# *Strategies in the Colombian Telecommunication Market*

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## *Seen Through the Perspective of Porter*

Master Thesis
Business Administration

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# Abstract

**Title:** Strategies in the Colombian Telecommunication Market – Seen Through the Perspective of Porter

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**Institution:** School of Management, Blekinge Institute of Technology

**Course:** Master Thesis in Business Administration (FED006), 10 credits.

**Purpose:** Through our research we want to contribute to greater understanding of how mobile phone operators in developing countries compete with each other in terms of their strategy and how Porter's three generic strategies are applicable in the sector of telecommunication.

**Methods:** A study of the three mobile phone operators in the Colombian Telecommunication Market has been done by looking into their strategies. Special focus had been laid out on how the strategies have changed and developed when a new operator enters the market. For the most part, secondary sources have been used to collect empirical data.

**Conclusion:** The most important conclusion we can draw from our research is that Porter´s three generic strategies, mainly the differentiation strategy, still are frequently used in the Colombian telecommunication market. Another conclusion is that a high-speed changing environment, such as the Colombian market, demands that the operators combine and integrate their strategy with other secondary strategies to become succesful. They can not, as Porter says, only depend on one strategy.

**Keywords:** Telecommunication, Strategies, Porter, Colombia, Growth.

# Acknowledgements

We would like to thank all the delegates of the SIDA course, who have been an inspiration for our thesis. Special thanks to the three delegates from the Colombian telecommunication sector, who have answered our questions and helped us to collect further data.

We would also like to thank Alexander Riobó at Telefónica Móviles – Movistar de Colombia and Ana Cristina Vásquez Luna at Ericsson de Colombia who have been incredibly supportive and helped us in different matters throughout our thesis.

Finally we would like to express our thankfulness to Stefan Hellmer and Anders Hedenstierna who believed in our thesis and supported us all the way through it.

BTH, Ronneby, May, 2006

Bodil Arbin Lars Holmberg Caroline Jönsson

# Table of content

# List of illustrations

# 1. Introduction

This thesis is about strategies, telecommunication and Colombia. First it is about ***Strategies*** because the choice of strategy made by a firm, how the firm pursue its choice, and how adaptive it is in a changing environment. All of which are of great importance for an organisations long term survival in an increasingly competitive world. Second is ***Telecommunication*** because this is a market with rapid technological changes, a market which is continuously liberalised throughout the world, and because it is a market with outstanding growth both in developed and in developing countries. Lastly, the thesis is about ***Colombia*** because the telecommunication market in Colombia is one of the fastest growing markets for mobile telephony in Latin America. It has been liberalised since the mid 90's and it consists of three highly competitive companies with their own respective network. In comparison with other developing countries, especially the Latin American countries, Colombia has been very successful throughout the liberalisation process and has managed to adjust to the new market conditions very well.

The liberalisation process, the rapid technological changes and the fast market growth puts pressure on the strategies formed by a company in the telecommunication sector. For reasons to become clear, we are using Colombia and its telecommunication sector in order to describe and analyse different strategies.

## 1.1 The telecommunication industry

The telecom industry is growing all over the world. More and more people are gaining access to the telecom services such as cellular phones, broadband and fixed telephones. Many developing countries are starting to invest more into this sector and it is becoming an important factor for their economy. The prosperity within the sector attracts newcomers and the competition increases. Therefore the companies within the telecom industry, as well as other industries, have to work hard to stay competitive in order to prosper in the market.

The figure below describes the global growth of the mobile industry throughout the world and the growth separated to in developed and developing countries.

The digital divide in 1994 was 27 times between developed and developing countries and has been reduced 4 times up to 2004.

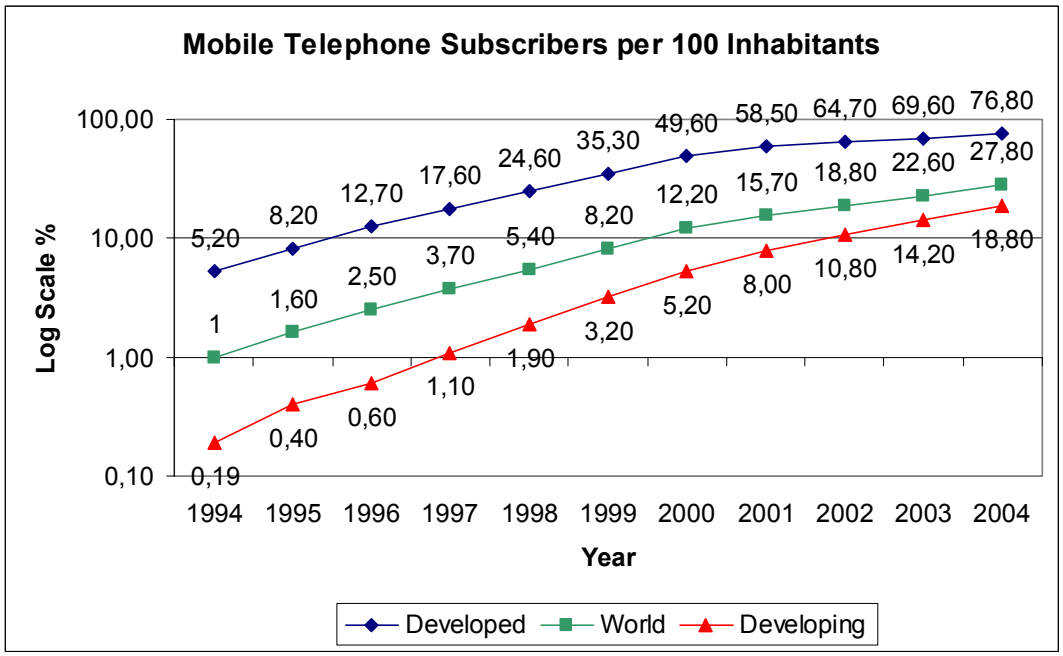



*Figure 1.1 Digital divide over developed, the world and developing in mobile telecom. Source: ITU (International Telecommunication Union)*

After 2005, the world-wide market of services in telecommunications will reach the US1.240 trillions and for year 2010 the hope is that it reaches US1.400 trillions. The income of fixed telephony will, on the contrary, have a low rate of growth and their participation in the total will decrease slightly. The movable telephony industry will continue growing, while the participation of the income by sales of services of Internet and data transmission will stay constant. The total income of the telecommunication industry in the first semester of 2005 reached the $6.86 trillions, which represents a real growth of 15, 1 % with respect to the first semester in 2004. (CRT, 2005). In order to become or to stay competitive in the telecommunication market the companies need to formulate a strategy. The next part of this chapter defines the term strategy.

## 1.2 Strategy definition

> *"The essence of strategy is choosing to perform activities differently than rivals do". (Porter, 1996)*

According to Porter (1996) a company must choose its activities in different ways than its competitors in order to deliver a unique set of value to its customers. Strategy is essential because there is not only one ideal position in the market. If there were, operational

effectiveness would be enough for the company to succeed. Even if company was producing at its lowest cost, serving all types of customers, reducing the number of employees, offering the same products as its competitors and having the same equipment etc, the company would in the end find itself fighting evenly with its competitors. This means that operational effectiveness is not enough for the company to survive when it reaches a certain point. The company therefore needs a strategy in order to differentiate itself. But it is not only enough with a unique position, it needs to guarantee itself a sustainable advantage, otherwise there will be a risk of being copied. Trade-offs is important in order to stay competitive. If a company wants more of something it has to choose less of something else. Strategy is therefore also choosing what not to do.

> *"Trade-offs are essential to strategy. They create the need for choice and purposefully limit what a company offers." (Porter, 1996)*

Strategy includes combining activities. The company needs to fit its activities together in a chain, where its position is as strong as its weakest link. It is more difficult for a competitor to copy a company with strongly fitted activities than to imitate one particular activity. The company needs to perform many things well and succeed in integrating them, not only managing a few of them. The success of a strategy therefore depends on several things. (Porter, 1996)

Before we make a deeper analysis into the strategies of the Colombian telecommunication sector we need an overview of the history of the market.

## 1.3 A brief history of the Colombian telecommunication services

The telecommunication service provision in Colombia started in 1904. The operators then belonged to private investors. By the middle of the 20$^{th}$ century the state nationalized of the operators and the government had control over the sector. By 1989 the Congress approved the 72 Law which ended the monopoly. Since then, the telecommunication sector in Columbia has gone through dramatic changes through the liberalization process. It came to be based on free competition. (Ruz et al, 2005)

The law 37 of 1993 introduced the legal framework for the bidding process of cellular telephony. The bidding processes took place in 1994 and cellular telephony became a public

service with participation of private national and international investors. The purpose for doing so was to attract investors from the national and international sector. (Ruiz et al, 2005)

Because of economies of scale Colombia ended up with two large operators; America Móvil - Comcel (a Mexican operator) and Telefónica de Móviles - Movistar. In the year 2000 a new law (Law 555) was approved. It regulated the conditions for the bidding process of PCS (Personal Communications Service) in three regions as they were designed for the cellular service. In 2003 a bidding process was held and a third company, Colombia Móvil - OLA, entered the market. (Ruiz et al, 2005).

There are three mobile phone operators in Colombia today with their own net; Comcel, Movistar and OLA. They operate throughout the whole country in a highly competitive market and successful strategies are and have been crucial for their survival in the constant changes. After this brief overview of the Colombian market we will next formulate the subject of this thesis.

## 1.4 Problem

Our focus for this thesis is to look into what strategies the Colombian mobile phone operators are implementing to in their companies. We intend to mainly look in to the strategies of the strongest and the weakest company in the market to see how each of them has tried to stay or become competitive in the market. Our intention is to investigate if the generic strategies which Porter developed with are applicable in such an industry as the telecommunication sector. Therefore we also base our analyses on work done by other strategists who can help us get a broader picture of the theories on the subject to complement Porter and also criticize his strategies. In order to find out if Porter's generic strategies can be applied in the telecommunication market, we will investigate the operator OLA to understand the strategic thinking the company had when entering the market and also how the most powerful company on the Colombian market, Comcel, had to change and develop its strategies in order to match OLA and keep its market shares. How did these companies make themselves competitive in the high speed developing market and what did failure to succeed depend upon? Therefore we have an interest in finding out what the strategies of the Colombian mobile operators are and how they have developed in order to be successful in the market. Our purpose with this thesis is formulated below.

## 1.5 Purpose

Through our research we want to investigate how the mobile phone operators in a high-speed developing market, such as the Colombian, compete with each other in terms of their strategies and how Porter's three generic strategies are applicable in the telecommunication sector.

## 1.6 Limitations

The largest limitation of our study is the inability to visit the Columbian companies which we are describing in our empirical research. We are not able to see if our findings through reports and interviews are coherent with the acted strategies within the companies.

There is an incredible amount of different theories and thoughts on the subject, making it impossible to dwell in to all of them. We will focus on the theories we consider to be most important in order to understand our empirical data. Next we describe why we find the Colombian telecommunication industry as such a fascinating subject.

## 1.7 Why the Colombian telecommunication industry

The telecommunication industry is growing at a very fast pace all over the world. It is a market with an extremely high rate of development. In Columbia, the market penetration growth is exceeding the other Latin American countries and a high-speed developing market has been created. The Ministry of Communications in Colombia reports that in the last quarter of 2005, 3.562 million new users were subscribed to mobile phones, that is to say, 39 557 per day, 1649 per hour or 27 per minute.

This in turn creates a need for well developed strategies in the three mobile phone companies in order to be competitive in the market and keep or increase the market shares. Our interest in the Colombian market lays in its high speed development and how the three mobile phone companies try to compete in it.

## 1.8 Earlier studies

There are many earlier studies discussing Porter and his three generic strategies. Porter's theories are among the most well-known within management schooling and they are tested in many different settings. One article very much like this thesis is the one written by Kim, Nam and Stimpert (2004) investigating the applicability of Porter's generic strategies in the digital

age. Also Wright and Parsinia (1988) have done real case studies about Porter's generic strategies. We will make use of these studies both in our theoretical section and in our analysis.

# 2. Method

The previous chapter introduced the purpose of our thesis. In this section we describe the journey towards answering the problems we formulated in the beginning. We explain how we have worked in order to get our information and the process of analysing it. Also included in this chapter are problems we encountered throughout our research.

## 2.1 Problem formulation

When it came to our knowledge that our university held a course in cooperation with the organisation SIDA (Swedish International Development cooperation Agency) our interest aroused. Various businesspeople were attending the course from developing countries all over the world. Our interest was caught from the beginning by the Colombian telecommunication market which seemed extremely fast growing and advanced in comparison to other market in developing country. We therefore wanted to look in to the strategies among the mobile phone operators, with Porter as a background try to see why one company can be successful while others fail. We found that by looking at the strategies of the three different mobile phone operators in the Colombian market we would be able to see how the companies operate in the market.

The Colombian market has gone through dramatic changes over the last period of time and the increasing competition makes the subject of strategic choices tremendously important for the telecommunication companies.

## 2.2 Data collection

In our empirical study we have used both primary and secondary data. When the secondary data has failed to answer our questions we have used primary sources to complete the picture. Both sources have been of equal importance in our search for data and we have tried to be objective in our choice of data in order to achieve validity which is crucial when obtaining a true conclusion. (Ghauri & Grönhaug, 2005).

### 2.2.1 Primary sources

The most important primary source has been the three Colombian participants of the SIDA course, both through interviews and discussions.

To establish a trustworthy and credible relationship with the participants (Ghauri & Grönhaug, 2005) we spent time with them both inside and outside the classroom. Therefore we got to know them on a deeper level which made them feel more comfortable when discussing their companies.

Through our open discussions and interviews with the Colombian participants we have been able to gain a clearer picture of the Colombian telecommunication market of today and its history. Because of the variance in the three delegates' employers we were able to get a broader picture than if they would have come from the same company. One problem we encountered was that only one of the three mobile phone operators was represented, the other two delegates came from the regulatory office and from a broadband company. But through the delegate from the regulatory office we achieved a greater picture of the market as a whole and she also contributed in the way that she gave us further people to contact in each of the three companies.

The difficulty in performing open discussions with a valid outcome is to get honest answers. Having persons involved in different companies may have affected them to answer in a way that makes their own company look better than it really is. We do think we came around that problem through not having all the three mobile phone companies represented. The participants did not have to feel threatened or competitive towards each other.

In order to get information from each of the companies we later contacted one person in each company. Their positions were varied but they all worked more or less with strategical choices for their company. Our first step was to interview them by mail and later call them in order to get a more complete answer.

Another very important source has been an interview with an employee at Ericsson de Colombia.

### 2.2.2 Secondary sources

Our intention has been to find as much information as possible through our secondary sources so that we could fully take benefit from the interviews with the employees at the three companies and Ericsson.

The most important secondary source for our research has been the information contributed from the MCR (Ministerio de Comunicaciones República de Colombia, regulatory office) in Colombia. The diagrams and numbers in our analysis are all from the reports handed out by this office. The second most important source has been the reports written by the SIDA delegates. We have had access to three reports written by each of the

participants at the end of 2005, and also one report written by four Colombian participants in the beginning of 2005. Through reading these we came up with our topic, problem formulation, method, how to collect the empirical material and what theories that were required to be able to understand our data. The reports were focused on the company they worked in, its position, its strengths and weaknesses, and its future possibilities. All the reports were written with the perspective of Porter's models and theories which therefore made it natural to use his research.

Other important secondary sources have been various; statistical sources, annual reports from the three companies, reports written by external and neutral companies, etc.

## 2.3 Critical stand towards our method and data

The largest problem we encountered when collecting our data was that some of the interviewed employees at the mobile phone companies wanted to avoid some of our questions. They considered the questions to be a bit too sensitive and the risk of their internal strategy being spread. That is an understandable concern and we did not pressure them to answer. Through our secondary sources we came around this problem and achieved more complete answers than we would have if we only had interviewed the employees in each company.

Based on the above described situation we were also aware of the fact that both the delegates of the SIDA course and the other employees at the companies may have answered the questions in favour of their own company and left out information which they considered to be sensitive. According to Ghauri and Grönhaug (2005) the company interest may influence the conducted research. This is a concern in many earlier studies and hard to avoid especially when dealing with private companies in highly competitive markets. Although, through collecting the majority of our data from the regulatory office we were able to come around the problem and obtain reliable information.

Another criticism of our empirical data is the calculation of ARPU (Average Revenues Per User). In the majority of cases when ARPU is calculated, the ARPU includes an income from the subscribers. In our case ARPU only includes the actual air time.

