**Gordon Institute
of Business Science**
University of Pretoria

Perceived Fairness Towards Airlines using Online First-Degree
Price Discrimination as a Pricing Strategy.

By

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Abstract

Big data enables first-degree price discrimination, which allows firms to better match supply with demand and to achieve a finer customer segmentation. The opportunity of implementing first-degree price discrimination has overshadowed the potential concerns. One of these concerns are consumer perception. Although literature has abundantly discussed price discrimination, literature on first-degree price discrimination have been scares. There is also very little literature that focus on the perceptions that are formed when first-degree price discrimination gets implemented in the airline industry.

This study explores the passenger's perception regarding South African airlines using online price discrimination strategies. Through an exploratory study, the student studied the consumers' reaction and perception towards first-degree price discrimination in one particular industry, the airline industry, in South Africa. Furthermore, as big data enables first-degree price discrimination, the student explored the level of knowledge there is with regards to big data. The intent of the research was to identify how passengers currently perceive price discrimination strategies, as well as to understand and identify how passengers will react to airlines using big data analytics as an enabler to use first-degree price discrimination.

The key findings supported literature that airline passengers have become accustomed to current first-degree price discrimination and revenue management. Perceptions changed once airlines used personal data to enable first-degree price discrimination. It was determined that price transparency could result in immediate acceptance of first-degree price discrimination tactics. However, a ''Perceived Fairness of First-Degree Price Discrimination for Airlines' model arose which allows a better understanding of the complexity of perceives fairness. The findings from this research adds to the existing literature on first-degree price discrimination and perceived fairness. It also contributes to literature in the airline industry.

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other university. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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CHAPTER 1: PROBLEM DEFINITION AND PURPOSE

1.1. Introduction and Description of the Problem

The rapid growth of E-commerce, advances in information technologies and the rise of social media results in an enormous amount of data being generated (Chen & Chen, 2015). Academic literature and popular business articles identified the advantages of using big data as a management tool to enable competitive advantage and to help inform decision making. Analytics, Business Intelligence (BI) and big data analytics have become increasingly important in business and academic community (Chen, Storey & Chiang, 2012). Wamba, Akter, Edwards, Chopin and Gnanzou (2015) explains that practitioners and academics should be interested in understanding the impacts of big data because it has the potential to transform the entire business process and revolutionise the art of management. Big data is everywhere, and most firms can obtain it. By providing managers with data analytics skills, managers will be able to gain a competitive advantage (Chang, Kauffman & Kwon, 2014).

Chen et al. (2012) defines big data and big data analytics as "the data sets and analytical techniques in applications that are so large (from terabytes to exabytes) and complex (from sensor to social media data) that they require advance and unique data storage, management, analysis, and visualization technologies" (p.1166). Akter and Wamba (2016) argues that big data analytics is a distinctive competence for high-performing business processes to support business needs, such as identifying potential and loyal customers, detecting quality problems, determining optimal prices, or deciding the lowest possible level of inventory.

Personal data and their aggregation as "big data" have recently become a big focus of research, as big data enables price personalisation. Internet Protocol (IP) specify user searches and interaction logs are collected through server logs and cookies. This data is a gold mine for organisations that are interested in understanding customers and to identify new business opportunities (Chen et al., 2012). Electronic networks collect a massive amount of personal data, resulting in a means to accurately analyse consumers' willingness to pay. Through this they are enabling first-degree price discrimination (Rayna, Darlington & Striukova, 2015).

Baye, Prince and Squalli (2013) defines price discrimination as "the practice of charging different prices to consumers for the same good or service" (p. 417). First-degree price discrimination enables the seller to charge each customer a separate price depending on the intensity of his or her demand. Second-degree price discrimination sees larger groups paying less, and in third-degree price discrimination, different class buyers pays different amounts (Kotler & Keller, 2012). Second and third-degree price discrimination is a very common strategy, but ideally firms would like to engage in first-degree price discrimination. However, this is a very difficult strategy to implement due to the knowledge required.

Big data offers new opportunities. The advent of the internet and the digital economy has made it possible to observe the behaviour of individual consumers accurately and has brought first-degree price discrimination into focus once again (Rayna et al., 2015). Researchers have recognised the potential of personalised pricing, but very few studies provide guidance in relation to how price discrimination effects buyers and sellers (Hinz, Hann & Spann, 2011).

Kotler and Keller (2012) identifies that price discrimination will be successful under the following conditions; when it is possible to segment the market and the segment shows different levels of demand, when the lower segments cannot resell the product to the higher segment, when the competition cannot undersell the higher segments, when the cost of segmenting the markets exceed the extra revenue, when the practice does not breed customer ill will and resentment, and when the practices are not illegal.

The purpose of this research is to understand if first degree price discrimination could lead to customer resentment and ill will, which could result in discrimination to fail. Customer perception of fairness with regards to prices is a key component in successfully implementing differential pricing strategies (Lii & Sy, 2009).

Malc, Mumel and Pisnik (2016) explains how price fairness has gained relevance due to the expansion of price discrimination through the business world, and how an understanding of the social comparison when customers perceive prices as (un) fair,

eliminates he dangers of not differentiating prices correctly for different consumers. A price that is perceived as unfair, could potentially trigger negative emotions that could result in a negative word of mouth, consumers terminating current relationships and even boycotts. It is crucial for managers to understand how they can use prices that will evoke fairness perception (Kuester, Feurer, Schuhmacher & Reinartz, 2015).

Few studies have been done to identify whether companies have been successfully implementing online price discriminations. This is probably due to sensitivity with regards to competitive reasons and possibly to prevent consumer backlash. A study done by Mikians, Gyarmati, Erramilli and Laoutaris (2012), found no evidence of price discrimination on system-based differences. An example that demonstrates how important it is to understand the customers' perception towards pricing strategies, is Amazon. They used personal price discrimination to calculate consumers' willingness to pay based on information contained in cookies. This strategy, however, back fired once consumers realised that they were paying more than other consumers for the same product (Rayna et al., 2015).

Price discrimination has been discussed abundantly as a pricing strategy, but the literature that has been devoted to first-degree price discrimination has been, until recently, scarce (Rayna et al., 2015). After reviewing various literature papers, it is evident that big data analytics could be used to enable first-degree price discrimination, which could result in increased profit or reduce inventory spillages. It is also evident that those who perceive price discrimination to be unfair, could potentially threaten the image of the organisation and result in unsuccessful strategy implementation.

1.2. Scope of Research

Few research studies on price fairness has been found in tourism literature from a customer's perception, while many has paid attention to pricing strategies from a managerial perspective. The airline market allows for price discrimination, and they have been practising revenue and yield management for years. Revenue management (RM) is a sophisticated name for price discrimination. Wang, Heo, Schwartz, Legoherel and Specklin recognises that one of the eight areas of managerial shift in securing the

success of revenue management is to move away from relying on historical and predictive analysis and to capitalise on the opportunities offered by big data (2015).

New pricing schemes have been controversial and traditional pricing strategies in the tourism industry have raised fairness matters (Chung & Petrick, 2013). Visser, Nikiforakis, Bielova and Joosen (2014) found no evidence of airlines using systematic price discrimination. This could be an indication that airlines are uncertain about consumer backlash.

The emergence of possible price discrimination based on personal data, could see airlines charging individual passengers' different prices for the same product. Some industry experts in the airline industry have claimed that the passengers are more concerned about flight cancellations, delays and baggage issues and that price increases have not been on the major list of complaints (Chung & Petrick, 2013).

Airlines have been using revenue management for years, this leads to the following question. If big data enables first degree price discrimination, would airline passengers change their perception towards the fairness of discrimination? The scope of research was restricted to perceptions of South African passengers, with regards to local airlines in South Africa, using personal information to enable first degree price discrimination.

1.3. Research Problem

This research is aimed to enable price setters to better understand and anticipate consumer perceptions towards price setting strategies. Behavioural price discrimination raises concerns about price fairness. Firms serving fairness minded consumers should be concerned about these consumers, and existing research has not fully explored consumer fairness concerns about behavioural based pricing (Li & Jain, 2015). It is imperative to study the relationship between perceived fairness of price and emotions in the e-commerce and internet business environment (Lii & Sy, 2009).

The objective of this research is to get an understanding of how passengers perceive the current pricing strategies used by airlines. To explore passenger's knowledge about big data and big data analytics, and how they feel about big data analytics using their personal data as a price setting reference. The aim of this research is to establish current perceptions of passengers and to understand how and why these perceptions were formed. Furthermore, it will be investigated how passengers will react towards unfair perceptions.

This research could potentially contribute to literature by providing a better understanding of passenger's current views on price fairness. Revenue management was implemented in the 1970s. The passenger's perception has potentially changed since then, and recent literature does not focus on this change. A positive change in perception could indicate that passengers could potentially be open to other forms of price discrimination. This research could potentially guide an airline when formulating future pricing strategies.

Big data as an enabler will allow organisations to best assess an individual's willingness to pay, their needs and wants, and thus the goal of efficient optimisation might be in the organisations reach. Academia should play a major role in understanding and advancing these opportunities (Wang et al., 2015).

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

A literature review was conducted to better understand how big data enables first degree price discrimination. Fairness perception is a complicated area. The below review will attempt to simplify the existing literature to guide the research questions and review how big data, first-degree price discrimination and fairness perception link to airline revenue management. This chapter will first discuss big data, then present an overview of price discrimination and fairness literature and how it ties in with revenue management.

2.2. Big Data

Big data enables first-degree price discrimination. It is important to understand the complexity of big data, and the opportunities and challenges it brings.

Big data is a buzzword among researchers, media and the business environment. It is therefore necessary to unpack the meaning of big data. Wamba et al. (2015) defines 'big data' as "a holistic approach to manage, process and analyse the 5 V's (i.e., volume, variety, velocity, veracity and value), in order to create actionable insights for sustained value delivery, measuring performance and established competitive advantage" (p. 235). *Volume* refers to the magnitude of data and is anything between terabytes and petabytes. Volume is currently relative, but this might change soon, due to storage capacity increasing. *Variety* includes unstructured, semi-structured and structured data. *Velocity* of data refers to the rate and speed at which data is being generated and acted upon. *Veracity* is the need to deal with uncertain and vague data. Data is only *valuable* once it has been analysed and used (Gandomi & Haider, 2015).

Big data contains abundant information about consumers including their preferences, demographics, shopping behavioural patterns and social behaviours (Wamba et al., 2015). Similarly, Chang et al. (2014) mentions that the data comes from everywhere and includes videos and pictures, online purchase records and geolocations from mobile phones. Big data has grown rapidly. This amount of data was not available in the past

(Chen & Chen , 2015). An enormous amount of product, customer, company and industry information could be generated by the web, and organised visualised through web and text mining techniques. By analysing customer clickstream data logs, analytical tools can provide trails of user's online activities, browsing and purchasing patterns (Chen et al., 2012). Data generated from smart phones and apps generate real-time data, that could be used to provide personalised offers (Gandomi & Haider, 2015). Developing better customer services, increasing operational efficiency, informing strategic decisions and identifying and developing new services and products are advantages that researchers and decision and policy makers needs to recognise and harness from big data to reveal the next wave of growth (Chen & Zhang, 2014). The growth of the internet has seen an increase of electronic commerce or online shopping, and this medium is used as an extension to develop growth and maximise profits (Lii & Si, 2009).

Recently there has been an increase in price discrimination based on location, post cost and even personal data. It is clear that big data generate avenues for competitive advantages, but it also presents various challenges. Most retailers have been unwilling to use this data and technologies due to the fear of consumer backlash (Vulkan & Shem-Tov, 2015).

Sivarajah, Kamal, Irani, and Weerakko groups the broad challenges of big data into three main chategories: data challenges (the 5V's), process challenges and management challenges. Managerial challenges include privacy, security, governance, information sharing and ownership (2017). Similarly Chen and Zhang identifies that difficulties lie in data storage, capture, searching, analysing, sharing and visualisation (2014). Big data also presents several challenges and concerns over privacy, and the use and collection of private information has raised concerns (Nunan & Domenico, 2013).

Unsophisticated, technologically unsavvy consumers could lack awareness of firm's offerings, whereas firm's are aware of consumer preferences, taste, price sensitivity and their distribution across the population. Consumer perception of big data is a topic that has not been studied much. A consumer survey done by the U.S. Pew Internet & American Life Project in 2013 indicated that a large proportion of their respondents have acted against actions such as tracing, by turning off their GPS (Kshetri, 2014).

Consumers are becoming more concerned about the degree to which marketers, retailers, manufacturers and web sites are monitoring their every action (Graeff & Harmon, 2002). This raises the question of how informed consumers are about big data and their application and what actions they might have taken?

User information privacy is where individuals control and regulate the information mode, type and extent of personal information conveyed to others. Perceived vulnerability is the degree of the users who believe that a risk might occur. If the extent of the risk is higher than the enhancement of user benefit, then the user might take up measures to protect online information (Adhikari & Panda, 2018).

Erevelles, Fukawa and Swayne (2016) explains that data offers behavioural insights about consumers and defines big data consumer analytics as "the extraction of hidden insight about consumer behaviour from big data and the exploitation of that insight through advantageous interpretation" (p. 1). Analysing clickstream datasets can predict with a certain amount of accuracy, based on customer browsing history, if a customer is going to purchase a product or not. Clickstream datasets enable companies to track the activities of online users and record the virtual trail users leave behind while browsing the Web (Chen & Chen, 2015; Gandomi & Haider, 2015). Big data and tools to analyse such data, creates the opportunity to create a much finer customer segmentation (Chen & Chen, 2015).

Through price setting algorithms, prices can change constantly, and different prices can be offered to different people at the same time. Big data leads to adequate information to predict their willingness, and personalised pricing leads to first-degree price discrimination (Kerber, 2016). While big data creates endless possibilities to maximise profit through personalised pricing, it is crucial to understand how first-degree price discrimination will be successful and to understand how technologically informed passengers are and how they will perceive personalised pricing.

2.3. Price Discrimination

Baye et al. (2013) identifies that there is a trade-off between selling only a few units at a higher price and selling many units at a lower price. By simply charging a single price where marginal costs equal marginal revenue, managers can set the profit-maximising price. Price discrimination could be used to yield profits above a single profit-maximising price, to extract additional surplus from customers (Baye et al., 2013).

Price discrimination occurs when a company sells a service or product at a different price that does not reflect the proportional difference in cost. It includes charging various prices for the same product to different customers based on their willingness to pay (Kotter & Keller, 2012; Richards, Liaukonyte & Streletskaya, 2016). Price discrimination is a fundamental concept in economic theory and it has become a very common practice for retailers and service providers (Hannak, Soeller, G, Lazer, Mislove, & Wilson, 2014). Pricing theory suggests that by fine-tuning the threshold price to the prospective buyers' willingness-to-pay, the seller will be able to extract greater profit from the individual. By charging a low threshold price to low valuation consumers, a sale could be realised whereas it would be otherwise lost. A high threshold price could possibly extract surplus from a high valuation consumer (Hinz et al., 2011).

Discrimination occurs when prices differ more than the costs. It is only when one compares the price-cost margin, and the margin varies, that one can be discriminated against. Customers paying the higher price, most commonly are the ones getting discriminated against. Differential pricing between peak and off peak is not a form of discrimination, because it only reflects the additional cost incurred for capacity. Selling in bulk is another example. Here they reflect economies reaped from selling in bulk (Hanlon, 2008). Dynamic pricing enables firms to increase revenue by responding to shifting demand patterns, matching supply with demand and achieving customer segmentation, and enables organisations to implement flexible pricing strategies that are based on changing demand (Chen & Chen, 2015; Erevelles et al., 2016).

Based on the level of information the company has, three types of differential pricing emerge.

1. First-degree price discrimination: A firm charges a different price for each unit offered. It occurs when the seller can price each unit at exactly the consumers' willingness to pay, meaning the seller can then capture all the consumer surplus.

2. Second-degree price discrimination: Different quantities will get charged at a different price
3. Third-degree price discrimination: Charging varying prices to different market segments and this is based on the characteristics of the segment profile (Armstrong & Porter, 2007; Lii & Sy, 2009).

First degree price discrimination can also be referred to as perfect price discrimination and personalised pricing, is characterised as charging the exact price consumers are willing to pay based on elasticity of demand. Elastic consumers who are price constrained will pay less than inelastic consumers who can afford to pay higher prices (Hannak et al., 2014). First-degree price discrimination involves customers to disclose personal information that would, otherwise, remain hidden (Richards et al., 2016).

Categorised as being extremely difficult to implement, Baye et al. argues that some service providers have been successfully implementing a form of first-degree price discrimination. Car dealers post a price above the actual marginal cost on the car, the car dealer then gives the buyer discount depending on the willingness and ability to pay. Similarly, most professionals charge a rate for their service, based on the assessment of ability and willingness to pay (2013).

Firms often use internet cookies, loyalty cards, IP addresses and user log-ins to track and store information about an individual customer's purchase history. This information enables firms to charge consumers customised prices based on their purchase history. This is a form of behavioural based pricing (Li & Jain, 2015). Personalised customer information makes it possible to segment consumers on individual levels, allowing organisations to apply first-degree price discrimination to offer different prices for different customers (Chen & Chen , 2015). Big data will support first-degree price discrimination and a move away from the less effective third-degree price discrimination, where a vast amount of the consumer surplus will be extracted (Wang et al., 2015).

Neoclassical economic conditions believe that prices should be set under market equilibrium, where marginal revenue equals marginal costs. Problems of fairness perception arises when the market conditions allow consumers to exploit an

advantageous market position. This includes monopoly markets, or where the consumers have an irrevocable need for the product, such as medicine, food or housing (Crane & Matten, 2016). One could improve this argument by adding that big data and the use of personal information should be included in the factors mentioned above. A firm could be using this information to gain advantage, and this could lead to questioning fairness.

A study done by Bergemann, Brooks and Morris (2015), considers the welfare implications of price discrimination and how additional information can lead to consumer and producer surplus.

