

**ENHANCING COMPETITIVENESS OF WINE THROUGH  
EMPOWERMENT LABELS: A CASE STUDY OF WINE  
PRICES AND CONSUMER PREFERENCES AT TWO WINE  
RETAIL OUTLETS IN THE KWAZULU-NATAL  
MIDLANDS**

By

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## ABSTRACT

*South Africa's history of the disempowerment of black people (Africans, Coloureds, Indians, and Chinese), presented the post apartheid government after 1994 with problems of policy formulation around empowerment of the previously disadvantaged groups (PDGs). In the wine industry, one possible way of addressing inequality in the access to economic resources and racially skewed land redistribution is through empowerment labelling of wine. Empowerment labelling of wine may promote competitiveness of wine businesses owned by the PDGs. This will help to address inequality problems in the sector. Skinner (2007) demonstrated that empowerment labelling can benefit South African wine firms in international wine markets because empowerment and Fairtrade labelled wines benefit from import preference in most European Union (EU) countries. This study investigates one possible way in which empowerment labelling may benefit wine firms on the domestic markets for wine. Several wine brands with empowerment attributes are currently traded in domestic wine retail markets in South Africa. Very few of these wine brands are broad-based black economic empowerment (BBEE) brands. If South African wine consumers value black economic empowerment in the wine industry, empowerment attribute labelling may be used to identify empowerment products, and thereby promote the competitiveness of Black Economic Empowered wine businesses.*

*This study sets out to quantify South African wine consumers' willingness to pay (if any) for empowerment labelled wines. Data for the study were collected in 2007 and 2008. Two methods were used for this purpose using two case studies in the KwaZulu-Natal Midlands. The first method used a revealed preference technique to determine whether a price premium exists on the current wine prices or not. Using the hedonic price analysis technique, linear and log-linear hedonic price functions for wine for two wine retail outlets in the KwaZulu-Natal Midlands were used to estimate the price premium paid for empowerment attributes in this domestic wine retail market. Explanatory variables which were found to influence wine prices were Platter's Wine Guide quality rating, Reputation of the winery, and BBEE. Tests on the statistical fit of the models using the Park Test and residual scatter plots indicated that the log-linear model had better data fit. These two models could not be compared using the more traditional R squared and F-statistics as they had different dependent variables.*

*The second method used a stated preference technique to estimate wine consumers' willingness to pay for empowerment attributes of wine in the Kwazulu-Natal Midlands. Personal interview surveys of consumers at a wine cellar were conducted. The monetary value of these consumers' willingness to pay was quantified using conjoint analysis and the conditional logistic model. Although the revealed preference techniques for consumer willingness to pay for empowerment labels showed that a negative price premium exists for these wine attributes, the stated preference technique revealed a positive willingness to pay for empowerment attributes. The monetary values could not provide the actual willingness to pay as they tended to be close to the hypothetical price of wine used in the questionnaire. This might be attributable to the prices used in the questionnaire not capturing the average actual wine prices for this specific wine retail outlet. Therefore, the monetary values were used as indicators of the ordering of attribute importance by the consumers.*

*The results also indicated that an information gap between consumers and producers may exist. This implies that, provided that consumers are made aware of these attributes, there may be potential for wine producers to earn a price premium on empowerment attributes. Further research is required to determine whether South African wine consumers (a) value empowerment attributes (using stated preference techniques), and (b) are aware of wine brands that have empowerment attributes. The results of this study would aid government in formulating policies that promote the competitiveness of empowerment attributes such as giving machinery or inputs procurement rebates to wineries that are broad-based empowerment compliant, and in so doing, improve the economic position of previously disadvantaged groups.*

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## LIST OF ACRONYMS

ACA	Adaptive Conjoint Analysis
BBEE	Broad-based Black Economic Empowerment
BC	British Columbia
BEE	Black Economic Empowerment
BWI	Biodiversity Wine Initiative
CFK	Cape Floral Kingdom
CV	Contingent valuation
DF	Degrees of freedom
FAO	Food and Agriculture Organisation of the United Nations
FNB	First National Bank
IBS	IFOAM Basic Standards
IFOAM	International Federation on Organic Agriculture Movement
IOAS	International Organic Accreditation Service
ISO	International Organisation for Standardisation
KWV	Koöperatiewe Wijnbouwers Vereniging van Zuid-Afrika Bpkt
KZN	KwaZulu-Natal
OLS	Ordinary Least Squares
PDG	Previously Disadvantaged Groups
PMB	Pietermaritzburg
ROI	Return on Investment
SA	South African
SABS	South African Bureau of Standards
SAFCO	South African Forestry Company Limited
SANAS	South African National Accreditation System
SAWIT	South African Wine Industry Trust
UNCTAD	United Nations Conference on Trade and Development
US	United States
VIF	Variance Inflation Factor

# **INTRODUCTION**

## **Statement of the problem and objectives**

The economic empowerment of previously disadvantaged groups (PDGs) is a stated objective of the post-apartheid government in South Africa (Department of Trade and Industry (DTI), 2003). According to the Broad-based Black Economic Empowerment (BBEE) Act (Act 53 of 2003), BBEE is the economic empowerment of all black people through diverse but integrated socio-economic strategies. BBEE initiatives in the agricultural sector include establishing black-owned farm businesses and agribusinesses. Some of these BBEE initiatives are Fairtrade-labelled, indicating that they adhere to standards for better treatment of farm workers and receive fair export product prices in international markets. According to Fairtrade Certified (2007), fair prices refers to a price that at least covers the cost of production while setting this price as the minimum resale base price of any particular product. BBEE farms and agribusinesses are a subset of these initiatives, being part-owned by some of their employees (including via farm-worker equity share schemes).

Empowerment is a credence attribute. Credence attributes are all the product's properties that cannot be determined by the consumer in any way, even if the product is bought and consumed (Caswell and Mojduszka, 1996). Credence attributes cannot easily be valued and consumers can only be aware of the presence of these attributes through product labelling. Through product labelling, the problem of asymmetric information is reduced and hence empowerment labels can be used to inform supply-chain participants about empowerment attributes of products. Empowerment labels may include empowerment brands (for example, the Thandi wine brand) as well as third party empowerment accreditation labels (for example, the Fairtrade label).

## **Rationalisation of the research**

According to Skinner (2007) empowerment attributes of products and services can serve to enhance the competitiveness of farms and agribusinesses. He established that a niche market exists for empowerment labelled wine. If agribusinesses could market their wine to

this segment, the possibility of an increment in their market share would be realised. This would subsequently promote their competitiveness. According to Kennedy *et al* (1997) cited by Ortmann (2000), competitiveness is defined as a firm's ability to profitably create, deliver value through product differentiation and/or lower costs. Empowerment characteristics can help differentiate a product from similar products. Skinner (2007) found that the advertising of empowerment attributes through labelling can help South African wine businesses access export markets and realise a price premium. However, Skinner was unable to demonstrate whether this benefit was derived from consumers' demands for empowerment attributes, or other reasons such as social responsibility objectives of firms within these supply-chains. This study explores this issue in a domestic wine market by investigating consumers' willingness to pay for empowerment attributes.

A study of consumers' willingness to pay for empowerment attributes is best suited to a product for which product labelling is important and where empowerment brands or labels are established. The South African wine industry has historically been relatively competitive in export markets, but competition has intensified following the emergence of New World wine (i.e. wine produced in emerging countries, including South Africa). New World wine countries use three basic strategies in marketing their wine: very attractive prices, very high quality adapted to consumer tastes, and campaigns to raise awareness and promote their own brands (Steiner, 2000; Orth and Krska, 2001; Loureiro, 2003).

Barrena and Sanchez (2007) state that wine producers are exploring different strategies to enable them to stay in the market and remain competitive. One such strategy they propose is product differentiation – the act of distinguishing products from those of competitors through mechanisms such as branding, labelling and emphasising unique attributes in the production chain. Branding is primarily concerned about the reputation, image, identity, and personality of a product as a marketing front on which a successful label could be built. According to the Food and Agriculture Organisation of the United Nations (FAO, 2007), a label is a symbol signifying verification of compliance with the set standards. This symbol serves to communicate information from the seller to the buyer and/or the end consumer. Labels that convey otherwise missing information to the consumers help them make better informed buying decisions pertaining to a particular product (Dankers, 2003).

Some wine sector initiatives that aim to empower PDGs have been established, but are not common. The Thandi brand is an-often quoted example of BBEE in the South African (SA) wine industry. This project, established in 1996, was one of the first equity share schemes in SA commercial agriculture and preceded the government's BBEE legislation by eight years. In 2003 Thandi wine became the first Fairtrade-labelled wine in the world, and in the same year was awarded a gold medal at the International Wine Challenge in London. Although 95% of all Thandi wines were exported in 2005, Thandi appointed new agents for marketing its wines in the domestic market in 2006 (Ewert *et al*, 2006). Labelling and branding also serve as a differentiation tool for a niche market.

BBEE is the economic empowerment of all black people who were disadvantaged by apartheid (Africans, Coloureds, Indians and Chinese) through diverse but integrated socio-economic strategies. Apartheid ensured that non-white racial groups were deliberately segregated against in most sectors of the economy. Economically, the non-white racial groups were kept on the very margins of activities, and given few opportunities to participate in mainstream economic activities (Lipton, 1989; Wolpe, 1972). One sector in which apartheid was applied was agriculture, a sector with considerable implications for economic growth.

Democratisation since 1994 has created opportunities to redress imbalances of the past in all sectors. Agriculture has attracted such measures as the Land Reform Programme and BBEE. An overarching strategy to ensure increased and fast-tracked participation of non-whites in the economy has been the passing of legislation for BBEE. In the wine industry, this strategy is complemented by empowerment labelling and branding (Skinner, 2007).

### **Research methodology**

Several methods can be used to estimate consumer willingness to pay (WTP) for different product attributes. Depending on the product attribute for which consumer WTP is to be estimated, different estimation techniques could be employed (Carroll and Green, 1995). For example, if the attribute is of a credence nature, both choice experiments and hedonic price analysis could be used depending on whether the problems of asymmetric information have been effectively addressed. If the product attribute is of a non-marketable nature, then contingent valuation estimation technique is most appropriate. Since BBEE is

a credence attribute, both revealed preference and stated preference techniques are used in this dissertation to investigate consumers' WTP for empowerment attributes at a wine retail outlet in the KwaZulu-Natal (KZN) Midlands. Hedonic and conjoint analysis techniques were used to investigate consumers' relative preferences for seven attributes of wine (Price, Reputation, Vintage, Variety, Organic, Fairtrade, and BBEE). Hedonic price analysis was used to estimate the current price premia on empowerment-labelled wines sold at two wine retail outlets in the KZN Midlands by surveying current wine market prices. Conjoint analysis using the conditional logistic regression model was used to estimate consumer WTP for empowerment attributes at one of these wine retail outlets in the KZN Midlands. SAS version 9 was used to formulate the choice questions and analyse the data after data collection. Using the SAS OPTEX (SAS Version 9) procedure to maximise design efficiency and maintain design orthogonality, a fractional factorial design was created (Kuhfeld *et al*, 1994). Using this method, a total of 32 product profiles was created with a minimum requirement of 30 respondents per choice set. The profiles were randomly divided into two blocks of 16 profiles with each scenario containing two complete product profile packages (A and B) of specified levels of each attribute. These choice questions were used in the personal interviews.

Survey interviews of consumers at a wine retail outlet were conducted using the systematic sampling method. Every fourth consumer was selected to be interviewed, with a small token of appreciation or response stimulus being presented to the respondents after the conclusion of the interview. A total of 91 usable questionnaires were completed by the respondents; 15 were unusable because of incomplete information. For data collection purposes, one wine retail outlet in the KZN Midlands was selected. This outlet was selected on the basis that it is a speciality wine outlet, it stocks some empowerment labels, and the owners were willing to participate in the study.

### **Delimitation of the study**

The first limitation of this study is that this research was conducted as a case study. Therefore, the results are case specific and cannot necessarily be extrapolated to other areas or on a country-level basis. The second limitation is that of the challenge of constructing a questionnaire that is both short enough for respondents not to lose interest in giving honest responses, while at the same time capturing adequate information from

respondents. Balancing these two imperatives presented one of the biggest challenges during the questionnaire formulation stage, and hence, some questions deemed important might have been left out of the questionnaire. For example, Gauteng and KZN respondents were not separately identified, therefore, the WTP estimates for these two groups were not estimated separately. The price ranges of R35 to R40, R40 to R45 which were calculated from a different wine Outlet with a different target market might have been too narrow. Hence the protracted market in the questionnaire was markedly different from the actual market where the study was conducted. BBEE was also considered in fairly general terms. Specific aspects of BBEE that could be important to consumers were not investigated. For example, worker owners of wine farm vs. black shareholders, or BBEE in other parts of the wine supply chain. Therefore, the study considers BBEE in the SA wine industry, in general, and has not focused on any specific aspects of BBEE. It is acknowledged that BBEE has different interpretations and guidelines in different economic sectors (DTI, 2003).

