The impact of consumer knowledge on exploratory purchasing behaviour:

Whiskey Consumer Perspective

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Abstract

Title**:** The impact of consumer knowledge on exploratory purchasing behaviour: Whiskey Consumer Perspective

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Purpose

This research project aims to investigate the impact of product knowledge on the exploratory purchasing behaviour by focusing on the perspective of whiskey consumer.

Methodological Approach

The Primary data was collected by an online questionnaire using SurveyGizmo website and distributed to the participants by social media, such as: LinkedIn and Twitter. The data was then coded and analyzed using SPSS to provide accurate results.

Findings

The exploratory tendencies are a significant factor within consumer purchasing behaviour. Brands that propagate innovation and release variety of product styles will attract and retain consumers with high level of exploratory behaviour. Furthermore, there is a significant correlation between subjective knowledge and exploratory behaviour, which suggest that level of confidence about the product can be an indicator of consumers exploratory tendencies. Moreover, the frequency of whiskey consumption was significantly related to the exploratory behaviour, which could be linked to the consumer's optimum stimulation level (OSL). Finally, research highlighted an increasing interest of younger generation in whiskey as most respondents were under fifty years old (eighty-nine percent) and twenty percent of overall participants were below thirty years old.

Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of MSc ***in International Business*** *is entirely my own work and has not been submitted for assessment for any academic purpose other than in partial fulfilment for that stated above.*

Signed ..... Date .....

(Candidate)

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Most importantly, I would like to thank my family and friends for their constant support over last two years. My parents and my sister who inspired, motivated and helped me every day and my friends who encouraged me to keep moving forward. I wouldn't be here without your help.

Table of Contents

List of Figures

List of Abbreviations

SK	Subjective Knowledge
OK	Objective Knowledge
EB	Exploratory Behaviour
OSL	Optimum stimulation level

Chapter 1 - Introduction

1.1 Introduction to whiskey market in Ireland

Since the early 2000's Irish whiskey has been a subject to significant growth within the global food and drink industry (Emen, 2019), which was christened by whiskey enthusiasts "the Irish Whiskey Renaissance" (Riegel, 2019). With its increasing reputation across the world, sales have grown over 10% in volume every year. Since 2002 the business has risen by nearly 1000%. The Biggest market, which is the United States, just became a billion-dollar business for Irish whiskey exports. The Irish golden spirit became the fastest growing segment in the global drinks industry, which is worth now over €650m a year to the Irish economy (Emen, 2019).

The number of operational distilleries reached thirty-one this year and it's still growing (Drinks Industry Ireland, 2020) (Drinks Ireland - Irish Whiskey association, 2020). Some distilleries, such as Great Northern, specialize in selling to bulk private labels, also called independent bottling brands, which significantly increases the number of brands available on the market (The Great Northern Distillery, 2020).

With rising numbers of whiskey brands and variations in quality, the industry has become very competitive. The increasing amount of choices has made the decision-making process much more difficult for average consumers.

Figure 1 Whiskey Tourism (Drinks Industry Ireland, 2020)

Figure 2 Distilleries in Ireland (Drinks Ireland - Irish Whiskey association, 2020)

1.2 Whiskey information intensive & purchasing behaviour

Whiskey is the most complex spirit on earth (Middleton, 2014), which is shaped by a complicated production process and many years of maturation in specially selected casks. Master distillers create a unique flavour profile and ensure the character of the whiskey and the superior quality is replicated with each bottle sold to a consumer (Buxton & Hughes, 2014).

This complicated product is a non-durable experience good, which means the consumer cannot judge the quality of the whiskey prior to the purchase (Nelson P., 1974). This makes the decision making process difficult for the consumer, especially in a continuously growing and now over-saturated market (Drinks Ireland - Irish Whiskey

association, 2020). To evaluate quality of the product, whiskey drinkers have to follow the extrinsic attributes such as: brand name, image, packaging, region, label attractiveness, age, price, distillery and alcohol level (Lee, Paterson, & Piggott, 2001). Information intensive products, such as whiskey, are difficult to describe and contain many extrinsic attributes, which is why knowledge plays a significant part in whiskey consumer purchasing behaviour (Ellis D. , 2015).

In all purchasing related activities, knowledge is a critical factor that affects all five stages of the decision-making process(Engel, Blackwell, & Miniard, 1995). It is used by consumers to reduce risk and uncertainty involved in the purchase of unfamiliar products (Mitchell & Greatorex, 1988). However, in relation to information intensive products, the influence is even more significant. Following Merrie Brucks (1985) distinction of consumer knowledge, both objective and subjective knowledge have been found to influence the purchasing decision making process. Individual's with high objective knowledge were found to research a broader range of product attributes and were strongly skewed towards intrinsic characteristics. Whereas novice whiskey drinkers tend to use more extrinsic attributes, such as price and brand name. Moreover, subjective knowledge was found to be a stronger motivator and a powerful predictor of consumer purchasing behaviour. These clues of the consumer behaviours have a significant relevance to the marketers within the whiskey industry and could provide a basis for market segmentation.

There are not many studies investigating the effects of knowledge on the other consumer behaviours within the whiskey industry. An example of such behaviour would be an exploratory tendencies of whiskey consumers. Each individual has a specific level of stimulation needed to be continuously maintained and modified by the person's behaviour (Orth & Bourrain, 2005). The variety-seeking tendencies are driven by intrinsic rewards, such as desire of the unfamiliar or curiosity (Trijp, Hoyer, & Inman, 1996), and have a significant impact on loyalty to already established brands or growth of the new distilleries in the market (Ellis, Pitt, & Caruana, 2015).

Considering the overall impact of knowledge on many aspects of consumer purchasing behaviour, the possible influence of the subjective and objective knowledge on variety seeking tendencies should be investigated.

1.3 Research question

The main question to be answered by this research paper are as follows:

"What impact does consumer knowledge have on explatorary purchasing behaviour within the Whiskey Consumer Industry?"

1.4 Research Objectives

To answer the research question, the following objectives were set:

1. To identify risks involved in purchasing whiskey and how does it compare to other similar products on the market.
2. To do an in-depth review of consumer knowledge and determine to what extent does it impact consumer purchasing behaviour.
3. To research the exploratory behaviour and possible correlation with knowledge.
4. To identify measuring scales for knowledge and exploratory behaviour.
5. Gather and analyze data from the whiskey consumer to determine the possible link between knowledge and exploratory purchasing behaviour.

1.5 Dissertation Structure

This section describes the structure of the dissertation by providing a brief overview of each chapter.

Chapter 2 Literature Review:

Literature review chapter examines all relative sources using critical analysis and provides a theoretical background to the project. The research topics of this dissertation include: in-depth knowledge of whiskey as a product, consumer purchasing behaviour and its influences, types of consumer knowledge and how does it affect purchasing behaviour and consumer exploratory behaviour.

Chapter 3 Research Methodology:

This chapter reviews the available research methodologies and justifies the selection of methods chosen for this research project, such as: research philosophy, data gathering, sampling, and data analysis.

Chapter 4 Analysis of Findings:

Chapter 4 described the analysis performed on the gathered data and highlights the key findings of the research. The correlation between subjective, objective knowledge and exploratory behaviour were tested and the results were recorded.

Chapter 5 Conclusions and Recommendations:

This Chapter summarizes the key findings and provides the insight into the managerial implications based on the results of the research. Furthermore, it discusses the research limitations and possible future areas for the research.

Chapter 2 – literature Review

2.1 Introduction to Literature review

The first section of this chapter includes the initial literature review related to whiskey as an information-intensive product, which is categorized as a non-durable experience good. As the chapter progresses, the discussion is conducted on the knowledge and how it affects the consumer's purchasing decision making. The last part of this chapter focuses on the exploratory behaviour of the consumer and the ways to measure the relationships between knowledge and variety seeking tendencies.

2.2. Whiskey as an information-intensive product

Whiskey is a complicated product, which is carefully crafted over many years through the multiple processes such as malting, fermentation, distillation and maturation. Master brewers, Master distillers and Master blenders work together to achieve the most complex and well-balanced liquid with a unique flavor profile (Buxton & Hughes, 2014). This is why whiskey is considered the most complex spirit on earth (Middleton, 2014), with over 300 flavored-bearing compounds found within the spirit (O'Connor, 2017) (Buxton & Hughes, 2014).

Most of these compounds, also called congeners, are created during the process of fermentation and refined during cask maturation. Congeners such as esters provide fruity and floral aromas to whiskey, where aldehydes can bring grassy or leafy flavours to the finished liquid (O'Connor, 2017). The combinations of these compounds create endless flavor profiles, which provides a unique sensory experience to the consumer.

Using sensory data and the pattern recognition process, the consumer develops a mental image in a specific region of the brain. Flavour recognition involves associating long-term, short-term and sensory memories with previous experiences (Lee, Paterson, & Piggott, 2001), such as smelling cut grass or bonfire smoke (Buxton & Hughes, 2014). The perception of whiskey taste can also be based on the general taste attributes, such as sweet, salt, sour and bitter (Buxton & Hughes, 2014). Assessing whiskey taste is clearly subjective and depends on a person's pallet and experiences. Below Figure 3 represents the "whisky flavor wheel", which deconstructs attributes of whiskey flavours in order to

train or guide the consumer through the tasting experience (Buxton & Hughes, 2014) (Lee, Paterson, & Piggott, 2001).

Figure 3 Whisky Flavour Wheel (Buxton & Hughes, 2014)

2.2.1 Irish Whiskey Growth

Besides the complicated production process and complex flavour profiles, the whiskey industry is currently experiencing a significant growth in production volume and rising numbers of new distilleries (Emen, 2019).

Irish whiskey has been expanding over 10% every year since 2002 and became the fastest growing segment within the global drinks industry (Emen, 2019). The number of operational distilleries in Ireland reached 31 this year and it's still growing (Drinks

Industry Ireland, 2020) (Drinks Ireland - Irish Whiskey association, 2020). This number was only four less than ten years ago (O'Connor, 2017).

Similar growth has been observed in Scotland and the USA. Scotch export levels have set a new record, exporting over £4.7 billion of whisky, which is 7.8% more than in the previous year (Carrel, 2019). The sales of the single malts grew by 28% between 2006 and 2012 (Buxton & Hughes, 2014). American whiskey has grown at an extraordinary pace, reaching revenues of 3.4 billion dollars and hitting 52% growth within the last five years (Carrel, 2019). Significant amount of craft distilleries started appearing across the United States. Large investments were recorded to construct considerable distilleries, such as Angel's Envy in Louisville ($12 million) or Brown Forman's Woodford reserve($36 million) (Buxton & Hughes, 2014).

With increasing variety of brands, styles, and distilleries, the whiskey market has become very competitive, which makes the decision-making process much more complicated for the average consumer.

2.2.2 Experience Product

Nelson's (1970) classification of the product describes two types of goods: "search" and "experience" products. Search products can be defined as items where the consumer is able to: (1) inspect the product prior to the purchase, and (2) research and evaluate the quality of the product prior to the purchase. Products such as furniture, clothing and footwear, computers, cameras or sporting equipment are considered search products (Nelson P. , 1970) (Nelson P. , 1974). The only exception are the products where the cost of repairing represents a significant portion of the purchase value (Jourdan, 2000).

The experience goods are products that cannot be easily inspected before the purchase. These types of items can't be evaluated before consumption and it's difficult to decide prior to purchase (Nelson P. , 1974) (Ellis D. , 2015). Unlike the search products, the customer needs to make several purchases and through the "experience" find the preferred option (Nelson P. , 1970). Experience goods are generally non-durable as sampling of such an item is destructive or reduces its value (Nelson P. , 1974) (Jourdan,

2000). Products such as beer, wine, spirits and dairy products are known as a non-durable experience products (Nelson P. , 1974).

Therefore, whiskey is a complex product that needs to be tasted in order to be evaluated and it is difficult to judge the quality of the whiskey before the purchase, which is why it should be considered a non-durable experience good.

2.2.3 Product Quality – Extrinsic vs Intrinsic attributes

The consumer perceives the quality of the product based on variety of informational cues associated with the good (Schiffman & Wisenblit, 2015). These attributes, intrinsic and extrinsic, provide the basis for the customer's perception of the product (Jourdan, 2000) (Chiciudean, Muresan, & Funar, 2016). (Schiffman & Wisenblit, 2015).

The intrinsic attributes are the physical characteristics of the product itself, such as size, colour, flavour, appearance or aroma, which the consumer uses to judge the quality of the goods (Schiffman & Wisenblit, 2015) (Espejel, Fandos, & Flavian, 2007). Customers consider the intrinsic cues to be the most important product characteristics during the decision-making process (Chiciudean, Muresan, & Funar, 2016). These attributes are perceived as more rational or objective, which justifies the consumer decision (Schiffman & Wisenblit, 2015). In the whiskey industry there are five main intrinsic attributes that are used to evaluate the quality: appearance, aroma, taste, mouthfeel, aftertaste (Lee, Paterson, & Piggott, 2001).

However, customers often use the extrinsic values to judge the quality of the product, such as : Brand name, image, packaging, region, label attractiveness, age, price, distillery, alcohol level and recommendation by others (Ellis D. , 2015) (Espejel, Fandos, & Flavian, 2007) (Chiciudean, Muresan, & Funar, 2016). Many studies have shown that the extrinsic attributes have influenced the customer perception of the product quality. Studies show that packaging, price, brand, origin or displayed awards can influence customers perceived quality of the goods (Lockshin, Jarvis, d'Hauteville, & Perrouty, 2006) (Lockshin, Rasmussen, & Cleary, 2000) (Schiffman & Wisenblit, 2015). Some of the consumers would use these attributes to help them to reduce the uncertainty regarding

quality of the product (Lockshin, Jarvis, d'Hauteville, & Perrouty, 2006). In Torres-Mreno et al. (2012) research, the brands information affected people's purchasing intent despite their sensory perception,(Hubbard, Jervis, & Drake, 2015) (Torres-Moreno, Tárrega, Blanch, & Torrescasana, 2011). In some cases the consumers claim their purchasing decisions were made based on the exceptional taste of the product, however, they are unable to point out the product again during the blind test (Schiffman & Wisenblit, 2015).

Other research highlighted that not only the decision making process but the experience itself can be influenced by the extrinsic characteristics of the product (Priilaid, 2006) (Torres-Moreno, Tárrega, Blanch, & Torrescasana, 2011). Priilaid (2006) demonstrated how the extrinsic attributes such as price and region can strongly influence liking of the wine by branding (Hubbard, Jervis, & Drake, 2015) (Priilaid, 2006). In other words, the brain in some ways is tasting the region and price before the actual consumption of the product (Priilaid, 2006). Considering the influence of extrinsic attributes over the consumer, some brands tend use them as a part of the differentiation strategy in order to gain a competitive advantage. In some industries the region can be associated with tradition, knowledge, adequate climate and specific basic profile of the liquid, which can positively affect the consumer's purchasing decision making process (Espejel, Fandos, & Flavian, 2007) (Vorel, 2019).

Using the Nelson(1970) classification, whiskey is a non-durable experience good and cannot be tasted prior to purchase, which means that the consumer needs to rely on the extrinsic attributes to judge it's quality. The external attributes of the whiskey are: Price, Packaging, Brand Image, Marketing, Origin ,Experience, Expectation (Lee, Paterson, & Piggott, 2001) (Schiffman & Wisenblit, 2015). A good example of the perceived quality influencer in whiskey are the regions of Scotch whisky such as Speyside, Highlands, Islay, Lowlands or Campeltown, which are usually related to the specific peated taste of the region (Vorel, 2019) (Schiffman & Wisenblit, 2015).

2.2.4 Information intensive product

Products are considered information-intensive when a considerable amount of information is required to describe it completely (Watson, Berthon, Pitt, & Zinkhan, 2009). One of the examples of such a product is wine (Bruwer & Thach, 2013). The large number of intrinsic and extrinsic information needed to evaluate the quality of the wine is significantly large (Bruwer & Thach, 2013) (Ellis D. , 2015). Deborah Ellis (2015) listed other products that should be also considered information intensive: *"information-intensive products such as wine, other beverage products (such as* ***single malt whiskey****), food products (such as cheeses), cars, art and high-tech products where large amounts of information exist and may affect consumers' behaviour."* Therefore, whiskey is also an information-intensive product (Ellis D. , 2015).

Considering whiskey cannot be evaluated before consumption (Nelson P. , 1974), the customer needs to decide which product to buy based on their current knowledge. The consumer decision making process is even more complicated when purchasing an information intensive product. The studies within the wine sector confirmed a significant correlation between level of knowledge and purchasing behaviour (Lockshin, 2003) (Ellis D. , 2015) (Bruwer & Buller, 2012). This raises the question regarding how much the knowledge influences purchasing behavior in the whiskey industry.

2.3 Consumer Purchasing Behaviour

Consumers make many conscious decisions when purchasing products every day. These choices are associated with different level of effort or involvement depending on how severe is the risk of purchase or the uncertainty about the product (Mitchell & Greatorex, 1988) (Barber, 2009). Traditionally, the consumer will either try to reduce the risk involved with the purchase or select the product with lower level of uncertainty (Barber, 2009). Bauer (1960) theory suggested that, all things being equal, the consumer will always purchase the goods with lesser risk associated with the product.

