Emission: Impossible – CSR Protocol

A quantitative study of brand trust and the Big Five personalities

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Abstract

Brand crises and corporate scandals have in recent years become increasingly present internationally affecting not only consumers and other stakeholders, but the environment at large. Although existing literature has sought to explain this rising trend and the extent of the effects that follow, a gap still remains towards explaining the varied consumer reaction that is expressed in their wake. One theory that has been gaining popularity over recent years in explaining consumer behaviour is the Big Five personalities, which consists of such dimensions as Agreeableness, Extraversion, Conscientiousness, Neuroticism, and Openness to experience. The purpose of this study was to bridge that gap by investigating the effect that the Big Five personalities and brand trust had upon purchase intention. To do so we formulated the following research question:

Does Agreeableness, Extraversion, Conscientiousness, Neuroticism, Openness to experience, and brand trust affect students’ purchase intention of Volkswagen products in the light of its recent CSR brand crisis?

To answer our research question we conducted a quantitative survey at Umeå University, targeting those students who study business related programs or courses. Selecting such students as our respondents was a result of us using convenience sampling method after deciding our target population. The answers collected from 123 respondents were used in a regression analysis which displayed a significant effect on purchase intention from Extraversion and Brand Trust, the result which is visualised in a revised conceptual model. This study makes a theoretical contribution to the research field of personalities’ effect on consumer behaviour and we suggest how our results could be generalized and applicable to not only Swedish consumers, but also consumers in other countries that share certain similarities with Sweden.

Key words: CSR brand crisis, Big Five personalities, Brand Trust, Purchase Intention
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Johan Palmqvist & James Smith
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.1</td>
<td>Subject Choice</td>
<td>1</td>
</tr>
<tr>
<td>1.2</td>
<td>Problem Background</td>
<td>2</td>
</tr>
<tr>
<td>1.2.1</td>
<td>The Volkswagen Emission Scandal</td>
<td>2</td>
</tr>
<tr>
<td>1.3</td>
<td>Theoretical Background</td>
<td>3</td>
</tr>
<tr>
<td>1.3.1</td>
<td>Brand Crisis</td>
<td>3</td>
</tr>
<tr>
<td>1.3.2</td>
<td>Variance in Consumer Reaction</td>
<td>4</td>
</tr>
<tr>
<td>1.3.3</td>
<td>Corporate Social Responsibility and its Impact</td>
<td>5</td>
</tr>
<tr>
<td>1.4</td>
<td>Research Gap</td>
<td>5</td>
</tr>
<tr>
<td>1.5</td>
<td>Research Question</td>
<td>6</td>
</tr>
<tr>
<td>1.6</td>
<td>Purpose</td>
<td>6</td>
</tr>
<tr>
<td>1.7</td>
<td>Delimitations</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Methodology</td>
<td>8</td>
</tr>
<tr>
<td>2.1</td>
<td>Research Philosophy</td>
<td>8</td>
</tr>
<tr>
<td>2.1.1</td>
<td>Preconceptions</td>
<td>8</td>
</tr>
<tr>
<td>2.1.2</td>
<td>Ontology</td>
<td>8</td>
</tr>
<tr>
<td>2.1.3</td>
<td>Epistemology</td>
<td>9</td>
</tr>
<tr>
<td>2.2</td>
<td>Research Approach</td>
<td>10</td>
</tr>
<tr>
<td>2.3</td>
<td>Research design</td>
<td>11</td>
</tr>
<tr>
<td>2.4</td>
<td>Literature Search</td>
<td>12</td>
</tr>
<tr>
<td>2.5</td>
<td>Source Criticism</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>Theoretical Framework</td>
<td>14</td>
</tr>
<tr>
<td>3.1</td>
<td>Brand Crisis</td>
<td>14</td>
</tr>
<tr>
<td>3.1.1</td>
<td>The Nature of a Crisis</td>
<td>14</td>
</tr>
<tr>
<td>3.1.2</td>
<td>Corporate Misbehaviour</td>
<td>15</td>
</tr>
<tr>
<td>3.1.3</td>
<td>Corporate Social Irresponsibility</td>
<td>16</td>
</tr>
<tr>
<td>3.2</td>
<td>Purchase Intention</td>
<td>16</td>
</tr>
<tr>
<td>3.3</td>
<td>Brand Trust</td>
<td>17</td>
</tr>
<tr>
<td>3.4</td>
<td>Big Five Personalities</td>
<td>18</td>
</tr>
<tr>
<td>3.4.1</td>
<td>Agreeableness</td>
<td>19</td>
</tr>
<tr>
<td>3.4.2</td>
<td>Extraversion</td>
<td>20</td>
</tr>
<tr>
<td>3.4.3</td>
<td>Conscientiousness</td>
<td>21</td>
</tr>
<tr>
<td>3.4.4</td>
<td>Neuroticism</td>
<td>22</td>
</tr>
</tbody>
</table>
8 Truth Criteria ............................................................................................................. 51
  8.1 Reliability ............................................................................................................. 51
  8.2 Validity .................................................................................................................. 51
Reference List ............................................................................................................. 53
Appendix I ..................................................................................................................... 64

List of Tables
Table 1: Respondent demographics ................................................................. 34
Table 2: Cronbach’s alpha values ........................................................................ 35
Table 3: Different mean values between our two data sets .................................. 36
Table 4: Mean values of combined sample .......................................................... 36
Table 5: Correlation test findings .......................................................................... 37
Table 6: ANOVA table ............................................................................................... 38
Table 7: Linear Regression ...................................................................................... 39
Table 8: Hypotheses verdicts ................................................................................... 39

List of Figures
Figure 1: Initial Conceptual Model .......................................................................... 24
Figure 2: Revised Conceptual Model ....................................................................... 40
1 Introduction

We begin this chapter by explaining the reasons behind our background and choice of subject. Furthermore we provide a brief explanation of the brand crisis we are studying and factors leading up to it before we move on to introducing the theory surrounding the parts of the scandal. We finish off the theory part by presenting the gap we have found, our thesis purpose and our intended contribution.

1.1 Subject Choice

We, the authors of this thesis, come from different academic backgrounds. James is an International Business Program student who has specialized within the area of accounting in his most recent semester abroad. He is currently undertaking his final semester at Umeå University for his Master of Science in Business Administration Degree. He has taken every available opportunity within the program to study in various countries and shape his study plan accordingly. From this he has focused on such subjects as Marketing at basic and advanced level, and brand management at advanced level in providing a foundation of knowledge in which to develop further. Although this is not his key area of specialty, he has found the area of marketing to be increasingly interesting as it has mirrored the rise of internationalization in becoming more important at the forefront of international strategy. As such, compromising on this field of study, rather than pursuing accounting, was feasible given his thesis partner’s different specialization but interest also in marketing.

Johan on the other hand, is a Service Management Program student who specialized in management throughout his studies and recent semester abroad. Additionally his studies have had a secondary focus on marketing and he has thus studied a few courses, mostly in position marketing. As such the choice of brand management was not the obvious first choice of subject but as it is highly relevant in the evolving global market, it became a suitable subject given his partner’s academic background.

Brand management became our subject of choice, but more specifically we wished to research what happens when a brand is mismanaged. Brand crises, a prominent area of study in past and current research, have occurred more frequently in recent years, prompting companies to give evermore attention and focus towards tackling these challenging events. With increasingly greater access to information about these crises through multiple media sources, consumers have had greater exposure to the scale and effects that follow. This increased awareness has made it more difficult for companies to cover up and contain the extent of the damage. The Corporate Social Responsibility (CSR) movement is also becoming more embedded at a global and national level in regards to environmental, economic, and social business practices. In the light of the recent emission scandal of Volkswagen we decided to work with the scandal as a foundation of our study upon consumers’ fledging behaviour towards brands and especially one involved in a CSR crisis.
1.2 Problem Background

The expansion of the automobile over the past 100 years has dramatically impacted not only environmental and technological change (Kirsch, 1996), but also the prominence of petrol- and diesel-based engines worldwide in creating one of the single most important challenges for clean transportation policy (ICCT, 2016). In this respect, although vehicles to date have improved in fuel efficiency and reduced emissions through preceding generations, this has regardless been offset by an increasing number of cars which have increased in weight and distances driven during this time (Nieuwenhuis et al., 2004, p. 7).

This concern has prompted respective legislation such as the Euro Standards in Europe (ACEA, 2016), and the Clean Air Act in the United States in establishing both air quality and emission control standards that protect the public’s health and the environment (EPA, 2016). Consequently, although development of the automotive industry over the past decades has gone through momentous growth of process and institutional innovation which has had a significant impact on competition and the dynamics of the industry (Fai & Morgan, 2007 p. 776), it is now being shaped increasingly by regulatory policies, alongside economic and political pressures.

1.2.1 The Volkswagen Emission Scandal

One of the world’s most prominent and recognised automobile manufacturers, and largest car producer in Europe, is that of the Volkswagen Group headquartered in Wolfsburg, Germany (Volkswagen, 2014). According to Forbes (2016), in 2015 Volkswagen was ranked as the 67th Most Valuable Brand in the world with a market capitalization of over a $100 billion. However, its recognition does not stop there. Volkswagen Group’s focus on adjusting to new technology, utilizing lean R&D processes, operating new technological platforms, and investing in adjacent markets has allowed it to rise as one of the top 50 Most Innovative Companies in the world (Ringel et al., 2015). This has allowed extensive expansion of operations into more than 30 countries worldwide, and vehicles sold in over 150 countries, alongside an ever-changing and ever-increasing competitive market and global standards (Volkswagen, 2014).

Most recently, however, the Volkswagen brand (a key brand under the Volkswagen Group) has been involved in a CSR scandal after an investigation revealed that Volkswagen had fitted over 11 million vehicles worldwide with software designed to deceive and circumvent emission testers (BBC, 2015; Ewing, J., 2015). These include 1.4, 1.6, and 2.0 litre engines that produce up to 40 times the nitric oxide limits dictated by U.S. and Euro Standards (Krisher, T., 2015; BBC, 2015; Schiermeier, Q., 2015). Furthermore, information came to light that the extent of the crisis reaches farther back to 2007 when Volkswagen employees were knowingly aware of the use of these ‘defeat devices’ (Arvinth, K., 2015). In the wake of this crisis, Volkswagen has put aside $7.3 billion to cover the cost of the recall; however, its drop in brand value as a result, extends further to include and affect its customers’ trust and loyalty, well-established reputation and recognized country brand (Cramer, A., 2015; Brand Finance, 2015; Arvinth, K., 2015). According to Barrett et al. (2015) this scandal not only affects the brand’s value, but also impacts human health and the environment resulting in over 50 premature dates and more than 30 cases of chronic bronchitis from excess air pollution.
Furthermore, the cost of driving is more expensive for customers, as the fuel consumption of affected vehicles is actually understated (Automotive News, 2015).

In light of this scandal and resulting consequences that follow, the public have had mixed responses and attitudes towards Volkswagen. According to one survey based in Ireland more than 75 percent of Volkswagen owners expressed that the recent brand crisis would not deter to them from a repeatable purchase in the future, whilst over half of non-Volkswagen owners said they would not be dissuaded either (Fátharta, 2016). However, in a conflicting survey by Grieb (2015), more than 60 percent of consumers based in the U.S. mentioned a mistrust of Volkswagen in respect to the current scandal, but when the respondents were asked to assess the seriousness of the issue, they considered General Motor’s ignition switch problem and Toyota’s sudden acceleration recalls as being more serious. Another important finding in the UK was that of all the 2,000 Volkswagen owners that were questioned, over 90 percent felt that some level of compensation should be paid out, and that the vehicle’s fuel consumption was an essential factor when considering their choice of purchasable vehicles (Frangoul, 2015). When asked what associations of the brand came to mind after the Volkswagen scandal, U.S. consumers highlighted such illustrative words as ‘dependable, affordable, German, and compact’ with only a minority of the respondents using such words as ‘liar’ and ‘scandal’ (Hennessy, 2015).

From these surveys, mixed feelings and trust have been expressed regarding different aspects of Volkswagen’s brand crisis. Individuals perceive and react differently to not only the type of crisis, but to what they consider important when purchasing a vehicle, and their attitudes towards the Volkswagen brand. This setting, underpinned by the key elements within our problem background, has allowed us to better identify research gaps within current literature that we can better explore and research, herein allowing us to make a theoretical and practical contribution.

1.3 Theoretical Background

1.3.1 Brand Crisis

How an organisation handles a brand crisis is one of the most important actions and influences the brand’s equity, consumers’ perception of quality, and the company’s market share (Chen et al., 2009, p. 2014). As Yannopoulou et al. (2010, p. 530) describes it, brand crises are misfortunate events waiting to happen and they could be caused by varying reasons such as faulty products, mismanagement, ethical scandals or causes that are outside of the organisation’s control. With the increasing complexity of products and availability of information to consumers these crises have become more frequent and often so in product-related situations where faults in manufacturing, mistakes in marketing or design errors are some of the more common causes (Yannopoulou et al., 2010, p. 530).

These crises will of course cause harm to the brand and consumers’ trust towards it (Yin et al, 2016; Haas-Kotzegger & Schlegelmilch, 2013), the degree of which will depend on several factors such as previous work with CSR (Klein & Dawar, 2004, p. 204) or previous relations with the brand (Hammerl et al. 2016, p. 37). A study by Kang & Hustvedt (2014, p. 264) found that trust can be considered one of the strongest factors influencing consumers in the purchasing process, alongside their intent to spread either
positive or negative word of mouth, especially in a CSR setting. Given that trust can be lost because of a brand crisis and trust can in turn affect purchase intention, the possibility arises to see the effect of this relationship in regards to a more specific brand crisis, such as Volkswagen’s, thereby identifying a research gap. However, brand crises do not only affect the brand causing the crises. According to a study on the Chinese milk powder scandal where poisonous milk powder was sold to mothers who fed the formula to their children, which led to waverin health and at times death (Custance et al. 2012, p. 22), it was found that the events during and after the crisis prompted consumers to begin distrusting other producers on the market and the whole domestic food-producer market took a downturn as consumers sought new sources (Custance et al. 2012, p. 23).

1.3.2 Variance in Consumer Reaction

The subject of brand crises and how it affects consumers is an interesting area of research. In fact as late as January/February, an issue in the Journal of Consumer Behaviour contains an article on the interplay of implicit theories of personality and brand crises. The study in question uses entity and incremental theories to explore the difference in consumers’ attributions towards a brand in a product-harm crisis, and in order to eliminate any previous bias the researchers used a fictional company (Yin et al., 2016). Thus lays herein another piece of the puzzle that is part of our identified gap, as this most recent study does not base its findings on companies who have recently experienced a brand crisis, nor does it account for consumers’ previously existing loyalty or disloyalty towards the brand. The study by Yin et al. (2016, p. 94) even explicitly calls for studies on the topic of attitudes towards companies in brand crises where a real brand is involved instead of a fictional one.

Furthermore, aforementioned studies have included consumers’ attributions (Yin et al., 2016, p. 87), characteristics (Haas-Kotzegger & Schlegelmilch, 2013, p. 88), or cultural differences (Samaraweera et al., 2014, p. 2644) but have not connected those traits to personalities that could be the foundation for segmentation. Whilst research does exist on the impact of consumers’ personalities on their behaviour towards a brand or company (Liao et al., 2015; Al-hawari, 2015), there is no connection, to the best of our knowledge, between brand crises and personality theories. Thus we have identified a gap that could connect an understanding of a more detailed basis for segmentation and service recovery strategies to brand crises of this nature.

A generally accepted, if not the most generally accepted, method of determining an individual’s personality is the Big Five theories of personalities (Quintelier, 2014, p. 343). While the use of traits to classify personality has been around since the 1930’s (Allport & Odbert, 1936), the Big Five structure was not born until the 60’s (Pervin et al., 2008, p. 119). The model has since been revisited and developed by several authors, one being that of Al-hawari (2015). The Big Five consists of the factors Extroversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience (Al-hawari, 2015, p. 42). By using this method of determining personality a possibility arises to distinguish a pattern and connect personalities with certain behaviour towards a brand in crisis.
1.3.3 Corporate Social Responsibility and its Impact

Modern corporate social responsibility (CSR) began in some regard with the Brundtland report, ‘Our common future’. Sustainable development was now introduced and defined as ‘development which meets the needs of current generations without compromising the ability of future generations to meet their own needs’ (World Commission on Environment and Development, 1987). Since then differing views of sustainability and sustainable development has arisen as sustainability is often regarded as an issue of environment while sustainable development usually includes a broader perspective. However, in 1994 a popular aspect was developed called the ‘Triple Bottom Line’ that noted three distinct aspects of sustainable development: People, Profit and Planet (Economist, 2009).