### **Significance of the study**

The empowerment labelling and branding strategy, if successful has the potential to improve skills development and increase the number of PDGs who manage, own and control businesses (Skinner, 2007). For PDGs, the problem of access into the wine industry has been compounded by the fact that the wine industry is capital, management, and technology intensive. With the help of government's land grant (to some degree for certain wine labels), a few groups of PDGs have been able to establish themselves in the wine industry (Ewert *et al*, 2006).

Currently, no studies of consumers' WTP for wine empowerment attributes in South Africa have been reported in peer-reviewed journals. Further, little has been reported about the competitiveness of these attributes and whether or not the empowerment attribute of these labels adds economic value. The development of BBEE legislation and policy is costly and takes time, and more costs are incurred in implementation. Hence, there is a need for the return on investment (ROI) to be understood by the policy makers and decision makers in government. The results of this study can better inform the wineries on whether empowerment labelling provides a competitive tool and how it could be used as a vehicle in increasing their profits through price premia. Wineries could use this study to



deduce the attributes in a wine that consumers value most via the relative rankings that consumers attach to each attribute. This could help them to craft or formulate their wines around these attributes, and consequently, to serve their markets better.

### **Layout of the dissertation**

The first chapter of the dissertation discusses the relationship between standards, certification and labelling. It discusses the mechanisms of setting standards by different standard-setting bodies, the certification of those standards (which is usually done by a third party), and the labelling of certification on a product. The second chapter describes BBEE in the wine industry and the labels that are associated with empowerment of PDGs. The third chapter reports a hedonic price analysis conducted to compare wine price premia that currently exist at two wine retail outlets in the KwaZulu-Natal Midlands. In the fourth chapter, conjoint analysis is used to measure consumer WTP for empowerment attributes of wine at one of these retail outlets. This chapter is followed by the Conclusions and Recommendations section.

# CHAPTER 1

## **Empowerment standards, certification and labelling**

There are three types of product attributes: search, experience, and credence. Search attributes assist a consumer to determine the product's quality and can be researched or examined by the consumer before buying the product (for example, the colour of the product). Experience attributes can only be determined by the consumer once the product has been purchased and consumed, for example, taste (Caswell and Mojduszka, 1996). Consumer demand for information on products has increased as consumers need more information to help them have a balanced diet, to avoid certain allergens or ingredients, and to know the origin and the environment under which a certain food product was produced. They also need to know the ethical and technological conditions under which the product was produced (Verbeke, 2005). Out of all the aforementioned reasons why consumers need information, safety reasons are the most important when it comes to food products. Information is about food quality and safety risks, helps to reduce consumers' uncertainty when making purchasing decisions (Langford *et al*, 1999). Potential market failure is created when consumers face uncertainty as a result of missing information about a product. This chapter discusses the problem of asymmetric information as motivation for the setting of standards; certification of standards by a third party; and the accreditation of certification bodies. The distinction between branding and labelling is also explained.

### **1.1 Information asymmetry**

Akerlof (1970) contends that information asymmetries can give rise to adverse selection in markets. He uses the Lemon Model (a second hand car in bad condition) to illustrate his point. Conventional economic theory of perfect competition assumes that all consumers are rational and have perfect information about the price of goods and services. However, in many markets, there may be an imbalance in the availability of information between the consumer and the seller. As a result, the consumer has incomplete, uncertain, or overly complex information. This is known as information asymmetry. Information asymmetry problems may be to the detriment of the consumer in markets where products and services are (Lindley, 2007):

- Complex and opaque, making it difficult for consumers to judge their characteristics.
- Bought infrequently, so that consumers do not benefit from past experience.
- Sought by intermediaries that are remunerated by commission based on the volume of sales rather than the quality of outcome for the consumer.
- Subject to a long time lag between the purchase of the product and the delivery of its benefits to the consumer.
- Subject to complex charging or pricing structures which make it difficult for the consumer to determine the total price he will pay for the product.
- Difficult to evaluate in terms of performance unless something goes wrong.

Lindley (2007) states that competition will be facilitated if consumers are provided with clear and relevant information that enables them to make an informed choice. In order for consumers to do this, labelling as a policy device is generally considered to be the least costly and the least restrictive method in cases of typical credence attributes (Caswell, 1998). Blandford and Fulponi (1999) assert that labelling initiatives are quite specific because of their potential direct impact on consumer decision-making. From this perspective, labels can be seen as an item of direct consumer information that may help reduce information asymmetry (Rabinowicz, 1999). Branding and labelling, and thus the establishment of standards, are a market mechanism that can be used to reduce information asymmetry and as a differentiating tool that can enhance the competitiveness of firms.

## **1.2 A brief history of food standards and labelling**

According to Dankers (2003), the earliest written historical records of food standards and labelling were found in Assyrian tablets and Egyptian scrolls. They prescribed the different methods to measure the correct weights of grain, and the labelling to be applied to some foods. This was aimed at addressing concerns arising from underweight content, size variations, misleading labelling, and poor quality.

Between 1897 and 1911, the Codex Alimentarius Austriacus was established. The Codex Alimentarius Austriacus was a wider collection of standards and product prescriptions for a variety of foods in the Austro-Hungarian Empire. From the early 1900s, attempts to harmonise standards were made by food trade organisations.

In the 1950s, when information on labels was minimal, consumers became concerned about product hazards such as micro-organisms, pesticide residues, environmental contaminants and food additives, and the way products were grown and processed. As a result, and in response to such fears, producers displayed more information about the product using product labels. However, for the claims on the label to be credible, third party certification became necessary to ensure that the set standards were maintained (Dankers, 2003).

With such a history, branding, labelling and standards have grown all over the world, motivated by various factors ranging from commitment to certain values and life styles, religion, concerns about profit, perceptions of injustices in trade, and commitment to industry best practices. Values and life style-motivated labels include organic certification, while those motivated by religion include Kosher and Halaal meat product certification, mainly for Jewish and Islamic communities respectively (Ziegler, 2007). Bottom line or profit-motivated labels are probably the most common and are a business strategy to gain competitiveness in a given industry. Labels or standards in response to perceived injustices in trade include Fairtrade initiatives to pay good prices to local producers selling products on the international market (such as cashew nuts, coffee, bananas and wine) on condition that their products meet certain conditions, like the non-use of herbicides. Industry labels are mainly concerned with fulfilling industry best practices. An example is the Forest Stewardship Council certification in timber and non-wood forest products like honey and mushrooms (Forest Stewardship Council, 2007). The process of food labelling and standards has become increasingly complex with its own technical language, organisations, legal processes and other imperatives. The following section is an attempt to elucidate some of these issues in the food industry.

### **1.3 Types of Product Standards**

A product standard may be defined as a specification or a set of specifications that relate(s) to some characteristic of a product or manufacturer. The specification may relate to size, dimensions, weight, design, function, components or any number of product attributes. Compliance with standards may be voluntary or compulsory, depending upon whether the standards are set by private organisations or are public standards set by governments. Products that do not meet the standards can still be sold without penalty. Products that

conform to these standards are permitted to use the standards mark which customers may be relying on for quality assurance, and therefore, even though standards may not be mandatory, producers may still have to conform to a given national standard in order to gain access to a given market. Technical specifications are standards laid down by regulatory authorities with which compliance is mandatory (Stephenson, 1997).

Standards may perform various functions. They are used as protection for consumers to ensure that only products which meet certain standards are traded in a market. Standards may also be used as barriers to entry into certain industries, or to benefit a well-established group of producers. The latter suppress fair competition and hinder technological innovation (Blind, 2004). When properly designed and implemented, standards enhance the value of the label by enhancing reliability and credibility.

### **1.3.1 Types of standard-setting organisations**

The types of standards which are set differ according to the category of standard-setting organisations (Dankers, 2003). Standards may be set by various types of organisations, including governments, industry participants and trade unions. Government-set standards are termed regulations. Governments may, however, adopt standards set by another body. These are normally generic in nature but can be moulded to suit the country situation. One such example of government-adopted regulations is the Alimentarius Codex for agriculture production, processing, labelling and marketing of organic products (foods), first adopted by the United States government, and later by European countries.

Standards may also be set by producers, buyers, or organisations acting on behalf of either of the parties. If producers set standards, a third party is normally invited to verify the implementation of the standards to demonstrate the producers' commitment to fulfilling the requirements of the market. In the case of congruent product requirements, producers and consumers may decide to set standards collectively. A good example is the GlobalGap protocol<sup>1</sup>.

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<sup>1</sup> The EurepGap (Euro-Retail Produce Association Good Agriculture Practice) (now GlobalGap) protocol was developed by 22 large European retail companies encompassing large scale fresh produce suppliers and producers ([www.eurepgap.org](http://www.eurepgap.org)).

Trade unions may also set standards on a small but significant scale. They do this by negotiating collective agreements (usually working conditions) for individual firms in an industry. On the other hand, non-governmental organisations (NGOs) normally set environmental standards. These NGOs may be in the form of advocacy groups, or broad stakeholder groups. A combination of governments, producers and NGOs may come together to set standards. For example, in ISO standards, all three groups are represented (Dankers, 2003). The South African wine industry has the wine industry Codes of Good Practice as empowerment standards for the industry ( South African Wine Industry Trust (SAWIT), 2008). However, in this dissertation only empowerment standards involving industry are discussed.

#### *Empowerment standards involving government*

##### *British Columbia (BC) wine standards*

These are standards which were developed by the Canadian government for implementation by different state governments in Canada. The purpose of these standards is to improve Canadian wine quality through the improvement of grape quality to promote increased competitiveness of Canadian wine on the world stage. The implementation of the national wine standards in BC began in 2005. All grape wineries are required to register annually and all wines of “Marked Quality” must be certified by the BC Wine Authority, which governs the national wine standards. All wineries desiring the “Marked Quality” designation must be registered with audit-worthy proof that the wines are made from BC grapes and have gone through chemical analysis from a certified laboratory. The BC Wine Authority certifies the winery laboratories. Wineries are also required to be audited at cost at least once every three years. The Authority regulations also lay down basic production guidelines and set out the six approved geographic indicators, which are: British Columbia, Fraser Valley, Okanagan Valley, Similkameen Valley, Vancouver Island, and British Columbia Gulf Islands. All membership is voluntary (Schreiner, 2005).

##### *South African wine industry Codes of Good Practice*

The South African government, through the South African Bureau of Standards (SABS), sets industry standards that all producers have to adhere to. In the wine industry, the setting and implementation of standards is done through the South African Wine Council. SAWIT

is a trust set up by government, and is one of the wine council's branches responsible for drafting the South African Wine Industry Charter. The Charter is based on and aligned with the Codes of Good Practice on Broad-based Black Economic Empowerment as published by government. These codes provide standards for the development of BBEE throughout the economy (SAWIT, 2008). They identify three categories for scoring purposes: large enterprises (annual turnover above R35 million), which are required to comply with all scorecard elements; qualifying small enterprises (annual turnover between R5 and R35 million), which are judged on four of the seven elements; and micro enterprises (annual turnover below R5 million), which are exempted. Verification of BEE compliance is done by EmpowerDEX, which keeps a database for BEE compliance from all sectors of the economy in accordance with the Codes of Good Practice (Andrews, 2007).

#### **1.4 Empowerment certification**

Certification is an assurance by a third party that the product in question conforms to certain set standards. The third party certifier should not have direct interest in the economic relationship between the supplier and the buyer (Dankers, 2003). Certification and labelling are seen as conduits of product differentiation and attractants of higher, yet less volatile, prices than those obtained in conventional commodity markets. They take advantage of three distinct industry trends, namely a widening physical gap between agricultural product producers and agricultural product consumers; an increase in consumers' food safety concerns; and an increase in household disposable incomes. When these trends are combined, they increase the demand for differentiated products. One method of differentiating products is by empowerment verification and labelling.