According to Bettman(1973), some of the factors that influence the perceived risk are (Mitchell & Greatorex, 1988):

- Lack of sufficient information about product
- The price is high
- Little or no experience with the brand
- The product is new on the market
- Customer has a low self-confidence
- The purchase is important to the customer
- High variation of quality between the brands

Other researchers focused on the four main perceived risks (Mitchell & Greatorex, 1988), such as:

- Financial aspect is related to the price of the product and the total disposable income of the consumer. The higher the price, the more risk is involved with the purchase.
- The physical risk refers to the quality of the product and the uncertainty related to the lack of experience with the brand or little information about the product.
- The functional involves matching the right product with the right occasion and place.
- The Social risk refers to the group approval aspect of post-purchase evaluation and it depends on the values of consumer's family or friends.

2.3.1 Purchase Decision-Making Process

The risk involved with the purchasing of the product is only one of the factors which affects the consumer purchasing decision-making process (Mitchell & Greatorex, 1988). However, consumer's decision-making process consists of multiple stages and it is influenced by various attributes. The consumer decision-making model created by Engel, Kollatt, and Blackwell (1995) proposed a five stage process for consumer decision-making, which consists of a series of actions that encapsulate the consumer's behavior (Engel, Blackwell, & Miniard, 1995). These five decision points are: 1) Problem

recognition, 2) Information search, 3) Evaluation of alternatives, 4) Purchase, 5) Post-purchase evaluation (Ashman, Solomon, & Wolny, 2015).

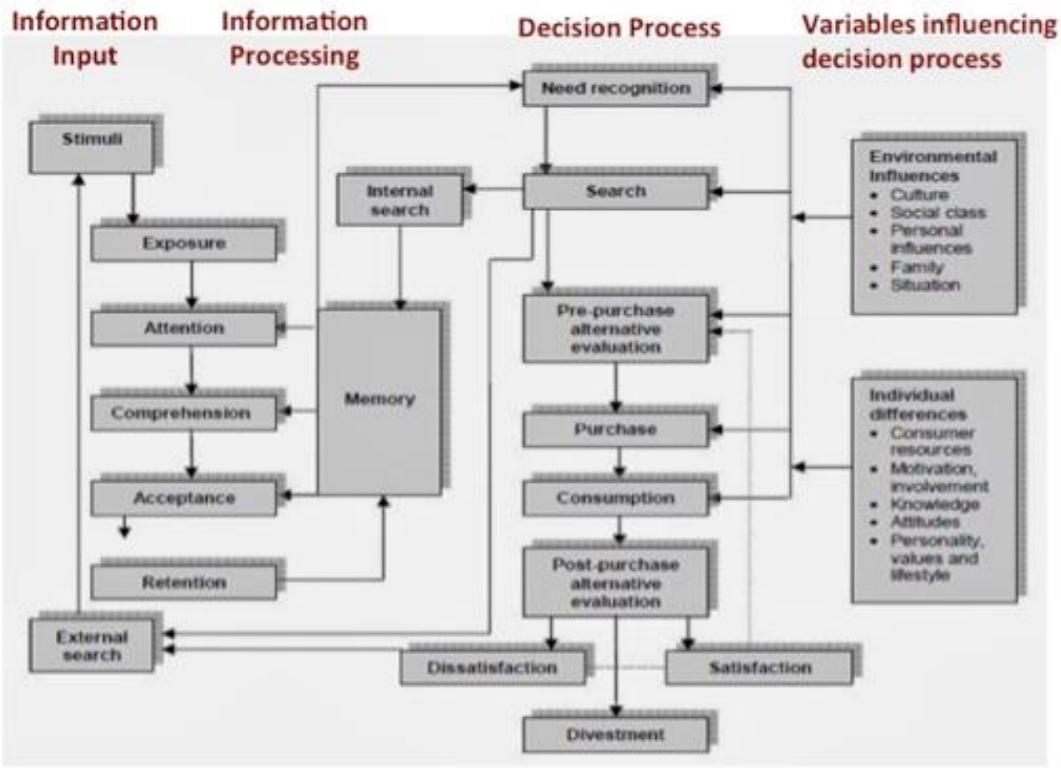

Figure 4 EBM Decision-Making Model of Engel, Blackwell and Miniard (1995)

Research suggests that one of the critical factors influencing the decision-making process is **knowledge**. It is a variable which affects all five stages of Engels (1995) model, especially information search (Flynn & Goldsmith, 1999). Higher levels of knowledge can also reduce the risk related to the purchase by lowering the uncertainty to the acceptable levels (Barber, 2009) (Barber, Dodd, & Ghiselli, 2008).

2.4 Consumer Knowledge

Product knowledge is a key information used in the product evaluation and purchasing decision making process (Raju, Lonial, & Mangold, 1995). The original concept of consumer knowledge used to be defined as unidimensional construct, often referred to as prior knowledge or a familiarity (Alba & Hutchinson, 1987). It is focused on the information stored in the memory, which is the most important part of the information processing model of human behavior (Brucks, 1985). Knowledge is known as a crucial factor affecting consumers beliefs and behaviours (Park & Sohn, 2018). It also influences the customer's understanding and processing of product attributes during the purchasing decision making process (Alba & Hutchinson, 2000) (Park & Sohn, 2018).

Various different studies attempted to define knowledge using many different types of measures, such as frequency of purchase, objective test, formal training and self-report measures (Alba & Hutchinson, 1987). None of these scales could with certainty measure the concept of prior knowledge (Brucks, 1985). In 1987 Alba & Hutchinson(1987), established a new model of consumer knowledge, which contained two major components: Familiarity and expertise. They defined familiarity as *"the number of product-related experiences that have been accumulated by the consumer"* And the expertise as " *the ability to perform product-related tasks successfully."* (Alba & Hutchinson, 1987) (Rao & Monroe, 1988) (Perrouty, d'Hauteville, & Lockshin, 2006). Familiarity is the amount of experiences with the product naturally accumulated by the consumer (Rao & Monroe, 1988) (Alba & Hutchinson, 2000). The extent of familiarity or experiences with the product, prior to and external searches, leads also to increased expertise within the product class. (Dodd, Laverie, Wilcox, & Duhan, 2005) (Perrouty, d'Hauteville, & Lockshin, 2006) (Alba & Hutchinson, 2000). Therefore, the exposure to any marketing promotional techniques and the number of encounters with the product develops both the familiarity and expertise (Ellis D. , 2015) (Alba & Hutchinson, 1987).

Merrie Brucks(1985) took a different approach to measure consumer knowledge, which highlights a distinction between the three main categories (Ellis D. , 2015):

- Prior experience
- Objective knowledge

- Subjective knowledge

Studies highlighted that the experience and knowledge are not the same concept, however, knowledge is accumulated during continues encounters with the product (Raju, Lonial, & Mangold, 1995). The experiences during the product usage, product ownership or education related to the product class develops the basis of consumer knowledge (Dodd, Laverie, Wilcox, & Duhan, 2005). This is why the objective and subjective knowledge were found positively related to the level of consumer's experience (Dodd, Laverie, Wilcox, & Duhan, 2005) (Ellis D. , 2015).

The Objective knowledge refers to what the consumer actually knows about the topic (Brucks, 1985). It is the information stored in the memory and ability to use these facts to answer the questions correctly (Brucks, 1985) (Ellis D. , 2015). The subjective knowledge relates to what the individual perceives they know about the product, also called self-rated knowledge (Aertsens, Mondelaers, Verbeke, Buysse, & Huylenbroeck, 2011) (Brucks, 1985). The differences between the two types of knowledge occur when the consumers do not accurately estimate their actual knowledge (Aertsens, Mondelaers, Verbeke, Buysse, & Huylenbroeck, 2011). This relates to the individual's confidence in their accumulated information about the product used in the decision making process (Alba & Hutchinson, 2000).

2.4.1 Objective Knowledge

Objective knowledge is referred to as "actual" knowledge (Raju, Lonial, & Mangold, 1995). It is the factual information (Schiffman & Wisenblit, 2015) stored in a person's long-term memory, which an individual uses to evaluate the quality of the product (Ellis D. , 2015). The consumer can demonstrate their objective knowledge using objective test, where the higher score on the test results in individual's superior product related knowledge (Raju, Lonial, & Mangold, 1995). The objective knowledge contains information such as extrinsic(price, packaging, brand image, marketing, origin) and intrinsic (appearance, aroma, taste, mouthfeel, aftertaste) attributes (Lee, Paterson, & Piggott, 2001) (Schiffman & Wisenblit, 2015).

What the consumer knows about the product is a major factor which influences many of the consumer's behaviours (Flynn & Goldsmith, 1999) (Barber, Dodd, & Ghiselli, Capturing the Younger Wine Consumer, 2008). A number of researches connected the consumer knowledge to the purchase decision-making process (Ellis D. , 2015). The product knowledge plays a major role in each stage after the consumer recognizes the need for the product. Some of the critical areas influenced by the knowledge are: pre-purchase information search, evaluation of purchase alternatives, attributes considered during evaluation, consumer's decision to purchase and post-purchase evaluation (Schiffman & Wisenblit, 2015).

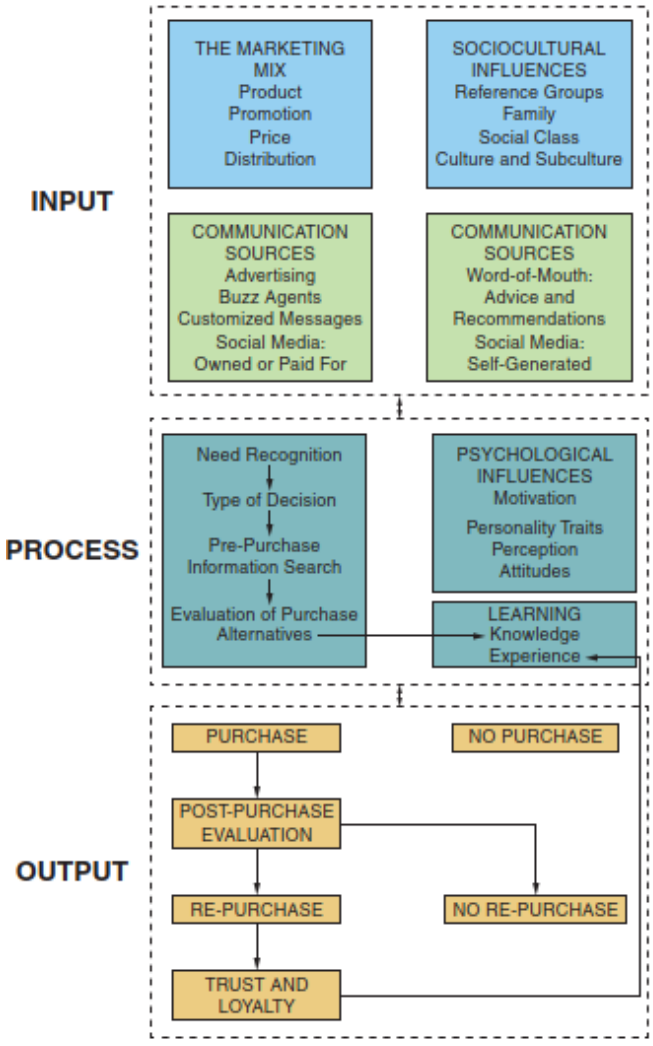

Figure 5 Consumer Decision-Making Model (Schiffman & Wisenblit, 2015)

The consumers with high a level of knowledge are considered to have a different knowledge structure and use this knowledge in different ways compared to the individual with lower levels of knowledge (Perrouty, d'Hauteville, & Lockshin, 2006). Experts tend to be more efficient in selecting the information during product research and make their decision based on the important attributes (Alba & Hutchinson, 1987) rather than being influenced by the marketing information (Ellis D. , 2015). The higher level of objective knowledge lowers down the uncertainty levels and reduces the effort put in by the consumer (Barber, 2009). The experts spent less time on researching resources and can comprehend more relevant information. This way they can focus on analyzing the product or adding more information about its alternatives to their knowledge structure (Alba & Hutchinson, 1987) (Barber, 2009).

Research connected high objective knowledge with a higher number of attributes used by consumers when evaluating alternative options (Brucks, 1985). More knowledgeable individuals seek more information about the product simply because they are aware of a larger number of important attributes (Alba & Hutchinson, 1987) (Ellis D. , 2015). Experts knowledge is much richer and tend to use different attributes than novices, to evaluate the quality of the product (Perrouty, d'Hauteville, & Lockshin, 2006). Bruwer and Buller (2012) research found that higher objective knowledge is positively correlated to use intrinsic over the extrinsic attributes. Novices tend to select attributes such as brand name, price (Rao & Monroe, 1988) or country of origin (Bruwer & Buller, 2012) as an indicator of the quality due to low level of intrinsic information stored in their memory (Rao & Monroe, 1988). On the other hand, experts will focus on more intrinsic characteristics, such as taste, functionality, style/type or variety (Bruwer & Buller, 2012).

Consumer knowledge has been linked to increased efficiency of the search activity and ability to ask more relative questions. Experts tend to use the wider range of the known attributes to ask a higher number of questions related to the product and its alternatives (Perrouty, d'Hauteville, & Lockshin, 2006) (Brucks, 1985). However, novice consumers were found to research more information about inappropriate alternatives, which wasted their time and effort (Brucks, 1985).

2.4.2 Subjective Knowledge

Subjective knowledge measures the individual's perception of how much she/he knows (Brucks, 1985). It is a self-assumed knowledge (Ellis D. , 2015), which plays an important role in consumers memory structure and problem solving (Raju, Lonial, & Mangold, 1995). Both OK(Objective knowledge) and SK(Subjective knowledge) were found to be positively correlated (Dodd, Laverie, Wilcox, & Duhan, 2005). However, they were also found to have different effects on consumer's information processing (Flynn & Goldsmith, 1999). Raju et al. (1995) suggested that "*subjective knowledge is a combination of knowledge and self-confidence".* Therefore measuring this subjective knowledge not only tests consumers actual knowledge but also indicates the level of a person's confidence about the product class (Alba & Hutchinson, 2000) (Brucks, 1985). The SK is typically measured with the self-report style questionnaires (Raju, Lonial, & Mangold, 1995), using a 1-7 Likert scale to record the answers (Flynn & Goldsmith, 1999).

Subjective knowledge has been found more related to the product experience than Objective knowledge (Flynn & Goldsmith, 1999). Raju et al. (1995) mentioned that SK was a better predictor to purchase decision satisfaction. Therefore, during the Post-evaluation stage the subjective knowledge influences the consumer's decision on whether the experience was positive or negative (Barber, Dodd, & Ghiselli, 2008).

The SK has also been shown to be a stronger motivator of purchase-related behaviour than Objective knowledge (Flynn & Goldsmith, 1999). Higher levels of subjective knowledge were found to significantly and positively influence consumer's willingness to purchase as well as individual's attitude towards the product or behaviour (Aertsens, Mondelaers, Verbeke, Buysse, & Huylenbroeck, 2011). Researchers found that subjective knowledge was a powerful predictor of consumer behaviour towards green consumption (Park & Sohn, 2018) and commitment to recycling, source reduction and political action (Aertsens, Mondelaers, Verbeke, Buysse, & Huylenbroeck, 2011).

According to Brucks(1985), people with higher subjective knowledge appear to be more efficient when searching information about the product class. These individuals search less information but consider more product attributes to be important than novices (Ellis

D. , 2015). However, this group is also more likely to incorrectly interpret information about the product due to their high subjective knowledge (Alba & Hutchinson, 1987).

On the other hand, consumers with low subjective knowledge are more likely to ask a salesperson or a friend for recommendations. They are also more likely to purchase products in an environment with a wide range of choices (Ellis D. , 2015). According to Ellis (2015) research, the subjective knowledge was positively related to consumer opinion leadership and negatively to the opinion seeking behaviour.

2.4.3 Knowledge implications within Marketing strategy

Understanding the consumer's needs and wants helps marketers to analyze and develop the most efficient market strategy for the target segment (Cravens & Piercy, 2009). Selecting the right strategy for the important four "P's" of the marketing mix is a crucial factor in creating a successful product offering (Ellis & Pitt, 2015). However, many marketers are neglecting the aspect of knowledge, subjective or objective, when investigating behavior of the target segment (Ellis D. , 2015). The questions such as "what the customer knows about the product" or "what are their levels of subjective and objective knowledge" can affect consumer behaviour. According to Flynn (1999) both SK and OK influences all stages of Engel et al. (1995) decision making process. Therefore, the consumer's knowledge can have a major impact on the purchasing behavior, especially considering the information-intensive products such as whiskey, wine or cheese (Ellis & Pitt, 2015) (Bruwer & Thach, 2013). To maximize the effectiveness of the marketing strategy the brand should target specific segments of the market based on the consumer's knowledge (Ellis & Pitt, 2015).

For instance, researchers found individuals with lower objective knowledge were more often using extrinsic attributes to evaluate the quality of the product (Bruwer & Buller, 2012). Consumers with little knowledge within the product class would use these product characteristics, such as Brand name, image, packaging, region, label attractiveness, age, price, distillery or recommendation by others, to lower their uncertainty levels in regards

to quality of the product (Lockshin, Jarvis, d'Hauteville, & Perrouty, 2006) (Ellis D. , Consumer knowledge and its implications for aspects of consumer purchasing behaviour in the case of information-intensive products, 2015) (Espejel, Fandos, & Flavian, 2007) (Chiciudean, Muresan, & Funar, 2016). The marketers should select a strategy that will focus on extrinsic features when targeting novices.

Packaging is one of the crucial extrinsic attributes, which plays an important role in determining the purchasing decision. The design of the container encapsulates a marketing message to the consumer, which can lower or increase perceived value of the product for the consumer if wrongly dressed. In the whiskey industry, it is vital for marketers to select the right design for a bottle, labels and gift/outer packaging that would reflect the target consumer's knowledge levels (Russell & Graham, 2003).

