used in the context of this paper:

"Emerging markets are newly formed or reformed markets that have been created by technological innovations, shifts in relative cost relationships, emergence of new consumer needs, or other economic and sociological changes that elevate a new product or service to the level of a potentially viable business opportunity." (Porter, 1998, p. 215)

Figure 1 outlines the enormous potential of emerging markets for the mobile phone industry: 85% of the world's population live in markets with an average penetration rate of only 20%. To open up these markets will be the central challenge of the mobile phone industry for the next years.

"Beyond the obvious utility of handsets in emerging markets
lies the holy Grail"
(Market report, Arête – A Billion Handsets in '07?)

As you can see in figure 1, there is an obvious gap regarding the penetration rates between the so-called developed world and the "emerging countries". These upcoming economies offer promising chances of counterbalancing losses of market share in companies' home markets and even offer the opportunity of gaining world wide market share.



Subscribers (M)	71	518	762
Population (Bn)	2,46	2,75	1,18
% Penetration	3%	19%	65%
Potential New Subscribers (M)	422	584	414

Figure 1: penetration rates vs. GNI, source: Prismark, 2005

2. Key Objectives

The objective of this paper is to provide all readers with an insight about the business opportunities of emerging markets. In the course of this paper, special requirements that mobile phone manufacturers as well as their suppliers have to meet to fulfill the needs of the users in emerging markets shall be identified. In the next step, the process of customer recruitment will be introduced and practically applied by the example of the globla moblie communication branch. In the last step, the findings will be practically applied by the example of the BRIC nations (Brazil, Russia, India, China) and especially Brazil.

3. Description of the Structure of this Paper

This thesis is divided in three parts which are shown in figure 2. Part A of this paper guides the reader along the theoretical background of the formulation of a generic customer acquisition strategy. It introduces some examplatory tools, which can be used in order to facilitate the analysis and the necessary decisions which have to be made in every step. Figure 3 graphically displays this process. In part B, the theory which was discussed in part A, will be applied to identify and approach customers in the mobile communication branch using the BRIC countries as an example. Part C then gives a short summary of the results, recommendations to all firms which make business in these markets and a short outlook over the possible future development of the ULC segment. Additionally it will indicate further needs for research.

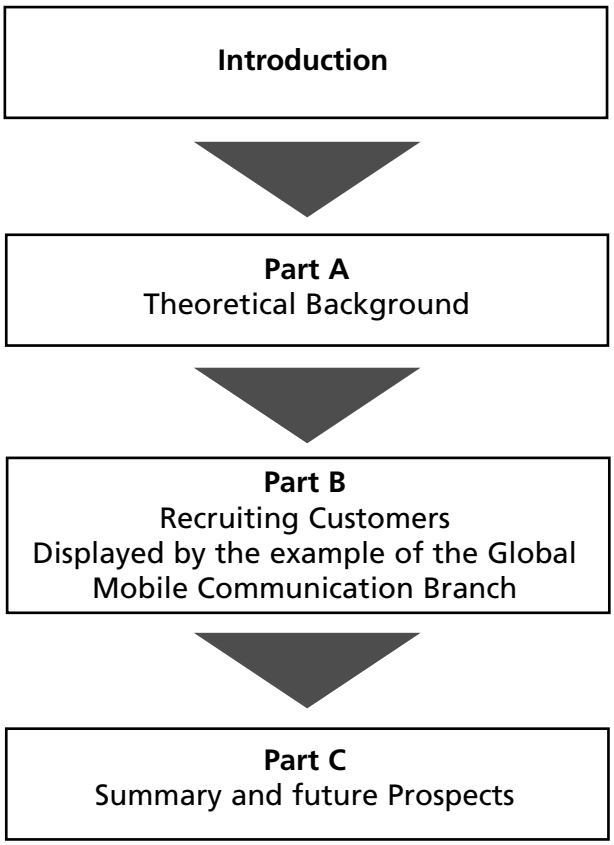


Figure 2: Structure of this thesis, source: own illustration

4. Delimitation of the Analysis Topic

It is realistic to think, that companies develop their customer acquisition strategies for international markets as singular plans for each product in each market. This is because it would be illusive to think that the success of a single customer acquisition strategy would be identical for all markets and product groups. The variety of highly differentiated markets with varying problem areas virtually forces companies to develop multiple individual customer acquisition strategies to cope with this complexity.

The choice to use the BRIC nations (Brazil, Russia, India and China) as examples for the examplary demonstration of a customer acquisition strategy in emerging markets, is based on the importance of these nations for all firms in this industry. Today, emerging markets already account for 80 percent of the new subscribers. These four nations account for more than half the volume of the world's overall new subscribers and for two thirds of new subscribers of the developing regions. Furthermore, an HSBC report proposes that it might be possible that in less than 40 years the four national economies of these nations could be bigger than the ones of the G6 countries. This enormous potential has put the BRIC countries in the focus of this paper. The choice of Brazil to display an in depth analysis of the industry structure has to do with the several structural advantages of this country, as well as with some other factors which will be outlined in part B.

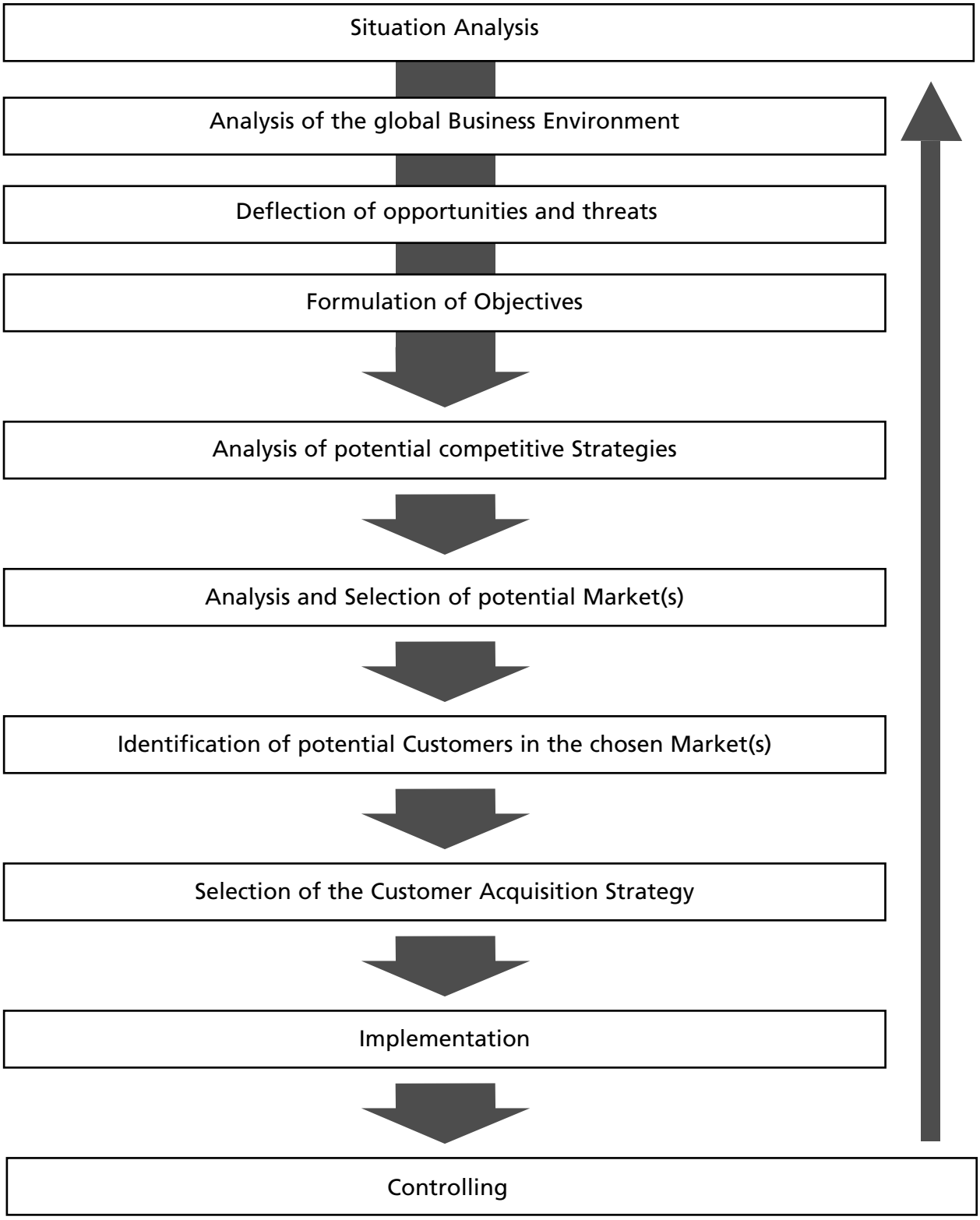


Figure 3: Structure of Part A of this paper, source: own illustration

Part A - The Process of Customer Recruitment in theory

Part A of this thesis introduces the theoretical background of the creation of a customer acquisition strategy for business to business (B2B) markets. As the marketing of B2B products is in many ways very different from business to consumer (B2C) products, the first chapter of part A will provide an overview of the main differences between B2B and B2B marketing. The subsequent step focuses on methods to analyze the global business environment. Thereafter, different competitive strategies will be presented. The subsequent sections focus on methods to select target markets and to identify potential customers in these markets. Finally, different customer acquisition strategies will be presented and the importance of constant controlling will be outlined. The structure of part A is shown in figure 3.

1. Special Aspects of B2B Marketing[1]

Many suppliers of B2B goods have recognized, that even technically outstanding products don't sell themselves. The "technically" better product is not necessarily always the more successful one. The question in this context then is, what can be done to offer benefits beyond the technical ones. As a consequence, we learn that technology driven companies have to think in customer-use categories as well. This is especially true in rapidly changing markets, where the changes create a need for a permanent reorientation. Under these circumstances, the technical superiority on its own is not a crucial factor in continuing economic success. The following section of this paper therefore displays the main differences between B2B and B2C marketing and provides options of individual approaches in B2B marketing, that can help to secure the continuous success of a company.[2]

"In fact, in some ways, business markets are very similar to consumer markets: Both involve people who assume buying roles and make purchase decisions to satisfy needs."
(Philip Kotler and Gary Armstrong, Principles of Marketing, 11th edition, p. 171).

Both disciplines share the same approach of thinking: both deal with the management of competitive advantages on the particular markets and both share the common goal of offering a product or service, which is superior in the perception of potential buyers. It is the idea of being able to carry out a particular economic activity more efficiently than another company, the idea of creating a comparative competitive advantage (CCV), that puts up the brackets around all marketing decisions as well in consumer as in B2B markets.[1]

1 In some definitions, the term B2B marketing also contains marketing to wholesalers and retailers. In the following, I will use the term B2B marketing as a synonym for industrial goods marketing, which means that I will neither consider wholesale nor retail marketing.

2 see: Backhaus, 2004, p. 8

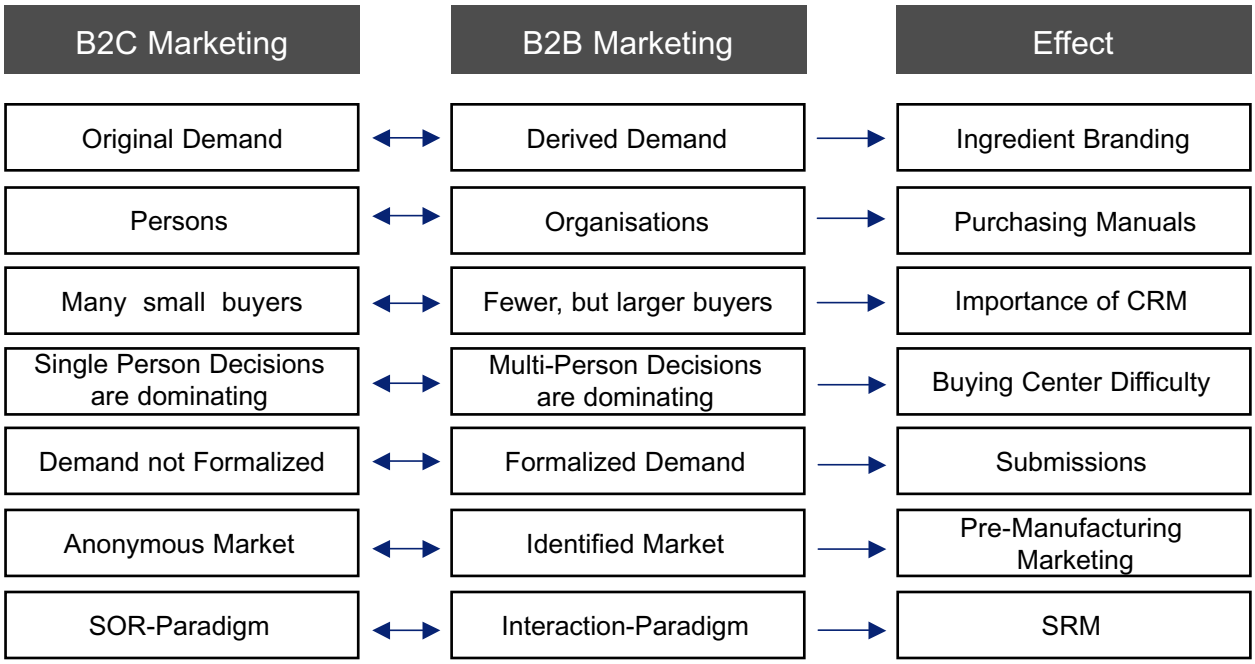


Figure 4: differences between consumer and B2B marketing, Source: own illustration

However, business markets also differ in many ways from consumer markets. The main differences as well as possibilities to use them to create competitive advantages, will be discussed in the following section of this paper.

In contrast to consumer markets, most transaction processes in B2B markets are characterized by a derived demand: it ultimately derives from the demand for consumer goods (e.g. growing demand for mobile phone chipsets can be derived from rising demand of mobile phones). Their marketing decisions have to consider multiple levels of the value chain. This leads to special problems in the marketing management e.g. in the brand policy. One way to deal with this situation is the so called "ingredient branding". If a B2B supplier can successfully manage to create a demand for its products from the end customers, its direct customers will have no choice, but to purchase this suppliers product in order to fulfill the needs of the end customers.[3]

Whereas buying decisions for consumer goods are in most cases relatively easy and do not involve huge amounts of money, purchasing decisions of B2B goods are more complex. They normally involve large sums of money, far greater technical complexity and hence, a far greater risk. This can also lead to advantages of the supplier – if he can convince his customer, that he completely understood the market requirements and that his product offers the potential to fulfill the exact needs of the end customer.[4]

3 see: Kotler / Bliemel, 2001, p. 374 ff.
4 see: Backhaus, 2004, p. 8 ff.

The business marketer normally deals with far larger buyers than the consumer marketer does. Even in large business markets, a few buyers often account for most of the purchasing. As a consequence, in order to secure and improve the strategic position of a firm within a market, the importance of the relationship to these few customers can not be overrated. A good customer relationship management is therefore the basement for the success in B2B markets.[5]

Organizational decisions are affected by multiple persons. It's not a single person who is in charge of the process and the multiple persons, who are in charge, often have different preferences for different solutions. The task of a successful marketing is therefore to identify as many persons as possible who are linked to the purchasing decision of the company. Then these persons can be addressed using different strategies to convince each one of them of the supplier's solution.[6]

„Large business purchases usually call for detailed product specifications, written purchase orders, careful supplier searches and formal approval." (Kotler / Armstrong, 2005, p. 173). To be able to directly compare the different solutions of different suppliers, the demand of buyers is in most cases more formalized as the one in the consumer goods segment. Organizational purchasing decisions in B2B goods markets are therefore often preceded by submissions which lead to the choice of the supplier. Depending on how stringent the guidelines of the submissions are, it might happen that a performance-related profiling is no longer possible as all suppliers will follow the strict guidelines. As this is the case other competitive advantages, which do not directly relate to a companies product have to be offered to the customers.[7]

Whilst the SOR-paradigm[8] can still be used as an explanation approach for market transactions on anonymous markets, the interaction-paradigm[9] is more appropriate on for identified markets. Marketers in B2B markets mutually interact with future customers to adapt the product as good as possible to the customer needs. „In recent years, relationships between customers and suppliers have been changing from downright adversarial to close and chummy" (Kotler / Armstrong, 2005, p. 173). This development led to the creation of the „Supplier Relationship Management" (SRM)[10].

5 see: Schierenbeck, 2003, p. 269
6 see: Kotler / Bliemel, 2001, p. 374 ff.
7 see: Backhaus, 2004, p. 8 ff.
8 The SOR-paradigm primarily describes the single-sided arrangement of a transaction relationship. The supplier formulates a marketing behavior program, in which he aligns the 4Ps (Product, Price, Promotion, Place) with his marketing strategy. These 4P's then have an impact on the purchasing decision of the buyer. These stimuli then act upon a buyer and determine the time, place and the price of a purchase. There is no mutual exertion of influence.
9 The Interaction-Paradigm describes the relationship of a supplier and a customer, in a way that is mutually interactive. Performance and counter-performance are created in a negotiation process.
10 „Supplier relationship management is a comprehensive approach to managing a firm's interactions with the organizations that supply the goods and services it uses. The goal of supplier relationship management (SRM) is to streamline and improve processes between a firm and its suppliers." (Whatis, 2005)

2. Situation Analysis & Formulation of Objectives

In order to profitably satisfy customer needs, the firm must understand its internal and external situation, including the firm's own capabilities as well as the situation of market environment. Therefore, this step focuses on the description, impartial portrayal and evaluation of the global industry environment. Out of this, opportunities and threats for certain products of the current portfolio for certain markets can be deflected. Another crucial point in this step is to recognize the strategical relevance of the gathered data. The data

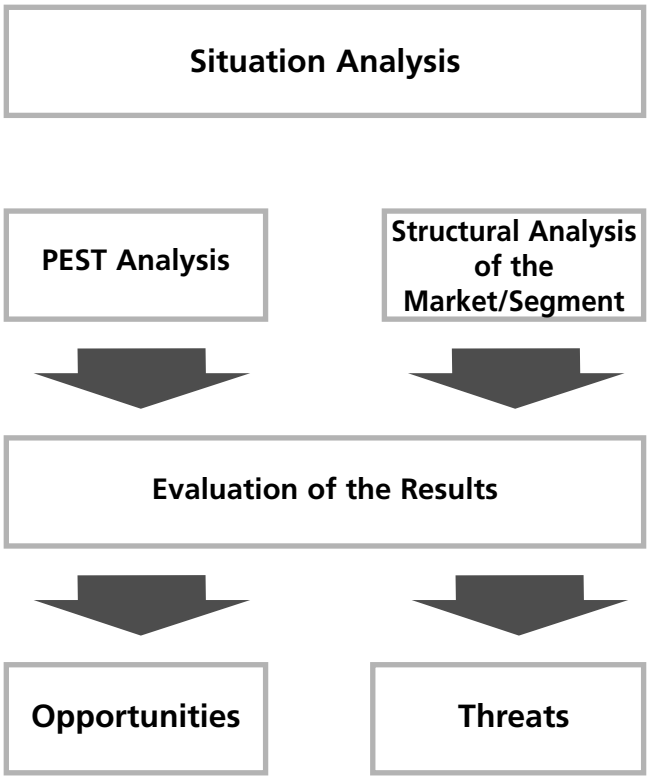


Figure 5, Situation Analysis, source: own illustration

will also reveal information about future trends and should therefore also impact on future product definitions and developments. As companies in B2B markets are striving for long-term relationships with their customers, a good knowledge about future trends can be a competitive advantage in the current customer recruitment strategy as well.

The analysis is conducted in two steps. In the first, one focuses on the evaluation of the political, economical, sociological as well as technological situation in the industry environment. The second one can be used to analyse the global industry environment on a structural basis. Figure 5 shows the structural approach of this process.

2.1.1. Analysis of the political, economical, sociological and technological Situation in the Global Industry Environment

Political, economical, sociological and technological factors are usually beyond the firm's control and sometimes present themselves as threats. For this reason some say that the abbreviation PEST is an appropriate term for these factors. However, changes in the external environment also create new opportunities. Therefore, the letters are sometimes rearranged to construct the more optimistic term of the STEP analysis. As many of the macro-environmental factors are country specific, a PEST/STEP analysis would have to be conducted for all countries in order to find out which ones are of interest. As this would require enormous resources, the analysis should be conducted in two steps. The first step should focus on the identification of overall political, economical and technological trends in the global industry environment. Some of these will offer opportunities for the firm. These trends should be deflected in order to reveal interesting market segments in certain regions or countries. Only after this step has been taken, the next one, an in depth analysis of different promising countries should be conducted. Chapter 4 will introduce ways of comparing certain countries.[11]

Political situation - The questions which have to be answered in this section all want to identify factors which impact on the demand of our customers products. Therefore major political changes and political trends within certain nations, like changes in governments, revolutions, wars, embargos, creation of free-trade areas, or the deregulation of certain markets, have to be identified and described. Furthermore countries which receive subventions by the UN, the EU, or from other sources, which might lead to an increasing demand have to be identified. After all of these trends and changes have been described, their possible impact on the demand of the firm's products has to be evaluated.[12]

Economical situation - Changes in the structure of the world economy might lead to basic changes in the demand of certain products in certain regions. Hence, it is necessary to understand the global economic trends in order to be able to make the right strategic decisions. Therefore, major changes in the global economic environment have to be identified and described. Regions of outstanding economic growth have to be spotted. Data on factors like the GDP growth, currency value development, or the development of exchange rates has to be gathered. In the end, the impact of these changes on the demand of the customers and therefore on the companies product has to be derived.[13]

Sociological situation include the demographic and cultural aspects of the external macro-environment. These changes affect customer needs and the size of potential markets.

11 see: Netmba, 2005
12 see: Bea/Haas, 2001, p. 102 and Netmba, 2005
13 see: Bea/Haas, 2001, p. 102 and Netmba, 2005

Therefore data about factors like birth rate, population growth, age distribution, development of the age structure and the development of average household size has to be collected and evaluated.[14]

Technical situation - Changes in the technology hold large opportunities as well as large threats. If technological changes pose a threat or an opportunity strongly depends on the question if the firm managed to identify a trend soon enough and reacted to it. Therefore, in this step the latest technological developments have to be described and their impact on the demand of the customers and hence the products has to be derived. One major question which has to be answered is if one of the identified trends could possibly open up new markets and customers.[15]

2.1.2. Structural Analysis of the Markets

After the objectives are set, the next step is to gain a better understanding of the factors that impact on success in the selected markets. One key aspect of success in a market is to understand the competitive environment. According to Porter, the key aspect of a firm's environment is the character of the market it competes in. This character determines the strength of the competition within the market and thus ultimately the profit potential of a market. As competition in an industry is rooted in its underlying economic structure and goes well beyond the behaviour of current competitors, Porter proposed five forces which jointly determine the character of a market and consequently the degree of competition within a market: the threat of new entrants, the rivalry among existing competitors, the bargaining power of suppliers, the bargaining power of buyers and the threat of substitute products. Once the five forces have been described and evaluated, their intensity and impact on the attractivity of the respective segment can be graphically displayed. Figure 6 shows a generic model of the five forces and their impact on the attractivity on a branch or segment. Thereafter, one can now identify a firm's strenghts and weaknesses relative to each competitive force. Where does the firm stand against substitutes? Against the sources of entry barriers? In coping with rivalry from existing competitors? The goal of the analysis of the market is to provide a basis for the subsequent selection of an adequate competitive strategy, which will best defend the firm against the competitive forces.[16]

14 see: Bea/Haas, 2001, p. 102 and Netmba, 2005
15 see: Bea/Haas, 2001, p. 102 and Netmba, 2005
16 see: Porter, 1998, p. 3

Threat of new Entrants

The threat of new entrants depends on the barriers to entry coupled with the reaction of existing competitors that the entrant can expect. Barriers to entry are for example economics of scale, product differentiation, capital requirements, switching costs, access to distribution channels, cost disadvantages independant of scale, government policy , or the expected retaliation of competitors.[17]

As new entrants normally enter the market with relatively low volumes, they face a cost disadvantage, because they cannot benefit from the decline of unit price with an increasing absolute volume. Differentiation poses another barrier to entry by forcing new entrants to spend heavily in advertisement, customer service and product differentiation, to overcome existing customer loyalties. Furthermore, the overcoming of market entry barriers often causes the need of large investments e.g. in production facilities. This market entry barrier is particularly important, if the capital is required for risky and unrecoverable up-front advertisement or re-search and development (R&D). The fourth very important barrier for pootential entrants are the one time switching costs which a buyer has to face

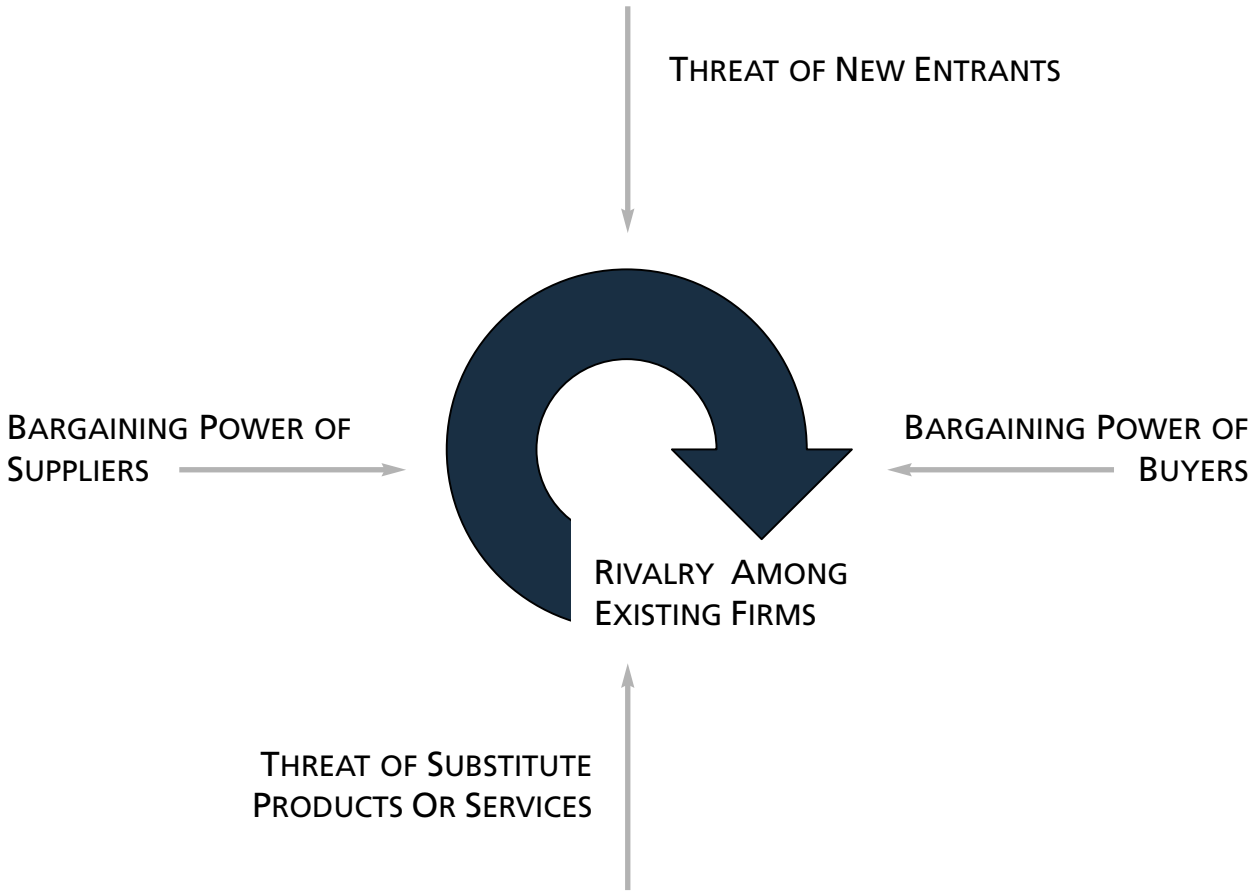


Figure 6: Forces driving industry competition, source: own illustration

17 see: Porter, 1998, p. 7

if he switches from one supplier's product to another e.g. costs of new accessories, because the old ones don't fit anymore. Another crucial factor which impacts on the potential success of a market entry is the access to distribution and advertising channels. Sometimes, this barrier is so high, that entrants have to establish own distribution channels for their products. Additionally, established firms may have cost advantages which are independent from their size and amount of sold products (economics of scale), such as product know-how, learning or experience curve, use of synergies. In the end, goverment policy can support a market entry by providing e.g. tax advantages for entrants, but also limit or even forclose entry into industries with such controls as licensing requirements and limits on access to raw materials.[18]

Apart from market entry barriers, entry can also be deterred by the threat of retaliations. If expected entrants are expected to respond forcefully, then entry may well be deterred. This is especially likely if established firms have substantial recources, industry growth is stagnating, or established firms have a great commitment to the industry.[19]

Intensity of Rivalry among existing Competitors

The intensity of competition of established firms is determined by a number of factors. The most important ones are[20]:

The capacity utilization ratio - if the capacity is not used completely, strong competition can be expected.