EmpowerDEX is one of the first verification agencies in the SA wine industry to be accredited by SANAS (South African National Accreditation System), with effect from February 2009. EmpowerDEX is an independent economic empowerment rating and research agency. The company's mission is to provide support to both the public and private sectors in accelerating BBEE in SA, thereby helping to promote economic development. The company's services include BEE verification and BEE research (First National Bank (FNB), 2009). The EmpowerDEX generic rating fee matrix is presented in Appendix F on page 102. The rating process involves four steps:

- Step 1: This is the planning and preparation step. In this step, pre-site visit dates by EmpowerDEX are arranged, and the requirements for the ratings process and accompanying documentation are discussed.
- Step 2: This step involves sending the rating pack with the information within a week of the pre-site visit. In this pack, no new information may be added as no new information can be accepted after the pre-site visit. The verification site visit is usually three weeks after the initial site visit.
- Step 3: This step is concerned with verification of the information presented to EmpowerDEX. This includes verification of any risk areas, validation of any supporting documentation, interviews with company representatives, employees, suppliers, and/or customers during site visits.
- Step 4: This is the final step and entails the production of a rating report and a rating certificate by EmpowerDEX. The overall rating score is equivalent to a rating status as per the guidelines in the Codes of Good Practice. If a company satisfies all the requirements, the EmpowerDEX roundel (label) (APPENDIX G on Page 101) can be used on its products to enhance credibility of a company's BEE status (Boxsmart, 2009).

## **1.5 Empowerment accreditation**

This is the evaluation of the third party certifier itself on its capacity to carry out certification. Skinner (2007) contends that an impartial and reputable third party certifier lends credibility to a label and may be a more cost-effective way of commanding a price premium. Successful accreditation systems should be demand driven and be characterised by low transaction costs. Ultimately, they can be a very good measure to counter low consumer confidence. The accreditation body is normally the body that crafts the generic standards that a third party certifier uses as guidelines in the certification process. The application of a verification symbol implying accreditation is part of the labelling process. SANAS is the accreditation body authorised by the Department of Trade and Industry (DTI) in South Africa to oversee the development and maintenance of the rating standards in the BEE industry. It is also responsible for accreditation of verification agencies (for example, EmpowerDEX) (Boxsmart, 2009).



The next section discusses the often interchangeably used concepts of branding and labelling. Branding and labelling are similar but different concepts. Firstly, branding is defined and its many dimensions are explained. Secondly, labelling is discussed as part of branding.

### **1.5.1 Branding and empowerment labelling**

The American Marketing Association (cited by de Chernatony and Riley, 1998:418) defined branding as, “a name, term, sign, symbol or design, or combination of them, intended to identify the goods and services of one seller or group to differentiate them from those of competitors.” Although it was the first formal attempt at defining branding, it has been criticised for being too mechanical, too concerned with the physical product, and too input-oriented (de Chernatony and Riley, 1998).

De Chernatony and Riley (1998) suggest nine brand conceptualisation themes:

- A legal instrument: a brand can be seen as a legal statement of ownership aimed at deterring imitators.
- A logo: this is a brand’s visual features as a basis for differentiation.
- A company: a company’s name is used to identify the entire product offering, suggesting a coherent focus for all company offerings and a consistent message to all stakeholders.
- An identity system: this perspective of the brand stresses the necessity of developing a holistic and integrated desired position for the brand. It distinguishes among the image, reputation, and identity of the brand. Brand identity is defined as a unique set of brand associations that the brand managers aspire to create or maintain (Louro and Cunha, 2001). Therefore, brand identity is an expression of how the organisation intends the brand to be perceived by consumers. Brand image is a consumer-centred concept defined as “a holistic impression held by the consumers about the relative position of a brand among its perceived competitors”, (de Chernatony, 1999:165). Brand image is perceived to be dynamic, and hence reflects the latest perceptions of consumers. Reputation is a collective representation of a brand’s past actions and results that describe its ability to deliver valued outcomes to multiple stakeholders (de Chernatony *et al*, 2001).

- An image in consumers' minds: this deals with perceptual filters which alter consumers' cognitions of brands. Brands may be viewed by consumers from four different perspectives; a brand may be seen as a means of identifying an offering. De Chernatony and Riley (1998) hold that consumers seldom remember the names of brands they buy regularly, but instead rely on the packaging to identify the products. A brand may be seen by consumers as a guarantee of consistent quality and hence act as a risk reduction mechanism. Brands may also act as a shorthand device encapsulating mental connections that people have around them. Ultimately, this enables rapid information recall and facilitates choice.
- A personality: brands are viewed as symbolic devices with personalities that add value beyond their functional utility. Aaker (1998) has developed a scale which measures brand personality along five dimensions: sincerity, excitement, competence, sophistication, and ruggedness.
- A relationship: De Chernatony (1999) holds that once the personality of the brand has been defined, a relationship between the brand and the consumer ensues that is contingent upon the inherent values of the brand personality.
- Adding value: this view asserts that consumers buy brands and not products. It holds that competition among brands is no longer toughest at the core product level, but at the added functional capabilities and symbolic features represented by the particular brand level (Simões and Dibb, 2001).
- An evolving entity: this view encompasses most of the above views. According to de Chernatony and Riley (1998), brands evolve from unbranded commodities to brands as references of identification to a stage where brands offer emotional appeal in addition to functional benefits.

Therefore, brands are not only logos but communicate and convey the core values that can be attributed to the product. It follows that, in conveying information about empowerment attributes of a product, a label is only one dimension of a brand.

### **1.5.2 Empowerment labelling**

According to FAO (2007), a label is a symbol signifying verification of compliance with the set standards. This symbol is the actual communication between the seller and the buyer or the end consumer. It is purported to convey adequate information to the consumer for him to make a better informed buying decision pertaining to a particular product. A

label is thus aimed at reducing the degree of information asymmetry between the seller or producer of a product and the end consumer.

Golan and Kutcher (2000) suggest that labelling is appropriate under the following conditions:

- Consumer preferences differ: labelling is appropriate when consumer preferences differ widely in relation to product attributes and characteristics. In the wine industry, this is important for empowerment labelling as it satisfies the niche group of consumers who have an innate need to feel good about helping the cause for social and economic upliftment of PDGs.
- Information is clear and concise: information on labels must be clearly informative since unread or misunderstood information may not lead to informed decisions by consumers. Unclear information may in fact increase information costs as a result of the extra effort needed to get the information across to consumers.
- Information on product use enhances safety: information that reduces the risk of consumers to the negative attributes of a product is valuable to consumers.
- Costs and benefits of consumption are borne by the consumer: labelling is appropriate when the consumption of a product creates externalities (affects someone else in a way that is not reflected by the market).
- Standards, testing, certification and enforcement services can be established: mandatory labelling should be accompanied by achievable quality standards, testing services to evaluate the effectiveness of the labelling claims, certification to substantiate the claims, and some mechanisms for enforcing the labelling rules in the whole supply chain (from the producer, distributor, retailer, through to the end consumer).
- No political consensus on regulation exists: in cases where there is little consensus on the decision either to completely ban the product, or where there is no government intervention at all, labelling may present the best compromise between the two viewpoints. Golan and Kutcher (2000) contend that government intervention in the US has served three main purposes: it ensures fair competition among producers, it increases consumer access to information, and it also reduces the individual consumer safety and health risk.

### 1.5.2.1 Benefits of empowerment labels

Marette (2005) asserts that most of the previous empirical studies of labelling have shown a significant effect of labelling on prices and consumers' WTP for consumer products, even when price premia are relatively low. It follows that the labelled product must also possess high consumption quality for it to command a price premium. This was found to be the case particularly in the case of socially responsible and origin-based labels.

Labelling of food products is the most direct form of communication with consumers on food ingredients. This is perceived to be highly important for consumers with allergies towards some food ingredients, as allergies and hypersensitivity currently have no cure (European Finance Association (EFA), 2007). Formulation and enforcement of mandatory regulations for the labelling of food ingredients can help protect consumers from products that might endanger their lives.

Consumer protection provided through labelling translates into a differentiation tool as it provides the consumer with more product information. Consequently, labelling can enhance competitiveness among producers of similar products. This is especially essential to small scale producers as it assures them of an equal footing with the more established producers in the same market; hence it may help small producers to increase their market share (Skinner, 2007). In the SA wine industry, most of the empowerment wineries are emerging wineries on both the international and local markets; therefore, empowerment labelling helps differentiate their wines from those of the well-established, non-empowerment wineries.

Labelling forms an interface between labelling control authorities, manufacturers, distributors, and consumers. It provides a dynamic vehicle through which demands of participating groups could be changed or implemented. Labels such as ethical characteristics, animal welfare or the absence of child labour on average may command a less than 10% price premium. However, the niche markets for such labels have been empirically proven to be stable, even though small. Recently, labels for Fairtrade and fair working conditions in developing countries have gained prominence on the world stage (Marette, 2005).

### 1.5.2.2 Costs of empowerment labelling

Whereas many developing nations produce resource-intensive products for export to the developed countries, industrialised nations produce eco-labels in accordance with the environmental impact awareness being the focus of attention internationally. The developed country producers use this label as a competitive tool against their low-cost developing counterparts. According to Nedlac (2002), producers in developing countries have increasingly found themselves at a disadvantage as they are not being able to meet the criteria for export to the developed countries' markets. Since their consumers have shifted their demand away from unlabelled products, the resulting trade flow imbalances have led to market share loss by developing countries, and hence trade distortions. The effects of this have been reduced production, lower investment levels and increased unemployment in these developing countries (Nedlac, 2002). Therefore, labelling could be used as a deliberate barrier to entry into certain markets. These barriers affect small-scale producers in particular, since they may not have the financial resources for large-scale product certification.

This chapter discussed Empowerment standards, empowerment certification, and the labelling of products with empowerment attributes. It provided a general overview of empowerment. The following chapter explores empowerment in the South African wine industry, with particular focus on broad-based black economic empowerment.

## CHAPTER 2

### **Empowerment in the South African (SA) wine industry**

South Africa's apartheid policies sought to deliberately exclude PDGs from social and economic progress. These policies prevented PDGs from participation in the mainstream economy. Agrarian reform refers to measures that address the legacy of apartheid policies in the agricultural sector of South Africa. One such measure is Black Economic Empowerment (Moseley, 2006).

Concerns about the slowness of implementation of empowerment led to efforts to increase the rate of empowerment under the Broad-based Black Economic Empowerment (BBEE) policy. Empowerment can be defined as the sanctioning of legality or formal warrant. In the South African case, empowerment has entailed the passing of legislation favouring the PDGs in the form of BBEE (Andrews, 2007). Agriculture has attracted such empowerment measures as land redistribution and BBEE, and this chapter specifically discusses empowerment in a sub-sector of agriculture: the wine industry. The chapter discusses the contentious concept of BBEE, and its application in the wine industry. It discusses the Thandi wine empowerment label as an example of one empowerment label which seems to be doing very well on the overseas markets. It was also the first Fairtrade-labelled wine in the world. It also discusses Stellar organic wine as an example of an organic wine on the local market.

#### **2.1 A short history of wine-making in South Africa**

Understanding the drive towards empowering PDGs in South Africa's wine industry can be explained by a short review of history. In Africa, wine was first made in the Nile Delta about 5000 years ago. The wine-making technology was adopted in South Africa when Jan Van Riebeck brought grape vines to the Cape in the 1650s. The country's most famous wine, Constantia, became a huge success in Europe in the 1700s (Kench *et al*, 1983). In the seventeenth century, the Dutch provided an outpost to serve ships sailing from Europe to the East in Cape Town. Since the inhabitants of the Western Cape were not used to farm labour, the Dutch brought East Africans or Madagascan slaves to work on their farms. As a result the labourer population evolved into a mixed race called coloureds, who now

account for over 60% of the Western Cape's population (Moseley, 2006). Despite the abolition of slavery in 1834, farm labourers' conditions remained poor and their wages low. According to Kench *et al.*, (1983), the master-labourer relationship that existed between the farm workers and the white farm owners prevailed even after the abolition of slavery. Many of the labourers bought groceries on credit from their employers and hence fell into the debt-bondage cycle with their masters. The 'dop system'<sup>2</sup> was also used to retain workers in a low wage industry (Kench *et al.*, 1983).

During the apartheid era, international sanctions prevented the flow of money, technology, vine material and know-how into South Africa. In addition, the Cooperative Growers' Association (KWV) controlled grape production and used its influence between 1918 and 1988 to buy as much grape as its members could allow (Moseley, 2006). This heavy-handed control by the KWV of the wine industry provided very limited access to PDGs and could have limited the rate of improvement in wine quality. Most of the wine was distilled into brandy (Ewert *et al.*, 2006).

The abolition of apartheid saw the engagement of foreign consultants and the acquisition and use of virus-free vines. This also saw the move to end the domination of the largely white male elite in the wine industry to empower the PDGs. This has been done through conversion of KWV a cooperative to a private company, and replacing it with the South African Wine Trust (SAWIT). BEE provided the initial guiding framework, followed by BBEE in order to increase the rate of implementation of government's empowerment programmes across sectors – agriculture included.