Over the last two decades CSR has become more prominent in both political and business contexts as the demand for change and sustainability in all aspect of the Triple Bottom Line is pressing from both experts and the general public, such as consumers (Bärlund, 2004). As there is a distinction between different CSR-related actions, there has also been varying focus points for different demographics. For example, Swedes are more inclined to focus on ethical and philanthropic aspects while Lithuanians are more inclined to focus on economic aspects of CSR (Pikturniene & Vasiliauskaite, 2012, p. 241).

But within the CSR field there is a certain conflict as to its actual impact upon consumers’ behaviour towards companies. Klein & Dawar (2003, p. 204) stated that CSR activities would cause a positive bias towards the company that at times would overrule otherwise logical aspects such as economical or durability in their choice of consumption. Conversely, Luchs et al’s. (2010, p. 28) findings contradicts this as CSR was something that rather could make the consumer suspicious of the product’s or service’s quality and thus the producer would often have to provide some sort of insurance or proof to reassure the consumer of the product’s or service’s strengths. Albeit while there is a possibility that consumers will have negative experiences with the CSR activities, that should not deter companies from being ethical as the experience depends on a variety of different variables (Luchs et al. 2010, p. 29). As aforementioned above in brand crisis, a crisis can happen due to numerous reasons and be widespread in its effects, such as a loss in consumer trust and in turn purchasing behaviour. Also the variance in consumer reaction to a brand crisis can be caused by such factors as underlying individual differences in consumer attributions, characteristics, and culture. However, given the growing prominence of CSR and people's attitudes towards it, it is important to see how a crisis, and more specifically a CSR crisis as in the case of Volkswagen within our study, can be looked at given these same factors, although personalities in our case, that cause a consumer reaction, and also given that the effect of brand trust on purchase intentions has not been looked at within this context.

1.4 Research Gap

As we have presented above, there is a gap to fill between a CSR crisis, consumer personalities, and brand trust. This emphasis on CSR is in line with how the media has presented the crisis, as that of an emissions scandal that was caused by Volkswagen. This reflects the Emission standards that Volkswagen failed to abide by. As a result we shall be focused on this aspect as the most important that reflects the nature of
Volkswagen’s violation, such as its environmental impact as the primary concern. This more narrow gap allows us to focus our study on exploring the effect of one particular type of crisis, the interplay between Agreeableness, Extraversion, Conscientiousness, Neuroticism, Openness to experience, and brand trust together with this brand crisis, and how this might affect consumers’ purchase intentions as a result. Regarding personalities, this is further highlighted since there is an uncertainty as to if CSR activities actually influence consumers’ purchase behaviour, as some authors claims it does (Klein & Dawar, 2003) whilst some claim it has little or negative effect (Luchs et al., 2010). Not only could this variance be due to different consumer personalities, it could potentially be similar towards companies that fail to abide by CSR practices. This is something we wish to explore further.

1.5 Research Question

Given the problem background and current gaps within research, we have formulated a research question which we thus propose:

*Does Agreeableness, Extraversion, Conscientiousness, Neuroticism, Openness to experience, and brand trust affect students’ purchase intention of Volkswagen products in the light of its recent CSR brand crisis?*

1.6 Purpose

The purpose of our study is to investigate how Agreeableness, Extraversion, Conscientiousness, Neuroticism, Openness to experience, and brand trust affect students’ purchase intention towards Volkswagen in the light of its recent CSR brand crisis. By quantitatively assessing which dimension of personality students lean towards and their level of brand trust, we will be able to see whether these factors influence purchase intention of Volkswagen’s products after its current CSR brand crisis.

This study will provide a theoretical contribution to existing empirical research that has been done within the area of brand crises’ and CSR’s effect on consumers and brand trust, incorporating purchase intention as the outcome factor. Furthermore, the study expands on the area of consumer behaviour which allows for further research into this topic. The study’s practical relevance will be for companies who are experiencing a brand crisis and need to consider an appropriate response strategy tailored toward specific personalities and different levels of brand trust. This will also allow companies to see which factors influence consumers’ purchase intentions in order to remain sustainable in the long-term.

1.7 Delimitations

The first delimitation of our study is our choice of Volkswagen as the brand crisis in our study. As most companies experience brand crises because of human error or mismanagement, Volkswagen’s situation is based on unethical practices which limits the scope of our results to a deliberate crisis type. Furthermore, we only consider a brand crisis within the automotive industry, which also limits the applicability of our
findings. This is because the length of the study is only between three to four months which does not make it feasible to do a cross-industry analysis or a longitudinal study.

Our target population will also be that of Umeå University students who take business courses; as a result, there may be a certain bias within our sample which in turn could make our results less applicable. However, we feel that there should be enough data overall to represent each aspect of our research in regards to the brand crisis. Also given the nature of the study, it could be beneficial to measure more than one variable within the target group such as loyalty as well, but we have found that other studies have concentrated on this, which in our case allows us to reduce the complexity of the research. Another concern is that students may not be the best representation of consumers who are affected or influenced by the brand crisis; they may not be car owners themselves, or understand what car characteristics are important to them when purchasing a vehicle.

Given that there are three main parts to our questionnaire: personality assessment, brand trust analysis, and then a more in-depth focus on purchase intention, we have to limit the questions in each section in order to maintain the attention span of the participants; however, this does comply with the shortened version of the personality determinant instrument which is considered satisfactory, and also with the fact that only one dependent variable, purchase intention, is being measured.

We have decided to concentrate on the Big Five personalities, alongside brand trust, within our study. Although previous research has mentioned findings related to age, gender, religion, nationality, and even implicit and explicit personalities towards influencing consumer behaviour, we find that our focus on more distinct personalities, although potentially influenced by factors just listed, will provide a more unique and reflective pattern of behaviour towards purchase intention. Furthermore, our focus on brand trust’s effect on consumers’ purchase intention within a CSR brand crisis context supports a complementary avenue of discovery.
2 Methodology

Within this chapter we will discuss our philosophical standpoint and how it affects our views and conclusions of the material. The chapter also presents our approach to the research, the choices behind the design, and the methodology involved in our literature search.

2.1 Research Philosophy

2.1.1 Preconceptions

Our preconceptions regarding the field of study, Marketing, which we have researched further in the degree project, is limited to say the least. We have both, as mentioned previously in our subject choice, only studied a few courses within this field. James has more academic experience in regards to studying Marketing at advanced level, but has no practical experience outside of the classroom. Johan, as well, has very little theoretical experience or practical experience within Marketing too. It can be said that our awareness of the subject is not very deep in this regard, which makes researching our chosen topic even more interesting, as the majority of information is new to us. In regards to our chosen company example, Volkswagen, James has had some personal experience with this brand, considering the first car he owned was a Volkswagen Golf. However, this company has not been picked for the study given his previous experiences, but rather because of its significance in media over the recent months. To this end care has been taken to be as objective as possible, in all aspects of the thesis where the brand itself is mentioned or being researched. Johan on the other hand has had no experiences with any car brands.

2.1.2 Ontology

According to Bryman & Bell (2011, p. 20), ontology is concerned with the nature of social entities whereby the main question is whether social entities are able and should be considered to exist in a reality external of social actors, or whether these social entities are able and should be considered social structures created through the perceptions and actions of various social actors. As with Saunders et al. (2009, p. 110), this reflects a researcher’s preconceptions regarding how the world works and their attitude towards specific perspectives. In light of this, it is important for us, as students carrying out research within the academic discipline of social science, to indicate our ontological position.

There are two ontological orientations to choose from in this case: objectivism or constructivism (Bryman & Bell, 2011, p. 20). Objectivism can be depicted as the view that social entities exist in a reality external to social actors (Saunders et al., 2009, p. 110). Whilst constructivism according to Bryman & Bell (2011, p. 21) is associated with the view that institutions and culture are not predetermined as with the objectivist approach, but rather that social phenomenon and their significance is constantly being cultivated by social actors. However, the chosen standpoint on this nature of knowledge extends into the choice of appropriate method, such as a quantitative or qualitative research method used within the study (Morgan & Smircich, 1980, p. 491).
Given what we have previously mentioned, the objectivist standpoint is in line with our preconceptions about different personalities and brand trust that we plan to investigate through our research. We believe that both personalities and brand trust are static and stable, but can be tested for relationships between independent variables such as experience, context and situation in which they are exposed to. This reflects our ontological view that social entities exist in a reality external to social actors (Saunders et al., 2009, p. 110), whereby stimuli in the social actor’s setting influence their attitudes and reactions to situations in foreseeable and distinguishable ways (Morgan & Smircich, 1980, p. 495). With this objectivist view, a quantitative study is suitable in determining the effect of different consumer personalities and brand trust on purchase intention after Volkswagen’s brand crisis. Had we taken a constructivist approach, we would not be able to differentiate the personalities nor brand trust as distinct from the brand crisis context as they would be continuously constructed and reconstructed in respect to this event (Bryman & Bell, 2011, p. 22).

2.1.3 Epistemology

As explained by Bryman & Bell (2011, p. 15), epistemology deals with the important question of what constitutes or what can be considered appropriate knowledge in a field of study, through which the question of whether social existence is able to and may be considered in light of the principles, beliefs, and methods of the natural sciences can possibly be answered. This is also similarly described by Ormston et al. (2014, p. 6) whereby epistemology deals with methods of understanding and learning regarding the natural world, how meaning about this reality can be gained, and what shapes the foundation of knowledge. Three epistemological positions are used in this regard to help explain this: positivism, realism, and interpretivism (Saunders et al., 2009, p. 113).

According to Bryman & Bell (2011, p. 15), positivism is associated with the use of the natural science methods towards the better understanding of social reality. This philosophical stance has become more prominent in regard to its increasing influence on social inquiry understanding over the last hundred years (Ormston et al., 2014, p. 8). As a result, its meaning has been interpreted to include many other principles by researchers during this time (Bryman & Bell, 2011, p. 15). These include such principles as knowledge is only formed through the senses given genuine consideration; knowledge is garnered through the collection of data as the basis for laws; hypotheses are developed through the use of theories in order to evaluate laws; value-free objective approach is used to conduct research; and, the difference between normative statements and scientific statements can be identified (Ormston et al., 2014, p. 10; Bryman & Bell, 2011, p. 15). Another epistemological stance is that of realism which Saunders et al. (2009, p. 114) describes as being similar to positivism through which the process of scientific enquiry is used: data generation and hypotheses testing. However, Saunders et al. (2009, p. 114) further elaborates on the nature of realism by explaining that reality is construed by an individual’s senses, such that the objective reality exists separately from the individual’s mind. An alternative stance to the aforementioned epistemological positions is that of interpretivism, which advocates the researcher to take an approach that considers the contrasts between individuals and objects and a personal view on the actions and responses of social actors (Bryman & Bell, 2011, p. 17).

In light of these philosophical stances and in respect to the research we wish to carry out, we find it appropriate and feasible to use positivism as the basis for answering our
research question. We are investigating whether existing theories on consumers’ personalities and brand trust, within the context of Volkswagen’s CSR brand crisis, affect the purchase intention of these respective consumers thereby supporting or refuting our hypotheses. This reflects the epistemological stance of positivism according to Saunders et al. (2009, p. 113), such that we use current theories to develop our hypotheses which are then accepted or rejected given our findings, allowing for the potential development of new theory.

2.2 Research Approach

In order to determine the most appropriate relationship between theory and empirical research in line with our research question, it is necessary to consider the different approaches that can be taken in carrying out research (Bryman & Bell, 2011, p. 11). In this respect, there are three main approaches that can be used such as induction, deduction (Saunders et al., 2009, p. 124), and abduction (Reichertz, 2004, p. 159).

According to Ormston et al. (2014, p. 7), induction is focused on creating knowledge through a bottom-up approach such that research on the environment allows for the foundation of potential laws and theories to be produced. This is similar to Kudo et al. (2009, p. 1215-1216) who consider that the inductive stance is a rational interpretation process of creating knowledge from specific situations or distinct facts. It can also be emphasized, however, that induction is the opposite of deduction in its process of conducting research (Bryman & Bell, 2009, p. 13). Induction is focused on the accumulation of qualitative data, thereby trying to explain how people interpret certain situations (Saunders et al., 2009, p. 127). In our study, we are investigating quantitative data for any possible relationships between the variables used, rather than researching human perceptions of the world, in developing theory; therefore, we will not be using this approach in our study.

Another approach that can be used is that of abduction. This refers to the examination and analysis of the collected data for characteristics or patterns of new knowledge for which there was no intention to find (Reichertz, 2010). This is also further explained by Richardson & Kramer (2006, p. 499) that abduction can serve to find purposeful evidence from already realized data. This type of approach to finding something potentially new is also in respect to a combination of using both inductive and deductive logic within the process (Råholm, 2010, p. 64).

Lastly we have deduction which according to Ormston et al. (2014, p. 7) begins with creating a theory to test using the formation of hypotheses for which empirical research is then carried out to accept or reject these. Bryman & Bell (2009, p. 11) outline 5 steps to take during this process such as ‘Theory, Hypothesis, Data Collection, Findings, Hypothesis Rejected or Confirmed, and Revision of Theory.’ This methodological approach can be best illustrated by Sir Arthur Conan Doyle’s fictional character Mr Sherlock Holmes in his adventures of solving crimes whereby the detective focuses on the interaction of data and theory through ‘modelling procedures, deductions and inferences, analysis of biases, testing of theories, re-evaluation and reformulation of theories, and finally reaching a solution to the problem at hand’ (Mcaleer, 1994, p. 318). In conducting our research, however, we will be using Bryman & Bell’s 5 steps, which emphasizes the use of scientific principles, looks at potential relationships amongst
variables, focuses on the accumulation of quantitative data, and considers a large sample size as a way to justify conclusions (Saunders et al. 2009, p. 127). We will be using such theories as ‘Consumer Personalities’, ‘Brand Trust’, and ‘Purchase Intention’, and within the theoretical context of a ‘brand crisis’ to focus on hypotheses to help explain any relationships, collect data through a three-part survey of university students studying business related courses, and analyse the data in confirming or rejecting the hypotheses.

2.3 Research design

The research design provides a plan for the accumulation of data and its analysis thereafter (Bryman & Bell, 2011, p. 40). According to Saunders et al. (2009, p. 136) your choice of ontological and epistemological position will be motivated by your research question, which will then direct your focus towards the appropriate research strategy, specific methods of data collection, evaluation and analysis procedures, and the length of the study. As mentioned in previous sections our research philosophy is based on our ontological objectivist stance, and our epistemological positivism position which supports our research question. This along with our research process of deduction allows us to form our quantitative research strategy (Bryman & Bell, 2011, p. 26-27) with clear goals (Saunders et al., 2009, p. 137). This has allowed us to consider the choice of research designs and the most appropriate one for our study.

According to Bryman & Bell (2011, p. 45) there are 5 separate research designs one can choose from, such as ‘experimental design; cross-sectional or social survey design; longitudinal design; case study design; and comparative design.’ Within experimental design, a correlation is tested between two variables: an independent variable, and a dependent variable, whereby individuals are assigned to a control group and an experiment group to test for this (Saunders et al., 2009, p. 142). A longitudinal study is focused on sampling a population using a survey, and then sampling the same population again at a later time, allowing for change to be monitored overtime between multiple variables (Bryman & Bell, 2011, p. 57-58). Another research design is that of a case study which Gillham (2010, p. 1) explains as possibly either a person, a group of people, an organisation, or a community, within a particular current context, that is examined to find various answers utilizing a broad spectrum of data. As Saunders et al (2009, p. 146) further explains, a case study focuses on both exploratory and explanatory approaches where multiple techniques for collecting data are used; this allows for the process of triangulation to better highlight what the existing data means. According to Bryman & Bell (2011, p. 53) another research design is that of a cross-sectional design which ‘entails the collection of data on more than one case (usually quite a lot more than one) and at a single point in time in order to collect a body of quantitative or quantifiable data in connection with two or more variables (usually many more than two), which are then examined to detect patterns of association.’ Within the comparative research design, data is collected from two cases or more such as institutions, countries, and groups of people, using the same methods of data collection for each, in order to help explain social events by contrasting any differences between the cases that may arise (Bryman & Bell, 2011, p. 63).

In light of our quantitative research strategy, and the different research designs available, we have chosen to use the cross-sectional design as our framework ‘for the collection and analysis of data’ (Bryman & Bell, 2011, p. 40). This allows us to take a
survey approach in using a standardized questionnaire to collect a broad spectrum of data on our student population within a day/two-day period; thereafter, allowing statistical software to then be used to test for any correlations between our variables, personalities, brand trust, and purchase intention, within the context of a CSR brand crisis in order to arrive at a model (Saunders, 2009, p. 144). This will allow us to see if this model supports our own model and hypotheses that we have proposed in our study.