Novices tend to look for quality assurance in the reputation of the brand or the distillery name (Rao & Monroe, 1988). The history of the brand can be a major factor in the marketing positioning of the product. Torres-Moreno et al. (2012) research suggests that brand's reputation can affect customers sensory perception and influence individual's purchasing intent (Hubbard, Jervis, & Drake, 2015). Equally, the company's trademark or a logo can influence the consumer the same way as it's closely associated with the brands name or reputation. These designs can have a significant meaning to the consumer based on the previous experience or a recommendation from a friend, which affects their purchasing decision making process (Russell & Graham, 2003) (Ellis D. , 2015). The image could be also recognized by the non-users from the advertisement or other means of communications, which could attract new customers to purchase the product (Russell & Graham, 2003).

Another major factor influencing purchasing behavior is the design and the information included on the label, which is full of extrinsic attributes of the product. Consumers with limited or no knowledge on the subject of whiskey may be influenced by the awards or medals displayed on the label (Schiffman & Wisenblit, 2015) (Ellis D. , 2015). Novices would use the place of origin as an indicator of the intrinsic attributes (Bruwer & Buller, 2012), such as peat aromas of scotch whisky that differ per the region of Scotland (Vorel, 2019). According to Priilaid (2006) country of origin can influence the customer's

perception of the quality to the point where it improves the sensory experience. Therefore, the country of origin, awards and label design should be an important part of the marketing strategy.

Furthermore, pricing is another crucial part of marketing strategy that significantly influences customers brand choice (Russell & Graham, 2003). Marketers can select the low pricing strategy to target the novice consumers who tend to purchase low cost products (Ellis D. , 2015). This behavior is related to the fact that purchasing something expensive without having knowledge creates a lot of uncertainty and risk (Mitchell & Greatorex, 1988). At the same time these unexperienced buyers might use the price as an indicator of quality. The higher price indicates better quality, which influences their decision to purchase an expensive product for special occasions without knowing much more about the product (Ellis D. , 2015). However, it is important to remember that the price needs to reflect the benefits offered by the product (Russell & Graham, 2003). Individuals with a higher level of knowledge may evaluate all the attributes of the product and deem it overpriced. Selecting higher selling price for the product without offering matching amount of benefits will eventually result in loss of market share (Russell & Graham, 2003).

The marketing channels also play a major role in marketing mix and it is significantly influenced by the consumer knowledge. Russell & Graham (2003) suggested that "*The optimum channel is usually selected based on the channel that is the most efficient at meeting the needs and servicing the demand of the specific consumer segment being targeted"*. Marketers who want to attract the novice buyers might choose supermarkets as the intensive distribution channel. The company that targets the experts/connoisseurs in the field will need to hire skilled and knowledgeable staff and choose high-end outlets to sell their product. This type of a consumer is looking for a technical and detailed message from the brand about the product and wants to be taken seriously (Beverland, 2003).

Similarly, the promotion piece of the marketing mix needs to reflect the target segment knowledge levels. The connoisseurs are reaching for more technical texts usually in specialist magazines, such as Irish Whiskey Magazine. On the other hand, the novice

consumer will respond to the mass communication and less technical form of advertisement and promotions (Ellis D. , 2015).

From a marketing perspective, the research into the impact of knowledge on consumer behaviour can be crucial to the segmentation of the market, which would lead to changes to the overall marketing strategy.

2.4.4 Segmentation

Walter Weir (1960) described the market as: "'*The market is not a single, cohesive unit; it is a seething, disparate, pullulating, antagonistic, infinitely varied sea of differing human beings – every one of them as distinct from every other one as fingerprints; every one of them living in circumstances different in countless ways from those in which every other one of them is living."* (Weir, 1960) (Yankelovich, 1964) (Geraghty & Torres, 2009). Therefore, the market consists of diversified groups, which should be treated differently.

Schiffman & Wisenblit (2015) stated that segmentation is a critical component of the strategic marketing framework, which recognizes the markets diversity and similarities in order to satisfy consumer needs. Johnson & Bastian (2015) reinforced this by saying that "*understanding and meeting consumer needs is the most powerful business tool*". For this reason the marketers should use the process of segmentation, which provides a clearer view of the market segment's needs and wants (Geraghty & Torres, 2009) (Yankelovich, 1964). Focusing on a single segment will allow the brand to focus their efforts into creating specifically designed products or promotional strategies that will satisfy the needs of the targeted consumer segment. This clear view of the target segments allows marketers to move to the next two elements of the strategic framework: Targeting and Positioning (Schiffman & Wisenblit, 2015).

Considering the importance of segmentation in marketing (Schiffman & Wisenblit, 2015) and how knowledge effects the consumer behaviour (Engel, Blackwell, & Miniard, 1995), there is very little research done into the knowledge based segmentation of information-intensive product consumers (Ellis D. , 2015).

Deborah Ellis (2015) created a segmentation tool for wine consumers, which focused on the product knowledge (Objective knowledge and Subjective knowledge). This model was found to have a managerial relevance for marketing decision makers in the wine industry, but also in all information intensive products, such as whiskey, cheese or art (Ellis & Pitt, 2015). The grid identifies four types of wine drinkers based on their perceived and actual knowledge:

- Neophyte- Individuals who scored low on both types of question.
- Modest- People with high factual knowledge but perceive themselves as novices
- Snob- Those who scored high on subjective but low on objective knowledge questions.
- Expert- Consumers with the high knowledge level on both facets.

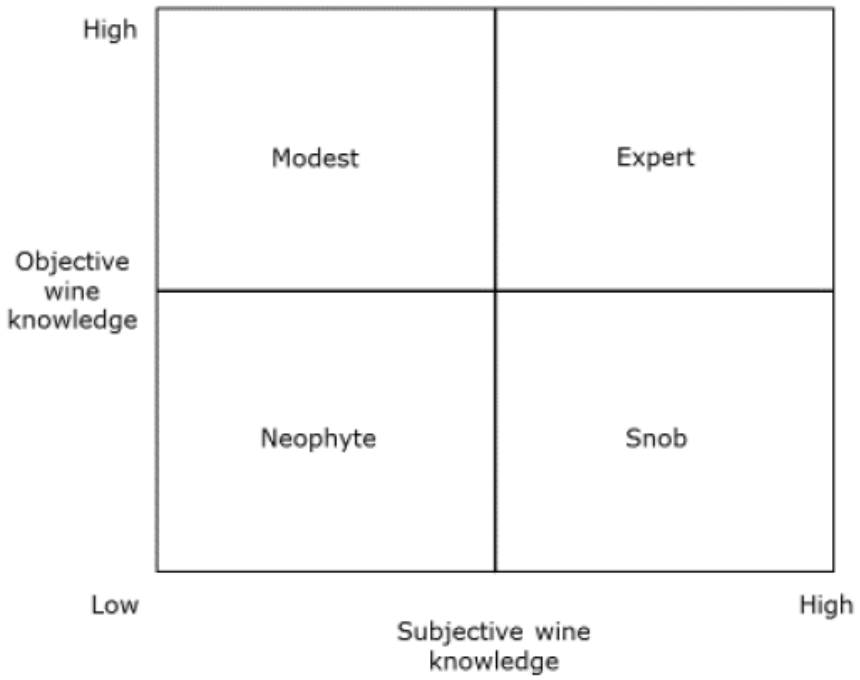

Figure 6 Wine Knowledge Types (Ellis D., 2015)

The segmentation tool designed by Ellis(2015) can provide a powerful insight into the segmentation of information-intensive products, which allows the marketers to create effective and efficient strategies via all elements of marketing mix (Ellis & Pitt, 2015).

2.5 Exploratory Behaviour

For most companies staying ahead of competition requires a significant investment into R&D. Continuous improvement and investment into New Product Development (NPD) signifies the future of the business. These new investments create an opportunity to acquire new revenue streams or expand a company's market share (Orth & Bourrain, 2005). Researchers linked creating and releasing new products to the successful differentiation of the brand, which can be used as a marketing strategy (Trijp & Kleef, 2008). However, this approach generates additional challenges. Businesses are required to find the best practices to stimulate the consumers to purchase their new products. This can be quite tricky as purchasing unknown products is related to uncertainty about quality and usually perceived as risky (Orth & Bourrain, 2005).

Many researchers focused their work on developing a list of motivating influences of purchasing behaviour. The reoccurring theme of "desire for exploration" has generated a significant amount of attention due to the inability to be explained by any traditional information-processing models (Baumgartner & Steenkamp, 1996) (Trijp, Hoyer, & Inman, 1996) (Raju, 1980) (Ellis D. , 2015). Researchers such as Holbrook and Hirschman have proposed that exploratory behaviour is influenced by experiential or hedonic motives rather than a utilitarian aspect of the offering (Holbrook & Hirschman, 1982) (Trijp, Hoyer, & Inman, 1996) (Ellis, Pitt, & Caruana, 2015). Examples of consumer behaviour that has been linked to exploratory purchasing include risk taking when making purchasing decisions, innovativeness in selecting and implementing the newest technologies, variety seeking purchasing and curiosity motivated information seeking (Baumgartner & Steenkamp, 1996) (McAlister & Pessemier, 1982). Consumers who experience this behaviour of switching brands for intrinsic stimulation are considered variety-seekers (Kahn, Kalwani, & Morrison, 1986).

2.5.1 Optimum Stimulation Level

The theory of optimum stimulation level (OSL) explains individual's responses to the environmental stimuli (Raju, 1980), which describes how a person's behaviour is

intrinsically motivated to reach a specific level of stimulation (OSL) (Orth & Bourrain, 2005). Hebb (1955) and Lueba(1955) argued in their papers that every organism has a preferred level of stimulation, which is called “optimum level of stimulation”. Each individual has a different level of OSL, which is continuously monitored and modified (Raju, 1980). The stimulation types can be characterized as novelty, ambiguity, complexity (Raju, 1980) or unexpectedness (McAlister & Pessemier, 1982). If the stimulation levels gathered from the environment are too low (i.e. boredom, satiation), the individual will attempt to increase the level towards their OSL (Orth & Bourrain, 2005) (Trijp, Hoyer, & Inman, 1996). The behaviour of modifying the stimulation level by an individual can be described as the exploratory behaviour (Raju, 1980). The consumers with the higher level of OSL are hypothesized to have higher levels of exploratory behaviour due to a continuous need to restore the stimulation to the optimum level (Trijp, Hoyer, & Inman, 1996).

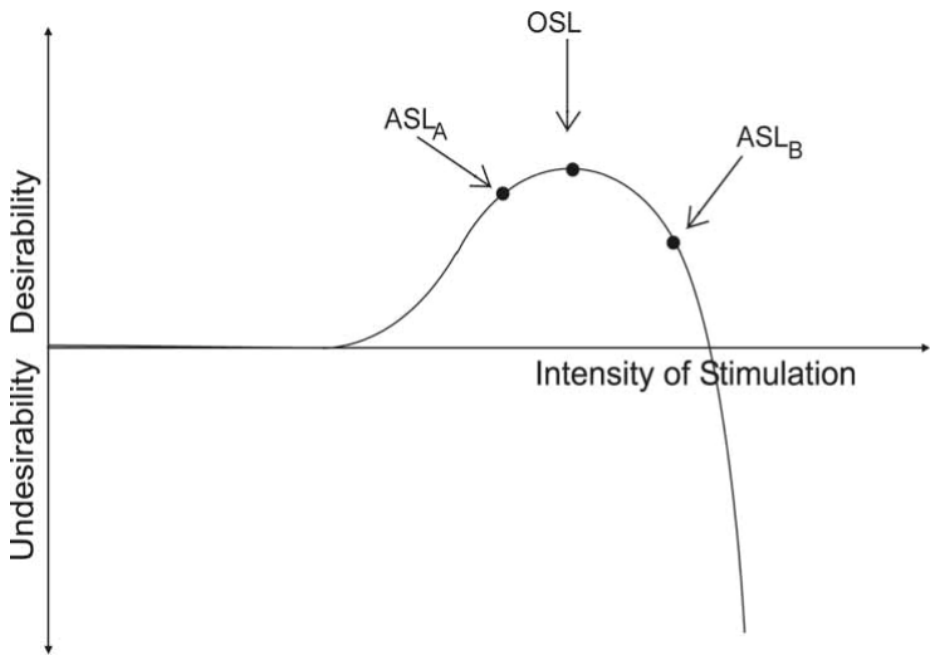

Figure 7 OSL Theory (Orth & Bourrain, 2005)

Further research by Baumgartner and Steenkamp (1996) has highlighted the fact that the OSL may not be the only parameter that affects the variety seeking behaviour, but the discrepancy between the OSL and the actual stimulation level (ASL). This view proposes that the variety seeking behaviour will only occur when the action will provide enough stimulation level to fill the gap between ASL and OSL (Baumgartner & Steenkamp, 1996) (Trijp, Hoyer, & Inman, 1996).

2.5.2 Risk Taking, Variety Seeking and Curiosity

Raju's (1980) basic motivations for exploratory behaviour are a significant factor in many studies of purchasing behaviour (Baumgartner & Steenkamp, 1996) (Trijp, Hoyer, & Inman, 1996) (Orth & Bourrain, 2005) (Ellis D. , 2015). The three main exploratory tendencies explained in the research are:

1. Risk taking
2. Variety seeking
3. Curiosity

The risk-taking tendency is linked to selection of the unknown alternative with high level of uncertainty (Orth & Bourrain, 2005). The Variety seeking has been described as the aversion to the repetitive behaviour and to brand switching (Raju, 1980). The difference between these two aspects lies in knowledge about the product, where one behaviour switches between known alternatives within product class and the other chooses to purchase unfamiliar brands (Ellis, Pitt, & Caruana, 2015). The last aspect of the exploratory tendencies is curiosity and it involves exploration in information seeking, shopping and interpersonal communication (Raju, 1980) (Orth & Bourrain, 2005).

2.5.3 Variety seeking and derived variety behaviour

Separately to Raju's (1980) research, McAlister and Pessemier (1982) created a model that divides the exploratory behavior into two classes based on the source of motivation: "Derived" and "Direct". Derived switching behaviour is imposed externally and it is not related to the willingness to change (Ellis, Pitt, & Caruana, 2015). The Direct motivator is

a result of a person's need for a change and to increase the stimulation levels to decrease the individual's boredom (Trijp, Hoyer, & Inman, 1996).

The influencing factors of derived variation include: "multiple needs" and "changes in the choice problem". The customer maybe purchasing products for multiple users in the household with separate individual preferences, which can result in different choices each time the customer shops. The product switching may also occur when a behaviour is dictated by a situation. In this case the consumer may choose a more expensive brand, such as special celebrations.(McAlister & Pessemier, 1982). The second factor of derived motivation is "changes in the choice of problem". It relates to the changes in available alternatives on the market, tastes or features of the currently preferred product or sudden change in individual's life. One might be influenced by changes in the alternative products, such as price, quality, availability or packaging. Another customer might be forced to look for a better solution on the market due to a change in taste of the current product. Financial problems could also be a significant factor in a person's purchasing behaviour (McAlister & Pessemier, 1982).

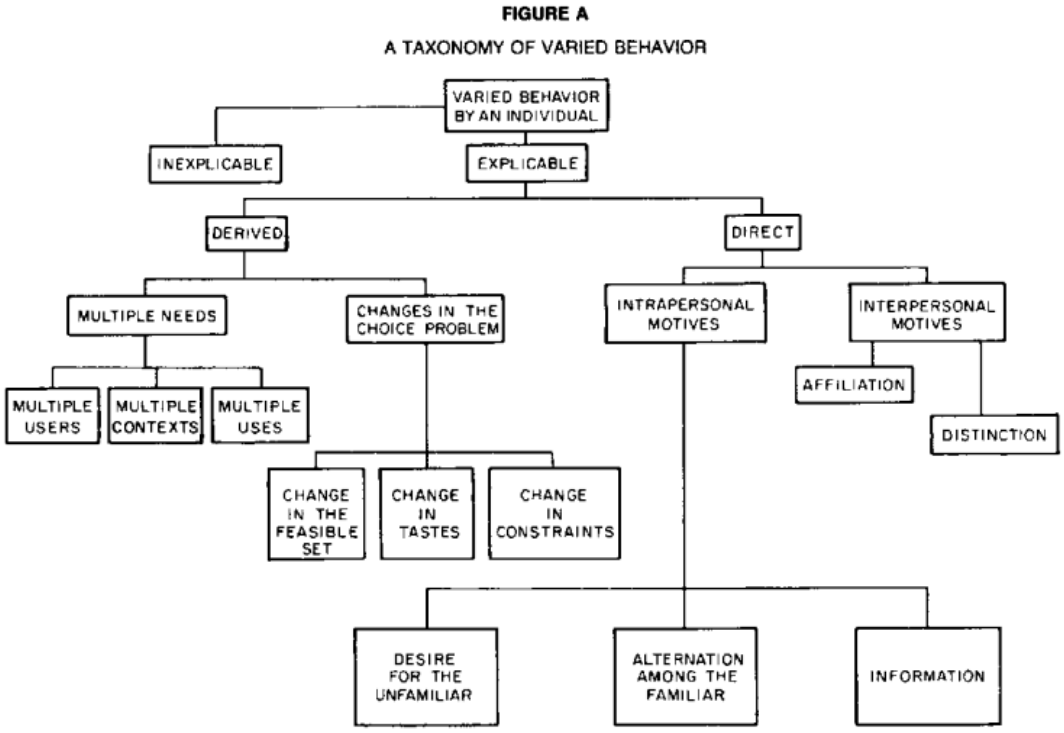

Figure 8: A Taxonomy of Varied Behavior (McAlister & Pessemier, 1982)

Direct switching is known as true variety seeking behaviour as the source of motivation is intrinsically rewarded to the individual (Trijp, Hoyer, & Inman, 1996). This type of exploratory behaviour is characterized by the intrapersonal and interpersonal motives (McAlister & Pessemier, 1982).