## **2.2 Broad-based black economic empowerment (BBEE)**

BBEE is defined by the BBEE Act No.53 of 2003 as “the economic empowerment of all black people through diverse but integrated socio-economic strategies” (DTI, 2003). The socio-economic strategies encompass the increase in the number of PDGs that manage, own and control enterprises and productive assets, and the increase in investment in enterprises that are managed by PDGs. Kassier *et al.* (2004) contend that the socio-economic reforms prioritise alleviating poverty and inequality, and their assessment to

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<sup>2</sup> The dop system was the provision of cheap wine as part of compensation by farmers to farm workers. This often led to alcoholism and domestic abuse. The system was abolished in 1960 (Kench *et al.*, 1983).

judge whether the measures are working, focuses on the achievement of poverty alleviation and inequality reduction. Kassier *et al* (2004) prescribe three approaches under which the proposed transformation and BBEE could be achieved.

The Neo-Liberal approach is viewed as a private sector-driven approach and emphasises the reliance on markets to transfer power to the private sector in order to empower the poor. This approach places much dependence on the assumption that the market is empowered to offer opportunities to the poor, and the belief that liberal market capitalism will provide the necessary tools for a trickle-down effect. The GEAR<sup>3</sup> and ASGISA<sup>4</sup> strategies form part of this approach and have been used as yardsticks for the government's socio-economic transformation (Andrews, 2007).

The second approach involves the need for PDGs to direct and take charge as emerged through the BBEE commission. Focus is directed towards poverty alleviation and economic transformation in a quest to align government policies with the World Bank view of a maximalist<sup>5</sup> and collective empowerment (Kassier *et al*, 2004). However, this approach is plagued with the challenge of translation of the vision into viable alternative political and economic institutions at the national level, let alone at the operating level. Often, the benefits to the poor are unevenly shared. The third approach is the approach being championed by the Department of Trade and Industry (DTI). This approach implicitly advocates governmental intervention in the case of a market failure (Andrews, 2007).

### **2.3 Empowerment in the wine industry**

Entry into the horticulture industry for new entrants has never been easy. Part of the reason is that, unlike other branches of agriculture, horticulture is capital, management, and technology intensive. Deregulation of markets after democratisation<sup>6</sup> made it more difficult to enter this market (Kassier *et al*, 2004). For the PDGs, the problem is compounded by the fact that the Land Redistribution for Agricultural Development (LRAD) grant, which is

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<sup>3</sup> GEAR is the Growth, Employment and Redistribution plan.

<sup>4</sup> ASGISA is the Accelerated and Shared Growth Initiative of South Africa.

<sup>5</sup> The uncompromising position of the World Bank in formulating policies that are aimed at expediting the achievement of full empowerment of the PDGs.

<sup>6</sup> During democratization, state support to farmers was withdrawn and the market was deregulated.



aimed at making it easier for them to venture into such markets, is not enough to enable them to acquire a viable farm. Moreover, most of the PDGs in the Western Cape cannot keep their jobs and cottages on the farms where they work as most farmers are downsizing permanent employees in preference of casual workers living off the farm. The need to cut labour costs is due largely to globalisation and government deregulation (Moseley, 2006).

### **2.3.1 The South African Wine Industry Transformation Charter**

In 2007, the Wine Industry Transformation Charter was adopted by the South African Wine Industry Council. The purpose of the Charter is to give impetus to change and development within the sector, and to provide the strategic framework and associated scorecard necessary to advance BEE, leading over time to a deracialised industry (an industry in which the means of production is representative of the population demographics) (SA Wine Council, 2007). It is generally accepted that despite certain sizeable BEE transactions and a number of BEE initiatives at farm and label level, much remains to be done in the transformation of the wine industry (SA Wine Council, 2007). However, the Charter has not yet obtained legal status as this can only be effected upon approval as a Section 9 Charter. It is currently registered as a Section 12 Charter. Therefore, the BEE scorecard in the Charter will only take effect after ratification as a Section 9 Charter. The BEE Scorecard in the Codes of Good Practice (APPENDIX C on page 97) and the terms of the wine industry BEE scorecard (defined in APPENDIX D on page 98) are used as a yardstick for assessing BEE status. In the Charter, BEE is defined as an integrated and coherent social economic process that contributes directly to the economic transformation of South Africa and brings about significant increases in the number of black people that manage, own, control and participate in the country's economy, and a substantial reduction in income inequality. The direct beneficiaries must include black workers, the black unemployed, the rural poor, the black middle class, and black entrepreneurs and investors. The Charter is seen as an opportunity to address the consequences of a history of dispossession and exploitation, and also to make a contribution to economic growth.

The Charter is based on the Codes of Good Practice and uses the following key principles:

- BBEE must be measured and reported according to economic reality rather than legal form.

- BEE is measured according to the seven core elements (ownership, management, employment equity, skills development, preferential procurement, enterprise development, and socio-economic development).
- All companies measure BEE based on a score system, and those with greater compliance receive a higher score.
- Beneficiaries should comprise 40-50% black women; and 2-3% black designated groups (black people with disabilities, black youth, black people living in rural areas and black unemployed people).

The Wine Industry Charter Council was established in accordance with the Codes of Good Practice. The Council is empowered with modification consideration of the Charter based on changes on the industry environment and in accordance with government decisions. The job of the Charter Council is to:

- Monitor and review the implementation of the Charter and industry scorecard.
- Establish an executive team to attend to routine work, to issue guidance notes, on the interpretation and application of the Charter, and to commission research.
- Establish a central database of relevant information on the BEE status of measured enterprises.
- Prepare an annual review outlining progress and evaluating new items for action.
- Engage with government, public sector finance institutions, the appropriate BEE bodies and other regulatory agencies to promote implementation of the Charter.

The South African Wine Industry Transformation Charter faces the same challenges as the other industry charters have faced (for example, the Financial Sector Charter and the Mining Industry Charter). These problems include the approach of most companies to empowerment obligations. Few have realised the benefits of BEE beyond tender or licensing criteria. They have been criticised for not appreciating the value-creating potential of the various components of BEE to an individual business and to the economy in general. Consequently, the Charter's intentions to have broad-based results may not be realised.

### **2.3.2 Broad-based black ownership of wine-producing firms in South Africa**

The SA Wine Council (2007) contends that black ownership of wine-producing firms and land under grape production in the wine industry still remains under 1%. This is no different from the 2005 results. One of the Charter's main objectives is to address the skewed ownership regime that is prevalent in the industry. APPENDIX E on page 101 presents estates under black ownership and their associated wine brands.

### **2.3.3 Empowerment labels in the SA wine industry**

Empowerment is viewed as the driving force behind the five success factors of the wine industry. These are: promoting the 'Brand South African' brand; accelerating international distribution; making headway on the empowerment and transformation front; attracting more funding for research and development; and improving skills for labourers and managers (Williamson and Wood, 2004, cited by Sefoko *et al*, 2005). It takes empowerment to improve the tainted reputation of the wine industry given its history of dispossession and exploitation (SA Wine Council, 2007). The *dop* system where workers were part paid in cheap wine was used as a retaining mechanism for workers in the wine industry with very low pay (Sefoko *et al*, 2005). Therefore, through the improvement in reputation of the wine industry, it is likely to have a positive impact on the competitiveness of South Africa's empowerment wine labels (e.g. Thandi), to encourage participation in social upliftment of the PDGs, and to improve resource and environmental management.

#### *The Fairtrade label*

Because many farmers, especially in the developing countries, receive payments that are lower than the costs of production, these farmers are forced into a cycle of poverty and debt (Fairtrade Federation, 2007). In addition, most of these farmers use intensive farming methods on the same pieces of land. Through the Fairtrade labelling (APPENDIX G on page 103) of their products, these farmers have been empowered by guaranteeing of minimum wages to their workers while receiving fair prices for their products, and encouraging sustainable methods of farming. Fair price is defined by Yanchus and Vanssay (2003), Bronkhorst (2004), Oxfam (2010), European Observatory on Fair Trade

Public Procurement (2010), among others, as a price that is equal to the market-determined price of a good plus an additional premium that consumers are willing to pay for the guarantee that specific inputs are paid at a certain socially acceptable rate. They also receive credit (Fairtrade Federation, 2007). Using the same avenue, the Fairtrade movement aims to alleviate the historically unequal international market relations by replacing them with producer empowerment and poverty alleviation. The market for Fairtrade-labelled products links ethically-minded consumers with poor southern producers (Reynolds, 2002). Most of the benefits of Fairtrade are as a result of the pricing structure that guarantees a floor price higher than the that of the world market (as in the case of Fairtrade coffee) (Reynolds, 2002).

However, Ebrahimi (2006) argues that, of the estimated 200 million pounds that consumers spent on certified Fairtrade products in the United Kingdom (UK) in 2004, only about 42 million pounds reaches the developing country producers. The difference in the earnings goes to supply chain middlemen and licensing fees charged by the Fairtrade Organisation. Promising as it may be, Fairtrade as a channel for selling products only accounts for 0.1% of the world trade in all goods. But sales of Fairtrade products have been growing at an average of 20% per year since 2000 in Europe alone (Fairtrade Federation, 2007).

The Fairtrade movement uses five tools for its contribution to development. These tools are outlined below:

- *Price premia*: To ensure a price premium, Fairtrade products are normally more highly priced than others.
- *Certification and labelling*: Fairtrade certification and labelling is conditional upon the meeting of certain quality standards, working conditions, environmental sustainability, business development and training. Some of the Fairtrade labels used in Europe are Max Havelaar, Transfair and Fairtrade Mark, which are all affiliated to the Fairtrade Labelling Organisation.
- *Corporate partner assistance*: Corporate partners (for example Microsoft) offer assistance to small scale farmers getting started on Fairtrade projects.
- *Technical support*: This includes business development, trade information, advice on quality standards and training in new techniques.

- *Advocacy*: This is done through the labels found on all Fairtrade products to relay information about Fairtrade. Ebrahimi found that supermarkets which stocked Fairtrade products found it easier to market these products to the niche market (consumers who are willing to pay more for a Fairtrade product) because of the Fairtrade information relayed via the label (Ebrahimi, 2006).

### *Arguments for Fairtrade*

According to Ebrahimi (2006), Fairtrade is seen by proponents as:

- A benefit to producers as they are able to earn a decent living, gain necessary skills and knowledge of better methods of farming, social responsibility, gain access to credit and acquire export experience.
- Better prices for farmers are not so much as a result of charging the consumers more, but because the Fairtrade organisations handle all operations between production and retailing, which ultimately reduces costs incurred (Ebrahimi, 2006).
- It supports thoughtful consumerism by being an educational tool for consumers through the Fairtrade label.

### *Criticisms of Fairtrade*

- The niche markets for Fairtrade products are much too small to have a major impact on the general living standards of the developing world. Only about 20% of consumers seem to pay attention to Fairtrade products and this is seen as a potential hindrance to possible expansion.
- Fairtrade products are seen as low-cost products made for oversupplied markets. This is seen only to postpone what is really needed for development in the developing nations, namely diversification of exports.
- The developed nations could do more by importing larger quantities of normally-priced goods from developing nations instead of Fairtrade products only.
- Fairtrade is viewed as an expensive niche market to maintain as it requires constant promotion and consumer education. The high marketing costs may be one of the reasons why part of the price premium commanded by Fairtrade products does not filter down to the developing world producers.

- Retailers may take advantage of the consumer's conscience by charging a price which is higher than the actual price premium to enrich themselves.
- There are too many criteria for measuring Fairtrade by the Fairtrade organisations; therefore, it may confuse the consumer as to whether the trade really is fair. There are also some fair trading organisations who are not members of FLO, such as Rugmark (the clean clothes campaign) (Ebrahimi, 2006).

### *The Thandi wine label*

This label is often offered as an example of a BEE label in the SA wine industry. The Thandi<sup>7</sup> label was the initiative of Western Cape farmer Paul Clüver in the Elgin Region. It started when a community of wage workers in Lebanon village was about to be made redundant by the South African Forestry Company Limited (SAFCOL) as a result of its intention to scale down activities in the Western Cape, cease forestry activities and dismantle the village. Clüver started by donating his own 100ha of uncultivated land and leasing another 100ha from SAFCOL at a nominal rate in 1996.

