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Airline Pricing Strategies
A Comparison of German Lufthansa and Scandinavian Airline System

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Business Administration C, Autumn Semester 2008/09

02.2.2009
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Executive summary

This paper focuses on the pricing strategies of international airlines, being the key factor to match the supply with demand and accomplish market equilibrium. The aim of study is to find a pattern of how pricing takes place, if and how airlines implement market segmentation and take demand-related elasticities into account. We specialize on the Scandinavian Airline System (SAS) and German Lufthansa. Their flight prices were collected as primary data from the corresponding websites. We observed the following air travel services: Long-haul international, short-haul international and short-haul domestic; additionally, we differentiated price levels by the time of booking. Based on our findings we can say that the market segmentation model provides a good base for airlines. However, it has to be accompanied by additional strategies to react to arising problems (peak problem, currency fluctuation, etc). The patterns we found implemented by SAS and Lufthansa represent a firm market-responsive approach to the problems in the airline industry.
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1 Introduction and problem statement

“Boarding completed – ready for take-off”: Before a passenger hears these words on board, a long process has taken place. Not only technically, but also commercially, the airline business is a highly complex, yet fascinating market. It is a very challenging and continuously expanding industry. Successful marketing is just as important as engineering for an airline to survive. Part of the marketing mix is the pricing policies of a company. This is specifically important to position the product on the market and to generate the revenue desired. In the case of airlines, this field has hardly been researched until now. Although it is crucial for any airline to offer competitive fares, academic studies are rare. If there is airline-related literature available, it usually focuses on the whole marketing mix but not on pricing itself. Hence, it only treats the topic superficially and then refers to other sources. Nonetheless, it is a highly significant field of research since it gives insights to a company’s strategy.

Specifically, we will focus on the research of how different pricing strategies can be applied to international airlines. Furthermore, we would like to find out how airlines set their ticket prices to compete in a fast-changing and highly competitive market. These aspects shall help both researchers and professionals to get an insight to pricing strategies in the airline industry. It can give an idea of how to set the right fares for new airlines and even other industries that wish to understand and adapt the highly customer-orientated airline policies.

1.1 Research questions

Do airlines apply market segmentation when pricing? Do they apply further pricing strategies? If so, which ones?

We would like to find pattern of how pricing takes place in the airline industry. We study if companies of this business sector implement the theoretically optimal model of market segmentation, applying demand-related elasticities. If so, how do they realize this strategy? How does it affect daily offers? Moreover, we research if they apply further strategies in addition to or substituting market segmentation.

1.2 Importance of research

The airline industry is a fast-growing industry and main business sector for all European countries. Providing fast travel services along with other commodities, both airlines and airports are well-established and essential for our economies. Many organizations nowadays operate on an international basis and thus depend on frequent and reliable flight connections.
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for their employees. Multinationals spend great parts of their budget on air fares for their staff, and the pricing policy of airlines directly impacts on other businesses. But also leisure travel becomes more and more significant. Not only holiday travel, but also for study reasons or to visit friends and relatives, is a growing market. Especially for leisure traveler, the price of a ticket is highly significant. The fares affect everyone of our society, and the requirement for fast travel opportunities rises continuously.

Furthermore, the airline industry represents a major employer for many European regions. Both directly and indirectly, an airport enormously influences employment patterns and development of a region. According to the Fraport GmbH (commonly known as Frankfurt International Airport, which is the largest one in Europe), they employed 25,193 people during the first half-year of 2008. Arlanda Airport says it provides work for 15,000 persons. All of them depend on a well-operating airline industry, which can only prosper if the prices are correctly set.

Being extremely competitive and customer orientated, airlines serve as examples for many other businesses. Not only can their attitude towards customer service, but also pricing policies be an aim for others to achieve. To be able to do so, the patterns which are applied by airlines must be clear. This paper is aiming at finding and explaining pricing patterns. Thus, it can be used as a base for other industries to transfer successful strategies and learn from air travel services. Besides, due to its fast-changing nature, a constant research about the airline business is necessary. We want to correctly map the actual situation, and it is crucial to work with the latest data. Even if similar studies might already exist, they are quickly out of date. This paper is providing an up to date presentation of the situation. It can serve as a record to base current decisions on or as a current information source to monitor developments.
2 Theoretical Chapter

We have chosen the Porter because with the help of analysing this concept it is possible to forecast if a company will be profitable.

The ‘The three generic strategies’- concept, by M.E. Porter, was already published 20 years ago and usually applied to companies which do not deal with travel management. The main reason for this is the fact that most airlines were formerly government owned and therewith did not have such a need to have a good marketing concept. If the airlines did not gain profits or even made losses, they were subsidised. An airline was and in some degree still is a prestige company for each nation. Most of the formerly national airlines have a contribution to their country within their names. That makes it still difficult today to let these often worldwide known companies fail in the open market.

Since most of the businesses in the airline sector are now fully or at least partly privatised, their management has received a new task. That is to satisfy the different shareholders and gain profits.

The three strategies by Porter, which we use to underline our choosen cases, are basic instruments to fit each and every company into one segment which can still be defined even though not all figures and published information is given. That means it is possible for us to apply this concept onto companies even if it is not possible to get detailed figures.

2.1 Presentation of the Concept

‘The three generic strategies’ concept by Porter is a simple matrix image with three different segments in which a company can be classified in.
On the horizontal levels there are two different aspects to be considered – a classification concerning the expansion of the company’s product range. The two dimensions are either industry wide or a particular segment only. That is to say in the latter one the product only serves a special part of the industry. In the airline business this is for example only dealing with cargo transportation or the other way round only transporting passengers. On the other hand an industry wide product range includes all parts of the airline business, from passenger up to cargo. This distinction is important because the wider a company expands their portfolio the more complex management and administration becomes. That includes also more costs and a more diverse customer base needs to be addressed.

On the other hand, a company which only operates in one segment of the market can draw a clear perimeter both concerning the marketing and portfolio. This is likely to result in a simplified cost structure as well as less administrative complexity.

The vertical differentiation is between uniqueness perceived by the customer and low cost position. The second one is easy to understand as it speaks for itself. The airlines operating in this dimension put their main effort in providing a product (range) for a minimum of costs. Therewith these airlines try to compete in the market by offering a price more than a product. The uniqueness which needs to be perceived by the customer is more difficult to describe. In this dimension the opinion of the customer is relevant. This is on the one hand difficult to find out and on the other hand hard to rate. But this part also is in favour for not reflecting the ac-
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tual performance of a product range but more the way the customer feels and sees it. That means it is not necessary to be unique as long as the customer perceives it as such.

The main difference is that the low cost position basically deals with keeping the costs for production reduced to a minimum. It has to study customers’ interests to find out which additional features are possible to be reduced to a minimum to be able to compete in such a highly competitive market. Companies in this market segment are not interested in satisfying all various customer groups but they specialize on the customers which are price-conscious. On the other hand the concept of customer perception is more customer-focused. For those companies it is a major concern to maintain an image which pretends to be a constant feature even if the reality is different.