The intrapersonal aspect is linked to the consumer's OSL levels and the desire of the unfamiliar. The variation in choice is solely related to the desire to increase the stimulation levels by purchasing variety of products (Trijp, Hoyer, & Inman, 1996). This type of variety seeking behaviour relates to switching between familiar alternatives and trying products outside of a known class (McAlister & Pessemier, 1982). An example of such a behaviour would be to purchase a new brand based only on the fact it's a new release and it looks interesting (Ellis, Pitt, & Caruana, 2015).

The intrapersonal motives are highlighting the desire for group affiliation or seeking originality. Many people are looking to become a member of a social group, which can influence their purchasing behaviour towards similar items selected by the members of the group. Others try to manifest their uniqueness in selecting products which would differentiate them from others (McAlister & Pessemier, 1982).

2.6 Deborah Ellis: Consumer knowledge and its implications

Deborah Ellis (2015) researched the implications of consumer knowledge on aspects of purchasing behaviour in the case of information-intensive products. The research focused on the wine consumer sector and their behaviour. Wine consumers face a difficult choice when making a purchasing decision considering the wide range of choices available on the market (Ellis, Pitt, & Caruana, 2015). The effect of knowledge on the consumers purchasing behaviour proved to be significant (Ellis D. , 2015).

The framework used by Ellis(2015) focused on multiple aspects of consumer behaviour, such as:

1. Segmentation of consumers based on their knowledge and how it relates compared to demographics. This type of classification of wine consumers provides significant managerial insights.

2. The relationship between consumer knowledge and the exploratory purchasing behaviour.
3. Investigation into the connection of consumer knowledge and the opinion seeking/opinion leadership behaviour.

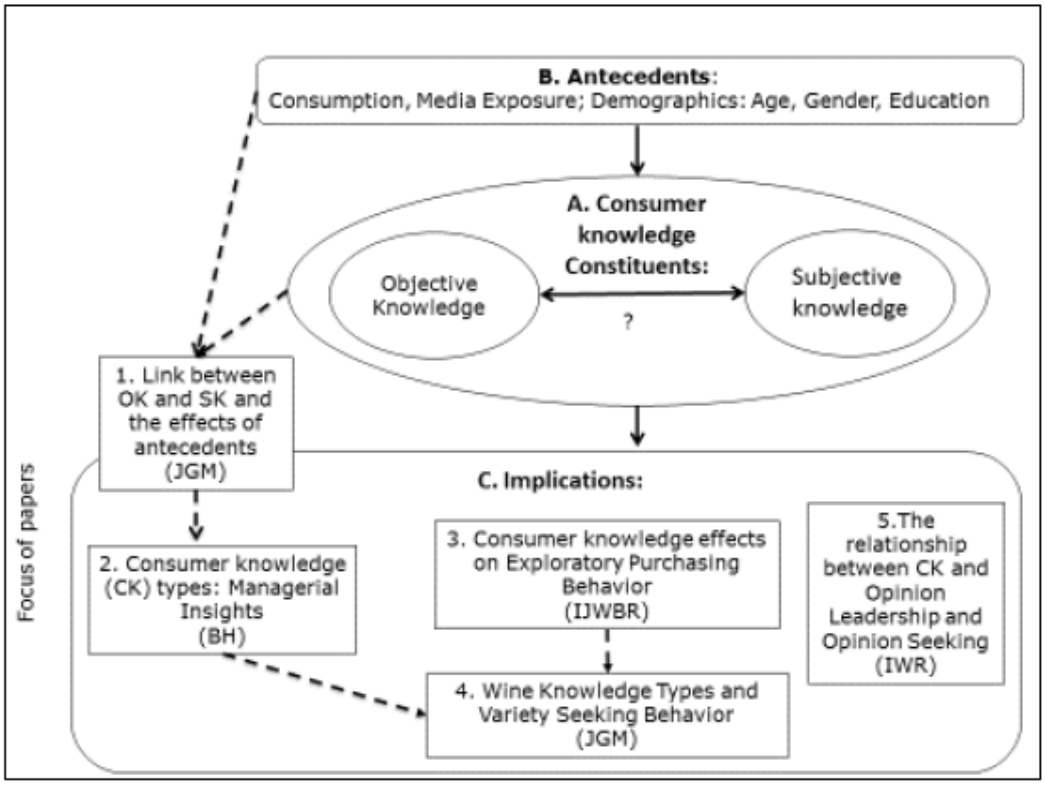

Figure 9 Deborah Ellis Doctoral Thesis Framework (Ellis D., 2015)

2.6.1 Subjective knowledge Test

Ellis (2015) used the Flynn's and Goldsmith's (1999) scale to measure the subjective knowledge of the responders. This scale provides a valid and reliable measure for the researchers to investigate the effects of subjective knowledge in areas of decision making and information search (Flynn & Goldsmith, 1999). Companies can perform basic segmentation based on the objective and subjective knowledge and use different strategies to target these specific customer groups (Schiffman & Wisenblit, 2015).

I feel quite knowledgeable about wine
Among my friends, I'm one of the "experts" on wine
I rarely come across a wine that I haven't heard of
I know pretty much about wine
I do not feel very knowledgeable about wine (R)
Compared to most other people, I know less about wine (R)
When it comes to wine, I really don't know a lot (R)
I have heard about most of the new wines that are around

Figure 10 Deborah Ellis subjective knowledge questions based on Flynn and Goldsmith scale (Ellis D. , 2015)

2.6.2 Objective knowledge test

The test for the objective knowledge used in the Ellis (2015) questionnaire was a combination of five items from Forbes' article about wine knowledge and expanded by an additional five question's created by authors of the article (Ellis, Pitt, & Caruana, 2015). The ten-item scale tests the participants knowledge about wine, where ten is the maximum points to receive and the lowest is zero. (Ellis D. , 2015).

Question	Answer Choices (Correct choice in *italics*)
Which of the following is a red wine?	Riesling Chardonnay *Merlot* Sauvignon Blanc Don't know
A peppery character is most associated with which wine?	Merlot *Shiraz/Syrah* Semillion Pinot Noir Don't know
Which grapes are never used to make Champagne?	Chardonnay *Riesling* Pinot Noir Pinot Meunier Don't know
Which is not a famous French wine region?	Bordeaux Champagne *Rheingau* Alsace Don't know
Which is the name of New Zealand's famed Sauvignon Blanc region?	Kapiti Hawkes Bay Waipara *Marlborough* Don't know
Which state in the USA grows more Riesling than any other and is home to the world's largest Riesling producer, Chateau Ste. Michelle?	California Oregon *Washington* New York Don't know
Which of the following red wine grapes originated in South Africa and is used to make red wine there?	Tempranillo Nebbiolo Cabernet Franc *Pinotage* Don't know
What red wine grape is Chile most famous for?	Malbec *Carmenere* Zinfandel Syrah Don't know
When grapes are affected by Botrytis Cinerea, the wines that are made from them are	Very dry Spoiled *Very sweet* Very high in alcohol Don't know
Who is the largest producer of wine in the USA?	*E&J Gallo* Robert Mondavi Opus One Kendall-Jackson Don't know

Figure 11 Objective Test (Ellis D. , 2015)

2.6.3 ECT – Exploratory behaviour Test

For the measurement of the exploratory behaviour, Ellis (2015) used the six-item scale developed by Van Trijp et al. (1996). The scale measures the exploratory consumer tendencies (ECT), which is based on the Baumgartners and Steenkamps (1996) Exploratory and Acquisition of Products (EAP) scale. The EAP scale was developed to measure the *"consumer's tendency to seek sensory stimulation in product purchase through risky and innovative product choices and varied and changing purchase and consumption experiences"* (Baumgartner & Steenkamp, 1996). However, the Van Trijp et al.(1996) version has been shortened to a six-item scale and reported a unidimensional structure with alpha coefficient of 0.79 (Trijp, Hoyer, & Inman, 1996) (Ellis, Pitt, & Caruana, 2015).

I would rather stick with a wine brand I usually buy than to try something I am not sure of (R)
When I buy wine in a wine store, I feel it is safer to buy wines that I am familiar with (R)
If I like a wine brand, I rarely switch from it just to try something different (R)
I am very cautious in trying new or different wines (R)
Even though certain wine brands make wines from a number of different grapes, such as merlot, cabernet sauvignon and shiraz, I tend to buy the same wine each time (R)
I enjoy taking chances in buying unfamiliar wines just to get some variety in my purchases

Figure 12 Ellis (2015) exploratory behaviour questions based on Van Trijp et al. (1996) ECT scale

Chapter 3 – Research Methodology

3.0 Research Methodology

Chapter Overview

This chapter contains the methods used to research and analyze available information regarding the consumer behaviour and whiskey product, and the data gathering methodology used in this study. This section will also provide an insight into the research process and explore the techniques selected to produce the valid results.

3.1 Research Question

Creswell (2014) stated that *"quantitative research questions inquire about the relationships among variables that the investigator seeks to know".* Malhotra, Nunan and Birks (2017) added that the research questions are "*refined statements of the components of the problem (..) which ask what specific information is required with respect to the problem components".*

The research should be guided by the theoretical framework or model, which will provide help with formulating research questions. The researcher's role is to identify and define the actual problem, which is the most important part of the project (Malhotra, Nunan, & Birks, 2017). The research success depends on the clarity of conclusions, which results from collected data. Incorrect problem definition statement within the research question will affect the clarity of the conclusion (Saunders, Lewis, & Thornhill, 2012).

The main question of this paper is: *"What is the impact of consumer knowledge on exploratory purchasing behaviour in the Whiskey Consumer Sector?"*

3.1.1 Research Objectives

Sounders, Lewis and Thornhill (2012) defined research objectives as *"evidence of the researcher's clear sense of purpose and direction".* Creswell and Creswell (2012) reinforced the idea saying *"that the objective shapes and specifically focus the purpose of the study".* The researchers use this to design the process for the project, which enables them to answer the research question (Malhotra, Nunan, & Birks, 2017).

To achieve the goal of this study the research will be broken into the following objectives (Malhotra, Nunan, & Birks, 2017):

6. To identify risks involved in purchasing whiskey and how does it compare to other similar products on the market.
7. To do an in-depth review of consumer knowledge and determine to what extent does it impact consumer's purchasing behaviour.
8. To research the exploratory behaviour and possible correlation with knowledge.
9. To identify measuring scales for knowledge and exploratory behaviour.
10. Gather and analyze data from the whiskey consumer to determine possible link between knowledge and exploratory purchasing behaviour.

3.1.2 Research Hypothesis

Malhotra, Nunan and Birks (2017) stated that "*hypothesis is an unproven statement or proposition about a factor or phenomenon that is of interest to the researcher".* In quantitative research the hypothesis signifies the predictions made by the researcher relating to the expected outcome of the relationship between researched variables (Creswell & Creswell, 2018). The role of hypothesis is to suggest the variables, which needs to be tested in the research. This is a significant part of the research problem as it will guide the project team on what and how the data has to be collected and analyzed (Malhotra, Nunan, & Birks, 2017).

Based on the research done by Deborah and Ellis on the knowledge effects on the exploratory acquisition of wine (Ellis, Pitt, & Caruana, 2015), similar hypotheses will be used in this paper to explore whiskey consumer's behaviour:

H1. Higher level of Objective knowledge of whiskey results in higher exploratory purchasing behaviour of whiskey

H2. Higher level of Subjective knowledge of whiskey results in higher exploratory purchasing behaviour of whiskey

3.1.3 Secondary research

Malhotra, Nunan and Birks (2017) stated that Secondary research is the *"data that have already been collected for purposes other than the problem at hand* ". This data is a key component of a successful research project. In order to meet the objectives of the research, a significant amount of data needs to be collected and analyzed. Gathered information can help with designing the sample of participants, formulating the questionnaire and setting the criteria for evaluating the responses. The examples of such data are: Books, Journals, Government publications or newspaper reports (Saunders, Lewis, & Thornhill, 2012; Creswell & Creswell, 2018; Malhotra, Nunan, & Birks, 2017). Saunders, Lewis & Thornhill, (2016) explained that secondary research consists of either raw data with little or no processing or compiled data that has some form of purpose and conclusion. Figure 13. from Saunders, Lewis & Thornhill, (2016) provides an overview of types of secondary research sources:

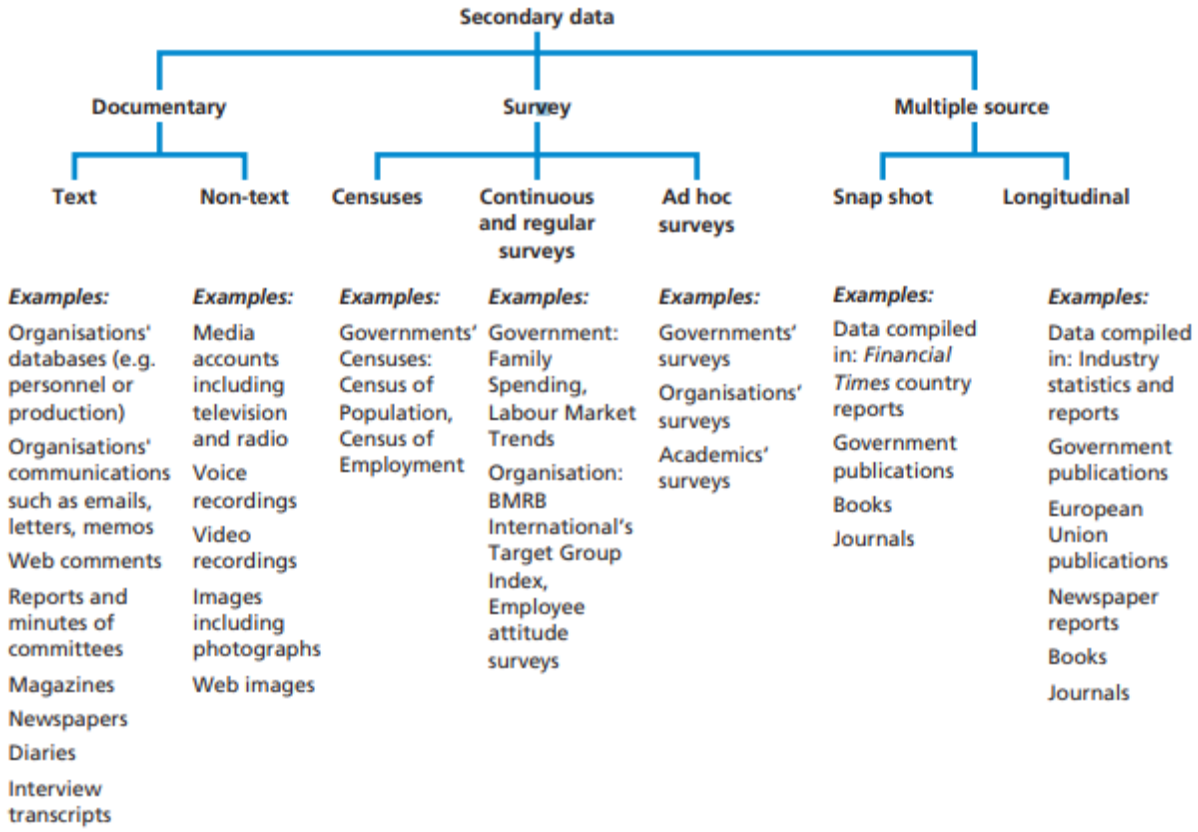

Figure 13 Types of Secondary Data (Saunders, Lewis, & Thornhill, 2012)

Creswell & Creswell, 2018 added that for a quantitative research methodology, the secondary data includes a substantial amount of research as it provides the direction for research questions and hypothesis. It can also introduce a theory or a framework, which can be an explanation for the expected correlation between the variables (Creswell & Creswell, 2018). To test the correlation between exploratory behaviour and consumer knowledge, this paper will follow the framework used in Ellis (2015) research within the wine consumer sector.