Together with an Anglican social development body, social workers from Lebanon village, workers from Clüver's De Rust farm and Clüver gave birth to the Thandi project. This project represented one of the first equity share schemes in commercial agriculture and preceded the government's black economic empowerment legislation by eight years (Ewert *et al*, 2006)

The farm's main focus initially was fruit production (with the farm's apples, pears and plums finding a ready market). The suitability of the farm's soils for high-grade grape production and the high demand for South Africa's good quality wines prompted the farm to concentrate on wine production. In 2003, Thandi wine became the first Fairtrade-labelled wine in the world, and within the same year, it collected a gold medal at the International Wine Challenge in London. By 2005, 95% of all Thandi-labelled wines were exported (Ewert *et al*, 2006). Local sales of Thandi wine were between 3% and 4% of total production between 2002 and 2006. This was mainly due to the fact that Thandi

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<sup>7</sup> Thandi is a Xhosa phrase for 'nurturing love'.

experienced problems with the agent until 2006. However, local sales are expected to surge with the appointment of new agents<sup>8</sup>.

Expansion in sales for Thandi wine will depend on expansion of the quantity supplied, since the demand is increasing relative to supply. For suppliers to be affiliated to the Thandi label, quality and empowerment criteria should be strictly adhered to. In 2005, Omnia (formerly Stellenbosch Vineyards) acquired a 34% stake in the Thandi wine company and three more grape farms affiliated themselves with the wine company and bought a stake in Thandi wine (Skinner, 2007). The Thandi case illustrates what it takes for an ordinary PGD to be empowered into being a wine company owner. Skinner (2007) noted that the Thandi brand in conjunction with the Fairtrade label has helped Thandi market its products in export markets.

#### *Stellar Winery label*

Stellar Winery is situated 275 km north of Cape Town on the road to Namibia. The winery makes use of a semi-arid climate, substantial refrigeration capacity and extensive in-house engineering to produce modern, Fairtrade organic wines. It was the first organic vineyard to receive the Fairtrade accreditation. The grapes are grown without the addition of chemicals, pesticides or herbicides. Stellar wines do not contain any form of preservatives and sulphur. Sulphur is one of the most common preservatives used in the preservation of wines. However, some wine drinkers develop headaches after consuming wines containing sulphur. The sulphur-free wines are aimed at this niche market (Stellar Organics, 2007). When compared with conventional wines, these organic, sulphur-free, Fairtrade wines sell at a premium (Griffin, 2007). There are not many published studies that study the WTP for empowerment attributes of wine. The following chapter presents empirical studies that have analysed empowerment attributes.

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<sup>8</sup> The new local agents are selected Spar supermarkets, selected restaurants, three Cellar Door outlets, the Thandi Farm stall in Elgin Valley, and The Company of Wine People's Welmoed and Helderberg Cellars in Stellenbosch.

## CHAPTER 3

### **A review of studies that have investigated hedonic pricing and consumers' WTP for empowerment attributes of agricultural produce**

There have been very few studies – specifically studies that use choice experiments and hedonic price analysis– examining consumer preferences on the credence attributes of wine in South Africa. The empirical model in this dissertation is largely guided by previous research dealing with WTP for credence attributes of other products. Some studies that have been done on credence attributes of other products other than wine are presented below.

Previous hedonic price analyses of wine prices include Priilaid and Rensburg (2006) in South Africa, London and Smith (1998) in France, and Bombrun and Sumner (2003) in the United States of America. Priilaid and Rensburg (2006) used hedonic pricing of 537 South African red wines to determine the implicit pricing and ranking of some of the observable characteristics of these wines. Five cultivars were included, namely: Cabernet, Merlot, Pinotage, Pinot Noir, and Shiraz. They employed a linear regression model to estimate the intrinsic price for red wine, and yielded 0.355 as their highest adjusted  $R^2$ . They found that successive increments in wine quality ratings were not equally priced. They also found that value for money was ranked highest, followed by varietal preference, expert ratings and, finally, loyalty to the brand (reputation). Therefore, they concluded that the value-for-money cue was quickly replacing the historic pricing of estate reputation.

Using data from the market for Bordeaux wine in France, London and Smith (1998) used hedonic price analysis to determine the effect on price of current product quality and reputation. They used a linear regression model where price is a function of current and expected quality, where the latter depends on reputation. They yielded an  $R^2$  of 0.467. They argued that when the true quality of a particular wine was unknown before purchase, consumers relied on a winery's reputation to form expectations of the wine's quality; as a result in this case, wine prices will depend on winery reputation. They found that the price premium associated with a better reputation far exceeded improvements in current quality.



Bombrun and Sumner (2003) analysed data from the prices of 8,460 individual Californian wines. They used a linear hedonic price analysis model to determine which attributes consumers valued most. They found that grape variety did not have a significant impact on the prices of some wines while having a significant impact on other varieties like Pinot Noir. For Cabernet wines, the tasting score by wine experts had the most impact on wine prices. For Cabernet and Merlot, age at release was found to have a significant impact on the wine prices, while origin had the most impact for Pinot Noir, Merlot and Zinfandel wines. Studies on credence attributes of agricultural products using choice experiments are presented below.

Darby *et al* (2006) estimated consumer WTP for locally-grown strawberries using an intercept study of direct market and grocery store shoppers. Their objectives were to provide a rationale for the existence of a niche market potential for Ohio berry producers. They also wanted to determine the extent to which the magnitude of premia varies according to socio-economic factors. The authors argued that such knowledge would allow merchants to identify various segments within the market and therefore, price the products within the segments strategically. They used choice experiments using the binary probit model. They also used the log-likelihood ratio test to test for differences between the direct market (if the consumer was surveyed at the market) and grocery store (if the consumer was surveyed at a grocery store). Darby *et al's* (2006) results suggested that there was a statistically significant difference between the two survey locations. The average grocery store customer was willing to pay an average of 0.64 US dollars extra for a carton of strawberries if they were labelled "Grown in Ohio". The estimate was much higher for an average direct market shopper (\$1.17 for a box of strawberries that cost \$3 at the time). However if the strawberries were labelled "Freshly harvested", the WTP estimate for both grocery store and direct market shoppers rose to \$0.87 and \$1.38 respectively (thus representing 29% and 46% of the price of conventional strawberries). Their conclusion was that a solid niche market existed for Ohio berry producers.

Singleton (2001) evaluated consumer WTP for Ecotourism certification in New Zealand and USA. His main objective was to determine whether a niche market for Ecotourism existed. His study was motivated by the problem that providers of Ecotourism had no incentive to expend the effort to meet eco-standards because of the presence of 'free riders'. Therefore the 'free rider' problem in the system served as a disincentive to meet

Ecotourism standards. Consequently, the client base had no way of distinguishing between genuine eco-tours and free riders. From his study and his review of other studies, Singleton concluded that consumers in the US were willing to pay a price premium of anything between 10% and 170% on organic produce above that of a conventional product (including ecotourism).

De Pelsmacker *et al* (2005) estimated consumer WTP for Fairtrade-labelled coffee. The purpose of the study was to investigate to what extent consumers were willing to pay for the Fairtrade attribute when buying coffee, and how consumers differed in terms of their WTP. They surveyed the total administrative and academic staff of Ghent University in Belgium, and obtained 779 useful responses. They used conjoint analysis with 48 different coffee profiles which were converted to eight product profiles (using the fractional factorial design). They established that the average WTP for the total sample was 10% of the price of non-Fairtrade labelled coffee, although it varied substantially between 36% for Fairtrade lovers (who comprised 35% of the total sample) and less than 5% for brand lovers.

Rousu *et al* (2005) used a non-hypothetical field experiment to examine the WTP for genetically-engineered (GE) labelled second generation cigarettes. In the USA, only second generation (foods modified to such a level that the consumer characteristics of the product are altered) should be labelled GE. However, only the modified attribute needs to be identified. Using a choice experiment, they concluded that in the absence of marketing information, consumers bid less for GE-labelled cigarettes relative to bids for exactly the same cigarettes without a GE label. Thus according to their findings, when a label indicates that a food product was produced with GE, there is a general decline in preference toward that item. However, after providing marketing information to consumers, GE labelling of the cigarettes did not decrease demand.

Kaneko and Chern (2005) measured consumer willingness to pay for genetically-modified oil, cornflakes and salmon in the United States. They used the contingent valuation method and asked respondents to choose between GM and non-GM alternatives (with an indifference option) using the binomial and multinomial logit models to calculate consumer willingness to pay to avoid GM alternatives. They discovered that consumers were willing to pay a premium of 20.92%, 14.8%, 28.4% and 29.7% of the basic prices to avoid GM vegetable oil, GM cornflakes, GM-fed salmon and GM salmon, respectively.

Their conclusions were that: Americans were generally accepting of GM foods if sufficient price discounts were given; consumers were less likely to accept GM foods if they rated them risky to human health; and consumers were more likely to accept them if they rated favourably the government performance in the food safety regulation.

Hu *et al* (2006) studied consumer perceptions of and WTP for credence attributes associated with Canola oil. Their objective was to provide a better understanding of consumers' preference for Canola oil to predict future market trends with Canola and Canola oil with different traits. They used a choice-based conjoint survey using 'nutrition information', 'GM seeds', 'certified', 'imported' and 'price'. The numbers 1, 2, 3, and 4, were also used as attribute levels for 'low in saturated fat', 'rich in Oleic acid', 'rich in Alpha-Oleic acid', and 'rich in vitamin E' respectively. Their results indicated that the question of whether the product uses GM seeds in production was the most important purchasing factor that consumers make. With a conventional Canola oil costing 298 to 698 yen, Japanese consumers are willing to pay an extra 221 yen for the organic attributes and 523 yen for the fractional food attribute. Consumers were also found to discount imported Canola oil at 700 yen.

Quantification of the WTP for empowerment attributes is the subject of the following two chapters. Willingness to pay can be estimated using two separate methods. The first method, discussed in Chapter 4, is a revealed preference technique in the form of hedonic price analysis. This method is being applied to estimate the current price premium in the local KZN market. It is often used when the price of the product in question is known and established on the market. The second method is a stated preference technique in the form of conjoint analysis, and is the subject of Chapter 5. It is applicable when the product is unknown or is not yet established on the market to have a significant influence on the overall market price for that product. Using this method, consumer WTP for empowerment attributes is estimated using the assumption that consumers are aware of these labels.

The next chapter discusses the theoretical standings of the two methods employed in this study (hedonic price analysis and conjoint analysis). The case study methodology employed is also discussed.

## **CHAPTER 4**

### **Research methodology and data collection**

Previous studies have used hedonic price analysis to investigate the actual premiums paid on products or their attributes. However, when markets are characterised by asymmetric information, actual premia may not be a good estimate of WTP. In such instances, choice experiments or contingent valuation techniques tend to be used. The case study methodology is used in this dissertation to investigate consumers' relative preferences for empowerment attributes (WTP).

In this chapter, case study analysis methodology is explained as the method used in this study. The study also uses the hedonic price analysis method to investigate consumers' relative preferences for empowerment attributes. This method was used to determine whether the current pricing of empowerment wines commanded price premia by examining their current prices and disaggregating the overall price into its different attributes. Two wine retail outlets were used for this purpose and the results were compared. The second part of this chapter investigates stated preferences for empowerment wines using choice experiments (conjoint analysis) at one of the wine retail outlets. The results of these two analyses are presented in chapters 5 and 6, respectively.

#### **4.1 Estimating premia paid for empowerment attributes using hedonic price analysis**

The Lancasterian approach (Lancaster, 1966) uses the concept that individual attributes of products can be valued. This chapter and Chapter 5 will focus on this concept and explain methods for estimating consumers' WTP for the BBEE attribute of wine. It will introduce the concept of hedonic price analysis and discuss the results that were obtained from a hedonic price analysis of two wine retail outlets in the KZN Midlands. The objective of the study was to evaluate the impact of different wine attributes on wine prices in these specific wine retail outlets. Hedonic price analysis applies to a product which is traded on the market. Even though some empowerment labels are sold on the local market, they may not yet be well established enough to have a notable impact on the overall price of wine.

#### 4.1.1 Hedonic price analysis

The term ‘hedonics’ was originally derived from the word ‘hedonikos’ in Greek which means ‘pleasure’ (Colwell and Dilmore, 1999). In an economic sense, however, ‘hedonic’ refers to the utility of, or the satisfaction that consumers acquire, through the consumption of goods and services. As derived from Lancaster (1966) and Rosen (1974), hedonic price analysis posits that a product possesses a range of attributes that, when combined, form bundles of attributes that influence utility. Historically, hedonic methods were developed and used in price indices. Bartik (1987) claimed that the first recorded contribution to hedonic price theory was by Court in 1941.

The Lancasterian Model (1966) postulates that all goods belong to groups and can only be consumed in combinations, given the consumer’s budget, *ceteris paribus*. In contrast, Rosen’s model (1974) assumes that all goods are wisely chosen from a spectrum of brands and are consumed discreetly. Consequently, Rosen’s model is more suitable for consumer goods. Rosen’s model also assumes a nonlinear relationship between the prices of goods and their characteristics, while Lancaster’s theory assumes linearity between the price of goods and their associated inherent characteristics. In Rosen’s model, it is also assumed that the consumers’ WTP for an attribute is a function of the utility level, the consumers’ income, and other variables influencing the consumers’ tastes and preferences.