2.4 Literature Search

The reason to carry out a literature search is to identify existing research within the field of interest, and methodologies and research approaches related to this research, so that one may find existing gaps that form and clarify the basis of a research question (Bryman & Bell, 2011, p. 92). According to Saunders et al. (2016, p. 72), however, this literature review process is normally carried out at the beginning of the project and continued as a spiralling movement, highlighting important parameters and aims of the research, thereby allowing one to arrive at the final outline of included literature within their research area.

Our literature search began with identification of keywords and search terms of topics that best reflected our area of interest in which we wanted to research. This was part of an exhaustive examination and thorough review of books, articles, journals, and other theses, within the area of marketing. The most used search engines for this were Business Source Premier, Academic Search Elite, and Cinahl provided by the Umeå University Library, alongside Google Scholar as complementary. Bryman & Bell (2011, p. 104) argue for this use of electronic databases as a crucial source of existing literature. Eventually, we found a key article in the most recent volume of *Journal of Consumer Behaviour* that we considered being highly relevant and very interesting to research further. This allowed to us to establish specific boundaries and the direction of our study, whilst allowing us to follow up on references within the article’s bibliography to help guide this process (Bryman & Bell, 2011, p. 103).

We then began our search again using such words as Brand Crisis, Product-harm Crisis, Corporate Crisis, Corporate Scandal, Consumer Personalities, Consumer Behaviour, Consumer Attitudes, CSR, Brand Evaluations, Brand Attributions, Corporate Response Strategy, Brand Reputation, Brand Trust, Purchase Intention, and Brand Equity. Using the aforementioned search engines as previously with the identification of a research topic, we mixed these words into as many different arrangements in order to get the most comprehensive list of sources most relevant to our research area. However, we then limited these sources to whether they were peer-reviewed in order to maintain the credibility and quality of the literature considered within our study.

We then took our search a step further again by emphasizing more specific criteria and relevant literature for our study, in turn prompting us to redefine our research question with more clear aims for our study (Saunders, 2016, p. 72). Yet again, peer-reviewed articles were searched for relevance and then finally used to support this. More focus was then placed on words such as Big Five Personalities, CSR, Brand Crisis, Corporate Misbehaviour, Brand Trust, and Purchase Intention, and combinations of these. This allowed a more detailed account and critical analysis of essential literature used within our study.
2.5 Source Criticism

In order to locate and identify sources that were relevant to our research area, search engines provided by Umeå University Library, as mentioned previously, were used. As a result, only articles that could be retrieved and accessed free of charge were considered, thereby limiting the extent of existing literature that could be used to formulate our theoretical framework. At times, Google scholar was also used but only highlighted similar articles that were previously found by other search engines, and for which was confined to the same restrictions of access.

All sources that were compiled given their relevancy were chosen from credible journals and books that are well known and esteemed, alongside also articles that were cited in numerous studies for being very foundational to the topic at hand, and of an expert nature. Further sources were used based on their historical application and evolution to present day use. Authors and their previous works were further researched in order to make sure that all insights and literature could be gathered from the field of study that was essential for our own study.

A lot of emphasis was placed on articles that were most recently published within the last few decades to maintain that the theory was up-to-date and also because some theory became a more prominent field of study in recent years. In each case, the most important content from the articles that was relevant to our study was used to support our theoretical framework. Every care was made to not distort the meaning of the theory used, nor the misrepresentation of what was found, so that the quality of the theory was retained. Only in minor instances were secondary sources used when access to the original source was impossible, and when the source was essential or very supportive for our theory.

It can also be mentioned that a lot of the articles used have been conducted overseas in different countries whereby they include both cultural and political biases. We as researchers understand the limitations this might create for our own study, as well as that our study is focused on Swedish consumers who have been shaped by their own cultural and political norms. Furthermore, a review of the methodological approach for data collection has been considered within each relevant article, alongside whether the study was based on a fictional or factual case. In all regards, to the best of our ability, all sources have been carefully selected and scrutinized repeatedly, in order to best represent those sources that are of high quality and credibility for the framework of our study.
3 Theoretical Framework

We begin this chapter by reviewing existing literature on brand crisis, purchase intention, brand trust, and the Big Five personalities. As each theory is continually developed, we delve more into how each one relates to our research study and present hypotheses to test in turn. Finally, we highlight our conceptual model at the end of this section.

3.1 Brand Crisis

3.1.1 The Nature of a Crisis

A brand crisis can be considered as a publicized assertion that a main brand offering is inaccurate or untrue (Dawar & Lei, 2009, p. 509). Over the most recent years many examples of this have surfaced, such as Firestone’s faulty tires, Tylenol’s poisonous pills, Coca-Cola’s polluted drinks, and Toyota’s flawed braking system (Rea et al., 2014, p. 532). As a result, normal consequences of brand crises have included distortion of long standing favourable quality perceptions, tarnishing of reputation, revenue or market losses, costly product recalls, and devastating carefully nurtured brand equity (Van Heerde et al., 2007, p. 230). Furthermore, other ramifications are also caused that extend to a loss in investment possibilities, corporate delays, lost relationships with key stakeholders, and management’s company focus (Marcus & Goodman, 1991, p. 284). The reasons behind specific consequences are many, but one of the factors is the nature of the crisis.

Park & Lee (2013, p. 216) argue that the nature of crises is contingent on the company, given that each company has its own unique stakeholders and settings in which a crisis can occur; therefore, a classification of different crises is motivated for. According to Pullig et al. (2006, p. 528), the nature and extent of scandals can generally be associated between two types: product-related, such as faulty products, or value-related within the company, such as discriminatory actions or violations of labour rights. Marcus & Goodman (1991, p. 284) also consider the nature of crises in respect to two important factors: the people whom are affected by the event, and the origin of the problem itself. In this respect, they classify the nature of crises into three different types, such as accidents, scandals, or health and safety incidents (Marcus & Goodman, 1991, p. 284-288). Coombs & Holladay (1996, p. 284) believe that attribution theory can best be used to illustrate connections amongst two variables, external control and intentionality, that reflect crises. External control can be divided into internal and external, which reflects whether the crisis was produced by the organisation or by a third party outside the organisation, whilst intentional reflects whether the crisis was deliberately caused or accidental (Coombs & Holladay, 1996, p. 284). Transgression refers to the connection between intentional and internal (Coombs & Holladay, 1996, p. 284), which highlights theory that most accurately represents Volkswagen’s crisis type. Volkswagen knowingly admitted to equipment tampering, which resulted in their brand crisis. However, although crises themselves come in all shapes and sizes, in relation to their focus, extent, and whom they affect, the specific causes of brand crises are just as important.
3.1.2 Corporate Misbehaviour

According to Bradford & Garrett (1995, p. 876), unethical corporate behaviour can be stated as organisational acts that pursue revenues in disregard to the ethical norms and laws accepted by the public. Organizational behaviour is also characterized as immoral if it breaks fundamental principles such as ‘ethical standards’, ‘social responsibility doctrines’, or ‘the law’ (Palmer, 2012, p. 26-28). These standards can be further divided into distinguishing what constitutes organizational misbehaviour; for instance, if the organisation and its employees undergo acts that better themselves at the expense of their stakeholders, if employees take advantage of the company, if the organisation does not consider the overall benefit of its decisions in light of its cons, if the organisation’s activities affect human rights, or organisational activities negatively affect the environment (Palmer, 2012, p. 26-28). Although there are many ways to classify unethical organizational behaviour, it is noteworthy to consider what indicates to the public that this behaviour has taken place. According to Clement (2006, p. 315-316), there are three main preconditions that emphasize this: ‘(1) a plea of guilty by a firm to charges of misconduct; (2) a ruling against a firm by a government agency or a court; and (3) an agreement by a firm to settle charges, often by paying a fine.’ In Volkswagen’s case, these three conditions were satisfied alongside specific corporate misbehaviour on organizational gain at the expense of its stakeholders: predominantly customers in the scandal. However, although little evidence supports why Volkswagen did what they did, it is worth acknowledging empirical research on causes of such behaviour.

According to Gill (2012, p. 373), capitalism is considered to promote competition in which corporate achievement is valued as competitively advantageous over competitors; as a result, morals and standards are abandoned in a bid to be the leader. Similar to this, Shaw (2009, p. 567) argues that capitalism in essence, through the search of monetary self-achievement, promotes a situation whereby organisations and citizens are inclined to take shortcuts, trick others, and violate rules within the business world. What these authors have in common is that the need to be the best in a capitalist society potentially leads to corporate misbehaviour. However, other authors suggest more commonplace criteria within a company. Gellerman (2003, p. 20) suggests that opportunities within a situational context can to a significant degree transfer over into unethical behaviour. Pendse (2012, p. 277) develops this further, by outlining two other factors such as motive and means, which when interconnected with opportunity can cause an ethical threat that leads to potential unethical behaviour. By far the most extensive list of causes of unethical behaviour has been outlined by Fassin (2005, p. 270). These encompass such factors as ‘the pressures from shareholders’, ‘the evolution of society – the individualism of people – norms’, ‘the globalisation of the economy’, ‘the jurisdiction of business’, ‘the inefficiency of the juridical system for business’, ‘the disproportional importance of communication/media’, the reward and evaluation system of business and of managers’, ‘the difficulty to translate a strategy from the top into practical implementation’, ‘the motives of business’, and ‘the psychology of entrepreneurs’ (Fassin, 2005, p. 270). As aforementioned before in the problem background, some of these causes could be related to the increase in regulatory policies, and economic and political pressures that the automotive industry is currently experiencing. However, whether it can be fully ascertained that there is a connection between these two, Volkswagen has still perpetuated corporate misbehaviour.
3.1.3 Corporate Social Irresponsibility

As aforementioned before, the nature of Volkswagen’s brand crisis extends to that of intentional and internal, with both referring to corporate misbehaviour. However, as Volkswagen’s corporate misbehaviour emphasised a way to deceive emission testers and environmental authorities rather than, for example, a ploy to deceive suppliers, it transitions the nature of crisis to include negligent CSR. According to Sohn & Lariscy (2014, pp. 25-26), a CSR crisis can be considered as an important occurrence that potentially causes harm to both a company’s reputation that encompasses standards and principles cared for by communities, and established welfare responsibilities; these responsibilities extend to, but are not limited to, environmental concern, diverse employees, community engagement, and corporate philanthropy. Herzig & Moon (2013, p. 1870), further acknowledge that given that corporate social responsibility extends to societal business considerations expected by the public, corporate social irresponsibility (CSI) can therefore be associated with business decisions that fail to accommodate these expectations. In this essence, Volkswagen’s corporate social irresponsibility can be derived from their corporate misbehaviour because of their CSR negligence. Jones et al. (2009, p. 304), highlights this in regards to failing to adhere to this, or only moderately adhere, to laws that apply to CSR. It is also noteworthy that, like corporate misbehaviour, CSI can be attributed to being either deliberate or unintentional, with intentional referring to the goal of maximising profits in order to reach certain aims, and efforts to maintain the acts’ secrecy (Lin-Hi & Müller, 2013, p. 1932). Corporate Social Irresponsibility has also been found to be perceived through the subjective evaluation by individuals, that the act in question was harmful, that the organisation was responsible for this, and that the victim was not complicit in the harmful act (Lang & Washburn, 2012, p. 318).

From a theoretical point of view, we can now classify Volkswagen’s brand crisis, as a CSR Intentional and Internal Crisis through which corporate misbehaviour resulted in corporate social irresponsibility not only affecting consumers and other stakeholders, but the environment at large. This pinpoints and accurately describes the crisis context emphasized by our research question.

3.2 Purchase Intention

According to Solomon et al. (2013, p. 5), consumer behaviour can be classified as ‘the study of the processes involved when individuals or groups select, purchase, use or dispose of products, services, ideas or experiences to satisfy needs and desires.’ This can be underpinned by four important influencing factors: cultural, social, personal, which personality falls under, and psychological, in turn resulting in varying consumer behaviour (Kotler & Armstrong, 2010, pp. 161-175). Within this behaviour, Kotler & Armstrong (2010, pp. 177-181) further highlights the systematic buyer decision-making process that focuses on the buyer acknowledging a need or want they wish to satisfy, considering internal and external information, evaluating the various products or services, forming a purchase intention and purchase decision, and then lastly expressing post-consumer buying behaviour. Accordingly, within this process, purchase intention is considered to be the ‘single best predictor of actual behaviour’ (Peter & Olson, 2010, p. 145). It is also noteworthy; however, that purchase intention can be affected by both attitudes of other people, and unexpected situational factors, before the actual purchase decision is made (Kotler & Keller, 2009, p. 212). This is important to understand as
Volkswagen’s recent CSR crisis could be classified as an unexpected situational factor which might have had a significant effect on consumers’ purchase intentions towards their products.

Given this possibility, and that there is a vast amount of empirical research conducted to uncover how purchase intention is influenced, and the degree to which it is influenced or affected by the aforementioned four important factors, a huge gap remains regarding how a CSR crisis context might influence these factors, and therefore purchase intentions further. Existing research studies, to name a few, have pointed to firstly, age differences, older people assigning less culpability of the company, being less vulnerable, and having minimalistic views of the effect of a product-harm crisis, than their younger counterparts, in turn having higher purchase intention levels of the company’s offerings post-crisis (Silvera et al., 2012, p. 305). Another study found that the length of time after the first signs of accountability and harm had been caused, affected the impressions of consumers, resulting in a higher willingness-to-pay as time passed from a few months up to a year post-crisis (Vassilikopoulou et al., 2009, pp. 177-178). A study highlighting Toyota’s recall of their vehicles following their accelerator pedal crisis, found that the type of response strategy used post-crisis, and the consumers’ level of engagement with the company’s offerings, can influence not only the company’s reputation, but also purchase intentions of consumers (Choi & Chung, 2013, p. 26). Given this lack of research, and Volkswagen’s CSR crisis most recently, the opportunity to test theory regarding purchase intentions, as a dependent variable, is possible.

3.3 Brand Trust

‘The ultimate goal of marketing is to generate an intense bond between the consumer and the brand… and the main ingredient of this bond [is] trust’ (Hiscock, 2001, p. 1). This can be associated with the view that trust is one of the most essential and coveted aspects within a relationship, whilst also being considered the most significant quality a brand can possess (Delgado-Ballester et al., 2003, p. 3). To this end, brand trust can be regarded as consumers’ readiness to have confidence in the ability of the brand to fulfil its expressed nature; this reduces the doubt in a situation where consumers are unsure thereby allowing them to have confidence in the brand (Chaudhuri & Holbrook, 2001, p. 82). According to Doney & Cannon (1997, p. 37), the development of trust in a business relationship can be created through 5 key processes: calculative, prediction, capability, intentionality, and transference. However, more focus on building brand trust in rather consumer relationships, has been highlighted by Lau & Lee (1999, p. 359) whereby five main brand attributes were evident. These are brand predictability, which arises from continuous consumer interaction with the brand and consistency with brand quality; brand competence, that emphasizes the brand’s ability to maintain its core competence that satisfy the needs and wants of consumers; brand reputation, which focuses on pleasing its consumers and maintaining its promises; brand liking, that highlights making the aesthetic features of the product appealing to look at and associating the brand with a pleasant memory or feeling; and trust in the company, that the company supporting the brand has a positive image and good performance of other products (Lau & Lee, 1999, pp. 360-363). In another study by Reast (2005, p. 9), emphasis is also placed on multiple dimensions of brand trust, such as credibility and performance satisfaction, in building consumer-brand relationships.
Some empirical research has also been done to investigate the effect brand trust has on other important variables. According to Chaudhuri & Holbrook (2001, p. 90), brand trust was found to be directly connected to both attitudinal loyalty and purchase loyalty, and therefore, indirectly associated with an increase in market share and relative price. This is due to increased continual purchases and greater chance of recommending the brand, which is also in line with Becerra & Badrinarayanan (2013, p. 378), who found brand trust to impact positively not only purchase intentions, but also referral intentions. Similar to those findings, Kang & Hustvedt (2014, p. 264) found that trust is one of the strongest factors influencing a consumer in their purchase process and their intents to spread positive or negative word of mouth, especially in a CSR setting. However, the significance of brand trust has also been found to extend to online behavioural intentions in affecting online purchase intentions (Becerra & Korgaonkar, 2011, p. 947). These studies highlight that there is a relationship between brand trust and purchase intention, but it does not explain how brand trust might exactly affect purchase intention in regards to Volkswagen’s CSR brand crisis.