Out of these four axes in combination there result three segments which cluster a group of airlines with the same products and similar marketing. It should be mathematically four of them but the ‘Focus’ is not divided in the image which we have chosen. This could be done by differentiating between a cost advantage and a service advantage. But since the ‘Focus’ is operating on a narrow market the difference of cost positioning is not as necessary as in the broader market.

The next segment we have a closer look at, is ‘Differentiation’. This segment can be seen as a contrasting one to ‘Focus’. A company which is assigned in ‘Differentiation’ operates with a product range including all possible products of the related market. So companies which relate to this segment base their profit on before mentioned synergies which arise out of producing diversity. That means the companies operating in this segment aim to generate economies of scale as well as economies of scope. The latter is described later on and the economies of scale are developed by “increased efficiency in production” (Hollensen 2004, P.10) having a wider spread demand.

The vast array of offered products needs to deal with a much more complex and therewith difficult way of managing. There is not only a problem of coordinating the operating sequences but also the need to satisfy a huge variety of different customer demands. There are a lot of different target groups to address. Connected to that there is a need for several separate pricing models to be able to compete with other companies. Those can be focused on overlapping markets.
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In respect to the customers view a company which is located in the ‘Differentiation’ segment has the advantage that it is possible to work together with this company on different markets. So once a customer is connected to a company he might want to keep consuming their services. Differentiation generates the possibility to purchase further products which are sold on new market scopes. Therewith the company derives benefits out of earlier relations, which means it generates economies of scope.

2.2 Pricing Strategy

In order to generate profits, a company needs to have a structure which is reliable. This is not only necessary on the production side but also in the distribution section. So the base for each company is not only the production of a good product itself but also a well thought through marketing strategy. As we specialized in airline companies the strategy of marketing is of even more importance because in this market there are sold intangible products. That means the goods have particular characteristics which compounds the selling. Unlike tangible products which are durable and touchable, the airline industry has to cope with selling products which cannot be advertised by showing pictures of them. It is always generated after it has been sold and therewith marketing strategies have to be mature. There are different types of products sold by airlines but the most important ones are passenger and cargo transportation. It is, for example, obvious that these products cannot be stored until the demand is there to sell it to the customers. Therefore each seat which is not sold at the time of departure cannot be sold later when there is more demand than the actual capacity of an airplane. This accentuates the importance of marketing in this area of business.

In this context we also have to mention that another importance in regard to the intangibility is that products can only be created with the actual presence of the customer. This ‘Uno-Acto-Prinzip’ (Maleri, 1997) is a major disadvantage in the production of services in the airline industry. The company always has to rely on the cooperation of the customer, because otherwise the service cannot be implemented. In addition to that production in advance is also not possible. So there are peak-demands and times of off-peaks. That means the managing of personnel and machines becomes one of the major tasks. There are different ways of dealing with this extraordinary characteristics described in this paper.

The price for products is one of the key factors, therewith it is dealt with this delicate topic in the following section. Depending on the price policy of an airline, the pricing strategy addresses certain groups of customers. Correct pricing is also crucial to cover the costs and
make benefits. But what is the optimal price for an air transport service? What does it depend on and how to maximize the turnover? This section is going to analyse basic principles of pricing and costs of the airline industry. It will explain how to set the optimal prices for a flight and which factors influence the price building process.

**2.3 Equilibrium/market-clearing price**

Basic microeconomic principles show that in a free market the equilibrium price of a good or service is the point where the supply is equal to the demand (see Figure 1). At this point, the price “equates the quantity supplied to the quantity demanded” (Pindyck, p. 24) and market-clearing takes place. Due to market mechanisms, the price tends to change until the market is cleared.

![Figure 2: Market Equilibrium (Pindyck, Rubinfeld, 2005)](image)

**2.4 Market Supply**

In the case of airlines, the market supply is generated by all airlines operating on a certain route. This can be monopolised, such as the route Åre/Östersund (OSD) to Stockholm Arlanda (ARN), or oligopolised, for instance the route Frankfurt International, Germany (FRA) to New York, John F Kennedy, USA (JFK). Each company has three key performance variables (Doganis, p. 180): unit cost, unit revenues/yields and load factor. The unit cost refers to the average cost for each unit of capacity, measured in per available ton kilometre. Unit revenues or yields indicate the profit an airline makes on each unit of output sold and are measured in per revenue ton kilometre. The load factor shows how much of the capacity offered has really been sold (%). These factors are closely linked, since one can compensate (but not replace) another. High load factors can balance out low yields. If costs are too high though, even a very high load factor does not guarantee profitability if yields are too low.
The primary factor determining the supply of any company is costs. For an airline, the two major inputs are capital (airplanes) and labour (pilots, flight attendants, management, etc). It is important to note that the production function, which indicates the highest output (Q) that a firm can produce for every specified combination of inputs (Capital K, Labour L), is a fixed-proportion production function (see Figure 2). This means that the output can only be increased if both input factors are augmented proportionally. For each plane, two pilots and a fixed number of flight attendants are required. Unlike other industries, increasing only the input of capital (number of planes) or only the input of labor force (amount of pilots), the output (flights offered) will not be rising.

Figure 3: Fixed-proportion Production Function (Pindyck, Rubinfeld, 2005)

The optimal price is set where the average total cost (ATC) is equal to the marginal cost (MC) of production (see Figure 4). At this point, the ATC reaches its minimum and the MC is increasing. The price gained for each unit equals the marginal revenue, thus the benefit is zero in the long run. If the market price would be higher, the airline would achieve profits and attract new competitors to the market. In that situation, the price falls each time more airlines offer their service. In the opposite case, at least one firm will not be able to remain in the market since its costs are not covered in long-term. Exiting the market, the number of suppliers decreases, increasing the market price. For a short period, a company can offer its services for a lower price, as long as the variable costs are covered. If the price falls below that margin, the company cannot produce efficiently any more. One characteristic of the airline industry is that the marginal costs are extremely low. Whilst the fixed costs (the supply of a plane and the corresponding staff) are very high, the cost of carriage for an additional passenger is diminu-
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tive. This allows the airlines to carry out massive market segmentation in order to maximize the load factor (will be discussed further on).

![Graph: Price Optimum](image)

**Figure 4:** Price Optimum (Own elaboration based on Pindyck, Rubinfeld, (2005))

The challenge for any airline management is to match supply and demand in a way that these three factors are balanced. Therefore, it is vital to know and understand the demand structure of the market the company operates in.

### 2.5 Market Demand

The market demand is represented by all passengers wishing to travel on a specific route. According to Doganis, the passengers can be classified into two main clusters: Business travel and leisure travel. “Business travel involves a journey necessitated by one’s employment and paid for by the employer.” (p. 183). These customers usually require high seat availability on demand, high frequency of service, the availability to cancel/change reservation, as well as the possibility of a quick check-in and check-out. Leisure travelers in contrast can be subdivided into two distinct categories: Holiday travel and passengers who visit friends and relatives (VFR). Their main characteristic is that leisure travelers are more flexible when it comes to flight times and dates and that they pay out of their own pockets. Therefore, their chief concern is to pay a low fare. Whilst they are prepared to fly on another day or time, and possibly travel to another airport nearby, the business traveler demands a certain time and location in order to match business with travel.