Figure 1: The Surplus Triangle (Bergemann et al., 2015, p.2).
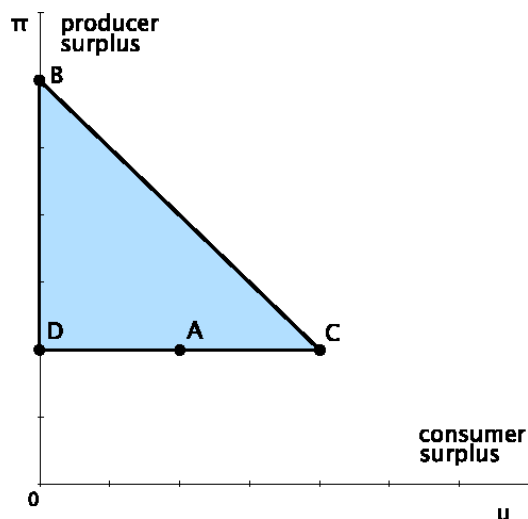
The shaded area in Figure 1 indicates that the sum of producer and consumer surplus cannot exceed the total value that consumers will receive, that the consumer will not buy a product above the valuation price and that the sellers should at least get a price above uniform price if there was no segmentation. Point B indicated that the monopolist has complete information of the buyers' valuation, thus enabling first-degree price discrimination, resulting in the producer charging the true valuation price. Point C marks where the consumer surplus is maximised. Here the producer has no information, and they are held down to uniform price. Point D is where no social surplus is achieved, the producer charges the uniform price, minimising profits and holding consumer surplus down. Point A is where the producer has no additional information, the consumers receive positive surplus and the producer charges standard price.

This study proofs that additional information above the original distribution could have a substantial effect on producer and consumer surplus. And that this additional information does not only impact the producer, but that it could positively and negatively affect the consumer surplus (Bergemann et al., 2015). If, however, the consumer regards this as unfair practice, the seller might be impacted through disgruntled consumers, and customer defections.

Consumers who anticipate that their personal data might be used to price-discriminate them might even attempt to manipulate the information they are revealing (Rayna et al., 2015). Knowing that retailers use clickstream data or that they are testing their pricing behaviour, customers might behave strategically and change their online shopping routines. Hinz et al, mentions that consumers might try to hide their willingness to pay, or they might regard the practise as unfair. This might jeopardise the seller's profits. Price discrimination mechanisms might offer benefits to sellers, but they are worth very little if they don't get accepted by consumers (2011).

Price discrimination in service industries is based on the following assumptions: firstly, consumers have heterogeneous taste in products, and individuals will purchase different amounts of the same priced product based on their willingness to pay. Secondly, the firm that is discriminating will have some degree of market power. Lastly, consumers should not be able to resell products to the other consumers who are charged a higher price (Lambrecht et al., 2012).

The airline market allows for price discrimination. Barriers to entry arise for the sunk cost, scale economies and hub-and-spoke systems that give airlines market power, even when the route is competitive. Different slots between airlines ensure that they differentiate among each other with schedule and route offerings (Stavins, 2001). Airlines use fare rules that prohibits passengers to change names or transfer the tickets to other passengers, which makes the exercise for price discrimination much easier (Hanlon, 2008). Big data provides much more detailed information about demand including holiday plans, business trips, student vacations, visiting friends and family, thus enabling first-degree price discrimination.

Nonlinear pricing theoretical models, such as price discrimination, generally finds that some passengers are better off, others are worse off and that firms are better off (Lambrecht et al., 2012). On the other hand, Hanlon states that price discrimination in the airline industry are characterised as impacting the relatively rich and benefiting the passengers who are less well off (2008).

2.4. Rationality of Consumer Behaviour

2.4.1 Defining Price Fairness

Kotler and Keller (2012) defines perception as "the process by which we select, organise, and interpret information inputs to create a meaningful picture of the world" (p. 98). When consumers perceive purchase situations and prices, most often they do not evaluate them completely rational (Cant & van Heerden, 2010).

Fairness is the judgement of whether the outcome or the process to reach the outcome are just, acceptable or reasonable. Price fairness refers to a customer's emotions and related perception to how acceptable, fair and reasonable the difference is between two prices or procedures with a pertinent standard, reference or norm (Malc et al., 2016; Xia, Monroe & Cox, 2004). This is similar to Kuester et al. (2015) explanation, where the consumer will form their price fairness judgement on reference transactions by comparing the price to be judged by the reference price. They define the reference price as "any price to which other prices are related and consumers rely on a variety of possible reference prices such as prices paid previously, prices paid by other consumers for the same product, price of equal or similar products from competition, and even expected future prices" (para.2).

Xia et al. (2004) explain the concept of price fairness, using various conceptualisations to describe the phenomenon of fairness:

- Procedural Justice: This theory suggests that the focus is on the procedure that determines the outcome (Kahneman, Knetsch, & Thaler, 1986)

- Equity theory and distributive justice: here emphasises is placed on the importance of equality of outcome between the exchange of two parties (Adams, 1965)

Building on equity theory and distribution justice, it seems reasonable that we can expect unfairness to prompt behavioural consequences and negative attitudinal, which could cause the disadvantaged clients to be chased away (Fernandes & Calamote, 2016). Price evaluations are comparative. When prices that are judged differs from the reference price, it might be perceived as unfair. Although these comparisons might be necessary, it might not be sufficient to perceive it as unfair. Furthermore, price comparison leads to these outcomes: disadvantaged inequality, equality and advantaged equality. Finally, potential negative emotions and perceived unfairness will be directed towards the party that have been perceived as causing the situation (Xia et al., 2004).

Figure 2: A Conceptual Framework of Price Fairness (Xia et al., 2004, p.2).
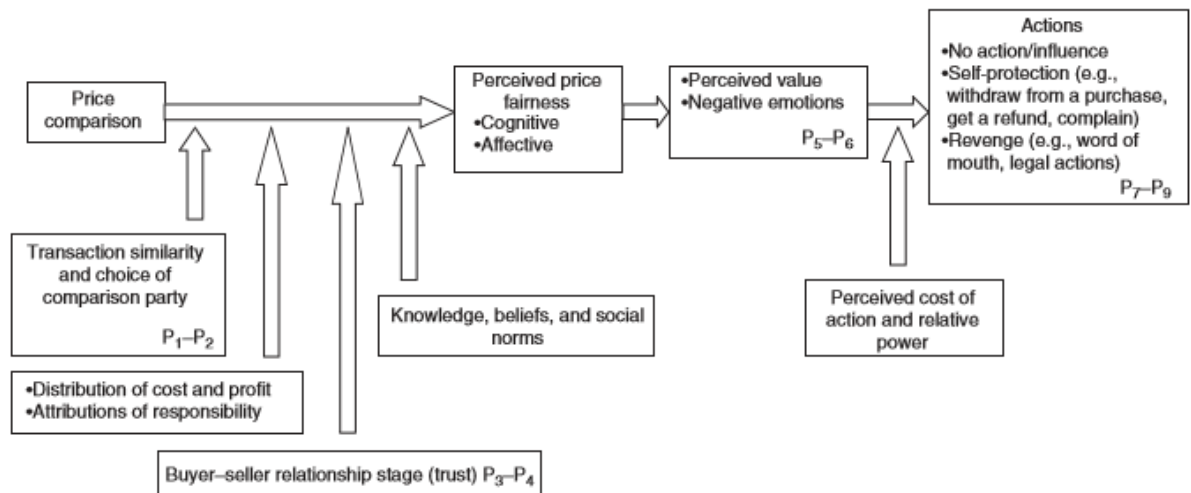
Figure 2 presents a conceptual framework for price fairness that integrates the conceptualization and that organize the existing price fairness research. From this we can infer that there are certain factors that influence perception of fairness and these lead to a perceived value, or emotions which could lead to actions being taken (Malc et al., 2016; Xia et al., 2004). There are multiple theories that explain how consumers formulate price fairness perceptions. The following section will discuss the factors that influence perceptions, the decision of fair, unfair or the norm, and the potential outcomes.

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2.4.2 Factors Forming Perception

Procedural fairness is the perceived fairness of the price setting practice. *Procedural fairness* is important because it reveals more about the seller's character than the outcome does, and these character judgements will be used for judging future events (Ferguson, Ellen, & Bearden, 2014). On the other hand, the *dual entitlement principle* is based on a reference transaction, that a consumer is entitled to a reasonable price, and that a company based on a reference point is also entitled to a reasonable profit. People tend to accept a price increase when costs increase (Chung & Petrick, 2013).

Social comparison is when consumers generally think that they are the same, and that they should all pay the same price (Mussweiler, 2003). They regard interpersonal price disparities as unfair (Wu, Liu, Chen & Wang, 2012; Xia et al., 2004). This is similar to *distribution fairness.* The distribution theory refers to the comparison a consumer makes to the outcome (e.g., the offered price), to the outcome of another. This theory emphasises the importance of the information from the social comparison. It suggests that a price comparison is necessary, but it is not the only relevant factor when evaluating overall price fairness (Ferguson et al., 2014).

Mussweiler (2003) suggest that comparisons do not exist in an information vacuum, and that a judgement is made based on the relevant knowledge of comparison targets. He also mentions that, more importantly, the judgement can only be made if there is a certain degree of knowledge available. The question then arises of how airline passengers perceive price disparities, as the airline industry have been using revenue management for years. Interpersonal price disparities might seem less unfair if the pricing policy is a norm in the industry (Garbirino & Maxwell, 2010).

Richards et al. (2016) improves this argument and identifies the relevant literature and the factors that determine how price fairness perceptions are formed. He includes customer perception of sellers cost, buyers previous experience with the product or seller, cultural differences among buyers, competition prices, loyalty to the retailers, the procedure used to set prices, the motives inferred for setting prices, any perceived

violation of social norms in price setting and interpersonal differences in price. Ferguson et al., (2014) agree with Richards that price perception incorporated more than just one or two factors to form an overall price fairness perception. They suggest that there is an interaction between procedural and distribution fairness, and that both influence overall price perception.

2.4.3   Fair or Unfair

Xia et al. (2004) argues that unfairness and fairness could be two completely different concepts. They suggest notions about unfairness are normally clearer, sharper, and it could be more concrete than the notion of fairness. From this we can infer that passengers will know why prices are unfair because they experienced it, but they will find it hard to articulate what is fair, which could indicate that they accept price discrimination because they do not perceive it as unfair or fair, they just perceive it as the norm.

2.4.4   Outcome of Perceived Fairness/Unfairness

Equity theory helps us understand the possible outcome of customer perception, equality, dis-advantage inequality (this is when a customer observes a price to be higher than the other) and advantage inequality (this is when the actual price is lower than the other price) (Adams, 1965). *Self-centred inequity aversion* is a notion that when discriminatory pricing is used, it might fail if the interviewee has evidence that others paid less or more than himself. The opposite is true for *self-interested in-equity aversion*, when a consumer has evidence that others paid less than them, but they also got a good deal, then discriminatory pricing is more likely to succeed (Liaukonyte, Richards, Kaiser & Rickard, 2014; Richards et al., 2016).

Customers are frequently unwilling to accept being price discriminated, because they fear they could possibly end up paying more for the same product as others. Unless consumers are provided with sufficient incentive, they are unwilling to disclose private information fearing that the information will be used against them (Rayna et al., 2015). Buyers who can help formulate and participate in the price-formulation process, will less likely place blame for the outcome of the price (Richards et al., 2016). Vulkan and Shem-

tov (2015) mention that some members of the public are willing to sacrifice some of their own payoffs to ensure a more equal distribution of payoffs.

Personalised pricing could cause perceptions of unfairness, fear of price-gouging, loss of credibility and trust, and could possibly reduce purchasing intension. Once the price is seen as "unfair", consumers will not trust the vendor or the way in which the price was set (Richards et al., 2016). Chung and Petrick wanted to understand the relationship between antecedent and consequences of tourist perceived price fairness. Their study demonstrates that price comparison negatively influences price fairness, and that fair or unfair relied on the buyer's subjective perceptions based on cognitive reasoning (2013). This is similar to Xia et al., their research found that price comparison played a role in price unfairness judgements and that price unfairness is associated with negative emotions, and that these negative emotions would be dealt with through revenge (2004).

2.4.5 Conclusion of Perceived Fairness

This section illustrates that based on a comparison and other factors, consumers will perceive an outcome as either fair or unfair, and based on the information available they would react in different ways (Chung & Petrick, 2013; Ferguson et al., 2014; Malc et al., 2016; Mussweiler, 2003; Richards et al., 2016; Xia et al., 2004). From literature a diagrammatic image has been derived and it is illustrated in Figure 3 below:

Figure 3: A Model of Perceived Price Fairness
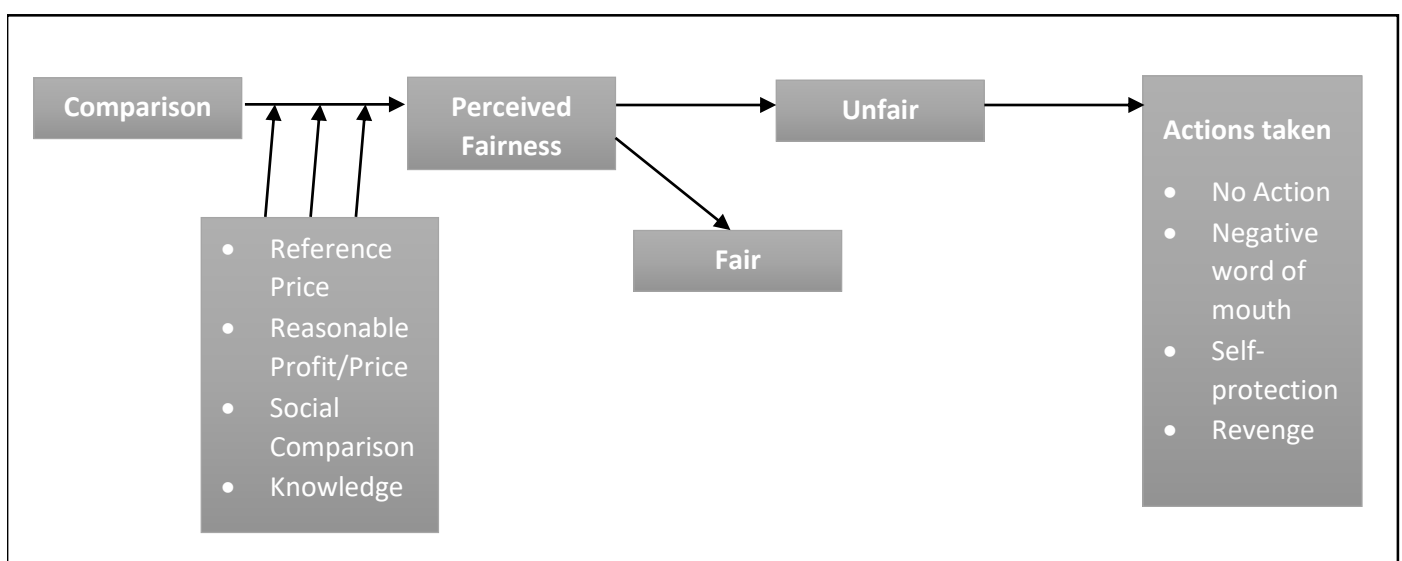
2.5. Revenue Management

Revenue management started in the airline industry aimed at maximizing yield per available seat (capacity utilization). Yield management in the 1970's was the core principle (Denizci Guillet & Mohammed, 2015). Kimes (1989) define revenue management as "the process of allocating the right type of capacity to the right kind of consumer at the right price so as to maximize revenue or yield" (p.15). This definition is supported by Denizci Guillet and Mohammed (2015). They state that to date this is still the most relative definition and it has only been modified slightly to include at the correct time and distribution channel. Revenue management is a sophisticated form of price discrimination (Tribe, 2011).

Airlines charge their passengers different fares, and it all depends on the time the reservation was made, and the quantity of tickets booked (Lii & Sy, 2009). Dynamic pricing has gained popularity since its success in the airline industry. The most dynamic pricing problems in revenue management includes:

- Finite selling session/time horizon: Airlines sell their seats several months before the departure.
- Finite amount of inventory: Airline decides on an aircraft type resulting in the fixed number of seats that cannot easily be changed.
- Selling seasons consist of multiple seasons that might be set at different prices (Chen & Chen , 2015).

The hospitality and airline industry use yield pricing and revenue management, offering higher-price late purchases, discounted, but limited early purchases, and lower rates for unsold inventory. They also offer different prices for the seat class, day of week and time of day (Kotler & Keller, 2012). Airline companies implement sophisticated pricing schemes that change ticket prices hourly. Consumers will only know about this if they underpaid or overpaid for the ticket, or if they chat to other passengers (Wu et al., 2012).

Wang et al. (2015) suggest eight areas of managerial shift that requires attention from management (Table 1)

Table 1:Eight areas of Managerial Shift in Revenue Management (Wang et al., 2015)

From	To
Revenue Maximisation	Profit Optimization
Revenue-Centric Approach	Customer-Centric Approach
Demand-driven Pricing	Reputation and Value-Based Approach
Short-term Tactical RM approach	Long-term Strategic RM Approach
Managerial Distribution	Channel Improvements
Relying on Historical and Predictive Demand Analysis	Capitalizing on the Opportunities offered by **B**ig Data
Focussing on Room Revenue	Total Revenue from all Yieldable Sources
Educating RM Leaders	Fostering RM Culture through the Organisation

One of these shifts are to move away from demand-driven pricing and revenue-centric approaches towards a customer-centric, reputation and value-based approach. However, they also mention that managers should move away from using historical and predictive demand analysis and explore and capitalise on the opportunities that is offered from big data (Wang et al., 2015).

If passengers view regular prices as higher than the reference price because of frequent low-demand prices, or if they view peak-demand prices as higher, then they might view prices as unfair. These passengers also believe that they should get more value for the higher price, and if they do not get that value, they believe the price is unfair. When the relationship between consumers believing they deserve a reasonable price, and the organisation believe they are entitled to make a reasonable profit, becomes unbalanced, the passengers considers this transaction as unfair (Kimes & Writz, 2003). This raises the question, if consumers regard first-degree price discrimination as unfair, could big data opportunities prevent the shift to a more customer centric, reputation and value-based approach? Negative consumer response is likely if consumers perceive a firm practice as unfair (Writz & Kimes, 2007).