However, we hypothesise that brand trust will have an impact on consumers’ purchase intentions and thus:

\[ H(1): \text{Brand trust has a positive effect on purchase intention of Volkswagen products in light of the CSR brand crisis.} \]

Given this, we shall now look at the Big Five personalities and how theoretically they can be tested to help better explain purchase intentions within consumer behaviour towards Volkswagen after the crisis.

### 3.4 Big Five Personalities

Before the Big Five became the dominant method there was an array of ways to measure personality, for example in the 1980’s there were methods with as few as 2 or as many as 20 concepts of personality (Pervin et al., 2009, p. 114). However, all of them lacked a descriptive model or taxonomy of its subject matter, considering one central goal of such a taxonomy is the definition of overarching domains within which large numbers of specific instances can be understood in a simplified way (Pervin et al., 2008, p. 114).

Attempts to create such taxonomy for scientific use has been a topic since the 1930’s with Klages (1932), Baumgarten (1933) and Allport & Odbert (1936) as prominent researchers, specialising in the use of individual’s natural language. The underlying reason for this is the lexical hypothesis, that most of the personality characteristics have become encoded in our language (Allport, 1937). Goldberg (1981) would later argue through his work that the vocabulary used in the natural language contains the characteristics the people find important and useful in their everyday life.

Initial work would take every word that could distinguish the behaviour of one human being from that of another (Allport & Odbert, 1936, p. 24). Although that would amount to a massive 18,000 words and was described by Allport (1937, p. 353, 354) as ‘a semantic nightmare’, and ‘enough to keep psychologists at work for a lifetime’. It would however bear fruit as four major categories of person descriptors were identified: (1) personality traits, (2) temporary states, (3) highly evaluative judgements of personal
conduct and reputation, (4) and physical characteristics, capacities and talents, and other terms of doubtful relevance to personality (Allport & Odbert, 1936, pp. 25-27).

Several authors would come to base their research upon the work by Allport & Odbert. One such being Warren T. Norman (1967) who would develop the initial four categories further into seven categories, but the framework would soon meet the same type of criticism of Allport & Odbert’s initial categorization: the categories overlap and the boundaries are fuzzy (Pervin et al., 2008, p. 118). Instead the most influential would be that of Cattell. Through extensive work, Cattell (1943) took the initial 18,000 words and narrowed it down to the subset of 4,500 words within the trait category for his research as the initial list of items was too overwhelming to be used in research. Those 4,500 words were then funnelled down into 35 variables of which, through oblique factor analysing, twelve factors could be identified and later used in his 16 Personality Factors questionnaire (Pervin et al., 2008, p. 118). Building upon those identified variables, Fiske (1949) would construct simplified descriptions from 22 of Cattell’s variables. These, according to Pervin et al. (2008, p. 118) resembled what would later become the Big Five. In an attempt to clarify Fiske’s factors Tupes & Christal (1961, p. 14) reanalysed data from eight samples and came to the conclusion that five factors were relatively strong and recurrent, and by limiting oneself to those would not have any major consequences. This would come to be the definite start of the Big Five approach as more authors such as Norman (1963), Borgatta (1964), and Digman & Takemoto-Chock (1981) replicated the five factor structure. But because of uncertainty regarding whose version should be used, it would however take another decade until a generally accepted version would be created (Pervin et al., 2008, p. 125-129).

The evolution of the Big Five leaves us with two major implications. First being that although the validity and feasibility of the Five Factor structure has been tested by several researchers, it was during the 1980’s and 90’s found to be that it does not imply that personality differences could be explained by five different traits but rather that these are five dimensions that in an abstract and broad way represent personality, each containing more specific and distinct characteristics (Pervin et al., 2008, p. 119). Second is that while there is a generally accepted version, many authors use other wording with the same implications, and the same goes for their polar opposites (Pervin et al., 2008, p. 125). The five commonly used are Agreeableness, Conscientiousness, Neuroticism, Extraversion, and Openness to experience.

### 3.4.1 Agreeableness

According to Rothmann & Coetzer (2003, p. 69), Agreeableness is associated with a type of person, who is enjoyable to be around, naturally unselfish, cares about people and wants to assist them, and also considers that other people will essentially be just as supportive. Other authors describe agreeable individuals using such words as altruistic, trustworthy, modest, and cooperative (Lahti et al., 2013, p. 155; McCrae & Costa, 1997, p. 513), whilst describing them characteristically as forgiving in nature, having attitudes towards working together, using appropriate language when speaking, and being someone easily influenced by others (McCrae & Costa, 2008, p. 164).

Agreeableness, alongside the other four distinctive traits that comprise the Big Five Model of personalities, has been the subject of many studies over most recent years in order to find a distinct relationship between these traits and other variables. However,
before this model, in regards to finding a connection between various personality traits and specific types of consumer behaviour, the results had been ambiguous at best (Kassarjian & Sheffet, 1991, p. 281). Most recently, Bosnjak et al. (2007, p. 587), explains that the Big Five Model from the 1990s onwards has been widespread in its use and explanation of consumer behaviour.

In one study by Nga & Yien (2013, p. 239), it was found that Agreeableness has a big effect on ‘risk aversion, cognitive biases, and socially responsible investing dimensions of financial decision making respectively.’ In another study, brand personalities such as exciting, competent, and sincere were found to have a positive connection with Agreeableness; furthermore, a positive relationship between affective brand loyalty and Agreeableness was also evident (Lin, 2010, p. 13). According to McCrae & Costa (2003, cited in Roozmand et al., 2011, p. 1079), agreeable people focus on maintaining social peace and drive cars that emphasize this, which as a result, motivates their choice of car to be in line with that of a social need, rather than using it to convey power or to show off.

Other studies have also been found that reflect a strong connection between aspects of CSR and the Agreeableness trait. In a study by Luchs et al. (2012, p. 133), Agreeableness was a big predictor of environmental concern. This has been further supported by Swami et al. (2010, p. 143) that Agreeableness has a positive connection to awareness and care of ecosystems, whilst also stating that Agreeableness is the strongest trait towards empathy. In respect to buying ecological products, Agreeableness was found to be one of three traits to be strongly correlated to that of ecological consumer behaviour (Fraj & Martinez, 2006, p. 176). This is also in line with Hirsh & Dolderman’s (2007, p. 1585, 1589) findings that consumerism, such as material gain is negatively associated with Agreeableness, but that environmentalism, such as concern for the environment, is positively associated with the Agreeableness trait.

Although there are studies that focus on the relationship between the Big Five personalities and consumer behaviour, not all are fruitful in their findings of a connection between agreeableness and specific variables. In our study, however, we feel that there could be a distinction between different personalities and specific consumer behaviour such as purchase intention, which have been aforementioned within the theoretical framework. As such we are motivated to test one hypothesis that includes our independent variable, agreeableness, within our research gap:

H (2): Agreeableness has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.

3.4.2 Extraversion

Extraverts are characterised by sociability, activity, enthusiasm, and assertiveness (Quintelier, 2014, p. 344), and their behaviour includes maximising their gains from contacts, spending more energy than others on generating new social relations, taking the leadership role in projects, and attaining high status in social groups (Pervin et al., 2008, p. 120; Milfront & Sibley, 2012, p. 188).

In terms of purchase intention, it is at times hard to say how an extraverted person will act. There is little evidence or work done on actual attitudes other than that they tend to
like what they believe will benefit their own image (Tsao & Chang, 2010, p. 1079; Quintelier, 2014, p. 344). However, there is more done on the subject of ethical and political behaviour. Quintelier (2014, p. 344) states that there’s no clear indication of how an extraverted person will behave when faced with ethical consumption choices only that they are more likely than others to discuss their views with friends, family, or other associates and thus be influenced by and influence others in their behaviour. This would later lead to the finding that younger extraverted consumers are negatively inclined to ethical consumption when faced with buying or boycotting unethical products (Quintelier, 2014, p. 349). This is however a ‘for or against’ study rather than one measuring different dimensions, which could have an impact upon the results. Milfront & Sibley (2012, p. 193) are more ambiguous in their findings whether an extraverted personality would have a significant impact on consumption related to environmental concerns. Tsao & Chang (2010, p. 1802) would however come to the conclusion that those of the extraverted personality are more likely to listen to others when making consumption choices, especially those that have a greater impact on their image.

As Lin (2010, p. 4) said, ‘Consumers… are like the brand spokespersons’, and a person who puts much effort into image and social contexts is unlikely to identify with a company in the middle of a scandal marked by misbehaviour and intentional covering up. As such, we hypothesise the following:

H (3): Extraversion has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.

3.4.3 Conscientiousness

Those of the conscientiousness personality are characterised by traits such as organized, punctual, reliable, and having a sense of duty (Quintelier, 2014, p. 344). McCrae & Hofstede (2004, p. 57) also highlights the duty trait while pointing to achievement striving, self-disciplined and competent as important traits. As Pervin et al. (2008, p. 120) puts it: ‘Describes socially prescribed impulse control that facilitates task- and goal-directed behaviour, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks.’

In terms of purchase intention, the conscientious consumer will utilize their knowledge of the products and the nature of the products to make decisions that will be in line with their purpose and beliefs (Tsao & Chang, 2010, p. 1802, 1803). A conscientious consumer will also avoid risks if possible, often purchasing the product that will yield them the highest benefit while minimizing the risk (Nga & Yien, 2013, p. 234). When choosing brands the conscientious consumer will often look for brands that correspond to them, those brands that show responsibility, competence, reliability and assurance (Lin, 2010, p. 8). The reputational and competence aspects proposed by Lau & Lee (1999, p 346, 347) in building relationships between the consumer and the brand are most likely the ones that matter the most to the conscientious consumer. As the conscientious consumer tend to act with self-discipline and duty, they naturally act and plan for better outcomes in the future, thereby not necessarily acting upon the needs of today but rather those of tomorrow (Milfront & Sibley, 2012, p. 198). This would lead to a pro-environmental behaviour (Milfront & Sibley, 2012, p. 198), especially if the consumer views it as his or her duty to contribute to a better environment (Quintelier,
Hirsh (2010, p. 248) further emphasizes the importance of community as he argues that conscientious individuals will follow social guidelines and norms for appropriate environmental action more so than those less conscientious individuals. With this as our background we formulate the following hypothesis:

\[ H (4): \text{Conscientiousness has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.} \]

### 3.4.4 Neuroticism

Sometimes called Emotional Stability to put it in a positive contrast, or rather the polar opposite of Neuroticism within the dimension, Neuroticism focuses on negative traits of the dimension. Tsao & Chang (2010, p. 1802) call those that lean towards this personality as self-conscious and more vulnerable to emotional hurt or inflictions. Rothmann & Coetzer (2003, p. 69) goes even further saying that neurotic persons are prone to having irrational ideas, less able to control impulses, do not cope well with stress, and tend to feel fear, sadness, disgust, and anger amongst other similar feelings. As Pervin et al. (2008, p. 120) puts it: “Contrasts emotional stability and even-temperedness with negative emotionality, such as feeling anxious, nervous, sad, and tense”. Quintelier is one of the few authors dubbing the personality as Emotional Stability in research purposes, describing those individuals whom do not easily feel anxious, nervous, sad or tense but rather tend to experience calm, relaxing or reliable feelings (Quintelier, 2014, p. 344). As the majority of literature uses the neuroticism side of the personality we will too as it simplifies our research and makes other authors arguments more applicable to our work.

Often described in literature but at times overlooked in favour of other personalities out of the Big Five (Matzler et al., 2006; Hirsh & Dolderman, 2007), there is a certain scarcity of literature done upon Neuroticism’s connection to purchase intention. Research around the neurotic consumer is often centred on their tendency to be negative or anxious in their attitudes or behaviour (Nga & Yien, 2013, p. 235; Lin, 2010, p. 8). The neurotic consumer would often show signs of hedonistic purchasing behaviour, often buying what feels good at the time or that has an appealing aesthetic, thus giving in to impulses or buying products that does not necessarily connect them to particular brands (Lin, 2010, p. 13). This could be attributed to uncertainty avoidance, a trait strongly connected to neuroticism (Nga & Yien, 2013, p. 238).

Furthermore, their environmental concern became a surprise for Hirsh (2010, p. 247) when he found that it had a positive relation with neuroticism. This would be caused by a neurotic person's self-interest and self-preservation rather than altruistic motivation as displayed by conscientious or open people (Hirsh, 2010, p. 247, 248). Further proof for this argument is found in the study by Nga & Yien (2010, p. 237) as neurotic investors had a negative relation with socially responsible investments, most likely caused by the ambiguous and often less profitable nature of such an investment. Milfront & Sibley (2012, p. 188) argued that neurotic persons had a high sense of environmental preservation motivation and engagement. They found that there was lower levels of environmental engagement when faced with actual actions but their attitudes and emotions, especially those of anger and anxiety, towards environmental preservation would yet be positive (Milfront & Sibley, 2012, p. 193).
We argue that despite the shifting conclusions about Neuroticism’s impact on purchase intention, as even some authors did not find a connection between Neuroticism and environmental friendly behaviour, and for the sake of our research, the uncertainty element in Volkswagen’s crisis will be enough to bridge the gap that prompted some to conclude that there was no connection while others stated that Neuroticism did in fact affect environmental friendly behaviour. The hypothesis will therefore become:

\[ H (5): \text{Neuroticism has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.} \]

3.4.5 Openness to experience

Openness to experience is the fifth and final personality and is defined by ‘the breadth, depth, originality, and complexity of an individual’s mental and experiential life’ (Pervin et al., 2008, p. 120). Those scoring high in Openness to experience tend to not be rigid in their own views nor in their expectations about others; moreover they are curious about new experiences and products and are among the first to adopt new products or services (Quintelier, 2014, p. 344). The more open to experience a person is, the more that person is likely to consider different viewpoints, arguments, and opinions and often seek out opportunities to learn new things; consequently they will be less prejudiced and often more forgiving than others (Tsao & Chang, 2010, p. 1802). They will however also be more inclined to adopt new ethical, social, and political ideas (Rothman & Coetzer, 2003, p. 69).

Consumers who are characterised by openness to experience tend to follow their traits quite well in their purchasing behaviour as they act upon their curiosity and emotional state (Tsao & Chang, 2010, p. 1802) albeit not acting upon a whim but rather in a utilitarian manner (Taso & Chang, 2010, p. 1810). Nga & Yien (2013, p. 234) also argue that these consumers are not fully materialistically inclined but rather see the long-term benefit in often imaginative or emotional investments. They therefore conclude that Openness to experience often leads to low levels of risk aversion (Nga & Yien, 2013, p. 239).

Controversially, Matzler et al. (2006, p. 430) found that those of Extrovert and Openness to experience are similarly drawn towards hedonic values of products and respond well symbolic, aesthetic, and emotional values. Furthermore, Lin (2010, p. 13) also found that consumers characterised by openness to experience tend to be loyal to brands they feel does right by them and thus experience stronger relations than they do with others, but as previously mentioned, those consumers would also feel a certain level of loyalty towards a variance of brands rather than a single one or few. When a certain level in the relationship has been achieved the open consumer will feel a greater sense of forgiveness and understanding while valuing their relationship with the brand (Al-hawari, 2015, p. 47)

Openness to experience along with agreeableness was found to be the biggest indicator of environmental concern in a study done by Hirsh & Dolderman (2007, p. 1589, 1590), much due to the connection they both have to self-transcendence and the belief in higher values. Hirsh would further underline his previous collaborative results in his own research where he also added that agreeable and open persons would be affected by their concerns for others, partly explaining their environmental concern (2010, p. 247).
Quintelier (2014, p. 344) would hypothesise and later confirm (p. 349) that this type of personality has a strong, if not the strongest, connection to political consumption behaviour and attitudes.

While the literature is quite agreed upon the fact that those open to experience are very much concerned about the environment, it is also clear that they are forgiving. We therefore hypothesise the following:

\[ H_6: \text{Openness to experience has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.} \]

3.5 Conceptual Model

![Initial Conceptual Model]

*Figure 1: Initial Conceptual Model*
4 Practical Methodology

Within this chapter we motivate for the type of data we are using in our study. Next, we explain our choice of sample and sampling technique, followed by the data collection method. We then consider our questionnaire design and how it reflects our theoretical framework. Following this we provide a brief explanation of the statistical software and analyses we will use to evaluate our data. Lastly, we provide a description regarding the ethical considerations of the study.