Consequently, it is of great importance for an airline to know the mix of passengers to plan marketing. Furthermore, airlines have to face peak problems throughout the year. Whilst daily
and weekly peaks result from common working hours and days in a culture, seasonal peaks are usually caused by school and public holidays. In general, one can say that the longer the flight is, the longer is the stay both for business and leisure travel. Doganis also points out important factors affecting passenger demand for all markets: The income level and elasticity, price elasticity (will be discussed later on), population and economic activity of a region, market supply, as well as the social environment. For particular routes, these additional factors come into account: tourist attraction of a region, exchange rates affecting the prices, travel restrictions, possible substitutes such as fast-track trains or ferry connections, historical and cultural links between two regions, which also lead to population movements and labour flows. Especially the last point enforces VFR-travel. He also found a “two-to-one relation between demand for air travel and world GDP” (p. 196).

2.6 Elasticities of demand and consumer surplus

As we have seen above, pricing is the key mechanism to match supply and demand. It can even out fluctuations in demand and be a guide to marketing planning and new investments. According to Doganis, there are two alternatives in pricing:

1. Cost of service/cost-related pricing

“The first is to relate each tariff to the costs incurred in providing the services used by those paying the tariff.” (p. 271). This implies an equal price for all passengers, independent of their purpose of travel and booking-time. During the 1980s, when most air travel services were governmentally regulated, the cost-related pricing was the foremost strategy. It was seen as rational, simple and enforceable, and each charge should “be at the lowest level which will cover the costs of efficient operators, including an adequate return on capital” (p. 271). Despite the different demand segments due to the specific passenger clusters outlined above, a fixed market price was set for all customers.

The demand-related pricing on the other hand takes the varying price elasticity of the demand into account. Causing different willingness to pay among the customers, the price-related elasticity of the demand is the departing point when inducting market segmentation. It is crucial to understand and know the different elasticities in order to successfully conduct price politics. Even if it is an approach that is very much influenced by micro-economics, it explains us how to optimally structure the prices.
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This elasticity measures by how much the demand will change with the change in the price: If the price of a ticket rises by 1%, how much will the demand decline? In general, we can say that as price increases, quantity decreases and vice versa.

The mathematical definition for price elasticity is:

$$E_p^D = \frac{\%\Delta Q^D}{\%\Delta P}$$ or $$E_p^D = \frac{\Delta Q/Q}{\Delta P/P} = \frac{P}{Q} \frac{\Delta Q}{\Delta P}$$

with $E$ being the price elasticity of the demand, $Q$ being the demand for air travel services and $P$ being the price per unit.

When $|E| > 1$, the service is price elastic. In that case, an increase of 1% of the ticket fare will decrease the demand by more than 1%. The airline should decrease its prices to achieve higher sales revenue. When $|E| < 1$, the good is price inelastic, which means that increasing the ticket fare by 1% will reduce the demand by less than 1%. In that case, it would be wise to raise the price since the total yield will rise.

According to the International Air Transport Association (IATA) report by InterVISTAS Consulting Inc., when analyzing the price elasticity of air travel one should distinguish among markets for:

- Business and leisure travel
  “In general, […] all else being equal, business travellers are less sensitive to fare changes (less elastic) than leisure travellers. Intuitively, this result is plausible – business travellers generally have less flexibility to postpone or cancel their travel than leisure travellers. Nevertheless, the studies do show that even business travel will decline in the face of fare increases, albeit not to the same extent as leisure travel.” (IATA report p. 9)

- Long-haul and short-haul travel
  On short-haul routes, the price elasticity is generally higher than on long-haul routes. “In part, this reflects the opportunity for inter-modal substitution on short haul routes (e.g., travellers can switch to rail or car in response to air fare increases).” (p. 9)

- International and domestic long-haul travel
  We can also note that for international long-haul tickets the elasticity is higher than for the same domestic modus (see Figure 5).
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Another factor to be considered is the time of booking. In order to analyze the flight prices later on, we will divide the time span into three segments: Extreme short term, short term and long term. As extreme short term we consider a booking made for the 1st flight on the next day. This is often the case for business travel and emergencies. Both for urgent situations in companies and for leisure travelers the prices of these bookings are relevant. Short term is a booking made for a midday-flight one week in advance. This could occur for a spontaneously planned conference or need for family visit which can still be prepared. The third alternative is the long term booking. This refers to a point approximately three months in advance. For planned business trips, holiday trips or visiting friends and relatives this is often the option selected. We expect the long term booking to be cheaper than the first ones. Naturally, a booking can be made at any other point before departure. But in order to structure our research, we would like to refer to these three periods of time as representative references.

![Price Elasticities for Air Travel](Gillen et al., 2002)

According to IATA, a number of factors affect the price elasticity of an air service, including:

- Availability of substitutes: the more possible substitutes, the greater the elasticity
- Degree of necessity or luxury: luxury products tend to have greater elasticity
- Proportion of the purchaser's budget consumed by the item: products that consume a large portion of the purchaser's budget tend to have greater elasticity
• Time period considered: elasticity tends to be greater over the long run because consumers have more time to adjust their behaviour

With the knowledge of price elasticities, we can come back to the demand curve and market segmentation. Different customers are obviously willing to pay different prices for the same air travel service. By charging the same fare for everyone, as formerly done with the cost-related pricing, an airline would miss out on the consumer surplus shown in Figure 6.

![Figure 6: Consumer Surplus (Own elaboration based on Pindyck, Rubinfeld, 2005)](image)

To take advantage of different elasticities, airlines should offer a range of prices for the same flight. Depending on the days remaining until departure, the booked load factor, possible peak forecast and competitive pricing, the fare can vary greatly. This way, the market is broken down into segments and the airline receives higher overall revenue (Figure 7). Apart from that, carriers often accomplish different travel classes (first, business, economy, and sub-classes) for pricing purposes.

The downside of the demand-related pricing is the complexity of market segmentation. Whilst cost-related pricing is easy to implement, different fares for the same service are more difficult to manage. Apart from additional calculations, it might result in hard to justify price differences for the customers.

One factor which is has to be considered when booking a flight is the time remaining until departure. That is, if one books well in advance or so-called last-minute. Price segmentation not only takes place between different categories, but also within the categories. In our thesis,
we refer to three time frames: “extreme short term”, “short term” and “long term”. Extreme short term means to make a booking very close to the actual flight time. This can be for the next day or even the next available flight. Short term refers to a considerable short time span, such as a week or 10 days before the flight. In the empirical part, we set seven days as an example. Long term bookings are made well in advance. This is typical for leisure travel in order to achieve low fares or for thoroughly planned business trips. It is important to distinguish between those subcategories, seeing that prices can vary within a booking class as the time span gets shorter.