Deodhar and Intodia (2002) state that hedonic price analysis deals with the identification of traits or characteristics of a product that influence its daily market price. It involves the regression of the price of the product on its different influential attributes as a derivative of the price of the product in respect to the product attribute. If this implicit price is not found to be significantly different from zero, then the respective characteristic is not valued by consumers. However, if after regression, the particular attribute’s estimated coefficient is found to be significantly different from zero, then the attribute is valued by consumers.

The above theory and empirical evidence suggest the following general hedonic price function for wine:

$$Price = f(\text{reputation, quality, objective characteristics}) \quad (4.1)$$

Therefore, the price of wine is a function of reputation, quality, and objective characteristics. Hedonic price analyses of wine prices can be divided into two groups. The first group includes taste characteristics of wines as wine quality characteristics. The objective is to better understand how consumers judge wine quality. The second group uses an index of wine quality in place of individual taste characteristics. For this study, individual quality characteristics are indexed using the Platter wine rating (2007; 2008).

Following Oczkowski (2001), suppose that a wine bottle is described by  $n$  different reputation, quality and objective characteristics ( $Z_1 \dots Z_n$ ), and the bottle of wine is associated with a unit price. A hedonic function will describe the price of the  $i^{\text{th}}$  bottle ( $P_i$ ) as a function of its characteristics ( $Z_1 \dots Z_n$ ). Therefore,

$$P_i = f(Z_{i1} \dots Z_{in}) \quad (4.2)$$

If the market is in equilibrium, equation (4.2) represents a point of utility maximisation by the consumer, given their knowledge of prices and characteristics of alternative wines on the market. It is further assumed that prices charged in markets are a fair reflection of the average consumer's utility derived from the product (Schamel, 2000).

#### 4.1.2 Hedonic price analysis research methodology

In light of studies discussed in Chapter 3, the selected attributes that were considered in this dissertation are: Empowerment, Fairtrade, Variety type (grape), Reputation, Vintage, and wine Platter Rating (as a proxy for quality attributes). In hedonic price analysis, measurement errors could arise when proxy variables are used in the absence of actual data (Mitchell and Carson, 1993).

Equation (4.3) specifies the price for the  $i^{\text{th}}$  bottle of wine as a linear function of its characteristics ( $Z_i$ s).

$$P_i = C + R_2 D_{i2} + R_3 D_{i3} + R_4 D_{i4} + R_5 D_{i5} + R_6 D_{i6} + R_7 D_{i7} + R_8 D_{i8} + R_9 D_{i9} + \beta_1 Vin_{i1} + \beta_2 BBEE_{i10} + \beta_3 Vtp_{i11} + \beta_4 Rep_{i12} + \beta_5 Org_{i13} + \mu_i \quad (4.3)$$

Where:  $P_i$  - Retail price of wine per 750ml bottle (Linear model) and  $LnP_i$  for the log-linear model.

$C$  - Constant

$D_{i2}$  - assumes 1 if the  $i^{\text{th}}$  bottle of wine is rated 1 star and 0 otherwise (as rated by Platter's Wine Guide, Table 4.2).

$D_{i3}$  - assumes 1 if the  $i^{\text{th}}$  bottle of wine is rated 1.5 star and 0 otherwise

$D_{i4}$  - assumes 1 if the  $i^{\text{th}}$  bottle of wine is rated 2 star and 0 otherwise

$D_{i5}$  - assumes 1 if the  $i^{\text{th}}$  bottle of wine is rated 2.5 star and 0 otherwise

$D_{i6}$  - assumes 1 if the  $i^{\text{th}}$  bottle of wine is rated 3 star and 0 otherwise

$D_{i7}$  - assumes 1 if the  $i^{\text{th}}$  bottle of wine is rated 3.5 star and 0 otherwise

$D_{i8}$  - assumes 1 if the  $i^{\text{th}}$  bottle of wine is rated 4.5 star and 0 otherwise

$D_{i9}$  - assumes 1 if the  $i^{\text{th}}$  bottle of wine is rated 5 star and 0 otherwise

$\beta_1 Vin_{i1}$  - vintage year

$\beta_2 BBEE_{i10}$  - assumes 1 if a BEE-labelled wine, otherwise 0

$\beta_3 Vtp_{i11}$  - Grape Variety type - this is a vector of different varieties that can be categorised into two groups; one group with Merlot, Cabernet Sauvignon, Chardonnay, Pinotage, Port, Shiraz/Syrah, White blends, and Red blends. The second group is comprised of Red, White, and Rose wines. For purposes of this study, the latter was used as it yielded a higher number of estimated significant coefficients. The former only had a few estimated variable coefficients significant at the 10% probability level of significance.

$\beta_4 Rep_{i12}$  - reputation of the winery. The wine top performers for the period 2005 and 2006, according to John Platter's ratings, were used as proxies for reputable wineries.

$\beta_5 Org_{i13}$  - assumes 1 if an Organic-labelled wine, otherwise 0

$\mu_i$  - error term

Note: all the above Platter ratings are relative to the base category. The base category was a 4 star wine. This rating was chosen as it was the most common rating category among the sample of wines taken from this particular wine retail outlet.

The *a priori* expectations of the study are that the estimated coefficients for all the attributes will have positive signs (Table 4.1). It is expected that the price premium for empowerment labels will be positive. Alternative specifications include a log-linear relationship, in which case the dependent variable is specified as the natural logarithm of  $P_i$ . The expected relationships between the price of a wine and its attributes are provided in Table 4.1. The relationship between vintage squared and price were also tested and the results indicated that price increases with vintage but at a decreasing rate. The variable coefficient estimates were not statistically significant. Interactions between various variables were also tested but their estimated coefficients were not found to be statistically significant. For example, the interaction between vintage and variety type to consider whether prices for red wines may increase at a faster rate than prices of white wines as vintage increases was performed. The results were also not statistically significant.

**Table 4.1 Expected signs of wine attribute parameter estimates**

<i>Variable</i>	<i>Variable description</i>	<i>Expected sign</i>
Variety	1 if white and 0 otherwise (or Red)	+
Vintage	Time the wine took to mature (it is expected that year (Age) the longer this time, the higher the price)	+
Label	Whether the wine is BEE, Organic, or Fairtrade-labelled, assumes 1 if it has a label and 0 otherwise	+
Rating	The wine's quality rating by John Platter (Rated from 1 to 5 stars)	+
Reputation	Of the winery, assumes 1 for a known (reputable) winery and 0 otherwise (unknown)	+



The wine ratings were obtained from John Platter’s 2007 Wine Guide. This guide is one of the two most popular guides used by wine consumers on wine purchases in South Africa (Platter, 2007). John Platter’s scoring guide of the wines is presented in Table 4.2.

**Table 4.2 John Platter’s wine scoring guide**

<i>Points</i>	<i>Stars</i>	<i>Recommendation</i>
13	1	average and acceptable
14	2	appealing, above average
15	3	good to very good, suitable for cellaring
16-17	4	excellence and distinction
above 18	5	superlative, world class master-piece.

Note: The maximum points that a wine can score is 20.

Adapted from Platter (2007)

To complete the dataset, the other explanatory attributes were obtained from Platter’s Wine Guide (2007, 2008). All the wines listed as sold in 750 ml bottles were used in this analysis. The total number of observations from retail outlet A was 1089 after subtracting the wines that were listed as being in boxes or larger bottles. Of these, 59 were BBEE-labelled, 16 were Organic-labelled, and 8 were Fairtrade-labelled. Three-quarters of the stock from retail outlet B were used in the analysis and represented 239 750 ml bottles of different wines. Of the sample, 7 were Fairtrade-labelled, 8 Organic-labelled, and 15 BBEE-labelled. The data set was analysed using the hedonic price analysis technique, and was tested for heteroscedasticity using the Park Test and scatter plots.

#### *The Park Test*

As cross-sectional data are more susceptible to heteroscedasticity, the Park Test was conducted to determine the presence or absence of heteroscedasticity. Heteroscedasticity occurs when classical assumption five is violated. Classical assumption five states that the observations of the error term are drawn from a distribution that has a constant variance. The presence of heteroscedasticity implies that the variance is overstated resulting in larger

standard errors. Subsequently, the t-statistics obtained from such a regression will be understated giving rise to wrong interpretation of the results as otherwise significant t-statistics would be found to be statistically not significant. Therefore, the OLS (Ordinary Least Squares) estimators of such datasets are unbiased but inefficient as they do not have minimum variance (Studenmund, 2001).

To examine the relation between the estimated residuals in the original regression, and the explanatory variable  $X$ , Park suggests the following two step procedure. The first step is to run OLS on the regression in question and retain the residuals. The second step is to estimate the following equation:

$$\ln e_i^2 = \alpha + \beta \ln z_i + \mu_i \quad (4.4)$$

Where  $\alpha$  is the log of squared estimated residuals,  $\beta$  is the log of the predicted parameter estimate of the explanatory variable,  $Z_i$  is the proportionality factor to the variance, and  $\mu_i$  is the error term. If the estimates of  $\beta$ s are statistically significant, it can be concluded that heteroscedasticity is present in the dataset. Heteroscedasticity results in the regression coefficients having larger standard errors although the variable coefficients are unbiased. In such cases, remedial measures can be taken. One such remedial measure is to use the weighted least squares method to estimate the regression.

$$\frac{y_i}{\sigma_i} = \beta_1 \left( \frac{x_1}{\sigma_i} \right) + \beta_2 \left( \frac{x_2}{\sigma_i} \right) + \left( \frac{\mu_i}{\sigma_i} \right) + \dots \quad (4.5)$$

Where the variances are known to a multiplicative constant ( $\sigma_i$ ), and heteroscedasticity can be remedied by dividing through the OLS regression equation by the variance (as in equation (4.5) and use OLS to re-estimate the parameter coefficients (Maddala, 1992). The new re-estimated equation would be:

$$y_i^* = \beta_1^* x_i^* + \beta_2^* x_i^* + \mu_i^* \quad (4.6)$$

Where  $\beta_1^*$  and  $\beta_2^*$  are used to differentiate the estimated parameters of the transformed model from those of the original model, and  $x_i$ s are the explanatory variables.

However, often the nature of heteroscedasticity and hence the variances are not known. In such a case, OLS is used to estimate the equation. The estimated residuals are saved and their absolute values are used to regress on their dependent variables, the result are the transformed data sets. With the variance known, the Weighted Least Squares method can be used as outlined above. This procedure may be used till convergence is obtained. The standard errors obtained from this procedure are only valid asymptotically. Therefore, the standard errors obtained may still be inefficient (Maddala, 1992). Efficient standard errors possess the minimum variance property in the class of unbiased estimators. To address this problem, STATA (2009) was used to estimate the regression using the robust function where importance weights and bias correction for heteroscedasticity functions were used. This procedure has the advantage of being able to assign different weights to each observation. These functions were chosen in order to obtain efficient standard errors and hence rid the heteroscedasticity problem that was prevalent in the data set.

## **4.2 Eliciting consumers' relative preferences for empowerment attributes using choice experiments**

This section introduces contingent valuation as a method to measure consumers' willingness to pay for public goods. As a branch of contingent valuation, conjoint analysis (with the conditional logistic regression model) is discussed next, followed by personal interviews, sampling method and questionnaire design.

### **4.2.1 Contingent valuation**

Contingent valuation (CV) is a method that seeks to elicit people's preferences for public goods by evaluating their WTP for specific improvements in those goods (Mitchell and Carson, 1993). CV predominantly uses survey questionnaires to elicit people's values for public goods. It tries to circumvent the effect of market failures by presenting consumers with a hypothetical market and eliciting how much the consumers would be willing to pay for a particular public good. The hypothetical market may be modelled after an actual private or a political market.

According to Mitchell and Carson (1993), CV was first used in 1963 by the economist Robert K. Davis. Unbeknown to Davis at the time, however, Wantrup had previously proposed the use of the direct interview method to evaluate natural resources. As a result of

Davis' influence, Ridker (1967) used CV in several studies which attempted to value the benefits of air pollution. During the 1970s, contingent valuation became a popular method used to evaluate non-marketable goods, and is still extensively used.

CV acquired its name from the fact that the elicited WTP values are contingent upon the market described to the consumer/respondent. The questionnaire used in CV consists of three parts. The first part gives a detailed description of the questions under evaluation and presents the respondents with the hypothetical circumstances under which that good is provided; the second part consists of questions designed to elicit the consumer's WTP for that particular product; and the last part elicits the respondent's characteristics. Other methods that aim to estimate WTP are offshoots of the CV method. Such a method is conjoint analysis.