4.1 Nature of Data

According to Bickman & Rog (1997, p. 23), ‘the most important resource for any research project consists of the data used to answer the research question’. In the collection of this data, Berg (2004, p. 237) makes a distinction between two different sources: primary data and secondary data. New data that is collected by the researcher is considered ‘primary data’, whilst the use of already existing data, that was used for other research purposes, is called ‘secondary data’ (Bickman, 1997, p. 23, 27). Given the nature of primary data to be very time-consuming and financially constraining, it can be opportune to use the vast amounts of secondary data that have been accumulated over recent years to answer, or partly answer, your specific research question (Saunders et al., 2016, p. 316). This secondary data can be either quantitative or qualitative based (Smith, 2008, pp. 4-5) and can come from such sources as research produced by social scientists, market intelligence companies, professional organisations, and governmental agencies (Bryman & Bell, 2011, p. 312). However, there are various disadvantages to using secondary data such as the complexity of the current data, which could entail taking a long time to understand the sampling approach or choice of target group; quality of the data, whereby problems could arise regarding the survey questions, were they understand, how were they asked, and how were missing data accounted for; and missing key research, such as specific questions you would like answered in your study or the contrasting meaning of particular concepts you find important (Vartanian, 2011, pp. 15-16). However, although secondary data has its limitations, it also argued to be an appropriate substitute at times or even complementary to the use of primary data (Cowton, 1998, pp. 431-432).

As we have mentioned above, data is a very important resource used within the research project; as a result, careful consideration needs to be taken. As researchers who have considered the advantages and disadvantages of both choices, and also the data that best supports our research question developed from the lack of existing literature within the problem background, we feel it important to use primary data in conducting our research project. This is due to the nature of our study being focused on Volkswagen’s CSR crisis which was very recent. Although there have been a rise in company crises worldwide in recent years, not many studies have looked at the consequences in their wake, thereby limiting the amount of secondary data on the topic. Furthermore, the Big Five personalities used in our study within this context is relatively new, arising from the early 90’s in its usage as a feasible representation of consumers’ personalities (Pervin et al., 2008, p. 119). These two circumstances highlight the collection of primary data as the most essential and appropriate in answering our research question: ‘Does Agreeableness, Extraversion, Conscientiousness, Neuroticism, Openness to experience, and brand trust affect students’ purchase intention of Volkswagen products.
in the light of its recent CSR brand crisis? Therefore, the remainder of this section and study shall focus on its extraction, analysis, and potential application.

4.2 Quantitative Sampling

According to Neuman (2011, p. 240), ‘the primary use of sampling in quantitative studies is to create a representative sample that closely reproduces or represents features of interest in a larger collection of cases, called the population.’ This process is emphasised by De Vaus (2002, p. 70), whereby a population is clearly defined, then a sampling frame emphasizing a more feasible and relevant target population is used, and then a sample is obtained from this. Using this process, however, two types of sampling techniques can be used: probability sampling and non-probability sampling (Saunders et al., 2016, p. 275). Probability sampling refers to the units within a sample having an equal and known chance of being selected from the target population (Bryman & Bell, 2011, p. 176). This encompasses certain sampling techniques such as simple random sampling, stratified random sampling, systematic sampling, and cluster sampling (Fowler, 2009, pp. 24-28; Fink, 2013, pp. 81-85). On the other hand, one could use non-probability sampling which refers to certain units within the population having more of a chance at being picked for a sample than others (Bryman & Bell, 2011, p. 176). From this choice one can pick from three sampling techniques: convenience sampling, snowball sampling, or quota sampling (Bryman & Bell, 2011, p. 190). Convenience sampling reflects the choice of units that are easily reachable and convenient for the researcher, which can be considered not difficult to obtain, and also less costly and quick (Neuman, 2011, p. 242). For our study the population we identified were students in Sweden, the sampling frame were Swedish students at Umeå University, and our sample were Swedish students taking business courses at the Business School, given its convenience. According to De Vaus (2002, p. 90) one normally uses non-probability sampling, and in turn convenience sampling, when they are not trying to make a generalization about the population from the sample. However, in our study we are not making a generalization about the consumer population and their behaviour, but rather about these consumers who have identified with a distinct personality, which is measured using an empirically supported personality test. In this essence, because we are trying to see if there is a connection between these consumer personalities and consumer behaviour, convenience sampling allows a feasible way to do this and generalise about the population. In our sample, it could be wise to include other faculties in order to receive extensive data on each aspect of our research in regards to the brand crisis. However, given the lack of time and financial resources, we planned to overcome this by increasing the sample size of students (De Vaus, 2002, p. 81, 90).

4.3 Data Collection

For our quantitative data collection, we used a self-administered questionnaire in order to conduct our survey. According to Fink (2013, p. 2), surveys ‘are information collection methods used to describe, compare, or explain individual and societal knowledge, feelings, values, preferences, and behaviour.’ However, the most popular survey strategy for data collection is that of a questionnaire, whereby each individual is asked to answer the exact same set of predefined questions (Saunders et al., 2016, p. 439; De Vaus, 2002, p. 95). There are also two types of questionnaires one can choose from, such as self-completed questionnaires, which can be delivered via the internet,
postal, or personal, or interviewer-completed questionnaires, which can be recorded via the telephone or face-to-face (Saunders et al., 2016, p. 440). Each of these choices comes with both advantages and disadvantages. If we consider the former in regards to self-completed questionnaires over interviewer-completed questionnaires, it is less costly to carry out, the results can be obtained quickly, there are no interviewer effects present, it is potentially more convenient for the participant, and no confusion over interviewer order of questions; however, some disadvantages relate to being unable to help clarify questions for participants, questions not of interest for the respondent, inability to collect further data, unsure if the relevant person answers the questionnaire, and potential for missing data (Bryman & Bell, 2011, pp. 232-234). Notwithstanding, it is also important to consider certain measures within your questionnaire design that affect not only the validity and reliability of the collected data, but also the response rate (Saunders et al., 2016, p. 439), which can minimise the limitations of each questionnaire choice. These measures reflect considerable thought given to the relevance and structure of each question, an understandable and aesthetically pleasing questionnaire, the aim and objectives of the study outlined from the beginning, a trial test of the questionnaire, and a carefully prepared, delivered, and fully completed returned questionnaire (Saunders et al., 2016, p. 439; De Vaus, 2002, pp. 58-62; Bell, 2005, pp. 138-148).

Given the nature of our research study with its specific research questions and aims, we found it relevant to use a self-administered questionnaire to be delivered personally in a classroom setting. In this regard we firstly identified a lecturer we were familiar with, and from whom we received permission to attend their class in order to hand out our questionnaire to their students. However, given that the turnout of students in the classroom was lower than previously anticipated, measures were taken to redistribute the questionnaire online via email in order to increase the amount of respondents, and in turn data collected. For this, we identified all students within all business programmes offered at Umeå Business School that were in different years to the students in the class. This form of online data collection can be considered very cheap, and for which there is a low level of likelihood that the respondent’s answers will be distorted (Saunders et al., 2016, p. 441). Given this, we find online distribution of our questionnaire to be acceptable as a complementary method. It could be possible as well that the collected data from both methods reveal different patterns, as in the classroom setting students might have felt pressure to complete the questionnaire quickly or a lack of time to really consider each question, whilst for the students answering the questionnaire online, they could take their time and look up any words they might not be familiar with. Given this possibility, statistical analysis will be used on both data sets, and highlight the differences individually and then together. From this we will be able to better understand if there will be any serious implications from combining the data. Nevertheless, both these forms of data collection allowed us to focus on our sample, as they represented a target population that were most likely not in possession of a vehicle or their own vehicle, but would soon have purchase intentions to buy one in the foreseeable future (Saunders et al., 2016, p. 440). This also allowed us take the stance of perceived brand trust from a point of view where students might not have developed any brand trust towards Volkswagen, which reduces the possible influencing factor of already built-up brand trust. Students were also more feasible as there was a time and financial constraint in limiting our choice of questionnaire. However, one error we suspect will occur from our student sample is that international students studying these business programs and courses who have answered the questionnaire could affect the generalization of the results in regard to Swedish consumers. However, we consider this
error to be very miniscule as the questionnaire distributed in the classroom was during a Swedish class, and when the email was sent out to students, emphasis was placed three different times on Swedish consumption and attitudes. In the end, the amount of questionnaires that were handed out in the classroom was 86, and our response rate from this was 100 percent (everyone in the classroom who was present when the questionnaire was distributed, answered it). This could be partly because our self-administered questionnaire was complemented by confectionery as an incentive in order to improve the response rates of the students in collecting our quantitative data (Bryman & Bell, 2011, p. 236; Anseel et al., 2010, p. 348). However, from the 465 email addresses that were obtained from the database of students studying within 1st and 3rd year at Umeå Business School, only 37 students actually completed the questionnaire that was sent out. We did have more respondents after our own specified deadline, but we did not include these in our data set considering we had already started our data analysis. As a result our response rate was 8 percent (rounded up). This is in line with Bryman & Bell (2011, p. 189) who suggest that the response rate should account for certain circumstances: some questionnaires might not be fully answered, some individuals might refrain from participating, and some participants might not be suitable for the study.

4.4 Questionnaire Design

As we have already established, collecting the data is crucial to answer your research question (Bickman & Rog, 1997, p. 23) and designing your questionnaire is of the utmost importance in order to get what you need (Saunders et al., 2016, p. 439). This puts pressure on the researchers to construct the questionnaire in a way that allows accurate collection of valid data.

One of the most common ideas when constructing surveys is that they cannot be too long as the respondent will lose interest or induce reluctance to answer, causing incomplete data (De Vaus, 2002, p. 112). This is however not a fact but rather an idea without any sufficient proof (De Vaus, 2002, p. 112), as the proper length of a questionnaire is very situational and should be determined by both the setting in which it is being distributed and the target audience (Fowler, 2009, p. 104). But as we initially chose to administer the survey to students in classrooms the length of the survey was of the utmost importance because of the time constraint imposed on the respondents as they were asked to answer the survey during a break in their lecture.

In designing your questions you are faced with three options: adopt, adapt or develop your questions (Saunders et al., 2016, p. 452). While developing your own questions helps you gain the data you specifically need for your research, it would be wise to adapt or adopt as it is efficient and often proven to be valid items for testing a specific construct (Saunders et al., 2016, p. 452.). Out of our seven constructs, purchase intention, brand trust, Agreeableness, Extraversion, Conscientiousness, Neuroticism, and Openness to experience, we chose them all from previous studies as they were tested before by several authors and proven to be valid. The adaptation instead of adoption came to light as the language could at times be confusing for a non-native English speaker and the questions regarding brand trust and purchase intention were aimed at specific manufacturers.
The construct for purchase intention consists of four questions that are supposed to be reverse scored and was adapted from a study on post purchase behaviour and attitudes done by Krishnamurthy & Sivaraman (2002, p. 653) and later used in a study on CSR and transparency and its effect on attitudes and behaviour by Kang & Hustvedt (2014, p. 258). The construct for brand trust consists of five questions that are supposed to be scored normally and was adapted from a study on brand consideration, credibility, and choice done by Erdem & Swait (2004, p. 193) which also was later used by Kang & Hustvedt in their study (2014, p. 258).

When testing the Big Five the more common forms are the NEO-Five Factor Inventory, Big Five Inventory, or the International Personality Item Pool-Five Factor Model (Cupani & Lorenzo-Seva, 2015, p. 40). However, these are lengthy and time consuming which prompted researchers to find a faster yet valid way to measure the Big Five. The result was the Mini-IPIP (Mini International Personality Item Pool) which consisted of 20 items and was proven to be psychometrically superior to the otherwise popular ten item construct (Cooper et al., 2010, p. 689). As it is short but still acceptable with a Cronbach’s alpha above .7 for all but conscientiousness with 0.68 (Cooper et al., 2010, p. 689) we decided to use it for our personality measuring construct. The 20 questions are divided with four questions measuring each separate dimension of the Big Five. Since roughly half of the items are used to measure the polar opposite of the personalities we are using for our research they will have to be reverse scored when used in the analysis. Those items are numbers 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, and 20 in the combined personality construct. The constructs would however, before administering the survey, come to be adapted to a more simple language to lessen the risk of confusion amongst the respondents. Doing so we risk losing the intended meaning of the question but as the changes are minor and synonyms are used we argue that it will not have a major negative impact on the measuring.

When designing the question you are faced with the choice of how you want the respondent to answer it, one of the most common ways being the use of a Likert scale (Fink, 2013, p. 45). Fortunately for us, the previous research done on the area have all used Likert scales with five points ranging from ‘Completely disagree’ to ‘Completely agree’ (Laverdière et al., 2013, p. 740; Kang & Hustvedt, 2014, p. 260). The remaining questions were made as open for which program the student is currently enrolled in, together with their previous owned brand of car, and closed for their age and gender.

4.5 Quantitative Data Analysis

Given the extensive amount of data that have been collected on each of the various variables within our study, which has resulted in 123 respondents, it is necessary to analyse this using quantitative techniques in order to detect such trends, patterns, relationships and tendencies that can help ‘explore, present, describe, and examine’ this information in answering our research questions, and project objectives (Bryman & Cramer, 2005, p. 86; Saunders et al., 2016, p. 496). In this regard, a multitude of statistical software platforms can be used, such as Minitab, SAS, IBM SPSS Statistics, and Statview (Saunders et al., 2016, p. 497), from which we decided to use SPSS for our quantitative data analysis as it is considered one of the most popular and widely used (Bryman & Bell, 2011, p. 360).
4.5.1 Cronbach’s Alpha

According to Bonett & Wright (2015, p. 3), Cronbach’s Alpha can be considered as ‘one of the most widely used measures of reliability in the social and organisational sciences.’ It is one of three measures that emphasize the external or the internal reliability of the data that is collected (Bryman & Cramer, 2005, p. 76; Saunders et al., 2016, p. 451). In this respect, Cronbach’s Alpha is focused on internal consistency whereby emphasis is placed on the responses from multiple questions within a questionnaire which are then constructed into a scale used to measure this (Bryman & Bell, 2011, p. 159; Saunders et al., 2016, p. 451). It is important to use this type of reliability test within our study so that we may adequately provide support for our data, and in turn our results as reliable and consistent in its use and representation. Various literature have provided support for an adequate level that denotes this reliability, such as 0.7 as adequate (Cooper et al., 2010, p.690; Blumberg et al., 2011, p. 372; Saunders et al., 2016, p. 451), or 0.8 as satisfactory (Bryman & Bell, 2011, p. 159). However, in one study by Moss et al. (1998, p. 178), over 0.6 was considered to be an acceptable level. According to Bonett & Wright (2015, p. 4), it is often too common and incorrect in practical use to consider Cronbach’s Alpha of the sample used, as representative of the population, unless that level is known for the population. However, in a study by Donnellan et al. (2006, p. 201), whereby they tested the Big Five personality 20-item questionnaire across different samples and over a period of several months, alphas more than 0.6 were found to be evident across all the studies thereby being consistent in their reliability. This provides support within our study for 0.6 as a satisfactory minimum level and also reflective of the population, with the use of the Big Five personality 20-item questionnaire.

4.5.2 Descriptive Statistics

In order to convey large amounts of summarized data in a way that is easy for the researcher or reader to comprehend (Anderson et al., 2012, p. 13), it is best to use descriptive statistics that allows one to explain and contrast multiple variables numerically (Saunders et al., 2016, p. 527) and then represent this in tabular or graphical form (Adams et al., 2007, p. 171). This is what has been done throughout our quantitative data analysis, in order to more comprehensively highlight and explain our findings, and from which a more coherent discussion and conclusion can be drawn. Two focus points are emphasized for variables being used within descriptive statistics with such analysis: ‘central tendency’ that refers to the identifying of values that are consistent, and ‘dispersion’ which focuses on the dispersed values around the consistent central values (Saunders et al., 2016, p.527). Central tendency is measured by use of the ‘mode’ a value that occurs the most, the ‘median’ which is the middle number of orderly numbers, and the ‘mean’ the value that is the average of all numbers (Hardy, 2004, p. 37,39). Dispersion can be measured using both the inter-quartile range and the standard deviation with the former referring to the values of the range between the 25th percentile and 75th percentile, with the latter referring to the squared variance from the mean (Hardy, 2004, pp. 41-42). These two aspects of descriptive statistics and their constituents are very relevant to our study.
4.5.3 Multiple Linear Regression Analysis

According to Saunders et al. (2016, pp. 532), one important question posed within data analysis is how to measure the relationship between variables. One method of this correlation which is the most widely used (Oakshott, 2012, p. 246) is Pearson’s Product Moment Correlation Coefficient \( r \) in order to detect whether there is a positive or negative linear relationship between two variables (Adams et al., 2007, p. 196). The calculated coefficient from this can lie between 0 to 1 with closer to 1 indicating a stronger positive relationship, or it can lie between 0 to -1 with closer to -1 indicating a stronger negative relationship (Bryman & Bell, 2011, pp. 347-348). Although correlation can indicate whether two variables are associated with each other to some extent, it does not account for whether there is a cause-and-effect relationship present (Bryman & Cramer, 2005, p. 220). In our study it is important to take correlation a step further and use regression analysis instead, however, as we are testing our hypotheses for causal effects, how strong these effects may be, and how they compare with each other (Stolzenberg, 2004, p. 165). This in turn allows us to assess whether each of our independent variables (each of the Big Five personalities, and brand trust) has an effect on the dependent variable: purchase intention (Stolzenberg, 2004, p. 166). The equation for simple linear regression is \( Y_i = \beta_0 + \beta_1 X_1 + \epsilon_i \) (Adams et al., 2007, p. 199). The equation can be explained as \( Y_i \) is the dependent variable, \( \beta_0 \) is the population intercept, \( \beta_1 \) is the population slope coefficient, \( X_1 \) is the independent variable, and \( \epsilon_i \) to account for deviation errors (Moore et al., 2011, p.531). However, Oakshott (2012, p. 250) argues that ‘before a regression equation can be used effectively as a predictor for the dependent variable, it is necessary to decide how well it fits the data. One statistic that gives this information is the coefficient of determination.’ This allows us to determine the strength of the relationship between the dependent and independent variable by specifically considering how much of the deviation in one variable is caused by the other variable, and expressing it as a value between 0 and 1 (Saunders et al., 2016, p. 547; Bryman & Bell, 2011, p. 349). This in turn allows us as researchers to judge whether our data is statistically relevant in accepting or rejecting our hypotheses.