Kalayci (2015) points out that it is a daunting task for consumers to figure out the price of a product or service. They further explain that if goods and services have multiple dimensions, and if consumers are only able to evaluate some of the dimensions,

organisations will make it harder for consumers to compare the value of the goods and services. Complex pricing is popular in the airline industry. Firms tailor their prices to better adapt to passenger needs and to better segment the market. They offer bundle services, which make prices more complex, because there are different parts of the offering. Firms could also intentionally make prices more complex (Homburg, Totzek & Kramer, 2014).

The social norm theory explains why some airline passengers do not mind paying different prices than other passengers for nearly identical seats (Richards et al., 2016). This pricing strategy has been very successful in higher education, where personalised prices that are based on needs and merits are a common practice (Waldfogel, 2015).

2.6.   Conclusion

The advantage of big data analytics combined with behavioural pricing creates endless opportunities for improving profits through price discrimination strategies. Organisations need to explore these opportunities, but they also need to understand threats and potential consequences to successful implementation strategies. Airlines have been using the deferential pricing technique since the 1970s and it could be argued that these policies have become more accepted through the years. How will passengers respond to these new pricing strategies?

CHAPTER 3: RESEARCH QUESTION

The literature review has prompted the following questions:

3.1. Research Questions

Research Question 1: How do passengers currently perceive airline pricing strategies and what is the level of knowledge they have?

This research question will firstly explore how price sensitive the sample is, as this will help to inform how, and why fairness perceptions are made. Secondly, it will explore what passengers' current perceptions are with regards to airline prices. The questions will aim to understand the passenger's knowledge with regards to airlines' current pricing strategies. Thirdly, it will seek to understand if and why passengers perceive prices and price forming tactics to be fair, unfair, or if they perceive these prices to be the norm (this is how it is and always have been).

Research Question 2: What is the current understanding of big data?

Kshetri mentions how technologically unsavvy, and unsophisticated consumers could lack awareness of firm's offerings (2014). To understand the consequences with regards to first-degree price discrimination, one must take a close look at the level of knowledge and understanding passengers have. This research question will aim to establish how informed passengers are with regards to big data. Furthermore, the question will establish how informed passengers are about advantages and the negative effect of big data analytics. It would then determine how vulnerable interviewees have felt and if they have taken steps to mitigate vulnerability.

Research Question 3: Passengers perceptions towards personal pricing.

This question will help to determine the interplay between big data and pricing tactics. Once interviewees understand what big data and big data analytics are, how will this change their perceptions towards current pricing tactics and pricing tactics that sees

airlines using first degree price discrimination to adjust prices based on their willingness to pay.

Research Question 4: **Reaction to unfair perception.**

Once the price is seen as "unfair", consumers will not trust the vendor or the way in which the price was set (Richards et al., 2016). Research question four provides the potential of understanding how and why passengers will react to perception of unfair.

CHAPTER 4: RESEARCH METHODOLOGY

4.1. Introduction

This chapter discusses the chosen methodology for this study. The literature review that was conducted in Chapter 2 shaped the foundation and the basis of methodology choice and the guideline for formulating the interview questions that was used in the in-depth, one-on-one interviews. Adopting an exploratory, qualitative approach. The selected population, research method, sample size, data gathering, and the method of analysis will be discussed in the section below.

4.2. Methodology Choice:

Cassell and Symon's (2011) identified three conditions that result in good qualitative research: research that is fit for a purpose, that is hard to access and that needs to be demonstrated. A qualitative and exploratory research method should be used to extract as much information as possible and to provide examples or demonstrations where possible. Exploratory studies lend itself to a new phenomenon where the researcher might want to gain some insights that will inform the research design and might not be able to launch themselves into full-scale research. Qualitative research involves describing, explaining and interpreting collected data when there is no established assumption or beginning point of truth (Williams, 2007).

The purpose of the study was to understand how passengers currently perceive airline pricing strategies, and how they will react to strategies that use their personal online data. The aim of this study was to gain a broad understanding, while at the same time developing new constructs and concepts on this topic. This method allowed the researcher to understand and delve deeply into the complexity of passengers' perceptions, and to discover new insights around this topic that was relatively unexplored, which allowed the interviewer to explain difficult questions to interviewees (Saunders & Lewis, 2012). Vaismoradi, Turunen and Bondas (2013) explain that qualitative methodologies consist of "the philosophical perspectives, assumptions, postulates, and approaches that researchers employ to render their work open to

analysis, critique, replication, repetition, and/or adaptation and to choose research methods" (p. 398).

The selected interviewees came from a wide variety of groups and segments of the population, and the data was gathered during a short period of time. Due to the nature of the study and the time and resource limitation, a cross-sectional research was done. Saunders and Lewis (2012) defines cross-sectional research as "the study of a particular topic at a particular time" (p. 123).

The purpose of this study is suited for literature researching and interviewing (Saunders & Lewis, 2012). The interviews were particularly useful as the researcher was unsure of the answer respondents would give. The researcher also had to vary the questions, and the order of the questions. The purpose of this research was to formulate tentative answers to the research questions and to gain new insights about the passenger's perceptions. In-depth interviews, which where semi-structured, allowed for a deep understanding and rich perceptions through one-on-one interactions. The researcher acknowledged the complexity of the research questions and that passengers might not fully understand the dimensions to price discrimination or big data. Semi-structured interviews allowed the interviewee to test assumptions by asking questions, summarising responses which allowed for further questions (Saunders & Lewis, 2012).

Qualitative research builds on the inductive study of socially constructed reality, focusing on an idea, meaning and practices, and taking the native point of view seriously (Cassell & Symon, 2011; Williams, 2007). Inductive reasoning starts from specific observations and then moves to broader generalisations and theories (Saunders & Lewis, 2012). This research process followed an inductive approach. Once the literature review was done, the researchers' expectations and assumptions were partial. The observation that was gained from semi-structured interviews allowed for certain patterns to emerge. Once analysed, the patterns led to formulate a general theory.

4.3. Population

Saunders and Lewis (2012) define a population as "the complete set of group members" (p. 132). The target population for this study would comprise of all passengers that has bought a domestic ticket on a South African domestic airline. The population have been limited to South African domestic passengers who have purchased a ticket, and who are aware of the price they, or their organisation have paid for some of these tickets.

4.4. Sampling Methods and Size

A sample is a subset drawn from the chosen population. Time and cost restrictions make it difficult to use the whole population, therefore a sample was selected. The sample was a representative of its target population to assure that it produced valid and reliable estimates (Wegner, 2016). The sampling technique that was used is a two-layered non-probability sample technique. This included both convenience sampling and purposive/judgement sampling (Wegner, 2016; Saunders & Lewis, 2012).

Convenience sampling is used when the population elements are selected for inclusion based on ease of access (Kothari, 2004). The researcher used her informal network to gain access and establish a list of individuals who formed part of the population. Purposive/judgement sampling was used to collect qualitative data. The researcher used her judgement to actively choose interviewees who would have been able to answer the questions and meet the objective. Purposive sampling is used when a researcher needs to make a logical generalisation and they must understand what is happening (Saunders & Lewis, 2012). With purposive sampling, interviewees are selected according to predetermined criteria. These criteria will be relevant to the study (Guest, Bunce, & Johnson, 2006). The criteria that was used to qualify passengers for the sample included: passengers must be older than eighteen years of age, they must have bought a domestic ticket in the last year, this ticket had to be on a domestic route in South Africa, and they must be aware of the price they or their organisation paid for the ticket.

Guest et al. (2006) mentions that most qualitative research studies suggest that the purposive sample size must be established inductively, and that the sample continues until theoretical saturation occurs. However, they argue that a general yardstick is needed to point out where saturation is likely to occur. They define data saturation as

"the point in data collection and analysis when new information produces little or no change to the codebook" (p. 65).

Due to the nature of a purposive sample method, the researcher assumed a degree of homogeneity, where the interviewees were chosen based on a set of criteria. The goal was to understand the shared perception of passengers among a relative homogeneous group (Guest et al., 2006). Saunders and Lewis (2012) suggest that homogeneous sample size is likely to be 10 interviewees. Guest et al., (2006) notes that a sample of 12 should be enough. 13 face-to-face semi-structured interviews were conducted. Further details of the interviewee are provided in Table 2 and in Chapter 5.

Table 2: Age, Position and Level of Education of Chosen Sample

Nm	Age	Position	Level of Education
1	32	Consultant Manager	Master – Business Administration
2	30	Aircraft Maintenance Engineer	Diploma and Certificates
3	32	Executive Financial Advisor	Certificates
4	38	CEO	Degree – Computer Science
5	43	Solutions Advisor	Degree – Transport Economics
6	44	Business owner and Accountant	Degree – Accounting
7	30	Accounts Executive	Matric
8	26	Office Manager	Degree – Project Manager
9	32	Internal Sales	Degree - Accounting
10	30	Operational Manager	Diploma
11	48	Business Owner and Farmer	Matric
12	46	Business Owner and Hair Dresser	Matric
13	38	Channel Accounts Manager	Matric

4.5 Unit of Analysis

The sampling unit is explained by Wegner as the object being measured (2016). The passengers who were interviewed for this study are eighteen years and older, bought an airline ticket in the last year, on a domestic route in South Africa, having been aware of the price they or their organisation paid for the ticket.

4.6 Measurement Instrument and Data Gathering Process:

4.6.1 Pilot Test

A pilot test was conducted to ensure that the interviewees were able to understand the questions, that the questions were not leading, to test the researcher's technique and to ensure that the correct data will be collected to answer the research questions (Saunders & Lewis, 2012). The first pilot was used to identify problems early on and prevented some amendments later on. The first pilot identified that the order of the questions was leading the second set of questions, and that some of the methodology confused the interviewer. The researcher made an informed decision to conduct a second pilot test. This pilot was much more successful. The interview questions where not leading, and the interviewee understood most of the questions. The researcher also added some general explanations to assist future interviewees to understand more complex theoretical questions.

4.6.2 Data Collection Tool and Method:

The literature review and research questions guided the interview questions and topics. The nature of the research questions lends itself to semi-structured interviews. Data was collected through face-to-face, in-depth, open-ended interviews of a chosen sample over a six-week period. The audio was recorded and at the same time notes was taken. Notes were used to assist the researcher to keep track of additional questions. Saunders and Lewis (2012) suggests that audio recordings will give you unbiased and accurate records and it allows you to listen to your recordings again. Audio will be backed on OneDrive.

Saunders and Lewis (2012) suggest that when conducting an interview, it is important to thank the interviewee for attending the interview, to explain the purpose of research and to ask their permission to audio record the interview. They also note that it will be ethical to get consent from the interviewee. The consent form that was used is presented in Appendix 1 and the Ethical Clearance Letter in Appendix 2. Each interviewee signed the consent form and gave their permission to be recorded.

The longest interview lasted 38 minutes. The interview questions included the interviewers age, occupation and level of education. Prior to the interview, the researcher insured that the interviewee qualified based on the pre-determined criteria. Interviewees were encouraged to answer the questions based on current and past experiences, as openly and freely as possible. This ensured that rich data was gathered to support the exploratory nature of this research. Table 3 presents the mapping of the research questions that was formed in Chapter 3. In Appendix 3 the semi-structured interview guideline that was used are presented.

Table 3: Research Questions and Interview Question Mapping

Research Questions:	Interview Question:
Research Question 1: How price sensitive are passengers, how do passengers currently perceive airline pricing strategies and what is the level of knowledge they have?	1. How often do you travel? 2. What is your primary reason for travel? 3. In the last year, how often have you flown with a domestic airline? 4. The primary reason for domestic travel? 5. Do you fly economy, business or premium? 6. What platform do you use to make your booking? 7. When you purchase a ticket, what attributes do you consider as important? 8. Once you have made your booking what attributes are very important to you? 9. Do you fly the same route regularly? At the same time? 10. Do you often find changes in price for that route and time? 11. How do you currently perceive airline pricing tactics? 12. Are you aware that some passengers pay more or less than other passengers for a ticket even though they have the same attributes? 13. Why do you think airlines are doing this? 14. Do you think this is fair, unfair or a norm?

Research Question 2: What is the current understanding of big data.	1. What is your understanding regarding big data? 2. What is your understanding regarding big data analytics? 3. Do you know of any organisations that are currently using big data? 4. On a personal level, what are some of the benefits you might experience from big data? 5. On a personal level, what are some of the negative effects that you might experience from big data? 6. Have you ever taken steps to limit the data organisations gain or track?
Research question 3: How do passengers feel about their personal data being accessed online by Airlines and how would they feel about pricing tactics that uses online data to price discriminate?	1. Would you be comfortable with an airline accessing and using your personal data, and analysing your data on a personal level? 2. If an airline used your personal data to personalise your search and to offer you products and services based on your online history, would you consider this fair or unfair? 3. If an airline used your personal online history to charge a price based on your willingness to pay, would you consider this fair or unfair? 4. Please will you elaborate why?
Research question 4: Reaction to unfair perception	1. If you were to find out this is how the airlines have been pricing tickets, how would you react? 2. Would you act out against the airline? 3. Would you fly with the airline again? 4. If the answer is "no" in question 26, the following question will be presented. And if the flight is at the right time and date, and it is the best price by far, would you still not fly?

4.7 Analysis Approach

Agee (2009) stresses that the initial questions in qualitative studies are just a starting point. During the process of collecting data from the semi-structured interviews the research questions changed as the researcher gained an increased understanding of the problem. The research questions were thought of as a navigation tool, and they helped the researcher to map possible directions and to inquire about the possible unexpected (Agee, 2009).

Vaismoradi et al. (2013) clarifies that the use of descriptive qualitative analysis such as content analysis and thematic analysis can be used for low level interpretation, in contrasts with hermeneutic phenomenon or grounded theory where complex interpretation is required. Saunders and Lewis (2016) recommends developing meaningful categories or codes, which will emerge from the data, when using an inductive approach to look for patterns in the data. They will also be refined as you look for patterns in the data. It is then necessary to decide on a unit of data and attach the unit of data to the relevant categories/themes. The unit of data could be a line of a transcript, an individual response or a sentence. Qualitative approaches seek to understand a phenomenon from those experiencing it.

Content analysis is a systematic categorising and coding approach used to determine patterns and trends of word uses and their relationships and frequency at which they occur. This is similar to thematic analysis, which is an independent qualitative descriptive approach. It is described as a method for identifying, reporting and analysing patterns or themes within the data (Vaismoradi et al., 2013). Braun and Clark emphasise that one of the advantages of thematic analysis is the flexibility it brings, and that it is a useful research tool which could potentially provide a rich and complex account of data (2006).

Most of the data analysis took part after the data was collected, on a question to question basis and a thematic analysis approach was used (Saunders & Lewis, 2012; Braun & Clark, 2013). Table 4 is used to explain Braun and Clarks step-by-step thematic analysis approach that was used.

Table 4: Thematic Analysis (Braun & Clark, 2006, p. 87)

Phase	Description of the process
1. **Familiarise yourself with the data:**	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. **Generate initial codes:**	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. **Searching for themes:**	Collating codes into potential themes, gathering all data relevant to each potential theme
4. **Reviewing themes:**	Checking analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
5. **Defining and naming themes:**	Ongoing analysis to refine the specific of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. **Producing the report:**	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

The interviews were transcribed and then listened to and read several times. This was to ensure that the interviews were captured correctly, and that they were reliable and understood. It also ensured that the researcher could note initial ideas, and that the researcher could assign codes (Saunders & Lewis, 2012; Braun & Clark, 2006). Potential themes were identified through collating codes together (Vaismoradi et al., 2013). The question-by-question developed data was captured in Atlas. Ti. It was supported by a frequency analysis. Analysing the frequency of certain answers provided some additional explanations of some patterns (Sage, 2009). Once the analysis was complete, the researcher was able to generate a code book out of Atlas TI, this is presented in Appendix 4.

4.8 Validity and Reliability

Validity and reliability are important factors in research strategy design. Validity is to ensure that the research results are really what they appear to be about and that the

data collecting method is accurate and that it measures what it intent to measure. Reliability is to ensure consistency. Observer error and bias and subjective error and bias threatens the reliability of results (Saunders & Lewis, 2012). The researcher made a great effort not to impact her opinion on to the interviewees, and to not influence the interviewees in any way.

4.9 Research Limitations

- Owning to our inability to identify all the variables of behaviour, the researcher is unable to state precisely the conditions that influence behaviour (Miller & Tsang, 2011).
- The time and financial constraints, and the difficulties of contacting the whole population result in the whole population not being researched.
- The size and spread of the study where un-known, this indicated that a non-probability sample method was used, which indicated that the research was unrepresentative of the whole target population and that non-random sampling technique could result in selection bias.

CHAPTER 5: RESULTS

5.1 Introduction

This chapter will discuss and present the key findings from the semi-formal, in-depth, one-on-one interviews of the 13 domestic South African passengers. The research questions where formulated through a thorough literature review and the use of a consistency matrix to ensure consistency between the reviewed literature, research questions, data collection method and data collected. The key findings will be answered, and they will relate to the research questions posted in Chapter 3.

The results are presented based on the themes that emerged from the analysis of the interviews, providing insights to passengers' perception regarding South African airlines current pricing strategies, their knowledge regarding big data and how they would perceive online price discrimination strategies. This chapter will start with a description of the interviewees in the study, followed by the results of the thematic analysis and research questions.

5.2 Description of Interviewees

Convenience sampling and purposive/judgement sampling was used to select interviewees. The qualifying criteria used for the sample include: passengers must be older than eighteen years of age, they must have bought a domestic ticket in the last year, this ticket had to be on a domestic route in South Africa and they must be aware of the price they or their organisation paid for the ticket. Passengers were selected from a wide variety of industries and organisations, their ages ranged from 26 to 46 years, and their level of education ranged from matric to master level. This wide selection was to create a homogenous sample, with an attempt to increase the richness of the data collected.

15 passengers were interviewed, two of the interviews had to be removed. The first was the pilot interview. This interview was leading, and the interviewee did not understand

the content. Once the interview questions were changed, a second pilot interview was conducted. This pilot interview went well, and it was used as part of the data analysis. In the second interview that was removed, it was noted that the interviewees organisation pays for the tickets, and that the interviewee had no knowledge of the price the organisation pays. This was to ensure reliability and validity of the results, as discussed in section 4.8. The 13 interviews were conducted face to face at a convenient location, either at the interviewees home, at a coffee shop or on university campus.