3.2 Research Methodology

Research methodology is the main factor that influences the way of answering the research question (Saunders, Lewis, & Thornhill, 2012). Creswell & Creswell (2018)

described the research methodology as a process that *"involves segmentation and taking apart the data (…) to make sense of the text and image data".*

For this research paper the methodology is based on the "Research Onion" (Figure 14), which Saunders, Lewis, & Thornhill (2012) described as *" a way of depicting the issues underlying your choice of data collection method or methods and peeled away the outer two layers – research philosophies and research approaches".*

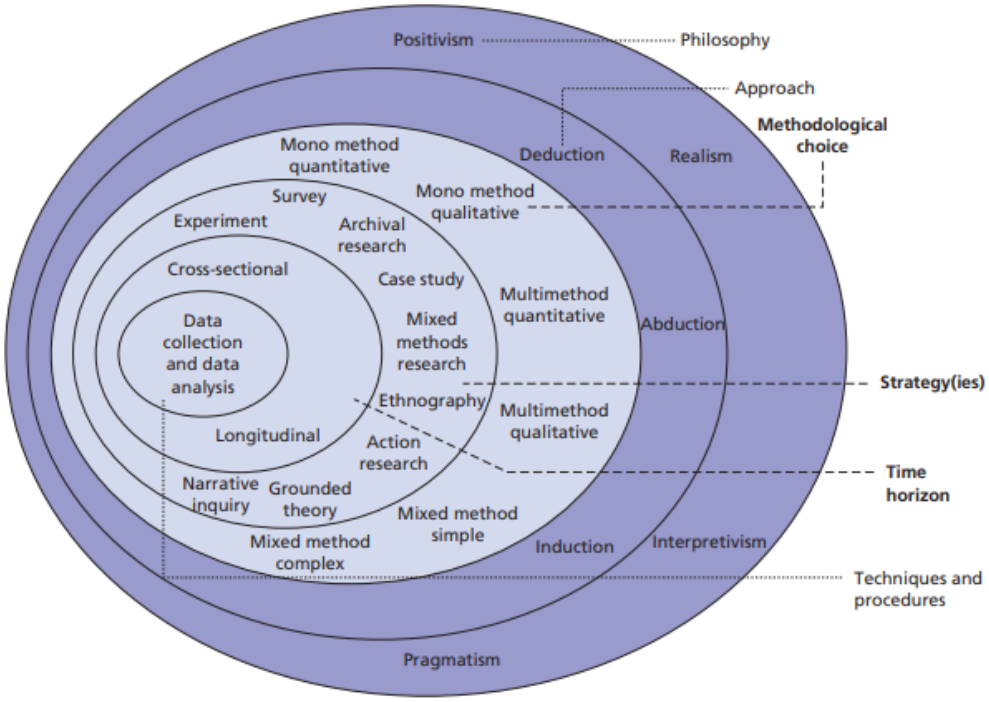

Figure 14 Research onion (Saunders, Lewis, & Thornhill, 2012)

3.2.1 The Philosophy of the research

Saunders, Lewis, & Thornhill (2012) describe the research philosophy as *"your assumptions about the way in which you view the world".* These assumptions will influence the selection of research strategies and methods for data gathering.

There are two main research philosophies used in research projects: Positivism and Interpretivism (Malhotra, Nunan, & Birks, 2017). The positivism belief promotes the scientific approach, which focuses on adopting a framework for investigation and collecting data for future analysis (Saunders, Lewis, & Thornhill, 2012; Malhotra, Nunan,

& Birks, 2017). The researcher developes the hypothesis, gathers data using questionnaires and surveys, and tests the assumptions to prove/disprove the hypothesis. This is why the positivism approach is best suited for the quantitative research project (Malhotra, Nunan, & Birks, 2017).

The Interpretivism approach is seen as the opposite of positivism (Malhotra, Nunan, & Birks, 2017). Saunders, Lewis, & Thornhill (2012) described interpretivism saying that it *"advocates that it is necessary for the researcher to understand differences between humans in our role as social actors"* and that when using positivism *"rich insights into this complex world are lost if such complexity is reduced entirely to a series of law-like generalizations".* Compared to positivism, interpretivism follows a softer approach, where the researcher needs to adopt an empathetic stance (Saunders, Lewis, & Thornhill, 2012).

This paper takes the positivism approach to the research, which matches the implemented framework developed by Ellis (2015) and selection of the questionnaire as the data collection method. Following this philosophy is critical to the successful outcome of this project.

3.2.2 Research approach

There are two main approaches that are affecting the design of the research project: Deductive and inductive. These two methodologies influence the presentation of findings and the conclusion driven by the gathered data (Saunders, Lewis, & Thornhill, 2012).

The inductive approach was defined by Cooper and Schindler (2014) as a *"reasoning which allows the modeler to draw conclusions from the facts or evidence in planning the dynamics of the model".* The researcher would use the interview method to try and understand the nature of the problem (Saunders, Lewis, & Thornhill, 2012). It is a process of building the broad themes, which are discussed and observed in order to formulate a generalized model or theory (Creswell & Creswell, 2018; Malhotra, Nunan, & Birks, 2017).

Cooper and Schindler (2014) described the deductive approach as "*reasoning that serves to create particular conclusions derived from general premises".* It is a structured approach that tests the theory by collecting and analysing data, which results in accepting or declining the research hypothesis (Saunders, Lewis, & Thornhill, 2012). Malhotra, Nunan, & Birks (2017) added that the approach needs to include:

- Identified area of study
- The issues emerged from the established theoretical framework.
- Variables to be measured (i.e. hypothesis)
- Developed instrument to measure the variables
- Participants
- Responses to be analyzed
- Acception or rejection of the tested theory

Considering this paper adapts the framework designed by Ellis (2015) and uses a predefined questionnaire to test the two hypotheses, the research project clearly follows a deductive research process.

3.2.3 Primary research

Malhotra, Nunan, & Birks, (2017) describes the primary research as *"data originated by the researcher for the specific purpose of addressing the problem at hand"*. The two main approaches selected by the researchers are: Qualitative and Quantitative. The difference between these methods is in the way of collecting the data. The researcher will select the approach based on the perceived accuracy of measurement (Malhotra, Nunan, & Birks, 2017). The most common methods of collecting data within those analysis techniques are interviews, observations and conducting experiments or surveys (Cooper & Schindler, 2014; Saunders, Lewis, & Thornhill, 2012).

3.2.4 Qualitative vs Quantitative Research

According to Saunders, Lewis, and Thornhill (2012) the main difference between a qualitative and quantitative approach is that quantitative collects, analyzes and generates

results in numerical format, whereas the qualitative method focuses on non-numerical data.

Qualitative research is a method to encapsulate the participants behaviour, feelings and experiences in the given context (Malhotra, Nunan, & Birks, 2017). Cooper and Schindler (2014) stated that *"qualitative research is designed to tell the researcher how (process) and why (meaning) things happen as they do".* The qualitative approach is based on the interpretive philosophy, which explains the subjective and socially constructed meanings of the studied phenomenon (Saunders, Lewis, & Thornhill, 2012). This type of research tends to build theories or generate ideas, however, rarely tests them (Cooper & Schindler, 2014).

On the contrary, the quantitative approach is usually associated with philosophy of positivism, which uses highly structured frameworks to gather and analyze data to test the theory. The researcher numerically measures data and uses statistical techniques to examine the relationship between the variables (Saunders, Lewis, & Thornhill, 2012). This approach is covered in more detail in next chapter.

3.2.4.1 Quantitative Research

Cooper and Schindler (2014) stated that the quantitative research is *"often used for theory testing, requiring that the researcher maintain a distance from the research to avoid biasing the results".* The researcher is seen as independent and does not interact with the respondents (Saunders, Lewis, & Thornhill, 2012).

The quantitative differs from qualitative in many key parts of the research methodology, such as the level of involvement of the researcher, sampling methodology and size, data gathering techniques, data type and analysis methods (Cooper & Schindler, 2014). According to Creswelland Creswell (2018) the quantitative research approach is 1) pre-determined, 2) asks instrument based questions, 3) gathers numerical data, 4) uses statistical analysis and 5) statistically interprets collected information. Cooper and

Schindler (2014) adds that the study consists of coded participant responses, which are represented as a data set to be manipulated for statistical analysis.

The most dominant methodology in quantitative research is using a survey or questionnaire, which gathers the participant's responses using the same set of questions in a predetermined order (Cooper & Schindler, 2014; Saunders, Lewis, & Thornhill, 2012). This methodology matches the data collection method used in the Ellis (2015) research project, which this paper tries to replicate within the whiskey sector.

3.2.4.2 Questionnaire

The questionnaire is a quantitative method of collecting data by asking the participant to answer a set of predefined questions (Saunders, Lewis, & Thornhill, 2012). Malhotra, Nunan, & Birks (2017) described a survey as "*use of structured questionnaires administered to a sample of a target population*".

The questions may be asked in-person, over the phone or in writing (e.g. email) (Saunders, Lewis, & Thornhill, 2012). The most common category of questionnaire is a structured direct survey, where the responses to the predefined questions are fixed and require participants to select one of multiple answers. By forcing the participant to choose the answer between provided options, the researcher reduces the variability in the responses. However, the disadvantage of this approach is that the participant is unable to provide desired information (Malhotra, Nunan, & Birks, 2017).

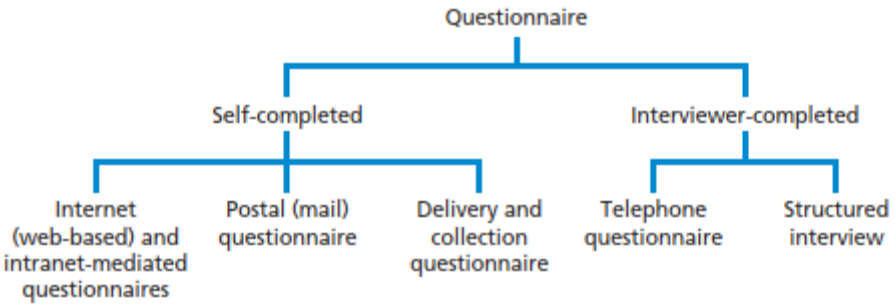

Figure 15 Types of Questionnaires (Saunders, Lewis, & Thornhill, 2012)

Questionnaires can be divided into two types, Self-completed and Interviewer-completed, which can be distinguished by the amount of contact the interviewer has with the participant. The self-completed questionnaires are filled and returned by the respondents using the internet, postal services or distributed by hand to each respondent. On the other hand the interviewer-completed questionnaires are taken over the phone, recorded by the interviewer, or by structured interviews where the interviewer meets the participant physically (Saunders, Lewis, & Thornhill, 2012).

Choosing a correct type of questionnaire is influenced by multiple factors, such as: types of questions, sample size, characteristics of the respondents, importance of reaching the right person for the study and ensuring the data is not contaminated in any way (Saunders, Lewis, & Thornhill, 2012).

Online Surveys - Due to the incredible technological advances in the last ten years, utilizing online surveys has become a dominant method of reaching the participant and collecting the data for the research. There are many advantages of using this technology, such as speed, cost, targeting specific group segments and removed interviewer bias (Malhotra, Nunan, & Birks, 2017). Using an online survey platform (e.g. Snap Survey, Survey Monkey and Survey Gizmo) is also user-friendly, as it allows to build a questionnaire using a graphical user interface (GUI) and analyze the data within the same program (Saunders, Lewis, & Thornhill, 2012).

Postal Surveys – Due to the significant increase in use of online questionnaires, the offline surveys have sharply declined. There are multiple disadvantages involved with this form of data gathering, such as: significant amount of time to return a survey, need of incentive for each participant to fill out the survey, availability of address of target consumers and costs involved in sending back the survey incurred by the participant (Malhotra, Nunan, & Birks, 2017).

Street Survey – This technique works particularly well in large shopping centers, where the consumers can be targeted during their shopping. It is an efficient way of collecting

data as the interviewer can locate a large number of participants in one specific location (Malhotra, Nunan, & Birks, 2017).

Telephone surveys – Data gathering using a telephone survey method involves asking the participants questions and filling out the survey by the interviewer. The questionnaire tends to be short as interviewing time is reduced. Due to the lack of participant's willingness to be a part of survey and low number of landlines available to call, this approach has become unpopular amongst researchers. However, the quality of the data gathered is better than that of a standard questionnaire (Malhotra, Nunan, & Birks, 2017).

Structured interview – Involves an interviewer to be present while the participant fills out the questionnaire, which is why this method has been in decline for many years. There are significant costs involved to interview a participant face-to-face. This method is only used when the consumer cannot be effectively interviewed by any other means but face-to-face (Malhotra, Nunan, & Birks, 2017).

3.2.4.3 Rationale for using Online questionnaires

The main rationale behind choosing the online questionnaire was easy access to target consumer segment, speed of return of completed questionnaire, and costs involved in running the survey. The online platform selected for this research was "Survey Gizmo", which is compatible with all the types of questions used in the survey and extracts specific file formats that can be uploaded to the statistical software (SPSS). Using social media channels such as LinkedIn and Twitter ensured the right consumer segment was engaged and the volume of responses was significant enough to test the hypothesis.

With that in mind, other methods were explored, such as street, face-to-face, postal or telephone surveys. The street survey and face-to-face interviews became unavailable for this project due to the outbreak of the Covid-19 virus. Meeting the participant physically was against the HSE guidelines. Contacting large numbers of whiskey consumers by post or telephone was also difficult to achieve due to lack of addresses or phone numbers available to the researcher.

3.2.4.4 Questionnaire design

In contrast to the semi-structured interviews, the questionnaires need to be predefined before they reach the participant. The interviewer has only one chance to ask the question and collect the data needed to answer and test the hypothesis. There is no possibility of asking additional questions and clarifying the participant's answer. The questions need to be phrased in a way that the participant can clearly understand and without ambiguity (Saunders, Lewis, & Thornhill, 2012).

Secondary literature can be a source of already defined and validated questions. The researcher can use these existing questionnaires to test the hypothesis, without reinventing, refining and pretesting a new survey (Cooper & Schindler, 2014). After researching the Ellis (2015) framework (Figure 16.) and the questionnaire designed and used within the research, the subjective knowledge and exploratory behaviour questions were considered validated and suitable to be implemented by this research project.

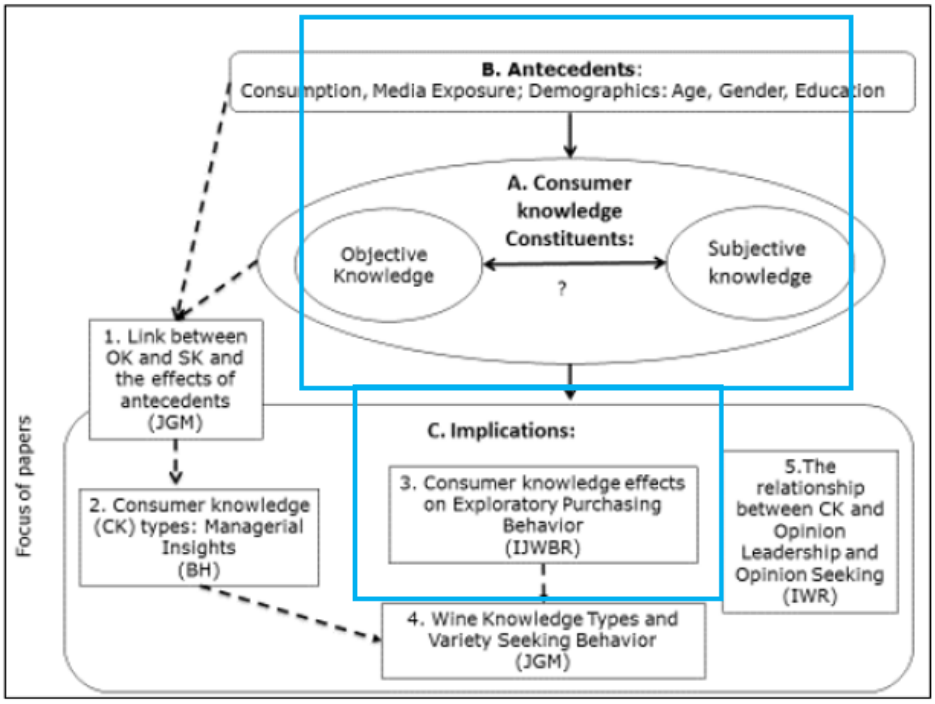

Figure 16 Adapted framework from Ellis (2015) study

The subjective knowledge questions used in Ellis (2015) where validated by Flynn's and Goldsmith's (1999) research. This scale provides a reliable measure for consumers subjective knowledge, which is the reason why it was also specifically tailored and implemented by this research project. The questions where modified to suit the whiskey consumer sector:

1. Among my circle of friends, I'm one of the "experts" on whiskey
2. When it comes to whiskey, I really don't know a lot
3. I know pretty much everything about Whiskey
4. Compared to most other people, I know less about whiskey
5. I do not feel very knowledgeable when discussing whiskey topics

The test for levels of exploratory behaviour was adopted from the Van Trijp et al. (1996) research, which was a refined version of Baumgartner's and Steenkamps (1996) Exploratory and Acquisition of Products (EAP) scale. This six-item scale measures the exploratory consumer tendencies (ECT), which was validated within Ellis (2015) research and many other previous researchers (Trijp, Hoyer, & Inman, 1996; Ellis, Pitt, & Caruana, 2015). The questions were modified and translated to the whiskey consumer sector:

1. I Would rather stick with a whiskey brand I usually buy than to try something I am not sure of (reverse)
2. I enjoy taking chances in buying unfamiliar whiskey just to get some variety in my purchases
3. I am very cautious in trying new or different whiskey (reverse)
4. Even tough certain brands experiment with different styles of whiskey, I tend to buy the same type each time (reverse)
5. If I like a whiskey brand, I rarely switch from it just to try something different (reverse)
6. When I buy whiskey, I feel it is safer to buy whiskey that I am familiar with (reverse)

In Ellis (2015) the objective knowledge questions were both adopted from a literature review and created by the authors of the research. Similarly, this research project adapted seven questions from the Whiskey Masters, one of the leading Education and Certification programs for Scotch, Bourbon and all Global Whiskeys in the US (Whiskey Masters, 2020), and three questions created by the researcher:

Whiskey Masters:

The terms "new make," "white dog" and "clearic" all refer to:

A. Bottled but unlabeled whisk(e)y
B. Newly distilled spirit (x)
C. Matured but not yet bottled whisk(e)y
D. A disappointing spirit

Which of these terms refers to the 200 litres size container traditionally used?

A. Barrel (x)
B. Puncheon
C. Hogshead
D. Quarter Cask

In Bourbon, corn must account for at least this percentage of the mash bill:

A. 50%
B. 51% (x)
C. Majority of the grain blend
D. 70-80%

Which Grain is the Basis of Single Malt whiskey?