#### **4.2.2 Conjoint analysis**

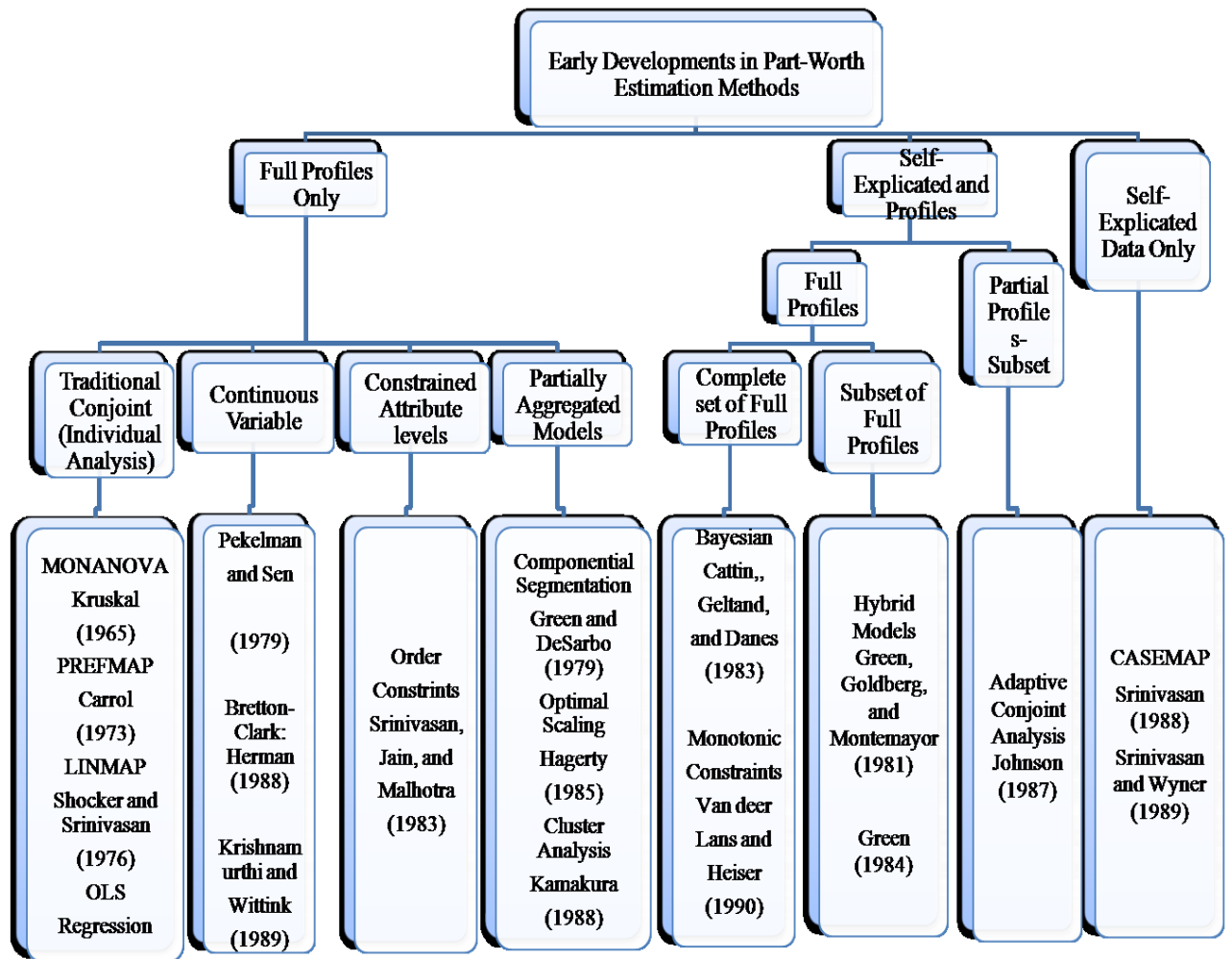
The first contribution to conjoint analysis was made by Luce and Tukey (1964), a mathematical psychologist and a statistician respectively. The first psychometric contribution to non-metric conjoint analysis, however, was done by Kruskal (1965), followed by Roskam (1968). The first step in conjoint analysis is to select the most appropriate method based upon the study's particular objectives and circumstances. Ratings-based conjoint analysis involves rating individual product alternatives or pairwise rating two product alternatives simultaneously. No-buy options are not usually accommodated in this type of conjoint analysis. This technique may be more appropriate for non-competitive markets, for example, oligopolies and monopolies. Figure 4.1 illustrates the early development in Part-Worth Estimation methods.

Hybrid techniques combine self-explicated scaling<sup>9</sup> with either ratings-based conjoint or choice-based conjoint and are generally appropriate with a large number of attributes. Adaptive conjoint analysis (ACA) is an example of a hybrid technique. Both the above methods can be conducted as full profile or partial profile studies. Full profile studies involve one level from every attribute in the study, while partial profile studies involve a

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<sup>9</sup> Method used to compute the overall utility for a multiattribute alternative as a weighted sum of alternative's perceived attribute levels and associated value ratings (Gustafsson *et al*, 2003).

subset of the total set of attributes. According to McCullough (2002), full profile studies should ideally contain no more than six attributes.



**Figure 4.1 Early developments in Part-Worth estimation methods**

Adapted from Carroll and Green (1995)

However, depending on the complexity of the attribute, six might be too many in cases of complex or unfamiliar attributes. If the attributes are absolutely simple and familiar, more than six attributes could then be included. Full profile designs are generally preferred over partial and hybrid designs because full profile designs can accommodate interaction terms more easily and they require a smaller sample size. These methods increase the reliability and validity of the results (Carroll and Green, 1995). Owing to these particular reasons, the full profile design was used in this study.

Arora (2006) contends that conjoint analysis is a well-accepted research tool that is used to estimate the relative importance of attributes (various) in a choice process, and allows estimation of relative utilities of these attributes when considered jointly. Conjoint analysis applies a somewhat complex form of analysis of variance to a respondent's choices data set in order to calculate the utility<sup>10</sup> for each level of each attribute. Initial utility estimates are dependent on the respondent's rank ordering of the preferences and his ratings of attributes' importance.

Conjoint analysis is derived from the theories of Lancaster and Random Utility. The theory of Lancaster holds that utility is derived from the bundles of product attributes that those products possess. The Random Utility theory postulates that overall utility  $U_{ij}$  can be in terms of systematic components ( $V_{ij}$ ) which is a function of the attributes and the stochastic term. Probability-wise it can be expressed as equation (4.7):

$$P_{ij} = P_r(V_{ij} + \varepsilon_{ij} \geq V_{ik} + \varepsilon_{ik}; \forall_j \neq K \in C_i) \quad (4.7)$$

Given that individual  $i$  chooses alternative  $j$  rather than  $k$  if  $\mu_{ij} > \mu_{ik}$ , where  $C_i$  is the choice set for respondent  $i$  (Nadhem and Miguel, 2007).

Studies that have used conjoint analysis to estimate consumers' willingness to pay include that of Gil and Sanchez (1997). They used the weighted least squares approach with a conjoint-designed experiment to estimate and compare wine attribute preferences within and between two different Spanish regions: Navarra and Aragon. Navarra consumers' choices were found to be largely influenced by the wine's origin, followed by price and then grape vintage year. Aragon consumers' choices were found to be most affected by origin, followed by grape vintage year and lastly price.

#### 4.2.2.1 Study Conjoint design

According to Banerjee *et al* (2007), conjoint-based design provides the inherent advantage of allowing deliberate manipulation of attributes across choice sets to test specific hypotheses. Administering full factorial conjoint-based designs is cumbersome and expensive (Hudson and Lusk, 2004). To restrict this design using the SAS OPTEX (SAS

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<sup>10</sup> A respondent's utility is a measure of his or her relative strength of preference for each level of each attribute (Samuelson, 2005).

Version 9) procedure, a fractional factorial design was created that maximises design efficiency (minimised attribute correlation) while maintaining design orthogonality (Kuhfeld *et al*, 1994). A total of 32 product profiles was created with this method. A minimum of 30 responses (respondents) per choice set is required as prescribed by SAS Version 8. To minimise response fatigue and increase response rates, the profiles were randomly divided into two blocks of 16 profiles, each scenario containing two complete product profile packages (A and B) of specified levels of each attribute. These attributes are: ‘Organic labelled’, ‘vintage age’, ‘reputation of the winery’, ‘BBEE-labelled’, ‘Fairtrade-labelled’, and ‘price of wine’. These attributes and their levels are presented in Table 4.3 below.

**Table 4.3 Attributes and attribute levels of wine**

Attribute	Levels		
A = Pwn (price of wine)	$a_0 = R35$	$a_1 = R40$	$a_2 = R45$
B = Org (Organic wine)	$b_0 = \text{Organic wine}$	$b_1 = \text{non-organic wine}$	
C = Rep (reputation of winery)	$c_0 = \text{reputable winery}$	$c_1 = \text{non-reputable (unknown) winery}$	
D = Vin (vintage age)	$d_0 = 2 \text{ years}$	$d_1 = 4 \text{ years}$	
E = BEE (BEE label)	$e_0 = \text{carries a BEE label}$	$e_1 = \text{does not carry a BEE label}$	
F = Ftd (Fairtrade)	$f_0 = \text{carries a Fairtrade label}$	$f_1 = \text{does not carry a Fairtrade label}$	

The full profile approach produces 96 ( $3 \times 2^5$ ) as the total number of product profiles. This number of product profiles is too large for respondents to give reliable responses. Therefore, the D-optimal criteria would be used to select the profiles that would assist in improving the sampling efficiency. The above levels were chosen on the basis that they satisfy four criteria prescribed by Gustafsson *et al* (2003). These criteria are:

- *Independence*: The attributes must not be inter-dependent, hence interactions must not occur between attributes. The attainment of an attribute level must not depend on the attainment of a particular level of another attribute.

- *Focussed*: The attributes must be precise, concise and must be defined along a particular dimension.
- *Realistic*: The attributes must lie with the worst and the best examples currently in the market.
- *Balanced*: Attributes should have the same number of levels, since the greater the number of levels, the more importance is given to that attribute.

The total utility of the attributes should add up to 100%. However, the importance of a single attribute is determined by its utility span<sup>11</sup> when compared to the utility spans of the other attributes. These utility shares are converted into a description of product preferences using the conditional logistic regression model.

#### 4.2.2.2 The conditional logistic regression model

If it is assumed that an individual,  $i$ , has  $m$  possible multi-attribute products to choose from, the total utility that the individual  $i$  derives can be presented as:

$$U_{ij} = V_{ij} + \varepsilon_{ij} = q'_{ij} + \varepsilon_{ij} \quad (4.8)$$

Where  $V_{ij}$  is the observable part of total utility and  $\varepsilon_{ij}$  represents the unobservable part.  $V_{ij}$  is also assumed to be linear in parameters and depends largely on the characteristics of the alternative and the decision maker, *ceteris paribus*.  $q'_{ij}$  is part of the linear parameters and is assumed to be a vector of explanatory variables (Huang and Lin, 2007). The logit model results from the assumption that the error term of equation (4.8) has a Type 1 extreme value distribution. The resulting conditional logit model is presented below:

$$P_{jk} = \frac{\exp\{\mu_{jk}\}}{\sum_k \exp\{\mu_{jk}\}} = \frac{\exp\{\mu_{jk}\}}{\exp\{\mu_{j1}\} + \exp\{\mu_{j2}\}}, k = 1,2 \quad (4.9)$$

The mean utility of an alternative is determined by the levels of the attributes in an alternative. A conditional logit model constituting the attribute levels reported in Table 4.1

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<sup>11</sup> Utility span is calculated by subtracting the highest utility value of that attribute from the lowest utility value of that attribute. This utility measure is also a measure of the part worth of the attribute to the total utility of all attributes.



would be estimated. The estimated coefficients of equation (4.9) would represent the marginal utilities of the relevant attributes. According to Banerjee *et al* (2007), when the ratio of a particular marginal utility of an attribute is taken relative to the marginal utility of money (the estimated price coefficient), it yields the marginal rate of substitution of money for the attribute or the marginal WTP. Estimation of this conditional logistic model was performed using the maximum likelihood techniques. Hence, the estimated parameter coefficient estimates of equation (4.9) were used to calculate the monetary value for the consumer WTP for the different attributes. For the Price variable, R35 per bottle of wine was used as the base category, hence the other price levels were in comparison with a R35 bottle of wine. ‘None BBEE’, ‘none Fairtrade-labelled’, ‘Unknown Winery’, ‘2-year Vintage’, and ‘none Organic’ were all used as base categories with only 2 levels each. In Table 4 which presents the estimated consumer WTP for the attributes, ‘Organic’ and ‘Price’ (R40 for females and pooled, and R40 and R45 for males) was found to be statistically insignificant. The monetary value for the consumer WTP for the attributes was given by the following formula:

$$Price_{\beta} = \frac{45-35}{utility_{45}} \times |utility_{\beta}| \quad (4.10)$$

Where:  $Price_{\beta}$  is the estimated consumer WTP for attribute  $\beta$  at R45.