# 3. Theoretical approach

Earlier chapter was a description of how we conducted our research and analysis. Next step is to sort out what theories we are using in order to reach a deeper understanding of the Colombian telecommunication industry. In this chapter we describe different theories that will help us approach our problem and draw some conclusions from our data. The interest in Porter comes from the widespread use of his theories. His theories have been used in many companies for over twenty years and are still the most read and studied of the different strategical theories. We will take a critical stand towards these theories though in order to give a broader picture.

## 3.1 Three generic strategies

> *"Strategic positions can be based on customer's needs, customer's accessibility, or the variety of a company's products or services." (Porter, 1996)*

Porter (1990) means that a firm's long tern survival in an industry depends on the pressure from its competitors and their forces. Therefore the firm must choose a market position in which it has a competitive advantage. This position is the `competitive scope` or the firm's target area within the industry. The firm must for example choose the variety of products it will produce, distribution channels it will employ, types of buyers it will serve, the geographical areas in which it will sell and mainly compete. One reason why competitive scope is so important is that the industries are segmented. All industries have products that can be differentiated in some sense. If it by some reason is impossible to differentiate the product physically it is always possible to differentiate the service around the product. Serving different segments requires different strategies and different capabilities. Competitive scope is important because firms can gain competitive advantage through competing globally or internationally. There are two basic position identified; lower cost and differentiation. Competitive advantage in lower cost or differentiation results in a higher productivity than that of the competitors.

| | | COMPETITIVE ADVANTAGE | |
|---|---|---|---|
| | | Lower cost | Differentiation |
| COMPETITIVE SCOPE | Broad Target | Cost Leadership | Differentiation |
| | Narrow Target | Cost Focus | Focused Differentiation |

*Figure 3.1 Three generic strategies. Source: Porter (1990)*

"Today's smart marketers don't sell products; they sell *benefit packages*. They don't sell *purchase value* only; they sell *use value*." Philip Kotler in *Kotler on Marketing*

### 3.1.1 Cost leadership

Porter (1990) further writes that choosing a lower cost strategy means that the firm is able to produce the product cheaper than its competitors and there can only be one cost leader. The sources of cost advantage depend on the structure of the industry. It is necessary that the firm has a broad target and serves more than one segment. A lot of companies may even operate up or down streams in the industry. The firm often sells standard at acceptable quality and service. The low cost results in a higher output using less input than the competitors require.

According to Shapiro and Varian (1999) a firm that is able to sell more than other firms will have the lowest average cost. This allows the firm to make money when others can not. But to sell more the firm will need to lower the price; this also means that the firm has a smaller profit on each unit sold. If this works out the firm has to make up for the lost revenues in volume. In traditional industries reducing the average cost of production is focusing on cutting down the unit cost of production. With information goods, unit cost of production is negligible. The basic idea of reducing cost of information goods is to increase sale volume. Usually it does not help much to focus on the unit cost of information goods, because the firm produces one copy and sells the same copy over and over again.

This is a demanding approach because the company is required to look for how it can reduce costs all the time. This takes a lot of control and time for the manager. The advantages of having cost leadership offer a defence against mighty suppliers by offering more flexibility towards the increasing cost of input goods. In addition it usually brings the advantage of scale as well. Having this approach protects the company against Porter's five forces of competition, because price negotiation can only affect the economy until the next efficient competitor's profit is gone. Due to this, they are less effective competitors and will be affected first from pressure from other forces. To reach this cost superiority the company needs to have a big market share or other advantages.

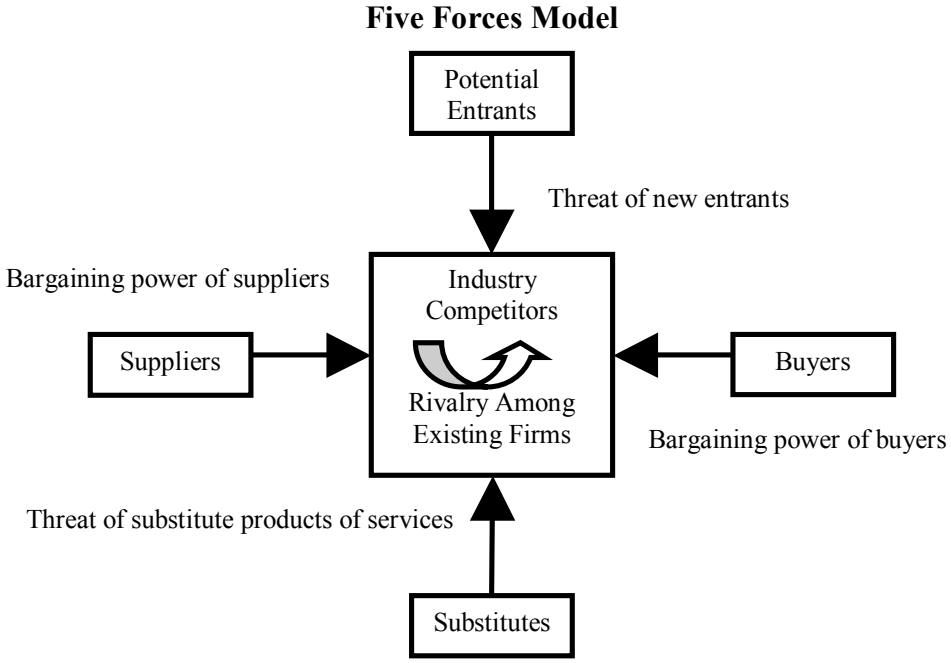



*Figure 3.2 Five forces model. Source: Porter (1985)*

### 3.1.2 Differentiation

> *"A firm can outperform rivals only if it can establish a difference that it can preserve."(Porter)*

By choosing a differentiation strategy Porter (1990) means that the firm is able to provide unique and/or superior value to the product more efficiently through quality, special features or after sale service. There can be many differentiators in an industry. Differentiation allows the firm to add a premium value to the product, which leads to a higher profit than that of the competitors. The differentiated firm makes higher revenue per unit than the competitors, because of the buyer's special demand.

Shapiro and Varian (1999) write that if the firm's strategy is differentiation, the firm must add value to the product, thereby distinguishing the product from the competing products. The firm can not let the product become a commodity because when that happens the product has lost its value as a differentiated product. Therefore the firm must do everything it can to make sure that there are no close competitors. It can do so by differentiating the product from other available products.

### 3.1.3 Focus

It is discussed by Porter (1983) that firms in the same industry can choose different competitive scopes in the same segment. The basic choice is between a broad target and a narrow target within the same segment. The narrow target is a well defined market and the broad target is a larger market defined in a wider perspective.

In 1990 Porter further writes that it is difficult, however not impossible, to have both lower cost and to stay differentiated relative to the competitors. It is hard to provide unique performance, quality or service and at the same time have lower costs when the products are costly to produce. The worst scenario is to get stuck in the middle or to have more than one type of strategy at the same time, because then the firm is unable to reach the right target of buyers.

According to Shapiro and Varian (1999) focus is achieved by personalizing the product. If a company succeeds in creating a unique product it will have breathing room to both personalize the pricing and to design the product. There are two ways of adding more value to a unique product and thereby being able to focus on a narrow target. The first one is to personalize or customize in order to generate more value for the customers, offer value adding services to achieve a closer relationship between the customer and the personalized product. The second one is to establish pricing arrangements that capture as many of the values as possible.

An example of a personalized product or service can be when a customer is interested in mobile phones, music and technical gear. Personalized media can show news and headlines on those topics. What is even more interesting is that this media can show ads that are closely related to these topics, for example memory sticks which are used for the music player in phones, new downloads of music or other accessories.

## 3.2 Competitive strategies

It is discussed by Porter (1983) that every company has a competitive strategy; either it is official or unofficial to the market. There is a frame with four key factors that the companies can formulate into a competitive strategy. The first one is based on the company's strengths and weaknesses and describes its assets and skills in comparison to its competitors. Financial resources and technical skills are included in this key factor.

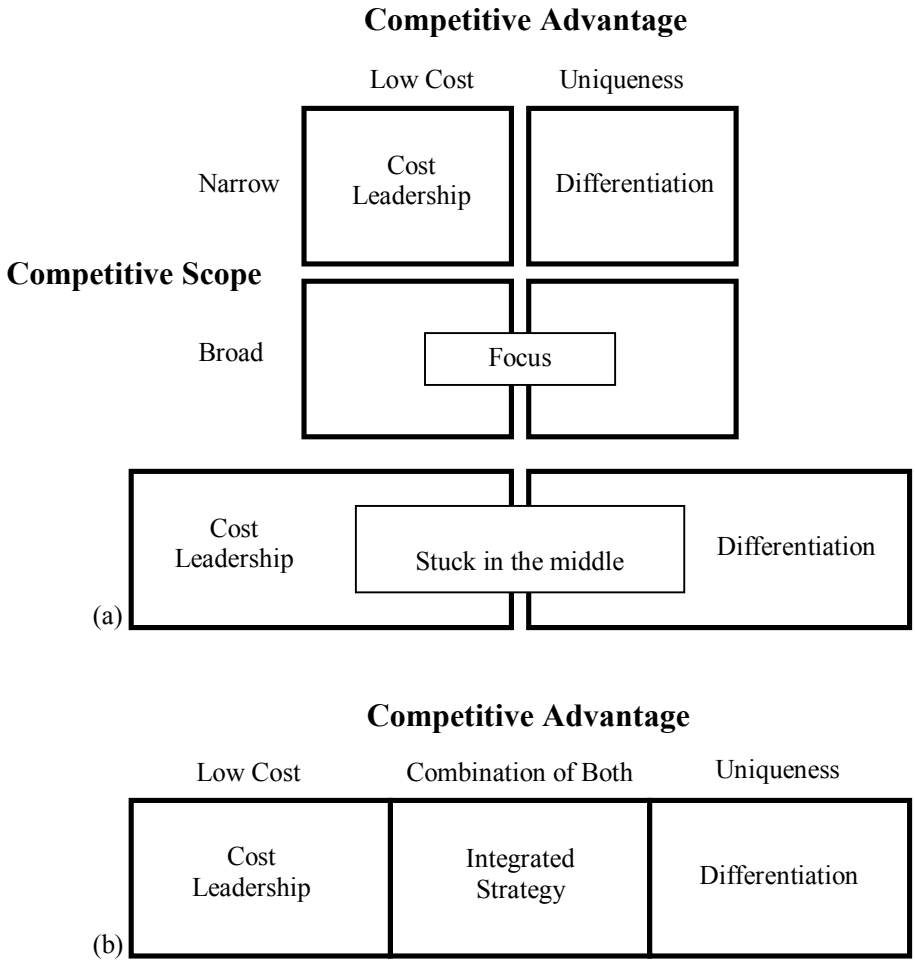
Another key factor is the value of the company's employees. This factor gives the company the motivation and need to actually take the strategy in to action. Together with the strengths and weaknesses it decides the inner boundaries for which strategy the company successfully can adapt. The external conditions are decided by the branch and the surroundings. The possibility of development and threats for the company settle the competition with the risks and possibilities.

The last key factor includes the expectations from the society, the policy of the government, social commitments and development of the norm. To get a successful business the company needs to take these four factors into consideration.

In his book of 1990 Porter writes that the competition in a branch reduces the demand of profit in the investment minimum. The five forces of competition together settle the insensitivity in the competition to a branch and the profitability, and that force which is the strongest decides which strategy it is going to be.

According to Davidson (2001), a company's competitive strategy is choosing a favorable industry. There are two main questions and they both have to work, otherwise there is no meaning for the company to go in to the industry. The first one is the profitability in long term and which factors that determine that. The second one is which components that are affecting the companys' position in the market. This question is important to ask no matter if it is a local or a global company. To be able to see if the industry is profitable, the company has to do some research in the in to the industry's competitors, suppliers, buyers, potential entrants and substitutes for the product or service. These are factors that determine the company's required revenue in the end because they are all factors that affect the prices, costs and the demanded investments. According to Davidson the next step is to decide which strategy to use. If this does not happen the company will be stuck-in-the-middle and often become a failure. Davidson also says that a company can work to have more than one strategy but it is risky, because having both a cost leadership and differentiation is expensive.

Research that Kim, Nam and Stimpert (2004) mention in their article found that firms employing only one of Porter´s generic strategies outperformed companies that applied elements from different strategies into their company. Companies who tried to achieve two or more different strategies at the same time also failed to perform at their best, depending on the lack of clear directions. Several other studies argue, however, that the development of any successful business strategy has to reflect the larger competitive environment. Since industry environments do not specifically prescribe the need for cost leadership or differentiation, there is little reason to believe that one strategy is the best choice in any given environment. The fast changing environment in which companies operate today demands flexible combinations of strategies. Kim, Nam and Stimpert conclude that integrated strategies combining elements of cost leadership and differentiation will result in higher performance than cost leadership or differentiation do individually. But still, as Porter wrote, stuck-in-the-middle has to be avoided; the integrated strategy is to be seen as a new generic strategy.




*Traditional classification of competitive strategies. (a) Classification of competitive strategies whit focus embedded. (b) Competitive strategy as a continuum.*

*Figure 3.3 Classification of competitive strategies. Sources: Kim et al, (2004)*

Wright and Parsinia (1988) have also done real case studies about Porter's generic strategies. They found out four main reasons to criticise Porters generic strategies. They are following;

- Choice
- Only one strategy
- Focusing
- Generic strategy in fragmented business

The first criticism of Porter, also by these authors, is that the company has to choose only one of the three strategies. How often can a company choose their own strategy? It depends on what kind of resources the company has access to, the size of the company and what kind of industry it is working in. Larger companies often have access to better resources and can compete with lower costs or differentiating, while the smaller companies are forced to compete with the focus strategy. The second criticism is that Porter says that a company would choose one of the strategies. Wright and Parsinia (1988) have viewed Philip Morris and Holiday Inn Corporation as examples in their article of businesses that, with great success, have used multiple strategies. The third criticism is the focus strategy. With a focus strategy a company can either choose to have cost focus or differentiation focus. The strategy is based on the difference between the segment that the focus company has and that of the other segments in the industry.

Porter (1983) means that the focus company has advantage over other companies, because other broad target companies can not successfully serve one segment at the same time as they serve other. Focus strategy can only be successful for smaller companies. Wright and Parsinia (1988) argue that the larger companies can not adopt the focus strategy alone because serving a small segment can not be worth the big effort in marketing and research for the segment and generate big revenues. The fourth criticism concerns the market. The three generic strategies might be successful if the market consists of some market leaders and some small businesses. Then they clearly can be the cost leaders and smaller companies can use the focus strategy. In a more fragmented industry there has to be more than one strategy operating because the size and position of the companies are not clear.

In an article by Powers and Hahn (2004) they looked into whether or not there are any links between competitive methods, generic strategies and firm's performance. Porter's definition means that a company has to choose one of the three strategy types otherwise the company will be stuck in the middle and not perform to its capacity. The article shows that in

financial businesses a cost leadership strategy did perform better than company that had differentiation and focus. However, those, which have chosen differentiation and focus, performed better than the company that was stuck-in-thee middle. Day and Wensley (1998) also say that choosing a strategy based on the positional advantage in the market will make a firm successful, because it is dependent upon which resources are available to them.

## 3.3 Product choice

In many cases less information can be more valuable according to Shapiro and Varian (1999). The reason is that many users have trouble identifying which product that will be appropriate for them, especially if the customer is new to the product or service. Then they have little or no information of what is a good or bad product. Goldilocks Pricing means that the best way to launch a service or product is not to have two versions of it; instead the company should have three. This depends on human psychology; most people try to avoid the extraordinary and want to seek the "normal" to avoid choosing wrongly. Having three alternatives a company is going to increase their revenue. That is why the company should create its strategy so that it sells the standard version. If the company has more alternatives it can make the standard version look more attractive. Because it is easier for the customer to choose, it seems like as if the standard alternative is making the buyer feel that he or she is making a good choice by not buying the extreme version.

Arvidsson et al (2005) argue that the decision for a person to subscribe to the mobile service, which is required in order to generate traffic, depends on the cost of using mobile service, subscription fees, usage tariffs and the cost of the phone (terminal). One assumption can be made in the mobile service; the mobile service has a demand curve that increases when the price goes down.

The question is how to measure the actual cost. The operators offer several different choices for the customers and the different opportunities of choice are changing almost all the time. This environment makes it difficult to measure the average cost on the mobile market.

Assume the actual cost for the operator is the same for all users. The revenues for an operator are often measured as the ARPU and often measured in a period of a month. To approximately measure the actual cost per minute, contracture a quasi-price as ARPU divided by MoU (Minutes of Use).

## 3.4 Usage behaviour

Shapiro and Varian (1999) argue that technologies with strong network effects tend to be followed by explosive growth. This pattern results in positive feedback and is based on user's growth; more and more users find adoption worthwhile. In other words; the product/service attracts the critical mass and takes over the market. This makes the stronger grow stronger and the weak gets weaker. It is unlikely that all firms will survive.