A list of the interviewees is provided in Table 5 below. Consideration was given with regards to the interviewees age, education and level of seniority. Out of the 13 interviewees, 6 were female and the purpose of travel was either business or leisure or both. All the names of the interviewees have been changed to ensure anonymity for the respondents. The names were changed to aliases to help formulate trends between each research question and interviewee.

Table 5: Information and Details of the Selected Interviewees

Interviewees Name	Age	Position	Level of Seniority	Level of Education	Primary reason for travel
Jessica	32	Consultant Manager	Consultant	Master – Business Administration	Leisure
Dewan	30	Aircraft Maintenance Engineer	Supervisor	Diploma and Certificates	Business
Alvin	32	Executive Financial Advisor	Senior	Diploma and Certificates	Leisure
Tshepo	38	CEO	CEO	Degree – Computer Science	Business
Tyron	43	Solutions Advisor	Consultant	Degree – Transport Economics	Business
Precious	44	Business owner and Accountant	Business Owner	Degree – Accounting	Business
Mel	30	Accounts Executive	Specialist	Matric	Leisure
Angel	26	Office Manager	Manager	Degree – Project Manager	Leisure

Emma	32	Internal Sales	Specialist	Degree - Accounting	Leisure
Willem	30	Operational Manager	Manager	Diploma	Business
Theo	48	Business Owner and Farmer	Owner	Matric	Leisure
Charlie	46	Business Owner and Hair Dresser	Owner	Matric	Leisure
Martin	38	Channel Accounts Manager	Consultant	Matric	Business

5.2.1 General Travelling Details

The first few questions were used to get a general overview of who the interviewees are, how often they travelled (Table 6), primary reason for travel (Table 7), if they flew economy or business class (Table 8) and what platforms they used to make their bookings (Table 9).

Table 6: Frequency of Travel

Ranking	Construct	Frequency
1	Once or twice a year	6
2	A few times a week/month	5
3	More than 5 times a year	2

Table 7: Frequency Table - Leisure or Business

Ranking	Construct	Frequency
1	Leisure	7
2	Business	6

Table 8: Economy or Business Class

Ranking	Construct	Frequency
1	Economy class	12
2	Business class	1

Table 9 indicates that 9 out of the 13 interviewees used online platforms such as the airline's direct website or online intermediates.

Table 9: Booking Platform

Ranking	Construct	Frequency
1	Airlines direct website	9
2	Travel Agents	2
3	Online Intermediate	2

Most of the interviewees used the preferred airlines direct website, or they opened all the airlines' websites to find the best flight.

Emma: "*There are a few websites, such as Travelstart and Cheap flights, where you can just put in your destination and it will bring up a few flights. We have no preferences. We will select between time and price, which one is the best*".

Alvin: *"When I book local flights, I go to the three big local airlines to see who is the cheapest and obviously if there is a specific time that I need to fly'"*.

Two of the interviewees, both business travellers, mentioned that they use online travel agents to book their flights

Tyron: *"We have a travel agency that we mostly use. Typically, we book online through their website"*.

In another instance, Jessica and Angel mentioned that they use their discovery points to get discounts. This resulted in them always using Kulula as the preferred airline.

Angel: *"I am with discovery, so I use my discovery points. I then fly with Kulula"*.

5.3 Results: Research Question 1

Research Question 1: How do passengers currently perceive airline pricing strategies and what is the level of knowledge they have?

This research question was used to firstly explore how price-sensitive the sample was. This helped to inform how and why fairness perceptions are made. Secondly, it was used to evaluate what passengers' current perceptions are with regards to airline prices. The questions further aimed to understand the passenger's knowledge with regards to airlines current pricing strategies. Thirdly, it sought to understand if, and why, passengers perceive prices and price forming tactics to be fair, unfair, or if they perceived these prices to be the norm (this is how it is and always have been).

5.3.1 Attributes that are Important when Purchasing a Ticket

The interviewees had to identify the attributes that are most important to them when they purchase a ticket. Table 10 presents the six factors that interviewees mentioned in the interviews. Price and reputation were ranked first and second, time and date were ranked third and fourth, and flexibility and the choice between driving and flying was also mentioned a few times.

Table 10: Attributes that are most Important when Purchasing a Ticket

Ranking	Construct	Frequency
1	Price	11
2	Reputation	8
3	Time of flight	7
4	Dates	5
5	Flexibility	3
6	Choice between driving and flying	3

The individuals had differing opinions based on the purpose of travel, but the main attributes where price, reputation and date and time. Although price was the most important, emphasis was placed on reliability, dates and times.

Alvin: *"There is no need buying the cheapest ticket if the plane is going to fall out of the sky. Normally, I will plan on when I want to fly, and I try to keep to that. Price is the main attribute".*

Theo: *"I try to stick with brand names such as Kulula and Mango. But it is all about price. We look at two or three airlines, and then we select the best price".*

Dewan: *"We are quite specific about dates, but we will look for the best prices on that date".*

Mel: *"The flight time that suits me and the price is the most important attribute".*

Three interviewees highlighted the importance of price and flight times, this is a major consideration when deciding between choosing to drive or to fly. One of the interviewees mentioned that it is convenient to fly from Lanseria, and that it is a much more important consideration than price. All three these interviewees were business travellers.

Tshepo: *"We will drive if it is between two or three hours, Bloemfontein is just too far. If it is too far to drive then I will fly, but if it is closer to drive, I prefer to drive. If it is R7 000 I will rather drive. But if I am going on a reimbursive rate, if I travel a 1000km I will get reimbursed R4 000, and a flight the fare is R2 000. In this case I am not going to drive for 14 hours, so then it is better to fly, but if I must pay R7 000 to fly to Polokwane then I will rather drive. With abnormal circumstances you will have to do what you have to do".*

Willem: *"We have a timeframe that we need to be there by, if it fits in this timeframe, and this includes driving to the airport. This is the biggest attribute. If we have a connection, it is how the connection and the flight match up. Price is a big factor, but the date, time and the environment that we fly to is the most important. If it is too expensive, we would rather drive there, if it is going to cost me a thousand rand more, to fly up than to take a fleet car, we would rather take the fleet car".*

Martin: *"The Airport is important, deciding between OR Tambo and Lanseria, OR Tambo is very difficult to get to, because of the time, and I must take the Gautrain, there and back it is almost R400. Price is not an issue for me, because I don't pay for my ticket".*

5.3.2 Airline Pricing Tactics

Interviewees were asked to explain how they currently perceive airline pricing tactics. This question attracted a few different answers. The answers ranged from "very confusing" and "I have no idea" to "the airlines have a monopoly" and "there is quite a big difference between the different airlines". These will be discussed below.

Below are the themes that emerged:

1. Confusing
2. Monopoly
3. Differences between airlines
4. Online price discrimination
5. Bare fare
6. Last minute bookings

Two interviewees admitted they did not understand the price tactics airlines are using. Although they were aware that the price changes day by day.

Dewan: *"It is very confusing. …we fly a lot and we do a lot of short-term bookings and the prices vary extremely. One week I will fly for a minimal amount, approximately R600, and then next week for the same flight it will be R2 500. I think that is very random".*

One interviewee mentioned that the airlines have a monopoly if they are the only airline flying to a destination, while two of the other interviewees mentioned the price disparity between low-cost airlines and the full-service airlines.

Willem: *"It is like a monopoly. If there is only one airline flying to a destination, they have the monopoly, but if there are multiple airline's flying to a destination, there is no monopoly".*

Tshepo: *"SAA and BA, I think their services are completely different. SAA, you pay a full price ticket, but their food and the service is much worse than BA, and the ticket cost is that much more. I do not see the value in the ticket, because then you can just fly low cost. We just book the lowest fare. I do not think airlines have a tactic, or maybe they do".*

A key finding that emerged during the interviews is that 3 of the interviewees believed airlines were already practicing online price discrimination, and that prices increased based on the airline's or travel agency's online activities on their website.

Emma: *"There is quite a difference between the pricing. …SAA is very expensive, I would rather fly Kulula or SAF Air. I have noticed if you search more, the prices go up. I guess because of popularity. I think they see that a lot of people are researching the flights and based on popularity their prices go up".*

Tyron: *"I am not sure if it is the airline or the travel agent, but when you go online you can search on British Airways website. They store the cookies, and then by the second or third time you go onto their website, the rate goes up. I have seen this on the British airways website".*

5.3.3   Awareness and Perception of Current Price Discrimination

This question tried to establish if passengers were aware of the current pricing discrimination strategies that airlines are practicing, and if they are aware of why this is taking place. 12 out of the 13 interviewees were aware that there is a disparity between prices passengers pay for airline tickets, even though the tickets had the same attributes (Table 11).

Table 11: Awareness of Current Price Discrimination

Ranking	Construct	Frequency
1	Aware	12
2	Unaware	1

The interviewees were asked why they think airlines were using this strategy and table 12 indicates the frequency occurrence of the interviewees explanations. The most common being if you book in advance, you will be able to get a special fare, followed closely by supply and demand, the availability of seats and that it is normal business practice for airlines and other businesses to implement such strategies.

Table 12: Reasons for Current Price Discrimination

Ranking	Construct	Frequency
1	Advance Bookings	7
2	Supply and Demand	6
3	Availability of Seats	5
4	Normal Business Practice	5
5	Client Segmentation	3
6	Marketing Campaign	1
7	Cost if Booking Through Intermediate	1
8	Airline Cost	1

Advance bookings were one of the most popular explanations. The Airline's have instilled a culture in passengers that the further in advance they book, the better the fare could be. This is evident by the below responses.

Angel: *"It is cheaper when you book way in advance, than two days before the flight"*.

Jessica: *"I used to schedule myself to make sure that I do the booking far enough in advance, so I get a decent price for my ticket"*.

Mel: *"We try and book in advance, if you book closer to the time, instead of booking a month in advance, it is much cheaper. If you book two days before the flight, it would be much more expensive"*.

Charlie: *"I think it is the time you book the flight, the availability. If I bought my ticket two months before the departure date, and someone else bought their ticket the day before, they would have paid more even though we are on the same flight"*.

Some of the interviewees used more than one of the above-mentioned constructs as an explanation. The main constructs that were used together was availability of seats and flight demand.

Alvin: *"From what I understand there is a difference between classes. There will be a certain amount of a cheaper class available that they would open for sale, this ensures that they get a certain amount of people onto the flight. After that they start closing those classes, selling the more expensive classes so that they can start making more profit on the flight. I mean, if you know that your flight is going to be full, that means that people*

want to travel that specific time. Indicating you can charge more because people are willing to pay more. I think the pricing gets done due to how full their flights are. It has to do with their supply and demand. I think some of the flights might not be that full, and that is why the prices will be lower than the others that are fully booked.

Jessica: "*I can understand that the fuller the plane gets, the more you can charge for the remaining seats because it is supply and demand. I can see it from their perspective, as a person who works in business, I can understand why they do it, and it works like that on every product, so I do not see why airlines should be different*".

Willem: *"The price changes day-to-day, so one day the price might be good and another day the price might be worse. It also depends on the supply and demand. If there is a big supply, the prices will go down. If there is a function taking place at some place, people need to use the airline, so prices will go up. If you look at the world cup, the prices were insane. People had to get to the game, so the airline's had more routes and flights, but the tickets were also more expensive. It also depended on what is happening in that area. If you book last-minute the tickets could either be very low because the airline has a lot of seats available, or it can be very high because there are not a lot of seats left. It is not set in stone, so you do not know what you are getting".*

One of the other explanations were passengers/client segmentations, and how these segmentations were used to differentiate the flights based on time, day of week and passenger's profiles such as the business traveller and tourists.

Theo: *"Friday, Monday and Sunday nights are expensive. This is due to business travellers. When you go on business you do not want to go on a Monday and weekends are the worst".*

Tyron: '*I suppose they see there is an interest if you are looking at the flight for the third time and assume you will probably spend a little bit more. It is client segmentation, from business travellers to tourists and people visiting their families, so between those three there is a big difference between the sensitivity of the price. I think it is business, I think all organisations do that".*

Martin: "*I am aware of the differences in price. Every day there is a different price. Midweek is low season, and I understand that. Pricing is fair as long as it stays at a certain gap. If it is peak season such as Friday, Monday and Sunday, and the price is lower than the competitor, I will go for the lower price".*

Interviewees were also asked their opinion to understand if they perceive these strategies as fair, unfair or as a norm (Table 13).

Table 13: Perception of Current Price Discrimination

Ranking	Construct	Frequency
1	Fair	6
2	The norm	4
3	Unfair	3

Most interviewees indicated that this was fair practice or a normal occurrence. Only three interviewees felt that the discrimination was unfair. Some interviewees said that it is fair or the norm, and if they want more affordable tickets, they would book their tickets in advance.

Mel: "*I think it is fair. If you leave it to the last-minute, it is going to be more expensive*".

Jessica: "*It does not bother me, because I will make sure that I do things far enough in advance to not have to pay too much for my ticket*".

Some of the other interviewees mentioned that it is normal business practice.

Tyron: "*I think this is a very competitive market, and in order to stay in the market you have to be competitive and current. You have to adapt, and you cannot charge R5 000 for a ticket and someone else is charging R400. It will not work. I think it is business. I think all organisations do that*".

Alvin: "*I think it's the norm, it is how it has been since I have known about it. It would probably be fair. I think it is normal business practice*".

Dewan: "*There must be a reason why they do it, so it is just the way they run the business*".

The three interviewees who felt like this was unfair practices explained that they do not understand why airlines would charge different prices, and that it should be the same for

all passengers. One of the interviewees also stressed that if an event occurred, such as a funeral, it would result in them buying a much more expensive flight, and they saw this as unfair.

Angel: *"I think it is unfair, because if you are going on the flight, the flight will operate. If I pay R1 000 more now and two weeks later, I pay R1000 less? I do not understand why, because it is the exact same flight".*

Martin: *"I did not know they do this. Is it because of pensioners, disabilities, loyalty points? I do not know why else. I do not understand why they are doing it. No, I think it is unfair".*

Emma: *"You never know, something might have happened to a family member that passed away and you need a flight the next day. I think then it is unfair, because then you will land up paying R2 000 more than the person who planned a week ahead, and that is unfair. That is not something you can plan".*

5.3.4   Summary of Findings Research Question 1

In answering research question one, the following themes emerged. One of the first dominating themes that emerged was that most of the interviewees were price sensitive, and that although reliability, time and date of departure is important, price remained the number one attribute for consideration. The business travellers also took price into consideration, but they were more concerned with date, time, reputation and most importantly, the time it would take to drive.

Figure 4 indicates that out of 13 interviewees only one was unaware that airlines are price discriminating. This interviewee felt it was unfair, but he was unsure of why the airline would be using this strategy. The remaining 12 interviewees was aware of the discrimination. Out of the 12 interviewees, two indicated that it is unfair practice, although they understood the airline was using this strategy as a result of advance bookings. The remaining 10 interviewees believed that it was either fair practice, or that it was a norm, and they reasoned it was due to advance bookings, supply and demand, availability of seats, normal business practice, client segmentation, marketing campaign or intermediate cost or airline costs.

Figure 4: Awareness of Price Discrimination

Awareness of price discrimination

12 - Aware of discrimination

1 - Unaware of discrimination

10 - Fair/Norm

2 - Unfair

1 - Unfair

5 - Advance Bookings
6 - Supply and Demand
5 - Availability of seats
5 - Normal business practice
3 - Client segmentation
1 - Marketing Campaign
1 - Cost if booking through intermediate
1 - Airline cost

2 - Advance Bookings

1 - I don't understand why?
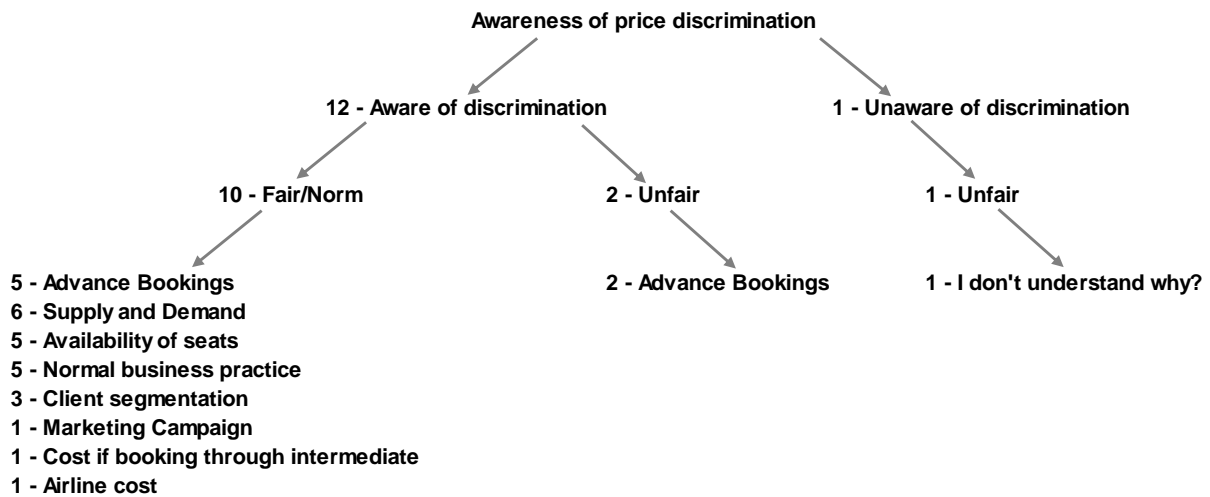
5.4 Results: Research Question 2

Research Question 2: What is the current understanding of big data.

Kshetri mentions how technologically unsavvy and unsophisticated consumers could lack awareness of firm's offerings (2014). To understand the consequences with regards to first-degree price discrimination, one must take a close look at the level of knowledge and understanding passengers have. This research question aimed to establish how informed passengers are with regards to big data. Furthermore, the question sought to establish how informed passengers are about advantages and negative effects of big data analytics. It also tried to determine how vulnerable interviewees have felt, and if they have taken steps to mitigate vulnerability.