Along with the time remaining until departure, the booked load factor has to be considered when setting a price for an air travel service. These two factors are closely linked to each other, since the cabin factor tends to increase over time until it reaches its maximum. The term “cabin factor” describes the number of seats booked in relation to how many passengers can be accommodated by an aircraft. It is measured in percent. Since an airline has relatively high fixed costs accompanied by low marginal costs, the aim for any airline should be to achieve the highest cabin factor possible. Some even make use of overbooking\(^1\). The higher the load factor is, the higher the revenue for the airline gets. At the time of departure, any unsold seats cannot generate benefits. Through market segmentation, an airline can capture the different willingness to pay and thus increase its cabin factor. It also represents an instrument to control the varying market demand. This will be further discussed in the empirical part.

\(^1\) Business Dictionary.com: Practice of airlines [...] to sell more tickets than the actual number of people they can accommodate. It aims to avoid empty seats [...] and is legally sanctioned so long it is not abused.
This strategy is a reactive approach to varying elasticities outlined above. Concluding, there is no single best price for a flight, but a mix of price segments to maximise the profit. In order to do this, an airline should respond to these distinctions. Only when taking the different demand situations into account, can it successfully plan and implement its marketing strategy, with pricing being the key factor to match demand with supply.
3 Methodology

We specialise our research on two airlines since the whole market in the airline industry is too wide to analyse. The geographical differences as well as differences in the type of market require a differentiated view on the whole industry to deliver a sufficient result. The understanding of Porters generic strategies gives us the possibility to synchronise this theoretic concept with airlines in the actual market. We want to have a closer look at two European Airlines – the German airline Lufthansa and the Swedish Scandinavian Airline System (SAS). These two were once governmentally owned and now face competition in the open market. Hence, we apply the different segments of the model which were differentiation, overall cost leadership and focus to the presentation of the two airline companies. By setting them in such a cluster we can identify their covered scope they operate in.

All organizations are different, yet we will try to find a strategy suitable for most internationally operating airlines. Since this is such a broad field, we will focus on the market of passenger travel. Demanding extreme customer-orientation, air travel services for passengers also represent a challenge for planning and implementing pricing strategies. Thus, we would like to find a concept suitable for the international airlines market.

In the last part we have introduced the theoretical models we are going use for our analysis later on in this thesis. The models we have chosen are most suitable to give the answers to our research question. By using the Porter Model, with its different segments, we can position the airlines in the market. This will help us to identify which competition they have to deal with. As a result of that, the airline can chose the most suitable marketing strategy.

The different pricing models will help us to compare the actual pricing system to the theory. Based on micro-economic knowledge, we would like to find out whether the theoretical model of market segmentation is also valid as a practical approach for the airline industry. By observing price policies and fares in case studies, we will examine if companies apply theoretically optimal models in real life and if they succeed.

3.1 Delimitation

We have to note that although pricing plays an important role in airline marketing it is important to mention that there are a lot more factors which affect the company performance. In order to present reliable data we narrowed our research to pricing. Therewith we eliminated false results due to insufficient sources. It is hard to investigate reliable data which is secured
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by the companies. This lack of information would lead to an unreliable outcome. So our re-
search, with the focus on pricing, can only be seen as a part of effective performance.

The airline market is a very complex one and therewith not appropriate for a valid observa-
tion. Therefore, we also divided the whole market up into a small part of it. Therewith we
make sure that the results are valid. We did not only specialize on two airlines but also on
certain routes so that we can deliver decent results.

For the positioning the airlines on the market we split up the model, as already done in the
beginning of the thesis, into four parts. First we divide the market into industry-wide and one
segment only. The two airlines we look closer at are both operating in the first market seg-
ment. They transport passengers all over the world which indicates that the offered service is
not in only one segment (i.e. Europe). We have to mention that SAS does not operate in South
America and not in Africa. But this exception is not a sufficient reason against the industry
wide segment. Furthermore, Lufthansa operates not only on the passenger transportation mar-
ket but also on the cargo and others. This is a good indicator that both airlines can clearly be
situated in this area of the Porter model.

Now the differentiation between overall cost leadership and uniqueness perceived by the cus-
tomer is necessary. It is clear that the two airlines follow a similar marketing concept. They
both cannot be referred to as low cost carriers; their price structure is not based on a market
penetration with an unbeatable price. They both do not reduce their services to such a mini-
mum as typical low cost airlines like Ryanair do. They still try to be competitive but they
have a very diverse fleet as well as a wide spread product portfolio. These facts lead to the
positioning in the differentiation segment. That makes it possible to have these two airlines as
a reliable source for the research aim we have. There are still differences concerning these
two companies but a perfect match is impossible to find under the given market conditions.

3.2 Research design

Since our intention of study was to find pattern of how successful pricing can take place in the
airline industry, we chose to use induction. Even though we start by discussing the theoretical
background of pricing, we based our results on empirical evidence and drew general conclu-
sions from our observations. Throughout the paper, there is a constant interaction between
theory and data. Our research design is descriptive. Due to the relative newness of the field of
study and thus the need to map the territory, we found this design to be the most suitable. The
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constantly changing nature of the airline industry as well as the separation of research and action further supports the choice for descriptive research.

The flight prices were collected as primary data. They are measured in Euros and surveyed directly on the corresponding company website. This source has the advantages of being easily accessible, highly reliable and relatively well comparable. Having very specific values, we applied the ratio scale as the scale of measurement.

Our study is a multiple case design with a holistic approach. That means that we analyze more than one case, but focus on a single unit of analysis. We found the research population of the two airlines SAS and Lufthansa to be most appropriate. These are the companies which meet the design requirements best: They belong to the same industry and offer services for the same market segment. Due to their organizational history and geographical location, both are embedded in similar environments and possess a comparable image. Whilst the industry experiences frequent and major environmental changes, these airlines have demonstrated different responses.

Our unit of analysis is the prices of flights that match certain criteria. In line with the division of routes described on page 16, we decided to observe the following flight services:

- **Long-haul international**
  - Lufthansa: Frankfurt International, Germany – New York City (NY), USA
  - SAS: Stockholm Arlanda, Sweden – Newark (NJ), USA
- **Short-haul international**
  - SAS: Stockholm Arlanda, Sweden – Frankfurt International, Germany
- **Short-haul domestic**
  - Lufthansa: Frankfurt International, Germany – Berlin, Germany
  - SAS: Stockholm Arlanda, Sweden – Åre/Östersund, Sweden

Since both Sweden and Germany are rather small countries which do not allow long-haul domestic flights, we excluded this as a forth category. The third variable defined by IATA is the differentiation between business and leisure travel. Since we do not know which ticket is bought by which traveler, we cannot differentiate these categories. Common sense implies that business travelers buy the more expensive tickets more often than leisure travelers. This might often be the case. But some leisure traveler might also prefer to purchase the more ex-
expensive business class ticket and vice versa. Therefore, we will collect data of the three fares without classification of their purpose.