A. Corn
B. Barley(x)
C. Rye
D. Wheat

In the 1930s, this distillery started the use of triple-distillation in Irish whiskey:

A. Midleton
B. Tullamore
C. Cooley
D. Bushmills (x)

Which of the following is not a step in the malting process?

A. Kilning
B. Germinating
C. Tunning (x)
D. Steeping

Straight Kentucky Bourbon must be…:

A. Flavored only to a degree of typical treatments in Bourbon County
B. Colored only with caramel, if needed
C. Stored for at least 2 years, in specific ways (x)
D. From a maximum of 2 distilleries

Researchers questions:

What is a Devil's cut?

A. The percentage of alcohol leaked during maturation.
B. The loss of distillate which is absorbed by the wood of the casks. (x)
C. The alcohol consumed by workers during the production process.
D. The amount of tax imposed on alcoholic beverages.

What is the legal maximum ethanol concentration for column still distillation process for Scotch whisky?

A. 94.1 %
B. 93.9 %
C. 94.8 % (x)
D. 95.2 %

What's an angel share:

A. The amount of alcohol kept aside for tasting.
B. Amount of alcohol lost to evaporation while ageing. (x)
C. The amount of alcohol offered up to the Gods.
D. The leftovers after the alcohol is bottled.

3.2.5 Sampling

Sampling is a crucial part of the research process. It allows the researcher to select a group of people out of the population in order to draw a conclusion about the entire population (Cooper & Schindler, 2014). Saunders, Lewis, & Thornhill (2012) stated that sampling techniques *"enable you to reduce the amount of data you need to collect by*

considering only data from a subgroup rather than all possible cases or elements". Using these methods benefits the research project by 1) lowering the costs, 2) improves the speed of collection, 3) improves accuracy of the results and 4) increases the availability of the population (Cooper & Schindler, 2014).

Malhotra, Nunan, & Birks (2017) described designing a sample as a four step process:

- Define target population – a collection of elements or participants, which posses the desired information.
- Determine the sampling frame – a list or set of direction for identifying the target elements in the population
- Select sampling technique – deciding on how the elements will be selected to create a sample.
- Determine sample size – number of elements participating in the study.

However, Cooper & Schindler (2014) added one more important step in the sample design process:

- What are the parameters of interest – the variables of interest in the population. The researcher needs to know what are the relevant parameters that will be measured.

The most important decision for the researcher when designing a sample is to choose the sampling technique. Deciding on choosing the right approach is dictated by the time constraint, costs and the participants availability. There are two types of techniques available to the researchers: Probability and Non-probability (Malhotra, Nunan, & Birks, 2017).

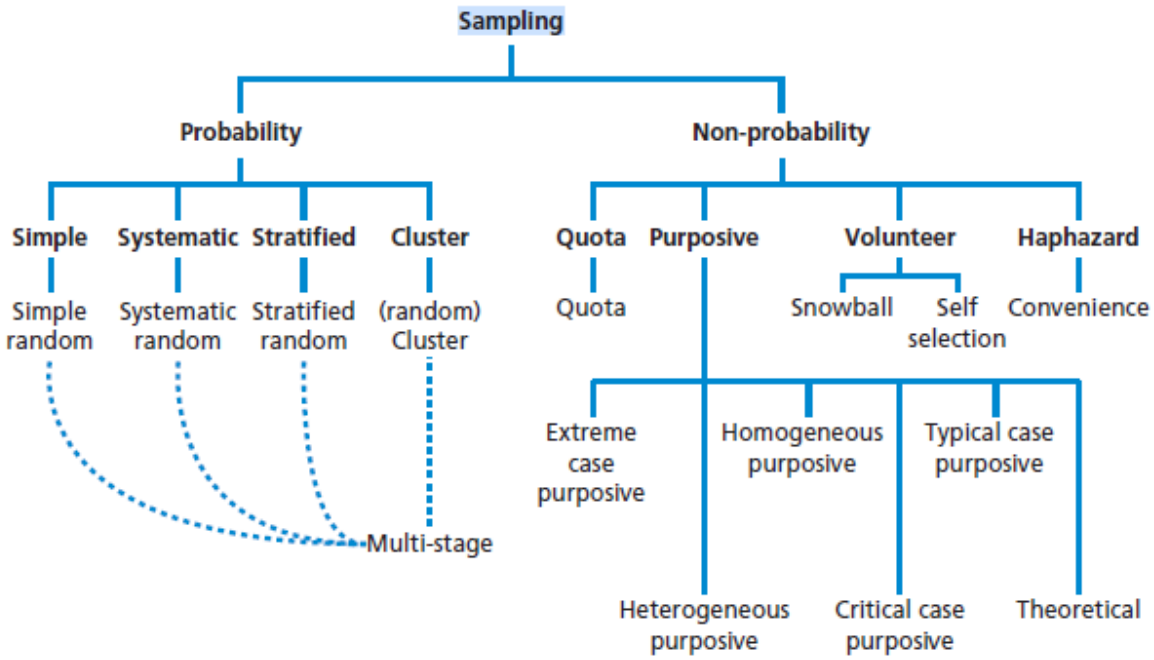

Figure 17 Sampling techniques (Saunders, Lewis, & Thornhill, 2012)

In the probability sampling, the researcher selects the participants at random from the population. It is a process that reduces the sampling bias and increases the chances that the group is an accurate representation of the population (Cooper & Schindler, 2014). However, in some instances use of the probability sampling technique is not possible, such as lack of sampling frame. In this situation the researcher will use the non-probability techniques to acquire an appropriate representative sample (Saunders, Lewis, & Thornhill, 2012). Lack of sample frame and time constraint were the deciding factors for choosing the non-probability technique for this project.

Saunders, Lewis, & Thornhill (2012) stated that when *"it is difficult to identify members of the desired population (…) the volunteer sampling is most commonly used".* There are two techniques used to approach the volunteers: Snowballing and Self-selection (Saunders, Lewis, & Thornhill, 2012).

Using the snowballing method starts with selection of the initial group of participants, which matches the criteria of the target population. After completing an interview or questionnaire, the participant is asked to identify the next person with similar

characteristics. This referral process is repeated until the sufficient sample size is gathered (Malhotra, Nunan, & Birks, 2017).

The Self-selection takes place when the individual expresses the desire to take part in the study, which allows the researcher to collect data from the respondent. This type of sampling can include advertisement in the magazines, articles, posting on the relevant online media or emailing known elements of the target population (Saunders, Lewis, & Thornhill, 2012). It is a fast and cost-effective way of acquiring the sample size needed for the research project, especially without available contact details for the target population (Cooper & Schindler, 2014).

Due to the constraints, such as lack of sample frame, time or cost, this research used online media platforms (i.e. LinkedIn and Twitter) to reach the elements in the target population. After the survey was posted on social media, the volunteers completed the questionnaire and submitted their responses. The account used to post the survey was linked with multiple relative online media groups connected to the target population.

Although the method matches the self-selection technique, there was an element of snowballing involved in this approach. Increasing the number of people completing and sharing the survey online made the survey more visible to the target population. The term used for online content reaching increasingly greater numbers of people in a short amount of time is known as “becoming viral”.

3.3 Research Strategy

Saunders, Lewis, & Thornhill (2012) described the research strategy as *“a plan of how a researcher will go about answering her or his research question”.* Selecting the right strategy is an important factor in a research project, which enables the researcher to answer the project question or to meet the objectives of the study. There are two main strategies exclusively linked to the Quantitative research approach: Experiment and Survey (Saunders, Lewis, & Thornhill, 2012).

Cooper & Schindler (2014) describe the Experimentational approach as a *“study that involves an intervention by the researcher beyond that required for measurement”*. The

researcher tests the correlation between the dependent variable and the independent variable within the study. The prediction that the change in the dependent variable will influence the independent variable is known as the Hypothesis. Usually used in natural science projects (Cooper & Schindler, 2014; Saunders, Lewis, & Thornhill, 2012).

Similar to the experimental approach, the survey strategy is also associated with a deductive positivism research approach. It collects quantitative data, analyses it using inferential statistics and tests possible correlations between studied variables. The questions asked by this strategy are: What, Who, Where, How much and How many. The tool used in this approach to gather data from participants is usually the predefined questionnaires, which is very common amongst the business as it's a low cost option that collects data from a significant number of participants (Cooper & Schindler, 2014; Saunders, Lewis, & Thornhill, 2012).

The strategy for this research project will closely follow a survey strategy to test the defined hypotheses. This choice is aligned with the research philosophy and approach introduced in Chapters: 3.2.1, 3.2.2 and 3.2.4.

3.3.1 Data analysis

Analyzing quantitative data requires initial preparation of raw data before the information becomes useful (Saunders, Lewis, & Thornhill, 2012). Cooper & Schindler (2014) stated that data preparation includes "*editing, coding, and data entry and is the activity that ensures the accuracy of the data and their conversion from raw form to reduced and classified forms that are more appropriate for analysis*".

Quantitative data can be categorized into two main groups: Categorical and Numerical. Categorical data refers to information that cannot be measured numerically and is usually classified into sets or placed into ranked order. On the other hand, the numerical data is counted and measured numerically, which is more precise and can be analyzed by a wider range of statistics (Saunders, Lewis, & Thornhill, 2012).

Both types of data are generally presented via graphs, charts, statistics and other quantitative analysis techniques. Researchers can use multiple software options that help with this type of data preparation, such as Excel, Minitab, SAS and SPSS statistics. These packages will automatically analyze, calculate and draw charts based on the gathered data (Malhotra, Nunan, & Birks, 2017; Saunders, Lewis, & Thornhill, 2012).

This research project will use SPSS statistics tool for data analysis to ensure the correct conclusions and representation of findings are presented from the gathered data.

3.3.2 Coding

Cooper & Schindler (2014) described coding as *"assigning numbers or other symbols to answers so that the responses can be grouped into a limited number of categories".* This is a part of data preparation necessary for efficient further analysis. In a quantitative approach, coding is mainly used when dealing with open-ended questions, such as gender information (Malhotra, Nunan, & Birks, 2017). All coded data is stored by the researcher in a code-book. This file contains all the variables gathered by the research in the format required by chosen statistical software (Cooper & Schindler, 2014).

In this paper all the questionnaire segments needed to be coded due to the nature of the questions. The demographics section consisted of questions that needed to result in a numerical value. The results of the objective knowledge questions needed to be added up for each entry and both subjective knowledge and exploratory behaviour segment included questions that needed answers to be reversed.

3.4 The importance of research ethics

Research ethics can be defined as *"standards of behaviour that guide your conduct in relation to the rights of those who become the subject of your work, or are affected by it",* Saunders, Lewis, & Thornhill (2012). Similarly, Cooper & Schindler (2014) stated that *"**Ethics** are norms or standards of behavior that guide moral choices about our behavior and our relationships with others".*

The main reason the research project follows the principles of ethics is to make sure that nobody is harmed or suffers in any way from the research activities (Cooper & Schindler, 2014).The researchers are also obligated to work with integrity and objectivity to ensure the quality of the research. This means acting openly, being truthful and ensuring accuracy of the result (Saunders, Lewis, & Thornhill, 2012). The researcher should not deceive the participant to attempt to improve the response rate or results (Cooper & Schindler, 2014).

There are many other important ethical principles that need to be followed during quantitative research, such as: 1) Each participant of the survey has the right to not take a part or to withdraw their submission, 2) The researcher should always allow an option to not answer a particular question or to modify their response at any time, 3) The information gathered during the research process needs to be treated with confidentiality and anonymity, 4) The data cannot be altered or falsified to present positive results regarding the experiment (Saunders, Lewis, & Thornhill, 2012).

Malhotra, Nunan, & Birks (2017) focused specifically on the questionnaire ethics and added the below principles:

- Should not be overly long – Participants are volunteering to take part in the survey and should not be required to commit to a questionnaire that is longer than thirty minutes.

- Should not be asking sensitive questions – Each individual has a right to privacy, which should be respected by the researcher. If the purpose of the questionnaire is to investigate participant's sensitive information, then additional comfort should be provided to the participant.

- Should not be deliberately biasing the questionnaire – The researcher should not be phrasing the questions on the survey that might lead the participant toward a desired answer.

The research project needs to be safeguarded by implementing all of the above ethical principles. The questionnaire for this research will only take five minutes and will be using well established scales to measure consumer behaviour. None of the participants will be able to be identified as the Survey Gizmo platform does not collect any data from the participants, which could be used for that purpose. With this in mind, the researcher takes full responsibility for ensuring no identification is possible, and that gathered information is only used for the purpose of this dissertation.

3.5 Ensuring reliability and validity

Ensuring reliability and validity of the project is a researcher's responsibility as these are the key characteristics of the research quality. Saunders, Lewis, & Thornhill (2012) described reliability as "*whether your data collection techniques and analytic procedures would produce consistent findings if they were repeated on another occasion or if they were replicated by a different researcher*". It is crucial to the project's quality that the threats regarding possible participant or researcher biases are addressed (Saunders, Lewis, & Thornhill, 2012).

Cooper & Schindler (2014) defined validity as *"whether a measure accomplishes its claims"* and divided the different types of validity into two main categories: Internal and External. The first measure ensures that the researcher draws valid conclusions from the collected data. The project needs to verify that the alteration to the independent variable was the actual cause of the observed change of the dependent variable (Malhotra, Nunan, & Birks, 2017). In contrast to the internal validity, the external validity doesn't focus on the variables and their interaction, but it looks into whether the findings can be generalised to the larger population of interest (Saunders, Lewis, & Thornhill, 2012; Cooper & Schindler, 2014). The researcher needs to ensure that the relationship between the investigated variables can be applied to the wider context (Malhotra, Nunan, & Birks, 2017).

3.6 Limitations

All research projects are subject to the limitations due to the many constraints, such as time or cost. Most of the limitations of this study are related to the nature of the online questionnaire and the use of social media as a medium to recruit respondents.

As the questionnaire is available online, there is a possibility that the respondent can research the answer to the question for the objective knowledge part of the survey (Ellis, Pitt, & Caruana, 2015). Considering the survey remotely collects the responses from the participant, the only possible preventive action that could have been implemented regarding this concern was to include a note in the introduction page, which described the nature of the study and emphasized the importance of not using any outside help during the survey (e.g. books, magazines or internet).

The second limitation was related to using social media as a tool to gain the access participants, which could create problems for the study that needs to be addressed:

- Some researchers question if the social media responses are reflective of actual beliefs and behaviour (Malhotra, Nunan, & Birks, 2017). To ensure the measurement of consumer behaviour is investigated in this survey, the researcher ensured the respondents are treating the study honestly and professionally by highlighting the reason and importance of the research in the introduction page.

- There is also no limit on the geographical reach of social media, which means that the respondents can access the survey from any part of the world. This could possibly affect the results of study due to the cultural differences of different regions. In order to lower the level of geographical dispersion, the study initially focused on Irish based whiskey societies and Irish whiskey influencers.

3.7 Conclusion

The main aim of this research project is to investigate the impact of consumer knowledge on exploratory purchasing behaviour in the Whiskey Consumer Sector. As described in

this chapter, the research will follow the positivism approach in order to accept or decline the research hypothesis. The deductive methodology will follow the Ellis (2015) framework to research the available secondary data, gathering the data and analysing the information collected by the questionnaire. Regarding the ethics and reliability concerns, the possible issues were discussed, and precautionary actions were implemented. Therefore, the methodology chosen for this research project was deemed appropriate to successfully achieve the objectives of this study.

Chapter 4: Analysis of Findings

4.1 Introduction

After the data was gathered using the Survey Gizmo online tool, the survey responses needed to be coded into a readable format for SPSS. The statistical software analyzed the distribution of the responses and calculated the Mean and standard deviation for collected data. This chapter provides the results of the reliability checks performed on each section of data, correlation measurements between the sets and key findings that influenced the recommendations and conclusions found in the succeeding chapter.

4.2 Reliability

The data was first analyzed to determine the reliability of responses for each construct, such as Objective knowledge, subjective knowledge and exploratory behaviour tendencies of the participants.

4.2.1 Subjective Knowledge responses

The Flynn's and Goldsmith's (1999) scale used to measure the subjective knowledge proved to be a reliable scale. The test performed by SPSS calculated Cronbach's Alpha at 0.798 for the responses that measured subjective knowledge:

Reliability Statistics

Cronbach's Alpha	N of Items
.798	5

Figure 18 Subjective knowledge Reliability results

The mean per each item was calculated at 3.601 with Maximum at 3.950 and minimum at 2.495.

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.601	2.495	3.950	1.455	1.583	.387	5

Figure 19 Subjective knowledge distribution of responses

Figure 20 represents the responses and the scores reached by the participants.