5.4.1 Degree of Knowledge – What is Big Data?

Interviewees were asked if they knew what the concept big data refers to. Two of the interviewees were very knowledgeable and were able to mention almost all of the aspect of Wamba et al. (2015) definition "'big data' is a holistic approach to manage, process and analyse the 5 V's (i.e., volume, variety, velocity, veracity and value), in order to create actionable insights for sustained value delivery, measuring performance and established competitive advantage" (p. 235). Five interviewees mentioned one or two of

the aspects while six interviewees admitted they have no idea what big data refers to, and they did not attempt to define it (Table 14).

Table 14: Degree of Knowledge about Big Data

Ranking	Construct	Frequency
1	Knowledgeable	2
2	Vague idea	5
3	No idea	6

Mel, Emma, Dewan, Charlie, Angel and Willem said they have no idea what big data is and what it is used for. All the other interviewees attempted to answer the questions. The main concepts that emerged were that it is used to make conclusions and decisions, that it is large volumes of data and it is the internet of things that is generating data. Some other concepts that emerged included: it tracks individual activities, it is different sources of unstructured and structured data and it is used for marketing.

Tshepo and Jessica were the two interviewees who were very knowledgeable about big data. Tshepo mentioned the internet of things, volumes of data and that it is used to make conclusions and decisions. Jessica had the best definition of all the interviewees.

Tshepo: "*There is a whole host of internet abled devices, or things such as the internet of things. These devices communicate with one another, …generating data, this is volumes and hordes of data. People and organisations can interpret this data. Big data analytics is the application or solution that can take all this data and interpret it into meaningful data and then make decisions with it. Big data is when the organisation's tracks where consumers are, and what they are doing on websites and social media. Business analytics takes this data and use it to get trends out of big data to steer organisations, and to inform them of what is working and what does not. It is about getting the perception of the market out there*".

Jessica: "*I understand big data to be large volume and it is the speed at which the data gets implemented. It is all about using structured and unstructured data from different*

sources and using them together, to make conclusions, on things such as customer analytics and business decisions, and to gain competitive advantage".

The five interviewees who attempted to supply a definition illustrated that they have a vague idea of what big data is. Theo referred to the volume of data and how it is used to make decisions: *"It is when you get a whole lot of data together and you try to analyse a pattern. Like the airlines, they analyse the data and know that on a Friday afternoon and on a Monday morning there is a high demand. …Therefore we are going to charge a bit more because the flights will definitely book".*

Alvin and Martin explained that it is all about the internet and how it generates data by tracking footprints.

Alvin: *"I have a vague idea of what big data is. Big data is basically, the internet, all the different big companies, and all the internet companies gathering your data. An example is when you log onto Facebook, and you like a certain page, on the next page you will see adverts for that specific product. They are gathering your footprint on the internet".*

Martin: *"Big data is a new thing, connected to the internet of things, where everything is going to be connected to everything, big data enables that. From a data sharing point of view, they are going to make data more available for everyone around the globe, at a certain price".*

Precious was the only interviewee that mentioned big data is used for marketing or research: *"It is part of marketing, more like research".*

5.4.2   Examples of Big Data

The interviewees were then shown a short video to explain what big data is and how it is used. The video also demonstrate how companies could benefit from analysing data and how the consumer should be more aware of what information they share online. Once the interviewees watched the video, it was clear they all knew what big data is and how it is used, although some of the interviewees found it difficult to define the buzzword 'big data'. After watching the video they had the following remarks.

Angel: *"Oh yes, I do know it. We use it at work already, with Instagram. We can tell when the best time is to post. From big data we know when people are looking at our pages and at what time. Each day we post exactly at that time. In the morning we will post about business and in the afternoon more about sports. We also do it with Facebook".*

The interviewees were asked if they were aware of any organisations that are currently using big data, nine out of the 13 interviewees said that they think all organisations use big data.

Alvin: *"I am not sure which companies use big data, but I think most companies do. Companies such as bookings.com or gumtree. I am sure these companies use big data, because once I liked something, it will always appear on other websites and their website as well".*

The consensus was that their companies either used big data to understand their consumers, which allows them to market more specifically, or that they store the data, but that they have not really made use of it. Tyron and Tshepo stated that their companies use big data to understand patterns, and how they are linked to demand patterns. They also use the data to investigate how changes in one pattern could lead to changes in another. Tyron said how by understanding their customers, they can market their products based on clusters. However, Tshepo mentioned that although they use this information to understand their customers, they have not used this data for marketing purposes.

Tyron: *"As a company we use big data a lot, we use it to gather information on our customers. We will gather information, such as weather patterns, and then link that data to our customers demand patterns to understand that the fluctuation in temperature will have an impact on their demand. We have done a lot of work with Danhumbee, they are a consulting firm for Tesco. They take customers' or retailers' data, such as loyalty cards and those kinds of data. They will group segmentation clusters together. They recognise that certain consumers think the same way, and this allows us to market specific things to those clusters based on that. This is not based on their demographics, but really on how they buy stuff and what we sell".*

Tshepo: *"All organisations use big data. Our own organisation collects a wealth of data out of municipalities. I can see spending or payment patterns. I can see the consumption of water; how much consumers use and when they use it. The same goes for electricity. We use BI to look at payment cycles. We can see that a consumer consistently pays on the 26th of each month, or the 15th. We have gathered this information, but we have not used it to attack a consumer from a marketing point of view. We have used it in a community that has a bad payment ratio. There might not be enough receiving points, so accessibility to paying your municipality bill becomes a problem. That is how we are making use of big data".*

Online advertising was mentioned seven times. The interviewees explained that if they go online to look at something that interests them, the advertisement reappears on other websites, even though the website has no connection with the original website. This is a form of personalised advertising.

Angel: *"When I do online shopping, and I then go onto Facebook, I see those items popping up on Facebook. When I like something, or when I am looking on Bookings.com, the adverts keep popping up".*

Mel: *"I have a Spree app on my phone. I always have Spree advertisements showing up on different websites".*

One of the interviewees stressed that although big organisations have huge amounts of data, he believes they are not utilising the data adequately. Another interviewee emphasized how big data is used as a projection tool.

Tyron: *"Clicks, have the best loyalty system in the country and they do not use any of their data, they do not have the means to. Woolworths has a lot of data, but again they are not using it. They are not trying to create segments of customers to market to".*

Alvin: *"I was in a seminar the other day, and they were talking about big data being used for fund managers, predicting which stocks to buy. They used Walmart as an example, where they could go through google maps and satellite images to look at Walmart's parking lots. If the parking lot is full, it could mean that they have a good year which means it could be good to have stocks in Walmart and they would use it for that".*

5.4.3 Positive and Negative Impacts

Table 15: Positive Impacts from Big Data

Ranking	Construct	Frequency
1	No benefits	7
2	Convenience	4
3	To bring awareness of product	2

When asked what personal benefits the interviewees have experienced from big data, most interviewees took some time to answer the question. Some individuals found it challenging to answer this question. Seven out of the 13 interviewees, as presented in Table 15, admitted they have not experienced any personal benefits.

Dewan: "*Not personally. There is definitely a lot of benefits in big data. Personally, I don't think anybody is a big fan of being tracked*".

Tshepo: "*I can't think of anything tangible right now that big data has assisted me with.*

Some of the other interviewees mentioned the information and convenience they have experienced from online personal advertising have benefited them, even though it is alarming how much organisations know about them.

Precious: "*It is scary that somehow, some way, they know so much about you, but it does bring the products you are interested in, to you, and I don't have a problem with that*".

Charlie: "*It is just giving you more information on the subject that you were looking at*".

Mel: "*I think if more people post on social media, I will be aware of things I might not have been aware of before.*"

Table 16: Negative Impacts from Big Data

Ranking	Construct	Frequency
1	Security Implications	4
2	No negatives	3

3	Spam	2
4	Scary	2
5	Do not want to be tracked	1
6	Price discrimination	1

Interestingly the interviewees were more certain about the negative effects of big data. Only three interviewees stated that they don't think big data and big data analytics have any negative effects.

Tshepo: *"No, I don't know. Maybe I am oblivious to it, maybe I don't care"*.

One of the interviewees said he doesn't know of any negative effects, because he doesn't know who uses the data and who doesn't. At the end of the day, it becomes a security concern.

Theo: *"Who else is using your data? Because these days, everyone is passing everything on to everybody else, to third parties. It is all about security. I don't care what everyone Google'. They can Google whatever they like, as long as they don't get a hold of stuff to hack me"*.

Others mentioned how they don't like to be tracked, and if organisations have all their information, it could lead to security concerns. Two interviewees used the word 'scary' when asked about the negative impacts of big data. They found it scary that organisations knew so much about them.

Dewan: *"Personally I don't think anybody is a big fan of being tracked"*.

Alvin: *"I think they might have too much information on specific individuals, so I think your privacy is affected by it and it could eventually have security implications"*.

Charlie: *"It's just scary that they know what you look at and browse for"*.

5.4.4   Personalisation

This question attempted to understand how passengers would feel if airlines used their online data to personalise their searches and their offerings. All the interviewees, except for one agreed that if it is used to assist them to make their lives easier, they would be happy if airlines to use this data.

Alvin: "Everyone *is using big data at the moment. Airlines are using it, everyone is using it. I think it would be the logical next step".*

Tshepo: "*To me, personal data is my bank account, that is personal data. If you want to see my shopping trends and what I'm interested in, I don't see it as personal. Take my searches, take my history and push the marketing campaigns my way, because I might just want to go to Magaliesburg to water ski on that day, or go see the Swiss Alps."*

Tyron: "*I have a profile with British Airways and SAA. They have all my information, I have made it available and they can obviously see what my travel patterns are. If it will allow them to do more specific marketing to me then they can".*

Dewan*: "With limited personal information, I will be fine with that. Like seating and flight suggestions… As long as it's not going into my very personal life, such as my Facebook account. That has nothing to do with them".*

Alvin: *"If it will make life easier, then obviously you know it could actually work. It's the same as looking at your diary on your phone which integrates with your flights and everything. If they know I fly somewhere regularly, and as soon as I login everything is there as I want it, it will be a lot easier".*

Theo was the only interviewee who said he wants to know the type of information the airlines would be using, and that it would be the airlines who benefit from such data and not the passengers.

Theo: *"If the airline wanted to do something like that, ask me the questions you want to ask, but don't take my data and look at my stuff. Ask me for the information you need, so I can make a decision and tell you listen I don't want to talk to you about that, or okay that is fair. It is about security and benefit for me, nine out of 10 times there is no benefit for the customer, only for the airline or the insurance company".*

5.4.5   Steps Taken to Mitigate the Risk of Organisations Tracking Data

The responses from the previous question prompted the researcher to establish if, and what interviewees have done to limit the amount of data organisations are able to collect.

Table 17 illustrates that even though interviewees found much more negative impacts from big data, only one interviewee took steps to restrict companies to track certain data.

Table 17: Steps Taken to Protect Individual Data

Ranking	Construct	Frequency
1	No steps taken	9
2	Have taken steps	1

Willem had a vague idea of what big data is. He used online advertising as an example of big data and mentioned that it is convenient. He also pointed out that organisations are using big data to price discriminate. *"If I search something, and it adjusts the rates, based on the data that is available. That is an invasion of privacy. Without that data, it would make business a lot harder to predict".* He said he has taken steps to limit organisations to track his movement via GPS, and that he has downloaded an app to block his searches. *"Yes, I've got a GPS blocker on my phone. There is also an app you can use to block your searches so only Google has your data, but you must give them permission to use your data. Almost everything gets recorded. Unless you use a VPN, you can't block the data that is being captured on Android.*

A few of the interviewees mentioned they are aware that when they download an app there is always a tick box to grant the app permission, but they never read terms and conditions. The same applies for visiting websites. Websites that collect personal information will pop up with a notification that inform the visitor the website will be collecting information such as search history, IP address, screen resolution, browser used, operating system and settings, access times and referring URL, device settings and locations. Browser settings should allow users the ability to control their cookies, but interviewees admitted they have never read these terms and conditions and that they have never taken steps to clear their cookies.

Tyron: *"On the phone apps, I always tick the terms and conditions box, but I don't really take the time to read them. That's probably a risk".*

Theo*: "I never read the terms and conditions, because most of the time we are in a rush, so we just click, I agree. You don't read anything, but you should".*

5.4.6   Summary of Findings: Research Question 2

In answering research question two, it has come to light that some interviewees were unaware of the term big data. However, once the video was played, they were able to easily identify organisations that are making use of big data. Interviewees found it difficult to identify the positive effects of big data. It was easier for them to identify the negative effects associated with big data analytics. Although the negative effects outweigh the positive effects, the majority of interviewees have never taken steps to block organisations from using or tracing their data. Most of the interviewees said they mostly accept the terms and conditions without taking the time to read it. They have also never cleared their cookies, even though they are aware that companies are tracking and collecting their online histories. Only one of the interviewees said he uses a GPS blocker and an app that blocks his searches.

5.5 Results: Research Question 3

Research question 3: Passengers perceptions towards personal pricing.

This question will help determine the interplay between big data and pricing tactics. Once interviewees understood what big data and big data analytics are, how did this change their perceptions towards current pricing tactics, and pricing tactics where airlines use first-degree price discrimination to adjust prices based on their willingness to pay?

5.5.1   Perception Towards Personalised Pricing

The below table (Table 18) indicates the response received with regards to personalised pricing based on willingness to pay.

Table 18: Perception towards Personalised Pricing

Ranking	Construct	Frequency
1	Unfair	7
2	It depends who is benefiting	3
3	Fair	3

In section 5.3.3 Table 13 indicated that six out of the 13 interviewees felt that current price discrimination practices were fair, four felt that it is the norm and three interviewees felt it was unfair. This changed to seven unfair, three fair and three who said it depends if they were benefiting from it. If they were, then it is fair.

It was interesting to note that three of the interviewees who felt current price discrimination is fair, changed their opinion with regards to personalised pricing.

Mel felt there should be a set price for everyone. In the first part of the interview she stated that *"I think it's fair. If you leave it to the last-minute it is going to be more expensive.",* this changed to: *"It is unfair, because they should have a set price for everyone and not because of what you are willing to pay and not pay. Each flight ticket should be the same price for everyone. If you book at a different time, it is acceptable to pay a different price. But not on what my willingness to pay is. You either have a price or you don't have a price".* She formed a negative perception based on a reference transaction.

The below interviewees initially felt price discrimination is fair or the norm but changed their perception to unfair once big data came into effect.

Dewan said the company is entitled to a reasonable profit, but with first-degree price discrimination, they always go for the biggest profit margin. *"I think it's unfair because they will always go for the biggest profit margin and you will always pay more. They track your flight and bookings".*

Charlie felt the organisation should consider loyal passengers and reward them accordingly. *"I would consider it unfair. … If they know you travel with them, and you travel with them a certain time of year, they should give their clients a special fair, and not charge them more".*

Precious: *"I think it's unethical. It's like those websites where if you buy it now, then you will get 10% discount, but if you leave, you lose that 10% discount. I think it is unethical".*

The other three interviewees stuck with their initial response as unfair. Angel and Emma made a social comparison where Emma refers to the complexity of prices.

Angel: *"Say, for example, I'm willing to pay a price and the other person is willing to pay a different price, but they can't afford that price, so they get their ticket for cheaper. It is not fair that I must pay a price and they pay cheaper for the same ticket on the same flight at the same time. That's not fair."*

Martin: "*There should be one price per destination, per time of the year, other than that it should be the same price for everybody. But how will I know? I will never know if someone paid more than me. I am expecting the airline to be fair".*

Emma*: "I would say it's unfair. I mean why can't you just have one rate?".*

Other interviewees mentioned from the start it depends how they benefit from the pricing tactics. It would be considered unfair if they were not benefiting, but if they did get the best fare, they would still fly with the airline, and they would be very happy.

Willem: *"It depends how it affects me. If it affects me positively, I will allow it but, if it has a negative effect, I'll block it. We put out what we want to. If we consistently search flights, the price would go up".*

Jessica: "*If you were on the side where you pay for the cheaper ticket, because that is more based on your affordability, that sound great. But, if you are on the other side, and you are the person being charged more, even though you utilize the service and get the same things, I don't think I will be very happy about it. I think all companies will be looking at ways to do that. But, I think it is pushing it a little bit. I would rather use an airline that is a bit fairer across the board. I don't think people should be penalised because they make more money. It is how the data gets used and utilised. If you discriminated based on how much you earn, it is great for the people earning less, but not for the people earning more. They might be working very hard, or there might be circumstances that you can gain from the data you have. Because you don't have those insights, you won't know whether or not the customer who also booked a five-star hotel can really afford a more expensive ticket. The money you see could have been inheritance, it might have been a gift from someone. You don't know, all you see is that he booked a five-star hotel".*

Three of the interviewees who initially thought that this is fair practice, were consistent and did not change their opinion. They said there is still a willing buyer, and a willing seller, and at the end it will self-regulate.

Tyron: *"I think this is fair, because at the end of the day it's still a willing buyer and willing seller. If they quote me and I'm not willing to pay, I won't. If they have access to that information and they are able to say ok this is my price elasticity, and they offer me a better price, I will be happy with that. I think it's fair. If they have the information to pitch something specific to me, all the power to them and I will travel more".*

Tshepo: *"…I think it's going to self-regulate. If there isn't a monopoly, and it is not only SAA, but BA and Mango as well, the free market principles will govern them. I don't think they will abuse it, as long as they are honest about it, and don't collude. But, if they milk us, there's nothing you can do about it. Then you would choose to drive. There are other alternatives and your priorities will change. When it is unaffordable and the minute you feel misused or manipulated, it will have the complete opposite effect. Then the loyalty will disappear, and you will do everything in your power not to fly with SAA because of that negative experience. That would be a dangerous game for them to play".*

Alvin: *"I still think it's good business practice. If I have two items for sale and I have four people who are willing to buy it, and I know there is a buyer willing to pay more for it, I would sell it to the person willing to pay more…. I still think it's good business".*

5.5.2   Summary of Findings Research Question 3

In this research question, three of the interviewees said it is fair and normal business practice. Four interviewees changed their perception to unfair, and the three interviewees whose initial perception was unfair kept their perception unchanged. The three interviewees who had formed fair perceptions indicated that the process is normal business practice and that there is always a willing buyer and a willing seller. The seven unfair perceptions were formed through comparisons to other passengers and that the airline is entitled to a reasonable profit, but not profit maximization.