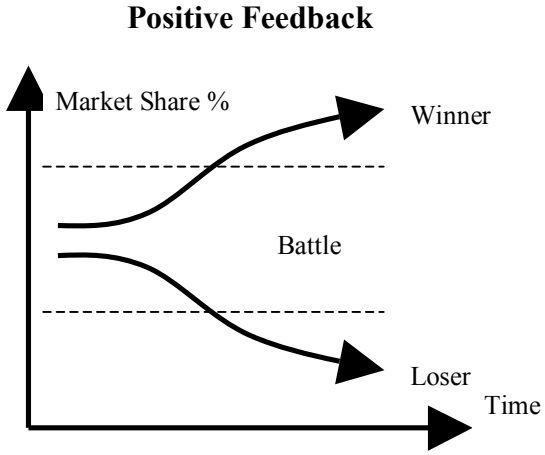



*Figure 3.4 Positive feedback. Sources: Shapiro & Varian (1999)*

The benefit for a user increases as more users who adapt to the network. Who wants to be the only one with a mobile phone and no one to call to? In other words; it is better to connect to a larger network then to a smaller one.

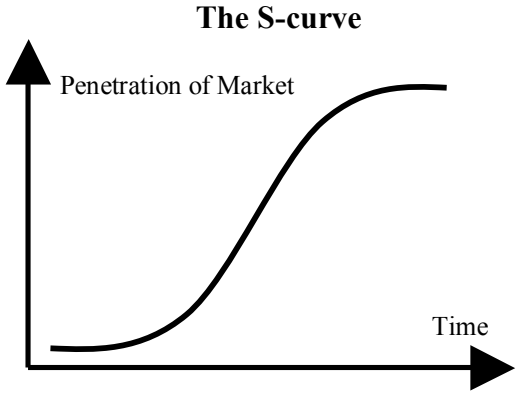



*Figure 3.5 Lifecycle for the S-curve (adoption dynamics) Sources: Shapiro & Varian (1999)*

The positive feedback effects in a network often result in explosive growth, as can be seen in the model for the S-curve when it is on its way up.

Shy (2001) means that the network effect can be used as a strategy when the demand dominates over the price effect. This means that the inverse demand of the S-curve is upward sloping at small demand and becomes downward sloping in high demand.

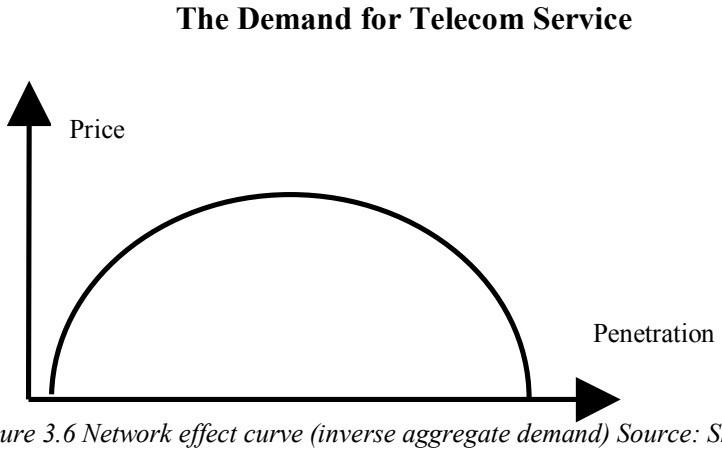



*Figure 3.6 Network effect curve (inverse aggregate demand) Source: Shy (2001)*

Small demands subscriber's willingness to pay raises the total demand, since the network effect dominate the price in a small network. When the network reaches the top of the haft circle, or half of the population, the negative price effect dominates the network effects.

Rogers (2003) has made a model over five categories of individuals in a society where every category adopts to new innovation at different stages of a product's lifecycle. Next figure shows the different categories.

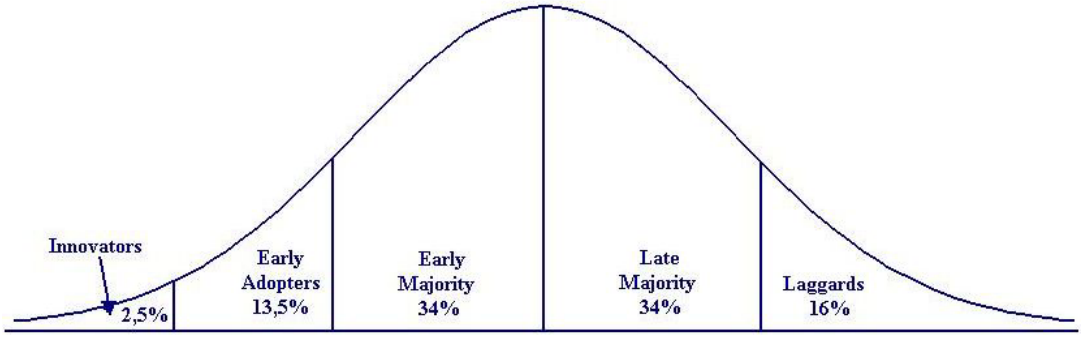



*Figure 3.7 Adopter categorization on the basis of relative time of adoption of innovations. Source: Rogers (2003)*

## 3.5 Market penetration pricing

It is discussed by Kotler (2005) that setting a low initial price indicates that the company wants to penetrate the market fast and gain high volume quickly. The company wants to capture a large market share with minimal economic efforts for the customer. The companies which are using this kind of strategy set the price as low as possible to attract as many customers as possible. After winning a large volume they can decrease their falling costs which will lead to a higher long run profit. The company uses price as a competitive weapon to win a market position and market shares from the other competitors, which will help them to establish a market brand in the industry. They enter the market with the strategy to get a lot of customers, which will help the company decrease their cost and therefor way become a cost leader in the market.

To apply this method successfully there are two conditions that have to be fulfilled. The first one is that the customers have to be price sensitive so they buy more of the product when the price is low, and the second is that when the volume increases the company´s product and distribution cost must be falling.

The idea with this kind of approach is that the company with a low price could attract many customers while keeping the competitors out. But this will only work if they company sticks to the low price position, otherwise the advantage will only last for a little while and then the competitors will catch up. That is why this kind of strategy is a bit risky. The company has to be sure that none of the competitors are going to set the price lower than them, otherwise the concept fails.

According to Porter (1983) a company has to choose only one strategy otherwise the company will not become successful. The low price also makes it risky because it will make the consumers very price aware and therefor it becomes more difficult to increase the prices if the company needs to.

In his article Keegan (1989) writes that the Japanese business people have been the most successful and frequent users of this kind of strategy. They often use aggressive penetration pricing which means that they are cutting the prices dramatically to get fast response. They have entered the USA market and have become very successful by this aggressive strategy.

## 3.6 Strategic competitiveness

Acting against the competitor can be tough for the existing player that has a big share in the branch according to Porter (1983). The company is forced to do some consideration because of the newcomers. The existing company often spends an essential amount of money to protect the market share it already possesses. Even if it sometimes is a good idea to take action towards newcomers, it is often better to use the resources of the company to make it stronger and develop the business. The existing business can draw advantages from the newcomers when they spend a great amount of marketing money on introducing the industry's services or products.

For example; when the Swedish operator 3 launched the 3G network, the company spent a lot of money to market the services which could be used in the net. Vodafone, Telia and Comviq got a free ride on the introduction and made the customers aware of their 3G services.

In his book of 1983 Porter further argues that high initial costs and precipitous reducing of costs is common in a new market. In the telecom industry there are large costs for buying the license and building the network. The same goes for new technologies in the industry; in the beginning it takes time to learn but the more the user uses the technology, the more revenues the company gets.

The described theories will help us to better understand the strategies of the Colombian mobile phone operators. We will make use of them in the following chapter where we analyze the market.

# 4. Empirical data

This section describes the Colombian telecommunication's history and the market of today. The purpose is to give a picture of the companies operating in the market and use the information in this chapter as a base for our further deepening of data and analyze of it in the following chapter. The data originates from reports written by the delegates at the SIDA course, annual reports from the three companies, information provided by the regulatory office, CRT (Comisión de Regulación de Telecommunicaciones) and other material handling the issue. This chapter starts with describing Colombia's path from monopolistic scheme to the competition ruling the market today. It is followed by a description of what the market looks like today.

## 4.1 Market evolution

In Columbia the telecommunication service provision started in 1904. The operators then belonged to private investors. By the middle of the 20$^{th}$ century the state nationalized all of the countries operators and the government had control over the sector in terms of policies and regulation. The Government formed the company Telecom in 1950 and put it in charge of the provision of national and international long distance telephone services, under a monopolistic scheme. Telecom also provided local telephony, in urban and rural areas; telex, telegraph and services of data transmission. By 1989 the Congress approved the 72 Law which ended the monopolistic scheme. Private investment was again approved but under a licensing system. Since then the telecommunication sector in Columbia has gone through dramatical changes through the liberalization process. In 1990 the government issued the 1900 Law Decree. It created the juridical structure for the private investment, rules of competition and the introduction of quality as a principle of the service provision. In the disposition, the concepts and definitions of services and networks, value added services, mobile telephony, fixed telephony, national and international carriers, long distance voice services, were also introduced. But the international and national long distance services as well as international and national carrier services were still kept under the monopoly of the national public telecommunications company. In 1997 the opening of long distance voice services was granted and 2002 approved the opening of international carrier service. Changes affected the market conditions in the sector and a new economic model was introduced. In

1991 there was a change in Colombia's Political Constitution. This change was revolutionary to the degree that it established new market conditions in the public utilities sector. It introduced a new economic model based on free competition as a fundamental right, and of course social obligations in charge of private investors. The Constitution created a secure framework for private investment. This resulted in much more investment into the sector. In 1992 the regulators were given authority to promote competition and to control access charges for some of the services. The government also liberalized the provision of cellular telephony to some degree. (Ruiz et al, 2005).The law 37 of 1993 introduced the legal framework for the bidding process of cellular telephony. The bidding processes took place in 1994 and cellular telephony became a public service with participation of private national and international investors. The purpose for doing this was to attract investors from the national and international sector. (Ruiz et al, 2005) Colombia was divided into three regions; the East, West and Atlantic coast, each with two companies operating within the mobile phone services. These six firms paid approximately US$ 1200 for the licenses before they could offer their services and they also paid a periodical payment of 5 % of their incomes. The ownership was divided in two networks, A which could only receive private investments and B that had both private and public. The purpose was to promote both national and foreign investment and to have six companies competing, but because of economies of scale Colombia ended up with only two companies; the Mexican operator Comcel and Movistar, a Spanish operator. This resulted in less competition and no national investment. (Ruiz et al, 2005).


*Figure 4.1 Map over Colombia. Source: CIA – The World Factbook*

In the year 2000 a new law (Law 555) was approved. It regulated the conditions for the bidding process of PCS in three regions as they were designed for the cellular service. In 2003 the bidding process was held and a third company, OLA, entered the market. The company paid US$ 56 million, and a periodical contribution of 5 % of their income. The companies still has to pay the 5 % contribution to MCR today. (Ruiz et al, 2005).

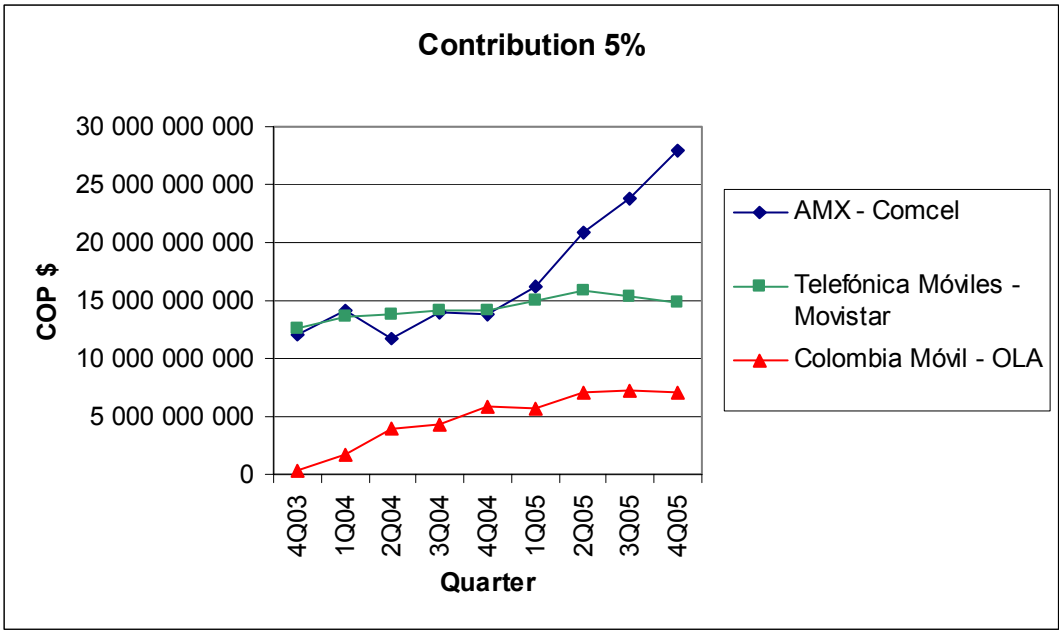



*Figure 4.2 Contribution of 5% of the income. Source: MCR*

## 4.2 Market situation

There are three mobile phone operators in Colombia today; Comcel, Movistar and OLA. Each of the operators has their own net and together their services add up to more than 30 percent of the total telecom income in Colombia. In 2004, eleven years after the licenses were approved; the number of subscribers of mobile phones surpassed the number of fixed-line users, as can be seen in many countries around the world. (Ericsson, 2005) The penetration rate of mobile services had now reached 22,9 %. (Ruiz et al, 2004) In 2004 the GDP of Colombia grew with 3, 8 % and the transportation and telecommunications sectors grew even more with 4, 9 %. (Ericsson, 2005) According to CRT the telecommunication sector is the second biggest investor in the infrastructure in Colombia (22 % of the total) next to the power sector (51 %). (Source: DNP) Current are that Colombia will have the highest growth in Latin America over the next two or three years. (Ericsson, 2005) In the end of 2005 the penetration of the mobile services reached 50,4 %. (Morgan Stanley, 2006)

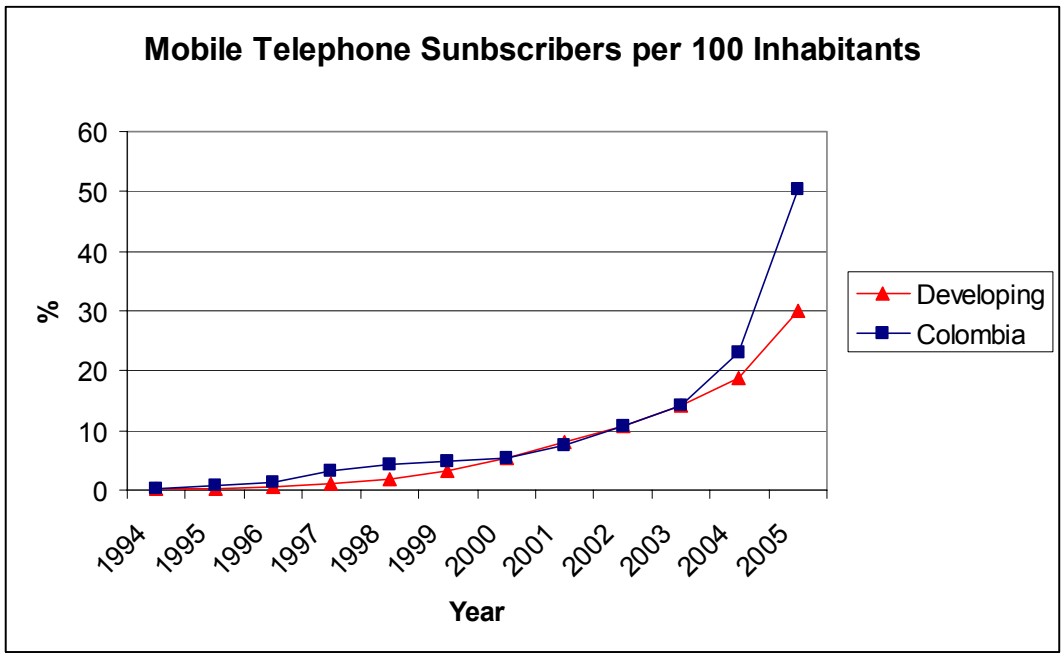



*Figure 4.3 Penetration over developing countries and Colombia. Sources: Morgan Stanley, ITU and forecast average increase percent calculating for developing countries year 2005*

Ericsson also predicts that Colombia has great potential for mobile growth. Today the country has the fastest growing wireless market in the region. One reason for this may be due to the fact that Colombia has some of the best telecommunications facilities in the Andean region. Messaging and mobile internet services are expected to grow and become increasingly important services. (Ericsson, 2005) Today, voice is the main service on the Colombian market. SMS is growing and recently interconnection agreements between the three mobile operators were signed, but still the mobile data services or mobile internet accesses are very low. Between 2001 and 2003 the CAGR (Compound Annual Growth Rate) of the mobile market has been 44 %. In 2003 Pyramid expected Comcel to strengthen its marketing and sales efforts as a result of more aggressive competition after the entrance of the PCS operator OLA (Ruiz et al, 2005).