The ice by the buyer is largely based on price and service, hence, the result is strong competition.

Switching costs - Competition increases if a firm didn't manage to tie a customer to its own product. Product differentiation, creates layers of insulation against competitive warfare.

High strategic stakes - If firms have high stakes in achieving success in an industry, competition increases.

High exit barriers - If firms have to cope with high exit barriers, competition will be high, as firms are forced to stay in the market. Possible market exit barriers are labor arrangements, resettlement costs, interrelationships between businesses etc.

18 see: Porter, 1998, p. 7 ff.
19 see: Porter, 1998, p. 14
20 see: Porter, 1998, p. 17 ff.

Pressure from Substitute Products

Substitute products are products, that perform the same function as the original product does (e.g.train/airplane). The threat of these substitutes increases, the better the price/performance ratio of the substitute product in comparison to the original product gets. To defend themselves against these substitutes, firms can either interact (e.g. common strategies, collective acting in terms of advertisement campaigns, generation of common product standards), or act individually (e.g. product, price, promotion, place).[21]

Bargaining Power of Buyers

The more bargaining power buyers have, the smaller the rentability and hence the attractivity of the industry gets. The bargaining power of buyers can be considered to be high, if they concentrate or purchase large volumes or if the products they purchase from the industry represent a significant fraction of the buyers's costs or purchases. Furthermore, this force can be considered high if the products the buyers purchase from the industry are standardized or undifferentiated and they face low switching costs. If buyers earn low profits or pose a credible threat of backward integration it strengthens their position as well. Last but not least, the amount of information the buyers have impacts their bargaining power as well. The more information a buyer has, the stronger his position is.[22]

Bargaining Power of Suppliers

The more intense the level of bargaining power of the suppliers is, the lower is the level of returns on the side of the buyer. The bargaining power of suppliers is usually high if the supplier group is dominated by a few companies and is more concentrated than the industry it sells to. Another factor which determines the value of this force is the competition within the supplying industry. If suppliers managed to differentiate their products or if they built up switching costs their bargaining position will be stronger. Furthermore the bargaining power will increase if the product of a supplier is an important input in the buyer's business. In the end, a credible threat of forward integration increases the suppliers bargaining position as well.[23]

2.2. Identification of Opportunities and Threats

After the internal and the external analysis have been completed, opportunities and threats can be deflected. This step is a necessary spadework for the subsequent formulation of targets as the profile should reveal areas with current competitive advantages. Also, it provides a possibility for the methodical generation of new strategies which minimize threats,

21 see: Porter, 1998, p. 23 ff.
22 see: Porter, 1998, p. 24 ff.
23 see: Porter, 1998, p. 27 ff.

and explore opportunities to secure the future success of a firm.[24]

Out of the previous analysis, concrete targets should be extracted and a general line of attack should be formulated. One should put on record the concrete strategy of the company and an eventual focus on certain markets along with corresponding products. Using the SWOT profile these targets should exploit the best possible combination of the firms strengths, weaknesses, opportunities and threats.

3. Introduction to Generic Competitive Strategies

An effective competitive strategy takes offensive or defensive measures to overcome weaknesses, to build strengths, to explore opportunities and to minimize the threats of a firm in a market. According to Porter[25], there are three possible strategic approaches to outperforming other firms in an industry: overall cost leadership, differentiation and focus. This chapter will at first give an overview of Porter's stategic approaches and will then introduce the outpacing approach of Gilbert and Strebel.

3.1. Overall Cost Leadership

The running theme of this strategy is to achieve an absolute cost advantage relative to competitors. This strategy protects a firm against all five competitive forces, as it provides above-average returns for the firm. It protects the firm against rivalry from competitors, because of its better cost position. In turn, the firm will "suffer last" from eroding prizes. Furthermore it gives a firm defense against powerful buyers, as buyers can force down prizes only if there are any competitors which offer cheaper products. In addition, the cost advantage is also a substantial entry barrier and it gives the firm a comfortable position against substitute products.

This stragegy requires some prerequisites a firm has to fulfill in order to being able to implement this strategy properly. The firm has to have a relatively high market share and a favorable access to raw materials. Furthermore, the access to recources for the high upfront investments (e.g. advertisement, production facilities) is taken for granted.[26]

3.2. Differentiation

The second strategy Porter proposes, is differentiation. The idea behind this strategy is to create a product which is percieved as being unique in the eyes of the customer. There are several ways of differentiating. Ideally the firm uses multiple dimensions of differentiating

24 see: Bea/Haas, 2001, p. 116 and Netmba, 2005
25 see: Porter, 1998, p. 47 ff.
26 see: Porter, 1998, p. 35 f.

itself from competitors, to create a truely unique impression. The major dimensions a firm can differentiate in are design or brand image, technology, customer service, product features and the dealer network.

Like the overall cost leadership, this strategy protects the firm against all five forces: It protects against competitive rivalry, as customers will have a lower price sensitivity. The uniqueness of the product and hence the brand loyality of customers provide strong entry barriers. Differentiation leads to higher margins, which defend the firm against powerful suppliers. Furthermore, it provides a strong defense against buyer power as buyers lack in comparable products. Last, differentiation yields in customer loyality and therefore gives the firm a favorable position against substitute products.

It strongly depends on the industry, wheather or not differentiation can be a successful comparative strategy. Even if all customer perceive the superiority of a solution, not all of them will necessarily be willing to pay the required higher prizes. Examples show, that this strategy is especially effective with capital intense products like construction machinery (e.g. Catapilar).[27]

3.3. Focus

Here the company focuses its effort in serving a few market segments well rather than going after the whole market. The strategy is based on the premise that in focusing on a particular market segment or customer group, the firm is able to serve its strategical target more effectively. In this case it is also possible to combine the two mutually exclusive strategies of overall cost leadership and differentiation. The firm achieving focus can thus earn above average returns in its industry: Its focus either means, that the firm is in a low cost position, has achieved differentiation, or has achieved a unique combination of both.

Porter emphasizes, that independent from the chosen strategy it is absolutly crucial that a firm develops its strategy in one of the discussed directions. If a firm fails to do this, if a firm is "stuck in the middle" the situation of the firm is very poor, as this situation either causes the loss of the high volume customers who demand low prizes, or the loss of profits as the firm has to compete with low cost competitors.[28]

3.4. Hybrid Competitive Strategies

Gilbert and Strebel however hold the view, that concentrating on one strategy, does not necessarily mean that the firm has to ignore the other. Therefore they proposed an additional approach which is known as "outpacing". The idea is to create a hybrid competitive strategy which combines the attributes of both of Porters strategies: high product quality and cheap product price.

27 see: Porter, 1998, p. 37 f.
28 see: Porter, 1998, p. 38 f.

Figure 7 shows the target of the outpacing strategy. It contains four quadrants. The one top-left and the one down-right match the two generic strategies which were proposed by Michael Porter. Due to their competence in terms of quality and due to their lack of cost efficiency, companies which are located in the quadrant at the top-left are quality leaders. Their strategy would be differentiation. On the other hand, companies which are located at the down-right quadrant are cost-leaders. Companies which are situated at the down-left quadrant are neither able to provide outstanding quality nor do they have a cost advantage. They are "stuck in the middle". They have to use different strategies like customer retention in order to improve their situation.[29]

Piller and Schoder, 1999 argue that new production technologies dissolve the conflict of goals between the flexibility (diversity of variants) or quality and the productivity (lean product line) or the cost-leadership. They say, that at the time of the formulation of Porter's concepts modern production facilities have not yet been used. Therefore, they say that the alternative strategy Porter proposes (focus) was still influenced by the classical trade-off between the diversity of variants and production costs.

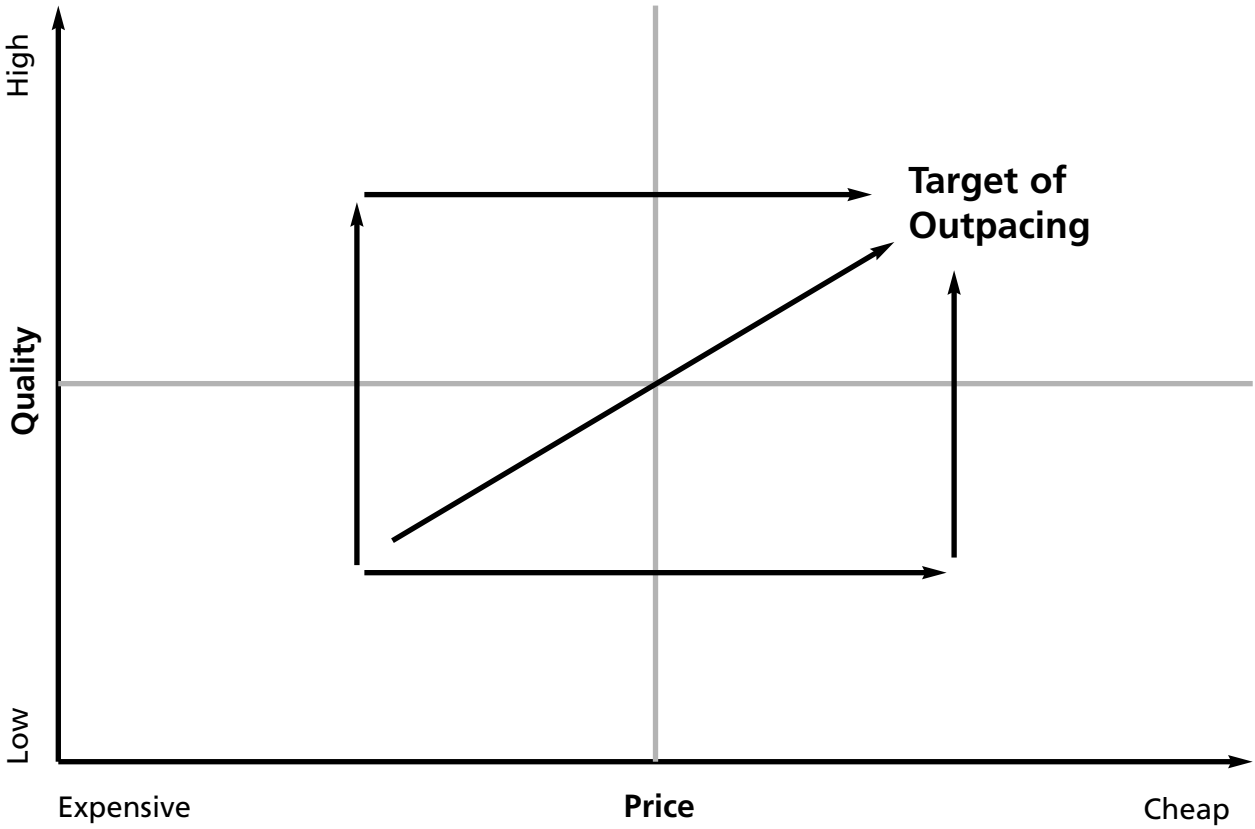


Figure 7: Target of the Outpacing Strategy, Sorce: own illustration

29 see: Porter, 1998, p. 38 f.

But a change in market requirements today forces firms to combine the strategic approaches of cost-leadership and differentiation, which were alleged to be excluding. Figure 9 summarises the facts that lead to the need of a customized and efficient market prozessing and therefore to a need for a hybrid competitive strategy.[30]

Plinke (1995, p.78) defines this construct as the "net-value" approach. He defines the net-value as the difference between value and costs of a solution. The basic idea is that the supplier with the best combination of price and additional value will be favoured in the eyes of the customer. This perspective was already discussed by Rosser Reeves in his book "Reality in Advertising" in 1960. His idea was that each product must make a proposition to the buyer: "Buy this product and you will get this specific benefit". He called this specific benefit USP (unique selling proposition).

Hence, the point is to create a competitive advantage, which is perceived as being unique by the customer. Over the years, many authors picked up this concept and a variety of different terms appeared, which all have the same meaning: comparative competitive advantage (Backhaus), effectivity advantage (Plinke) as well as USP (Reeves, Ries and Trout). In the following part of this paper term CCA (comparative competitive advantage) will be used.

CCA's can be created with the product itself, or within a system of additional services, that the firm offers. For the formulation of CCA's this means, that the product itself doesn't necessarily have to be technically superior. The only important factor is that it is seen as superior in the eyes of the customer. There are certain factors which influence the value of a CCA: The needs of potential customers, the own position in the eyes of the customer and the position of relevant competitors in the eyes of the customer.[31]

As all three influencing factors are defined out of the view of the respective customer, one can derive, that there are no absolute but only relative CCA's which can differ in the eyes of different customers. No matter where the competitive advantage is achieved, CCAs should answer the follwing questions: Why should a customer purchase our product?

3.5. Dynamics of Product-Performance

"Customers and competitors change dynamically in the different countries. Products and services, which are innovative and lucrative today, will be a matter of course and hard-fought tomorrow. Hence, firms have to continually adapt their product and service offering to the needs of the customers." (Belz/Reinhold,1999,p. 78)

Figure 9 shows, that hard-fought technical core products can be placed in service-shells. The combination of these core products with other service-shells then opens up the opportu-

30 see: Piller / Schoder, 1999, p.5 f.
31 see: Piller / Schoder, 1999, p.14 f.

Alteration from Vendor's to Buyer's Markets

A strongly buyer-sided bargaining power due to increasing global competition and an increasing pressure from the market leads to a global cut-throat competition.

Individualisation of the Demand

B2C Markets: Changes in values, hybrid buying patterns, demands on quality, new customer groups.

B2B Markets: Derived heterogene demand, trend to single-sourcing, trend to backward integration

Customized and Efficient Market Prozessing with a hybrid Competitive Strategy

Insufficiency of the Differentiation

New relation between price and product / service: Buyers make relatively high demands regarding quality, service and functionality at a low sales price, or rather certain minimum requirements for the price for products with distinctive differentiation .

Insufficiency of the Cost-Leadership

In many branches, firms reside on an advanced stage within the product life-cycle and therefore have similar cost structures. This eliminates the potentials for further significant cost reductions.

Figure 8: Sources of the need for a hybrid competitive strategy, Source: own illustration

nity to achieve above-average results and advantages for the customer:

"Customers don't want to have drills, they want to have holes in the wall."

The core of these service-systems is always the special service (CCA), which is generated for the customer. In doing so one always has to regard, that the additional services do not get out of hand, produce high costs and are hardly used or even taken gratuitous. It is therefore reasonable to create so called value-packages which create the link between the needs of the customer and the service offering of the company. An example of such value packages would be product bundles, additional service, the integration of the service in the procedures of the customer or even an integrated project management which leads to turn key solutions.[32]

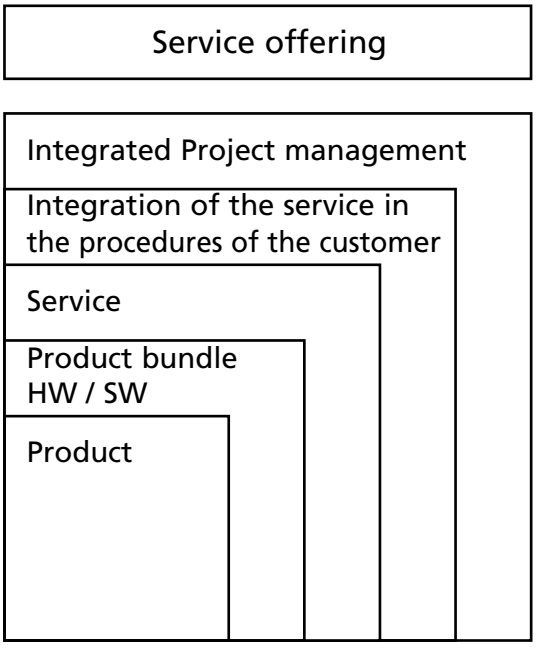


Figure 9: The core product as a service shell in a system of services, Source: Belz/Reinhold, 1999, p. 79

Product Bundle - The idea behind a product bundle is to offer a product package, which provides the best possible solutions for customer requirements without the need of any further processing. In the case of many suppliers, supply network management could play an important role in this context: vertical cooperations along the value chain could possibly enable suppliers to offer complete product packages which fulfill the needs of the customer in an optimal way.[33]

"Cooperation between companies comes along as another component, which is as important as competition itself." (Thurow, 1988 p. 863)

Service - Offering additional services could for example include the execution of feasibility-, time- or productivity-studies, the presentation of demonstrations, the execution of cost/benefit analysis, or the offering of additional finance-, attendance- or repair-services. Further additional service offerings could include the set-up of product-hotlines, indirect marketing, or user trainings.[34]

Integration of the Services in the Procedures of the Customer - This form of an additional service offering could include the accompaniment of the customer along the complete product life cycle. Furthermore it could contain new ways of cooperation in R&D, production and logistics. In either case, the target of such an offering is the achievement of a direct

32 see: Backhaus/Voeth, 2004, p. 292 ff.
33 see: Belz/Reinhold, 1999, p. 79
34 see: Belz / Reinhold, 1999, p. 79

contribution to the success of the customer. [35]

Integrated Project Management is the most advanced form of an additional service offering. The supplier gives the impulse for new projects of the customer, who will then realize major parts of the projects. Key aspects to the success of such strategies are early involvement in customer projects and coalition management. The results are turn-key systems which do not need any further processing by the customer.[36]

4. Analysis of key Indicators of promising Markets

The general line of attack which was described in the previous chapter, could eventually be realized in different markets. In order to identify which of these countries (or if all), need to be approached, one needs to identify and analyse certain key indicators. This spadework is necessary to enable the forecasting of the potential of different markets. Furthermore, especially in B2B markets it is often sufficient to gather market knowledge of one "model-market". As many of the potential customers will be multinational companies and thus operating in many regions, one can then argue that the one market works like a model and the gathered knowledge is transferable to similar markets. The subsequent chapter will therefore focus on the comparison of different countries.

The question which of the markets, which were identified with the PEST analysis (chapter 1.2, page 12), should undergo an in depth analysis in order to identify potential customers in the markets, is coupled to multiple factors. The most important ones are: market size (market potential) and the suitability of the market to transfer knowledge to other markets. This chapter can be seen as the second step of the PEST analysis and is therefore structured in a similar way. The main difference is the fact that all data now correlates to certain countries. As described in chapter 1, there are cerain factors which are country specific, and certain ones which are not. The technological changes for example normally apply globally, whereas the political, economical and sociological situation can vary from country to country. Therefore the technological changes will recieve no consideration in this chapter. The analysis of certain key indicators enables the quantitative comparison of different markets. In this context, one should analyze[37]:

Political Environment

which empowers us to compare political situations which might as well directly impact on the development of certain branches and industries:

- Political History / Stability

35 see: Belz / Reinhold, 1999, p. 80
36 see: Belz / Reinhold, 1999, p. 80
37 see: Bea / Haas, 2001, p. 34

- Deregulation of the telecommunication market
- Transaction Governance Capacity (TGC)
- Tax situation

Economical Environment

which influence the overall economic potential of the countries and therefore enable us to draw conclusions about their future potential:

- GDP growth
- Currency value development
- Development of exchange rates
- Percentage of people living in urban areas

Sociological Environment

which allow us to draw conclusions about the development of the numbers of potential customers in certain market-segments:

- Birth rate
- Development of the age structure
- Development of average household size

After these quantitative factors have been investigated, one now has to research a set of qualitative factors which might as well influence the choice of the market:

- How much effort does one have to make to gather the necessary data?
- Does the firm have any own subsidaries in the countries which can provide "inside-information" about certain topics which can hardly be researched by analyzing secondary statistical data?
- Are there any known biases of customers?
- How well does the market represent the typical patterns of the overall market segment the firm wants to compete in?

Out of the analysis of the different factors above, one should now be able to form a clear picture of the competitive environment in the respective markets. Therefore, the different markets can now be compared in terms of their potential, their relevance for global operating customers, their potential in terms of local customers and their qualification to gain knowledge and experience which can be transfered to similar markets.

5. Identification of potential Customers in the chosen Market(s)

The fourth step of this examination is about collecting as much knowledge over the functionality of the market as possible. The point is to understand the business connections along the supply chain of all operators and handset manufacturers, to be able to identify relevant possible business partners.

5.1. Development of a Market-Model

For this purpose, a detailed market model, which graphically displays all players of the branch in the market, has to be created. Furthermore, it should outline all customer supplier connections along the different supply chains. Figure 11 displays a generic market model. The shape of the model strongly depends on the industry and the country. Some countries for example might have a strong retail system whereas in others goods are mainly sold through wholesalers. It also strongly depends on the industry the analysis is conducted for. Some industries for example might mainly sell through the internet which would eliminate most of the common structures. In general, one might say that the more developed a country is the less levels the value chain has.[38]

A good understanding of the market structure and its functionality could enable a firm to extend the traditional business model of selling only to firms at the subsequent level of the value chain by finding ways to overleap this level and to directly approach customers in the first levels of the value chain.

A consequence of a single powerful player in a market could for example be, that a supplier overleaps some steps in the value chain to create a derived demand which would have a pull effect on his products. Other approaches could for example focus on the creation of vertical cooperations which directly serve the needs of the retailers of operators.

5.2. Identification of relevant Players, potential Customers and potential Cooperation Partners

After a market model has been created, one can now classify the players and identify potentially interesting customers and cooperation partners. In a next step, first quantitative statements of market shares and sales figures of the single players can be researched to get an understanding of much effort is worth putting into recruiting certain customers.

38 see: Backhaus / Voeth, 2004, p. 299 ff.