Within the three different flight categories, we additionally differentiated price levels by the time of booking\(^2\):

- **Extreme short term:** In the case study, we looked up the price for the first available flight on the next day. Depending on the connection chosen, the time varies between 6am and 11am (GMT + 01:00).

- **Short term:** To fulfill this requirement, we searched for fares ones week after the actual booking day. Because of the changing weekday, we expected price variations as well. Within our research frame, we did not have to face variations in working days caused by cultural differences. When observing flights to Arabian countries, one should take the shifted weekend and different peak days into account.

- **Long term:** Out long term fare is represented by a flight on Tuesday, February 17\(^{th}\), 2009. With that date, we believe to choose a relatively neutral date regarding time of the week and within the month.

### 3.3 Data collection

The figures were collected by entering the website of the corresponding airline every day at the same time (10am). This way, we wanted to ensure the consistency in data collection. On http://www.sas.se and http://www.lufthansa.de we searched for the related prices of SAS and Lufthansa, respectively. On each website, a query form is provided to filter and find the flights needed. One difficulty we had to face was to understand and learn to use these query masks appropriately. As commonly known, each airline has a different system and we had to be very careful to select the right variables when searching for the prices. We even experienced some problems with the server, which sometimes gave out error messages due to overcharge. This is certainly one of the main difficulties when researching over the internet.

For the short term bookings (next day and one week in advance) we referred to the day of observation. For example, on Monday 17\(^{th}\), we looked up the prices for Tuesday 18\(^{th}\) and Monday 24\(^{th}\). This implies the daily change of the flight examined. Whilst the problem of peak days is influencing this data, it gave us the possibility to compare different short term offers of the two companies. The long term booking on the other hand was recorded by refer-

\(^2\) See also chapter “Pricing Strategies“
ring to a constant flight, with the chance to observe possible price changes over time. We specifically monitored the following air travel services on February 17th, 2009: LH400 and SK1419/SK909 (long-haul international), LH6226 and SK1419/SK633 (short-haul international) as well as LH178 and SK072 (short-haul domestic). To find the air travel service which matches our categories best, we consulted the Schedule of Flights, which are available for download on each company’s website. This represented a difficulty at first, since the schedules are coded differently by each airline.

After finding the flights, we searched for the prices required. The data input was done by introducing the amount into a previously designed MS Excel worksheet (see Appendix 1). Depending on the flight category, some routes only offered two of the three ticket classes, marked with an X. Some flights were only offered on certain weekdays.

Another difficulty was that the two airlines publish their prices in different currencies: Lufthansa in Euro and SAS in Swedish Crones. To avoid problems when comparing the fare structures and be consistent, we converted all prices to Euros. This was done using the currency converter offered by SAS online. We assumed that this converter always operates with the latest exchange rate. Furthermore, we recorded all prices as “gross” prices, that is, without any tax, service charge, etc. That way, we avoided discrepancies due to different service charges or the taxes an airport charges for landing and departure. This makes calculations more reliable and reveals the real price strategy of an airline and bypasses hidden costs. However, when booking a flight, a passenger should always take into account that the prices represented in this paper are not final fares. Depending on the airline and airport, the net price can rise considerably by adding the secondary costs mentioned above. According to a decision of the court of appeal of Cologne, Germany, an airline is not allowed to advertise by quoting flight fares without all related cost. If it does so, it would gain a considerable competitive advantage through false declarations and thus act illegally. Nonetheless, from our own experience we can say that many airlines still use this type of advertising, especially in the low cost sector where penetration pricing is common.

Within the data collection, we also included fundamental figures of the company. This draws mainly from the recent business report. We found this material to be most reliable, but have to take into account that it is secondary data. The purpose of publication was to serve as an in-

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3 Decision of OLG Köln, May 9th, 2007; 6 U 239/06; Press release OLG Köln; This decision was specifically aimed at Lufthansa for offering flights for 99€, excluding extra charges
formation source for investors. At least in the case of Lufthansa, the organization is legally obliged to publish certain reports on a yearly base. Even though the business report is not aimed at students, we found some very relevant secondary data, such as the cabin factor used for data analysis later on.

Another problem we experienced along the data collection was the relatively short time span for observations. Naturally, it would have been more significant to record figures over various months. Due to the limited time to write the thesis it was impossible to carry out longer observations. Nonetheless, we believe that we have collected considerable data for our study purpose.

The sources used for this study are mainly the information provided by the organizations SAS and Lufthansa, as well as internet sources. This was due to the fact that we couldn’t find much relevant and current prints. Because of the speed at which the airline business is changing, most case studies can only be referred to during a limited time span. Consequently, as a base for further research, one must be careful when referring to this or other studies. Even though the information is selected carefully and currently up-to-date, flight prices might change rapidly within a short time-span. Basic principles ought to remain the same, but it is always advisable to be cautious with out-of-date figures.
4 Empirical study

4.1 Introduction to SAS

The Scandinavian Airline System (SAS) was established in 1946 with merging of the national airlines of Denmark, Norway and Sweden. The SAS Group is divided into three segments – Scandinavian Airlines, Individual Branded Airlines and Aviation Service. Scandinavian Airlines include the three founding national airlines; within Branded Airlines is Air Baltic and in the segment of Aviation Services there is cargo, technical and ground service. SAS’s short term strategy is to focus on the following areas until 2011 (SAS Aviation Group):

- Cultural Turnaround
- Focus on airline operations
- Concentrating on Northern Europe
- Harmonized and developed offerings
- Competitiveness in all areas
- Profitable growth

The long term goal is being environmentally competitive by reducing emissions by 20% until 2020 which is closely tied to the IATA aim, which even tries to reach zero emission by 2050.

At the moment SAS operates in approximately 34 countries, with 152 destinations and holds 40% of the market share in Northern Europe. Concerning the structure of ownership the SAS Group is 50% governmentally owned by the three founder countries. The other half consists of private shareholders. The main hubs are in Stockholm, Copenhagen and Oslo. The number of transported passengers was 25.1 million in 2007 and in the same year the operating revenue was 52.251 MSEK (SAS Annual Report 2007).

Although their main focus lies on operating in Northern Europe, SAS offers 13 long haul direct flights to North America and Asia. To gain a wider network, they were one of the founders of the Star Alliance in 1997. This helped to be able to offer a wider spread portfolio by using code sharing.

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4 Institut für Städtebau und Landesplanung: Alliance of eight international airlines for cooperation and synergy effects: Deutsche Lufthansa, Air Canada, SAS, Thai Airways International, United Airlines, Varig, Air New Zealand und Ansett Australia.

5 American Airlines: An interline partnership where one carrier markets service and places its code on another carrier's flights. This offers carriers an opportunity to provide service to destinations not in their route structure.
SAS has a reputation for being a very punctual airline. The company has also been famous for innovation in history. It was the first airline to fly over the North Pole and in 1952 they introduced the tourist class, which was followed then by the other airlines. With the help of Jan Carlzon, who became president of SAS in 1981, the customer satisfaction was announced to be the most important detail to focus on. He realized that it was time for a change in the common structures of western companies (Carlzon, 1987).