The situation is expected to develop rapidly since there is strong interest from small companies, universities and communities in developing content and applications, which will take off in the coming months (2005) when operators start to focus major efforts on data services. During 2005 the operators had aggressive promotional campaigns for messaging and mobile internet services. Since January 2004 reality shows, radio stations and media in Colombia have been driving SMS traffic through voting and interactive programs. Some companies are also using these kinds of tools as marketing channels. (Ericsson, 2005)

During 2004 an important traffic increase was observed among the mobile operators due to high levels of competition, services offers, and the continuous generation of tariff plans. As

the penetration of mobile services in remote areas increases, due to tariff plans and deeper segmentation in Colombia an important part of the rural population will receive benefits from the mobile technologies. (CRT, nr. 4, 2005) 25 % of the population lives in rural areas while 75 % lives in urban areas. In 2005, the Colombian operators concentrated on capacity, coverage and convergence rather than mobile services. Coverage for voice and data services is needed mainly in rural areas, whereas capacity is needed in the cities. (Ericsson, 2005)

Colombia´s mobile market presented an important rate of growth from the introduction of competition in 2003, when the third mobile operator, OLA, entered to provide services. (Ruiz et al, 2005) The entrance of the new mobile operator forced the established cellular companies to change their technological standards from TDMA to GSM and CDMA 1X. The arrival of the new operator had an important impact on the offering of new services and technologies such as the appearance of WAP, GPRS, SMS, use of contents etc. According to Pyramid research "The expected entrance of a GSM operator (OLA) forced incumbents Movistar and Comcel to upgrade their TDMA networks to CDMA 1X and GSM/GPRS respectively." All operators now have new networks and Pyramid expects a slow but steady migration of high-end subscribers to these new standards, which offer more attractive handsets and enable more sophisticated services. (Ruiz et al, 2005) In 2004 and 2005 two important circumstances appeared that affected the business of the movable telephony. First it was the appreciation of the type of change, which became more evident in 2004. The second was the technological renovation that the movable operators undertook from year 2003, especially the migration towards the technology GSM. Both processes altogether allowed that the movable companies increased their levels of productivity; their costs diminished and transferred their efficiency towards a commercial strategy more aggressive than it was reflected in the promotion of new plans and tariffs. (CRT, 2005)

Although there are three wireless players in Colombia, realistically speaking Colombia is a duopoly between Comcel and Movistar. OLA has been in Colombia for more than two years and only has 9, 5 % market share of total subscribers. Comcel dominates the market in Colombia with almost 62, 9 % market share. This is two, three times higher than Movistar´s market share that has 27, 6 % of total subscribers. (Morgan Stanley, 2006)

The entry of the third operator resulted in enlargement of the mobile coverage and content development for mobile Internet and has led the consolidation of synergies with other sectors of the economy. For example, for the year 2004 the country witnessed the growing trend of SMS and the multimedia applications involving telecommunications, entertainment and information providers. Likewise, in 2004 the complex integration among operators,

content developers and providers took place in order to cope with the expectations of the consumers. In this way the operators are obliged to establish alliances and joint ventures to make possible the offering of bundled services, diversifying the portfolio of services for consumer satisfaction and generating value for the shareholders. (CRT, nr. 4, 2005)

Two of the three companies; Comcel and Movistar are cellular operators and the third one; OLA is a PCS operator. Each firm has its own brand and services which are easy to differentiate. The market has a very high start up cost, mainly represented by coverage obligations, license costs and infrastructure costs. The market is also hard to enter because of the huge amounts of money that the mobile operators have spent on advertising and brand building. External threats are low; there are no concessions available for new mobile operators even though the Telecommunication Ministry of Colombia is now studying the entry of a 4$^{th}$ operator. There are also economies of scale which makes the entry of a new operator difficult. The current companies have been developing activities in order to keep subscribers. Some studies show that they can spend $100 per user per year in order to achieve their goals. The broad variety of alternatives for mobile telecommunications such as Wi Maxx, Wi fi, e-mail, chat, VoIP, denotes in the mid-term a significant threat for the mobile firms. Projections for 2008 indicate that nearly 75 % of the international voice traffic will be transported through networks using VoIP technologies. With the strong presence of at least 6 technology companies, such as Nokia, Motorola, Siemens, Eriksson, Samsung and Sony, the sector has become a very challenging, innovating and competitive market. (Jaramillo, 2005)

It is discussed in the annual report on telecommunications the regulatory office of Colombia; the current situation which is denoted by the arrival of major international players outlines new requirements for operators in the market. It becomes imperative for national operators to find strategic alliances, optimize distribution channels and infrastructure usage, in order to offer services in a more efficient way and develop better content and applications for customers. The entry of the third national mobile operator and the consolidation of the first two operators have accelerated the substitution process between fixed and mobile services. This means that the long distance communications market is nowdays disputed by the three licensed operators, the mobile operators and the Internet service providers, enforcing the licensees to redesign commercial strategies and to diversify its portfolios of services. During 2005 the operators were competing with each other in order to attract the loyalty of the consumers. (CRT, nr. 4, 2005)

The wireless players are still focusing on subscriber growth, particularly in the prepaid segment, which grew three times faster than the contract segment during 2005. (Morgan

Stanley, 2005) Prepaid payment systems means less billing administration for operators and better cost control for consumers. The system appeals most to young users. (Ericsson, 2005)

Three factors have affected the rapid growth of the prepaid segment in the market: Healthy macroeconomic indicators, lower than average wireless penetration compared to other major countries in Latin America in early 2005 and aggressive GSM network expansion and an increase in retail distribution, especially by Comcel. (Morgan Stanley, 2005)

### 4.2.1 Description of Colombia Móvil - OLA

In the Colombian telecommunication market, OLA is the smallest company in terms of market shares and revenues. The company entered the market in 2003 and is therefore also the youngest of the three companies. OLA is the result of the agreement between two of the historically largest fixed operators in Colombia; EPM (Empresas Públicas de Medellin) and ETB (Empresa de Telecomunicaciones de Bógota). These two companies had the control over the telecommunication services in the regions of Medellín and Bogotá, which happen to be the most important cities in Colombia. In November 2003 the companies merged and created OLA with a participation of 50 % from each of the shareholders. The reason for the creation of this company was the fixed to mobile market substitution, in which the fixed lines represented a negative growth in opposition to the mobile increasing penetration (Ruiz et al, 2005).

The mobile business in Colombia is eleven years old but before OLA entering in 2003 in the national market it grew very slow. In eight years the country had only a 10 % penetration or 5 million subscribers. But during the last three years the market has gone through dramatic changes. The penetration is now near 40 % and the prices have decreased almost six times since 1998. The MoU is near double the MoU in 1999 (Ruiz et al, 2005).

OLA was launched aggressively from the start. It offered very low prices on the in network calls during three years and reached its 10 % market share quickly. Due to the fast development OLA experienced operational problems such as bad coverage and therefore lost some of its market shares and its ability to grow. OLA has experienced book losses during all of its years in operation. The company believes it to be a consequence of it being the youngest company in the market and because of the experienced operational problems (Ruiz et al, 2005).

OLA offers almost the same products as its competitors and has coverage in all the national territory. It offers telecommunication convergence products to the market as fixed services, internet access, paid television, mobility and data transmission. It covers 226 towns,

while Comcel covers 615 and Movistar 366. Comcel reaches 39,6 millions of people, Movistar 34,5 while OLA reaches 32,1 millions of 42,954,279 (July 2005 est) inhabitants. OLA markets itself as an emotional brand; close to the people, warm and especially offered to younger people. It is also a national brand and markets itself as that in order to compel to the customer´s patriotic feelings. The company has a bad services brand reputation due to its earlier operational problems and also a smaller sell distribution system. The company still experiences internal operational problems related to the growing business knowledge. (OLA, 2005)

### 4.2.2 Description of America Móvil – Comcel

Comcel of Colombia is a subsidiary of America Móvil. America Móvil has subsidiaries and activities in thirteen countries in Latin America and in the USA. America Movil's interest in Comcel is 99,2% the company has different brand names in almost every country. It has operated in the Eastern and Western regions of Colombia since 2002 and in the Atlantic coast (Caribbean region), since February 2003.

Comcel's main business is to provide wireless voice and data services. The company operates nation, with the best coverage and quality, especially outside the major big city areas. At the end of 2005, the company covered approximately 92% of the population. Thus the company's slogan in advertising is the following one: "Colombia is a Comcel territory". Strength of the company is their distribution network with high numbers of retailers. They have both independent local distribution channels as well as a direct sales force.

The major focus for Comcel in 2006 will be margin expansion. The forecast is EBITDA margins over total revenues of 33,4 % in 2006, up from 17 % in 2005. Comcel has the largest GSM network in the country, with better coverage and quality than its competitors, especially outside the major metropolitan areas. Retail distribution is also another of Comcel´s strengths, with the highest number of retail points in the country. (Morgan Stanley, 2005).

At the end of 2005, Comcel offered thirteen various handsets below 100 US$, which is the lowest variety of handsets in the Colombian market for operators. At the same time, they charge the highest price along with Movistar. Comcel is the second biggest company to spend money on marketing in Colombia. At the end of 2005, Comcel had spent 58 400 737 million COP$ on commercials, and this is 61,09% more than last year. The company's media channels are national radio with 42,29%, TV with 42,08%, daily newspapers 11,90%, regional TV with 0,84% and 2,89 % with subscriber magazines of the total advertising budget.

At the end of 2005 Comcel's revenues amounted 3 271 COP$, the EBITDA 621 and the EBIT 181 billions of COP$. In another words, this means that EBITDA has decreased to 19 % from 26,7% and EBIT has decreased to 5,5% from 5,6% from the previous year (y-o-y). According to Comcel´s annual report in 2005 this impact corresponds to subscriber acquisition costs. In the beginning of 2004 Comcel has networks for offering services for voice and data traffic through TDMA, GSM, GPRS and EDGE. They also offer data based wireless services such as SMS, MMS and WAP notifications, info entertainment, location-based services and Internet access. Today they possess two radio frequency spectrums; 850 and 1900 Megahertz.

### 4.2.3 Description of Telefónica Móviles - Movistar

Movistar is a nationwide company and ranked 3rd place in the market capitalisation and have over 122 million customers worldwide. Movistar is the second largest telecom operator in Colombia with a customer base over 6 million, which is an increase of 83 % from year 2004. The Telefónica Group bought Bellsouth´s mobile operator in Colombia in November 2004. Movistar could not offer GSM/GPRS services until 3 quarter 2005 when they requested the Colombian Ministry for approval of 1900 MHz bandwidth to increase the country coverage and provide better services. Now they possess the frequency spectrum: 850 and 1900 MHz, which are the same as Comcel, while OLA has only 1900 MHz bandwidth. Movistar did not experience a huge growth because of the lack of being able to offer this kind of services and bandwidth. Although, in year 2004, Movistar worked with expanding the retail distribution and managed to, during 2005, gain a larger customer base with higher average revenue per user. Considering this and the big amount of marketing money mentioned above the revenue in 2005 reached 900 million US$. Another reason for the increase in revenue has been the impact of increasing handset sales.

Movistar has the strategy; *"Aiming to satisfy its customer's overall need for communications."* The operator has built its business on five cornerstones and the main focus is on the customer. The first and most important is to offer quality and compliance towards their customers. The second is innovation; the third is operations excellence, the fourth and fifth commitment, is leadership in people and a corporative communication and identity. Movistar also markets itself as being a company which puts a great effort into helping the environment and the people who live in the country by trying to decrease the digital divide for example.

Movistar has been presenting a much slower growth as the company only launched GSM/GPRS services in 3Q05. Movistar entered the Colombian market with the acquisition of the BellSouth assets a year ago. The company is still working to expand retail distribution in Colombia, but it is expected to see an increase in market share of net additions in the next year. (Morgan Stanley, 2005)

During the December selling season OLA had the lowest handset entry prices for prepaid users at 45 000 COP$, while Comcel and Movistar entry price for prepaid users was 55 000 COP$. Movistar offers the widest variety of handsets under 225 000 COP$ with 26 models followed by OLA with 14 and Comcel with 13.

Despite the fact that Comcel entry price was higher than OLA and that it offered fewer handset models than its two competitors, Comcel was able to get a much higher share of net additions during the quarter. Comcel success is a result of better network quality combined with a much larger retail distribution. The higher the number of handset models in a store, the more the customers get confused. (Morgan Stanley, 2005)

When reading these general facts about the Colombian mobile phone operators we can easier understand how the market works. To reach a deeper knowledge of it the next step is to go in to details about each of the operators and to make a comparison of the three.

# 5. Empirical study and analysis

The following section is a description of the Colombian telecommunication market combined with an analysis of it. The diagrams and figures show each of the three companies in comparison to each other, explaining how they have acted over time and how their strategies have changed along with the development of the market.

## 5.1 Gaining market shares

The following diagram visualises the market shares of the Colombian operators over the last nine quarters.

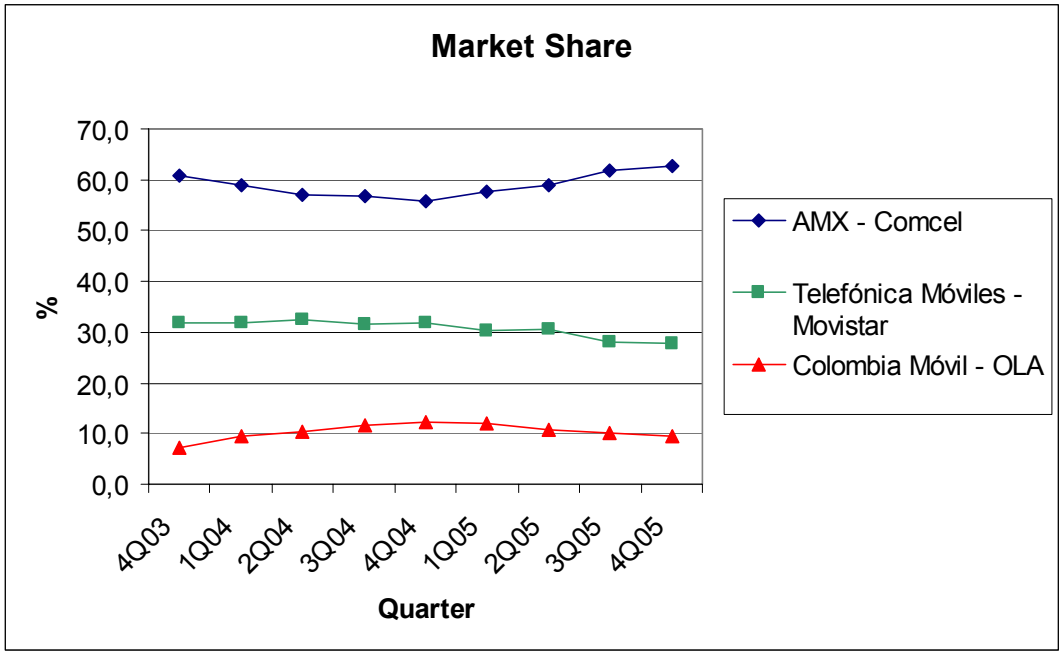



*Figure 5.1 Market share. Source: MCR*

Comcel has the largest market share and has been the market leader over all of the nine quarters. There is a major difference between the largest and the smallest company when it comes to market shares. The diagram shows that Comcel is loosing market shares when OLA and Movistar are winning and the opposite.

OLA´s great entrance in to the market and its winning of market shares from the other companies probably was due to the introduction of new technology and that they used penetration pricing strategy. OLA´s explosive growth in the market and their winning of market shares from the other companies stagnated fast and after that they even reduced their

market shares. According to what Porter says about drawing advantages from newcomers who are marketing new technology to customers, Comcel and Movistar could easily benefit from the subscriber's new awareness of the technology from OLA´s strong marketing in the industry.

## 5.2 Marketing

The diagram visualizes what operators in Colombia have spent on marketing at new and existing subscribers, in the years 2004 and 2005.