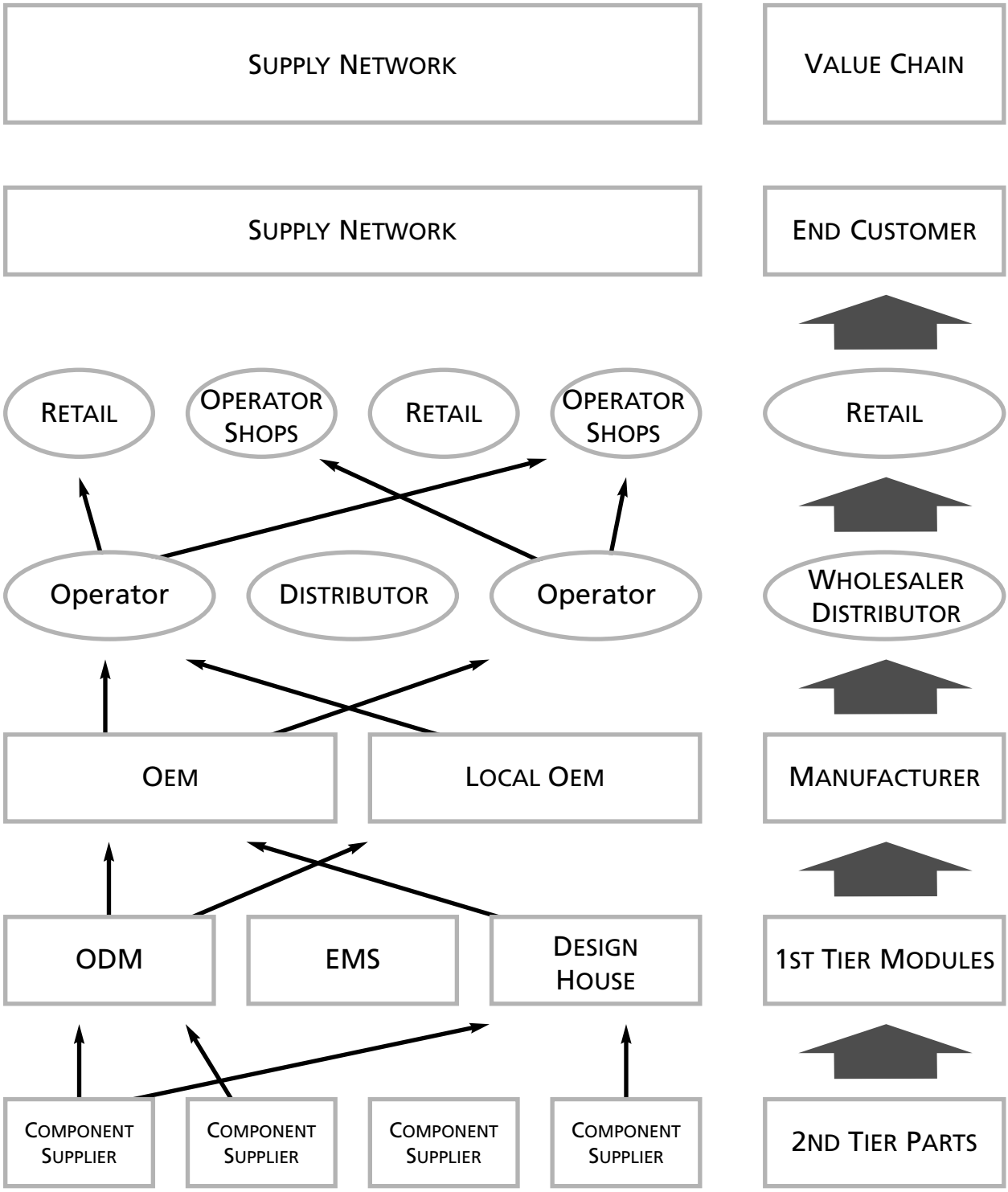


Figure 10: generic market modell, source: own illustration

6. Implementation

When an organisation has made a decision to approach customers in an overseas market, there are a variety of ways in which the organisation can enter the specific market. The decision which option can be considered the best, depends on multiple factors. The options vary with cost, risk and the degree of control which can be exercised over them. On the other hand, a strong presence close to important customers can bring tremenous competitive advantages. This chapter will provide a concise overview of five different foreign market entry modes.[39]

The theory of the optimal selection of a market entry strategy was the content of intensive academic research. Within the scope of this paper it is only possible to provide a brief overview of the main factors which influence the optimal degree of a firm's comittment into a foreign market. As one will see in the later subsequent overview of the different market entry modes, the key decisions a firm has to make are influenced by two variables: the desirable degree of control in the target market and the desirable assignment of resources to the target market. These variables are again influenced by others. The desirable degree of control in the target market depends on a firm's experience in other foreign markets. In addition, the extent of previous investment in the products of the business unit will influence desire to exercise control over the marketing and sales in the target market. Moreover the current competitive situation will strongly impact on the decision to grow internally or externally. The extent of resources a firm is willing to assign to a market entry is as well influenced by further variables, most importantly, by the attractiveness of the market and the size and the importance of the customers in the market. Figure 11 shows a model of factors which impact in a firm's commitment to a target market.
In the following, five different foreign market entry modes: indirect export, licensing, direct export, own sales subsidaries and own subsidiaries / core competency centers will be introduced and shortly described.

Exporting is the most traditional and well established form of operating in foreign markets. Exporting can be defined as the marketing of goods produced in one country into another. Whilst no direct manufacturing is required in an overseas country, significant investments in marketing are required. Exporting offers several advantages, such as home-based manufacturing which is less risky than overseas based manufacturing. Furthermore, it provides an opportunity to „learn" overseas markets before investing in bricks and mortar and thus, it reduces the potential risks of operating overseas. The main disadvantage is that one can be at the „mercy" of overseas agents and so the lack of control has to be weighed against the advantages.[40]

39 see: Helm, 1996, p. 66; University of Frankfurt, 2005
40 see: Helm, 1996, p. 67; Quickmba, 2005; Backhaus / Voeth, 2004, p. 166 ff.

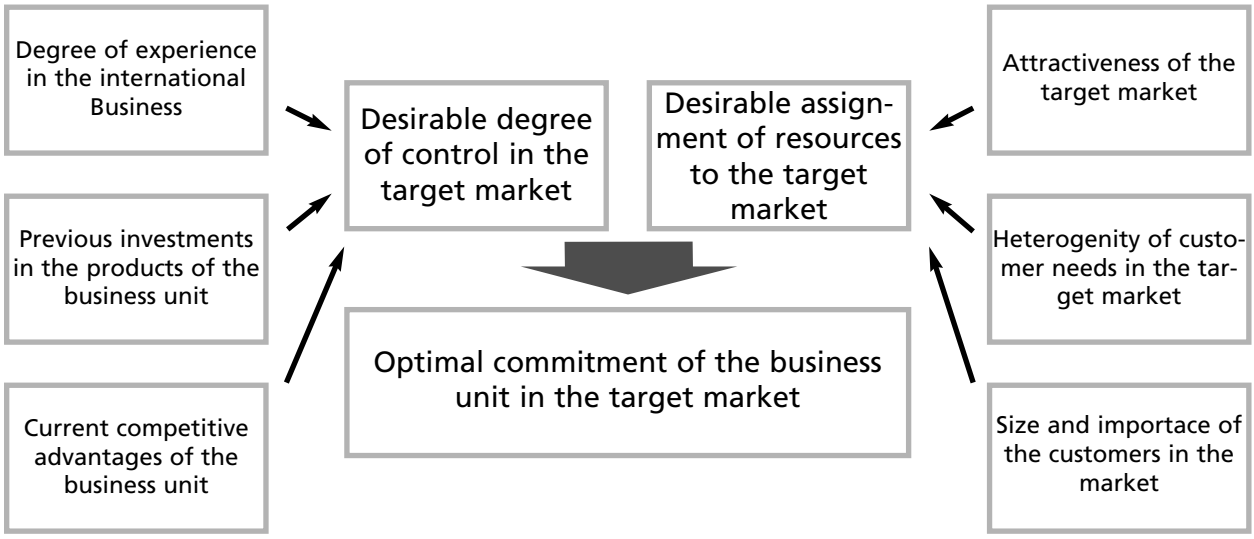


Figure 11: illustration of the selection of a market entry strategy , source: own illustration

An organisation which decides in favor of indirect exporting may use an agent or a distributor, to sell goods to customers in a foreign country. The exporter's task is to choose a market and to find an agent or a distributor. Control, or the lack of it, is a major problem which often results in decisions on pricing, certification and promotion being in the hands of others.

Direct export is defined as selling goods to foreign buyers without the intervention of an intermediary. Thus, it solves many of the problems of indirect exporting but also creates new ones.[41]

Licensing is defined as „the method of foreign operation whereby a firm in one country agrees to permit a company in another country to use the manufacturing, processing, trademark, know-how or some other skill provided by the licensor". It is quite similar to the „franchise" operation. Coca Cola is an excellent example of licensing. Licensing involves little expense and involvement. The only cost is signing the agreement and policing its implementation. Licensing provides the following advantages: it is a good way to start in foreign operations and open the door to low risk manufacturing relationships. The linkage of parent and receiving partner interests means both benefit most from marketing effort. Capital is not tied up in foreign operation and options to buy into partner exist. As disadvantages one can consider the limited form of participation and the potential risk that licensees become competitors. Those who decide to license ought to keep the options open for extending market participation. This can be done through joint ventures with the licensee.[42]

41 see: Helm, 1996, p. 67
42 see: Backhaus / Voeth, 2004, p. 166 ff.

The most extensive form of participation is the ownership of an own subsidary in the respective country. This involves the greatest commitment in capital and managerial effort, but the ability to communicate and control may outweigh any of the disadvantages of licensing. However, repatriation of earnings and capital has to be carefully monitored. The more unstable the environment the less likely is the ownership pathway an option. This strategy can have several extents. The selection depends on the desired commitment in the target market. For example a firm could only establish a sales office in the target market in order to better serve the local customers, or a firm can built its own subsidary, which might inclcude tasks like research and even manufacturing. Figure 12 gives an overview of the five entry strategies.[43]

Depending on the strategy a firm decided for, Bartlett and Ghosal formulated a very interesting approach which distinguishes between multinational, global, international and

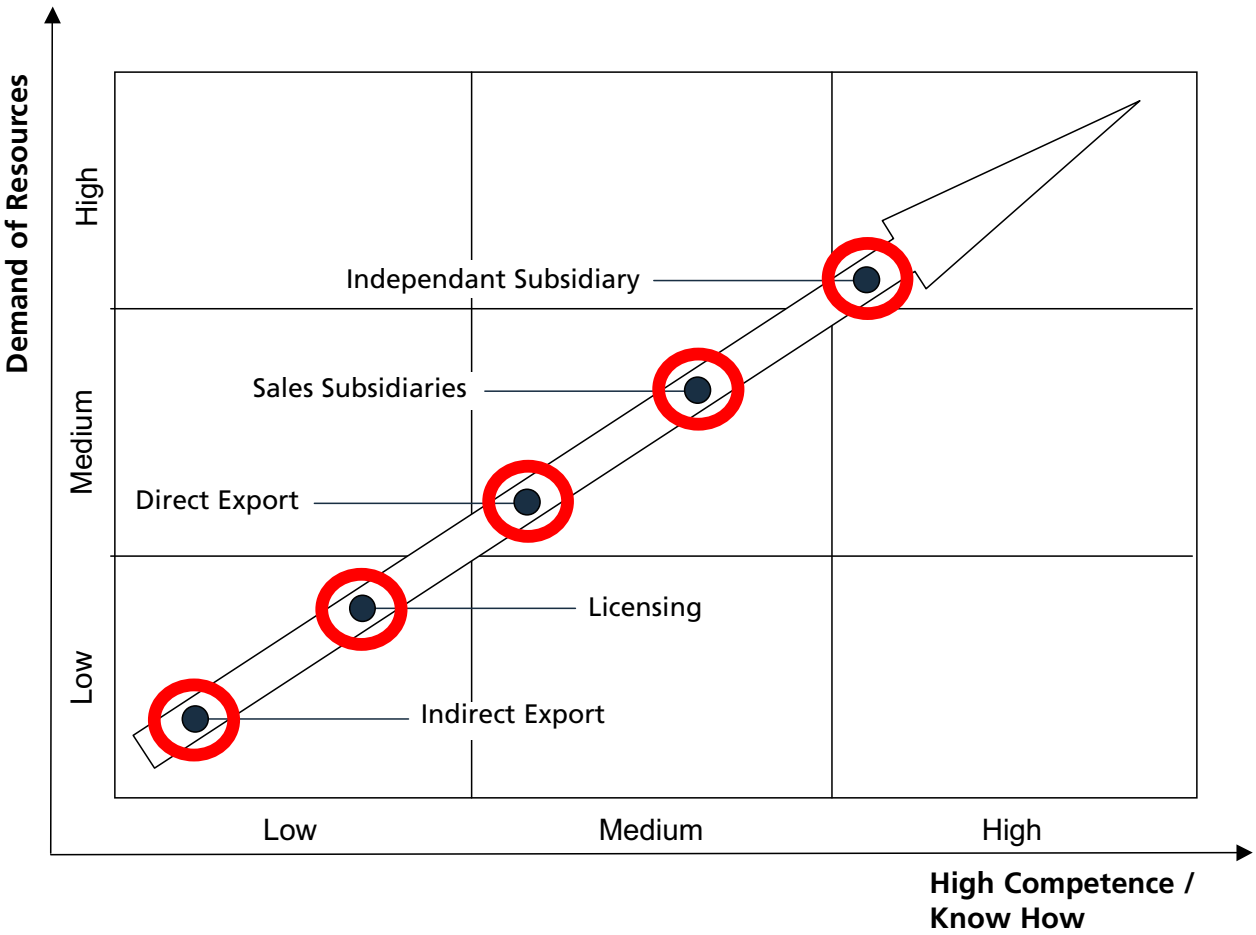


Figure 12: Overview of common market entry strategies, source: own illustration

43 see: Backhaus / Voeth, 2004, p. 166 ff.

transnational firms. The types differ in their ability to combine global and local orientation. Multinational firms prefer national solutions, global firms prefer the product-organisation, international firms have exporting departments and transnational firms use a matrix organisation. Barlett and Ghosal interpret transnational firms as seminal. The specific resources and skills they have, are widely spread and linked in this kind of firms. Performance, services, resources, information and human capital are interexchanged between independent units. Hence, cooperation and coordination processes take place in an environment of collective decision making. The advantages of this form of organisation are flexibility, participation, the exhaustion of manifold resources and increased learning- and innovation- capability. Today many firms exploit the advantages of such a decentralized model. The growing number of dezentralized sales structures is only one example of this[44]. A comparison of these two approaches is shown in figure 13.

Decentralized Sales	**Centralized Sales**
Control of operating figures and results	Tight controlling and guidelines, little scope
Strong impact of the markets on product innovations	Central decision making
Unity of thoughts and actions	Priority of the home markets
Success through marketability	Separation of concept and action
Intrinsic motivation	Extrinsic motivation
Flexibility through decentralized decision making at the customer	Success through competence in the head-office and through standardized professionality

Figure 13: Centralized vs. Decentralized Sales, source: own illustration

44 see: Bartlett / Ghoshal, 2004, p. 27 f.

7. Controlling

After the selected strategy has been implemented, customers have been approached and a first bottomline can be drawn, it is now possible to measure the success of the chosen strategy. Factors that have not been considered sufficiently in advance, but turned out to be important afterwards can be identified. This process is called ex-post analysis. In doing so, one can learn from positive and negative developments to ensure a learning process to improve future customer recruitment strategies.

The process can be divided into four steps which are shown in figure 14. In the first step, factors which had a positive influence on the selection of the market and the strategy have to be identified. In a second step, factors which were perceived negative in advance and therefore had a negative impact on the strategy decision should be identified. The first two steps should cover all main influencing factors which led to the choice of the markets, the choice of the customer and the choice of the strategy. The third and the fourth step should then identify factors which turned out to be important or negligible afterwards. In the third step, factors which had a negative and slowing impact shall be derived. Finally in the fourth step, factors which support the choice of the strategy and of all decisions and hence had a surprisingly positive development of the relationship to the customer and to the development of market share in the segment or country have to be identified.[45]

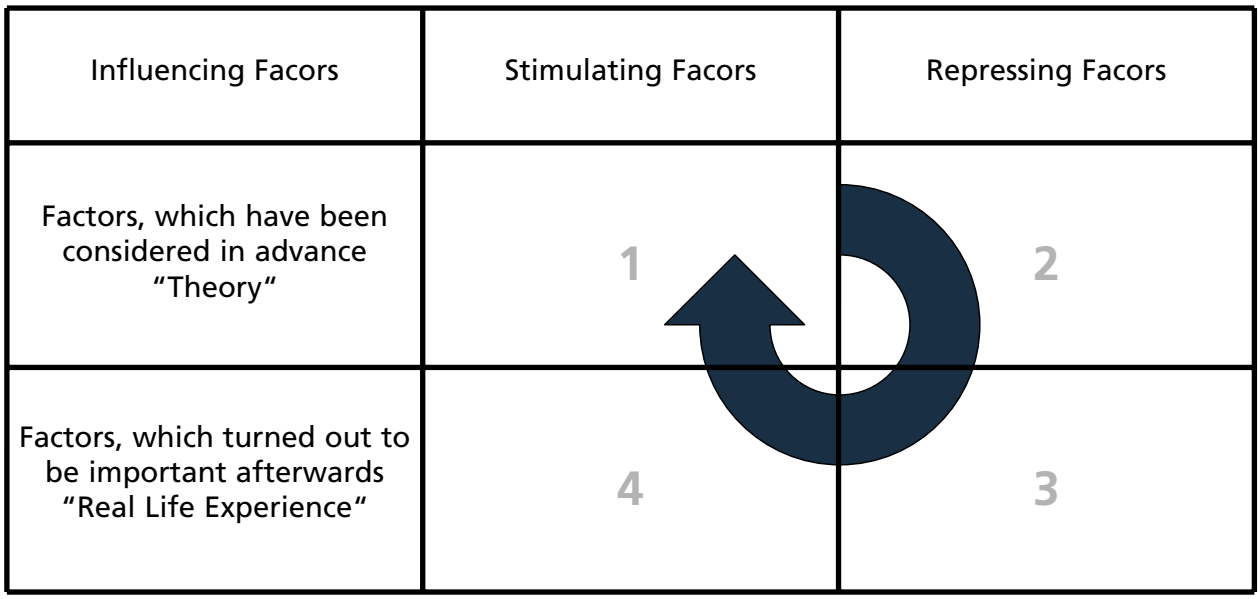


Figure 14: Controlling Schema for Customer Acqisition Srategies, Sorce: Kinkel, 2004, p. 57

45 see: Kinkel, 2004, p. 57 ff.

Part B – The Process of Customer Acquisition displayed by the mobile Communication Branch

This section of the paper will practically apply the theory, which was described in part A, by the example of the situation of the global mobile communication branch. The target is to derive promising strategic approaches to the BOP segment. For this purpose, the situation of the global economy as well as the situation of the global mobile communication branch will be described and evaluated. In the next step, objectives will be formulated. Having the objectives formulated, the structure of the industry will be analyzed and potential competitive strategies will be discussed. Furthermore, the potential of different countries for for the mobile communication brach will be assessed.

1. Situation Analysis & Formulation of Objectives

This chapter will evaluate the situation of the global economy and the broader environment of the global mobile communication branch. Having analyzed the current situationof the global handset industry, objectives will be formulated.

1.1. Analysis of the broader Industry Environment

This step focuses on the description, impartial portrayal and evaluation of the global industry environment. Out of this, opportunities and threats for Infineon and its ULC products will be deflected. The analysis is conducted in two steps. In the first, one focuses on the evaluation of the political, economical, sociological as well as technological situation in the industry environment. The second one can be used to analyse the global industry environmenton a structural basis.

1.1.1. Analyses of Key Indicators of the broader Industry Environment

This chapter will built the basement for the future formulation of targets. For this purpose, global economic developments, technological trends as well as political changes, will be discribed and evaluated. As sociological changes are country-specific, they will not be evaluated in this chapter. In the last two years, subscriber growth was primarily driven by added subscribers in developing regions of the worlds. After a period of declining replacement sales, replacement sales increased by pent-up demand in camera phones, color screens, and slick cool form factors in 2004.[46] *"It was a great year for handsets. In 2004, an estimated 660 million mobile handsets were sold. A large portion of 259 million phones were sold to new subscribers. The mobile phone subscriber population grew more than 19% to over 1.6 billion users, a healthy insurance for future replacement sales."* (Prismark Discovery Series, 2005) Although no one was able to predict the rapid growth of new subscribers in China over the past two years, the real variable in mobile phone sales is replacement demand. Replacement demand is driven by a combination of certain factors like the value of certain new features in the eyes of the customers, or service incentives, which can hardly be predicted. In contrast to this situation, the potential of new subscriber sales is relatively easy to predict. Furthermore, new subscriber sales account for more than one third of the global handset sales and are therefore a very lucrative market.[47]

46 see: IMF[a]
47 see: IMF

"Investor Interest in BOP markets is based on expectations of a large volume, low risk, and high-return-on-capital employes business opportunity." (Prahalad, 2005, p.30)

As you can see in figure 15, about 80% of these new subscriber sales already come from emerging and hence from entry phone markets.

Political Situation

Terrorism remains a constant threat for the world economy, but currently there's no major conflict which directly impacts on handset sales. Even though former war regions like Afghanistan or Iraq should show healthy growth rates, their potential for the global handset market is rather negligible.

Due to their political history, many emerging markets in the third world still have many prejudices against any private sector firms. Governments in these nations used to regulate the size and expansion of the private sector. Today we observe a continuing deregulation which facilitates doing business for private sector firms in these regions.[48]

Global Economical Changes - World Economic Outlook

In 2004, global GDP growth was on average 5 percent, the highest for nearly three decades. From a regional perspective, this result was relatively broad based, but some regions continued to grow more vigorously than others. Global growth continued to be driven by the United States, with strong support from Asia, activity in Latin America and some other emerging markets.[49]

Growth in emerging Asia has continued to exceed expectations. Growth in China remains very strong due to the recovery in the global information technology sector and generally supportive macroeconomic policies, including highly competitive exchange rates and an increasingly solid domestic demand growth. In Latin America, economic activity is rebounding strongly this year, supported by a pickup in domestic demand and the robust global expansion. In Brazil, the economic recovery is gathering strength, boosted by robust export growth and increasing domestic demand, and the forecast for real GDP growth in 2004 has been revised up. In emerging Europe, GDP growth is projected to rise to 5.5 percent in 2004, with a stronger-than-expected upturn in much of central and southern Europe.[50]

One major development in the global economy is obviously the ongoing economic growth in some former third world nations. Some of these are rather small nations and their impact on the world economy is hence negligible - but others will have a huge impact on the world economy as they unite a large percentage of the world's population and show enormous growth rates. These are the so called "Emerging Giants" or "BRIC" countries.[51]

48 see: Prahalad 2005, p. 63
49 see: IMF [b]
50 see: IMF [a]
51 see: IMF [a]

"BRIC (Brazil, Russia, India, and China) are four countries whose economy is such that they may become among the four most dominant economies by the year 2050. The coalition would encompass over forty percent of the world's population and hold a combined GDP [PPP] of 12.14 trillion international dollars. On almost every scale, it would be the largest entity on the global stage." (source: Wikipedia [a])

An HSBC report proposes that it might be possible that in less than 40 years the four national economies of BRIC could be bigger than the ones of the G6 countries[52] (figure 15).

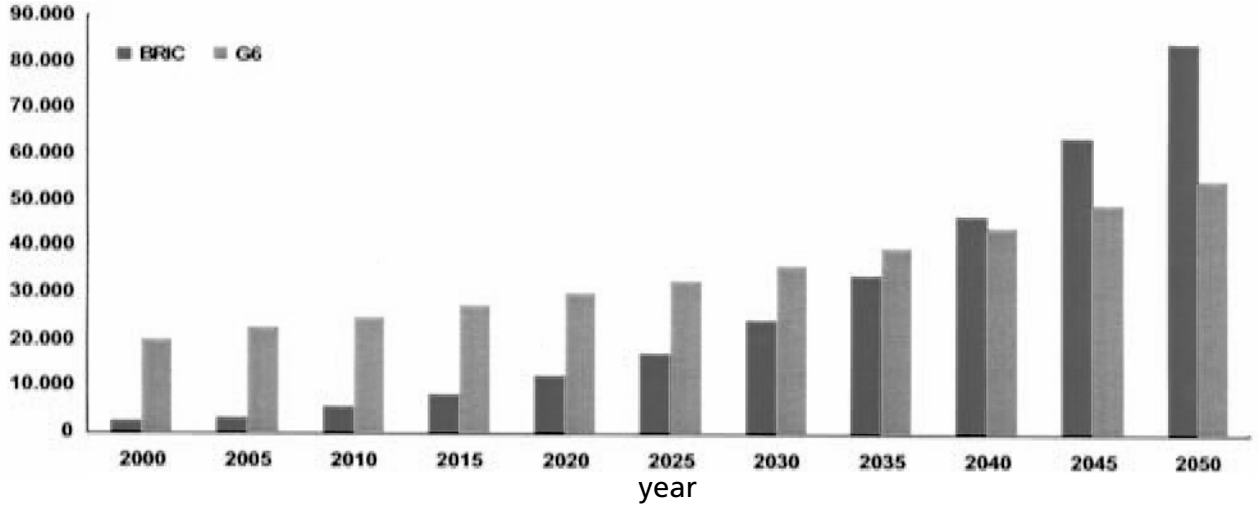


Figure 15: GDP forecast BRIC vs. G6; source: GS BRICs Model Projections

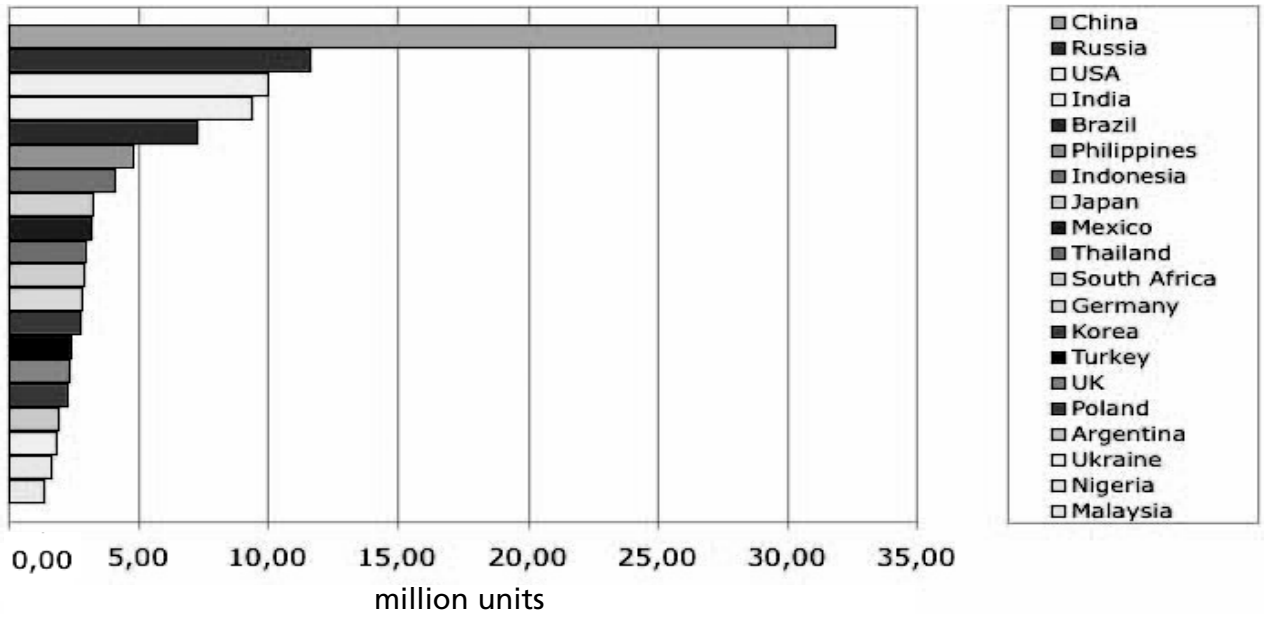


Figure 16: country-ranking of new subscriber sales; source: Prismark, 2005, p.4

52 The G6 countries are France, Germany, Italy, Japan, Great Britain and the U.S.

Figure 1 showed a plot of the subscriber penetration versus the Gross national Income (adjusted for purchasing price parity (ppp)) for 2003 for all of the more significant countries in the world. If we use estimate a minimum ICT spending of $5 per person, per month, there was an unfulfilled demand of 1.4 billion mobile phones in the world. Figure 16 shows that most of the new subscribers for the first half of 2004 already come from developing regions. If you have a close look at the figures, you will see that the BRIC nations significantly influence new subscriber sales. These four nations account for more than half of the volumes of the world's overall new subscribers and for two thirds of new subscribers of the developing regions.