5.6 Results: Research Question 4

Research question 4: Reaction to unfair perception

Once the price is seen as "unfair", consumers will not trust the vendor or the way in which the price was set (Richards et al., 2016). Research question four aimed to understand how and why passengers would react to the perception of unfair.

Mel and Tshepo were the only two interviewees who said they won't use the airline again. Even though they had the best price. Mel thought this was unfair practice and said she would fly with a different airline. **"***If I know there's a specific airline doing that, I'll find another airline just because it is unfair".* Tshepo felt it is fair practice and would self-regulate, but that if he found out an airline was using such practices he would try to fly with a different airline, **"***I'll do my best not to use them…. Even if it means I have to pay R200 more at BA that's what I'll do".*

All the passengers who believed it was unfair practice, except for Mel said they would still consider the airline if the price, time and date of the flight was still the best.

Dewan: *"Pricing is still the biggest factor. You will always look for the best prices. I won't stick with that airline because they gave me the best price once. I will always look for the best price".*

Precious: *"I still think it is unethical, but I would still probably fly with them".*

Charlie: *"We all want the best price. If I like the airline and they have the best price, I would fly with them. If they have the best price, I would definitely travel with them".*

Angel: *"…If it comes down to price and you get a discounted price, you are going to take the cheaper ticket. …You still want the cheaper flight".*

Jessica: *"If you need to fly somewhere at a certain time of day, and that is the flight that is available, you are still going to choose to fly at the time and price that best suits you. Whether it is the time that is convenient, or the price is the best, I think people are still going to choose the lower price. Even if they are charging you a lower price than the other airline, you are still going to go for the lower price. Because that is still more of a benefit to you. I won't pay for the more expensive ticket just because it is with another airline. I won't go to that extent, I would look at another airline and if their prices are comparable, I would not fly with the airline price discriminating".*

Martin: *"I would still fly with my preferred airline, if all the other airlines were doing the same and they still had the best price".*

5.7 Final Emerging Themes

Figure 5 is a summary of research question one, two, three and four, and it indicates some of the themes that emerged.

Figure 5: Emerging Themes: Research Questions 1,2,3,4

Research Question 1			Research Question 2		
Perception of current price discrimination			What is big data		
Fair	The Norm	Unfair	Knowledgeable	Vague idea	No idea
D 1: Alvin	0	1	0	0	1	0

	Research Question 1			Research Question 2		
	Perception of current price discrimination			What is big data		
	Fair	The Norm	Unfair	Knowledgeable	Vague idea	No idea
D 1: Alvin	0	1	0	0	1	0
D 2: Angel	0	0	1	0	0	1
D 3: Jessica	1	0	0	1	0	0
D 4: Tyron	1	0	0	1	0	0
D 5: Dewan	0	1	0	0	1	0
D 6: Tshepo	1	0	0	0	1	0
D 7: Mel	1	0	0	0	1	0
D 8: Willem	0	1	0	0	1	0
D 9: Theo	1	0	0	0	0	1
D 10: Emma	0	0	1	0	0	1
D 11: Precious	0	1	0	0	0	1
D 12: Charlie	1	0	0	0	0	1
D 13: Martin	0	0	1	0	0	1
Total	6	4	3	2	5	6

	Research Question 3				Research Question 4	
	Perception of future price discrimination				How would the unfair/depends will react	
	Fair	It depends	Unfair	Changed opinion	Retaliation	Price most important
D 1: Alvin	1	0	0	No	-	-
D 2: Angel	0	0	1	No	0	1
D 3: Jessica	1	0	0	No	-	-
D 4: Tyron	0	1	0	No	0	1
D 5: Dewan	0	0	1	Yes	0	1
D 6: Tshepo	1	0	0	No	-	-
D 7: Mel	0	0	1	Yes	1	0
D 8: Willem	0	1	0	No	0	1
D 9: Theo	0	1	0	No	0	1
D 10: Emma	0	0	1	No	0	1
D 11: Precious	0	0	1	Yes	0	1
D 12: Charlie	0	0	1	Yes	0	1
D 13: Martin	0	0	1	No	0	1
Total	3	3	7	4 - Changed	1	9

The first learning from the research questions revealed that four of the 13 interviewees changed their perceptions when big data enabled first-degree price discrimination. All the other interviewees were either consistent and did not change their views, or they changed their views slightly from fair or the norm to 'it depends if I am benefiting'.

The second finding showed interviewees who felt like the current discrimination was unfair, stayed consistent and felt like future price discrimination would be unfair. These three interviewees main reasoning was they did not understand why airlines are price discriminating, and interestingly, they also had no knowledge about big data and how it would be used.

Thirdly, the data collected found that the interviewees whose perception of first-degree price discrimination was either unfair or 'it depends', indicated they would most likely still use the airline if the price was the best, because for them, price is still the most important attribute. Only one interviewee strongly believed she would not use the airline again.

5.8 Conclusion

The results of the 27 interview questions are presented in this chapter. Through the analysis of the data collected, themes emerged that are supported by literature on the topic of first-degree price discrimination, big data and perceived fairness. In chapter 6, the research results and findings from this chapter will be discussed.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 Introduction

This chapter will give a detailed discussion of the results presented in chapter five. The analysis will be based on the results of the four research questions and provide insights into price discrimination and how big data influences passengers' perceptions with regards to future pricing strategies. Through contrasting, and comparing the findings with the literature review in chapter two, this chapter will build on the current literature.

6.2 Discussion of Research Question 1

Research Question 1: *How do passengers currently perceive airline pricing strategies and what is the level of knowledge they have?*

Research Question 1 sought to understand how price sensitive the sample is, to establish how and why fairness perceptions are made. Secondly, it explored what passengers' current perceptions are with regards to airline prices. The questions aimed to understand the passenger's knowledge with regards to airlines' current pricing strategies. Thirdly, it attempted to understand if, and why, passengers perceive prices and price forming tactics to be fair, unfair, or if they perceive these prices to be the norm (this is how it is and always have been).

6.2.1 Price Sensitivity and Attributes Effecting Bookings

The data from the interviews confirmed that passengers are price sensitive. The results indicated that "Price' was the most important attribute and the greatest influence when deciding to book a ticket. 85% of passengers were relatively elastic. Elastic consumers who are price constrained will pay less than inelastic consumers who can afford to pay higher prices (Hannak et al., 2014). It is important to understand how price sensitive interviewees are because price discrimination will favour some passengers while other passengers will be worse off (Lambrecht el al., 2012). This is similar to Hanlon (2008) who indicates that price discrimination in the airline industry will benefit passengers who are less well-off and impact the relatively rich negatively. The remaining 15% of

passengers were price inelastic, they were all business travellers. It is important to understand the sample's willingness to pay, as this will influence the fairness perception.

Chung and Petrick (2013) research revealed that passengers are more concerned about delays, flight cancellations and baggage issues, and that price increases was not on the major list of complaints. In some cases, this was supported by the results. Interviewees agreed with this statement, with eight interviewees stating the importance of the airline's reputation. One interviewee said it is important to get to the destination, and that there is no use buying the cheapest ticket if the plane is going to fall out of the sky. However, it was still evident that price was the deciding factor.

6.2.2   Awareness of Price Discrimination

Kimes and Writz (2003) concluded that revenue management has become more prevalent and that consumers have become more accepting since revenue management was introduced in the 1980s. The data from the interviews supported the literature that revenue management has become more acceptable. Table 11 presents the interviewees perception towards the current pricing tactics airlines are using. The data was analysed based on the frequency and the aggregated counts. 12 out of the 13 interviewees were aware that airlines are using certain price discrimination practices.

Table 12 illustrates some of the common themes that emerged, and the most common reasons interviewees used to explain why they think there was a difference between price paid and a different price of another consumer. The highest ranked construct was due to advance bookings. Kotler and Keller explain how the airline industry gives limited discounted seats to early buyers while charging higher prices for late purchases and lower rates for inventory that's not sold (2012).   This was the highest ranked understanding as to why prices differ so much. Seven interviewees mentioned that advance bookings results in cheaper fares.

This is also supported by the second and third highest ranked construct which was due to supply and demand, and availability of seats. These two constructs were further supported by literature. Revenue management uses advance bookings and base the

prices on supply and demand. Kimes (1989), explains how revenue and yield management is used to "guide the decision of how to allocate undifferentiated units of capacity to available demand in such a way as to maximize profit or revenue" (p.1). Lii and Sy further explain how airlines charge different fares based on the quantity of tickets booked as well as when the reservations were made (2009).

A common theme that emerged was that interviewees felt like it is normal business practice, and that airlines have been doing this for a very long time. Lii and Sy (2009) suggest that consumers deem tactics that are industry norms fairer, and this is supported by Garbirino and Maxwell (2010). A few interviewees were unsure as to why airlines are charging different prices, but they made a few assumptions as to why they think airlines are using such tactics. Some of the other interesting themes were that interviewees thought prices differed due to marketing campaigns, the cost of booking an intermediate and because of airline cost changes.

6.2.3   What are Passengers' Current Perceptions

The decision of whether the process of completing a transaction is just, acceptable or reasonable, determines if a price is seen as fair (Lii & Sy, 2009). In addressing the question about how airline passengers perceive airline price tactics, it was interesting to note that out of the 13 interviewees, only 23% felt the price discrimination practices and prices were unfair. This further confirms that consumers have become used to revenue management practices.

6.2.3.1 Fairness Perception

73% of the interviewees considered these strategies as fair or the norm. Some of the literature attempts to explain why revenue management has become acceptable. The consumer education problem was one of the challenges managers had to face once they first implemented revenue management (Kimes, 1989). Information disclosure time, such as when airlines use sophisticated pricing schemes to change prices hourly, affects consumers acceptance of the pricing policies (Wu et al., 2012). Xia et al. (2004) agrees that unfairness perceptions are reduced when yield management is used. This is done by decreasing the similarity of the transactions, by charging a different price for the same seats, and justifying it by adding additional benefits or restrictions.

The fairness perception and the awareness of price discrimination is an indication that airlines are transparent about their current pricing strategies. Mussweiler (2003) suggests that a judgement is made based on the relevant knowledge of comparison targets. More importantly he says, the judgement can only be made if there is a certain degree of knowledge available. The findings indicate that interviewees were aware that airlines are price discriminating to allocate the right type of capacity to the right consumers, which would lead to profit maximisation and passenger maximisation. This is supported by the definition of Kimes (1989) and Denizci Guillet and Mohammed (2015), allocating the right capacity, to the right kind of customer, at the correct time, at the correct distribution channel as to maximise yield or revenue.

The *dual entitlement principle* proposes that fairness perception is formed by the believe that consumers are entitled to a fair price and firms are entitled to a fair profit (Kahneman et al., 1986). When consumers believe a price was increased due to demand for the product, the price would more than likely be viewed as unfair. This is not supported by the findings. If airline consumers are aware that prices change due to demand, and if they are price sensitive, they should book in advance before demand increases and prices along with it.

6.2.3.2 Unfairness Perception

Only 23% of the interviewees felt current price discrimination is unfair even though all the interviewees travel with the airline quite often. In Homburg et al. (2014) study, questioned whether complex pricing ultimately pays off for organisations? One of their findings indicated that, based on the perceived complexity consumers make inferences about, the transparency of the firms pricing practices negatively affects the consumers choice and perception. The dominating theme that emerged from the interviewees who had unfair perceptions, was that they didn't fully understand why airlines where using these pricing tactics. The only interviewee who was unaware of the price discrimination said it could be due to segmentation of, for example, pensioners, people with disabilities and passengers with loyalty points. But, other than that, he was unable to give an explanation why, which resulted in his unfairness perception. This is further supported by Kalayci (2015) who said that prices of services could be daunting, and if consumers

are not able to evaluate all the dimensions of the price, they could deem prices as unfair, as seen from the findings.

Xia et al. (2004) suggests that characteristics of past purchases and other customers are the most influential factors when forming fairness perceptions. The literature supports the findings. Two of the interviewees made social comparisons to previous prices paid and expressed negative emotions with regards to changes in price. *Social comparison* and comparison to past purchases link well to the equity theory (Malc et al., 2016). In Adams *equity theory* there are three possible outcomes: the first is equity, the second is dis-advanced inequity, where the observer's price is higher than the reference price, and the third outcome is advance inequity, where the observed price is lower than the reference price (1965).

6.2.4   Conclusive Findings for Research Question 1

The first finding indicated that the sample was mostly price sensitive and elastic, and that business travellers were less elastic than passengers travelling for leisure. It was also noted that reputation is an important factor when considering which airline to travel with, but that price will remain important.

Secondly, the study found that passengers have become educated with regards to price discrimination/revenue and yield management. Most passengers were aware that airlines are price discriminating and they deemed it as fair. Most of the passengers perceived price discrimination as fair or the norm and justified it as supply and demand and that advance bookings could result in a less expensive ticket. This indicates that the transparency of airline pricing policies has paid off, and that passengers accept them.

The results also found that complicated pricing practices resulted in the perception of price unfairness. The main factors that formed the unfair perception was the comparison between reference price of previous paid price, and the reference of what others payed.

6.3 Discussion of Research Question 2

Research Question 2: What is the current understanding of big data.

Kshetri mentions how technologically unsavvy and unsophisticated consumers could lack awareness of firm's offerings (2014). To understand the consequences with regards to first-degree price discrimination. It was important to take a close look at the level of knowledge and understanding passengers have. This research question aimed to establish how informed passengers were with regards to big data, and to establish how aware interviewees are about organisations who were already using big data analytics. Furthermore, the question sought to establish how informed passengers are about advantages and negative effects of big data analytics. Finally, it investigated interviewees level of perceived vulnerability towards organisations and if they have taken steps to mitigate the vulnerability.

6.3.1   Level of Knowledge and Understanding Passengers have

The findings from the results indicate that 'big data' is a less recognised term. This is supported by literature. It could be possible, that due to the speed of dissemination, the term 'big data' has become rather nebulous in nature (Nunan & Domenico, 2015). All interviewees knew what big data is, however some interviewees have never heard of the term big data. Six of the interviewees were unable to define big data, and did not attempt to give a definition.

Two of the interviewees were very knowledgeable about big data, and was able to define big data and big data analytics almost to the exact definition given by Akter and Wamba (2016) and Wamba et al. (2015). Big data refers to volume, variety, velocity, value and veracity. 'Volume' refers to the quantities of big data, these quantities are increasing exponentially. The different types of data refer to the 'variety' of data. The 'velocity' is the speed at which data gets collected, analysed and processed. The strategic, transactional and financial benefits of big data is the 'value', and 'veracity' is the reliability of data and the data sources (Akter & Wamba, 2016; Gandomi & Haider, 2015; Wamba et al., 2015).

Both interviewees mentioned how the internet generates data. They referred to the volumes and variety of data and how this data gets analysed to make more informed decisions to add value to the organisation. However, not one of the interviewees mentioned the reliability of the data collected. The remaining five interviewees had a vague idea of what big data refers to. The results indicated that they believed big data is linked to the internet and that it is used to analyse trends and make decisions based on the data. One of the interviewees indicated it is used for marketing and research.

Once the term 'big data' was conceptualised, all interviewees knew what big data referred to, and were able to give examples of organisations that use big data as well as the nature and purpose it is used for. A dominating theme that emerged was that interviewees felt that all organisations should use it, and that they are probably already using it. Interviewee's mentioned online organisations such as Facebook, Take-a-lot and Bookings.com. Literature confirms that all the major internet firms including Facebook, Google and Amazon continues to lead the development of cloud computing, web analytics and social media platforms (Chen et al., 2012).

Chen et al. (2012) says that big data analytics will have a big impact on consumers through database segmentation and clustering, graph mining, social network analysis, sentiment and affect management, text and web analysis, anomaly detection and associated rule mining. He adds that all these analyses will impact consumers through long-tail marketing, increase sales and customer satisfaction, as well as targeted and personalised recommendations. Online and personalised advertising was one of the predominant uses, as interviewees mentioned how their searches kept reappearing as advertisements on different web page. It has become possible to research millions of markets at the other end of the product bitstreams via personalised recommendations and targeted searches (Chen et al., 2012). Interestingly, one of the interviewees said he believes that although organisations gather huge amounts of data, they are not using the data adequately.

The positive and negative effects of big data is presented in Table 15 and 16. Interviewees felt the negative effects of big data outweigh the positive effects. It is evident that consumers also have a need for individualised attention and personalised communication (Graeff & Harmon, 2002). Six of the interviewees felt it is convenient to

have personalised marketing as it brings them closer to the products, they are interested in. The remaining seven interviewees said they are unable to identify any positive effects.

Studies have shown that, in some cases, consumers might benefit from revealing information to firms, therefore when consumers protect their information about willingness-to-pay, it might not always lead to a better outcome or increased welfare (Kerber, 2016). The finding suggests that when individuals benefited from revealing personal data, they were willing to share information with organisations. All the interviewees except for one, said that they would share their information if the organisations used to personalise their searches.

Negative effects included the 'security impacts' of the personal information organisations had on individuals. The findings are supported by literature. The negative or managerial challenges that are associated with big data includes information sharing and ownership, security, privacy and governance (Nunan & Domenico, 2013; Sivarajah et al., 2017). Some of the other emerging themes were that interviewees did not want to receive spam, and they thought it is 'scary' that organisations know so much about them. Only three of the interviewees said they haven't experienced any negative effects from big data. Furthermore, one of the interviewees mentioned that organisations are using big data to price discriminate.

6.3.2   Mitigating Risks

The results from section 6.3.1 indicates that if the negative effects outweigh the positive effects from big data, it could imply that interviewees could become more concerned about the degree to which organisations track their every action (Graeff & Harmon, 2002). Literature suggests that consumers might even attempt to manipulate the information they are revealing if they anticipate that their personal data might be used to price-discriminate them (Rayna et al., 2015). This was not supported by the results, as only one of the interviewees mentioned that he has taken steps to mitigate the risks of organisations tracking his personal data. However, he was the only interviewee who mentioned price discrimination as a negative impact of big data. Adhikari and Kumar Panda (2018) explain that users perceived vulnerability might force them to engage in

online protection. The findings suggests that one interviewee felt vulnerable enough to take steps to mitigate his risks.