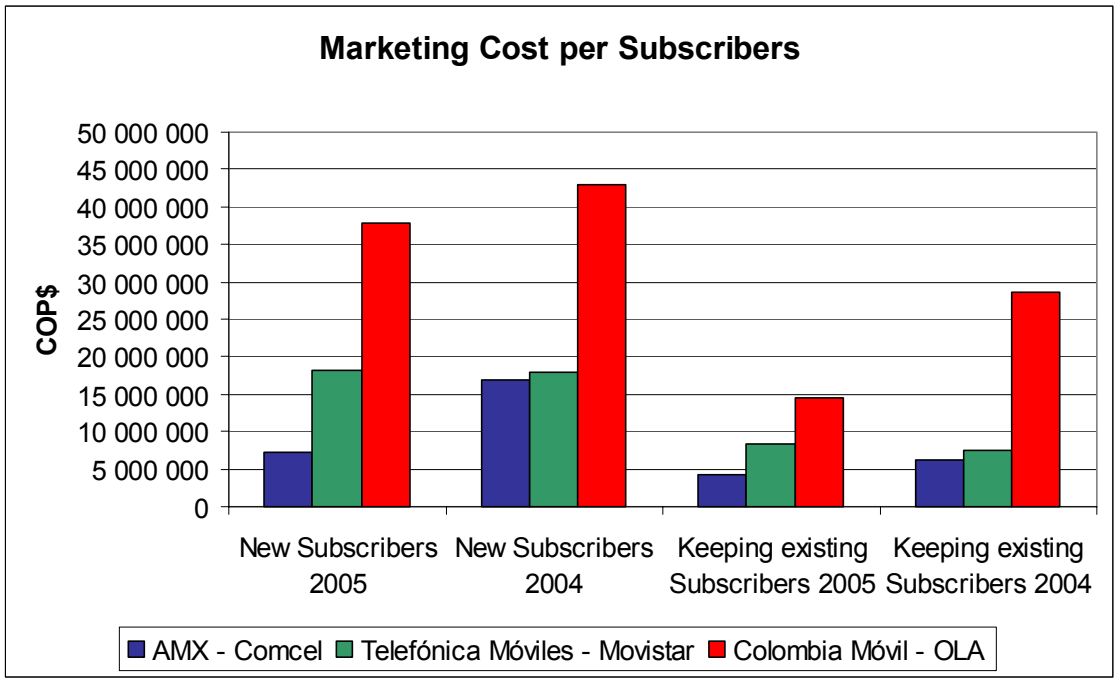



*Figure 5.2 Marketing cost per subscriber. Source: Revista Publicidad & Mercadeo*

OLA spent a greater amount of money both on getting and keeping existing subscribers compared to the other operators. Comcel increased their marketing cost by 61,09 % to 58 400 737 millions COP$ between 2004 and 2005; Movistar by 101,43 % to 49 772 735 millions COP$ and OLA decreased with 18,20 % to 30 195 492 millions COP$. Although Comcel can be considered as the company spending the largest amounts of money on their marketing, OLA spent much more per subscriber during the year 2005. Keeping existing subscribers for OLA during 2004 was three times more expensive for OLA than for Comcel and Movistar. In 2005 the competition became more equal considering keeping subscribers then 2004 but OLA was still the company spending the most money.

When comparing 2004 and 2005 OLA and Movistar had almost the same marketing cost per new subscriber but Comcel had the most successful marketing strategy and really reached out to their subscribers.

This would indicate that Comcel had the right kind of marketing because they increased their market share, but Movistar´s marketing did not fit the customer correctly because their market share declined. OLA´s market share declined as well and the company spent less money than the recent years on marketing. This could have been because OLA was a newcomer and introduced new technology last year to the market and had to make the market aware of their brand, the new technology and how to use their services. Comcel must have had a successful unique marketing strategy, which the other operators could not match in order to gain new subscribers. The next step for Comcel, according to Shapiro and Varian`s differentiation strategy, is now to make sure that the competitors will not be able to catch up. Comcel now have to use their resources to secure and increase their advantages.

## 5.3 The strategy of subscriber growth

This diagram visualizes the growth in quantity between the Colombian operators, over nine quarters.

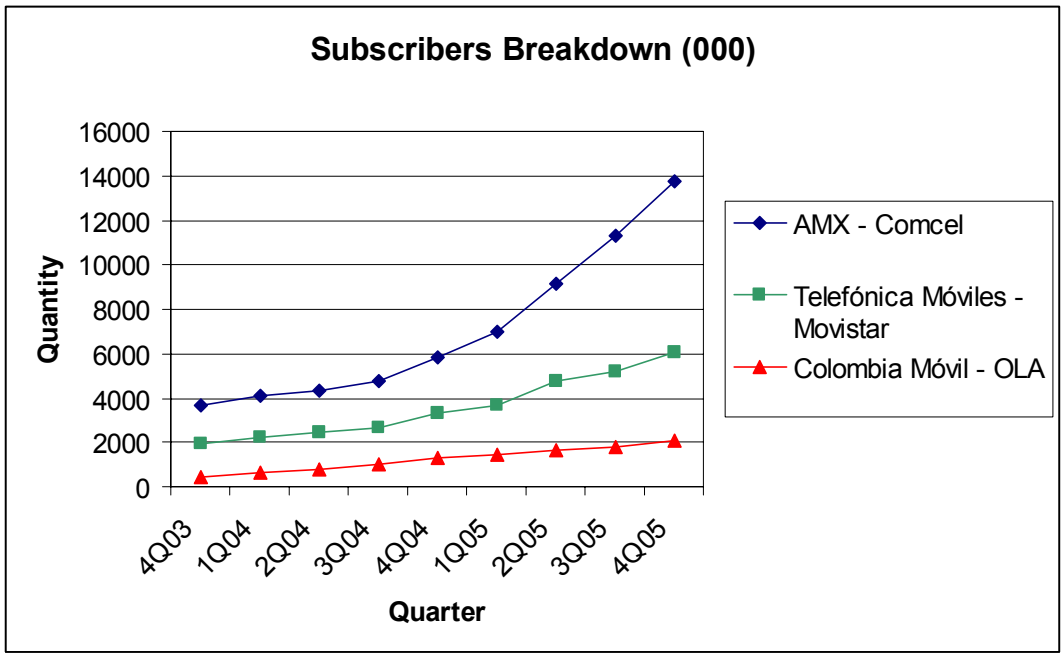



*Figure 5.3 Subscribers breakdown in quantity. Source: MCR*

Comcel has had an explosive growth in numbers of subscribers while Movistar and OLA have had a stabile growth trend. The huge increase of subscribers in the Colombian market explains the growth which all of the three operators is experiencing.

In the 4Q04 Comcel´s curve of subscribers really took of. This might have been from their increased marketing which made the subscribers more aware of the benefit of being movable and also that the price of calling decreased and fitted the critical market better. Another possible reason to why the majority of the subscribers choose Comcel instead of the other operators might be the strenghts of Comcel in coverage and distribution network of both retailers of mobiles and prepaid cards. According to the network effect theory it is better to connect to a larger network than to a small. As a result new and existing subscribers choose the larger network.

This diagram visualizes the difference between the operators growth on a log scale growth instead of only quantity growth, which means that this picture shows the divide between the operators over nine quarters.

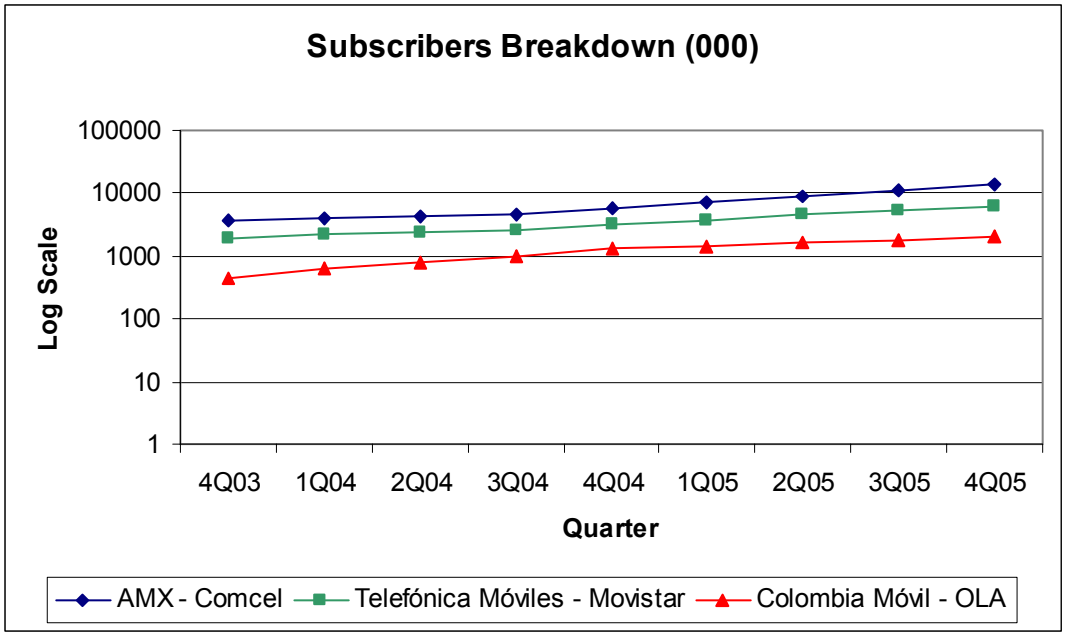



*Figure 5.4 Subscribers breakdown on log scale. Source: MCR*

It exhibits that Comcel´s and Movistar´s curves follow almost the same orbit; Comcel has increased their divide compared to Movistar with 0,38 units between 4Q03 to 4Q05. OLA´s curve has small fluctuations in comparison to the other two companies. They have reduced their divide to Comcel with 1,94 units between 4Q03 to 4Q05 and this means that OLA has more market power now in proportion of subscribers than they did nine quarters ago. This visualizes that there are almost no differences between the companies between 4Q03 and 4Q05. This has to mean that the market power has not changed much over time in this explosively growing market.

This diagram visualizes the net adds subscribers in 1000 over nine quarters between the companies in the mobile telecom industry.

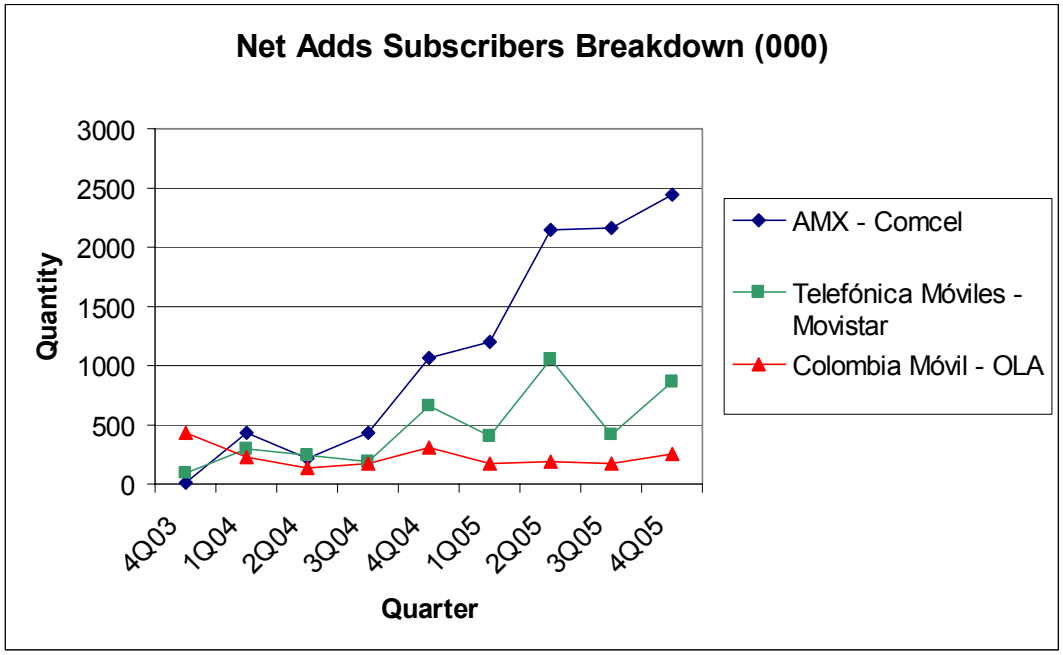



*Figure 5.5 Net adds subscribers breakdown in quantity. Source: MCR*

From the diagram you can see that Comcel has a stabile upward growth over the last quarters; Movistar´s trend is initially going up and down and OLA has a constant straight one. All of the three operators have almost the same net adds subscribers in the first quarters of 2004 but during the 4Q04 they started to differ a lot. Comcel has a straight line upwards which might depend on the bad reputation OLA got by their bad coverage and service. This agrees with what Strouse says about provider companies having to differentiate themselves by a sales team, customer service and coverage. Lack of one differentiation can result in customers preferring/switching to other companies with a better reputation. This can be one explanation to why subscribers are choosing Comcel instead of OLA. Other explanations could be that it was during the 4Q04 that the market share increased and thereby the subscribers wanted to connect to a larger network.

The Colombian operators have not implemented number portability. It is in the MCR agenda but is not concrete yet. Since the number portability does not exist, the result is big switching costs for the subscribers in order to switch operators. This has a negative effect on the subscribers because the operators know that the switching cost is large. The operator has to be sure of creating a greater value to the existing subscribers than the cost of switching

operators. The operators get a lock in effect of their subscribers through the large switching cost.

This diagram visualizes the net adds subscribers in percent instead of quantity net adds subscribers, over nine quarters between the companies.

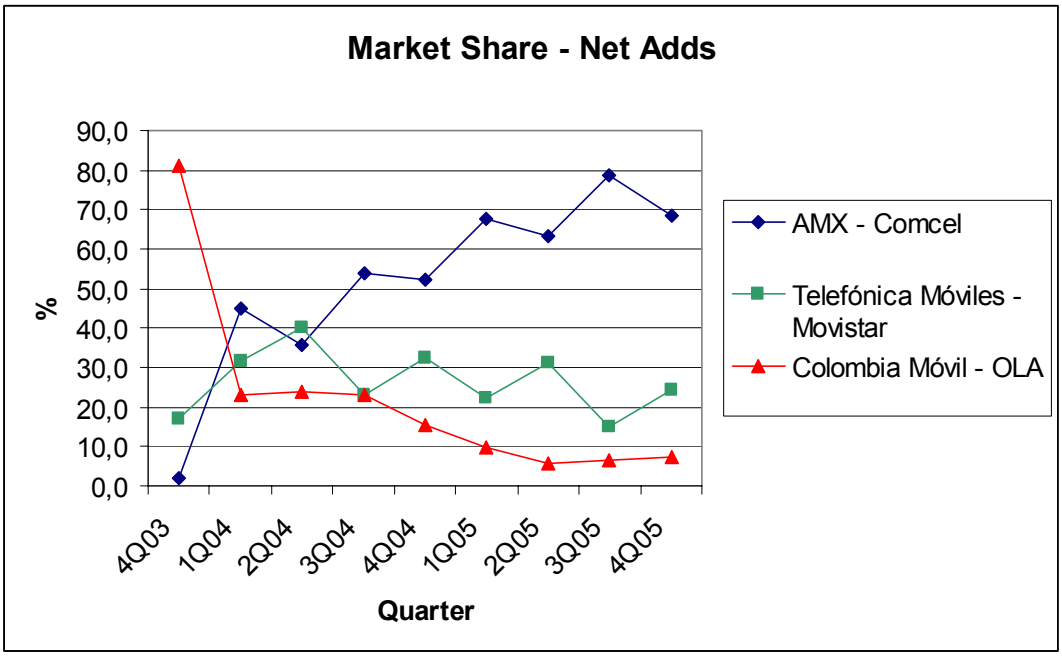



*Figure 5.6 Market share – Net adds in percent. Source: MCR*

The diagram shows that OLA and Comcel have straight opposite trends. OLA has a big growth in percentage in 4Q03 and Comcel has a low growth but over time the conditions completely change. Movistar´s growth is fluctuating between the two other companies with a slightly sloping curve.

It is discussed by Shapiro & Varian (1999) that positive feedback makes the stronger grow stronger and the weaker gets weaker. In net adds subscribers in percent this has a clear effect in the market with Comcel being the winner and OLA is the looser. It is better to connect to a bigger network than a smaller one (Shapiro, Varian 1999). This positive feedback has turned Comcel in to a winner and it could depend on the high coverage with over 92% of the population in the end of 2005. Other of Comcel strengths are their distribution network with a high number of retailers and that they have both independent local distribution channels and direct sales force. The negative feedback that has probably turned OLA to a looser is the operational problems with small distributions system, bad coverage and service. Bad reputation tends to spread by word of mouth and can result in a negative spiral.