Technological Situation

Ever since the invention of mobile communication, mobile handsets and networks have undergone a rapid technological evolution. Phones have become more and more technologically advanced, data connection speeds have increased and mobile handsets are no longer only telecommunication devices. The rapid growth of the semiconductor industry and the rapidly increasing subscriber base, have led to enormous price drops in the component costs of mobile phones and therefore to a prize drop of the phones themselves. This has led to a rapid saturation of developed markets and hence to a decreasing rate of new subscribers in these markets. Today we can observe two technological trends in the development of mobile handsets:

The first is continuous technological improvement. Never before have handset manufacturers been able to implement that sophisticated technologies into handsets. The second trend is an ongoing drop in component costs and therefore handsets - never before have handset manufacturers been able to offer handsets so cheaply.

Considering the identified trends above, OEMs will continue to differ from their competitors by implementing unique form factors or features which are supposed to make a phone "the only choice" in the eyes of the end customer. This strategy is supposed to motivate existing users to replace their phones. Furthermore, handset manufacturers will try to approach people worldwide who do not have a mobile handset yet. Companies analyzed the reasons for these market segments not having phones. In this context several market segments have been identified and targeted with new solutions (e.g. phones for older people, phones for kids), but one is especially important to consider: The millions of people who are simply not able to afford one.
To be able to reach this segment the most important variable to consider is the prize. The cheaper handsets get, the more new subscribers will purchase phones.

1.1.2. Structural Analysis of the Industry

In order ot identify the attractiveness of a market, Porter proposed his theory of the five forces.[53] The following section of this paper will identify and evaluate the attractiveness of the ULC branch using Porters' method. The five forces which will be assessed are: The threat of new entrants, the bargaining power of buyers as well as of suppliers, the threat of substitute products and the rivalry among existing customers. In order to scrutinize my own opinion, I questioned two of Infineon's marketing experts. I wanted them to rank the magnitude of each force on a scale from 1 to 10 with 1 meaning that the force does not have any impact.
The magnitude of the threat of new entrants, depends on some sub-factors which have to be assessed in order to being able to evaluate the overall level of threat. Economics of scale pose a major barrier. Especially in a segment which is so price sensitive and where price is the most important variable of selling a product, economics of scale are one major barrier for new entrants. Another market entry barrier is differentiation - can new competitors come up with unique products? As the ULC segment is a cost-driven market, the barrier of product differentiation is absolutely negligible. Large up-front investments which would be necessary to compete with existing companies pose another important barrier. Furthermore, new entrants would have to built up the necessary international sales infrastructure. The last important barrier which hampers new firms from entering this market is government policy. In some countries like Brazil, handset manufacturers have a tax advantage, if they produce the phone in the country. Many manufacturers therefore built factories in Brazil and assemble at least parts of the phone locally.

The two experts I interviewed ranked this force with 3 and 5. The given explanations included the high technological entry barriers and the lack of potential candidates which could enter the market. On the other hand, the level of the entry barrier concerning the necessary feature know how was ranked low, because only GSM technology is needed to compete in the segment. Concluding one might say that the threat of entry is rather negligible.

The answer to the question about the intensity of rivalry among existing competitors is not as clear as the magnitude of the threat of new competitors. Real differentiation is hardly possible and switching cost generally do not apply. As the ULC segment is one with promising growth rates, and large opportunities, firms will try to compete in the segment as long as possible. The fact that most of the new subscribers will at some time purchase replacement "next generation" ULC phones, intensifies competition as well as firms want to sensitise BOP customers for certain brands. On the other hand, the ULC segment is only one segment in the mobile handset industry, hence the strategic stakes of firms are rather small. Firms that cannot compete in this segment can concentrate on other segments. Exit barriers are rather small as well, as firms can always stop competing in the ULC segment as soon as they realize that the segment is not profitable.

53 see: Porter, 1998, p. 4

The two marketing experts that I quizzed, rated this force with 5 and 8. The given explanations were mostly about the fast repercussions of new movements and about the strong position of the OEMs. Therefore competition among existing customers can be considered to be moderate to high.

The threat of substitute products - especially in the ULC segment, where potential customers live in areas with low technical infrastructure and only a few have a land line connection, mobile communication is the only way for most people to get a telephone connection. A potential threat which can significantly reduce the attractiveness of the segment comes from the black market which accounts for almost 40 % of the handset sales in some developing countries. The two questioned specialists both ranked this force with 4. Recapitulating, one can say that the pressure from substitute products is not negligible, but strong evidence shows that the size of the black market is directly linked to the tax policy of the countries' governments. Therefore the degree of this force will shrink significantly once the policy reacts. The bargaining power of suppliers can be considered to be low as suppliers depend on Infineon and its competitors to get into the market. For the same reasons, this force was ranked 2 and 4 in the questionaire, which supports its negligibility.

The bargaining power of buyers - As buyers purchase high volumes and as the products are relatively undifferentiated this force has a highly negative impact on the attractiveness of the segment. Furthermore the switching costs are low. The questioned marketing experts ranked the bargaining power of buyers with 7 and 10. The reason for this ranking lies in the high volumes of the two big players Nokia and Motorola. They know that they are the big players and that their suppliers depend on them. The bargaining power of buyers is therefore the most important of Porter's forces in the ULC segment.
Concluding, one can say, that the ULC branch is a very attractive one, as only the bargaining power of buyers and partially the intensity of rivalry among existing firms products repress the attractiveness of the branch. In order to be able to create a defendable position against these two competitive forces, Infineon has to position itself in such a way that its capabilities provide the best defense against the existing array of competitive forces. Figure 17 graphically displays the current array of forces which surrounds Infineon in the ULC segment. The tonal value indicates to what extent the force influences the model.

1.1.3. Identification of Opportunities and Threats

The global opportunities are mainly characterized by a strong growth of the ULC segment in BOP markets. Within the BOP markets, the BRIC nations represent an enormous potential. The global threats are characterized by the strong global position of TI and the high level of insececurity about the future demands of consumers in BOP markets. The structural analysis of the ULC segment has shown that the segment is very attractive. The most eminent variable to success in the ULC segment are the major OEMs which hold a significant power.

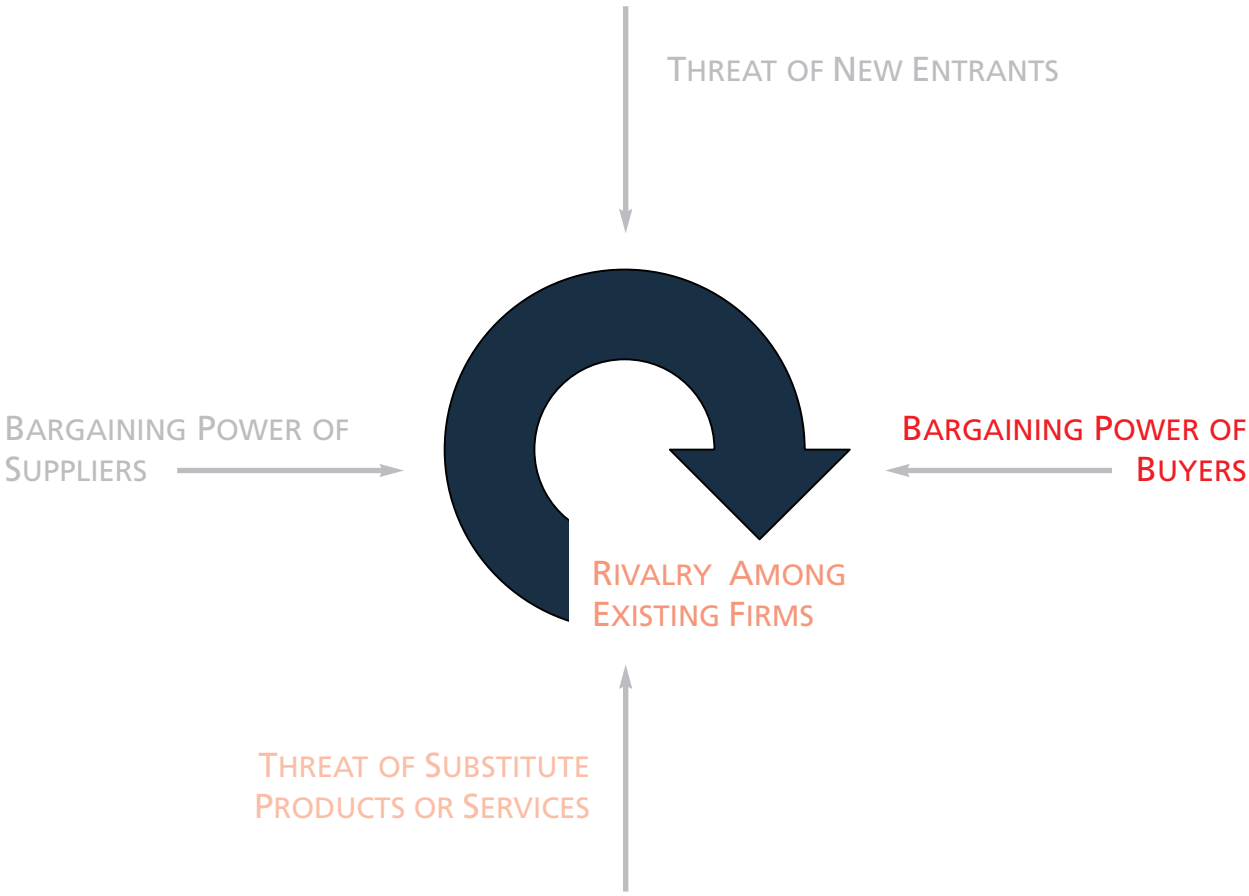


Figure 17: The intensity of Porters' five forces in the ULC segment

1.2. Formulation of Objectives

Out of the situation which was just outlined, one can see that there are obviously enormous business opportunities in developing regions of this world. Technical and process improvements today allow firms to approach these markets which enjoy rapidly growing economical power. Additionally, an ongoing deregulation in these markets creates a climate for healthy competition.

The potential of these markets was already discussed by C.K. Prahalad (2005). The wealth and income in the world can be graphically displayed in the form of a pyramid. At the top of the pyramid are the wealthy, with high levels of income. At the bottom, there are more than 4 billion people who live with less than $2 a day. These emerging markets have remained invisible for too long and the dominant assumption that the poor do not have money to spend and, therefore, are not a viable market is false. Certainly, the buying power for those earning less than $2 per day cannot be compared with the purchasing power of individuals in the developed world. However, by virtue of their numbers, the poor represent a significant latent purchasing power, that has to be unlocked.

Hence, the following part of this paper wants to provide a deeper understanding of the BOP markets. Furthermore, the needs and requirements for handsets for these markets shall be derived. As there is an obvious potential in the BRIC nations, the further analysis will focus on these markets.

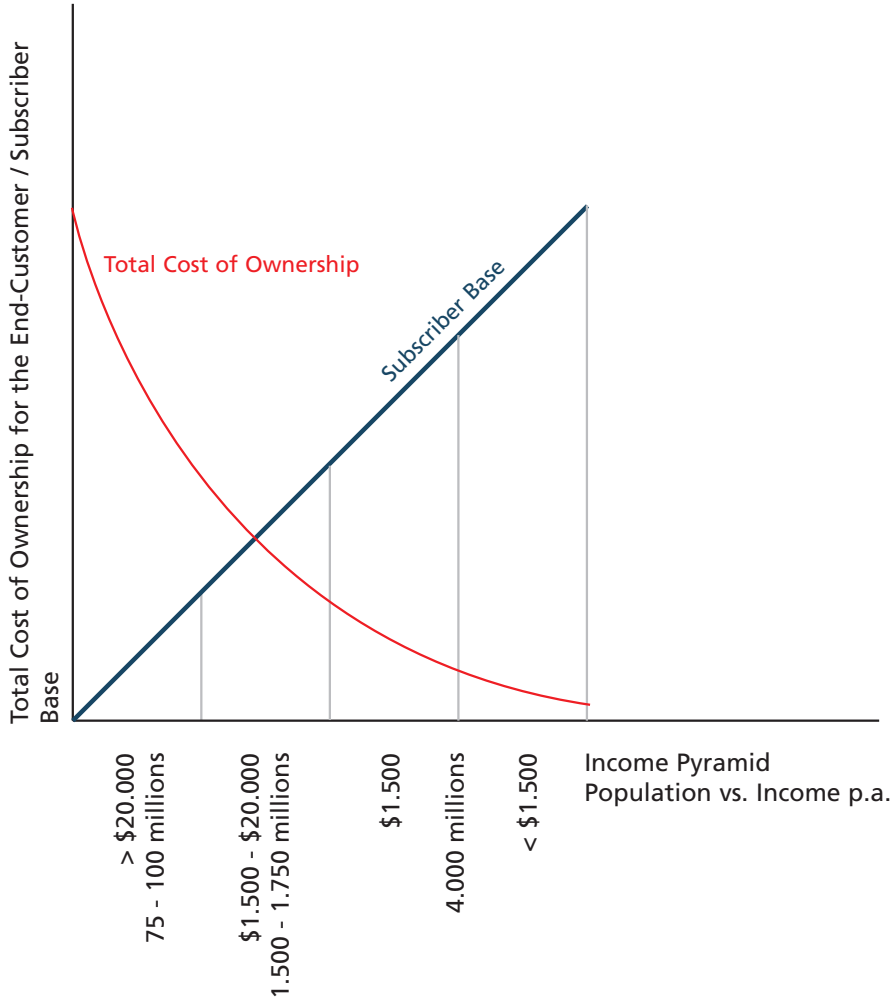


Figure 17: link between a reduction in cellular tariffs and the increase in subscriber base in BOP markets; source: own illustration

2. Description of Competitive Strategies for the ULC segment

As described in part A of this paper, Michael Porter suggests three basic competitive strategies a firm can use to outperform competitors: overall cost leadership, differentiation and focus. Economic evidence shows, that in BOP markets, the demand increases disproportionate to a decrease in price. Hence, in the ULC segment, overall cost leadership is the only reasonable strategy. Only firms which achieve the lowest possible cost position will be able to compete in this segment. Figure 18 shows the link between a reduction in cellular tariffs and the increase in subscriber base. The following example will underscore this observation:

In India mobile handsets used to cost $1000 a piece. Considering this price it is not a surprise that the market was quite limited. As the average price decreased to $300, sales started to increase. When Reliance (an Indian cell phone provider) offered a promotion that offered 100 free minutes for a mobile multimedia phone, with an up-front payment of only $10 and monthly payments of only $9.25 and additional services including news, games, audion clips of movies and favorite songs, the company retrieved 1,000,000 applications in 10 days.[54]

But the ULC segment requires more than just low prices. It requires the focus on price performance of products and services, and therefore a hybrid competitive strategy. As described at the very beginning of this paper, suppliers like Infineon have to focus on the needs of three different customer groups which are upstream in the value chain: handset manufacturers, operators, and end-customers. Hence, overall cost leadership is an obligation but the need to understand and to serve the needs of all customers which are upstream in the value chain is a necessity as well. This becomes especially crucial in this step, where a competitive strategy is about to be identified. The need for a new prize-performance envelope, includes the needs of all three groups. For the end-customer the total cost of ownership has to be as low as possible. This is of course not only dependant on Infineon's products, but on the products of mobile handset manufacturers and operators as well. For the operator, the right price-performance envelope includes the lowest possible handset price and the right feature set. In the case of an operator, the right feature set doesn't only include features which satisfy the end-customer, but also features like AMR[55]which reduce his total cost of operation. The next chapter will therefore provide a guideline for the successful development of mobile phones for the ULC market. The needs of the third customer group are the ones of the real customers to Infineon - the mobile handset manufacturers. These needs are not only feature and price related, but do also involve customer specific needs – as described in part A it might be necessary to offer a system of services.

2.1. Elaboration of the Special Requirements for Mobile Phones in BOP Markets

In recent years, many international firms have tried to approach emerging markets with their existing product portfolio. As these products have been priced and developed for western markets, they often quickly run out of potential customers in emerging markets. This is not only because they are simply too expensive, but the feature set is also inappropriate in many cases. Prahalad (2005, p. 25ff) identified some basic principles of innovation for emerging markets.

As BOP markets exist in many different countries and as most of these countries are large and cover multiple cultures and languages, solutions that are developed must be scalable and transportable. How does one take a solution from the southern part of India to the northern part? From Brazil to India or China? Solutions must therefore be designed for ease

54 see: Prahalad, 2005, p. 9
55 AMR - Adaptive Multirate Codec (A description of the technology can be found on page 51 of this paper)

of adaptation in similar BOP markets. This is a key consideration in order to gain economics of scale.

If one considers the BRIC nations as a focus group of international mobile handset manufaturers, this would mean that one creates a handset which fulfills as many of the needs of the different ethnic groups in these countries as possible, or can be easily adapted to do so. This becomes extremly crucial if one considers the variety of different languages and dialects within these groups. For a handset this could for example mean that as many languages as possible and as many customizations as possible should be preinstalled on the handset. If a manufacturer would only have to ship the phone to a location where it is needed without further processing it would save a significant part of the current costs. For the same reason it would also make sense not to include the charger into the sales package, as these are specific to the electric system in each country. Furthermore it would make sense to come up with an instruction manual which already includes most languages and dialects in emerging markets. As many potential ULC customers are illiterate, an alternative would be to provide a graphically illustrated instruction manual and user interface that can be understood intuitively. All these measures would lead to economics of scale and to a significant cost reduction.

Products for BOP markets have to work in hostile environments. Products have to endure noise, dust, unsanitary conditions, and the abuse for other purposes. Products must also be developed to accommodate the low quality of the infrastructure, such as electricity (e.g. wide fluctuations in voltage - sometimes between 90 and 350 volts, blackouts). This criteria is in fact one of the most crucial demands on ULC phones. The total cost of ownership on a monthly basis includes parts of the purchasing price of the phone. For example, if a ULC customer buys a basic phone for $36 and its estimated product life cycle is 2 years, the customer will pay $1,50 per month for the phone. As most ULC customers cannot afford much higher monthly shares, it would be fatal if a phone fails before it reaches the end of the two year cycle.

In addition, given the nature of the consumer population, research on interfaces is critical. The heterogenity of the consumer base in terms of language, culture, skill level, and prior familiarity with mobile devices poses a challenge to the innovation team. Most BOP customers are first time users and the learning curve cannot be long or arduous. As many potential ULC customers are illiterate and therefore can see and hear, but not read it might make sense to develop a graphical intuitive user interface (UI) which supports English as a preinstalled language. “EID Parry” an India firm which sells POS systems for grocery stores found that its customers even prefer an English-language interface to their PCs rather than the local language (Tamil) (Prahalad, 2005, p. 48). Additionally, such a measure would lower the necessary memory which needs to be implemented on the phone. Therefore it would directly and indirectly reduce the costs of the handset as the costs for memory would be lower and as less customisation would be needed.

Product development must include a deep understanding of the functionality. Marginal changes to products developed for the developed markets will not be sufficient. The infrastructure BOP consumers have to live and work in demands a rethinking of the functionality in order to ensure the lowest possible total cost of ownership. In this context it is important to understand what ULC customers will use their phones for. Will they only write messages, will they make phone calls, will they use online services, or will there even be a need for UMTS services. Indian housewives for example write in average 60 messages per day![56] The need to understand this, is not only crucial for serving the needs of end-customers, but also to reduce the operating costs of the networks. These costs vary in dependance on the used technology. An operator has to provide the necessary network capacity for data and voice streams. Some technologies for example AMR, can enhance this capacity. As all of these features already have to be implemented in the mobile handset, this becomes a crucial factor for handset manufacturers and their suppliers as well. The subsequent part of this chapter will introduce some technologies and services, which can reduce the total cost of ownership for the end-customer and can therefore increase the subscriber base.

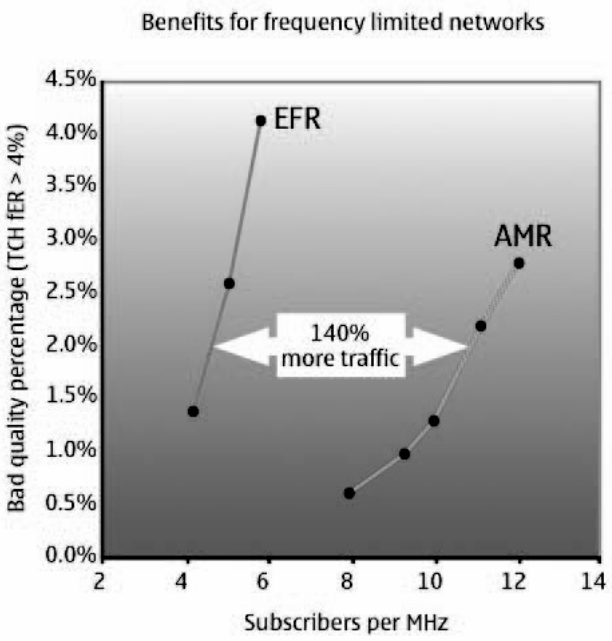


Figure 19: EFR calsl vs. AMR calls, Nokia, 2005[a]

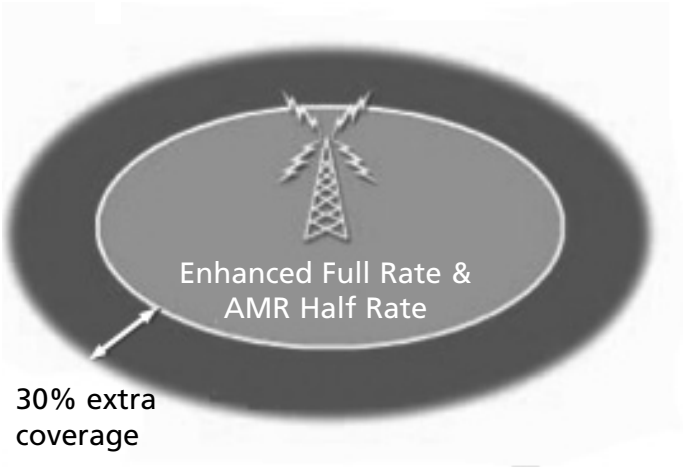


Figure 20: Extended coverage due to AMR, Nokia, 2005[a]

Adaptive Multirate Speech Codec - Operators with a growing subscriber base can face significant costs to expand their network's coverage in rural areas and increase capacity in urban settings to meet rising demand. By implementing the Adaptive Multirate (AMR) Codec, these GSM network improvements can be achieved quickly and with lower cost because no additional hardware investment is needed. AMR will cut future operating expenses by reducing the need to build new GSM base station sites. Operators currently using Enhanced Full Rate (EFR) coding can almost double their network voice capacity with AMR. This is because AMR Half

56 see: Prahalad, p. 43

Rate has roughly the same radio performance as EFR coding. The AMR Half Rate codec carries two calls on one time slot. The network dynamically chooses the AMR Full Rate or AMR Half Rate codec for each call. At high traffic loads the network uses AMR Half Rate extensively. When the network is less busy, it assigns AMR Full Rate coding to as many calls as possible, starting with those experiencing the poorest radio conditions. The superior radio performance of AMR Full Rate and AMR Half Rate results from a dynamic increase in error correction. In poor network conditions when high numbers of errors occur, more bits are used for error correction to obtain robust coding. Furthermore, AMR can cost-effectively extend mobile services into more distant rural areas to cover new subscribers. It increases the individual base station cell size by about 30%, reducing the amount of investment needed in infrastructure because fewer base stations can perform the same coverage. AMR can be quickly implemented in the network simply by updating the Base Station Subsystem (BSS) software, which costs significantly less than installing additional base station hardware to provide extra capacity.[57]

Expenditure per subscriber is estimated to be USD 20 lower over three years, which equates to a 30% cost saving.[58]

Push to Talk (PTT) enables to lower the total cost of ownership for price conscious customers. This is an effective strategy that network operators can employ for expanding their total customer base. PTT enables compatible mobile phones to function like two-way radios or 'walkie- talkies' in a 1-to-1 or 1-to-many group mode. It allows operators use of network capacity more efficiently because PTT is a data based service which needs far less network bandwidth than normal calls. Whereas in a circuit switched call the network capacity is used for the duration of the call, from connection attempt to hang-up, in a PoC call only the actual blocks of talk that comprise the conversation will result in load being placed on the network. Hence it can be priced lower than traditional voice calls. Therefore it can be attractive to end users, and will still be profitable to operators.[59]

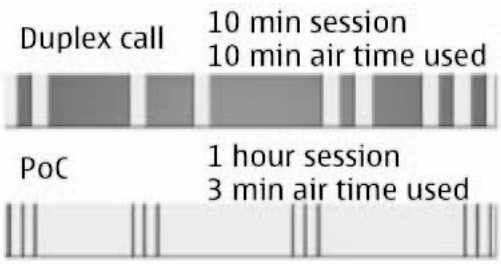


Figure 21: Used Network capacity Duplex Call vs. PoC, Nokia, 2005, p.2

As there is still no common standard for PTT and as the use of the service requires a better understanding of the handset, I don't think that PTT will enter the ULC segment. The fact that the implementation in the handset would increase the handset costs, underscores this assumption.

56 see: Nokia, 2005
57 Assumptions: Average ARPU of USD 5 per month 15mErl/subscriber operator with 15 MHz bandwidth and high traffic density per site assumed depreciation period of eight years for network equipment.
58 see: Nokia, 2005

EDGE / UMTS - The quality of infrastructure can vary substantially, especially within vast countries like Brazil, Russia, India or China and the rural poor therefore represent a very different customer group. For example, most of the rural markets are inaccessible to audio and television signals. In India for example 40% of the country are "media-dark". The ability to download movie and audio clips on wireless devises might allow firms to access these traditionally "media-dark" areas and provide customers in these locations with access to information. Hence, customers and operators could see 3G as a viable alternative. In my opinion, 3G might have an impact in some of these areas, but not in the ULC segment. The price of the phone and the services remain out of reach for BOP consumers.