4.6 Ethical Considerations

According to Blumberg (2011, p. 114), research ethics ‘is the study of the ‘right behaviour’ and addresses the question of how to conduct research in a moral and responsible way.’ For our study it is important to highlight this and that we have strived to maintain the best balance of the path towards scientific discovery, and the rights of our participants, and in turn society in general (Neuman, 2011, p. 143). As a result we have abided by a set of principles at every instance that form our code of ethics. These are as such, being objective and maintaining integrity as a researcher, having respect for other individuals and making sure that no harm comes to the respondents of the study, maintaining the confidentiality of those involved in the study, expressing the voluntary and withdrawal right of the participants, ensuring consent of participants, maintaining confidentiality of the data gathered and its correct analysis, reporting of accurate results, and ensuring safety of ourselves as researchers (Saunders et al., 2016, pp. 243-245).

In order to maintain objectivity, only questions that were highly relevant for answering our research question were considered as acceptable to be included in the questionnaire. Questions related to our study focused on such factors as age, gender, currently enrolled
program, presence of driver’s licence, car ownership, and personality, brand trust, and purchase intention assessments. Care was taken to avoid leading or biased questions that would affect the quality of the survey, and therefore the findings (Adams et al., 2007, p. 35). Furthermore, such harm as physical, psychological, legal, and economical were avoided at all costs (Neuman, 2011, p. 145). Questionnaires were handed out firstly in a classroom setting during the academic quarter before class so that they had sufficient time to complete the 4 to 7 minute questionnaire. All information that was provided by the respondents was anonymous with no way of tracing whom the questionnaire came from. This was to make sure that no individual was placed in a situation that would cause stress, embarrassment, undue anxiety, or unpleasantries (Neuman, 2011, p. 146).

In order to further our data collection, and increase our sample size, we also sent out the link to our questionnaire via email. The respondents were only sent this email once to avoid spamming, and could fill out the questionnaire at their own discretion and convenience. In both cases where the questionnaire was handed out in class and online, the purpose of the study was stated, alongside in the questionnaire. It was further highlighted that participation in the study was completely voluntary in order to emphasize their right to privacy (Blumberg, 2011, p.115, 119), and if they were curious about our findings, they were more than welcome to contact us.

Another important principle is as mentioned, that of data fraud which is considered falsifying the results, making up data, and removing data that does not coincide with your type of analysis (Adams et al., 2007, p.35). Throughout our research study the data that was collected from our questionnaires was kept in an Excel and SPSS spreadsheet that only us as researchers had access to using. Furthermore, only data that was compiled from respondents was used, and in situations where missing data was present from unanswered questions was the ‘mean’ of scores ever used. This number was based on the average score from all other respondents for this specific question. All our choices have been based on ethical standards of behaviour so that the integrity of our research has been maintained throughout its execution and conclusion.
5 Results

This chapter is dedicated to presenting the results of our data collection. First we give a presentation of the basic demographic information such as gender and possession of a license. We then move on to presenting the outputs from our SPSS analysis, including Cronbach’s alpha, descriptive statistics and multiple regression analysis. We round up the chapter with a revised version of our conceptual model.

5.1 Demographics

The two different surveys had a total of 123 respondents, 86 from the physical one that we distributed during an economics lecture and 37 from the mail we sent out. The combined result can be found in Table 1. In the age categories the vast majority were in the categories 18-22 and 23-27 with 59 and 57 respondents respectively. Of the seven remaining respondents, five were in the 28-32 category, and two were in the 33+ category.

There was an even spread among the respondents gender wise as 59 were men, 64 were women but none marked themselves as ‘Would not like to specify’. Furthermore an overwhelming number of respondents had their driver’s licence or were currently undergoing a test for one, 110 and 3 respectively, with only 10 not holding or taking one. Out of the ones holding a license, 40 currently owned a car while 11 stated that they had previously owned one, leaving the ones who never had a car of their own at 58.5% or 72 respondents. The majority were Umeå Business School students, mostly Service Management, Business Administration, or International Business Program, while 35 respondents or 28.5% were enrolled in other programs. Additionally there were 14 respondents currently not enrolled in a particular program but instead studied separate courses.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>N%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-22</td>
<td>89</td>
<td>48.0%</td>
</tr>
<tr>
<td>23-27</td>
<td>57</td>
<td>46.3%</td>
</tr>
<tr>
<td>28-32</td>
<td>5</td>
<td>4.1%</td>
</tr>
<tr>
<td>33+</td>
<td>2</td>
<td>1.6%</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>59</td>
<td>48.0%</td>
</tr>
<tr>
<td>Woman</td>
<td>64</td>
<td>52.0%</td>
</tr>
<tr>
<td>Would not like to specify</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Driver's License</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>No</td>
<td>10</td>
<td>8.1%</td>
</tr>
<tr>
<td>Yes</td>
<td>110</td>
<td>89.4%</td>
</tr>
<tr>
<td>Currently taking one</td>
<td>3</td>
<td>2.4%</td>
</tr>
<tr>
<td>Owning a car</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>72</td>
<td>58.5%</td>
</tr>
<tr>
<td>Yes</td>
<td>40</td>
<td>32.5%</td>
</tr>
<tr>
<td>Previously owned one</td>
<td>11</td>
<td>8.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Program</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Politics</td>
<td>25</td>
<td>20.3%</td>
</tr>
<tr>
<td>Service Management</td>
<td>24</td>
<td>19.5%</td>
</tr>
<tr>
<td>Separate courses</td>
<td>14</td>
<td>11.4%</td>
</tr>
<tr>
<td>Trading &amp; Logistics</td>
<td>6</td>
<td>4.9%</td>
</tr>
<tr>
<td>Business Administration</td>
<td>19</td>
<td>15.4%</td>
</tr>
<tr>
<td>International Business Program</td>
<td>18</td>
<td>14.6%</td>
</tr>
<tr>
<td>Social Science</td>
<td>5</td>
<td>4.1%</td>
</tr>
<tr>
<td>Statistics Program</td>
<td>5</td>
<td>4.1%</td>
</tr>
<tr>
<td>Economics</td>
<td>7</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Table 1: Respondent demographics

5.2 Statistical assumptions

Throughout our data analysis it is important to consider assumptions regarding normality and multicollinearity, to see if they reflect any violations within the regression analysis. According to Saunders et al. (2016, p. 533), normality means that the data values for each quantitative variable should also be normally distributed, being clustered around the variable’s mean in a symmetrical pattern forming a bell-shaped frequency distribution.’ On the other hand, multicollinearity can be considered the degree to which two or more independent variables actually have a correlation between each other, as if this is the case, it would be increasingly more difficult to measure to distinct effects or influences of each separate variable (Saunders et al., 2016, p. 548).
With these statistical assumptions fulfilled within our study, we have found our model to be statistically significant using SPSS, whereby we tested all six of our independent variables along with our one dependent variable.

5.3 Cronbach’s alpha

The tests conducted upon the variables of personality all proved the internal reliability to be of acceptable levels. As aforementioned, previous research done with the 20-item personality tests had Cronbach’s alpha values of 0.68 or higher (Cooper et al., 2010, p. 689). Our results would however trump that as we gained values of 0.7 or higher as displayed in Table 2. The value for Neuroticism would be possible to raise further to 0.810 if item 16 of the personality construct would be removed. We suspect that this is because of confusion over the phrase ‘seldom feel blue’ that could be alien to most non-native English speakers and thus some choose to give a neutral answer instead of one that would be closer to their true response if they fully understood the question. We did however set our limit at 0.7 and thus we had no reason to remove item 16 from the personality construct as we still received an acceptable value. As we had acceptable values from our tests we deemed the variables to be reliable and thus we could proceed with the analysis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>0.75</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>0.78</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.74</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.71</td>
</tr>
<tr>
<td>Openness to experience</td>
<td>0.70</td>
</tr>
<tr>
<td>Brand trust</td>
<td>0.82</td>
</tr>
</tbody>
</table>

*Table 2: Cronbach’s alpha values*

5.4 Descriptive statistics

With the reliability tests now being done and the values for Cronbach’s alpha deemed satisfactory, we could move on to calculate the descriptive statistics. First off we particularly wanted to extract the observed means and standards deviations for our independent variables and dependent variable. The means in our case explain different things, since we used a five point Likert scale, whereby a score close to three for the personality variables means that the person is balanced in that particular personality, as such does not tend to act or experience the same sensations as someone that leans more towards the end of the spectrum. On the other hand, a score close to three for the brand trust and purchase intention variables means that the person is quite neutral in their attitude towards the Volkswagen brand, while higher scores signifies higher trust or purchase intention and the reverse for lower scores.
But since we used surveys in paper and digital form, a comparison between some key statistics is in place before creating the complete Table 4. In Table 3 the differences of the variables have been summed up as the difference between paper form and digital. For example, the value for Extraversion’s maximum is the difference between the maximum in the paper-based Extraversion and the maximum in the digital-based Extraversion.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>0.75</td>
<td>0.25</td>
<td>0.35</td>
<td>-0.13</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-0.25</td>
<td>0.00</td>
<td>-0.13</td>
<td>0.09</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>0.50</td>
<td>0.00</td>
<td>-0.26</td>
<td>-0.1</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.00</td>
<td>0.50</td>
<td>0.33</td>
<td>0.00</td>
</tr>
<tr>
<td>Openness to experience</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.39</td>
<td>0.02</td>
</tr>
<tr>
<td>Brand trust</td>
<td>-0.20</td>
<td>-0.40</td>
<td>-0.03</td>
<td>-0.01</td>
</tr>
<tr>
<td>Purchase intention</td>
<td>0.00</td>
<td>0.25</td>
<td>-0.01</td>
<td>-0.13</td>
</tr>
</tbody>
</table>

Table 3: Different mean values between our two data sets

As there are no major differences between the two samples we argue that it is possible to use them together as the differences displayed are more likely to do with individual variance between respondents rather than anything else. The complete descriptive results are found in Table 4.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>1.25</td>
<td>5.00</td>
<td>3.43</td>
<td>0.78</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>2.00</td>
<td>5.00</td>
<td>3.84</td>
<td>0.76</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>1.25</td>
<td>5.00</td>
<td>3.50</td>
<td>0.82</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>1.00</td>
<td>4.50</td>
<td>2.52</td>
<td>0.76</td>
</tr>
<tr>
<td>Openness to experience</td>
<td>2.00</td>
<td>5.00</td>
<td>3.64</td>
<td>0.73</td>
</tr>
<tr>
<td>Brand trust</td>
<td>1.00</td>
<td>5.00</td>
<td>2.90</td>
<td>0.76</td>
</tr>
<tr>
<td>Purchase intention</td>
<td>1.00</td>
<td>5.00</td>
<td>3.16</td>
<td>0.87</td>
</tr>
</tbody>
</table>

Table 4: Mean values of combined sample
As the data describes regarding personalities, our respondents lean towards Agreeableness and Openness to experience the most while Neuroticism was more unusual signalling a tendency for Emotional Stability. Looking at the means for brand trust and purchase intention we see that the respondents were quite neutral in their attitudes. However, with brand trust slightly lower than the neutral score of 3 we observe that, in general, there were no high amounts of brand trust towards Volkswagen.

5.5 Correlation

The next statistical analysis we used was the Pearson Correlation. All of the variables that have been tested have been illustrated below within our table: Extraversion (E), Agreeableness (A), Neuroticism (N), Conscientiousness (C), Openness to experience (O), Brand Trust (BT), and Purchase Intention (PI). Emphasis has been placed, through the use of bold font, on the correlations that are most important and relevant to our study, such as each of the Big Five personalities and purchase intention, and then brand trust and purchase intention. As previously mentioned within our Quantitative Data Analysis section, the calculated coefficient in the table below can lie between 0 to 1 with closer to 1 indicating a stronger positive relationship, or it can lie between 0 to -1 with closer to -1 indicating a stronger negative relationship (Bryman & Bell, 2011, pp. 347-348). We can see from our results below that brand trust and purchase intention have the strongest positive correlation of .49 which is significant at the 0.01 level. We also tested the Big Five personalities in order to identify if there were any strong correlations present between each of them and purchase intention. However, only one variable, Agreeableness, was significantly correlated with purchase intention with a score of -0.16.

<table>
<thead>
<tr>
<th></th>
<th>E</th>
<th>A</th>
<th>N</th>
<th>C</th>
<th>O</th>
<th>BT</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>.22**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>.06</td>
<td>.10</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>.15*</td>
<td>-0.01</td>
<td>-0.12</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>.12</td>
<td>.024</td>
<td>-0.14</td>
<td>-0.01</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BT</td>
<td>.16*</td>
<td>-0.022</td>
<td>0.00</td>
<td>0.05</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>PI</td>
<td>-0.13</td>
<td>-0.16*</td>
<td>-0.03</td>
<td>-0.04</td>
<td>-0.04</td>
<td>0.49**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Correlation is significant at the 0.05 level

**Correlation is significant at the 0.01 level

Table 5: Correlation test findings
5.6 Regression analysis

In order to analyse our independent variables’ effect on the dependent variable we conducted a multiple regression analysis where we tested our independent variables against our dependant variable. First we had to see if our model contained a significant relationship.

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regression</strong></td>
<td>27.5</td>
<td>6</td>
<td>4.58</td>
<td>8.12</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*Table 6: ANOVA table*

As the p-value is below 0.05, our set significance level, we can state that our model is statistically significant. Additionally there was an observed R-square value of 0.30, telling us that our independent variables are able to explain 29.6% of the variance in purchase intention, our dependant variable. Moving on to the regression analysis of our variables we had mixed results. Given our significance levels of 0.05 there are two hypotheses for which we have empirical evidence to support. The first one being the hypothesis that brand trust has a positive effect on purchase intention. It is evident from the observed significance value of 0.00 together with the unstandardized beta coefficient of 0.52, signalling a particularly strong relationship between the independent variable and the dependent variable. The second supported hypothesis is the one stating that Extraversion has a negative effect on purchase intention. This is evident from the significance value of 0.03, which is below our set limit of 0.05, and the standardized beta coefficient of -0.18. However, that was not the case with our remaining four hypotheses. Agreeableness had an observed p-value of 0.20 and a beta coefficient of -0.12, Conscientiousness had an observed p-value of 0.63 and a beta coefficient of -0.04, Neuroticism had an observed p-value of 0.78 and a beta coefficient of -0.03, while Openness to experience had the least strong connection with a p-value of 0.796 and a beta coefficient of -0.03. Thus we have no empirical support proving our hypotheses H2, H4, H5, and H6 and therefore have to discard them.