## 5.4 Goldilocks pricing

This table shows how many varieties of handsets the three operators offered for prepaid subscribers at three different price segments in 2005.

| | AMX – Comcel | Telefónica Móviles - Movistar | Colombia Móvil - OLA |
|---|---|---|---|
| **Handsets Offered** | | | |
| Up to COP$ 225 000 | 13 | 26 | 14 |
| COP$ 225 000 to COP$ 450 000 | 12 | 8 | 6 |
| Above COP$ 450 000 | 9 | 11 | 15 |
| **Total** | **34** | **45** | **35** |
| | | | |
| **Handset Prices** | | | |
| Min Price (COP$) | 55 000 | 55 000 | 45 000 |
| Max Price (COP$) | 825 000 | 945 000 | 1 750 000 |

*Figure 5.7 Prepaid: Handset offering and entry prices. Source: Morgan Stanley*

Movistar is on the top of offering the widest variety of handsets by 45, OLA 35 and Comcel 34. The consultant Morgan Stanley has divided them in to three different kinds of price segment; one low price version, one in the middle and one expensive. OLA offered both the cheapest and the most expensive handset in the market, OLA`s most expensive handset is almost twice as expensive then both Comcel and Movistar. OLA's cheapest handset has a price of 45 000 COP$ and both Comcel and Movistar cheapest handset has a price at 55 000 COP$. Comcel has the most handsets in the middle version and offers twice as many handsets in the middle versions as OLA and one and a half as many as Movistar. This should be a winning concept according to Goldilocks principle; people choose the middle version because they do not want to choose the extreme in either direction. Comcel´s concept of offering most handsets in the middle can be the right decision to the new and fast growing market, where the knowledge of handsets is not as large as in a mature market and the existing human psychology effect on choosing wrongly.

## 5.5 Pricing strategy and differentiation

This diagram visualizes the quasi price per minute of airtime for each of the three companies over nine quarters.

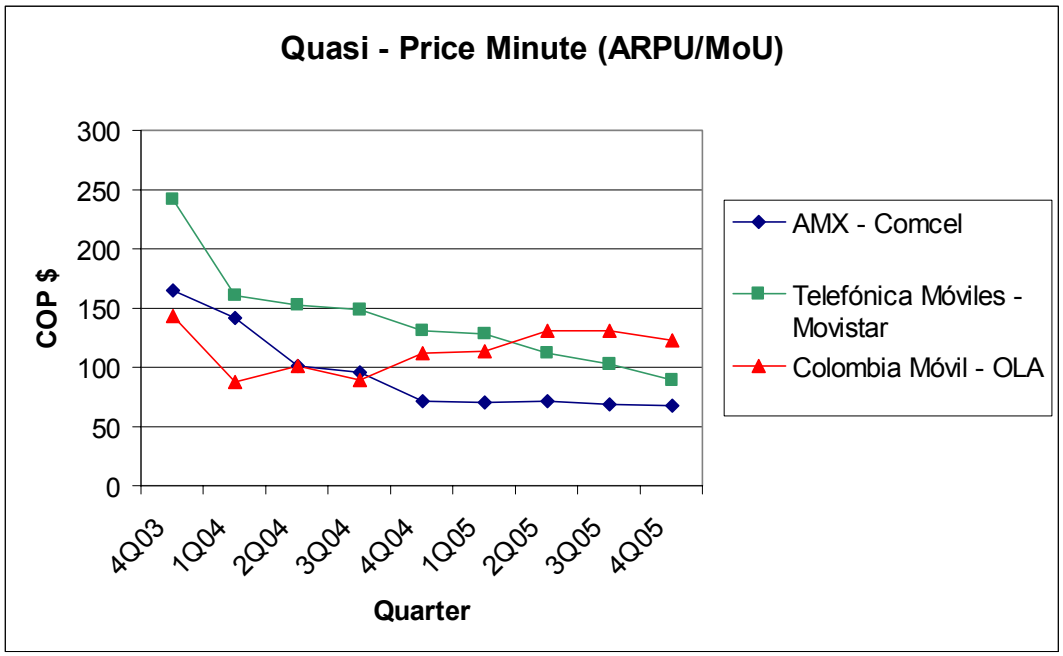



*Figure 5.8 Quasi – Price minute. Source: MCR*

The diagram shows that OLA entered the market with the lowest price, and at the end of 2005 they had the highest. Comcel and Movistar have decreasing prices; OLA is the only one who has prices that increased in 2005. The difference in prices between the cheapest and the most expensive company has decreased between 4Q03 and 4Q05 by almost half. The decreasing prices and the smaller divide in prices between the companies are indications of a more competitive market. Accordning to Shapiro and Varian (1999) the prices on the telecom market are probably going to drop until they strike the marginal costs.

OLA entered the market with the concept of penetration pricing and Porter says that the company has to hold on to a strategy in order to make it successful. OLA was able to keep the lowest price until the end of 2004, but then Comcel caught up and had the lowest prices.

According to Strouse (2001) the company can make the competitors into nonrivals through new technology or innovations but when the competitors imitate the technology or innovations they eliminate the competitive advantage which the first company had achieved. OLA entered the market with establishing new technology and lower prices than the other companies. The company aimed at differentiating itself from the other companies and through their entering, OLA forced the market to switch from TDMA to GSM and CDMA 1X. The

difficulty for OLA was that Comcel and Movistar followed the new technology too fast which made OLA no longer the only one with new services as WAP, SMS and GPRS. This resulted in that the concept of penetration pricing failed. Comcel and Movistar eliminated the competitive advantage that OLA had through offering the technology first. This means that OLA did not get the impact of the penetration pricing in the market as they expected and therefore from this perspective lost their differentiation strategy.

When comparing market shares and the quasi price per minute we can draw the conclusion that when Comcel dropped their price below OLA´s, their market shares turned from a negative trend to an increasing one. At the same time OLA´s market shares started decreasing in the beginning of 2005 and kept that negative trend the rest of the year. Movistar´s Quasi price was, as Comcel´s, lowered between 1Q05 and 2Q05. When they dropped their prices they also increased their market share a bit, but they still have a sloping market share. There is a clear relation between the pricing strategy which the companies implement and the size of their market shares.

OLA´s low quasi price when entering the market can be explained by a new phenomenon on the Colombian telecom market that OLA introduced and named “Pioneers”. This means that everyone who was a subscriber to “Pioneers” had a benefit of paying 30 COP$ for each minute of calling in OLA´s own network if they subscribed for three years. When OLA introduced “Pioneers” it was even cheaper than one minute in the fixed network. The “Pioneers” might even be an explanation to why OLA had a successful entrance and a big market share. According to one of our e-mail interviews the “Pioneers” was making almost every new subscriber choosing OLA as shows in the diagram over Market share – Net adds. Once the customers achieved greater awareness of the lower prices in the market, the competition became more viable which supports what Strouse (2001) says about pioneers pricing. With a new operator in the market Comcel and Movistar were no longer the only competitors and with harder competition they were forced to drop their prices.

It is easier for an operator to motivate a price drop than an increase to a subscriber. The subscribers became more prices aware with the low price; they did not want to pay as much for the services that they did before. Comcel and Movistar were forced to match OLA´s prices because of the more competitive industry and dropped their prices, as shown in the quasi price per minute diagram. Then OLA could no longer stick to their strategy and was forced to increase the quasi prices per minute, this resulted in that the other operators easily could catch up with OLA´s great net add market share in the 4Q04.

This diagram visualizes the Quasi ARPU of each company over nine quarters.

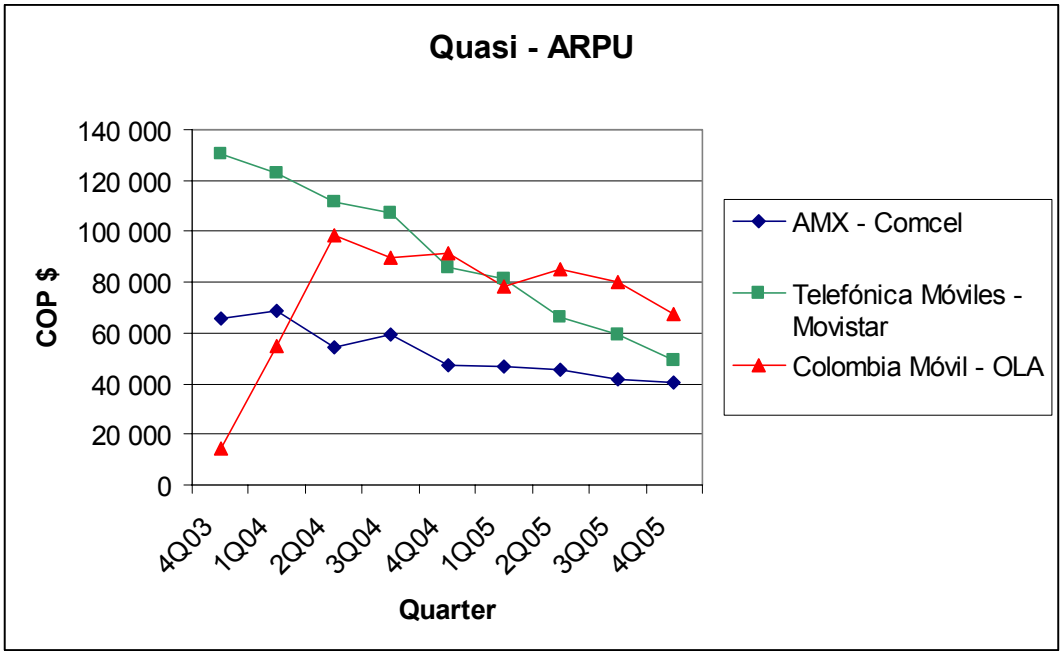



*Figure 5.9 Quasi – ARPU. Source: MCR*

Movistar and OLA had a large difference in quasi ARPU in the end of 2003, but in the end of 2005 the divide between the three companies was much smaller. OLA had the highest Quasi ARPU the last two quarters. Movistar has decreased the advantage they had in the end of 2004 and in the beginning of 2005 and also the diffusion between the three operators has decreased.

All of the operators have steady downhill sloping curves ARPU, with the exception of OLA´s first two quarters in the market. OLA´s first successful quarters off course depended on their entrance in the market, starting from having no subscribers. After the 2Q04 all three companies have decreasing ARPU. As mentioned before the increasing ARPU for OLA probably depends on that OLA entered the market with the penetrating pricing strategy and increasing MoU. The down sloping trend can be explained by the same factors, decreasing prices and MoU.

## 5.6 The strategy of segmenting

This diagram visualizes the processed calls per subscriber per quarter over nine quarters for the three companies.

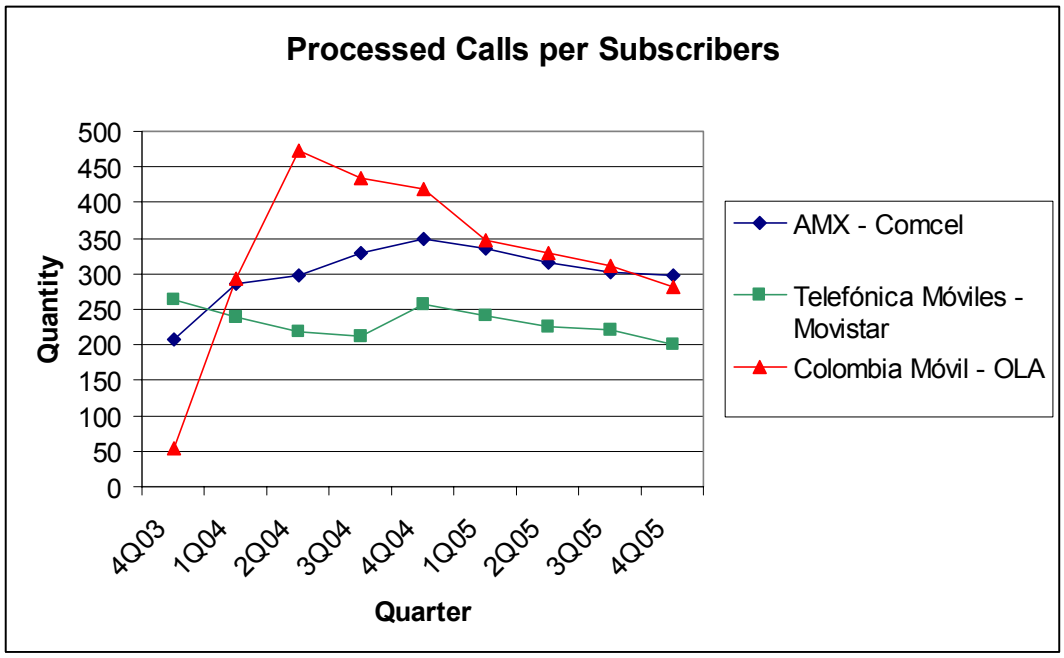



*Figure 5.10 Processed calls per subscribers. Source: MCR*

All of the three operator's subscribers have made fewer calls from 4Q04. The figure shows that in 4Q03 OLA´s subscribers made more calls but after that they did less and less for each quarter.

This sloping trend among all operators could be explained by the adopter categorization figure. Early adopters have another behavior than late adopters. The early adopters are more eager to pay and to use the new technology than the late adopters.

One explanation for the initial upward trend is the penetration strategy that OLA was using and Comcel´s dropping prices. Another explanation can be that more and more early adopters were connecting to the network and the possibility to process calls increased. According to Shy, it is when the network reaches its peak at the inverse demand curve that the willingness to pay for the network is going from up sloping to down sloping. It is at this point on the demand curve that the late adopter's are entering the market and their low willingness to pay for the services makes the number of processed calls decrease.

This diagram visualizes how many MoU per subscriber each of the three companies has had every quarter.

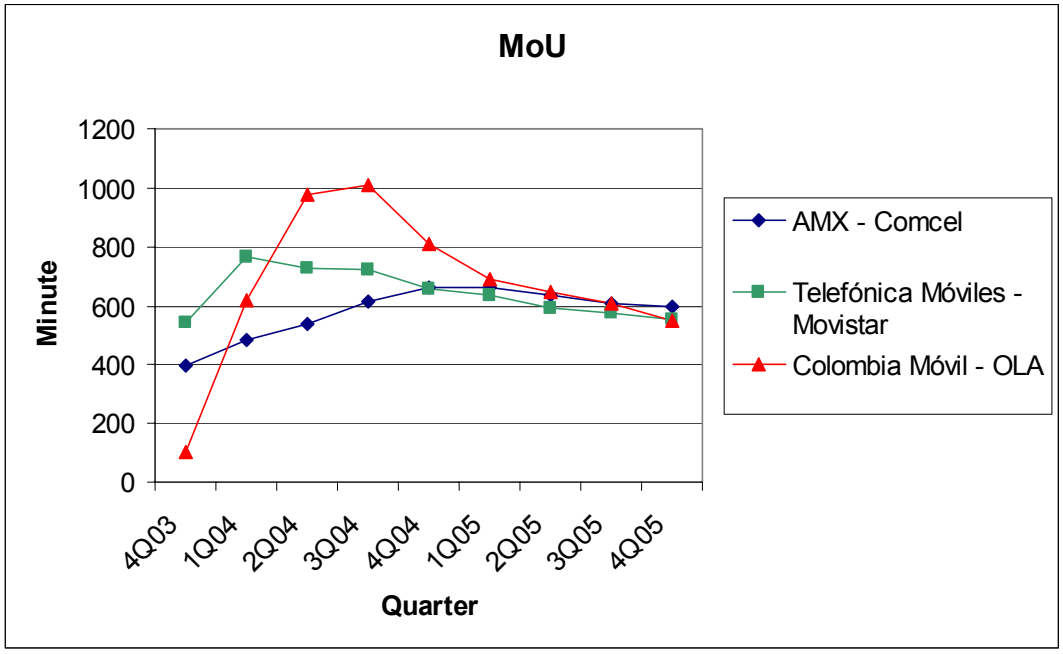



*Figure 5.11 MoU. Source: MCR*

OLA had an increasing MoU in the first quarters but over time the divide between the companies has decreased to almost nothing. OLA´s initially strong upward slope could depend on their "Pioneers" penetration pricing strategy. This is also explained and said before; when OLA introduced the new technology the early adopters were eager to use the new services. The highest amount of MoU was reached around 3Q04 and at the 4Q04 the slope started going downwards. If we look at the earlier shown diagram over the quasi price per minute we can see that it is by this time OLA increased their prices and therefor we can draw the conclusion that the MoU therefore decreases. This goes along with the assumption made in modeling the actual cost that the demand curve for mobile services increases when the price is going down. The behaviour of Comcel´s and Movistar´s subscribers are not following this assumption as strongly as OLA, but there is a clear relation. Also, according to the network effect curve, the late demand majority of subscribers are not going to pay a high price to use the services and as written before they have become aware of OLA`s low "pioneer" pricing. According to the network effect curve late adopters are not going to pay to high prices to use the services and they probably do not have the same demand of calling because of their willingness to pay, which have to decrease the MoU.