Furthermore there are some applications which can help to continuously decrease total cost of ownership of mobile phones and can therefore increase the subscriber base. Out of the applications described below, the balance check is the only one which needs to be implemented in the handset software. All other applications are purely network based:
Network based Refilling - To convert poor people into consumers, a capacity to consume has to be created. A rapidly evolving approach which is already used by many consumer goods manufacturers is to offer small and therefore affordable unit packages. In developed countries people tend to buy large bottles of shampoo to avoid the need of returning to the shop anon. In emerging BOP markets, the people often have unpredictable income streams and tend to spend the money they have as cash in their pocket. Network based refilling requires no paper scratchcards, which means no need for paper, printing and the other associated logistical costs. It also requires less management and simplifies the process, so commissions to resellers are lower. Therefore the minimum top-up sum can be reduced within the reach of people with short personal economy cycles.

Balance Check - Poor people like to be in control of their spendings. A system which allows these people to immediatly see the costs of their last call and their current account balance would help. This would also enable phone users to rent their phone to others who can then pay the used amount plus an eventual surcharge in cash. Nokia has already implemented a system like this: the „Nokia pre-paid tracker".

Balance Transfer - This is an important means to encourage poor people to becoming entrepreneurs themselfes. In the rural areas of many poor countries a lot of people don't have a bank account and hence are not able to benefit from cheap small amount network refilling. If an operator provides the ability for users to easily transfer money from one phone to another it would open up new business opportunities for people in these regions, as users could sell minutes cash to other users.

SMS Customer Care - Customer care is one of the major cost factors for an operator. Today many operators therefore started charging money from customers who want to benefit from personal customer care. Customers who are not willing to spend extra money on customer care, have to use internet or e-mail to communicate with the operator. As in BOP

markets, most customers won't have access to the internet, one possibility would be to allow customers to send free messages to the operator which contain a short description of the problem. The operator could then either answer per text message or just call back in order to discuss further steps.

2.2. Conclusion - Competitive Advantages in the ULC Segment

As one can see, cost leadership is a necessity in the ULC segment and the big players do not differ a lot in terms of prices. To gain a competitve advantage in the ULC segment firms need to find a way to differentiate itself from its competitors. One good way of differing from competitors would be a new and more flexible battery solution. A handset which uses standard primary cells or standard rechargable batteries would have some significant advantages for the ULC customers. Fistly it would reduce the handset price as these batteries are cheaper than the normal accu packs. Secondly it would reduce the need of service as these batteries are easily and inexpensively replaceable. A third advantage would be that the sales package would not necessarily need to include a charger, as primary cells can be replaced and standard rechargable batteries can be externally recharged. One cannot really say that this is an CCA as it is not sustainable, but it would help to convince cust mers of ULC1 as a thought-out solution. Figure 22 graphically displays the different possibilities such a battery solution would offer.

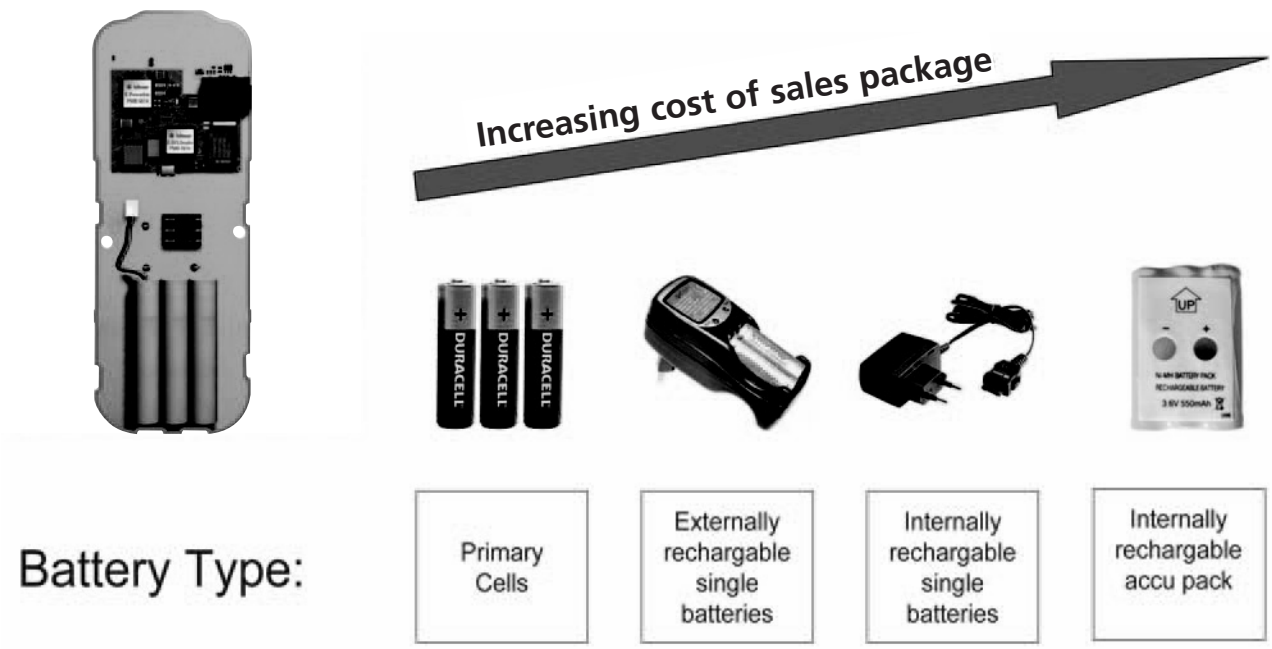


Figure 22: Flexible Battery Concept for BOP Markets, source: own illustration

3. In Depth Analysis of promising Markets

The analysis of the global industry environment showed that a significant portion of 80 percent of the word's new subscribers come from emerging markets. Four of these nations, BRIC, account for 40 percent of the worlds population, 50 percent of all worldwide new subscribers, and two thirds of the new subscriber sales in emerging markets. Therefore, the following part of this paper will give a short overview of the situation in these markets and an estimation of their future potential.

3.1. Analyses of key indicators of Brazil

Official language	Portuguese
Capital	Brasília
Largest city	São Paulo
Government	Democratic federal republic
President	Luiz Inácio Lula da Silva
Vice President	José Alencar
Area	8,511,965 sq km (5th)
Population	186,112,794 (5th)
Density	22/km (150th)
Independence	from Portugal
Declared:	September 7, 1822
Recognized:	August 29, 1825
GDP (2004)	$1.553 trillion (PPP) (10th)
GDP/head	$8,344 (PPP) (88th)
Currency	Real (R$ BRL)

Political Situation

On September 7th 1822, emperor Pedro I declared Brazil's independence. After Pedro II abdicted in 1889, in consequence of a military revolt, the country was governed by a military dictator. From then on, the country's political system constantly switched between short returns to a republic and longer phases of military dictatorships. In 1985, the first civilian president since 1964 was elected. Ever since then, the Brazilian political system became more stable. On January 1st of 2003, Lula da Silva started his presidency and is still in office today.[26]

The 1988 constitution grants broad powers to the federal government, of which the President and Vice-President are elected on the same ticket by popular vote for four-year terms. The President has extensive executive powers: he appoints the Cabinet, and he is also both head of state and head of government.[60]

60 see: Nationmaster, 2005[c]

Economic Situation

Possessing large and well-developed agricultural, mining, manufacturing, and service sectors, as well as a large labor pool, Brazil's GDP(PPP) outweighs that of any other Latin American country and the economy is expanding its presence in world markets. Major export products include coffee, soybeans, iron ore, orange juice, steel and airplanes. After crafting a fiscal adjustment program and pledging progress on structural reform, Brazil received a USD 41.5 billion IMF-led international support program in November 1998. In January 1999, the Brazilian Central Bank announced that the Real would no longer be pegged to the US dollar. This devaluation helped moderate the downturn in economic growth in 1999 that investors had expressed concerns about over the summer of 1998, and the country posted moderate GDP growth. Economic growth slowed considerably in 2001 — to less than 2% — because of a slowdown in major markets, the hiking of interest rates by the Central Bank to combat inflationary pressures, and fears over the economic policies of the new government to be elected. Investor confidence was strong at the end of 2001, in part because of the strong recovery in the trade balance. Highly unequal income distribution remains a pressing problem. After Luiz Inácio Lula da Silva inauguration on 1 January 2003, there was some fear that his party radicals might provoke an economic aboutface and Brazil would undergo a financial crisis. However, Brazilian economy seems to have detached itself from politics and after a GDP decrease of 0.2% in 2003, Brazil has enjoyed a robust growth in 2004 and prospects for 2005 also indicate significant growth.[61]

Sociological Situation

Brazil is populous along the coast, less in the interior. 81 percent of the Brazilian population live in cities. The inhabitants are very diverse with many races and cultures represented. The population of the southern states are mainly of European descent, tracing their roots back to the 19th century immigrants from Italy, Germany, Poland, Spain, Ukraine and Portugal. On the other hand, the majority of the north and northeastern inhabitants are of mixed ancestry (Natives, Africans and Europeans).[62]

Age Distribution:	0 to 14	26.1 %	134 of 227
	15 to 64	67.9 %	54 of 227
	64 +	6 %	108 of 227

Biggest Cities:	Sao Paolo:	20.000.000
	Rio de Janeiro:	12.000.000
	Belo Horizonte:	5.500.000
	Porto Alegre:	4.000.000
	Recife:	4.000.000

61 see: Wold Fact Book, 2005[d]
62 see: Nationmaster, 2005[c]

Telecommunication Market Overview Brazil

The Brazilian telecommunication market benefited from high levels of investment through the 1970s. Prior to 1972, there were more than 900 telecommunications companies operating in the country. As a result of these investments, the sector experienced notable levels of growth. By 1975, Telebras and its operating subsidiaries had acquired most of these 900 companies, which gave Telebras a monopoly in the Brazilian telecommunication market. This situation led to a poor quality of service and high calling rates. In the 1980s, the economic crises forced the Brazilian government to reallocate resources from telecommunication sector to more urgent sectors like health and education.
As the situation didn't change until the 1990s and as the quality of service was still poor, the government decided to privatize the telecommunications sector. In 1995, the Brazilian government started to reform the country's regulatory system which led to the "General Telecommunications Law" in 1997. This law paved the way for competition and for the privatization of the Telebras. To guide the process of privatization and to ensure fair competition, the Agencia National de Telecomunicacioned (Aantel) was founded. Anatels' main priority was the partition of the Telebras Systems into three specific areas to facilitate the subsequent privatisation of these companies. Furthermore, competition was to be introduced by auctioning mirror licences for each of these operations. In June 1997, the liberalization process started by placing for auction 10 B band licences. One year later Anatel auctioned 10 more A Band licences for each of these regions and therefore ensured a healthy competition. Economic challenges delayed the auction of 9 more D and E Band licences to 2002. By the end of 2002 the privatisation process of the Brazilian telecommunication market was over. Today there are no more geographic or service restrictions in Brazil. However, a tax report from the GSMA finds that Brazil has the third highest tax burden on the total cost of ownership of a mobile handset in the world. In Brazil, taxes represent almost 30% of the total cost of ownership of a mobile handset. About 85 percent of these taxes are collected from recurring mobile services. The balances are generated from taxes on handset sales.[28] This high level of taxes restricts mobile development significantly.[63]

Mobile Operators

Today only four operators share 91,5% market share in the overall market: VIVO, Claro, TIM and OI. Out of these four, TIM (Telecom Italia Mobile) is the only international operator who deploys GSM technology[64] and the only one which provides nationwide services in all 10 areas. Although TIM claims to reach all areas in Brazil, reports indicate that the network coverage of TIM could still be improved.[65]

63 see: Gartner[a], 2005
64 see: Stratety Analytics[a], 2004
65 The spanish operator Telefonoca acts through VIVO, but only deploys TDMA networks

Potential

With a population of about 180 million people, the size of the United States and a penetration rate of still only 34%, the Brazilian mobile phone market offers a huge potential for rapid growth.In the years from 1998 until now, the Brazilian Market grew from 5.2 million subscribers to 25 million subscribers in 2001 and was therefore one of the fastest growing markets in the world. Projections for 2005 are 58-65 million users.[66]

Figure 23 shows that the overall handset market potential is estimated to be 120 million units over the next 5 years which would on average account for 24 million units per year. The unequal distribution of income will especially drive the Ultra Low Cost segment. This is also supported by the fact that 80% of all mobile phones are already sold in pre-paid pakkages. If one divides the average Brazilian population in 10 income deciles one can calculate the average monthly spending on telecommunication of each decile. These are presented in figure 24.

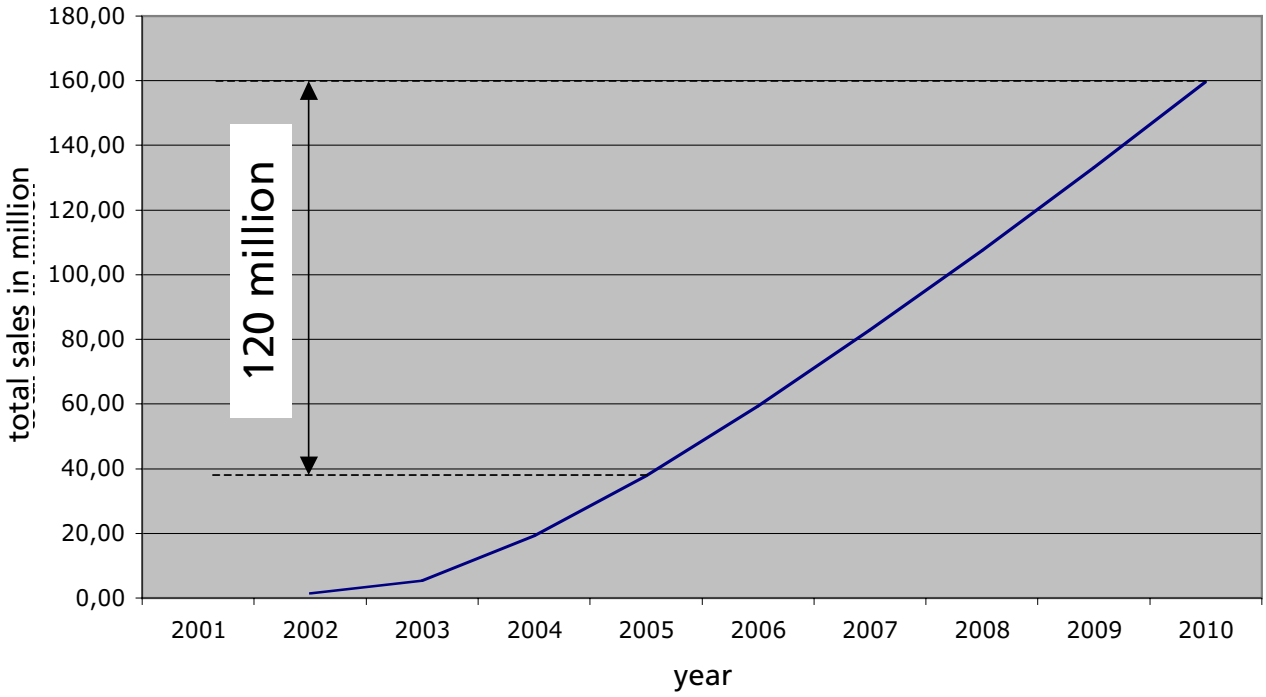


Figure 23: Accumulated total sales in Brazil, source: own illustration, data: based on Strategy Analytics, 2005[c]

One can assume that the sort of mobile device people are interested in strongly correlates to the decile they belong to. If one assumes that the purchasing price for a ULC phone varies from $30 to $50 US and that more expensive phones can already be considered to be entry phones, one can now establish boarders which restrict the potental buyers of ULC phones to a ceratin amount of monthly telecommunications spendings. If a ULC phone for example

66 see: Strategy Analytics[c], 2005

costs $36 US and has an expected product life cycle of two years, this would mean that the customer needed to spend an average $1.50 US per month on the phone. If one then assumes, that the operator needs about $3.50 US turnover per custoner, this would exclude everyone with a monthly disposable ICT spending of less than $5 US. As a borderline to the entry segment, I chose a monthly disposable spending of $12 US. I therfore assumed the costs of an average entry -phone to be about $60 US. This would correspond to a monthly payment of $2.50 US. As Entry phones already have a camera and internet features, one can also assume that the average monthly spending on data services will be about three times higher.

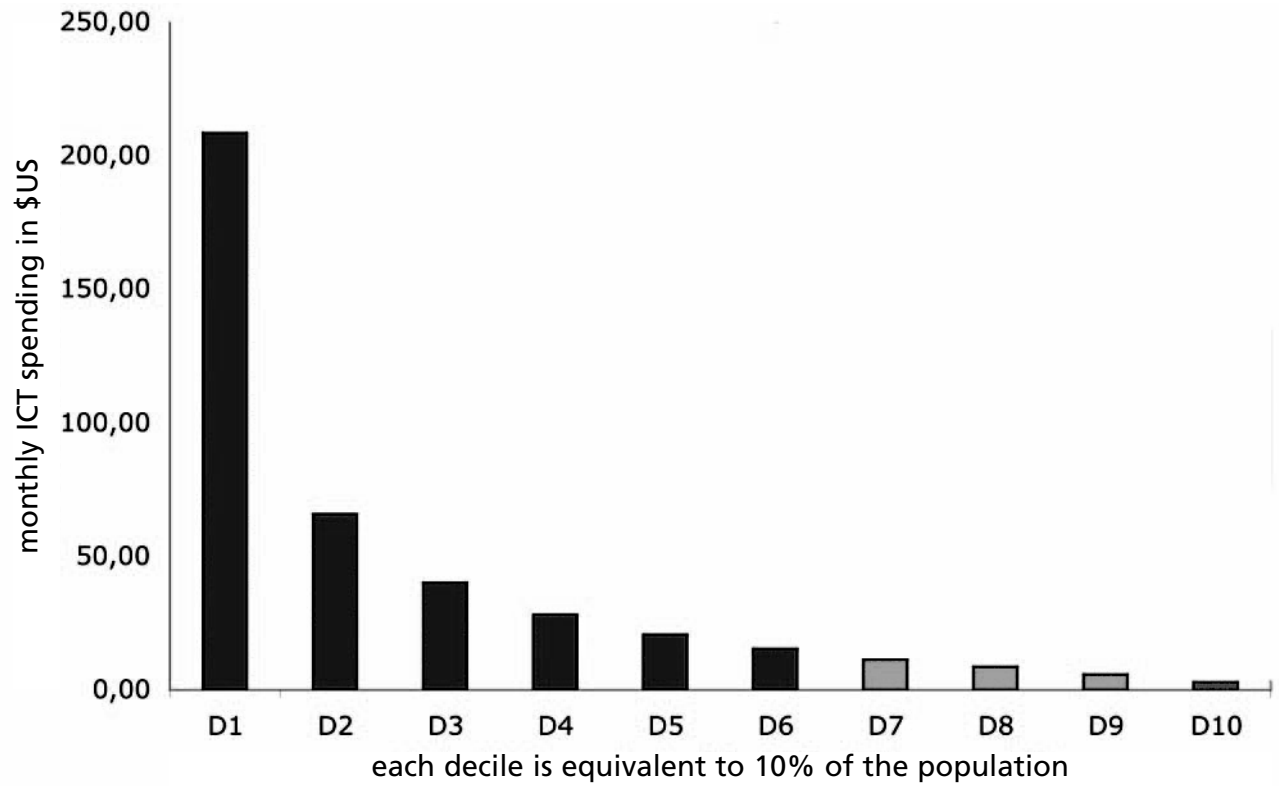


Figure 24: Average monthly ITC spending in Brazil, in dependance on the income segment, source: own illustration, data based on Strategy Analytics, 2005[c]

Starting from these assumptions about 30 percent of the Brazilian population would be potential customers for the ULC segment. This would correspond to about 30 million ULC handsets in the next 5 years, or an average of 6 million per year.

Strengths:

- Infineon has an own sales office in Sao Paulo
- Inequal distribution of income supports the strong demand for ULC phones
- Portuguese is the only official language which facilitates customisation
- Large percentage of people living in cities, and therefore within reach of good social and technical infrastructure facilitates the approach of customers with existing business models
- TIM, a European operator has a strong position in the market
- Independent regulator (ANATEL)
- Strong presence of local and international handset manufacturers
- Strong TGC

Weaknesses:

- In Brazil, taxes represent almost 30% of the total cost of ownership of a mobile hand set. This is the third highest value in the world and therefore restricts mobile development significantly.

3.2. Analysis of key Indicators of Russia

Capital	Moscow
Largest city	Moscow
Official languages	Russian, many others in component republics
Government	Semi-presidential federation
Prime Minister	Vladimir Putin
Independence	From the Soviet Union June 12, 1990
Area	17,075,200 sqkm (1st)
Population	143,420,309 (8th)
Density	8/km (178th)
GDP (PPP)	$1.486 trillion (9th)
GDP/head	$11,209 (61st)
Currency	Ruble (RUB)

Political Situation

Since gaining its independence with the collapse of the Soviet Union at the end of 1991, Russia has faced serious challenges in its efforts to forge a political system to follow nearly seventy-five years of Soviet rule. For instance, leading figures in the legislative and executive branches have put forth opposing views of Russia's political direction and the governmental instruments that should be used to follow it. That conflict reached a climax in

September and October 1993, when President Boris Yeltsin used military force to dissolve the parliament and called for new legislative elections. This event marked the end of Russia's first constitutional period, which was defined by the much-amended constitution adopted by the Russian Republic in 1978. A new constitution, creating a strong presidency, was approved by referendum in December 1993. With a new constitution and a new parliament representing diverse parties and factions, Russia's political structure subsequently showed signs of stabilization. However, executive and legislative branch continue to represent fundamentally opposing visions of Russia's future. The next elections are to be held in winter 2007/2008.[67]

Economical Situation

The rise of China has had much to do with the turnaround in the Russian economy. After the collapse of the Soviet Union, Russia has become a large commodity exporter. The sharp increase in demand in commodities in China had led to strong growth in this segment. Since Oil, Gas and Timber are fungible commodities, the increase in demand by China increases the price that Russia receives regardless of whether they sell it to China or Germany. Russia has also benefited in that the one area of industrial production where it has had an edge, military production is heavily demanded by China in its showdown with the U.S. and since other European nations and America are unwilling to sell to China, Russia has an effective monopoly on the Chinese arms market. It is worth noting that the Russian economy in the last five years has been growing faster than any other in the developed world.

This recovery, along with a renewed government effort in 2000 and 2001 to advance lagging structural reforms, has raised business and investor confidence over Russia's prospects in its second decade of transition. Russia remains heavily dependent on exports of commodities, particularly oil, natural gas, metals, and timber, which account for over 80% of exports, leaving the country vulnerable to swings in world prices. In recent years, however, the economy has also been driven by growing internal consumer demand that has increased by over 12% annually in 2000-2004, showing the strengthening of its own internal market. The country's GDP shot up to reach $1.5 trillion US in 2004, making it the eleventh largest economy in the world and the fifth largest in Europe. If the current growth rate is sustained, the country is expected to become the second largest European economy after Germany and the sixth largest in the world within a few years.[68]

Sociological Situation

Despite its comparatively very high population, Russia has a low average population density due to its enormous size. Its population is densest in the European part of Russia, in the Ural Mountains area, and in the south-eastern part of Siberia that meets the Pacific Ocean,

67 see: Nationmaster, 2005[d]
68 see: Wold Fact Book, 2005[b]

known as the Russian Far East. The Russian Federation is home to as many as 160 different ethnic groups and indigenous peoples.
The Russian language is the only official state language, but the individual republics have often made their native language co-official next to Russian. Cyrillic alphabet is the only official script, which means that these languages must be written in Cyrillic in official texts. Russia has a very inequal age distribution which will leads to an increasing average age in Russia. As a long term effect, it will lead to a decline of the total population in Russia and therefore to a decline in the handset subscriber base.[69]

Age Structure:	0 to 14	14.6 %	218 of 227
	15 to 64	71.3 %	10 of 227
	65 +	14.2%	38 of 227

Russias' biggest Cities are:

Moscow	9.500000 inhabitants
St. Petersberg	5.100000 inhabitants
Novosibirsk	1.400000 inhabitants
Novgorod	1.400000 inhabitants
Yekaterinburg	1.310000 inhabitants

Russia's Mobile Phone Market

The Russian mobile market is one of the fastest growing markets in Eastern Europe, demonstrating explosive growth over the last five years helped by the introduction of pre-paid services which account for 93 percent of all handset sales. By the end of 2003 there were more than 36 million mobile subscribers, a 35-fold increase since 1999. However unlike its European peers, mobile networks have not come to dominate the market. The tax on mobile communication is slightly above the average of emerging markets. In combination with the inability of enforcement of the Russian system and corruption, this leads to a significant handset sales through black markets.