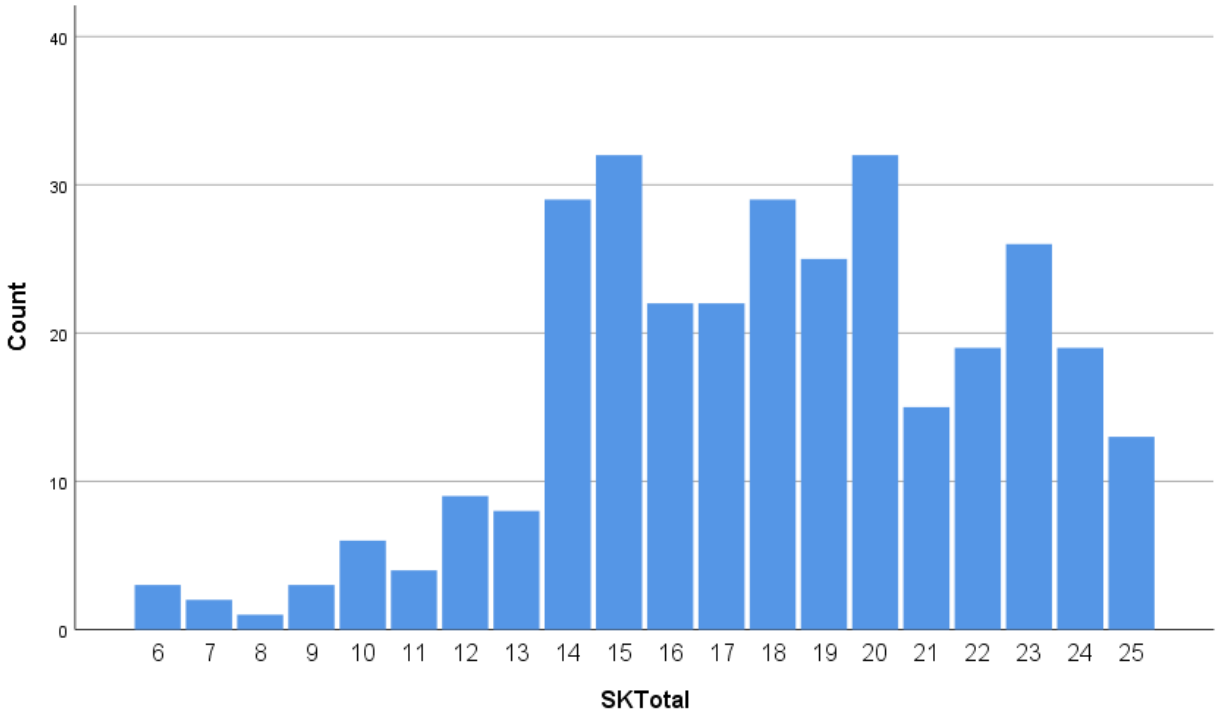

Figure 20 Subjective Knowledge distribution of responses diagram

The overall Mean for the subjective knowledge questions was 18.01 and standard deviation equaled 3.176:

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
18.01	17.440	4.176	5

Figure 21 Overall subjective knowledge scores

4.2.2 Exploratory Behaviour responses

The six-item scale developed by Van Trijp et al. (1996) proved to be a reliable measure of exploratory behaviour tendencies. The calculation done by SPSS software resulted in alpha coefficient (Cronbach) 0.787 and proved to be a unidimensional structure:

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.787	.788	6

Figure 22 Exploratory Behaviour: Reliability Testing

The mean per each item was calculated at 3.852 with minimum score at 3.505 and maximum 4.088:

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.852	3.505	4.088	.583	1.166	.042	6

Figure 23 Exploratory behaviour distribution of responses

The Figure 24 uses a diagram to illustrate the distribution of scores and the number of responses that reached each result:

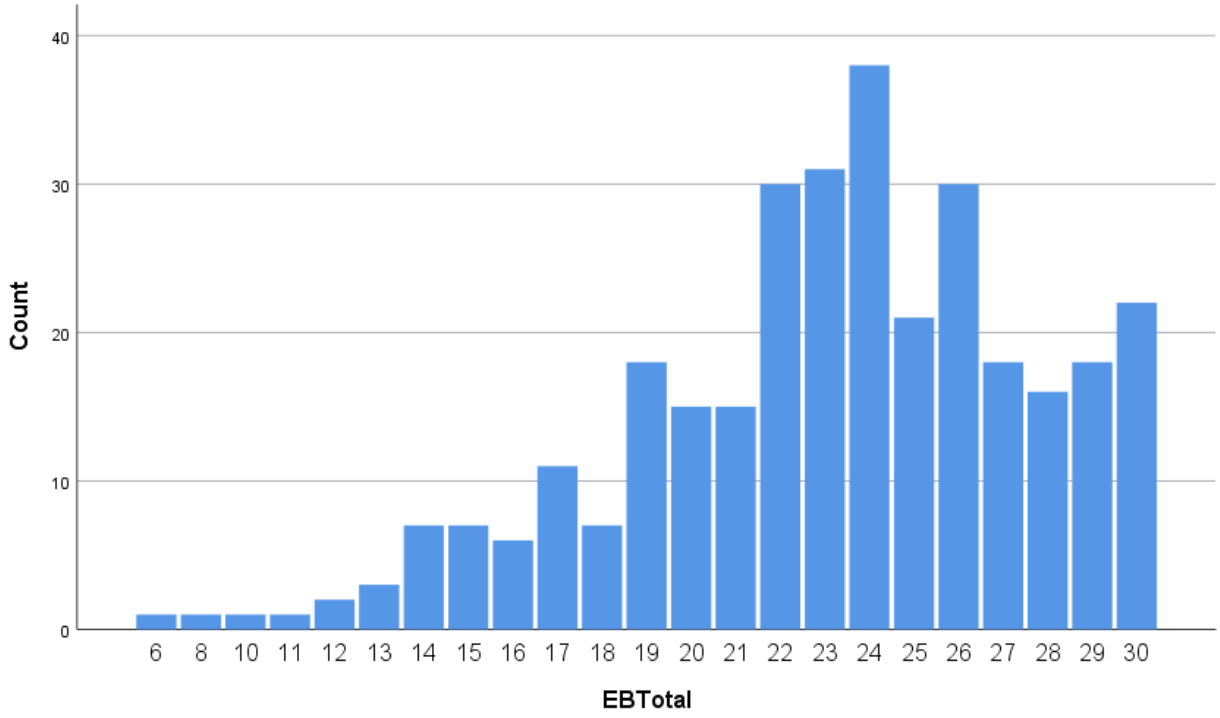

Figure 24 Exploratory behaviour distribution of responses diagram

The mean of combined exploratory behaviour scores was calculated at 23.11 and the standard deviation is 4.543:

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
23.11	20.641	4.543	6

Figure 25 Exploratory behaviour overall distribution results

4.2.3 Objective knowledge responses

Unfortunately, the questions measuring the objective knowledge have only a correct or incorrect answer, which means that it is a single item score and the Cronbach's Alpha cannot be computed.

The participants proved to have a quite high level of knowledge as the mean per item was 0.719, minimum score being 0.392 and max 0.972:

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	.719	.392	.972	.580	2.480	.043	10

Figure 26 Objective knowledge distribution of responses

Figure 29 reflects the number of results per overall score in the knowledge section of the survey:

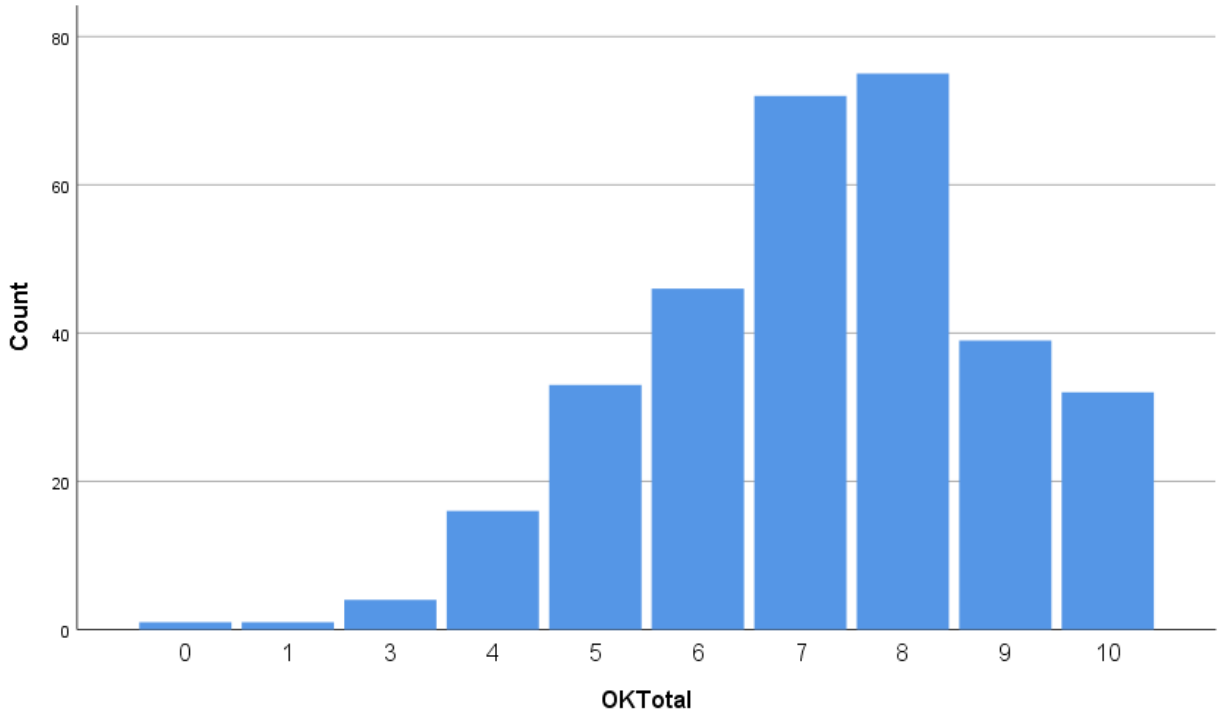

Figure 27 Objective knowledge distribution of responses diagram

The overall mean of the objective knowledge questionnaire was 7.19 and the standard deviation equaled 1.754:

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
7.19	3.078	1.754	10

Figure 28 Objective Knowledge overall distribution results

4.3 Validity

To determine the validity of the scales, the twenty-one questions, including Exploratory behaviour, Objective Knowledge and Subjective knowledge, were subjected to the factor analysis using varimax rotation.

This is a technique that investigates the correlations in the data to find an underlying common dimension (Ellis, Pitt, & Caruana, 2015). The results of this test highlighted three separate constructs within the collected data:

Rotated Component Matrix[a]

	Component		
	1	2	3
EBQuestion 4	.745	.119	.208
EBQuestion 6	.741	.023	.211
EBQuestion 5	.730	.131	.096
EBQuestion 1	.690	.116	-.226
EBQuestion 2	.588	.298	-.218
EBQuestion 3	.573	.205	.066
SQuestion 2	.171	.792	.149
SQuestion 1	.076	.737	.081
SQuestion 5	.260	.732	.142
SQuestion 3	.033	.706	.191
SQuestion 4	.225	.629	-.106
OKTotal	.132	.322	.836

Figure 29 Factor Analysis: Constructs

As the Value of Kaiser-Meyer-Olikin is above 0.8, the sample is adequate for Factor analysis and will measure what the researcher intends:

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.858
Bartlett's Test of Sphericity	Approx. Chi-Square	1097.438
	df	66
	Sig.	.000

4.4 ANOVA Demographics

Multiple ANOVA tests were undertaken to explore the relationships between the three constructs, Exploratory behaviour, Objective knowledge and Subjective knowledge, and collected demographics. The Collected demographics were Age, Gender and Frequency of whiskey consumption.

The majority of respondents were in between thirty-five and fifty-four years of age (two hundred twenty people) and the second group was between eighteen to thirty-four (sixty-three respondents).

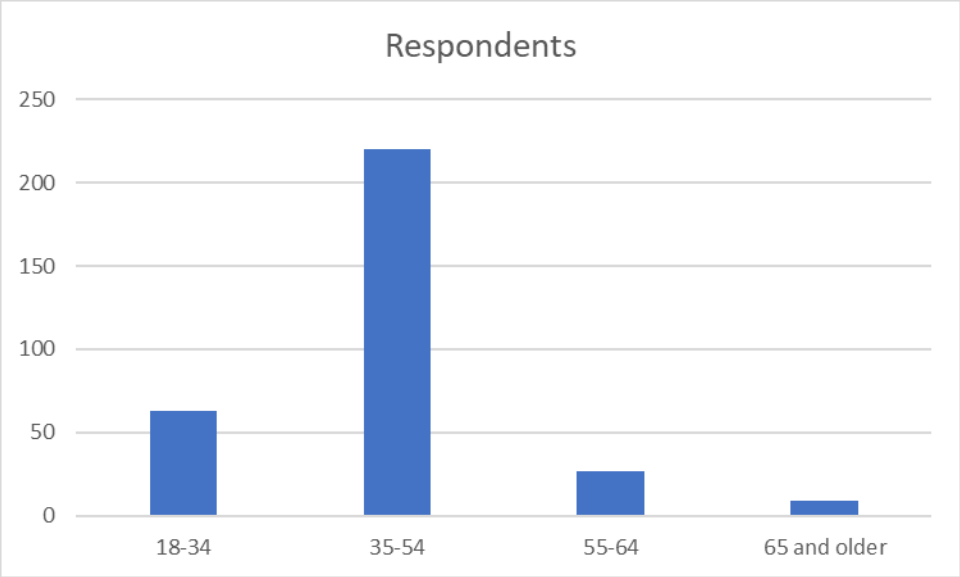

Figure 30 Demographics: Age Profile

Majority of respondents where Male, over eighty six percent, with only thirteen percent of respondents being women:

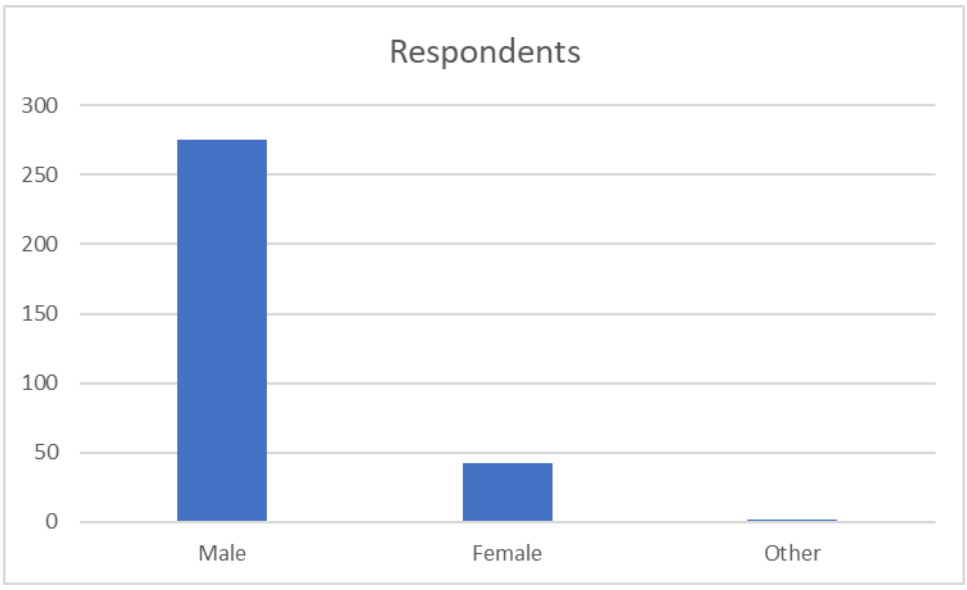

Figure 31 Demographics: Gender

Overall the participants had high frequency of whiskey consumption with hundred forty-three people, almost forty fife percent, drinking more than nine times a month and seventy four people, twenty three percent. consuming between six to eight times a month:

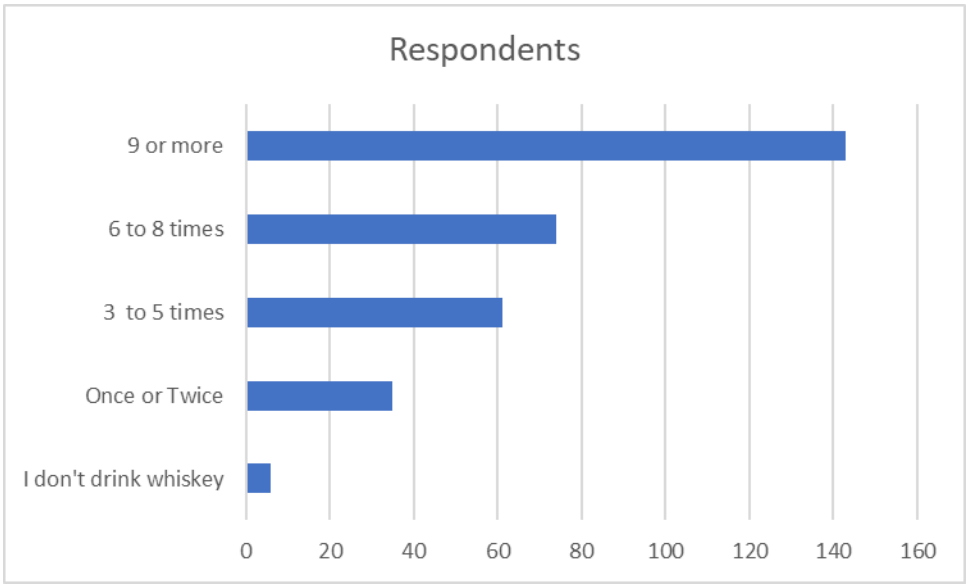

Figure 32 Demographics: Drinking Frequency

4.4.1 Exploratory Purchasing Behaviour and Demographics

The ANOVA test for Exploratory behaviour and demographics, such as age, gender and drinking frequency, were carried over and the results are as follows:

- Age was not found significantly related to the tendency to purchase exploratively.

ANOVA

EBTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	72.950	3	24.317	1.180	.317
Within Groups	6490.987	315	20.606		
Total	6563.937	318			

Figure 33 ANOVA: Age and Exploratory Behaviour

- Gender was also not connected to the exploratory behaviour as per below Figure 34.