4.2 Introduction to Lufthansa

The German Lufthansa was founded in 1926 with the merging of Deutsche Aero Lloyd and Junkers Luftverkehr. In the history of time Lufthansa was involved in the foundation of different airlines like Iberia and Eurasia. Only 13 years after its beginning there was a major expansion of its network including Thailand and Chile. Between 1992 and 1997 the company was fully privatized and split up into different segments like cargo, technique and IT-business, which became independent companies. At the end of this process it established with other airlines the Star Alliance. In 2005 SWISS Airlines was integrated as an independent part of the Lufthansa Group.

Figure 8: Group Structure Lufthansa (LufthansaInvestor Relations)

Lufthansa’s strategy is growth with the help of the following three stages:

- Steady expansion of their network in long and short-haul segment
- Cooperation with Star Alliance to gain more market share
- Individual differentiation of addressing customers, including all price segments but still maintain the image of premium brand
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There are several obstacles which the airline also considers like the increasing expanses for fuel (15.1% in 2007) and the fast changing competition market as well as the booming airline industry in fast developing countries like China and India.

At the moment Lufthansa reaches 181 destinations by operating approximately 513 airplanes. On these airplanes were transported about 50 million passengers in 2007. Lufthansa’s Hubs are in Frankfurt and Munich. The company had operational revenue of 1.378 m € (Lufthansa Annual Report 2007).

Observing two companies as case studies might not be as representative as collecting data from hundreds of entities, but it will give us the general idea needed. It will be possible to further build on this by analyzing other airlines. Due to a lack to time and space, we focused on SAS and Lufthansa and believe that they are well chosen examples.

4.3 Findings

As outlined above, we observed the prices in three categories: Long-haul international, short-haul international and short-haul domestic.

The fares for long-haul international flights (see appendix 2) are extremely constant. For Lufthansa passengers, the price is 6725€ in First Class, 3568€ in Business Class and 2836€ in Economy Class when flying from Frankfurt (FRA) to New York (NYC) with LH400 or LH402. In comparison to that the prices offered by SAS are in a range between 2635.16€ and 2488.78€ in Business Class and between 1499.15€ and 1375.78€ for Economy Extra. On the route we observed – Stockholm (ARN) to Newark (EWR) – there was not always a direct flight offered so we also included flights with a stopover in Copenhagen.

SAS’s short-haul international flights (See appendix 3) – Stockholm (ARN) to Frankfurt (FRA) – always included a stopover in Copenhagen. On this route the highest fare was 706.31€ in Business Class. In this cabin class the lowest observed offer is 604.11€ but it was independent of the time of booking. These prices did not change when observed in SEK. In the Economy Extra Class the price varies between 559.55€ and 697.11€. In addition to that there is sometimes an Economy Class offered which has a maximum price of 435.11€ and a minimum of 177.11€. In this class there were price differences depending on the time of booking. On short-haul international flights, Lufthansa only offers Business Class (959€) and Economy Class (872€). Again, these prices did not depend on the time of booking during our
research. This refers to the air travel services LH3000 and LH6226 between Frankfurt (FRA) and Stockholm (ARN).

Short-haul domestic routes (see appendix 4) on the other hand do vary in price. Whilst the Business Class nearly always remains 380€ on the route Frankfurt (FRA) to Berlin (BER), the Economy ticket oscillated between 49€ for a long-term booking of LH176 and 359€ the day before on LH170. For the SAS domestic route we observed – Stockholm (ARN) to Åre/Östersund (OSD) – there is a stable price for Business Class between 233.09€ and 212.41€ independent of the time of booking. The Economy Flex price is more expensive for the extreme short-term bookings and varies between 215.10€ and 147.72€ regarding every time of booking. For the extreme short term booking the first flight in Economy Class was often just at 11:15 a.m. with the flight number SK072. There is also a price variation between 32.20€ and 158.61€ whereby the cheaper flights were only available for the long-term in advance booking.

4.4 Market segmentation

In accordance with the market segmentation explained in the theoretical part\(^6\), both SAS and Lufthansa clearly differentiate between various market fragments. The common ones among most airlines are First Class (highest price), Business Class (middle price) and Economy Class (lowest price). This segmentation is necessary and used to gain the revenue needed by taking advantage of different elasticities. The different classes are not necessarily named as a standard. SAS for example has the three classes Business, Economy Extra and Economy. For instance, the flight from Stockholm (ARN) to Frankfurt (FRA)\(^7\) costs 702.11€, 578.11€ or 329.11€ depending on the category booked. For this flight, as for all others, the market segmentation strategy is obvious.

4.5 Price comparison SAS/Lufthansa

One flight route we included in our research is operated by both SAS and Lufthansa. The resulting average prices of the route FRA-ARN give an overview about the pricing structure of each company in comparison. The price difference is not likely to be affected by environmental factors but mainly by the individual marketing strategy of the companies. Reasons for this are not only the similar taxes and charges for landing but also the similar consumption of fuel.

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\(^6\) See Figure 7, chapter “Pricing strategies“

\(^7\) On November, 11th, 2008, 6:20am, booked the day before at 10am. Flight numbers SK1415;SK1637
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Figure 9: Average Prices for Observed Fares

In the upper graph we can see that Lufthansa’s prices are much higher than SAS ones. The average fare for a Lufthansa flight is 915.50€ whereas SAS offers the same route for an average of 529.77€. Another important difference is that Lufthansa offers a First Class, SAS splits up the Economy Class into Economy Extra and Economy. The main difference between these classes is that in the basic Economy Class a rebooking fee is charged and a refund is not permitted. The high difference at SAS’s prices between Economy and Economy Extra is another interesting result of this comparison. With this offer SAS attracts a target group which Lufthansa is not interested in since they do not offer on this route such a low price.

A possible difference between Lufthansa and SAS could be the service which is offered on the flight. There are different factors like seating pit and catering and additional services which could alter the price. Since these factors are hardly measurable, it was impossible to take them into account. This is in our opinion of minor importance because, although it is an international flight, the flight time is just over two hours. During this short time the offer of additional services is not a key reason for customers to choose one specific airline. So even if there are differences in service the high price difference between the airlines is not reasonable. Additionally, the route is operated by the Star Alliance. So the service will be identical for Lufthansa customers and SAS ones. Then the pricing structure of the two airlines is even more confusing because they create a competition which is not necessary on this route.


4.6 Relation First Class, Business and Economy

As noted in the theory, the downside of the demand-related pricing is its complexity of finding customers’ desires and matching it with the fares. But at both airlines we found evidence that they use certain instruments to handle this problem and consequently equal their supply with market demand. These strategies will be discussed in the following pages.

The most obvious price segmentation is differentiation between seating classes. Generally, we can say that the more luxurious the seating is, the more expensive the ticket becomes. But there are more implications than just ordinary price scales. As in many pricing systems, the costly First and Business Class tickets contribute more towards the total revenue of a flight than an Economy ticket. Figure 10 shows the relative contribution towards the turnover of each category on flight LH400 (FRA-NYC).