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficient</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Constant)</strong></td>
<td>-0.44</td>
<td>-0.62</td>
<td>0.54</td>
<td></td>
</tr>
<tr>
<td>Brand trust</td>
<td>0.60</td>
<td>0.52</td>
<td>6.55</td>
<td>0.00</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-0.12</td>
<td>-0.10</td>
<td>-1.29</td>
<td>0.20</td>
</tr>
<tr>
<td>Extraversion</td>
<td>-0.20</td>
<td>-0.18</td>
<td>-2.15</td>
<td>0.03</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-0.04</td>
<td>-0.04</td>
<td>-0.49</td>
<td>0.63</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>-0.03</td>
<td>-0.02</td>
<td>-0.28</td>
<td>0.78</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Hypothesis</td>
<td>Verdict</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>Brand trust has a positive effect on purchase intention of Volkswagen products in light of the CSR brand crisis.</td>
<td>Supported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>Agreeableness has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.</td>
<td>Not supported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Extraversion has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.</td>
<td>Supported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td>Conscientiousness has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.</td>
<td>Not supported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Neuroticism has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.</td>
<td>Not supported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H6</td>
<td>Openness to experience has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis.</td>
<td>Not supported</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7: Linear Regression

5.7 Hypotheses Results

Table 8: Hypotheses verdicts
5.8 Revised Conceptual Model

Our initial conceptual model, presented in the Theoretical Framework chapter, was done in order to visualize our theory in a comprehensible way. As we discovered in the regression analysis, certain relationships in the initial model were not possible to prove the way we hypothesised that they would. While connections were present they were not strong enough to be considered significant, in other words the p-values were above 0.05. With the removal of hypotheses regarding Agreeableness, Conscientiousness, Neuroticism, and Openness to experience, only the ones with Extraversion and brand trust remain. The results are displayed in ‘table a’ while figure ä displays the revised conceptual model.

![Figure 2: Revised Conceptual Model](image)
6 Discussion

Within this chapter we shall present our findings from our quantitative study. We shall proceed throughout this section by firstly highlighting the personality and brand trust variables within our initial conceptual model, and then what our findings revealed about each one. In each case, we will further discuss possible reasons and provide theoretical support for why this is.

6.1 Agreeableness

From our descriptive statistics we were able to calculate a mean of 3.84 for our variable Agreeableness. This conveys that our respondents lean moderately high towards the direction of Agreeableness in their personality assessment. Furthermore, this number stands alone independent of Volkswagen’s CSR brand crisis, and their purchase intention, in order to highlight one of the personality dimensions of the respondents. Considering our sample size was relatively large (123 respondents), the mean of Agreeableness provides a good representation of one of the personality dimensions of our sample (Bryman & Bell, 2011, p. 188). This variable which was included in our model for which was considered to be statistically sound, provided the foundation for testing our hypothesis with purchase intention. However, a negative Pearson correlation of -.16 was found to be considerably low. By squaring this, we then determined the coefficient of determination, such as ~.024, which means that 2.4 percent of the variance in purchase intention can be accounted for by Agreeableness (Bryman & Bell, 2011, p. 349). This, as a result, provides no support for a relationship between these variables. In our regression analysis, we used a confidence interval level of 95 percent, therefore emphasizing a significance level of 0.05. However, for Agreeableness the significance level was above this at 0.20 indicating no or very little linear relationship with purchase intention. In line with this is our hypothesis: Agreeableness has a negative effect on purchase intention of Volkswagen products in light of the CSR brand crisis, which cannot be supported. This is however interesting to note because our study has been focused on Swedish students, and according to Mooij (2003, cited in Roozmand et al., 2011, p. 1078) Sweden is acknowledged as a country that has a low power distance, and would be a country where people are more focused on cars that would be considered more environmentally friendly. Furthermore, McCrae & Costa (2003, cited in Roozmand et al., 2011, p. 1078) highlight that different personality dimensions can result in contrasting purchasing behaviour, such as agreeable individuals tend to own cars that are used as a social need. Both these studies give weight to the argument that purchase intentions would be lower for individuals who lean towards the end of the Agreeableness personality spectrum, given that Volkswagen's crisis was CSR related for which there was social and environmental implications. This is in contrast to our findings which clearly show no significant relation present.

6.2 Extraversion

The mean for Extraversion became the second lowest score out of the personalities at a value of 3.43. In reality this means that the average respondent was neither introverted nor extroverted but if anything, the respondents were leaning more towards being extroverted. This is particularly interesting as those living in Sweden, as we assume our
respondents are because of reasons previously mentioned, are inclined to be high in Individualism, a trait signalling a sense of self-being, individual identity, and tendencies to maximize individual gains from relationships (Hofstede, 2016a). Individualism is a trait that through thorough research between Hofstede’s cultural dimensions and the Big Five personalities has been primarily linked to Extraversion (Hofstede & McCrae, 2004, p. 69). Given that, it is quite surprising that the mean for Extraversion was not higher than 3.43, especially in a sample with students enrolled in business courses as those studying business often are seen as outgoing people. As seen in Table 5 there was no significant correlation between Extraversion and purchase intention. Extraversion would however come to be the only personality we could say, with statistical evidence, had an impact upon purchase intention as the significance value was 0.034, below our set limit at 0.05, and we therefore have support for our hypothesis, that Extraversion had a negative effect upon purchase intention.

There is some ambiguity to this though as Tsao & Chang (2010) argued throughout their work that the extrovert will act upon what they see as beneficial to their own image while Quintelier (2014) argued that extroverted people will take a stand against unethical products. This prompts the question: does the negative connection between Extraversion and purchase intention exist because extraverted people value relationships and thus does not take kindly to being deceived, or altruistic goals such as environmental protection? According to Al-hawari (2015, p. 53) a consumer who scores high on Extraversion is more prone to purchasing products based upon their relationship instead of the actual quality. While the scandal was one of deceit and cover ups it did not have an actual direct impact upon any individual’s economic wellbeing, and substantial recalls and apologies were issued by Volkswagen to make amends. It is plausible that those actions could have been seen as enough effort in the eyes of the extraverted consumers to stay loyal to their relationship, or in the case where none existed: not tarnish a potential future relationship. A counter-argument to this discussion could be derived from Tsao & Chang (2010), who argue for extroverts being interested in products that enhance their image, as purchasing products from a brand that has been pulling a curtain over the public’s eyes over the last few years arguably is not something a person concerned with their image and self-being would like to associate themselves with. As such, our research has been in line with theirs as we have found a negative relationship between Extraversion and purchase intention. We still have some doubt in the matter as Quintelier (2014, p. 349) did in fact conclude that Extraversion is positively inclined to environmental friendly consumption, rather than consumption that enhances self-image, especially when it comes to younger consumers. As such our results contribute to the ambiguity of the subject; however, we establish that there is a negative impact but cannot with certainty say if it is caused by the environmental impact nor the deceitful nature of the scandal.

6.3 Conscientiousness

Conscientiousness was the personality dimension with the third highest and consequently third lowest mean with a value of 3.50. This tells us that the average respondent leant towards the Conscientiousness aspect of the personality dimension, albeit mildly. As opposed to our hypothesis, it would come to have no major impact upon purchase intention. Furthermore, the Pearson correlation would come to be insignificant and thus we had to rely on the regression entirely to make any conclusions. The significance value of 0.63 determined that our hypothesis could not be supported
and we thus had to conclude that higher levels of Conscientiousness did not affect purchase intention in light of Volkswagen’s CSR brand crisis. This is somewhat surprising as the literature is unanimous in the argument that Conscientiousness is linked to preservation (Milfront & Sibley, 2012, p. 198), norm abiding (Pervin et al, 2008, p. 120), and dutifulness (Quintelier, 2014, p. 344). As the consumers who are high in Conscientiousness are linked with preservation, a part of that is expected to be reflected in their attitudes and consumption in the form of environmental friendly consumption. With CSR and minimizing of the environmental footprint being generally accepted norms in corporate and private life in Europe and Sweden, a low correlation such as the one between purchase intention and Conscientiousness is the opposite of the theory we have previously presented on the subject. Unrelated to CSR, Nga & Yien (2013, p. 234) stated that the Conscientious consumer would avoid risks and choose options that are more viable. This would naturally lead to those who score high in Conscientiousness to be wary of brands who recently have been exposed as fraudulent, but as the statistics show there is close to no effect on purchase intention by Conscientiousness towards Volkswagen products. Would we follow the line of argumentation posed by Tsao & Chang (2010, p. 1802), that Conscientiousness result in well-founded consumption decisions based upon knowledge of the product, it is plausible that the conscientious consumer considers the possibility of every other car manufacturer conducting the same fraudulent actions and thus does not view Volkswagen as particularly villainous. If that would be the case it is possible that the conscientious consumer does not have lower purchase intention since they consider Volkswagen to be trustworthy now that they have been in the limelight and have to redeem themselves in order to regain their former status.

### 6.4 Neuroticism

Coming in at the lowest mean with 2.52 Neuroticism is the only personality where we can argue that the average respondent was more inclined to the other side of the spectrum than the one we theorized they would be, as in this case the average respondent is more inclined to Emotional Stability. Despite the low mean, Neuroticism’s correlation and regression could have had an impact upon the theoretical contribution as the different levels of Neuroticism should yield different levels of purchase intention if we follow the argumentation of the literature. Evidently, that was not the case. With an insignificant correlation there were no conclusions to be drawn. The significance value of 0.78 would however not make it the least significant variable, but none the less prompting us to discard our hypothesis regarding Neuroticism’s effect upon purchase intention.

As Lin (2010, p. 13) said, the neurotic consumer tends to be driven by hedonistic motivation in their consumption, focusing on the aspects that give them a direct response or gain rather than future gains or sustaining quality. Lin is not the only one sharing this perceptive standpoint as the theory is almost in consensus regarding the understanding that neurotic individuals will act upon their own fears (Rothaman & Coetzter, 2003, p. 69), self-interest (Hirsh, 2010, p. 247), or risk aversion (Nga & Yien, 2010, p. 237). The implications of this is that while the neurotic consumer avoids uncertainty, and thus arguably a brand that has been committing fraud during the last few years, their unwillingness to consume in an environmental friendly fashion with the ambiguity and uncertainty it brings will mitigate the bad will caused as a consequence of the scandal; even more so, as there were no direct financial or quality implications,
but primarily environmental. Accordingly, there is support in the literature that Neuroticism is not a strong indicator of lower purchase intention, which was reflected in our research through bad correlation and an extraordinarily high significance value. One study that provides support for this argument is Milfront & Sibley (2012) who found that neurotic persons actually had a high sense of environmental preservation and motivation to engage in environmental protection (p. 188), but would however find that despite those attitudes it was seldom reflected in their actual behaviour (p. 193).

6.5 Openness to experience

The last of the tested personalities showed the second highest mean at 3.64, hardly surprising since the nature of the personality dimension is focused on intelligence, learning, and creativity, traits that are closely associated with students. It would however, as with the majority of personalities, come to have an insignificant correlation. Unsurprisingly the regression would accordingly yield results deeming Openness to experience unfit to explain our dependant variable as our set significance level of p>0.05 was lower than the observed significance value of 0.80.

The fact that we had to discard our hypothesis is both near and far the theoretical framework we have created. On the one hand Openness to experience has a substantial connection to environmental concern according to Hirsh & Dolderman (2007, p. 1589, 1590), caused by their perceived higher values and self-transcendence. If we dub the dimension, Intelligence, as it is often connected with and sometimes referred to as (Migliore, 2011, p. 40), this would make even more sense as preservation of our environment is among those altruistic and sustainable values that intelligence is often associated with. This line of argumentation is what caused Quintelier to hypothesise that Openness to experience would be correlating with political consumption (2014, p. 344). Through her research she was able to prove that hypothesis and conclude that there was indeed a consistent effect upon political consumption (2014, p. 348). Looking at the other side of the argumentation surrounding the personality dimension, our results could perhaps be explained. While Quintelier drew lines between traits that defines Openness to experience and environmental concern, and evidently found support for that connection, those traits in themselves do not necessarily signal strictly pro-environmental friendly behaviour. This dimension is characterized by curiosity (Quintelier, 2014, p. 344), consideration of opinions (Tsao & Chang, 2010, p. 1802), and often adaption of new ideas (Rothman & Coetzer, 2003, p. 69). As such those who score higher in this dimension could be caring for the environment while considering a broader scope of the situation. As Tsao & Chang (2010, p. 1802) mentioned, Openness to experience often comes with a higher sense of forgiveness and a tendency to be less prejudiced. As such it is not farfetched to argue that someone who is high in Openness to experience would see the fault in Volkswagen’s actions but at the same time consider their previous good reputation and thus forgive their actions. Further foundation for this argument can be found in Matzler et al. (2005, p. 430) who concluded that those scoring high in Openness to experience, much like those who score high in Extraversion, are drawn towards hedonistic values in products, namely caring about aesthetic or symbolic aspects. Unlike their extroverted counterparts they would however have a higher level of loyalty towards brands and consider other aspects rather than the immediate personal gain (Lin, 2010, p. 13). In that sense, assuming a hedonistic approach to products, and a relationship and open-minded set of attitudes towards brands, the most plausible explanation for their behaviour is that probably those with a high score in Openness to
experience will disprove of Volkswagen’s actions but still consider them a viable brand because of their previous actions and general reputation of being good quality.

6.6 Brand Trust

In the descriptive statistics we have an observed mean for brand trust of 2.90, which tells us that the respondents in general were close to neutral in their trust towards Volkswagen after the crisis, as scores of 1 meant that the consumers had a low amount of brand trust, while a score of 5 meant a high amount of brand trust. As a result, this would come to have an impact on purchase intention as can be derived from the Pearson correlation of 0.49. By squaring this we receive a coefficient of determination at a value of 0.24, telling us that 24% of the variance in purchase intention can be explained by the brand trust variable (Bryman & Bell, 2011, p. 349). This together with the found significance value of 0.00, as compared to our set significance level of 95%, makes it evident that there is a strong positive connection between brand trust and purchase intention, prompting us to accept the hypothesis that stated this very outcome.

This did however not come as a surprise as most studies establish a clear connection between brand trust and purchase intention (Kang & Hustvedt, 2014; Chaudhuri & Holbrook 2001). Some authors proved the connection in digital environments (Becerra & Korgoankar, 2011), while others have gone into the subject of CSR or misbehaviour. On the latter, it was found that when a company deliberately tampers with their products in order to increase their sales or meet regulations, their consumers trust in the brand will be tarnished and their sales will dwindle accordingly (Custance et al., 2011, p. 25). When Kang & Hustvedt (2014) researched the impact a brand’s CSR related activities had upon the consumers’ attitudes and behaviour, a distinctive effect was found between perceived CSR efforts, the trust following this, and the purchase intention it would eventually affect (p. 262). As such, our results are in line with the previous research done upon the subject, as to whether the connection we found is caused by the deceit itself or the environmental aspect of it. In the end, Sweden is quite an individualistic country (Hofstede, 2016), and as such it is probable that we care more about what others think of us than altruistic goals such as the preservation of the environment. However, this does not mean discarding it entirely, but rather not viewing it as important as our own well-being and image.
7 Conclusion

Within this chapter we shall firstly provide our general conclusions to our research question and purpose of the study. Following this, we shall then highlight the theoretical and practical contributions. Next we will mention the societal implications and effects of our study. We shall then provide limitations and recommendations for further research within this area.

7.1 General Conclusions

The purpose of our research study was to investigate how different personalities and brand trust affect students’ purchase intention towards a company experiencing a CSR brand crisis. This motivated us to formulate our research question: ‘Does Agreeableness, Extraversion, Conscientiousness, Neuroticism, Openness to experience, and brand trust affect students’ purchase intention of Volkswagen products in the light of its recent CSR brand crisis?’ By quantitatively assessing which dimensions of personality students leaned towards and their level of brand trust, we were able to see whether these factors influenced their purchase intention of Volkswagen’s products in the light of its recent CSR brand crisis, thereby allowing us to successfully answer our research question.

From our quantitative findings we found that only one of the Big Five personalities, Extraversion, had a significant negative effect on purchase intention of Volkswagen's products given its recent CSR brand crisis. For our other independent variable, brand trust, it was found to have a positive effect on purchase intention, whilst the remaining four independent variables, Agreeableness, Conscientiousness, Neuroticism, and Openness to experience, which make up the remaining personalities of the Big Five all had no effect on purchase intention. This has resulted in us having to revise our previous conceptual model in order to better reflect this outcome. It can be said though that the Volkswagen scandal did provide a good foundation for a brand experiencing a CSR crisis, as the extent of the crisis was mainly restricted to environmental implications; even though the indirect financial losses because of this were substantial. However, in our study emphasis has been placed on the specific cause of the crisis, and how it has been spread in the media, in classifying it as a CSR crisis.