This diagram visualizes the average MoU per calls for each of the companies over nine quarters.

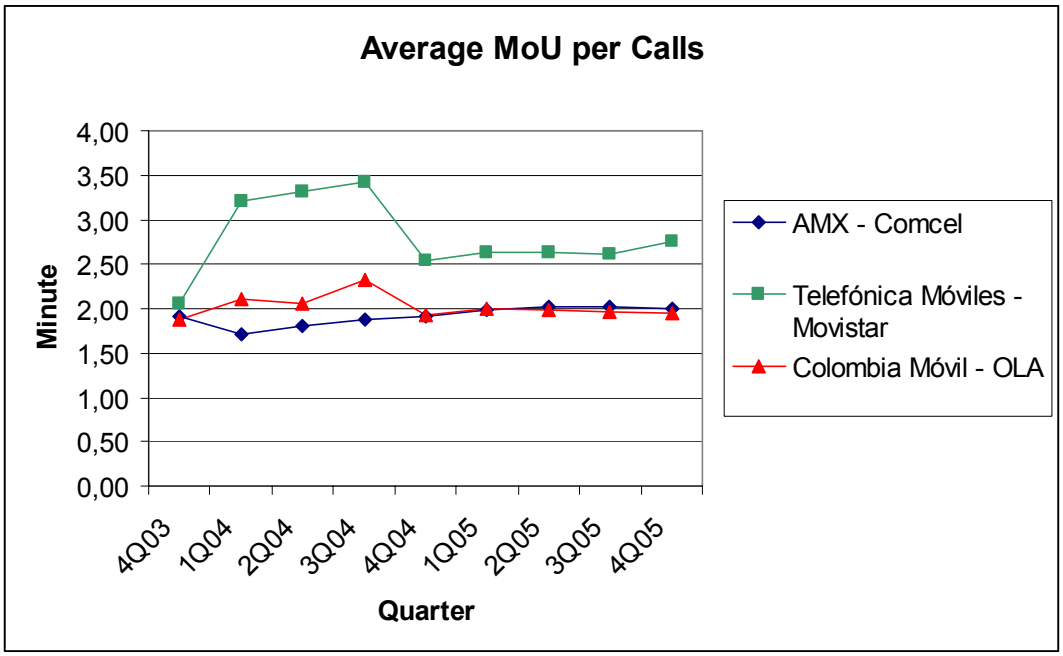



*Figure 5.12 Average MoU per calls. Source: MRC*

All the companies have the same Average MoU per calls at 4Q03 but Movistar´s subscribers have a different behavior and have had the highest amount of minutes during the quarters, while Comcel´s and OLA´s subscribers show almost the same behavior.

Movistar´s subscribers are calling longer time per average call and have less processed calls then the other operators. This could mean that they are differentiations on a segment, which is making longer calls, or that they have lower prices for calling within their network which are making the subscribers call longer.

The purpose with our analysis of the empirical data has been to understand the strategic positions of the three mobile phone operators. Through our research we have been able to draw some conclusions about each of the operators.

# 6 Summary and conclusions

Our focus was to look into what strategies the Colombian mobile phone operators are implementing and using in their companies. Through investigating their strategies we wanted to see if and how the generic strategies of Porter were applicable on the Colombian telecommunication market. What made the companies competitive and what did their failure and success depend upon?

The three operators are competing in an oligopoly market where OLA´s entrance started a price-dropping trend in the market. To be able to continue competing Comcel and Movistar had to look into their own strategies. OLA´s strategy was to differentiate themselves through their low prices, and entered the market very aggressively with the penetration strategy. The meaning was to attract a large volume of subscribers to be able to keep the cost low, maintain the low prices and to get a piece of the market share. Thereby their aim was to achieve the cost leader advantages. Their strategy was a success in the beginning; they got their brand well known and their volume of subscribers heavily grew. This depended on that they were the only operator that offered better services within a new technology to a lower price and to a better quality.

This strategy was a success only for a short period of time because Comcel and Movistar saw the advantages and invested in the new technology as well. Therefore OLA lost their cost leadership and could no longer stick out as they did when first entering the market.

In this case Porter's cost leadership strategy was applicable on the operator OLA. But after the entering stage they had to change their strategy when the other operators started to adopt their strategies according to the new conditions in the market. The mistake OLA did was that it should not have been such a surprise to them that the other operators started imitating them and invested in the same new technique when they saw the success OLA achieved. OLA should have had a second strategical plan, in case the first strategy would fail and this was exactly what happened. When the competitors started competing on the same conditions as OLA, the success of OLA started to decrease. This resulted in that they no longer had a strategy which made the subscribers confused of what the company had to offer. OLA becomes stuck in the middle between cost leadership and differentiation strategy. According to Porter a company has to choose one single strategy to become successful. To

make themselves more attractive and to turn their down sloping trend they have to change their bad service and coverage reputation which is a long and hard process.

Following figure is a model over what kind of strategy the three operators in the Colombian telecommunications market have. We have found out that the operators have used a differentiation strategy with the factors retailer, coverage, price and technique to increase their position on the market with more or less success.

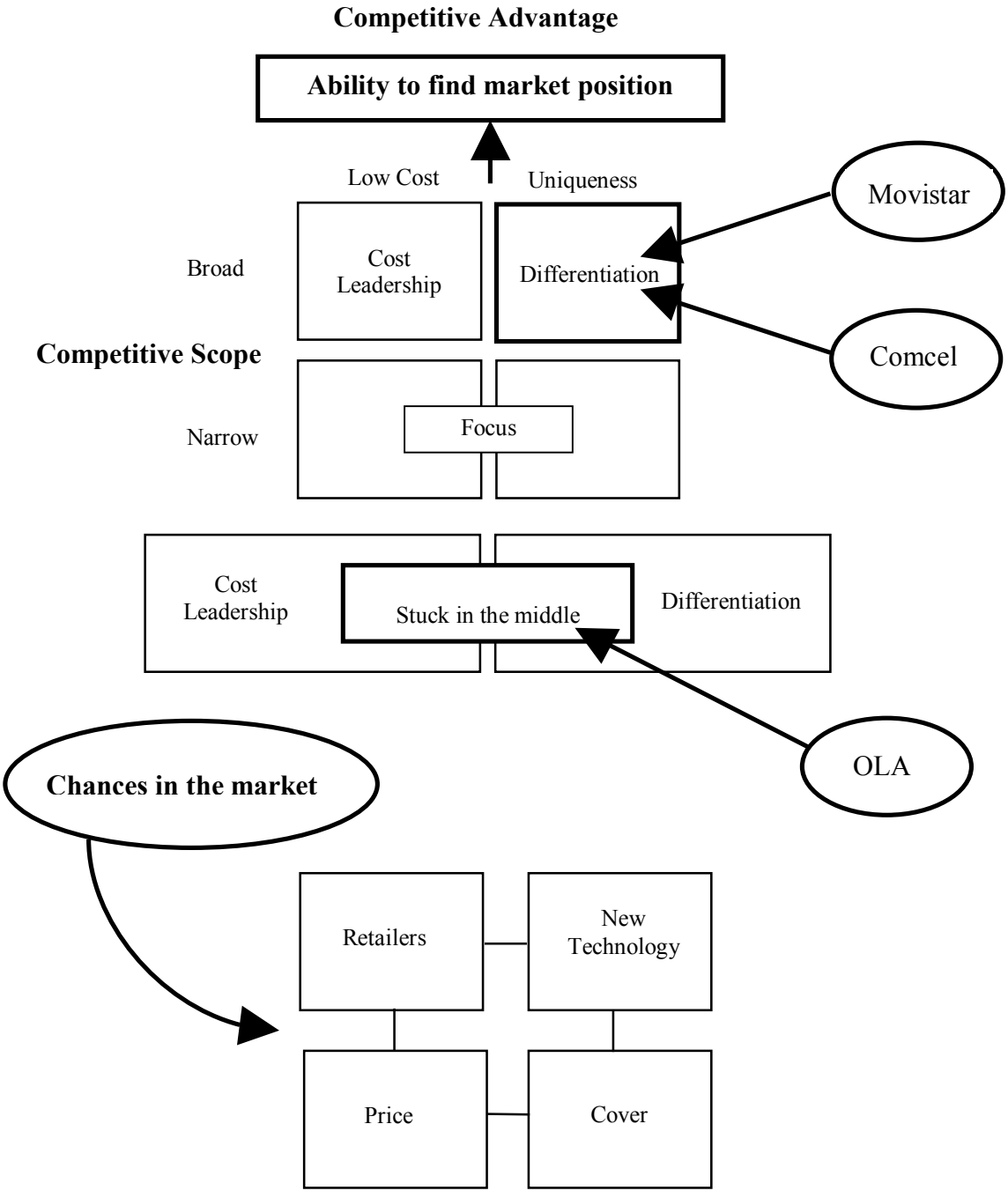



*Figure 6.1 The competitiveness model.*

By OLA´s entrance and dropping prices in the telecommunication market, both growth and competition increased a lot. More players in the market forced the other companies to look into their own strategies. Comcel and Movistar started dropping their prices to be able to continue competing and it is a proof of them realizing the need of adopting their strategy in order to meet the new conditions.

Comcel´s success in the Colombian market depends on that they reacted and invested fast in the new technology and easily could benefit from the hard marketing OLA did in the new technology. Comcel used the differentiation strategy and has been the most successful one of the three operators, this depended on several facts; their creation of a large retail distribution, choosing to go for the middle segment of handsets which make it easier for the new subscribers to choose, and smarter marketing than the other two operators made.

The conclusion of the analysis of the two operators OLA and Comcel is that they were trying to differentiate themselves with more or less success. Porter's differentiation strategy is frequently used in the Colombian market and it is working. The cost leader strategy was visible in OLA´s initial strategy but they had to change it when it no longer was successful. The problem with Porters generic strategy in the telecom industry is that it is a high-speed changing market and it is impossible to stick to only one strategy which Porter requests. In order to succeed a company has to use more than one strategy or at least have a back up strategy in case the first one is a failure. They probably have to combine the differentiating strategy with the cost leader strategy because of the more decreasing prices in the Colombian market. Having only a cost leader strategy is more or less impossible because all the operators are forced to keep the cost low and to be cost effective. We did not find that any of the three operators in the Colombian market were using the focus strategy. Having that strategy in the telecom market seems to demand too much effort and being too risky.

# 7 Glossary

## 7.1 Economic and operating glossary

**ARPU** (Average Revenue per User) – Service revenues of a given period divided by the average numbers of total subscribers of that specific period, it is presented on quarterly or monthly basis.

**CAGR** (Compound Annual Growth Rate) – The year-over-year growth rate of an investment over a specified period of time

**GDP** (Gross Domestic Product) – The value of all final goods and service produce in the economy in a year

**EBIT** (Earnings Before Interest and Tax) – An indicator of a company's profitability, calculated as revenue minus expenses, excluding tax and interest.

**EBITDA** (Earnings Before Interest, Taxes, Depreciation, and Amortization) – An indicator of a company's financial performance which is calculated as follows: = Revenue - Expenses excluding tax, interest, deprecitation and amortization

**Market Share** – A company's number of subscribers as a percentage of a country's total number of subscribers.

**Mobile Penetration** – Total number of subscriber of a country as a percentage of the population.

**MoU** (Minutes of Use) – Total traffic, outgoing and incoming, of a given period divided by the average number of subscribers of that specific period; it is presented on a quarterly or monthly basis.

**OIBDA** (Operating Income before Depreciation and Amortization) – An indicator of a company's profitability, calculated as operating income before depreciation, amortization, tax, and interest.

**Quasi** – means "as if; seeming or seemingly; in the nature of; nearly." In our case a calculating based on the fees of 5% that the operators pay to MCR (Ministerio de Comunicaciones República de Colombia) for air time.

1 US$ = COP$ 2 280 = 7,837 SEK www.xe.com den 29 Mars 2006

## 7.2 Technology glossary

**CDMA 1X** (Code Division Multiple Access) – A technology for digital transmission of radio signals, e.g. between a mobile telephone and a base station. The system uses the same frequency to allow multiple conversations. Conversations are cut into snippets and then remodulated and reassembled at the other end. CDMA technology provides for voice and data services up to speeds of 64 kbits/sec, as well as integrated voice mail and SMS services.

**EDGE** (Enhanced Data for Global Evolution) – A technology that gives GSM the capacity to handle services for the third generation of mobile telephony. EDGE provides three times the data capacity of GPRS. Using EDGE, operators can handle three times more subscribers than GPRS; triple their data rate per subscriber, or add extra capacity to their voice communications. EDGE uses the same TDMA frame structure, logic channel and carrier bandwidth as today's GSM networks, which allows existing cell plans to remain intact.

**GPRS** (General Packet Radio Service) – Enables GSM networks to offer higher wireless communication capacity, Internet-bases-content and packet based data services that promises rates from 56 up to 114Kbps and continuous connection to Internet for wireless phone and mobile computer users. The higher data rates as well as the "always connected" mode of operation will open the door to many new, non-voice applications and services. GPRS provides more than four times greater speed than conventional GSM systems.

**GSM** (The Global System for Mobile) – Enables advanced voice and data services. Communications Service is the most widely adopted, digital cellular technology in use today.

GSM uses time and frequency division techniques (TDMA and FDMA) to optimize the call carrying capacity of a wireless network. GSM also provides a number of carefully standardized and broadly supported capabilities such as Short Message Service (SMS), circuit switched data (CSD) and General Packet Radio Services (GPRS). GSM simplifies data transmission to allow laptop and palmtop computers to be connected to GSM phones It provides integrated voice mail, high-speed data, fax, paging and short message services capabilities, as well as secure communications. It offers the best voice quality of any current digital wireless standard.

**MMS** (Multimedia Messaging Service) - is a communications technology that allows users to exchange multimedia communications between capable mobile phones and other devices. An extension to SMS protocol, MMS defines a way to send and receive, almost instantaneously, wireless messages that include images, audio, and video clips in addition to text. Other possibilities include animations and graphic presentations of stock quotes, sports news, and weather reports

**SMS** (Short Message Service) – "Text Messaging" is a mechanism that allows brief text messages (up to 160 characters) to be sent to the phone Short message service is a wireless service available on digital mobile networks. It enables the transmission of text messages between mobile phones and other systems such as electronic mail, paging and voice mail.
SMS is an alternative to paging services, and can be used to provide reminder services, stock and currency quotes, airline schedules, and account information.

**TDMA** (Time Division Multiple Access) – Works by dividing a radio frequency into time slots and then allocating slots to multiple calls. In this way, a single frequency can support multiple, simultaneous data channels.

**WAP** (Wireless Application Protocol) – A family of protocols allowing mobile devices to access wireless services. WAP is a technology designed to provide users of mobile terminals with limited access to the internet, offering information in text form on the screen of your phone.

**Wi Fi** (Wireless Fidelity) – Is a term for certain types of wireless local area network (WLAN) that use specifications in the 802.11 family. New standards beyond the 802.11 specifications,

such as 802.16 (WiMAX), are currently in the works and offer many enhancements, anywhere from longer range to greater transfer speeds. Wi-Fi was intended to be used for mobile devices and LANs, but is now often used for Internet access. The geographical region covered by one or several access points is called a hotspot.

**WiMAX (W**orldwide **I**nteroperability for **M**icrowave **Acc**ess) is a standards-based wireless technology that provides high-throughput broadband connections over long distances. WiMAX can be used for a number of applications, including "last mile" broadband connections, hotspots and cellular backhaul, and high-speed enterprise connectivity for business.

**VoIP** (Voice over Internet Protocol) (also called VoIP, IP Telephony, Internet telephony, and Broadband Phone) is the routing of voice conversations over the Internet or any other IP-based network.

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# 9 Appendix

## 9.1 Interview questions

1. If your company has chosen a specific geographical market, which one? For example; east or north side of Colombia, cities or countryside.

2. If your company has chosen to specialize on any segment of customers in Colombia, which one? For example, private or business market, youngsters, older people or maybe lifestyle.

   -If you have chosen a special market what kind of premium value does your company give to this segment? For example, customer service 24/7, high coverage, innovative products or maybe the lowest price per minute.

3. If your company offers any extra services to your costumers, which ones?
   If yes,
   - Have you developed any new services during 2005?
   - Do you offer any services that are unique for the market?