![Pie Chart](image)

**Figure 10: Weighted Turnover**

These values were calculated by first finding out which aircraft type is being used on the air travel service. In this case, it is an Airbus A330-300. Its seats are distributed as follows: 4% First Class, 23% Business Class and 74% Economy Class. Since the fares remained constant, we multiplied the fare by the seating factor and put it into relation with the total revenue (Please note: The total revenue of 667,480€ is only being generated if the cabin factor is 100%). Given that the average cabin factor of Lufthansa in 2007 was 77.4% (Lufthansa Annual Report 2007), the benefit would have been proportionally smaller. Nevertheless, the relative contribution pattern remains the same. As we can see, the upper classes supply much
higher payments and thus are especially lucrative for airlines\textsuperscript{8}. This is one of the major triggers for market segmentation.

Another factor is the price range. This is the difference between the highest and the lowest fare offered for an air travel service. It can give us an idea about the profit margin and leeway an airline has when setting its prices. For example, the range between the lowest and the highest price on long-haul international routes is 1235€ (SAS) / 3933€ (Lufthansa) for FRA-NYC / ARN-EWR respectively. This implies that the willingness to pay varies greatly among different customers on that route. If it was not so, both airlines could charge a high price and limit their market segmentation to the point where the price elasticity of the demand is -1 for everyone. But since that point does not exist due to diverse elasticities, they offer a variety of fares. This can partly be explained by the factors that influence the elasticities\textsuperscript{9}, such as the availability of substitutes: On domestic and some short-haul international routes, trains, buses, cars and boats can be an alternative to flying. The more substitutes there are, the greater the price-elasticity of demand. In our cases, the routes FRA-BER and ARN-OSD have serious competition. For the route FRA-ARN on the other hand, both Lufthansa and SAS have a monopoly. They conduct code sharing on this route, enabling themselves of more price control and a higher profit margin.

In some cases, we found that certain fare segments were not offered (any more). A palpably reason is that the corresponding seating category is booked out. Especially at SAS, we frequently observed gaps of this kind. Another explanation is the rising cabin factor over time. As the booking numbers increase, the airline augments the prices to exploit the customer surplus. Therefore, a low economy price might not be sold any more. Especially if there is a high demand expected from former experience (certain weekdays and times), they tend to increase the fares more quickly. This can also be an instrument to manage yields, which will be discussed further on in this paper. Another reasonable justification is that there is not always enough time to offer additional service. For example, on all short-haul Lufthansa flights observed, there was no possibility to book First Class. Whereas Business and Economy has always been available on these routes, the most luxurious option was not offered. As it is a fairly short service (up to two hours), there is no sufficient possibility and demand for extra service.

\textsuperscript{8} It has to be taken into account that the costs are lower for Economy class than for the other two categories. We have been trying to find out about the exact costs for each class but did not get response from any Lufthansa agent. Nonetheless, the cost differences are neglectable compared to its turnover.

\textsuperscript{9} See also “Elasticities of demand and consumer surplus”
Something that surprised us was that certain options are only offered to specific customers. For example, the option “I am flexible in time +/- 3 days” by Lufthansa is only available when booking economic tickets. Certain flights were possible to book for economy or business only. This shows clearly the dedication to segment the market. Not only in the prices, but also in availability offered do these two airlines differentiate between diverse customer-groups.

4.7 Peak problem

Throughout the year, airlines have to face peak problems. Depending on weekends, working hours, holidays, and the seasons the demand varies greatly for the same flight. Business travel will mainly take place during weekdays, whereas holiday travel usually happens on weekends and public holidays. In Europe, the weekend is Saturday and Sunday, including Friday afternoon in some cases. The common working hours are roughly 40 hours per week, from 8-9am until 4-5pm daily. As we can see, the demand for certain routes drops significantly on the weekend.

![Figure 11: Observed Prices for Route: FRA-BER](image)

This example is taken from the observation of the short-haul domestic flight from Frankfurt (FRA) to Berlin (BER), booked short term. Below, you can see the data of SAS flight Stockholm (ARN) to Frankfurt (FRA), booked short term as well.
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Both Lufthansa and SAS show strong tendency to lower the prices on these days. Consequently, we can say that the market demand is lower and this way, the market equilibrium is re-established. With this strategy, they even out peak problems and buffer variations in demand.

4.8 Price increases over time

One strategy commonly known is that the fares rise over time until they reach their maximum just before the flight date. This could be clearly observed and formalized with the long-term booking prices for LH176 on February 17th, 2009 at 10.15am from Frankfurt (FRA) to Berlin (BER):

Figure 13: Observed Prices for FRA-BER February 17th, 2009
This graph shows only a small time-frame and the price seems to stabilize at 104€. But from the high prices of the extreme short term booking we can conclude that the fare will rise up to 238€ as a standard price for economy class. The linear tendency line also supports the assumption that the closer the time of flight becomes, the more expensive the booking gets.

By adapting the fares, the airlines ensure a high cabin factor. When they offer the air travel service for the first time, they do not have a single passenger yet. But as time progresses, more and more people book and the seat availability decreases. The optimum would be 100% cabin factor, which is often impossible. Using the price as a regulating instrument, an airline can achieve a high cabin factor and yet gain the maximum possible yield. When different customers are prepared to pay different prices, their consumer surplus is exploited by increasing the price as the booking entries ascend. When there are little tickets sold, the airline can keep them at a lower price. On the other hand, if the available seats are sold rapidly, and thus the demand is higher, they can elevate the price without missing out on the customer surplus. When the booking numbers stay below the expectations of the airline, they can even lower the price for another day or two in order to attract more clients. This market segmentation strategy offers the best segmentation within one booking category.

4.9 Pricing structure in the course of time

As we described in the three graphs before, both types of pricing structures have a positive effect on the usage rate of an airline because the peak seasons are depreciated. Another interesting result can be seen if we look at all graphs simultaneously. Since we observed different timeframes, that is to say the price for the same flight when booked in three month, one week or one day in advance, we can draw a conclusion concerning the pricing strategy by Lufthansa.

Figure 13, which shows the price when you book three months in advance, indicates that Lufthansa tries to even out the uncertainty of late bookings. Therefore the company provides cheap prices in the Economy Class to be sure to have a safe load factor earlier. This then leads to a better planning of short term pricing. If this kind of pricing is not performed it is more likely that the peak number of booking will arise in a short phase prior to the flight. That leaves a long period of uncertainty regarding the achievement of a good load factor.

We also expect that the price in the Economy Class is going to reach 283€ as we observed for bookings which are performed one week in advance since it is exactly the same route. In Figure 11 the pricing structure turned out to be a different one. There Lufthansa does not increase
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the price steadily but offers a cheaper fare on the weekend. This addresses leisure travelers. They are more price-conscious and therewith are not willing to pay the price which is offered during the week. Since on weekdays business travelers are dominating the demand the usage rate is less affected by the higher prices. Therewith Lufthansa tries to increase the load factor by attracting leisure travelers for the weekend.