7.2 Theoretical Contributions

This study has managed to make multiple theoretical contributions to existing literature by researching various aspects within the area of Brand Crises. Numerous studies have before focused on using fictional companies within their study (Coombs & Holladay, 1996; Samaraweera et al., 2014; Sohn & Lariscy, 2014), whilst factual company crises in studies have mainly represented such examples as Tylenol’s poisonous pills (Greyser, 2009), infant milk powder scandal (Custance et al., 2012), and Toyota’s flawed accelerator pedal (Choi & Chung, 2013). In our study Volkswagen’s brand crisis was not a result of human error, but rather knowingly caused which in the end had consequences for the environment. Furthermore, by researching the Volkswagen crisis relatively early on after the scandal we were able to compile data that was not timeless, as such that it could not be collected years afterwards. As a result, we were able to theoretically complement research within our type of crisis.
Furthermore, the study expands on the area of consumer behaviour. Previous studies have acknowledged the importance of purchase intention in buying behaviour and have tried to explain this relationship with age (Silvera et al., 2012), time span post-crisis (Vassilikopoulou et al., 2009), and response strategy used and engagement with company’s offerings within the context of a company crisis (Choi & Chung, 2013). For our study, we considered purchase intention too, but within a more specific context such as CSR brand crisis, and also used different independent variables such as the Big Five personalities and brand trust. This in turn allows us to make another contribution such as that of the personality trait, Extraversion, which was shown to have a negative effect on purchase intention of Volkswagen products in light of their CSR brand crisis. Given that the Big Five personalities have been rising in research prominence and use in recent years in order to provide an explanation of consumer behaviour (Bosnjak et al., 2007), our study in particular highlights that at least one of these dimensions is useful in explaining purchase intention. However, given this result, we can say that possibly the Big Five personalities may not be a great predictor of consumer behaviour, and more specifically purchase intention. It is possible that they may be a better predictor of other relationships involving different variables in specific situations.

Our last contribution is that of brand trust, and how it has a positive effect on purchase intention of Volkswagen's products in light of their CSR brand crisis. As mentioned in previous studies brand trust is the key ingredient for building a strong bond between the brand and the consumer (Hiscock, 2001), and known for affecting purchase intention (Becerra & Badrinarayanan, 2013), therefore. However, in our study we confirm this even in a situational context, such as a CSR crisis, in turn giving more weight to the relationship between these two variables. In each of these cases we have created new knowledge and have managed to fill the missing gap in existing literature surrounding the area of brand crisis, Big Five personalities, brand trust, and purchase intention.

7.3 Practical Contributions

This study has managed to make practical contributions for companies experiencing a CSR brand crisis, and for which they were responsible, within their respective industry. An important contribution is that of brand trust and its positive effect on purchase intention. Although studies have before supported that brand trust positively affects purchase intention in a general setting (Becerra & Badrinarayanan, 2013, p. 378), in our study we have managed to support this within the context of a CSR brand crisis, which was caused by Volkswagen. Furthermore, brand trust is considered one of the most important and essential qualities a brand can possess (Delgado-Ballester et al., 2003, p. 3), and therefore provides support for companies to not take this quality for granted. Although we have calculated a mean value of brand trust below the neutral value, it is only .10 away. As a result we argue there was no clear evidence found for lower brand trust after the crisis in our study. Given that this does not appear to be in line with the prominence of CSR as an essential practice to implement and for which to abide by within one’s company operations, it does not imply that CSR is not important, but rather in our case a CSR brand crisis would not yield lower levels of purchase intention.

Our study also provides another important practical contribution regarding the interplay between culture and the Big Five Personalities. In a study by McCrae & Hofstede (2004, p. 69), a strong correlation was found between the personality dimension ‘extraversion’ and the cultural dimension ‘individualism. This is very interesting
considering the United States, where the Volkswagen scandal was discovered, is considered one of the highest ranking individualistic countries in the world (Hofstede, 2016b). Given our result, that extraversion was the only personality to have a negative effect on purchase intention, it would appear that these countries such as the United States, United Kingdom (Hofstede, 2016c) and other countries high on individualism would be impacted by lower levels of purchase intention. This could lead to a drop in sales and market share, as in the United Kingdom the former fell by 14 percent and the latter dropped from 8.5 to 7.1 percent (Ruddick, 2016), affecting both profitability and sustainability. As a result an appropriate response strategy should be used when addressing the crisis in these countries.

Each of these two contributions highlights resounding implications for companies that experience a CSR brand crisis for which they were responsible for. Overall, to this degree, companies should understand the importance of cultivated and maintained brand trust, and how consumers who are more extroverted have a negative effect on purchase intentions in light of this type of crisis.

7.4 Societal Implications

Given the extent of the effects that research studies can have on the society at large, it was necessary to consider the implications of our thesis and how this might affect various stakeholders. To this end, however, we do not believe that we have suggested, praised or supported the results of our research in a way that could be used to harm these same stakeholders. We believe that our research highlights the effects that can follow for a company within the automotive industry that experiences a CSR brand crisis for which they were responsible, and that these costs should be avoided for themselves, their stakeholders, and the environment. We also believe that we have not slandered the name of Volkswagen but merely used their scandal that was conveyed in the media to research its effects on consumers. Our study highlights that Extraversion has a negative effect on purchase intention in light of this CSR brand crisis which should prompt companies to be more aware of their actions that have environmental implications. This is complementary to public discourse on the topic of CSR.

7.5 Limitations and Further Research

First of all we can say that our study was the first of its kind to be conducted, whereby we managed to test how the Big Five personalities and brand trust affected purchase intention in light of Volkswagen’s CSR brand crisis. However, one limitation of our study was that it was conducted in Sweden, whereby we focused on Swedish students in Umeå. Given this parameter, it would be best to also extend this study to not only other areas of Sweden but also abroad in other countries. However, in order for these studies to be repeated and generalized, a company experiencing a CSR brand crisis which they were responsible for, would have to be necessary to form the context in which to test the same variables that we did. However, although brand crises are more commonplace these days, this is not something one can always expect or hope for. In this instance, a fictional company could potentially be used, providing a description similar to Volkswagen’s situation to respondents. Complementary to this could be the choice of a longitudinal study whereby purchase intention in our study is measured at one point at time and then at a later point in time, with respect to the Big Five personalities. This
could allow one to see the changes that occur, which better reflects how different personalities interpret the crisis.

We can also say that our choice of data collection method, from which we handed out our questionnaires in the classroom and online, could be more streamlined with focus on just one approach, thereby allowing more consistent results. In our study we found different mean values, although only slightly, for each of our data sets. However, this could be in relation to the difference in the amount of respondents that represent each of these data sets, and also more adequate time to answer the questionnaire. However, in either case, emphasis could be placed on more respondents in other studies in order to better generalize these findings, as in our study we were restricted both financially and by a time frame to complete the research study within four months. Our focus was also on students who were undertaking either a business program or business related courses at Umeå Business School, representing that there may be a particular bias present. Although we have not detected this, as we received adequate data on each aspect of our research through the increase in respondents, we cannot say that it was not present. However, it would have been preferable to hand out the questionnaire to students in other faculties such that this could be minimized as a precaution. Additionally, as we have used a car manufacturer as our company in brand crisis there is some issues regarding the suitability of using students as respondents as most are not in a position to buy a car or having previously owned one. Thus it could be beneficial to conduct a similar study upon consumers who are more plausible to be engaged in car ownership or using a brand that produces goods or services that are more commonly consumed by students.

In our study we also focused on the Big Five personality dimensions using the 20-item questionnaire. Although research has supported its applicable use as an adequate personality test and we also calculated a cronbach’s alpha of .7 for each dimension, a 44-, 60-, or even 120-item questionnaire could have been more appropriate in precisely reflecting which personality respondents leaned towards. It can also be argued that personality tests do not necessarily categorize people but rather what personality they lean towards, which as a result adds an element of vagueness thereby making it more difficult to segment these individuals for marketing use. Furthermore, although Kotler & Armstrong (2010, p. 172) state that personal factors, such as personality are one of the factors that influence consumer purchasing behaviour, they use a unique classification of different personality traits in order to do so, such as self-confidence, dominance, sociability, autonomy, defensiveness, adaptability and aggressiveness. This is something that could shed light on why four of the Big Five personalities might not be good independent variables to test, and therefore a representative personality test in exhibiting a relationship between that of purchase intention. Yin et al. (2016, p. 93) have found that consumers’ implicit personalities,incremental versus entity, can affect their brand evaluations in light of a product-harm crisis, and suggest that further research should be conducted using a real life company. As a result, we decided to use Volkswagen, and given the rise of the Big Five personalities in recent years as a credible representation of consumer personalities, we decided to substitute implicit theories of personalities for that of the Big Five, as no research was conducted in the context of a CSR brand crisis with these variables. Furthermore, considering our sample group was students we felt brand evaluations could be replaced by purchase intention as students would have minimal built-up associations with the brand. However, given the outcome of our hypotheses it could be
argued that possibly implicit theories of personality would have been more feasible to use, and implement in our study. It could also be possible that other factors that affect consumer behaviour could provide a stronger relationship to our dependent variable, purchase intention, which would allow the specific company enduring a CSR brand crisis to shape their response strategy to those affected by their actions more successfully.

In a study by McCrae & Hofstede, where personality dimensions were found to have correlations with cultural dimensions, it could be possible to pursue further research by testing cultural dimensions instead and its effect towards purchase intention in light of a crisis similar to Volkswagen’s. This would allow a far more appropriate response strategy to this specific crisis, as it would be modified to the more prominent cultural dimension in each country.
8 Truth Criteria

In order to strengthen the quality of our quantitative research, we shall evaluate it using the truth criteria. Within this we shall focus on the dimensions of reliability, and the internal and external types of validity.

The three main criteria in business research are replicability, reliability, and validity (Bryman & Bell, 2011, p. 41). Replicability refers to the possibility of conducting research again (Bryman & Bell, 2011, p. 41). By ensuring replicability, the researcher will not only make it possible for others to replicate or improve upon their research, it will also impose a certain level of objectiveness (Bryman & Bell, 2011, p. 165). We argue that by using previously tested constructs we achieve some degree of replicability, along with reliability and validity which will be discussed later. But as we are using a convenience sample we reduce the ability to replicate our study, while all respondents were currently enrolled in a business program or a business related course, some were from other programs which could have had an impact. In that sense our sample raises certain issues for replication, such as if it would be replicated should the sample consist of business students or students currently studying business courses?

8.1 Reliability

Reliability is the dimension concerned with consistency and consists of three prominent factors; Stability, Internal reliability, and Inter-observer consistency (Bryman & Bell, 2011, p. 158). Since stability is concerned with the stability of a measure over time, that is the, reliability in using the same data collection method upon the same sample some time later (Bryman & Bell, 2011, p. 158) it was of lesser importance to us as we were conducting research that, to the best of our knowledge, has not been done before and because of the research time frame. Thus we could only enable future stability by clearly displaying the steps we have taken. When measuring internal reliability, the most commonly used method is using Cronbach’s alpha, and when used, values of 0.7 or above will indicate that the combined questions measure the same thing (Saunders et al., 2016, p. 451). Given that all of our constructs had 0.7 or above, we had support to consider our constructs as internally reliable. We got these values by using constructs that had been previously used in similar studies and in those proved to have acceptable Cronbach’s alpha values; individual values for each construct are displayed in ‘Questionnaire Design’. Inter-observer consistency being the last of the three and too complex for this study, was not considered in our reliability testing.

8.2 Validity

Validity is also concerned with suitability of the measurements, but rather if they are appropriate for measuring the intended concept (Bryman & Bell, 2011, p. 159). Internal validity will be achieved if a causal relationship is found between variables (Saunders et al., 2016, p. 203) while external validity will be achieved when the study’s findings can be generalised or applicable to other settings or groups (Bryman & Bell, 2011, p. 43). Generalising could at times be difficult to do, especially when using a convenience sample without having a clear population (Bryman & Bell, 2011, p. 190). But as we do have a clear population in mind, students in Sweden, and our sample is quite large with 123 respondents we argue that there is some degree of generalisability unto the
population. However, Bryman & Bell (2011, p. 190) argue that one should be careful making such statements and instead the results gathered from research based on a convenience sample should be used as basis for further research. The internal reliability in quantitative studies is concerned with questioning if the questionnaire is representing the reality that is being measured (Saunders et al., 2016, p. 451). That question does though raise another question according to Saunders et al. (2016, p. 450): if the reality was now, why would a questionnaire be designed to collect more data? While this is a highly valid question, we are more concerned with the causality aspect. To further increase our internal and external validity we made sure to use previously tested constructs for their particular intended purposes while making as little changes as possible to ensure that our results would be comparable with other researchers’ findings. As such, we argue that our research holds a certain level of validity.
Reference List


Questionnaire regarding consumption and attitudes

Hello!

We are two students writing a thesis in business administration. The purpose of this study is to see the impact a scandal has on different consumer attitudes towards a brand. The survey is expected to take between 4-7 minutes.

As a participant in this study you are completely anonymous and participation is voluntary.

If you wish to get more information about the study or the results you are welcome to contact any of us.

Kind regards.
James Smith, jaem0001@student.umu.se
Johan Palmqvist, palmqvist.johan@gmail.com

Personality and demographic
The first section is designed with consumer demographic and personality purposes.

1. Which gender do you identify as?

☐ Woman
☐ Man
☐ Would not like to specify

2. How old are you?

☐ 16-22
☐ 23-27
☐ 28-32
☐ 33+

3. Which program are you currently enrolled in?
4. Do you have a driver's license?

☐ Yes
☐ No
☐ Currently taking one

5. Do you own a car?

☐ Yes
☐ No
☐ Have previously owned one

6. If so, which brand or brands?

______________________________________________

Please mark to which extent you disagree or agree with the following statements

7. I am the life of the party

1 2 3 4 5

Completely disagree ☐ ☐ ☐ ☐ ☐ Completely agree

8. I do not talk a lot

1 2 3 4 5
<table>
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<th>9. I talk to a lot of different people at parties</th>
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<tr>
<td>1 2 3 4 5</td>
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<td>Completely disagree</td>
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<td>10. I keep in the background</td>
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<td>1 2 3 4 5</td>
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<td>Completely disagree</td>
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<td>11. I sympathize with others' feelings</td>
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<td>1 2 3 4 5</td>
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<td>Completely disagree</td>
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5/3/2015

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<th>12. I am not interested in other people's problems</th>
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<td>1 2 3 4 5</td>
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<td>Completely disagree</td>
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<th>13. I feel others' emotions</th>
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<td>1 2 3 4 5</td>
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14. I am not really interested in others

1 2 3 4 5

15. I get tasks done right away

1 2 3 4 5

16. I often forget to put things back in their proper place

1 2 3 4 5

17. I like order

1 2 3 4 5

18. I make a mess of things

1 2 3 4 5
19. I have frequent mood swings

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20. I am relaxed most of the time

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21. I get upset easily

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<td>完全是不同意</td>
<td>不同意</td>
<td>同意</td>
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22. I seldom feel blue

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23. I have a vivid imagination

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24. I am not interested in abstract ideas

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The Volkswagen emissions scandal

In the autumn of 2015 Volkswagen was caught tampering with emission tests to produce values that were low according to US and European standards while the actual values were as much as 40 times higher than the displayed ones. It was found that Volkswagen testers had been doing this since 2007 and that the executives had knowledge of it. Consequences included environmental impact, increased risk of pollution related diseases and increased fuel consumption. When confronted, some executives defended themselves saying "Everyone else are doing the same thing".

In this section you will be asked to answer questions about your attitude towards Volkswagen's products after their actions. Even if you are not in a position to purchase a car at this time, we sincerely ask you to propose you were.

The following questions all begin with "After the scandal..."
27. Volkswagen is still a brand that doesn't pretend to be something it isn't

1  2  3  4  5

Completely disagree ☐ ☐ ☐ ☐ ☐ Completely agree

28. I would believe Volkswagen's product claims

1  2  3  4  5

Completely disagree ☐ ☐ ☐ ☐ ☐ Completely agree

29. I believe that Volkswagen will keep their promises in the future, no more and no less

1  2  3  4  5

Completely disagree ☐ ☐ ☐ ☐ ☐ Completely agree

30. Volkswagen still has a name you can trust

1  2  3  4  5

Completely disagree ☐ ☐ ☐ ☐ ☐ Completely agree

31. Volkswagen will hold on to their commitments

1  2  3  4  5
32. I am less likely to check reviews regarding Volkswagen products

1 2 3 4 5

Completely disagree  ☐  ☐  ☐  ☐  ☐  Completely agree

33. I am less likely to consider Volkswagen the next time I think about buying a car

1 2 3 4 5

Completely disagree  ☐  ☐  ☐  ☐  ☐  Completely agree

34. I am less likely to ask the salesperson about Volkswagen the next time I visit a car dealership

1 2 3 4 5

Completely disagree  ☐  ☐  ☐  ☐  ☐  Completely agree

35. I am less likely to suggest Volkswagen products to a friend

1 2 3 4 5

Completely disagree  ☐  ☐  ☐  ☐  ☐  Completely agree