Commercial mobile services have been available in Russia since 1992, when Moscow Cellular Telecoms deployed its Nordic Mobile Telephone (NMT)-based system. Although the NMT standard provides good coverage over long distances and can be deployed relatively inexpensively with fewer base stations, GSM has become more prevalent due to its greater ability to support roaming not just in Russia but also with its key trading partners in western and eastern Europe. As a result NMT and CDMA have become largely marginalized. All "Big 3" operators use GSM as standard technology for their networks.[70]

69 see: Nationmaster, 2005[d]
70 see: Gartner[b] ,2004; Business Monitor Online, 2005

Unlike other European markets, the Russian market did not feature a national operator from the beginning. Instead, license authorities granted each of Russia's 89 administrative regions two or three licenses. As a result, several hundred cellular networks were built, and as a consequence, coverage and penetration of mobile services vary considerably across the country. Moscow and St. Petersburg are the country's largest cities and generate the major share of the country's mobile services revenue. As growth has slowed in these markets, operators focuses have turned towards regional areas to develop strong brand names, increase their market share and exploit economies of scale. [71]

Mobile Operators

Seven distinct mobile groups have emerged from the rapid consolidation of the Russian mobile market. The "Big 3" operators, Mobile TeleSystems (MTS), VimpelCom and MegaFon, dominate the market with over 85% market share. The rest of the Russian market remains fragmented. The German Operator T-Mobile owns 25.1 % of MTS.
It is likely that the Big three operators with their frenzied pace of merger and acquisition will continue to consolidate the market. However, there is some uncertainty among the key stakeholders of the Russian mobile market. A number of significant stakeholders have emerged with considerable overlap in their stakes including AFK Sistema and Alpha Group. Alpha Group owns stakes in Russia's second and third largest mobile networks, MegaFon and VimpelCom, following the company's decision to acquire 25% stake in the former year. As a result, this has fueled speculation of a possible merger between MegaFon and VimpelCom. A possible merger of the two companies could emerge as a much stronger competitor to the dominant player MTS. [72]

Potential of the Russian Mobile Phone Market

Russia has the largest size of all countries in the world. With a population of about 140 million people the Russian mobile phone market offers a huge potential. Despite the high penetration rate of currently 57.6 percent, and the fact that Russia has one of the largest black markets in the world, the Russian market still has the potential for a healthy growth.[31]

Starting from the same assumptions as in Brazil, figure 26 shows that about 20 percent of the Russian population would be potential customers for the ULC segment. Assuming an overall market potential of 220 million handsets (figure 25) in the next five years, this would correspond to about 44 million ULC handsets or an average of 8.8 million ULC handsets per year. [73]

71 see: Gartner[b] ,2004; Business Monitor Online, 2005
72 see: Gartner[b] ,2004; Business Monitor Online, 2005
73 see: Wold Fact Book, 2005[b]; Strategy Analytics[c], 2005

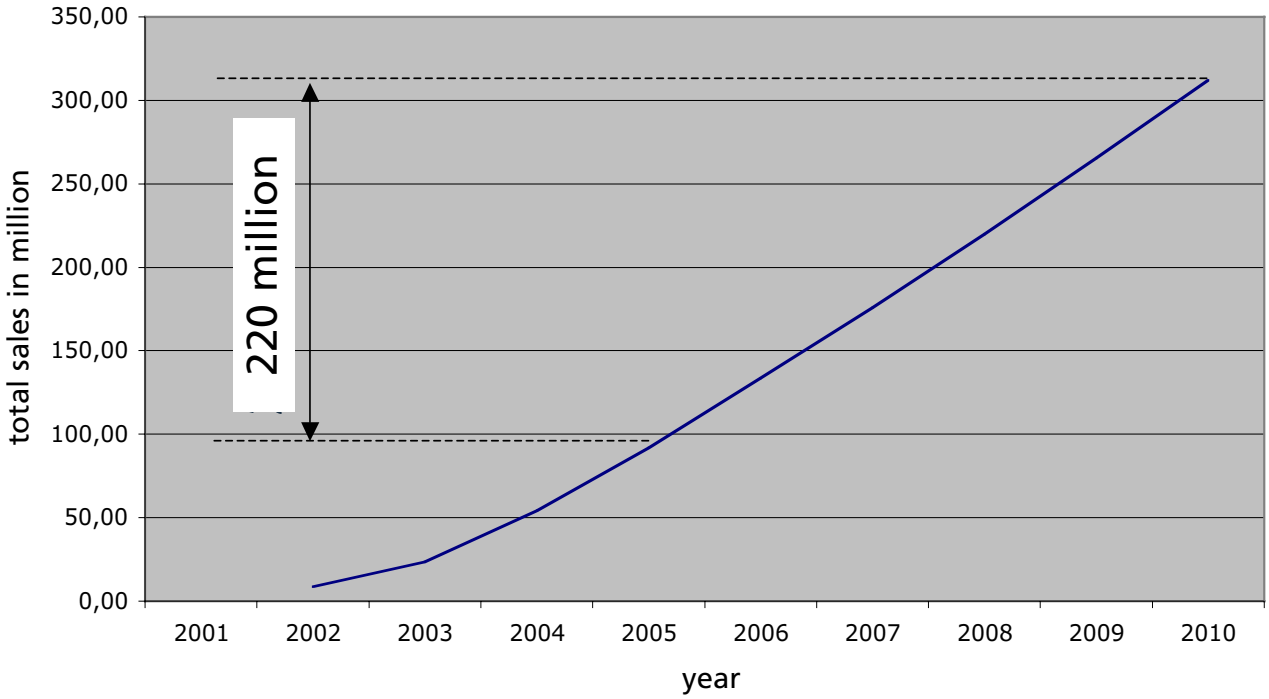


Figure 25: Accumulated total sales in Russia, source: own illustration, data: based on Strategy Analytics, 2005[c]

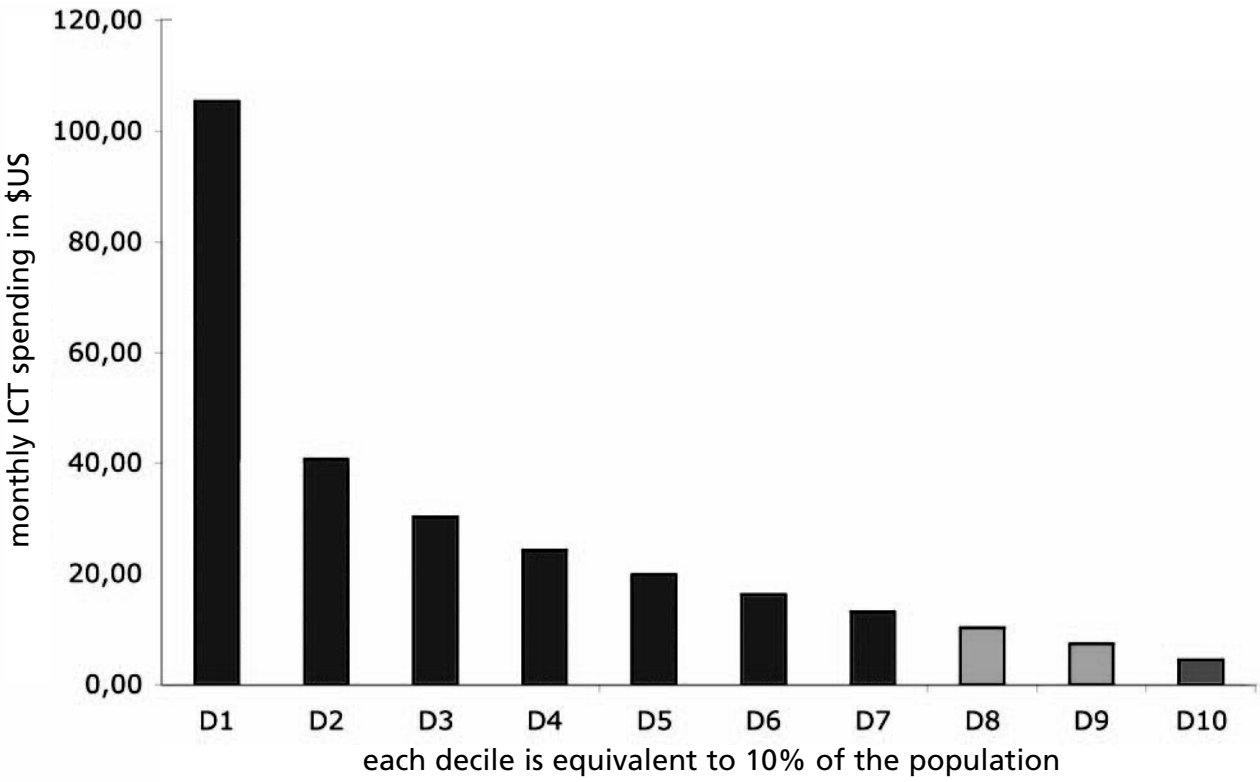


Figure 26: Average monthly ITC spending in Russia, in dependance on the income segment, source: own illustration, data based on Strategy Analytics, 2005[c]

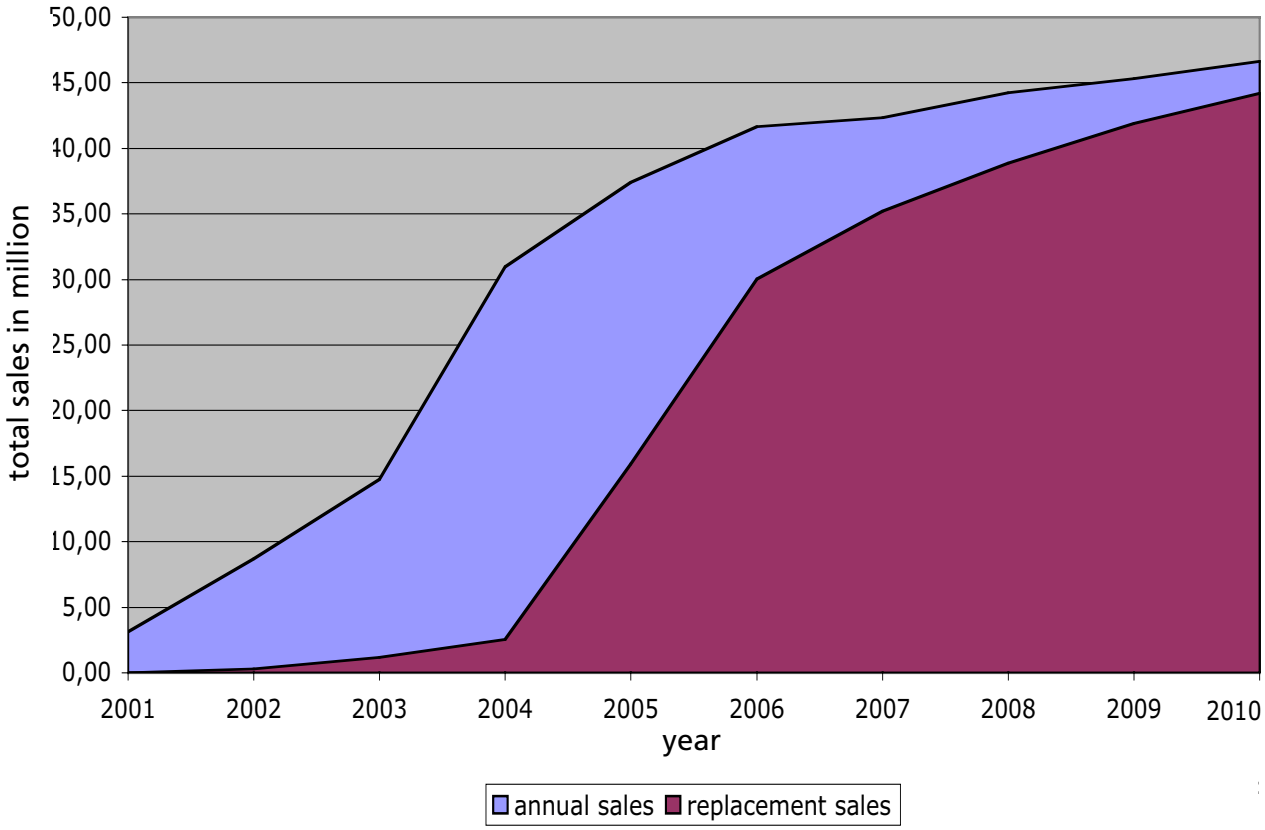


Figure 27: New subscriber sales and replacement sales as part of the total sales per year, own illustration, data: Strategy Analytics[c], 2005

Strengths

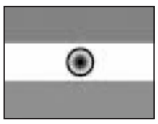
- All major operators use GSM as their standard technology
- T-Mobile holds 25.1% share at the biggest Russian operator which could facilitate a collaboration.
- Due to its overall market potential, Russia has a strong potential for ULC phones as well.
- Strong currency value development

Weaknesses

- Many rural areas in Russia have no mobile telephone services yet
- High penetration rate of currently 57.6% will leads to a decline of new subscriptions and to a boost in replacement demand - these replacement sales will soon amplify the need for advanced ULC phones (figure 27)
- Corruption and a large black market repress the opportunities of the market
- No considerable local presence of eiter international or national handset manufacturers
- High average age of the population
- Weak TGC

3.3. Analyses of key Indicators of India

Macroeconomic Data:



Capital:	New Delhi
Largest city	Mumbai (Bombay)
Official languages	Hindi, English, and 21 other languages
Government	Federal republic
President	APJ Abdul Kalam
Prime Minister	Manmohan Singh
Independence	from The United Kingdom
Declared	15.8.1947
Republic	26.1.1950
Area	3,287,590 sqkm (7th)
Population	1,080,264,388 (2nd)
Density	329/km (31st)
GDP (PPP)	$3.602 trillion (4th)
Per capita	$3262 (125th)
Currency	Rupee

Political Situation

According to its constitution, India is a sovereign, socialist, secular, democratic republic with a bicameral parliament operating under a Westminster-style parliamentary system. It has a three branch system of governance consisting of the legislature, executive and judiciary. The President and Vice-President are elected indirectly by an electoral college for five-year terms. The Prime Minister is the head of government and most executive powers are vested in this office. [74]

For most of its independent history, India's national government has been controlled by the Indian National Congress Party. Following its position as the largest political organisation in pre-independence India, Congress, usually led by a member of the Nehru-Gandhi family, dominated national politics for over forty years. In 1977, a united opposition, under the banner of the Janata Party, won the election and formed a non-Congress government for a short period after the unpopular 'emergency rule' imposed by Indira Gandhi in the previous Congress regime. In 1996, the Bharatiya Janata Party (BJP), a political party with a right wing nationalist ideology, became the largest single party, and established for the first time a serious opposition to the largely centre-left Congress. But power was held by two successive coalition governments, who stayed on with the support of the Congress. In 1998, the BJP formed the National Democratic Alliance (NDA) along with smaller parties and became

74 see: Nationmaster, 2005[a]

the first non-Congress government to sustain the full five year term after it returned to power in 1999. The decade prior to 1999 was marked by short-lasting governments, with seven separate governments formed within that period. One however, a Congress government formed in 1991, lasted the full five years and initiated significant economic reforms.
In the 2004 Indian elections the Congress party returned to power after winning the largest number of seats, by a narrow margin. Congress formed a government in alliance with the Communist Party of India (Marxist) and with several mostly-regional parties called the United Progressive Alliance.[75]

Today, increasing corruption poses one of the most eminent threats to the political stability in India.[76]

Economical Situation

India has an economy ranked as the tenth largest in the world in terms of currency conversion and fourth largest in terms of purchasing power parity. It recorded one of the fastest annual growth rates of around eight percent in 2003. Owing to its large population, however, India's per-capita income by purchasing power parity works out to be just US$ 3,262, ranked 125th by the World Bank. India's foreign exchange reserves amount to over US$ 143 billion. Mumbai serves as the nation's financial capital and is also home to both the headquarters of the Reserve Bank of India and the pre-eminent Bombay Stock Exchange. While a quarter of Indians still live below the poverty line, a large middle class has now emerged along with the rapid growth of the IT industry.
The Indian economy has shed much of its historical dependence on agriculture, which now contributes to less than 25 percent of GDP. Other important industries are mining, petroleum, diamond polishing, films, textiles, information technology services, and handicrafts. Most of India's industrial regions are centered around major cities. In recent years, India has emerged as one of the largest players in software and business process outsourcing services, with revenues of US$ 17.2 billion in 2004-2005. There are also a lot of small-scale industries that provide steady employment to many of its citizens in small towns and villages. India's main exports items include agricultural products, textile goods, gems and jewellery, software services and technology, engineering goods, chemicals and leather products while its main import commodities are crude oil, machinery, gems, fertiliser, chemicals. For the year 2004, India's total exports stood at US$ 69.18 billion while the imports were worth US $89.33 billion.[77]

75 see: Wold Fact Book, 2005[c]
76 see: Nationmaster, 2005[a]
77 see: Nationmaster, 2005[a]

Sociological Situation

Although India occupies only 2.4% of the world's land area, it unites over 15% of the world's population. Almost 40% of Indians are younger than 15 years of age. More than 70% of the people live in more than 550,000 villages, and the remainder in more than 200 towns and cities.

Age Distribution:	0 to 14	31.2 %	97 of 227
	15 to 64	63.9 %	126 of 227
	65 +	4.9 %	129 of 227

Indias biggest Cities are:

Mumbai (formerly Bombay)	12.700000 inhabitants
Dhelio	13.800000 inhabitants
Chennai (formerly Madras)	6.700000 inhabitants
Kolkata	4.500000 inhabitants

English enjoys associate status but is the most important language for national, political, and commercial communication, Hindi is the primary Official language of the Indian government and primary tongue of 30% of the people. Among the other major languages, Telugu (second highest spoken language in India), Bengali, Gujarati, Marathi and Tamil all have about 50 million or more speakers within the boundaries of India (with more living in other countries). There are 22 languages recognized by the Indian Constitution.[78]

India's mobile phone market

Cellular services were originally introduced on a duopoly basis throughout India in 1994, whereby two licenses were offered in each of India's four major cities (Delhi, Mumbai, Kolkata and Chennai) and 22 regions (known as 'Circles'). A third license for each area was offered in 1999, and a fourth in 2001. Despite spectacular growth in recent years - 164% in 2003 and a further 69% in 2004 - India's mobile subscriber base represented a penetration rate of just 5.7 percent in 2005, the lowest in the region. This opens big opportunities for handset manufacturers and operators in India. The regulatory environment is also less restrictive than in the past, and recent policy changes will enable further growth.[79]

Three Landmark decisions have radically changed the telecom scenario in India: the telecom policy of 1999 removed the annual fixed license fee operators were mandated to pay to the government and introduced a revenue share regime based on performance. The entry of

78 see: Wold Fact Book, 2005[c]
79 see: Gartner, 2004[c]

cellular operators Mahanagar Telephone Nigam Ltd. (MTNL) and Bharat Snachar Nigam Ld. (BSNL) helped expand coverage and decrease service costs. Furthermore, the introduction of calling party pays (CPP) was an incentive for consumers to adopt mobile services.[80]

Mobile Operators

In December 2004, there were about 12 mobile operators, with Reliance having the largest base with 21% market share. Bharti was second, only a little behind, with 20.4% share. With the presence of four to six operators in each telecom operating circle, India's mobile market is highly competitive. Even industry consolidation like IDEA buying out Escotel in January 2004 and Bharti buying Hexacom in April 2004 will not change the highly competitive environment fundamentally, as at least five major operators will continue competing aggressively for market share. The "Big 5" operators (Reliance, Bharti, BSNL, Hutchinson and IDEA) all use GSM technology. Reliance and BSNL additionally deploy CDMA networks in some regions.[81]

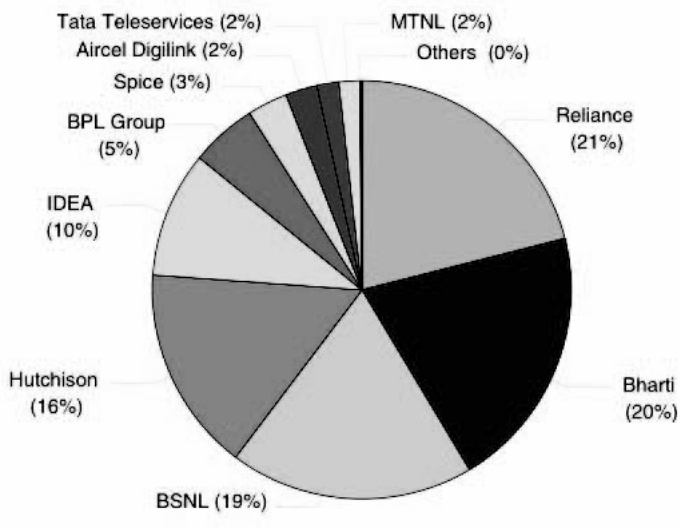


Figure 28: Market shares of Indias' operators, source: Gartner[c], 2004

Potential

Overall, India's mobile services market will grow by a compound annual rate of 28,3 % during the next four years. Prepaid subscribers account for the majority of customers, with nearly 70% of the total subscribers. Starting from the same assumtions as before, figure 35 shows, that about 50 percent of the Indian population would be potential customers for the ULC segment. As India's overall potential is estimated to be about 120 million handsets (figure 29) in the upcoming five years, this would correspond to about 60 million ULC handsets, or an average of 12 million ULC-phones per year. The lower border of model assumption was estimated to be $5 US. Figure 30 shows, that a decline of this boarder (which is already discussed by some experts) could even lead to a ULC share of 90% of total handset sales in the next years. The extremly high share of new subscriber sales until and even beyond 2010, which is shown in figure 31 , stresses the high demand for ULC handsets in India.[82]

80 see: Gartner, 2004[c]
81 see: Business Monitor Online, 2005
82 see: Strategy Analytics[c], 2005

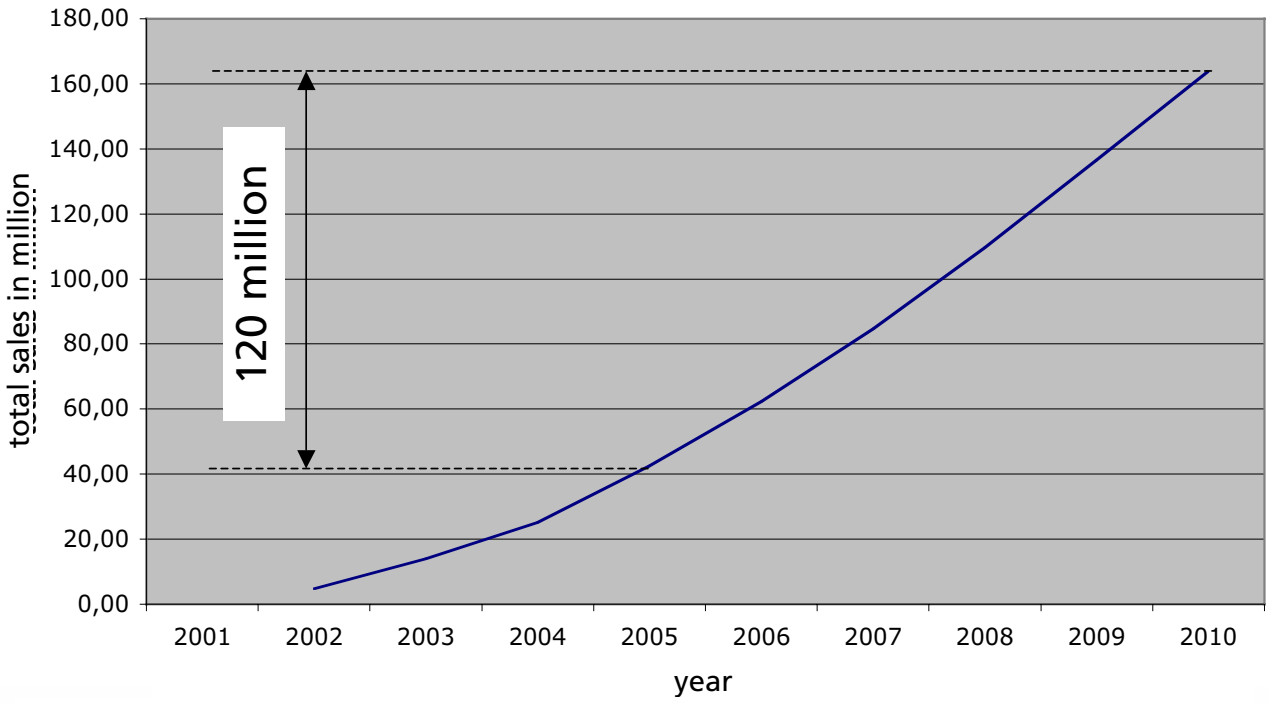


Figure 29: Accumulated total sales in India, source: own illustration, data: based on Strategy Analytics, 2005[c]

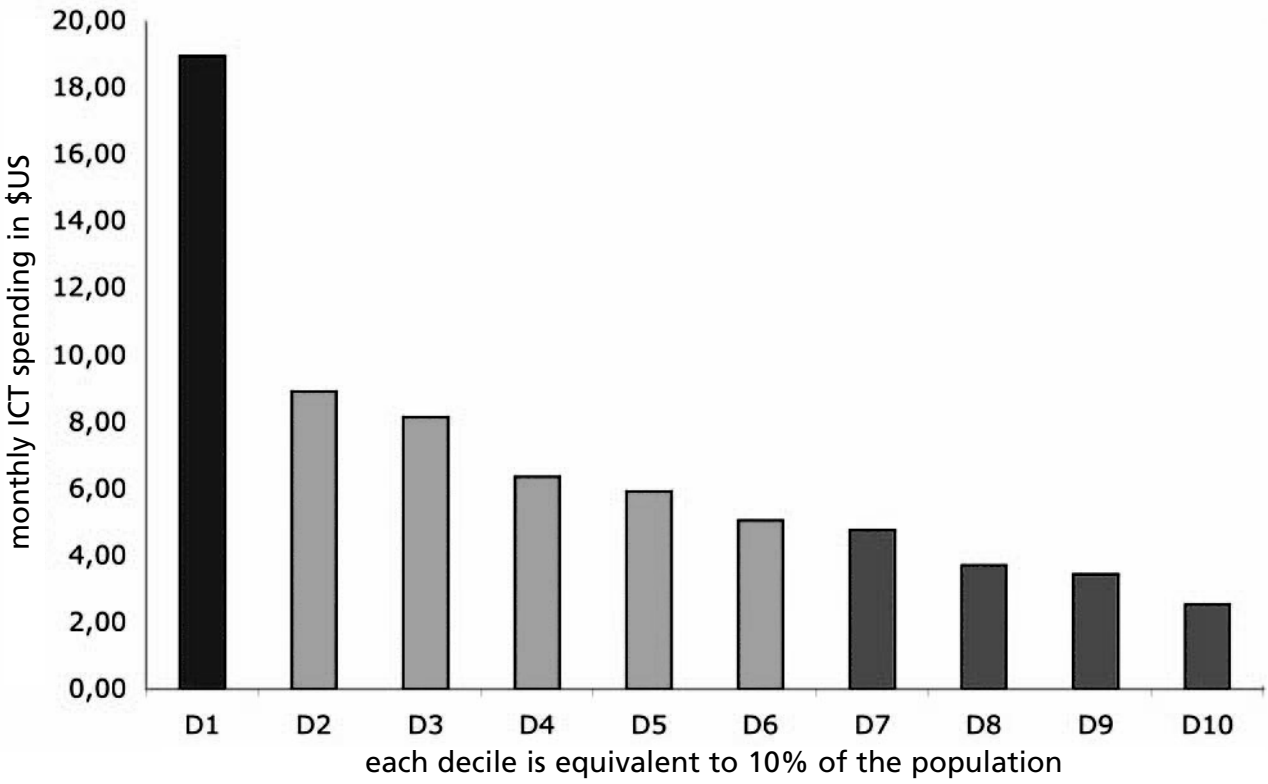


Figure 30: Average monthly ITC spending in India, in dependance on the income segment, source: own illustration, data based on Strategy Analytics, 2005[c]