The results found that although consumers are aware that the terms and conditions are cautioning them to allow the organisation to track and use their data, all interviewees accepted the terms and conditions without hesitance. To provide promotions that are tailored to the individual's needs and interest, information is needed (Graeff & Harmon, 2002), and consumers will not be able to reap the benefits of personalised searches and convenience without disclosing this information.

6.3.3   Conclusive Findings for Research Question 2

The results show that all interviewees are aware of big data and big data analytics. Even though they are unable to define the term. However, in principle, they were aware of some of the uses of big data and were able to identify some of the positive and negative effects. Although the results indicated that the negative effects outweigh the positive effects, consumers were happy to disclose information if it resulted in a benefit for them. Results also shows that consumers are aware that their data could be collected and used, but that they do not take the time to read the terms and conditions, or disable their cookies and browsing history, showing that interviewees have not felt vulnerable towards organisations using their data.

6.4 Discussion of Research Question 3

Research question 3: Passengers perceptions towards personal pricing.

This question will help to determine the interplay between big data and pricing tactics. Once interviewees understand what big data and big data analytics are, how will this change their perceptions towards current pricing tactics and pricing tactics that see airlines using first-degree price discrimination to adjust prices based on their willingness to pay.

6.4.1 Change in Perception

The results in section 5.5.1 showed 'the perception towards first-degree price discrimination is unfair', as the primary construct that emerged and it had the most frequency identified. The change in perception is indicated in Figure 5, where four interviewees changed their original perception from either fair or the norm to unfair. This resulted in an unfairness frequency count of seven. This is supported by Richard et al. (2016) who indicates that personalised pricing could cause perceptions of unfairness, fears of price-gouging, loss of credibility and trust, and could possibly reduce purchasing intension. Crane and Matten also support this saying that consumers might question fairness if organisations exploited consumers if this is done by using their information generated through big data (2016).

On the other hand, the findings indicate that six interviewees thought price discrimination is either fair or that it would be fair, if they benefited from price discrimination. Price fairness is formed based on a social component where prices are viewed as a tool for exchange, and they are governed by regulations and social rules. A price will be deemed fair if it is socially accepted (Lii & Si, 2009). In section 6.2.3 it was clear that passengers have accepted revenue and yield management practices.

6.4.1.1 Fairness Perception

Three interviewees said it would be fair if organisations used big data to price discriminate based on their willingness to pay. It has been shown that several conditions play a role in whether additional information from a variety of sources lead to lower or higher profits and if it harms or benefits consumers. Some of the findings indicated that when a consumer is unaware of the information, or buying history a firm uses, and the firm has a monopoly, the information will increase the firm's profits. However, the same information can lead to lower prices and lower profits under competitive conditions because it leads to more competition between firms for different consumers (Kerber, 2016). The results in section 5.5.1 indicates that the main construct and factor forming the fairness perception is that there is always a willing buyer and a willing seller and that it would self-regulate. Supporting literature suggests that under competitive conditions, first-degree price discrimination could be beneficial to consumers and that it would self-

regulate. Bergemann et al. (2015) argues that additional information could not only impact the producer, negatively and positively, but also the consumer.

The finding of the perceived perception of fair, further supports Xia et al. (2004) and Richards et al. (2016), concept that the perceived fairness would be less concrete than a perception of unfairness. None of these interviewees mentioned past purchases, reference prices or social comparison. Figure 3 indicates that comparison is the first step in forming a perception of fairness. The factors that affect the perception are: a comparison between a previous or reference price, that the organisation is allowed a reasonable profit and the consumer should be allowed a reasonable price, a social comparison is made and consumers believe they are all the same and that they should all pay the same price, and lastly, the knowledge and information available impact the decision (Chung & Petrick, 2013; Ferguson et al., 2014; Malc et al., 2016; Mussweiler, 2003; Richards et al., 2016; Xia et al., 2004). The results indicate that a comparison is not the first step when making a fairness perception. It also shows if interviewees have the relevant information and knowledge, they would immediately form a fairness perception and disregard any of the other factors.

The study also found that a price would be deemed fair if the consumer were positively affected. The concept of price fairness has an economic component and a social component. Economically, a consumer is motivated by utility maximization, where they make decisions based on their own self-interest (Lii & Si, 2009). Richard et al. (2016) support the findings that consumers would be more willing to buy if the perceived inequality is in their favour. This is explained by the model of 'self-interest in-equity aversion'. Consumers experience negative utility if they are worse off and they will experience positive utility when they are positively affected (Liaukonyte et al., 2014).

6.4.1.2 Unfairness Perception

Ferguson et al., (2014) summarised the research that has been conducted to explain some of the circumstances as to why some prices were deemed more or less fair. Price increases were deemed as unfair if they were due to heightened demand or scarcity and when profit from sales were higher. Prices were seen as fairer when prices they were aligned with increase costs, when an increase was not taking advantage of consumers

situations, and when increases were due to external factors outside of the organisations control. The findings suggest that consumers deem first-degree price discrimination as unfair. Price discrimination takes advantage of consumer situations and it is clear tha interviewees felt the same.

Results in Malc et al. (2016) indicated that social comparison appeared to be the most relevant to negative price perception, and that it increased when people compared the observed price with the price paid by someone close to them. This was supported by the findings. Three out of the seven interviewees with unfair perceptions explained that it would be unfair if their reference paid either more or less than them for the same service. This is supported by Wu et al. (2012), the consumers believe they are similar to other consumers and they should pay equal prices if they buy the same product (Wu et al., 2012).

The second highest construct to emerge from the unfair perception was the *dual entitlement principle,* this principle is based on a reference transaction, where a consumer is entitled to a reasonable price, and the company, based on a reference point, is also entitled to a reasonable profit (Chung & Petrick, 2013). Two interviewees suggested that the organisation will always go for the highest profit margin and that the airline should look after loyal consumers, by giving them a discount for their loyalty.

The remaining two constructs that emerged from the findings were that the process is unethical. Ferguson et al. (2014) indicate that unfavourable prices will initiate the evaluation of perceived fairness of the price setting practice that was used to set the price. They further explain that procedural fairness is only considered when the overall fairness perception is formed when the evaluation of fairness and its outcome is disadvantaged.

6.4.2   Conclusive Findings for Research Question 3

The process of forming price perceptions are complex. The information and knowledge about big data and how it could be used to price passengers based on their willingness to pay, resulted in two perceived outcomes. The fairness perceptions were formed with only the new information and the interviewees did not make comparisons to other

passengers or to profit. This was not supported by literature in Figure 3. Fairness perceptions were formed based on the idea that prices will self-regulate in a competitive market and that first-degree price discrimination might benefit the passenger more than the airline. It is also mentioned that there is always a willing buyer and willing seller.

Reference transaction, social comparison and the dual entitlement principle are the two main constructs that emerged from the unfairness perceptions. It was based on a comparison and considered the factors mentioned in Figure 3 as the main attributes to form a perception. The comparison led to two possible outcomes, advantaged inequality and disadvantaged inequality. If the interviewees were advantaged, they perceived the price to be fair or unfair and when they were disadvantaged, their perception was unfair. Interviewees only regarded the process of forming the price when they were disadvantaged. The findings are summarised in Figure 6 below.

Figure 6: Factors Leading to Fairness Perception
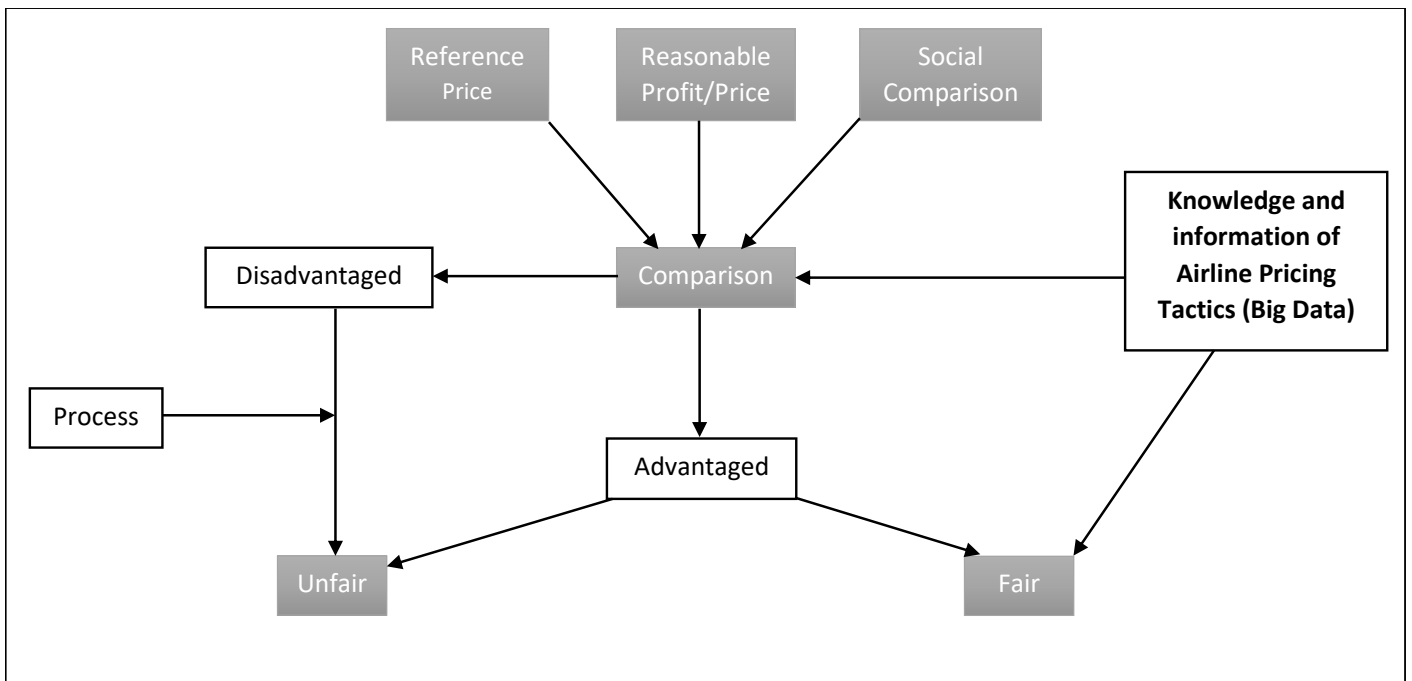
6.5 Discussion of Research Question 4

Research question 4: Reaction to unfair perception

Once the price is seen as "unfair", consumers will not trust the vendor or the way in which the price was set (Richards et al., 2016). Research question four provides the potential of understanding how and why passengers will react to the perception of unfair.

6.5.1   Reaction Towards the Airline

Only two of the interviewees indicated that they would avoid the airline and that they would try their best not to fly with the airline again. This is supported by literature. Consumers' perception of the fairness of a price is a key component when implementing first-degree pricing strategies. Lii & Sy argues that the decision to accept or reject the price, influence consumers' buying decision and their emotion towards the organisation (2009). Previous research indicates that the acceptance of the price an organisation offers is based on their perception of fair or unfair. Their study showed that when consumers perceived the price to be unfair, when firms implemented internet differentiation pricing tactics, they showed negative emotions such as fear, disappointment, outrage and anger (Lii & Sy, 2009; Writz & Kimes, 2007) and responses such as lower purchase intention, dissatisfaction and higher price consciousness (Writz & Kimes, 2007; Xia et al., 2004).

The remaining interviewees who perceived first-degree price discrimination as unfair explained they would be dissatisfied with the airline, but that they would take no action towards the airline. The majority of literature suggests that consumers would respond to unfair price perceptions through lower purchase intention, high price consciousness and dissatisfaction (Hinz et al., 2011; Malc et al., 2016; Richards et al., 2014; Vulkan & Shem-Tov, 2015; Xia et al., 2004). Although Malc et al. (2016) studied the consequences of perceived unfairness, they found that the results of perceived unfairness can be classified into three groups, firstly that no-action would be taken, secondly, self-protection and lastly being vengeful, Xia et al. (2004) explains that some buyers might not take action against the seller. When the buyer perceived unfairness has no significant influence on the transaction, it is likely that they will take no action.

The results show that six of the interviewees would take no action and still travel with the airline if the ticket was priced the best. This is supported by Richard et al. (2015). This study found that consumers were less likely to purchase products if they regard the price as unfair. They were also less willing to purchase if the inequity was not in their favour, but that they were more willing to purchase if the perceived inequity was in their favour. If the inequity was in the passenger's favour, all interviewees except one would still support the airline. The results in section 6.4.1.1 indicates that practices will self-regulate and that consumers might end up being positively affected by first-degree price discrimination.

6.5.2 Conclusive Findings for Research Question 4

The results indicate that although passengers will experience negative emotions, most price sensitive passengers would take no actions against the airline. Furthermore, Ferguson et al. (2014) research confirmed that both distributional fairness and procedural fairness influence the overall fairness perception. They also found that when a price is advantageous, the overall price fairness perception is driven by distribution, and not by the suspicion of the seller. It also indicates that when an outcome is disadvantaged, only then procedural fairness is considered in the overall fairness evaluation.

In research question three it was mentioned that when consumers are price advantageous, the overall price fairness perception is driven by distribution (Ferguson et al., 2014). This was reconfirmed in question four. Interviewees said if they were positively affected by first-degree price discrimination, and the airline had the best price, they would still buy the ticket from the airline with the best fare. The findings for this section are illustrated in Figure 7 below:

Figure 7: Outcome of Perceived Unfairness
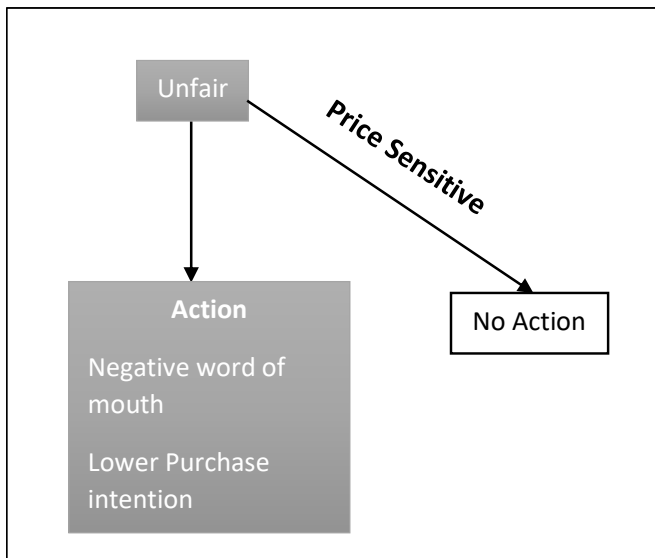
CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

In this chapter, the 'Perceived Fairness of First-Degree Price Discrimination for Airlines' will be discussed in terms of the original model (Figure 3) that was discussed in chapter two, and the findings and themes that emerged and were explored in chapters five and six. Based on this model and the findings, recommendations for managers are made. The limitations of this study will be discussed and the recommendations for future studies will also be presented and suggested.
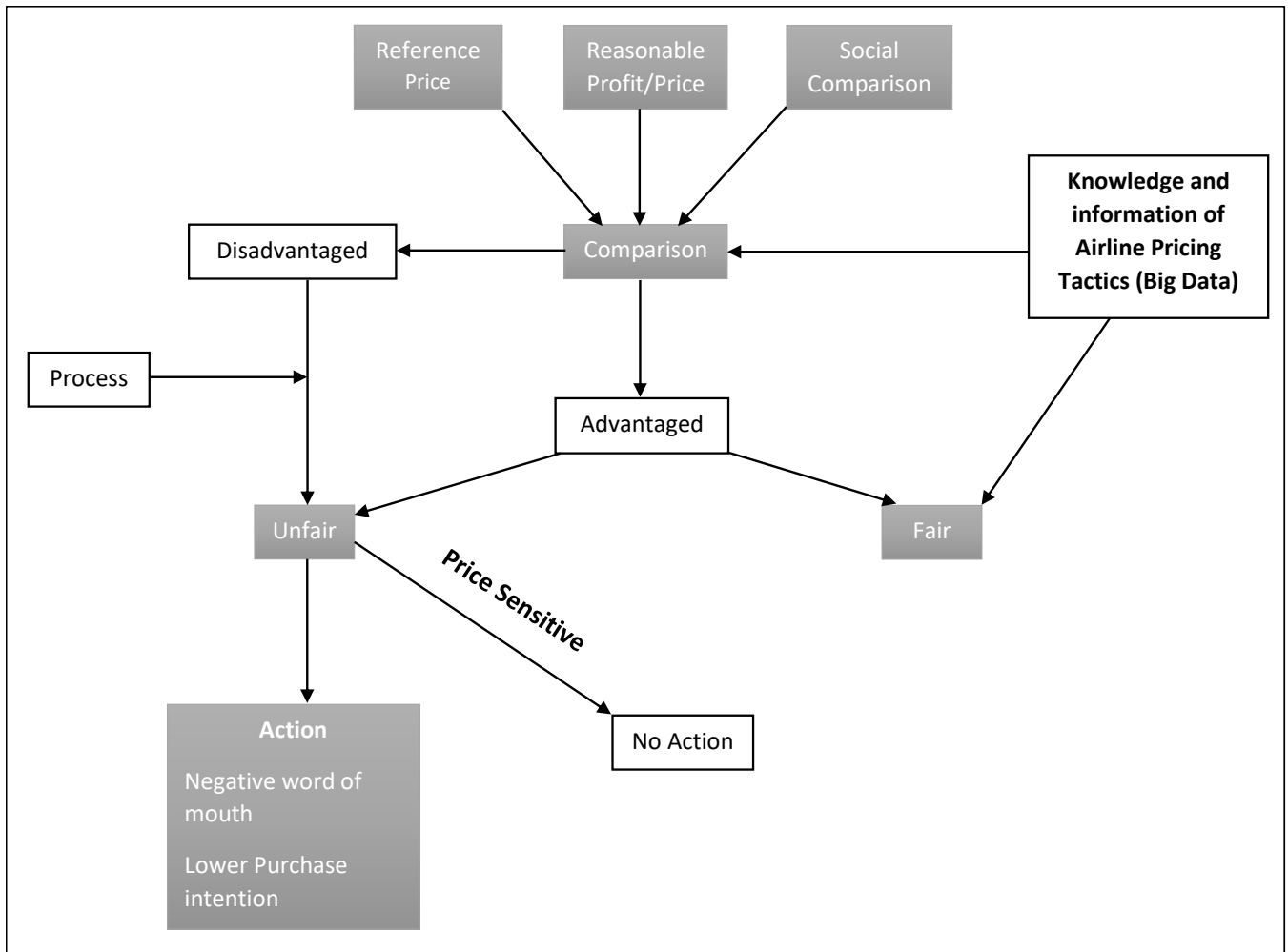
7.2 Understanding Passenger Perceptions

7.2.1   How the 'Perceived Fairness of First-Degree Price Discrimination for Airlines' model was developed

The 'Perceived Fairness of First-Degree Price Discrimination for Airlines' model was developed through thoughtful and careful consideration of the constructs and themes that emerged in chapter five. These themes and constructs were explored in chapter six, in sections 6.2, 6.3, 6.4 and 6.5. Consideration was given to the factors that influence perceived fairness and how previous knowledge and understanding regarding big data impacts a consumer's perception towards airlines using first-degree price discrimination and the outcomes of unfair perception. These aspects were pulled together and is presented in Figure 6 and 7.