4. If your company brand represents anything what is it?
   If it does, which methods is your company using? For example, TV, radio or magazine.
   What kind of expenditure has your company for marketing each year?

5. If your company has some pricing policy which one is it?
   - For example; always having a 10% lower price than the competitors, call for free within your company net or maybe let your costumers call a 100 free minute for a fixed fee?

6. Number of employees?

7. How is your organization structured?
   - How far down in the organization do you have responsibility for the result? Number of employees per unit?

8. We are interested to get quarterly numbers of your company's (4Q03-4Q05)

   -Total revenues
   -Total cost
   -ARPU (Average Revenues per User)
   -MOU (Minute of Use)
   -Cost per Unit (Unit = Costumer)
   -Net cash flow
   -Net investments
   -Net depreciations

   Reports of financial statement

   Reports of profit and loss statement (4Q03-4Q05)

9. Anything else you want to add; own thoughts about your company´s vision or its chosen strategies?

We would like to conclude this interview with expressing our greatfulness for your time and engagement with answering our questions. Your information will be very useful for us in our research on the Colombian telecommunication market.

Yours sincerely,

Bodil Arbin
Lars Holmberg
Caroline Jonsson

## 9.2 Data

**A Closer Look at the operators in Colombia**

| **Subscribers Breakdown (000)** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
|---|---|---|---|---|---|
| AMX - Comcel | 3674 | 4109 | 4319 | 4746 | 5814 |
| Telefónica Móviles - Movistar | 1915 | 2219 | 2456 | 2639 | 3297 |
| Colombia Móvil - OLA | 430 | 653 | 795 | 976 | 1290 |
| **Total Subscribers** | **6019** | **6981** | **7570** | **8361** | **10401** |
| % Growth q-o-q | 9,7 | 16,0 | 8,4 | 10,5 | 24,4 |
| % Growth y-o-y | 37,1 | 43,9 | 45,5 | 52,4 | 72,8 |
| **Market Share** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 61,0 | 58,9 | 57,1 | 56,8 | 55,9 |
| Telefónica Móviles - Movistar | 31,8 | 31,8 | 32,4 | 31,6 | 31,7 |
| Colombia Móvil - OLA | 7,1 | 9,4 | 10,5 | 11,7 | 12,4 |
| **Total** | **99,9** | **100,1** | **100,0** | **100,1** | **100,0** |
| **Net Adds Breakdown (000)** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 10 | 435 | 210 | 427 | 1068 |
| Telefónica Móviles - Movistar | 91 | 304 | 237 | 183 | 658 |
| Colombia Móvil - OLA | 430 | 224 | 141 | 182 | 313 |
| **Total Net Adds** | **531** | **963** | **588** | **792** | **2039** |
| % Growth q-o-q | 85,5 | 81,4 | -38,8 | 34,4 | 157,7 |
| % Growth y-o-y | 108,4 | 41,2 | 68,7 | 176,7 | 284,3 |
| **Market Share - Net Adds %** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 1,9 | 45,2 | 35,7 | 54,0 | 52,4 |
| Telefónica Móviles - Movistar | 17,1 | 31,6 | 40,3 | 23,1 | 32,3 |
| Colombia Móvil - OLA | 81,0 | 23,2 | 24,0 | 23,0 | 15,4 |
| **Total** | **100,0** | **100,0** | **100,0** | **100,1** | **100,1** |
| **Total Wireless Penetration** | **14,5** | **16,7** | **18,0** | **19,8** | **24,5** |
| Incremental Penetration | 1,2 | 2,2 | 1,3 | 1,8 | 4,7 |
| **Minutes traffic Total (min)** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 1 457 884 856 | 1 995 252 035 | 2 332 754 325 | 2 917 240 470 | 3 861 214 614 |
| Telefónica Móviles - Movistar | 1 035 715 849 | 1 702 639 043 | 1 788 788 216 | 1 905 537 869 | 2 157 357 454 |
| Colombia Móvil - OLA | 43 290 889 | 402 734 630 | 775 015 605 | 987 721 515 | 1 044 948 325 |
| **Total Minutes traffic Total** | 2 536 891 594 | 4 100 625 708 | 4 896 558 146 | 5 810 499 854 | 7 063 520 393 |
| **Processed Calls** | **4Q03** | **1Q04** | **2Q04** | **2Q05** | **4Q04** |
| AMX - Comcel | 762 565 116 | 1 170 851 691 | 1 288 878 398 | 1 559 658 322 | 2 026 669 551 |
| Telefónica Móviles - Movistar | 505 655 614 | 531 706 699 | 538 935 186 | 555 868 644 | 849 566 281 |
| Colombia Móvil - OLA | 23 004 755 | 191 549 194 | 375 701 456 | 424 010 580 | 541 674 159 |
| **Total Processed Calls** | 1 291 225 485 | 1 894 107 584 | 2 203 515 040 | 2 539 537 546 | 3 417 909 991 |
| **Process Calls per subscriber** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 208 | 285 | 298 | 329 | 349 |
| Telefónica Móviles - Movistar | 264 | 240 | 219 | 211 | 258 |
| Colombia Móvil - OLA | 53 | 293 | 473 | 434 | 420 |
| **Average Process Calls per Subscriber** | 175 | 273 | 330 | 325 | 342 |
| **MoU - Quarter** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 397 | 486 | 540 | 615 | 664 |
| Telefónica Móviles - Movistar | 541 | 767 | 728 | 722 | 654 |
| Colombia Móvil - OLA | 101 | 617 | 975 | 1012 | 810 |
| **Average MOU** | 346 | 623 | 748 | 783 | 710 |

| **MoU Average of Calls** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
|---|---|---|---|---|---|
| AMX - Comcel | 1,91 | 1,70 | 1,81 | 1,87 | 1,91 |
| Telefónica Móviles - Movistar | 2,05 | 3,20 | 3,32 | 3,43 | 2,54 |
| Colombia Móvil - OLA | 1,88 | 2,10 | 2,06 | 2,33 | 1,93 |
| **Total Average MOU** | 1,95 | 2,34 | 2,40 | 2,54 | 2,12 |
| **Contraprestación 5%** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 12 039 247 000 | 14 183 571 000 | 11 771 157 000 | 14 036 564 000 | 13 733 393 000 |
| Telefónica Móviles - Movistar | 12 500 245 221 | 13 672 302 000 | 13 717 851 000 | 14 147 182 000 | 14 088 355 000 |
| Colombia Móvil - OLA | 309 251 000 | 1 781 742 100 | 3 907 205 000 | 4 379 835 000 | 5 881 895 000 |
| Total | 24 848 743 221 | 29 637 615 100 | 29 396 213 000 | 32 563 581 000 | 33 703 643 000 |
| **Quasi-OIBDA (Billions) COP$** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 241 | 284 | 235 | 281 | 275 |
| Telefónica Móviles - Movistar | 250 | 273 | 274 | 283 | 282 |
| Colombia Móvil - OLA | 6 | 36 | 78 | 88 | 118 |
| **Quasi - ARPU** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 65 538 | 69 037 | 54 509 | 59 151 | 47 242 |
| Telefónica Móviles - Movistar | 130 551 | 123 229 | 111 709 | 107 216 | 85 462 |
| Colombia Móvil - OLA | 14 384 | 54 571 | 98 294 | 89 751 | 91 192 |
| **Quasi - Price ARPU/MoU** | **4Q03** | **1Q04** | **2Q04** | **3Q04** | **4Q04** |
| AMX - Comcel | 165 | 142 | 101 | 96 | 71 |
| Telefónica Móviles - Movistar | 241 | 161 | 153 | 148 | 131 |
| Colombia Móvil - OLA | 143 | 88 | 101 | 89 | 113 |
| **Average Quasi - Price ARPU/MoU** | 183 | 130 | 118 | 111 | 105 |

| **Subscribers Breakdown (000)** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | *Sources* |
|---|---|---|---|---|---|
| AMX - Comcel | 7022 | 9174 | 11334 | 13775 | MS |
| Telefónica Móviles - Movistar | 3699 | 4757 | 5171 | 6033 | MS |
| Colombia Móvil - OLA | 1464 | 1650 | 1827 | 2086 | MS |
| **Total Subscribers** | **12185** | **15581** | **18332** | **21894** | MS |
| % Growth q-o-q | 17,2 | 27,9 | 17,6 | 19,4 | MS |
| % Growth y-o-y | 74,5 | 105,8 | 119,2 | 110,5 | MS |
| **Market Share** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 57,6 | 58,9 | 61,8 | 62,9 | MS |
| Telefónica Móviles - Movistar | 30,4 | 30,5 | 28,2 | 27,6 | MS |
| Colombia Móvil - OLA | 12 | 10,6 | 10 | 9,5 | MS |
| **Total** | **100** | **100** | **100** | **100** | MS |
| **Net Adds Breakdown (000)** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 1208 | 2152 | 2160 | 2441 | MS |
| Telefónica Móviles - Movistar | 402 | 1058 | 414 | 862 | MS |
| Colombia Móvil - OLA | 175 | 186 | 177 | 259 | MS |
| **Total Net Adds** | **1785** | **3396** | **2751** | **3562** | MS |
| % Growth q-o-q | -12,5 | 90,3 | -19 | 29,5 | MS |
| % Growth y-o-y | 85,4 | 476,9 | 247,5 | 74,7 | MS |
| **Market Share - Net Adds %** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 67,7 | 63,4 | 78,5 | 68,5 | MS |
| Telefónica Móviles - Movistar | 22,5 | 31,2 | 15 | 24,2 | MS |
| Colombia Móvil - OLA | 9,8 | 5,5 | 6,4 | 7,3 | MS |
| **Total** | **100** | **100,1** | **99,9** | **100** | MS |
| **Total Wireless Penetration** | **28,5** | **36,3** | **42,4** | **50,4** | MS |
| Incremental Penetration | 4 | 7,7 | 6,1 | 7,9 | MS |

| **Minutes traffic Total (min)** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | *Sources* |
|---|---|---|---|---|---|
| AMX - Comcel | 4 662 393 672 | 5 842 569 405 | 6 896 822 756 | 8 220 790 832 | MCR |
| Telefónica Móviles - Movistar | 2 345 518 792 | 2 809 282 346 | 2 973 287 693 | 3 343 956 098 | MCR |
| Colombia Móvil - OLA | 1 010 072 055 | 1 065 676 794 | 1 114 814 028 | 1 138 378 366 | MCR |
| **Total Minutes traffic Total** | 8 017 984 519 | 9 717 528 545 | 10 984 924 477 | 10 426 368 564 | MCR |
| **Processed Calls** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 2 352 313 037 | 2 896 102 524 | 3 429 867 523 | 4 095 570 813 | MCR |
| Telefónica Móviles - Movistar | 892 893 851 | 1 067 420 999 | 1 140 466 652 | 1 210 603 451 | MCR |
| Colombia Móvil - OLA | 507 814 581 | 542 347 400 | 565 847 726 | 587 178 338 | MCR |
| **Total Processed Calls** | 3 753 021 469 | 4 505 870 923 | 5 136 181 901 | 5 893 352 602 | MCR |
| **Process Calls per subscriber** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 335 | 316 | 303 | 297 | MCR |
| Telefónica Móviles - Movistar | 241 | 224 | 221 | 201 | MCR |
| Colombia Móvil - OLA | 347 | 329 | 310 | 281 | MCR |
| **Average Process Calls per Subscriber** | 308 | 290 | 278 | 260 | MCR |
| **MoU - Quarter** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 664 | 637 | 609 | 597 | MCR |
| Telefónica Móviles - Movistar | 634 | 591 | 575 | 554 | MCR |
| Colombia Móvil - OLA | 690 | 646 | 610 | 546 | MCR |
| **Average MOU** | 663 | 624 | 598 | 566 | MCR |
| **MoU Average of Calls** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 1,98 | 2,02 | 2,01 | 2,01 | MCR |
| Telefónica Móviles - Movistar | 2,63 | 2,63 | 2,61 | 2,76 | MCR |
| Colombia Móvil - OLA | 2,00 | 1,98 | 1,97 | 1,94 | MCR |
| **Total Average MOU** | 2,20 | 2,21 | 2,20 | 2,24 | MCR |
| **Contraprestación 5%** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 16 287 915 000 | 20 896 532 000 | 23 758 585 000 | 27 940 688 000 | MCR |
| Telefónica Móviles - Movistar | 15 061 837 000 | 15 803 578 000 | 15 348 011 000 | 14 887 534 000 | MCR |
| Colombia Móvil - OLA | 5 740 404 000 | 7 018 738 000 | 7 326 764 000 | 7 031 240 000 | MCR |
| Total | 37 090 156 000 | 43 718 848 000 | 46 433 360 000 | 49 859 462 000 | MCR |
| **Quasi-OIBDA (Billions) COP$** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 326 | 418 | 475 | 559 | MCR |
| Telefónica Móviles - Movistar | 301 | 316 | 307 | 298 | MCR |
| Colombia Móvil - OLA | 115 | 140 | 147 | 141 | MCR |
| **Quasi - ARPU** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 46 391 | 45 556 | 41 924 | 40 567 | MCR |
| Telefónica Móviles - Movistar | 81 437 | 66 443 | 59 362 | 49 354 | MCR |
| Colombia Móvil - OLA | 78 421 | 85 076 | 80 205 | 67 414 | MCR |
| **Quasi - Price ARPU/MoU** | **1Q05** | **2Q05** | **3Q05** | **4Q05** | |
| AMX - Comcel | 70 | 72 | 69 | 68 | MCR |
| Telefónica Móviles - Movistar | 128 | 113 | 103 | 89 | MCR |
| Colombia Móvil - OLA | 114 | 132 | 131 | 124 | MCR |
| **Average Quasi - Price ARPU/MoU** | 104 | 105 | 101 | 94 | MCR |

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MS, Morgan Stanley

**A Closer Look at the Colombian Operators Marketing**

| % | TV nal. | TV reg. | Radio | New Paper |
|---|---|---|---|---|
| AMX - Comcel | 42,09 | 0,84 | 42,29 | 11,90 |
| Telefónica Movil - Movistar | 57,11 | 1,81 | 25,32 | 12,42 |
| Colombia Movil - OLA | 61,80 | 1,87 | 18,78 | 11,85 |

| **Marketing cost in segments miles COP$** | | | | |
|---|---|---|---|---|
| AMX - Comcel | 24 580 870 203 | 490 566 191 | 24 697 671 677 | 6 949 687 703 |
| Telefónica Movil - Movistar | 28 425 208 959 | 900 886 504 | 12 602 456 502 | 6 181 773 687 |
| Colombia Movil - OLA | 18 660 814 056 | 564 655 700 | 5 670 713 398 | 3 578 165 802 |

| **Marketing Cost / All Subscribers COP$** | | | | |
|---|---|---|---|---|
| AMX - Comcel | 1 784 455 | 35 613 | 1 792 934 | 504 515 |
| Telefónica Movil - Movistar | 4 711 621 | 149 326 | 2 088 920 | 1 024 660 |
| Colombia Movil - OLA | 8 945 740 | 270 688 | 2 718 463 | 1 715 324 |

| **Marketing cost New and Keeping Existing Subscribers** | **New Sub 2005** | **New Sub 2004** | **Existing Sub 2005** | **Existing Sub 2004** |
|---|---|---|---|---|
| AMX - Comcel | 7 336 588 | 16 940 592 | 4 239 618 | 6 235 443 |
| Telefónica Móviles - Movistar | 18 191 789 | 17 880 049 | 8 250 080 | 7 494 761 |
| Colombia Móvil - OLA | 37 886 439 | 42 921 949 | 14 475 308 | 28 614 633 |

| % | subscription | miles COP$ 2005 Totalt | miles COP$ 2004 Totalt | Variation |
|---|---|---|---|---|
| AMX - Comcel | 2,89 | 58 400 737 | 36 252 867 | 61,09 |
| Telefónica Movil - Movistar | 3,34 | 49 772 735 | 24 710 228 | 101,43 |
| Colombia Movil - OLA | 5,70 | 30 195 492 | 36 912 876 | -18,20 |

| **Marketing cost in segments miles COP$** | | **Summa** |
|---|---|---|
| AMX - Comcel | 1 687 781 299 | 58 406 577 074 |
| Telefónica Movil - Movistar | 1 662 409 349 | 49 772 735 000 |
| Colombia Movil - OLA | 1 721 143 044 | 30 195 492 000 |

| **Marketing Cost / All Subscribers COP$** | | |
|---|---|---|
| AMX - Comcel | 122 525 | 4 240 042 |
| Telefónica Movil - Movistar | 275 553 | 8 250 080 |
| Colombia Movil - OLA | 825 093 | 14 475 308 |

*Sources: Revista Publicidad & Mercadeo*