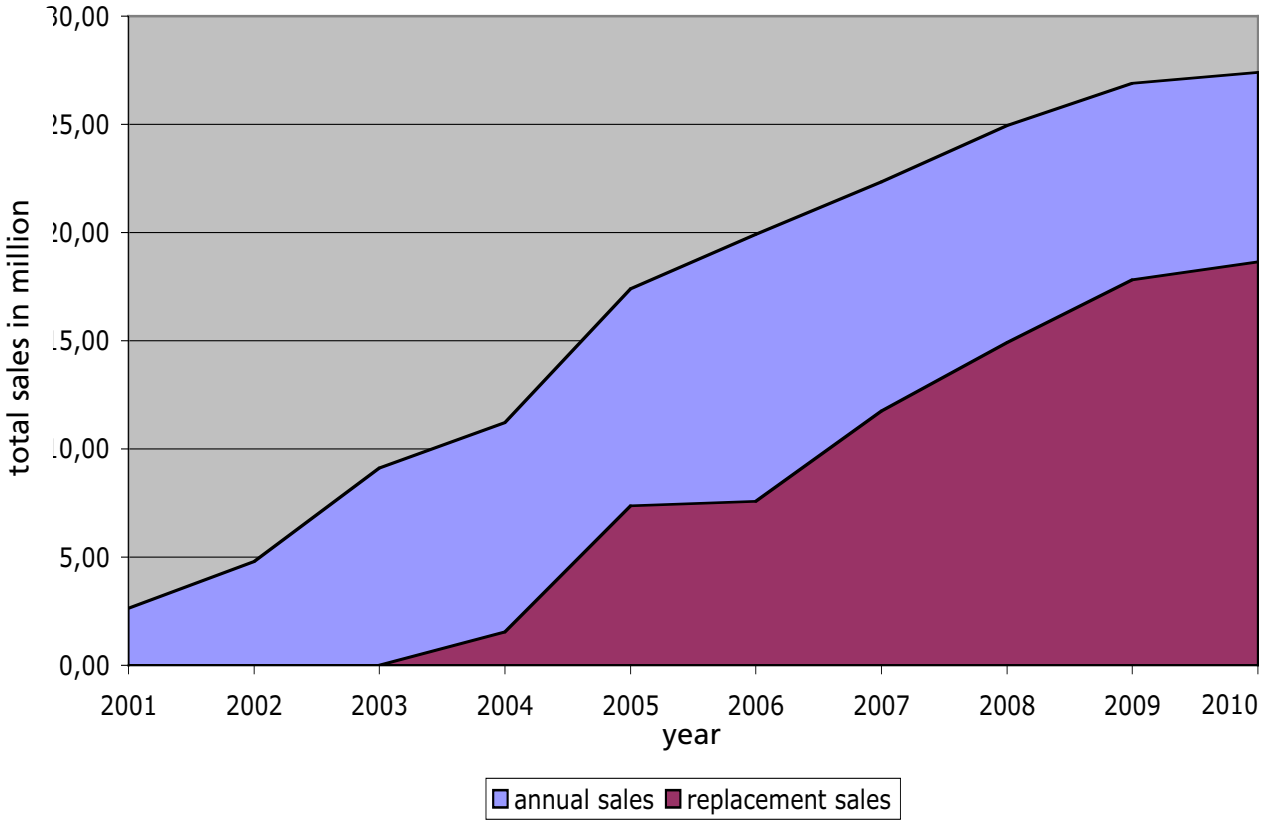


Figure 31: New subscriber sales and replacement sales as part of the total sales per year, own illustration, data: Strategy Analytics[c], 2005

Strengths

- 2nd largest population in the world
- Independent regulator (TRAI)
- Infineon has an own sales office in Bangalore
- Cellular market grew by 164% in 2003, by 69% in 2004
- Low GDP per capita means take-up of services such as broadband are unlikely to be widespread - this offers an enormous potential for ULC handsets
- As India was an English colony, the English language is widely spread
- 6th lowest taxation on mobile telecommunication of all emerging markets

Weaknesses

- Uncertainty over future of state-controlled fixed operators MTNL and BSNL
- Large percentage of inhabitants living in rural areas with a bad social and technical infrastructure demands for new ways of distribution for handsets sim cards and prepaid recharge systems.
- The variety of different languages complicates the sales of handsets.
- High level of bureaucracy and perceived high level of corruption
- Potential customers in India speak many different languages and dialects

3.4. Analyses of key Indicators of the People's Republic of China

Capital:	Beijing
Largest city	Shanghai
Official languages	Chinese
Government	Communist State
President	Hu Jintao
Prime Minister	Wen Jiabao
Independence	Manchu Dynasty replaced
Republic	1 January 1912
People's Republic	1 October 1949
Area	9,596,960 sqkm (3rd)
Population	1,306,313,812 (1st)
Density	136/km (54th)
GDP (PPP)	$8.091 trillion (2nd)
Per capita	$6193 (97th)
Currency	Renminbi (RMB¥) (CNY)

Policical Situation

In the terminology of political science, the People's Republic of China was and is still considered to be a communist state. But any attempts to characterize the nature of China's political structure into a single, simple category are insufficient and not satisfactory. In spite of the fact, that the Chinese regime has variously been described as authoritarian and communist, it appears that China is slowly becoming capitalist in its economic system. China recently released an official statement on its political structure, upholding the notion that the state should be ruled by democratic means. Today the government of the Peoples Republic is controlled by the Communist Party of China. While there have been some moves toward political liberalization, the party retains effective control over governmental appointments. While the state uses authoritarian methods to deal with challenges to its rule, it simultaneously tries to reduce dissent by improving the economy, allowing expression of personal grievances, and giving lenient treatment to persons expressing dissent whom the regime does not believe are organizers. The media have become increasingly active in publicizing social problems and exposing corruption and inefficiency at lower levels of government. The support of the Communist Party of China among the Chinese population is unclear, as there are no national elections. Political concerns in China include the growing gap between rich and poor and the growing discontent with widespread corruption within the leadership and officials. However, considering the rapid economic growth, the combination of curruption and an authoritarian system seems to be a petty evil as the rulers at least have the power to enforce their decisions.[83]

83 see: Nationmaster, 2005[b]

Economical Situation

In the 1980's the Chinese goverment began moving the economy from an inefficient, Soviet-style centrally planned economy to a more market-oriented system. Despite the fact, that the system operates within a communist framework, the economic influence of non-state organizations and individual citizens has ever since then been steadily increasing. The authorities switched to a system of household and village responsibility in agriculture in place of the old collectivization, increased the authority of local officials and plant managers in industry, permitted a wide variety of small-scale enterprises in services and light manufacturing, and opened the economy to increased foreign trade and investment. The result has been a quadruplication of GDP (ppp) since 1978. In 2004, China was the second-largest economy in the world after the US, although in per capita terms the country is still poor. As a result of its hybrid system the leadership has often experienced the worst results of socialism and of capitalism: bureaucracy, lassitude, growing income disparities and rising unemployment. However, foreign investment remains strong and the economic growth remains remarkable.[84]

Sociological Situation

The People's Republic of China, in an attempt to limit its population growth, has adopted a policy which limits urban families to one child and rural families to two children when the first is female. Because males are considered to be more economically valuable in rural areas, there appears to be a high incidence of sex selective abortion and child abandonment in rural areas to ensure that the second child is male.[85]

Age structure:	0 to 14	21.4 %	159 of 227
	15 to 64	71.0 %	13 of 227
	65 +	7.6 %	86 of 227

The biggest Cities in China are:

Shanghai	12.200000 inhabitants
Beijing	9.200000 inhabitants
Taipei	7.400000 inhabitants
Chongqing City	7.200000 inhabitants
Hong Kong	6.650000 inhabitants
Changsha	5.955000 inhabizants
Tianjin	5.750000 inhabitants

84 see: Wold Fact Book, 2005[a]
85 see: Nationmaster, 2005[b]

The Chinese Mobile Phone Market

The Chinese telecommunications industry has undergone dramatic restructuring in recent years, one of the most significant steps being the transfer of regulatory responsibilities from the Ministry of Posts and Telecommunications (MPT) to the Ministry of Information Industry (MII) in March 1998. China Mobile, which took over control of mobile services from MPT in 1998, still retains the majority (61%) of the wireless market, with 204mn subscribers at the end of 2004. China Unicom, a publicly-listed subsidiary of the Unicom Group, currently operates in 30 provinces and holds 33.5 percent of the market at the end of 2004. The operator recently completed its acquisition of Unicom New Century from China United Telecommunications for CNY 4.8 million, gaining an additional 16.6 million subscribers in the process. China's mobile market grew by 24 percent in 2004, with an astonishing 65 million net additions, but despite the scale of this growth China remains rooted to the bottom of Asia's mobile markets in terms of penetration.[86]

Potential of the Chinese Mobile Phone Market

With about 1.3 billion people, China is the most populous country in the world. The penetration rate is with 26.1% one of the lowest in the region, which offers a huge potential for further growth. The taxes on mobile commuication belong are among the lowest in the world which will support healthy growth in the future.

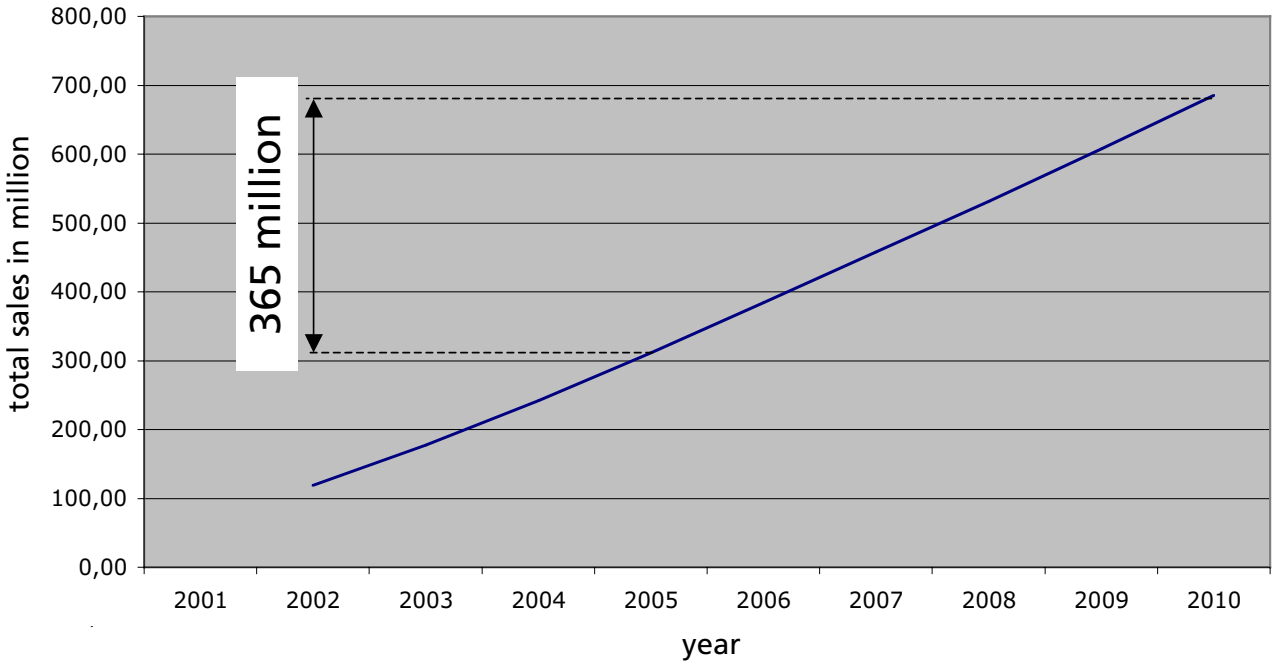


Figure 32: Accumulated total sales in China, source: own illustration, data: based on Strategy Analytics, 2005[c]

86 see: Wold Fact Book, 2005[a]

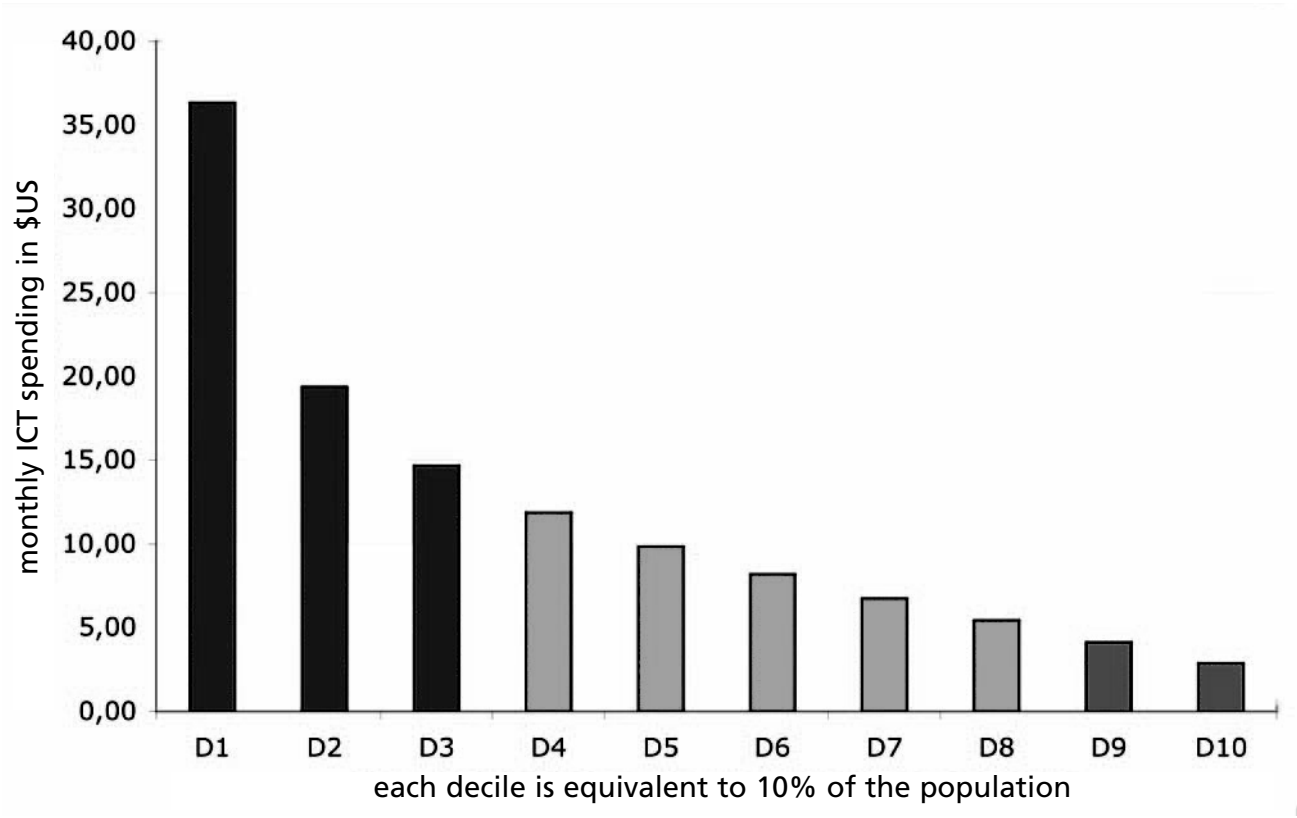


Figure 33: Average monthly ICT spending in China, in dependance on the income segment, source: own illustration, data based on Strategy Analytics, 2005[c]

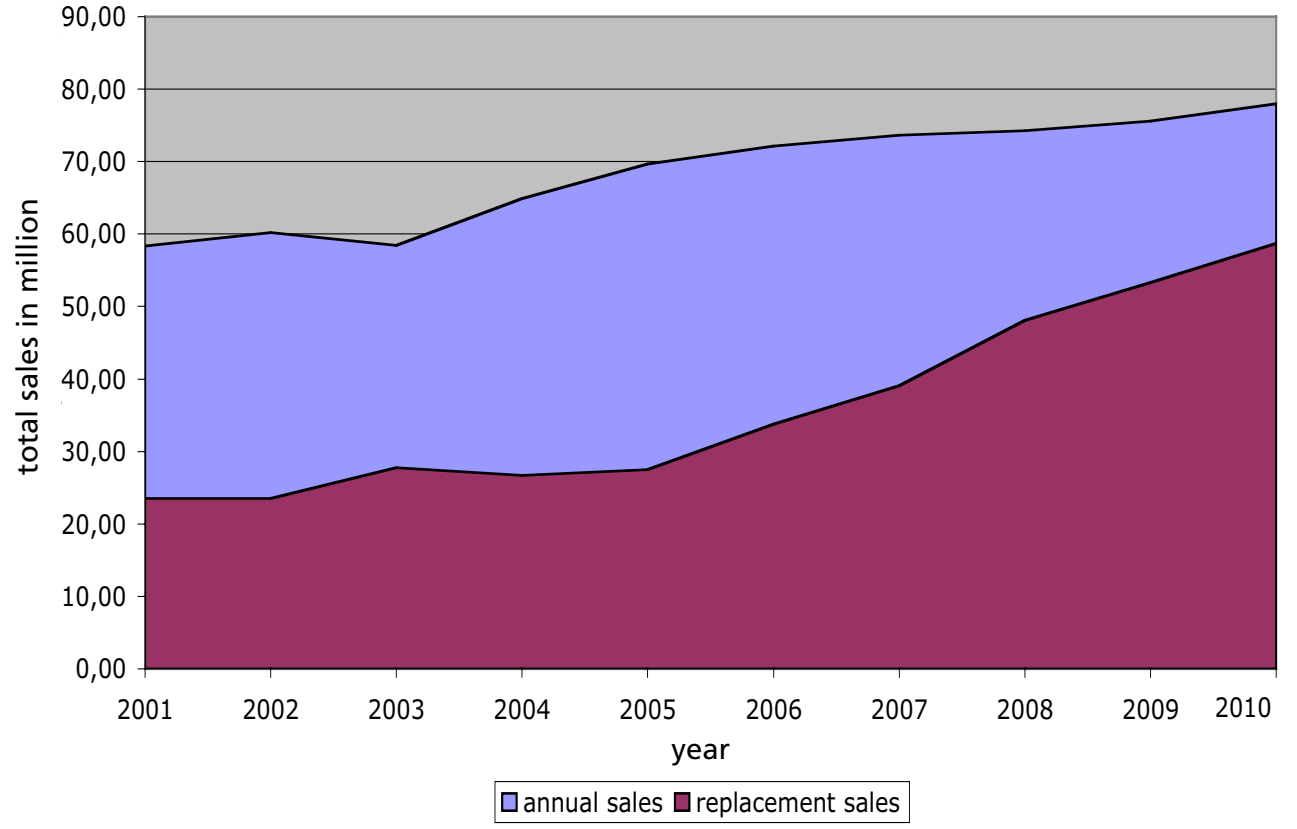


Figure 34: New Subscriber sales and replacement sales as part of the total sales per year, source: own illustration, data based on Strategy Analytics, 2005[c]

Based on the previous assumptions, Figure 33 shows that about 50 percent of the Chinese population would be potentially purchase ULC handsets. Assuming an overall market potential of 365 million handsets (figure 32) in the next five years, this would correspond to about 180 million ULC handsets or an average of 8.8 million ULC handsets per year. Similar to India, China will continually have extremly high share of new subscriber sales until and even beyond 2010. This trend, which is shown in figure 34, backs the high demand for ULC handsets in China.[87]

Strengths

- China is the most populous country in the world
- Stunning potential for ULC handsets
- The two big players on the Chinese market China Mobile and China Unicom are the world's largest and third largest operators in terms of subscribers.
- Strength of domestic handset manufacturing
- Large numbers of new subscribers and the increasing GDP per capita will encourage a strong replacement demand
- Despite large number of fixed-line subscribers, the penetration rate of 26.1 percent is still relatively low compared to some of China's regional neighbours.
- Chinese is the only official language

Weaknesses

- Many rural areas in China have neither fixed-line nor mobile telephony services available
- Popularity of fixed-wireless services developed by UTStarcom could hinder expected growth of wireless industry.

87 see: Strategy Analytics[c], 2005

3.5. Elaboration of the Results

Obviously, all four nations hold an enormous potential for ULC handsets. However, the detailed comparison which is shown in figure 39 reveals some slight differences between the 4 countries. The analysis points out that China is the most attractive country to the ULC segment, followed by Brazil and India. As Brazil offers several structural advantages like a strong presence of potential customers, including international oper ting OEM's as well as local OEM's, one could focus on the identification of potential customers in Brazil in a first step.

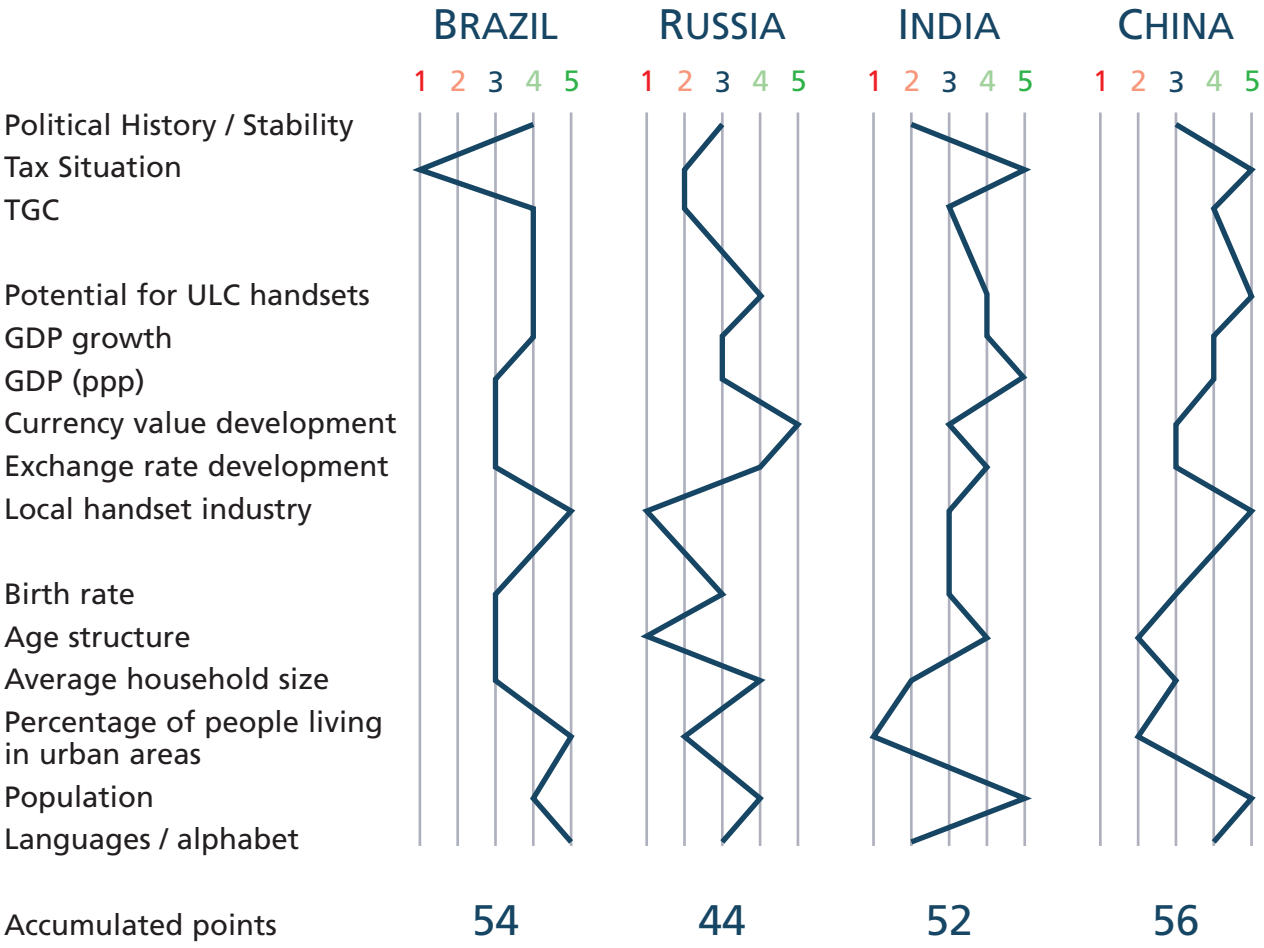


Figure 35: Evaluation of the Attractiveness of the BRIC Nations for the ULC Segment, source: own illustration

4. Identification of potential Customers in Brazil

Which customers a company should approach can be best seen in a model of the respective market. Figure 36 graphically displays a model of the Brazilian mobile phone market. Its shape corresponds to the relationships along the value chain.

A closer look at the model reveals that the big international OEMs account for 92% of the market share. Apart from that, there are four local OEMs: Gradiente, Evadin, Vitelcom and Venko. Furthermore, it is interesting to see, that only four operators unite 91,5 percent of the subscriber base. Another observation is, that there are obviously no handsets sold through retail stores.

These observations lead to some interesting conclusions which can create new innovative business. These new models go beyond the traditional model of only approaching OEMs and ODMs.

In the case of Brazil, there are four potentially interesting customer groups: the OEMs and ODMs, but also the top three GSM operators and the local OEMs.

The most interesting customer group apart from the big international OEMs are the three big operators, especially TIM. As the operators sell their phones exclusivly through own shops, a cooperation with one of the big operators could be a very lucrative business.

Therefore companies should not only approach the operators in order to create a demand for their solutions at the top of the value chain which could lead to a derived demand in their products, but also think about ways to directly serve the needs of the operators by providing turn key solutions. Furthermore, as TIM is a European operator a good co-operation could benefit Infineon's position in other countries as well.

The second very interesting customer group are the locally operating OEMs. They have only little experience in the ULC business and benefit from a cooperation with a multinational firm. A frequent contact could therefore lead to a viable business opportunity.