The aim of chapter two was to understand the complexity of perceived fairness, and how big data is an enabler for first-degree price discrimination. This model was designed to gain insight into the complexity of perceived price fairness as highlighted in Figure 3 and further developed to understand the impact big data has on the perception of airline passengers. Figure 3, 6 and 7 was combined to form the 'Perceived Fairness of First-Degree Price Discrimination for Airlines' model presented in Figure 8.

Figure 8: Perceived Fairness of First-Degree Price Discrimination for Airlines

7.2.2 Explanation of the 'Perceived Fairness of First-Degree Price Discrimination for Airlines' Model

There are four factors that influence passenger perceptions in the airline industry. These factors are used to make comparisons, and the comparisons are used to form a conclusion, that either results in an advantageous or a disadvantageous outcome, which would lead to the perception of fair or unfair. Disadvantaged passengers would consider the process to form a price, such as first-degree price discrimination, as unfair. Advantaged passengers would consider the comparison as fair or unfair. Unfair perceptions have possible negative outcomes and price sensitive passengers would have no reaction if they are still receiving a good deal.

The first factor, the 'knowledge and information of airline pricing tactics', is the first step in the fairness evaluation. Judgement is made based on the knowledge and does not exist in an information vacuum (Mussweiler, 2003). The knowledge about pricing tactics was one of the most important themes that emerged. As such, it forms the basis of perceived fairness in the airline industry. As illustrated in sections 5.3.3 and 6.2.3, individuals easily identified airline pricing tactics and considered them fair when they understood why airlines were implementing such tactics. This sentiment was directed towards current discrimination tactics, it was further supported in section 6.4.1. In section 6.4.1, interviewees who understood the impact of big data, and how it could be beneficial to consumers or suppliers, immediately formed a fair perception.

However, individuals who did not understand why airlines were implementing such pricing tactics, was forced to the second step of the fairness evaluation. Where they had to make a 'comparison'. This is illustrated in section 6.2.3.2 and 5.3.3. Consumers form a perception based on a reference transaction and comparing it to a reference (Kuester et al., 2015). The second step of the fairness evaluation was the comparison the individuals made to a reference. These references include a reference price, a social comparison, that the organisations are allowed a reasonable profit and that the passengers are allowed a reasonable price. Sections 5.3.3, 5.5.1, 6.2.3 and 6.4.1 discuss how these references are used to form a perception. There are two possible outcomes of the comparisons, the first is an advantageous outcome and the second a disadvantageous outcome.

The second major theme that emerged from the study is that based on these outcomes, the interviewees experienced different reactions. An advantageous and disadvantaged comparison leads to two possible perceptions. This is discussed in section 6.4.1 and 6.5.1. When interviewees were positively affected by the price discrimination, they regarded the price as unfair or fair, the same was seen for the interviewees who were disadvantaged. However, one anomaly was that interviewees who were disadvantage, also considered the process, first degree price discrimination, as unfair. It was clear that the interviewees who regarded the process of 'first-degree price discrimination' as unfair, did not completely understand how price discrimination and big data works.

The final step in this model is the 'action' or 'no action' step, this step is taken by the interviewee who formed an unfair perception. This is discussed in 6.5.1. The third major theme that emerged from the study is that price sensitive interviewees, even though they regarded first-degree price discrimination as unfair, still regarded price to be the major attribute when they bought a ticket. Taken 'action' would result in negative word of mouth and lower purchase intention. However, in section 5.6 it is clear that very few interviewees would take action against the airline as they have become accustomed to revenue management. They would also not limit organisations to track their personal data to mitigate the risks.

7.3 Recommendations for Management

The rapid advances in technology, and the interactions involving consumers and suppliers generate massive amounts of information, which creates challenges and opportunities for business leaders and researchers (Chang et al., 2014). Through big data analysis and initiatives, organisations and businesses are starting to gain critical insights by collecting and analysing structured data, which is collected through various enterprise systems and analysed (Chen et al., 2012). Managers should be conscious when implementing internet pricing tactics. They should be aware of consumer evaluation and be cautious when implementing tactics as to not evoke perceptions of unfairness (Lii & Sy, 2009).

Big data generates big opportunities, but with opportunities come potential negative effects. The findings from research question 1-4 illustrates that although revenue management have become customary in the airline industry, passengers could perceive first-degree price discrimination differently.

7.3.1 Understand how Perceptions are Formed

It is important for managers to understand how passengers could perceive first-degree price discrimination, because it has the potential to form unfair perceptions. Furthermore,

if first-degree price discrimination is not dealt with correctly, it could result in actions being taken by passengers. Perception of price unfairness and price fairness is probably the most important determinant when implementing price discrimination tactics (Richards et al., 2015). It is also well-confirmed that many users are not aware they might be behaviourally targeted, or the extent of the data that is collected (Kerber, 2016).

To understand how passengers perceive first-degree price discrimination, it was important to understand why and how the perceptions were formed. Figure 8 can be used to understand how, and why passengers form their perceptions.

7.3.2 Transparency

Furthermore, management should understand that price sensitive passengers react differently to non-price sensitive passengers. For these passengers price is the most important attribute, and consumers with a low willingness to pay would be more interested in being discriminated against (Rayna et al., 2015). When implementing first-degree price discrimination, it is important for managers to be transparent about pricing tactics. Ferguson et al. suggest that organisations should be more transparent about mechanisms such as price setting, as this will allow consumers to build a relationship with the organisation, and to convey the nature of fair price setting practice and that it could result in even lower prices to consumers (2014). Information transparency is the degree of accessibility, availability and the visibility of information (Miao & Mattila, 2007).

Managers should aim to provide passengers with sufficient knowledge and information to help them understand why they are using first-degree price discrimination. As illustrated in 7.2.2.1, if passengers are aware of the pricing tactics and they understand that it could possibly be beneficial to both them and the airline, it could lead to a fairness perception. If they understand they could benefit from price discrimination, they could be more acceptable to first-degree price discrimination.

Rayna et al. (2015) explores strategies where first-degree price discrimination could be acceptable if both the consumer and producer adopts this form of pricing. If rewarded properly, consumers are ready to reveal their personal data. A 'greater good" can be

achieved even when consumers and firms behave selfishly, because of the additional surplus (Rayna et al., 2015). Vulcar and Shem-Tov (2015), show that when the subject was unable to personalise prices based on the consumer willingness to pay, they charged prices well over marginal costs. They also indicated that as the number of sellers increased in the market, prices decreased. According to a study done by Hinz et al. (2011), discrimination might even increase satisfaction of consumers, as discrimination might enable transactions that would not have taken place at all.

However, consumers who have high willingness to pay would likely do anything they can to avoid revealing information that would lead them to be discriminated against (Rayna et al., 2015). The fourth major theme that emerged was that interviewees did not take any action to prevent organisations from tracking their data. This is discussed in section 5.4.5 and 6.3.2. This supports the recommendation that airlines should be transparent and communicate the benefits of big data, and how big data could lead to increased personalisation and discounted fares.

7.3.3   Conclusion

Short-term gains might be offset, unless consumer fairness perceptions are well managed, to prevent a negative impact on long term profitability (Writz & Kimes, 2007). Perception of pricing plays a key role in customer behaviour and satisfaction, as consumers may perceive revenue management as unfair. When consumers are unfairly treated, they might act negatively, which could lead to decrease in customer satisfaction and deteriorating of the organisation's economic success (Heo & Lee, 2011).

7.4 Research Limitations

This research is not without limitations. These are identified and discussed below:

- Dynamic pricing is a form of price discrimination and it enables firms to increase revenue by better matching demand and supply, achieving customer segmentation and responding to shifting demand patterns (Chen & Chen, 2016). This research only focussed on first-degree price discrimination. The perceptions

with regards to dynamic pricing could be different to first-degree price discrimination.

- This study is limited to domestic routes in South Africa and could have different results if it is done on international routes or carriers.

- Consumers who are members of loyalty programs might be biased due to the miles and discounts they get.

- Cultural differences between countries with regards to perceptions.

- This research does not take into account how passengers' perceptions might change if prior experiences and other seller's prices are taken into account. It only focusses on how big data changes passengers' perceptions.

- The research was done on the airline industry. Other industries and sectors could have very different results.

7.5 Suggestions for Future Research

The following recommendations are made for future research. These recommendations would add significant value to existing literature:

- Future research should address the perceived fairness of first-degree price discrimination in other industries and in different countries. The airline industry is very different to other industries, and consumers have become accustomed to revenue management. Future research should focus on other industries where price discrimination has not been used, which could lead to different perceptions with regards to first-degree price discrimination.

- Culture is likely to confound the research, future research should explore the role of perception on first-degree price discrimination across a variety of cultures (Lii & Sy, 2009).

- Future research should be done to understand consumer perception with regards to the impact big data has on dynamic pricing.

- The effects and relationship of loyal customers and customers who are members of loyalty programs. This might play an important role in consumers' judgment of the fairness of first-degree price discrimination (Lii & Sy, 2009). Future research should be done to understand these effects.

7.6 Conclusion

The literature shows that big data could have big impacts on organisations and on consumers. Big data enables first-degree price discrimination, but perceived unfairness towards airlines could result in potential negative emotions and outcomes. However, airline passengers have become accustomed to revenue management and price discriminations. This research set out to contribute and close the gap that currently existed in literature. This report resulted in the 'Perceived Fairness of First-Degree Price Discrimination for Airlines' model which integrates current perceptions, big data knowledge, and possible outcomes. This is combined with the primary constructs that emerged which includes comparisons, knowledge and the effects of advantaged and disadvantaged comparisons on outcomes.

This research contributes to literature as it provides key insights into how passengers form their perceptions towards airlines using big data to price discriminate and how they will react or act out towards an airline. It will also assist to airline managers and consultants who would like to implement first-degree price discrimination but are cautious about possible negative reactions. The model of 'Perceived Fairness of First-Degree Price Discrimination for Airlines' could be used to navigate the complexity of perceptions towards first-degree price discrimination.

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Appendix

Appendix 1: Consent Form

<u>Informed Consent Form</u>

Title: Passengers perception towards Airlines using online first-degree price discrimination as a pricing strategy.

Researcher: Lizaan Swart, MBA Student at the Gordon Institute of Business Science, University of Pretoria

I am conducting research on South African airline passengers and their perception regarding current and potential pricing strategies. The purpose of the study is to understand how passengers currently perceive airline pricing strategies and how they will possibly react to new strategies using their personal data. Our interview will be between 20 minutes and 1 hour. This will help inform airlines on how potential and current passengers react toward pricing strategies.

You may choose to not be audio recorded, as the recording of this interview is voluntary. Your participation is also voluntary and you can withdraw at any time. All the data will be kept confidential and any quotations that will be used will be kept anonymised.

If you have any concerns please contact Mike Holland my supervisor, both our details are provided below:

Lizaan Swart: Mike Holland

Swart.lizaan@gmail.com   mholland@pricemetrics.co.za

084 493 8361   082 495 1283

Interviewee's Name: _____

Signature: _____   Date: _____

Researcher's Name: _____

Signature: _____   Date: _____

Gordon Institute of Business Science

University of Pretoria

08 August 2018

Swart Lizaan

Dear Lizaan

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee

- Name:
- Age:
- Occupation:
- Level of seniority:
- Level of education:

Research Question 1: How do passengers currently perceive airline pricing strategies and what is the level of knowledge they have?

1. How often do you travel?

2. What is your primary reason for travel?

3. In the last year, how often have you flown with a domestic airline?

4. The primary reason for domestic travel?

5. Do you fly economy, business or premium?

6. When you purchase a ticket, what attributes do you consider?

7. What platform do you use to make your booking, online, travel agency etc?

8. Do you fly the same route regularly? At the same time?

9. Do you often find changes in price for that route and time?

10. How do you currently perceive airline pricing tactics?

11. Are you aware that some passengers pay more, or less, than other passengers for a ticket even though they have the same attributes?

An example will be provided: We are travelling on a flight to the same destination, at the same departure time and we paid two different fares, I paid R4000 and you paid R2000.

12. Why do you think airlines are doing this?

13. Do you think this is fair, unfair or a norm?

Research Question 2: What is the current understanding of big data.

14. What is your understanding regarding big data?

15. What is your understanding regarding big data analytics?

A short clip will be played (Forbes, 2016)*:*

https://www.forbes.com/video/4857597029001/#5769ff1a32b8

16. Do you know of any organisations that are currently using big data?

If the interviewee cannot identify any organisations that are currently using big data, the following example will be used:

In retail, physical stores such as booksellers can track which books sold and the ones that didn't. Loyalty programs could also be tied to purchases from individual customers. The understanding of customer's changed dramatically when shopping moved online. Retailers can not only track what consumers look at, but also what they bought, how they navigated through the site, their reviews, how much they were influenced by promotions and page layouts, as well as similarities across groups and individuals. They developed algorithms that track how customers responded to or ignored recommendations. They also developed algorithms that can predict which books individual customer's would like to read next (McAfee & Brynjolfsson, 2012).

17. On a personal level, what are some of the benefits that you might experience from big data?

18. On a personal level, what are some of the negative effects that you might experience from big data?

19. Have you ever taken steps to limit the data organisations gain or track?

Research question 3: How do passengers feel about their personal data being accessed online by airlines and how would they feel about pricing tactics that uses online data to price discriminate?

20. Would you be comfortable with an airline accessing and using your personal data and analysing it on a personal level?

21. If an airline used your personal data to personalise your search and to offer you products and services based on your online history, would you consider this fair or unfair?

22. If an airline used your personal online history to charge a price based on your willingness to pay, would you consider this fair or unfair?

23. Please will you elaborate why?

Research question 4: Reaction to unfair perception

24. If you found out this is how the airlines have been pricing tickets, how would you react?

25. Would you act out against the airline?

26. Would you fly with the airline again?

27. If the answer is "no" in question 26, the following question will be presented. And if the flight is at the right time and date, and if it is the best price by far, would you still not fly?

Individual Codes
0. A few times per month/week
0. Business class
0. Degree
0. Diploma
0. Economy class
0. Forties
0. Masters
0. Matric
0. More than 5 times a year
0. Once or twice a year
0. Thirties
0. Twenties
1. Advance Bookings
1. Airline costs
1. Airlines Website
1. Availability of seats
1. Aware of discrimination
1. B - Flexibility
1. B - Travel Agent
1. Bare Fare
1. Business
1. Choice between driving and flying
1. Client segmentation
1. Confusing
1. Cost of booking intermediate
1. Dates
1. Driven by competition
1. Last minute bookings
1. Leisure
1. Marketing Campaign
1. Monopoly
1. Normal business Practice
1. Online intermediate
1. Online price discrimination and demand
1. Perception - Fair
1. Perception - The Norm
1. Perception - Unfair
1. Price
1. Reputation
1. Supply and demand
1. Tactics between airlines

1. Time of flight
1. Unaware of price discrimination
1. Unfair - Why - Do not understand
1. Unfair - Why - Unplanned events
2. Tracking
2. Airlines
2. Amazon
2. bookings.com
2. Clicks
2. Convenience
2. Different Sources - structured and unstructured
2. Discovery
2. Don't want to be tracked
2. Example - Fund managers
2. Facebook
2. Google
2. Gumtree
2. Have taken steps
2. Insurance companies
2. Internet of things generating data
2. Knowledgeable about big data
2. Large volume
2. Marketing
2. Manipulation
2. Most companies use big data
2. No benefits
2. No idea what big data is
2. No negatives
2. No steps taken
2. Online Advertising
2. Oracle
2. Personally uses big data
2. Price discrimination
2. Scary
2. Security implications
2. Spam
2. Speed
2. Spree
2. Takealot.com
2. Telecommunications
2. Their organisations are using big data
2. To bring awareness of products
2. Trip advisor
2. Used to make conclusions

2. Vague idea
2. Woolworths
3. Discriminating based on how often you travel
3. Fair
3. Free market
3. How the data gets used
3. how would you know?
3. I want to make the choice
3. If it makes my life easier - Why not?
3. Invasion of privacy
3. It depends if you are benefiting
3. It depends what data
3. It is a benefit
3. It is just about profit maximisation
3. It is the same flight, it should be the same fare
3. It should be the same price for everyone
3. It will self-regulate
3. Lower prices
3. No spam or marketing
3. Normal business practice
3. Supply and demand
3. There should be only one fare
3. They are already doing it
3. inaccurate data
3. Unethical
3. Unfair
3. Who is using the data?
3. Why should someone pay less than me?
3. Willingness is limited to what you have available
3. Willing buyer and willing seller
4. I will pay more to fly with a different airline
4. I won't act out, price is still the most important
4. I would block the data they have
4. If the price is the best, I would still fly with that Airline
4. Won't fly with them again