ANOVA

EBTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.549	1	2.549	.122	.727
Within Groups	6560.587	315	20.827		
Total	6563.136	316			

Figure 34 ANOVA: Gender and Exploratory Behaviour

- Frequency of consumption was found positively related to the exploratory tendencies.

EBTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	783.227	4	195.807	10.636	.000
Within Groups	5780.711	314	18.410		
Total	6563.937	318			

Figure 35 ANOVA: Drinking Frequency and exploratory behaviour

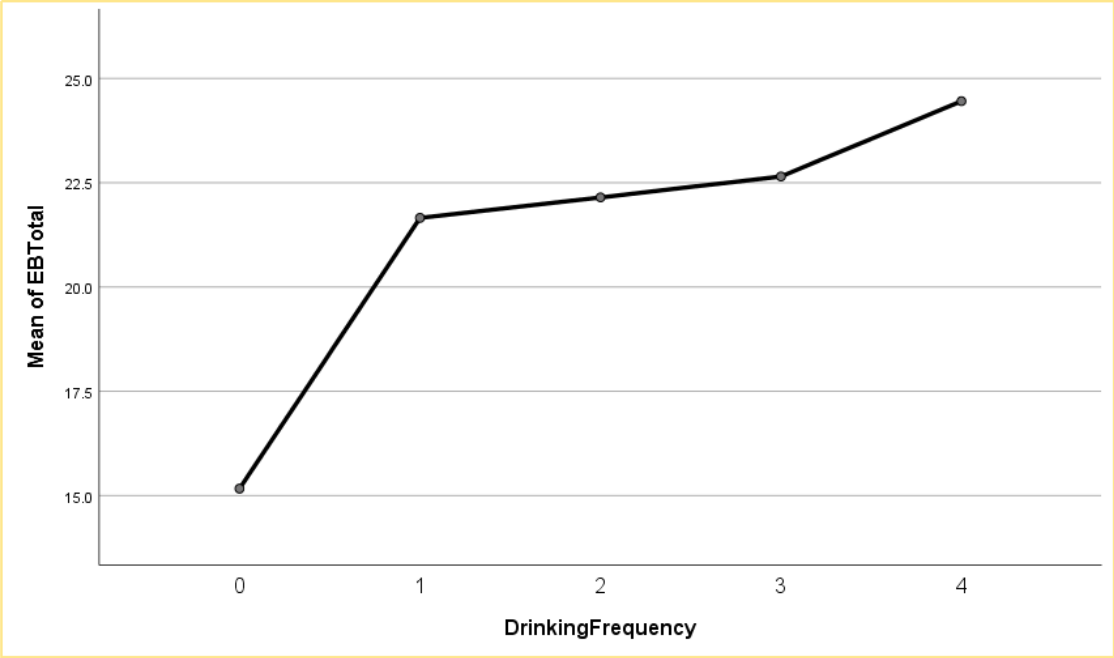

Figure 36 ANOVA: Drinking frequency graph

4.4.2 Objective Knowledge and Demographics

Similarly to exploratory behaviour, the objective knowledge was tested by a series of ANOVA tests against the collected demographics. Age and Gender was not found significantly correlated with objective knowledge as Figures 37 and 38.

ANOVA

OKTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11.507	3	3.836	1.249	.292
Within Groups	967.208	315	3.071		
Total	978.715	318			

Figure 37 ANOVA: Objective Knowledge and Age

ANOVA

OKTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.005	1	.005	.002	.968
Within Groups	970.102	315	3.080		
Total	970.107	316			

Figure 38 ANOVA: Objective Knowledge and Gender

On the other hand, the frequency of whiskey consumption was significantly correlated with the objective knowledge:

ANOVA

OKTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	86.930	4	21.733	7.652	.000
Within Groups	891.784	314	2.840		
Total	978.715	318			

Figure 39 ANOVA: Objective Knowledge and Frequency of consumption

4.4.3 Subjective Knowledge and Demographics

The subjective knowledge was also tested by a series of ANOVA's against the demographics collected from the participants. The age and gender were again not significantly related to the construct as the graph depicts.

ANOVA

SKTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	29.295	3	9.765	.558	.643
Within Groups	5516.692	315	17.513		
Total	5545.987	318			

Figure 40 ANOVA: Subjective Knowledge and Age

ANOVA

SKTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10.689	1	10.689	.609	.436
Within Groups	5525.298	315	17.541		
Total	5535.987	316			

Figure 41 ANOVA: Subjective knowledge and Gender

The frequency of the whiskey consumption was the only demographic collected from the survey respondent that was found significantly related to the construct:

ANOVA

SKTotal

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1180.391	4	295.098	21.225	.000
Within Groups	4365.596	314	13.903		
Total	5545.987	318			

Figure 42 ANOVA: Subjective Knowledge and Frequency of consuption

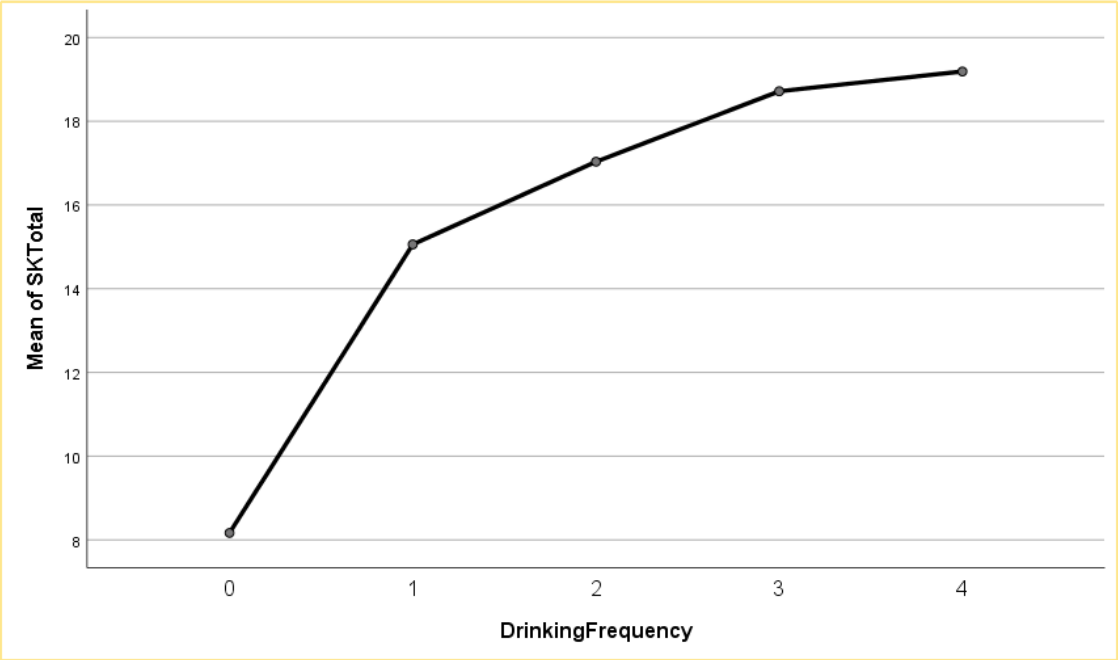

Figure 43 ANOVA: Frequency of consumption graph

4.5 Correlation

To investigate the effects of objective knowledge and subjective knowledge on the exploratory behaviour, the research used the Pearson's correlation coefficient measure.

4.5.1 Subjective and Exploratory

The subjective knowledge was found to have a significant correlation with exploratory purchasing behaviour in the whiskey consumers sector. The result 0.4 is seen as medium correlation.

Correlations

		SKTotal	EBTotal
SKTotal	Pearson Correlation	1	.401**
	Sig. (2-tailed)		.000
	N	319	319
EBTotal	Pearson Correlation	.401**	1
	Sig. (2-tailed)	.000	
	N	319	319

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 44 Pearson Correlation: Subjective knowledge

4.5.2 Objective Knowledge and Exploratory behaviour

The correlation between the objective knowledge and exploratory tendencies did not result in significant correlation. The results were only 0.23 and are seen as low.

Correlations

		OKTotal	EBTotal
OKTotal	Pearson Correlation	1	.230**
	Sig. (2-tailed)		.000
	N	319	319
EBTotal	Pearson Correlation	.230**	1
	Sig. (2-tailed)	.000	
	N	319	319

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 45 Pearson Correlation: Objective knowledge

4.5.3 Subjective and Objective knowledge

The subjective and objective knowledge were also tested using the Pearson's method and were found to be significantly correlated to each other:

Correlations

		SKTotal	OKTotal
SKTotal	Pearson Correlation	1	.410**
	Sig. (2-tailed)		.000
	N	319	319
OKTotal	Pearson Correlation	.410**	1
	Sig. (2-tailed)	.000	
	N	319	319

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 46 Pearson Correlation: Subjective and Objective Knowledge

4.4 Key Findings

In summary, the three main constructs, exploratory behaviour, objective knowledge and subjective knowledge, have been tested to find correlation between the data sets as well as multiple ANOVA tests were performed to find connection between the constructs and participant's demographics.

The age profile of the respondents was significantly between thirty-five and fifty-four, over sixty-eight percent. Eighty-eight percent of the participants were within the first two age groups, which could be related to the medium (social media) used to distribute the survey.

The gender profile was significantly skewed towards male participants, with over eighty-six percent to fourteen. Suggesting there are still more male whiskey enthusiasts than women.

Most respondents drink quite a significant amount of whiskey (nine or more times a month), which summed up to forty-five percent of participants. This would suggest that

most of the respondents are whiskey enthusiasts or connoisseurs and should have a high level of knowledge.

The ANOVA tests did not find any significant correlation between age or gender and the three constructs. The only variable that was found to be related to all three, subjective knowledge, objective knowledge and exploratory behaviour, was the frequency of whiskey consumption.

The Pearson's tests found the subjective knowledge to have a significant but medium effect on exploratory behaviour where the objective knowledge was very low and insignificant to report.

Chapter 5 – Conclusion and recommendations

5.1 Chapter Introduction

The main aim of this research was to determine the impact of knowledge on the exploratory purchasing behaviour within the whiskey consumer sector. This chapter will combine the project findings with the literature review and highlight the managerial implications, limitations and directions for future research.

5.2 Managerial Implications

The exploratory tendencies are an important factor in consumer purchasing behaviour, which is why the whiskey marketers are interested in exploring what influences this type of personal characteristic. Whiskey enthusiasts with significant variety seeking tendencies are more likely to seek new brands and are open to trying new innovations offered by the whiskey industry (Ellis D. , 2015). Therefore, companies that release new products or new styles of whiskey should try to implement a strategy that focuses on the consumers with high exploratory purchasing behaviour.

On the other hand, the exploratory purchasing behaviour causes keeping these consumers loyal to the brand much harder than whiskey drinkers with lower variety seeking tendencies (Ellis D. , 2015). Companies will have to continue to innovate and continuously release new products to retain this consumer segment. Some other incentives that could improve the brand loyalty are rewards, discounts, engagement with whiskey clubs and provide platforms to discussion forums (Ellis, Pitt, & Caruana, 2015).

The results of this study indicate that there is a significant correlation between the frequency of drinking whiskey and exploratory purchasing behaviour, but not the age or gender. This could be related to the theory of optimum simulation level(OSL), where the person's behaviour is intrinsically motivated to reach a specific level of stimulation (Raju, 1980). The consumers with the higher level of OSL have a higher level of exploratory behaviour due to the continuous need to restore the stimulation to the optimum level (Trijp, Hoyer, & Inman, 1996).

The demographic profile of the respondents displays a significant increase in the popularity of whiskey in younger generations. Twenty percent of participants were

between eighteen to thirty-four and seventy percent of participants were between thirty-five and fifty-four. However, the whiskey market segment seemed to be still dominated by the male enthusiast as only thirteen percent of the respondents were women.

The research also revealed a significant correlation between a subjective knowledge and exploratory tendencies. However, not significantly related to objective knowledge. This implies that people with high subjective knowledge tend to be more open to new brands and innovations. Following Deborah Ellis (2015) segmentation grid, people who scored high on subjective but low on objective knowledge would be referred to as "Snobs" and consumers with a high knowledge level on both facets are called "Experts" (Ellis & Pitt, 2015).

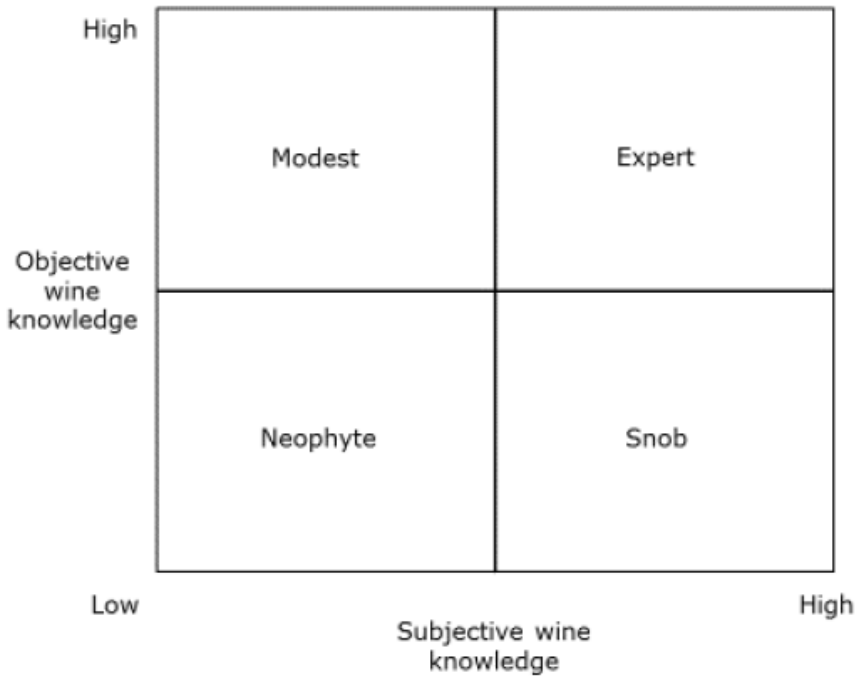

Figure 47 Wine Knowledge Types (Ellis D., 2015)

Both "*Snobs*" and "*Experts*" are more likely to seek variety in their purchases due to their high levels of self-assumed knowledge, which increases their confidence and reduces the uncertainty (Ellis & Thompson, 2018). This relates to Bettman(1973) theory, where factors such as lack of sufficient information about the product, customer has a low self-

confidence, little or no experience with the brand and high variation of quality between the brands, are influencing the perceived risk of purchasing a product. With lowered risk and high confidence in the selected product, the consumer is more likely willing to try a new style or new brand on the market. Companies that target these consumers need to recognize that this market segment is more likely to purchase their products in specialized whiskey shops rather than supermarkets and adjust their distribution channels accordingly. Brands should also include a variety of products with higher pricing to their portfolio, which will increase the chances the consumer will stay loyal to the brand. Furthermore, companies could introduce loyalty schemes, such as discounts after multiple purchases of their product, to provide additional value to the consumer and retain this segment. On contrary, the consumer with low subjective knowledge, such as Neophytes and Modest, are more likely to purchase the same brand with lower price in locations such as supermarkets.

The companies should perform basic segmentation based on the objective and subjective knowledge and use different strategies to target these specific customer groups (Schiffman & Wisenblit, 2015). Understanding the consumer knowledge can give the marketers insights of the purchasing behaviour, such as exploratory tendencies.

5.3 Limitations

As any research project, this study had its limitations due to constraints such as cost and time. The main two limitations that were recognized at the start of the project were the use of the online survey as a data gathering tool and the selection of social media as a distribution channel.

The online questionnaire was a convenient solution to reach whiskey enthusiasts and gather their responses. However, considering the objective knowledge questions required the participants to use their own whiskey knowledge without reaching for any help from outside sources, this approach could not ensure the responder's honesty. The only action that was available for the researcher was to emphasize the importance of not using any outside help during the survey (e.g. books, magazines or internet) in the introduction page.

The second limitation was related to using social media as a tool to gain the access participants. The drawbacks associated with using the social media channels as a recording tool of the actual respondent's behaviour was addressed in the introduction note, which asked to complete the survey honestly and professionally and highlighted the reason and importance of the research.

The second limitations regarding to social media channels is the geographical spread of responses. As the geometric data was not gathered during the collection process due to GDPR issues, there was no way of eliminating responses coming from outside of Ireland or Europe. Therefore, the researcher focused on sending and copying the Irish whiskey enthusiast clubs and Irish whiskey brands in the social media post in order to ensure most of the responses would be local.

5.4 Recommendations for future research

Several future research topics became evident during the project and possible improvements that can be used for the next study within the whiskey consumer sector.

The objective knowledge effectiveness can be improved by creating an environment where the respondents can't use outside resources. It might also be beneficial to change the format of the survey by changing to open questions instead of multiple choice. This would prevent guessing and gather more accurate knowledge levels of the participants.

Following Deborah Ellis (2015) research paper there are multiple topics that haven't been explored within this study. It would be interesting to perform a segmentation exercise within the Irish whiskey consumer sector using the knowledge type grid. This could be helpful to marketers who can use this tool to target specific knowledge type consumers. Furthermore, there could be more investigation done on the relationship between objective/subjective knowledge and the other demographics, such as education. There are also other consumer behaviours than variety-seeking tendencies that could be explored in the future, such as opinion leadership and opinion seeking.

Similar to whiskey or wine consumers, it might be interesting to repeat this study with other information intensive products. The type of the product might result in changes to consumer purchasing behaviour.

Equally as product type, the cultural differences can also have some influence on the consumer's actions. Ensuring the responses are collected within single country and comparing them with the others could provide a significant insight for marketers.

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