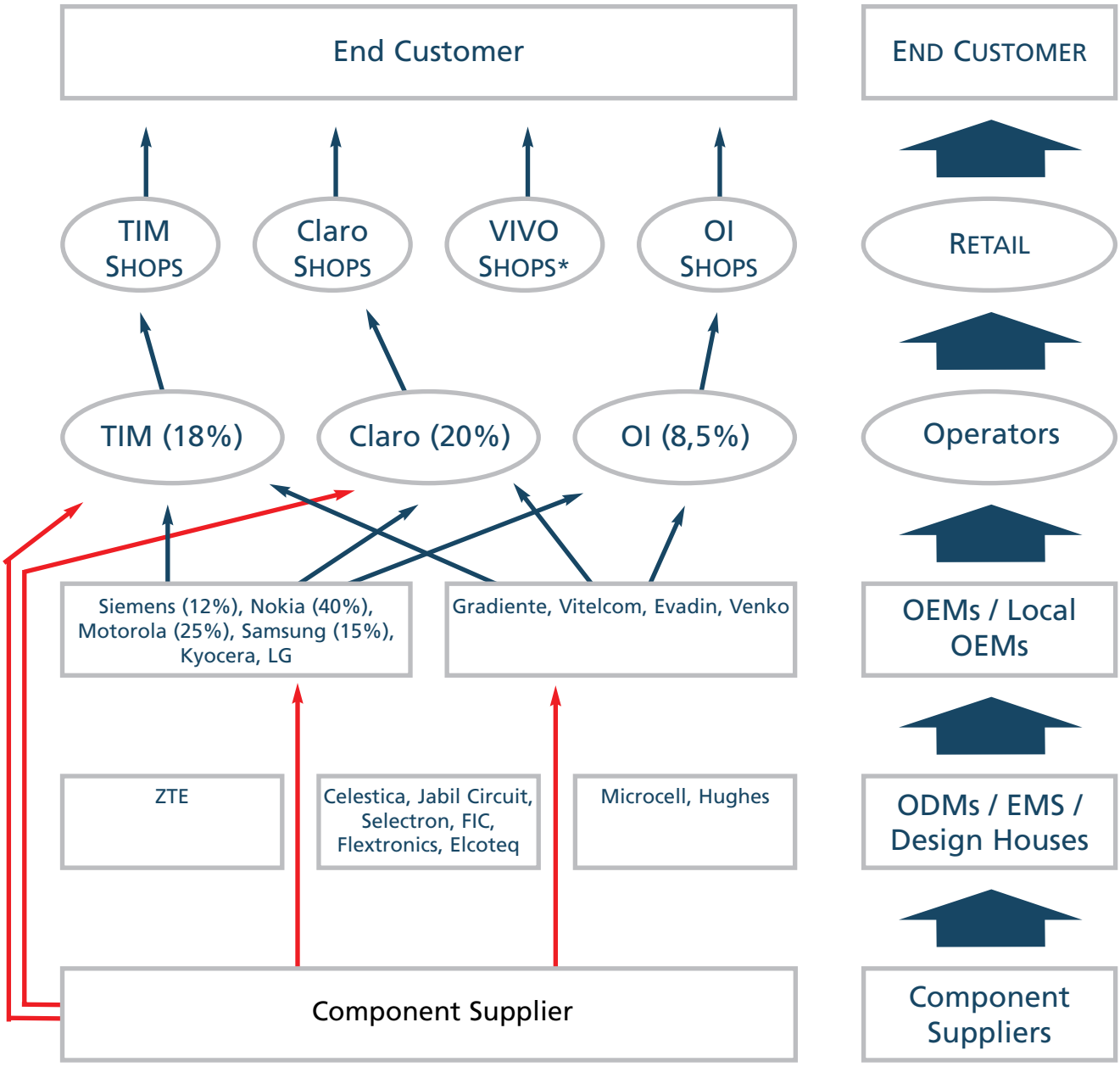


Figure 36: Market Model of the Brazilian Mobile Phone Market, source: own illustration

Part C – Summary and future Prospects

Part C of this thesis will at first conclude the results which can be drawn from the analysis of part B. Thereafter a possible scenario for the future development of the ULC segment will be discussed. The subsequent chapter presents strategic recommendations firms in the industry and for their products for the ULC segment. In the end, future needs for additional research on the ULC topic will be discussed.

1. Conclusion

The markets at the bottom of the pyramid offer an enormous growth potential. 85 percent of the world's population live in these countries, but only 20 percent of these people have a mobile handset. Today, these markets already account for 80 percent of the world-wide new subscriber sales. To exploit this potential will be the one central challenge for the mobile communication industry in the near future. Hence one derived challenge is to build the most simple handsets to prices which are affordable to the poorest people in the world. But the wealth, which the telecommunication industry wishes to find in emerging markets, lies concealed behind a number of barriers and hindrances which have to be overcome in order to be able to skim the full potential of these markets. These hindrances can only partially be overcome by private sector organizations. Government policy and the deregulation of markets remains the other major enabler of the spread of mobile technology throughout the poor in emerging markets. For example in 16 of 50 developing countries, taxes on mobile phones and services represent more than 20% of the total cost of ownership.

Still, the most promising emerging markets, Brazil, Russia, India and China have already taken the most important steps towards a deregulated private sector telecommunications market. The acquisition of customers in these nations is of utmost importance to all firms in the telecommunication industry. These four nations account for more than half of the volume of the world's overall new subscribers and for two thirds of new subscribers of the developing regions. Furthermore, the economic development in these regions is so strong that it might be possible that in less than 40 years the four national economies of these nations could be greater than the ones of the G6 countries.

The comparison of the potential for the mobile handset industry of BRIC nations showed an enormous gap in the demand for ULC phones and clearly indicated China to have the highest demand for ULC phones followed by India. An indepth comparison of the overall attractiveness of these markets supports China as the most attractive country, but identifies Brazil to be the second most interesting country for the ULC segment. India is still in the process of developing a political structure which supports private sector organizations. Corruption and the missing executive power of politicians are a strong barrier for the ge-

neration of a truly competitive environment which is the prerequisite for decreasing prices and therefore for the spread of mobile communication at the bottom of the pyramid.

This paper concentrates on Brazil, because it offers several structural advantages. Most importantly, the majority of Brazil's population lives in big cities. This eliminates most of the difficulties ULC handsets have to face in other emerging markets, like missing power supply, weak sales infrastructure, or problems with after sales service. Thus, Brazil's customers can be approached through an existing sales network with existing business models. As all big players in the industry have the knowledge about how to approach customers in developed countries with existing business models, the process of recruiting customers in Brazil should be much easier than in other emerging markets. Therefore, Brazil is a good hybrid of a emerging and a developed market and thus firms can learn from the needs of handset manufacturers, operators and end-customers in Brazil and then apply the knowledge to customers in other less developed emerging markets. Furthermore, Brazil has a strong presence of potential customers, including international operating OEM's as well as local OEM's.

2. Future Development of the ULC Segment

The development of the ULC segment in the upcoming years is extremely disputed. If one believes leading market analysts, UMTS and EDGE will rapidly gain share in the markets of developing countries and oust purely GSM based handsets. How fast this development will take place and if these technologies will also penetrate the ULC segment, strongly depends on the economic development in the respective country. Prahalad, 2005 describes a change of the income structure. He argues, that the current shape, the pyramid will transform into a diamond by 2020. This means that disposable income of former "bottom of the pyramid" customers will increase and the customer base in this segment will hence shrink. Strategy Analytics for example forecast that there will be no more GSM based handsets in Brazil in 2009.

Will social transformation lead to a shift in the demand structure in developing markets?

Historically it was assumed that poor countries are poor because of their lack of resourses. Therefore, international aid was granted as a substitute for locally generated resourses. Secondly, it was assumed, that international help for specific infrastructure projects would increase wealth in these countries. Finally investments in education were assumed to offer the best way of increasing economic development in these countries. This approach of thinking was applied during the past 30 years, but the success remains questionable. In his book "the mystery of capital", Hernando De Soto, challenged these assumptions. He argues, that developing countries could often be asset-rich, but capital poor. The reason for this lies in the missing capability of these nations to guarantee certain laws, primarily the law of contracts. Two dimensions determine the potential of nations to develop a vibrant private sector which will support economic growth: A system of laws, institutions and re-

gulations and the capacity to interpret and enforce these regulations, contracts and social norms. In developed nations, the concept of legal ownership converts assets into capital. This concept cannot be guaranteed in many developing nations. This approach suggests, that poverty is, at least partially, a self-imposed problem. As a result many of these nations have tremendous trapped resourses. For example De Soto estimates the trapped resources are as high as 50 percent of the GDP in China and as high as 20 percent of the GDP in India.

The reason that most multinational companies still prefer China over India is shown in figure 37 - a clear preference for enforcement capacity over the legal system of the books. Even though China is very corrupt, bureaucrats and politicians at least have the power to enforce contracts. Corrupts in India cannot necessarily do this. However, today the capabilities to solve the perennial problem of poverty through businesses at the BOP are available in most developing nations.

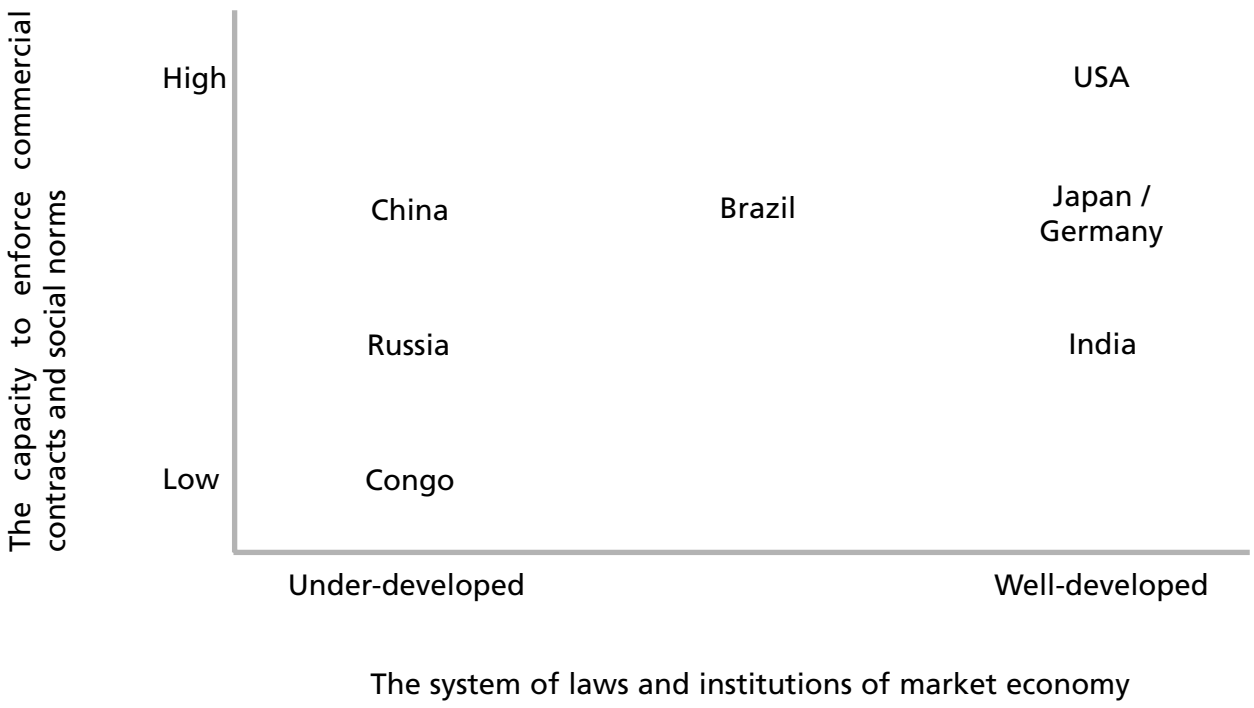


Figure 37: Comparison of the Transaction Governance Capacity (TGC) of the BRIC nations, source: own illustration

The question remains - will social transformation lead to an increasing demand at the BOP? A study by the National Council of Applied Economic Research (NCAER) in India suggests that there are clear signals that there is an emerging change from the former pyramid like shape of the income structure in developing nations towards a more diamond like one. During recent years, India for example has libertized its economy, has supported private-sector development and has given its states room to experiment with different models. As a result, different models have been implemented in India's states and the growth rates vary largely.

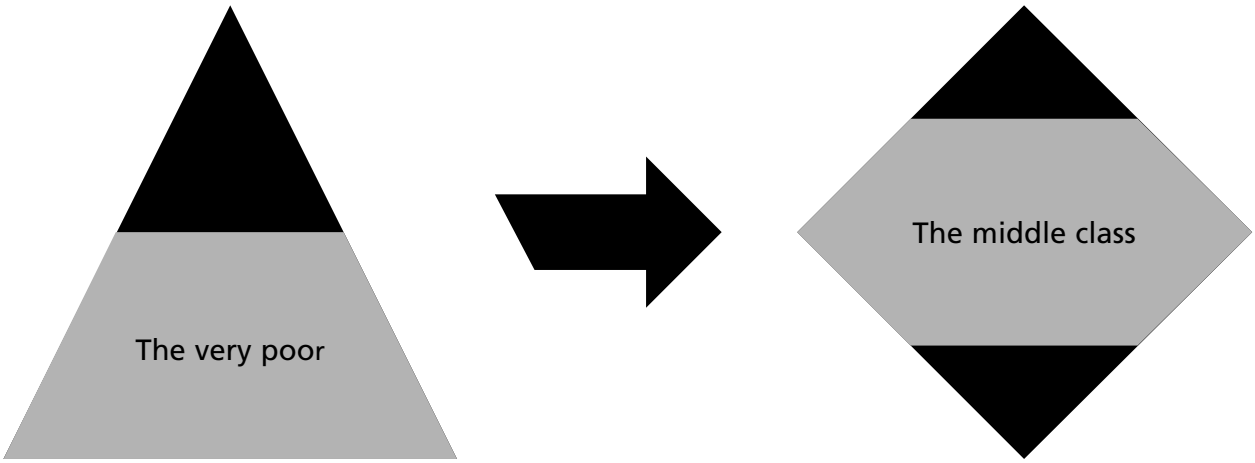


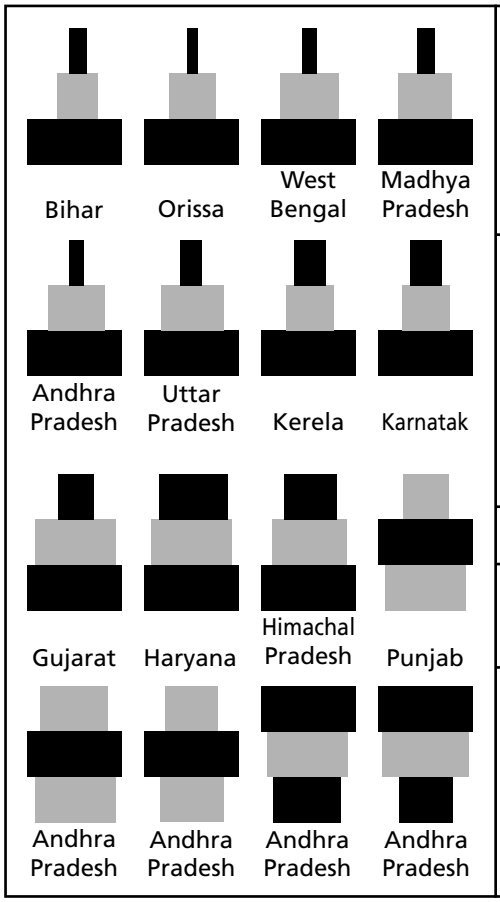
Figure 38: Change of the shape of the income structure, source: own illustration

Figure 39 shows the shape of the rural income distribution in India in 2006. One can see, that some states like Bihar and Orissa still show the expected pyramid like shape. However in other states such as Assam, Maharashtra, Gujerat, Haryana, and Punjab, the shape is already shifting noticeably.

This change will create a virtuous cycle. Long term demand for products will increase the domestic economic activity. This will again create new wealth and which will therefore support the morph towards the diamond. The pattern India shows at the moment is only an early stage of the process. Prahalad (2005, p. 112) believes that with the support from the private sector and civil society organizations, a healthy income distribution in a humane and just society is possible by 2020. If one believes these assumptions, there won't be an increasing demand at the bottom of the pyramid because there will be no more pyramid. The demand will increase due to an increasing middle-class in the middle of the diamond (MOD). Former BOP customers will transfer to MOD consumers.

The demand for ULC phones will hence rapidly increase in the next years, but will become saturated by the end of the next decade. The new born middle class in the MOD, will no longer have different needs than the middle class in developed nations. Therefore the BOP customer segment will shrink until 2020 which will lead to an increasing demand of feature enriched replacement sales. The same development will be observed for spread of purely GSM based handsets. EDGE will have an increasing impact from the end of this decade on.

However, until the end of this decade one can assume, that in contrast to the developed markets decreasing total cost of ownership will always lead to an increasing subscriber base in BOP markets as long as the markets are not saturated. As a technologically more advanced handset will always be more expensive than one with less technology at the same point in time, cost reduction in component costs should be forwarded to the end-customers in order to continuously increase subscriber base. Figure 40 graphically displays this effect.



Contribution to argi GDP (%)		Index of number of households		
		Lower	Middle	High
8,1	Bihar	100	43	17
	Orissa	100	43	11
48,6	West Bengal	100	65	21
	Madhya Pradesh	100	60	26
	Andhra Pradesh	100	67	22
	Uttar Pradesh	100	74	30
	Kerala	100	59	36
	Karnataka	100	57	37
5,4	Tamil Nadu	100	96	44
5,3	Rajasthan	100	88	67
	Himachal Pradesh	100	76	64
22,8	Assam	100	106	38
	Gujarat	100	112	83
	Haryana	100	145	76
	Maharashtra	100	125	151
	Punjab	100	179	188

Figure 39: Forecast of the rural income distribution in India 2006, source: own illustration

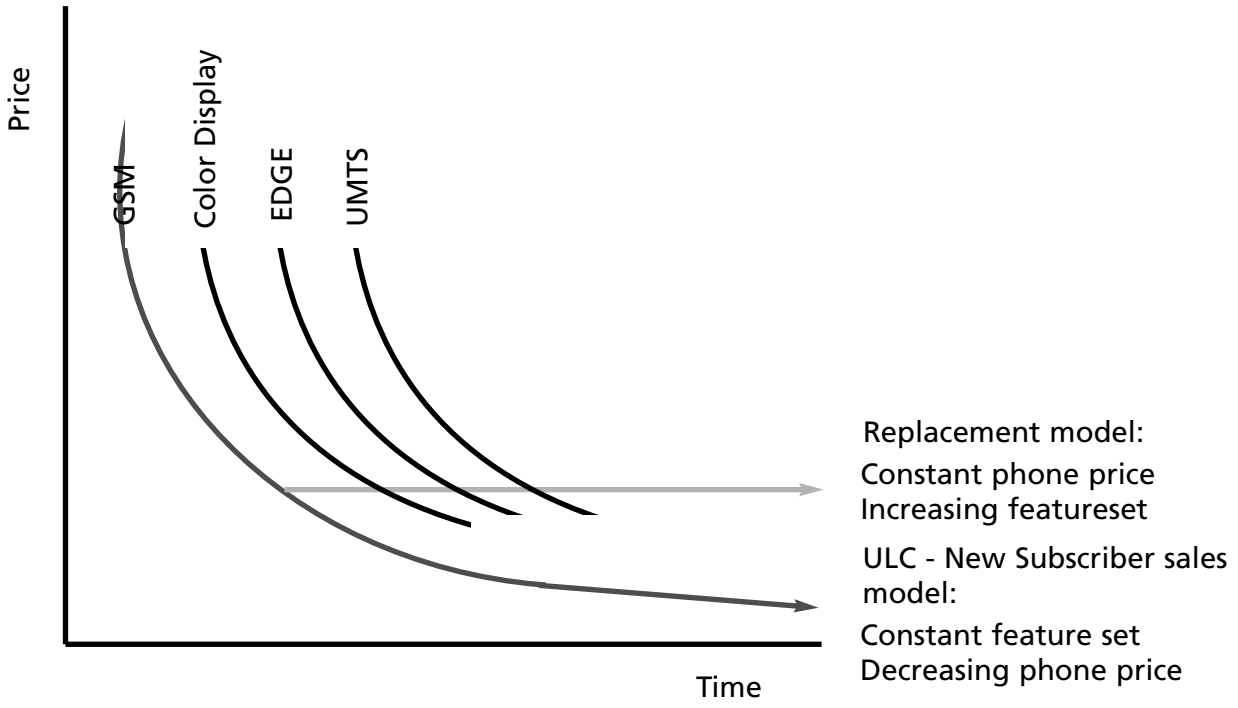


Figure 40: ULC model new subscriber model vs. replacement model, source: own illustration

3. Recommendations

In this chapter, I want to provide recommendations to firms who want to sucessfully participate in the industry. The chapter is divided in two parts: the first will focus on product related recommendations which could help to achieve overall cost leadership and a certain amount of differentiation. The second part outlines some basic strategy related recommendations for component suppliers which should be considered in order to exploit the potential of the ULC segment to its fullest.

Product related Recommendations

In general my research has shown, that it is difficult to speak of the one and only ULC segment. Even the low end consumers in BOP markets have differentiated needs in terms of design, durability, brand and functionality. Once the replacement sales for ULC handsets will begin in 2007, the need to offer more advanced ULC phones will strengthen the need for the creation of different ULC segments. Furthermore, as I have outlined in chapter 3 of the second part of this paper, the ULC segment demands for a hybrid competitive strategy which focuses on cost leadership and product differentiation in parallel. Therefore, the product, its price and features are the key to success in the ULC segment.
The retail price of a handset can be directly influenced on three levels: the product itself, the necessary product and software customisation and variants, and the package the handset is sold in.

The level of the product and its features is the most complex one. The implementation of certain features might increase the handset price but will lead to a decrease of cost of operation and therefore to a decrease of the total costs of ownership for the end customers – AMR is only one example of such a feature. Even though the BOM of the handset might then be higher than the one of competitor products it could still lead to a competitive advantage in the eyes of the operators. Another example of such a feature would be the implementation of the SIM card into the phone. Today the manufacturing and processing of each SIM card costs the operator about $5 US which directly have to be added to the price of the handset. Research has shown that a direct implementation of the SIM card functionality into the handset would significantly reduce this cost factor.

Another major cost factor is the necessary operator and country specific customisation. Less customisation would lead to significant cost savings which would lead to a further decrease of the retail price. Further research needs to show which of the languages and dialects in BOP markets need to be preinstalled on the phone and if a graphically supported UI could possibly eliminate the need for the implementaton of certain, if not all languages, except of the most common ones of industrial nations. The same idea could help to reduce the number of variants of instruction manuals.

In the end it is not only the price of the handset which decides the retail price of a phone.

The costs of additional components which are sold with the phone add to the costs of the handset and finally determine the retail price of the sales package. These components include the accu pack, the charger, the instruction manual and the packaging material. Each of these four components opens up new opportunities for further cost savings and for a reduction of the retail price of the sales package. For example, the implementation of a flexible battery solution which enables end customers to run their phones with standard primary cells would not only reduce the costs of the included battery solution, but also eliminate the need to include a charger into the sales package, as customers can either buy new primary cells once the old ones run out of power, or use externally rechargable batteries. Again this measure would reduce the required packaging volume and therefore the costs of the packaging material. Furthermore, it allows the operator to create additional returns through the separate sales of chargers.

Strategy Related Recommendations

Two facts suggest, that only the big players in the international mobile phone business will gain significant shares in the ULC segment. Firstly, the poor are very brand-conscious which means that they will be more likely to buy products of well known brands. Secondly the size of these firms provides them with enormous economics of scale which will lead to a cost situation which will hardly be outbiddable by any smaller manufacturers. Therefore, component suppliers have to focus on major OEMs.

Furthermore, major ODMs, which supply major OEMs should be approached. This strategy would indirectly grant Infineon most of the advantages, the direct supply of a major OEM has.

Additionally, some of the BRIC nations offer interesting business opportunities with local OEMs which do not operate internationally. Especially China and Brazil have a strong presence of such locally operating OEMs. As both markets hold an enormous potential the volumes of these local OEMs might be promising as well. Hence, component suppliers should approach these local OEMs as well.

Another possible strategy focuses on the creation of a joint venture with an ODM in order to produce a complete handset which can be directly sold to operators, OEMs, or retail-store chains like ALDI, Mediamarkt, Tchibo or Wall-Mart all over the world. This strategy has the advantage that suppliers could overleap one step in the value chain which might positively impact on profit margins. The idea of a joint venture with an ODM poses some important questions: who will be responsible for the after-sales service and whose brand will the phone be carrying? As neither the supplier nor the ODM have any experience of after sales service nor an established network of service points, this is an important problem to solve. Depending on the customer the phones are sold to, to solve this problem can be more or less difficult. For example, if the customer already has an existing call center for its own products, it requires only little effort for him to include the first step of the handset serv-

ice into its hotline. This first step includes basic technical knowledge about the product to solve minor problems on the phone. Problems with products which cannot be solved over the phone then have to be sent to the suppliers customer who will then forward the products to the ODM technicians. The question about the brand can possibly even positively impact on the attractiveness of the product as one possibility would for example be to offer the customer the use of its own branding on the phone. This would also reduce the need to establish an own hotline as the phone wouldn't be carrying either the suppliers or the ODM's brand.

4. Further needs for Research

The further need for research mainly includes the need to learn more about the BOP consumers, their habits and their needs. The need for further research can be sub-divided in three categories:

- research on technology
- research on languages and interfaces
- research on the economical development and spending habits of the ULC customers

Research on technology mainly has to identify the potential of certain technologies in the ULC segment. For example, will EDGE or UMTS enter the ULC segment? What potential do services like PTT have in BOP markets?

Research on languages and dialects needs to identify the preferred languages and dialects in BOP markets. Furthermore the average ability of BOP consumers to use technological advanced devices with different UI structures has to be observed. For example, can BOP consumers use a phone which uses English as a language? How can one create a UI that enables even illiterate consumers to operate the phone? Research on this topic will help to improve instruction manuals as well.

Thirdly, the ongoing economic development of the ULC segment has to be observed. An ongoing economic development which leads to an increase of the per capita spending on telecommunication could for example lead to a merger of ULC and entry phone customers.

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Afterword by Michael Richter

In the last decade, high-technologies such as information and communication technologies were used mainly in the developed nations of the United States, Western European countries and Japan.

However, during the last few years, this situation has radically changed and the mobile phone industry has undoubtedly played a vital role in this process. Due to the phenomenal growth rates of over 60 percent per year, mobile communications has decisively contributed to the spread of high-technologies in developing nations like India and China.

In 2005 about 2,1 billion people or about 32 percent of the world's population were registered users of mobile communications devices. Out of these 2,1 billion people, more than 60 percent were residents of developing nations. Therefore, these countries have clearly surpassed the industrialized nations in both the turn-up of new robust mobile infrastructures and the acquisition of millions of new mobile communications users. This ratio will shift even more in the years to come, as the decreasing price of mobile communications, will enable more low income residents, of developing nations, to purchase mobile communications equipment.

To address these markets effectively it is necessary to develop new, innovative products as well as marketing strategies.

This book provides important, methodical and easily exercisable basics for the cultivation of these emerging markets. I hope the work of this author will attract the interest it deserves, not only in the academic arena, but also in the practical scope.

Dr. Michael Richter

Vice President Communications Sales EMEA
Infineon Technologies