The question arising out of these two different types of pricing is why there is not a constant one. We came to the result that the booking period of three months in advance is not usually used by business travelers since they are more likely to book flights on a short term bases. So there is no need to offer the high prices which we observed in the second graph. Leisure travelers are attracted and book their flights early, and then the prices increase to be able to receive the maximum price for the fare which is possible. But due to the fact that business travelers are not interested to fly on the weekend the plane is not filled enough. Therefore cheaper fares are supposed to guarantee a high load factor. The time of changing the pricing structure is best when business travelers start booking their fares in advance.

4.10 Currency fluctuations

As mentioned earlier, we had to adjust the prices to one currency to be able to compare the outcome of the observation on Lufthansa’s web-page and SAS’s ones. We decided to state the prices in Euro since this currency is more universal for global markets. The results of this currency conversion can be seen in the following graph: The effects of currency fluctuation on pricing of companies which operate on an international market.

![Graph: Progress of Fare ARN-FRA, Ex-change Rate €/SEK](image)

Figure 14: Progress of Fare ARN-FRA, Ex-change Rate €/SEK
In this graph there are two curves displayed. The blue line is the average price which decreases in the course of time from nearly 148€ down to 143€. The adjustment to customer interest can be eliminated as reason for this decrease because the effects of lowering the price by 5€ within 20 days as that would have little impact on the customers decision. The primary vertical axis displays the exchange rate of SEK-Euro, according to the European Central Bank for the time of our research. The curve decreases in the time of our research from 0.0999 €/SEK until 0.0945 €/SEK with the minimum at the 6th of December (European Central Bank).

By comparing these two curves it is obvious that the price-curve is steadier than the actual currency fluctuation. This indicates that the airline considers not the actual exchange rate but the overall trend of the fluctuation. This can be seen perfectly at the consistent price from 19th to 25th. During this period it is uncertain if the exchange-rate stays at the low of 0.0964 €/SEK longer or if it rises again. Then finally at the 26th the price is reduced. During the time of research the price mainly reduced and the exchange rate decreased as well. This indicates that SAS is dealing with the problems of currency fluctuation well which ensures prices which are worldwide comparable.

To keep the prices up to date is of major concern but as a result of a constant adjustment of these it is more difficult to launch prices which are attractive for customers. So an offer ending with -.99 Eurocent implements a higher affinity for a purchase than the step of a whole Euro. This marketing strategy is therewith more difficult to fulfill for international operating companies. We experienced during our research that SAS does not elaborate this kind of strategy because the prices observed were offered regardless of possible negative effects on the customer.

Since our research was in Euro we cannot give a statement on how Lufthansa includes the exchange rate in its pricing but in the annual report of 2007 it is described how the development of different currencies affect the performance of the group positively or negatively.
5 Analysis

The aim of this study was to find a pattern of how pricing takes place in the airline industry. To achieve that, we collected data from both SAS and Lufthansa for nine flights each. These are representative for most flights offered in this industry and thus provide a good example for the majority of flights. Through empirical study of the two cases we found the following pricing strategies:

Airlines apply the concept of market segmentation, which was explained in the theoretical part. They offer two or three seating categories which in some cases include sub-categories for booking. By doing so, the airlines exploit the consumer surplus. As different passengers vary among their price-elasticity of demand, the companies meet their requirements and thus maximise the revenue.

Additionally to this general model, they usually apply supplementary strategies to cope with problems which arise in the international market. First, we observed the so-called peak problem. Depending on factors such as working days and hours, public holidays and school holidays, the demand for a certain air travel service varies. To even out these fluctuations, airlines should adapt their prices to different conditions. They set higher prices on peak days/hours and lower ones for times in which the expected demand is weaker. That way, they can even out the discrepancy between demand and supply. Second, all internationally operating airlines have to face currency fluctuations. As soon as they offer a ticket in a country with another currency, the fare and benefit margin suffers influence from changing conversion rates. These fluctuations are faced by adapting the fare to the current purchasing power. This implies a good planning and careful observation of currency developments to produce at the price optimum. Third, the airlines have to achieve the highest possible cabin factor. They manage their yields by increasing price over time. According to both booking status and time remaining until departure, the airline sets a continuously rising price. Forth, on short routes, substitutes such as the railway, buses, boats, and cars represent considerable competition. We observed that the flight fares are generally lower on such routes than on flights where they possess a monopoly.
6 Discussion

All these strategies complement the basic concept of market segmentation. Based on our findings we can say that the model presented in the theory does provide a good base for airlines. However, it has to be accompanied by additional strategies to react to arising problems and fine-tuning the pricing strategy. The patterns we found implemented by SAS and Lufthansa represent a firm market-responsive approach to the problems in the airline industry. We assume that not only the two observed companies, but also other international airlines of similar standards apply these strategies. Both for new organizations and for those who wish to change their pricing patterns, these structures are beneficial and practicable.

We proved that companies do implement the theoretically optimal model of market segmentation and thus apply demand-related elasticities. As outlined above, they add further strategies necessary in the business. We have to note that air travel services are fast-changing and that the unwritten rules valid today might be completely changed. Nonetheless, this model proven to be well suitable at the moment and can be seen as an example to employ for other sectors as well. Due to its market-responsive approach, the market segmentation model is an excellent method in general. It very much takes the varying elasticities into account. Even if the market’s environment changes as it constantly does, the customers will always have individual demands. This gives space for further research and updates. It also represents a trigger for professionals to constantly be aware of changes and stay alert of the current market situation.


7 Opinion

We also disregarded new and challenging forces like the increasing price for energy and more conscious treatment of the environment. These clearly are interesting to deal with since they are affecting not only the airline industry but all others as well in the near future and even in parts already nowadays. This future change is also directly connected to pricing. Since the increasing costs for production will have major effects on product prices. These prices for the consumer should not be fully determined by production but by demand. Still it is necessary that the final price covers at least the fixed costs for a short term view and variable costs for long term view. We reduced the spreading of the topic so that we can present a meaningful and clearly defined delimited result of the complex structure. Otherwise the results would have been affected too much by influencing forces so that a statement could not be seen in a general perspective.

Our results show that today’s airline industry already is very customer orientated one. Since the companies in this market are mainly dealing with intangible products it is important to sell the right amount of products at the right time. So the customer needs to be the seen as the most important variable. Therewith pricing which affects the customer directly can be seen as a key instrument in marketing. We found out that demand peaks were reduced by offering a differentiated price. The resulting benefits for the customers are not only lower prices in the off-season but also a more efficient operating plane. This leads to wider diversity of routes. This customer orientated view is not yet understood by all other industries so the airline industry can be seen as model for the future market. A lot of companies or even industries create their prices only on a cost-related basis. This is due to the hard competition in the Airline industry not possible. Since competition increases in all industries partly as a result of globalization there is more need to focus on the customer and the connected demands. Ergo the results of our study, which contain solutions for regulating demand, can also be applied to companies in other industries.
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Appendices

1. Excel Worksheet (Design)

2. Flight fares
   a. Long-haul international
   b. Short-haul international
   c. Short-haul domestic