$utility_{\beta}$  is the estimated parameter coefficient at R45.

Equation (4.10) assumes that there is a linear relationship between utility and price.

Standard errors calculated using the following formula:

$$Se(Price_{\beta}) = \frac{45-35}{(utility_{45})^2} \times Se(45) \times (utility_{\beta}) \quad (4.11)$$

Where:  $Se(Price_{\beta})$  is the standard error of the estimated coefficient for the attribute of interest (for example, Fairtrade).

$Se(45)$  is the standard error of the estimated price coefficient at R45. The other variables are as in equation (4.10).

### 4.3 Personal interviews survey

Personal interviews are conducted when the interviewer asks questions face to face with the respondent. These interviews are flexible in terms of where they are conducted. Personal interviews offer the following advantages:

- The interviewer works directly with the respondent (Holstein and Gubrium, 2003). As a result, follow-up questions are easy to ask depending on the respondent's answer (Lehmann, 1979).
- Relatively complex presentations (multi-attribute) can be shown to respondents while implementing questions.
- The presence of the interviewer might convince the respondent to answer questions that s/he might otherwise leave unanswered.
- Personal interviews usually take place in the respondent's everyday natural surroundings. This compels more accurate responses since the respondent is in a relaxed environment where non-verbal routines can be exercised (Holstein and Gubrium, 2003).
- Respondents are more tolerant of longer interviews than the other interview methods, particularly if the interviews are pre-arranged.

However, personal interviews are usually more expensive than the other data collection methods. The presence of the interviewer may also generate responses which are deemed fitting for approval. In cases where the interviewer misinterprets the respondent's responses, a serious case of mis-categorisation may arise. This method is also susceptible to interviewer cheating, where the interviewer fills out some responses without asking the questions. This may happen where the interviewer has a time constraint (Lehmann, 1979).

### 4.4 Sampling method

Sampling methods can either be classified as probability or non-probability-based. Probability sampling has an advantage over non-probability sampling since the sampling error can be calculated (Welman *et al*, 2005). Probability samples include random sampling, systematic sampling, and stratified sampling. Churchill (1994) defines systematic sampling as a statistical method involving the selection of every  $k^{\text{th}}$  element from a sampling frame, where the sampling interval is calculated as:

$$K = N/n \quad (4.12)$$

Where  $N$  = population size, and  $n$  = sample size.

Each element in the population has a known and equal probability of selection. As a result systematic sampling is functionally similar to random sampling. Li *et al* (2006) used systematic sampling to determine whether Chinese consumers prefer buying imported wine with a Country of Origin label. They selected every eighth consumer who entered the Century and Super Brand malls to be interviewed. The data were collected over a period of two weeks (including weekends to minimise bias) and included respondents from all backgrounds. One hundred and forty-eight usable questionnaires were returned for the research. The researchers found that most Chinese consumers preferred buying local Chinese wine, rather than foreign brand-labelled wines. They attributed this to the consumers' lack of brand image knowledge of foreign brand-named wines. The current study adopted Li *et al*'s (2006) systematic sampling method, and using this method, every fourth consumer was selected for the survey.

Seghieri *et al* (2007) also used a mixture of judgement sampling and systematic sampling to sample wine consumers in the Lombardy, Tuscany and Lazio regions, to determine Italian wine consumers' behaviour in selected stores and major Italian retailing chains. The consumers were interviewed immediately after they purchased wine. The researchers' results showed that consumers face many competing wine brands and hence take time to evaluate product alternatives in terms of brand, colour, price, and country of origin. They concluded that the organisation of a store's shelf space is highly important in attracting consumers' attention.

Since there is no single database for wine consumers in South Africa, a pre-selected sample of wine consumers could not be obtained. Therefore, methods such as stratified sampling could not be used. Specific wine clubs also could not be sampled because their members are deemed wine enthusiasts hence would most likely be more knowledgeable about wine than a novice wine consumer. This would make the results of such a sample biased. Hence, this study adopted the sampling method used by Li *et al* (2006). The data were collected from a single wine retailer in the KwaZulu-Natal Midlands. The study population was wine consumers; therefore, targeting a dedicated wine outlet where all

respondents are likely to be wine consumers was preferred. The outlet was chosen on the basis that it has arguably the largest collection of wines in the KwaZulu-Natal Midlands; that it has a diverse market; and that the owners were eager to participate in the study.

#### **4.5 Questionnaire design**

The questionnaire (APPENDIX A on page 87) was divided into three sections. Section A elicited information relevant to the consumer's individual characteristics, which could add to the explanation of their wine purchasing behaviour. In particular, data related to the consumer's economic, social and demographic characteristics were collected in this section. Section B elicited information relevant to the consumer's wine drinking habits. It sought to merge consumers' individual characteristics with their wine selection behaviour. It tested the consumer's conversance with both empowerment and Fairtrade labels. For example, what do consumers understand by empowerment and Fairtrade terms, and whether those concepts mattered to them when they were selecting a bottle of wine for consumption. The section was composed of both closed and open-ended type questions.

Sections A and B sought to rationalise the eventual choice of the consumer in Section C. Section C presented the consumers with 16 sets of hypothetical wine profiles. Consumers were expected to indicate their preferred alternative from each of the sixteen choice sets of wine attributes. Each scenario contained two complete wine profile packages (A and B) of specified levels of each attribute. The wine profiles were generated by SAS Version 9. The coded choice design from which the wine profiles were decoded is presented as APPENDIX B on page 96.

#### **4.6 Case studies and data collection**

Yin (2009) defines a case study as an empirical enquiry that investigates a contemporary phenomenon in depth and within its real life context, especially when the boundaries between phenomenon and context are not clearly defined. Tellis (1997) further states that this technique facilitates a holistic and in-depth understanding of many mutually-dependent and interrelated institutional arrangements, and satisfies the three tenets of qualitative research. These are describing, understanding, and explaining. Robson (1993) states that case study research is appropriate when the main concern of the researcher is to understand what happens in a specific context and when people are willing to cooperate in the study.

Yin (1994) suggests that case studies are an ideal methodology when the researcher has little control over events; when the focus of the study is on a contemporary phenomenon in a real-life context; and when the research is exploratory in nature. He further suggests that case studies do not limit the researcher to specific methodological tools. The unique strength of case studies is their ability to deal with a full variety of evidence, for example, documents, interviews, questionnaires and observations, both qualitative and quantitative.

Case study is a triangulated research strategy, implying that it uses different sources of data. This attribute constitutes its key strength when compared to other research methods. The rationale for triangulation is to increase the validity and reliability of the data by corroborating it with data gathered from other sources (Pinto da Silva, 2002). However, a frequent criticism of the case study methodology is that replication is not possible and that this renders it incapable of rendering generalised conclusions. Theory is, however, used as a guideline against which results from the case study are compared.

The cases for this study were two retail wine outlets in the KZN Midlands. Retail outlet A was selected on the basis that it is the only wine speciality shop in the KZN Midlands. Retail outlet B was selected on the basis of it being the biggest wine speciality shop in Pietermaritzburg central business district. This is of specific importance as both retail outlets serve different markets. This section gives brief descriptions of retail outlet A and retail outlet B and the datasets used in the analysis.

Retail Outlet A is situated 7.5 km from Mooi River on the R103 road, about 0.5km from the Rosetta turnoff. It exhibits a very friendly environment where consumers are free to look around and make enquiries on any wine, about which the owners are very knowledgeable. It was established in December 1996 by Warwick and Margaret Spowart. The intention was to serve the local communities in the KZN Midlands. However, with its growth and good customer service, it has become a favourite stopping spot for travelling tourists. It stocks over 2000 different types of wine. A wine price list with the year the wine was released was collected from retail outlet A (Spowart, 2008). The data from this outlet were collected between August and October of 2008.

Retail Outlet B is located in Pietermaritzburg (PMB) and stocks over 1000 wines. The wines purchased by this wine retail outlet are selected through the attendance of wine

tasting events. The wines that do well in terms of the combination of tasting scores and price are then selected for stock at Parklane Super Spar Cellars. Their primary clientele is middle- to upper-class consumers (Naidoo, 2007). Data were collected in September 2007. The following chapter presents the results for the revealed preference study that was conducted on two wine retail outlets using the current prices of wine (2007, and 2008).

## CHAPTER 5

### **Results of hedonic price analyses of wine prices at two retail outlets in the KwaZulu-Natal Midlands.**

This chapter presents the hedonic price analysis results of two wine retail outlets in the KwaZulu-Natal Midlands. The outlets do not serve the same market segment and the analysis uses both a log-linear and a linear model.

#### **5.1 Results**

Correlation matrices were drawn up using STATA, 2009 to test for statistically significant correlations between the variables. For retail Outlet A (Table 5.1), the most highly correlated variables whose coefficients were above 0.5 are Fairtrade and Organic. BBEE and Fairtrade correlation coefficients for Outlet A were not found to be severely highly correlated. For Outlet B (Table 5.2), the most highly correlated variables were between Fairtrade and BBEE which exhibited relatively high correlation, hence Fairtrade was left out of the regression. This is due to the fact that the Fairtrade labelled wines all happened to be BBEE labelled. The rest of the estimated variable pairwise correlation coefficients were all below the 0.8 correlation level which according to Gujarati (2003), is the rule of thumb value to indicate the severity of the correlation. Tables 5.1 and 5.2 which present correlation matrices are presented overleaf. In both Table 5.1 and 5.2, Fairtrade and Organic estimated variable correlation coefficients with Price were found not to be statistically significant, while the stimated correlation coefficients for BBEE in Table 5.2 were all not found to be statistically significant. This indicates that there is no relationship between BBEE and all the variables of Table 5.2. However, in Table 5.1, BBEE's estimated correlation coefficients with Price and Organic were found to be highly significant indicating that there exists a relationship among these variables.

**Table 5.1 Variable correlation matrix for Outlet A**

	<i>Price</i>	<i>Vintage</i>	<i>Age</i>	<i>Reput</i>	<i>Organic</i>	<i>BEE</i>	<i>Fairtrade</i>	<i>Rating</i>
<i>Price</i>	1							
<i>Vintage</i>	0.1723**	1						
<i>Age</i>	0.3797**	0.3794**	1					
<i>Reputation</i>	0.0712**	-0.1430*	-0.0987	1				
<i>Organic</i>	-0.0765	-0.0482	-0.0467	0.149**	1			
<i>BEE</i>	-0.058**	0.0471	-0.0579	0.083	-0.0326*	1		
<i>Fairtrade</i>	-0.0971	-0.003	-0.0749	0.1682	0.719**	0.6711*	1	
<i>Rating</i>	0.5364**	0.1329*	0.3354**	0.1418**	-0.2637*	-0.0168	-0.2072	1

NOTE: \*\*\*, \*\* denotes statistical significance at the 1% and 5% levels of probability, respectively.

**Table 5.2 Variable correlation matrix for Outlet B**

	<i>Price</i>	<i>Reput</i>	<i>Age</i>	<i>BBEE</i>	<i>Fairtrade</i>	<i>Organic</i>	<i>Rating</i>
<i>Price</i>	1						
<i>Reput</i>	0.3204**	1					
<i>Age</i>	0.3577**	0.0605	1				
<i>BBEE</i>	-0.082	-0.0665	-0.024	1			
<i>Fairtrade</i>	-0.082	-0.0665*	-0.024	1	1		
<i>Organic</i>	-0.0289	0.0863*	-0.038	0.0719	0.0719**	1	
<i>Rating</i>	0.6528**	0.4131*	0.3204**	-0.0115	-0.0115**	-0.0275**	1

NOTE: \*\*\*, \*\* denotes statistical significance at the 1% and 5% levels of probability, respectively.



The other estimated correlation coefficients in Table 5.1 that were found to be statistically significant are: Vintage with Price; Age with Vintage and Price; Reputation with Price, Vintage, and Organic; and Rating with Price, Age, Reputation, Vintage, and Organic. In Table 5.2, the other estimated correlation coefficients that were found to be statistically significant are: Price with Reputation, Age, and Rating; Reputation with Fairtrade, and Organic; Organic with Fairtrade; and Rating with Age, Fairtrade, and Organic.

Table 5.3 shows the results of both the log-linear and linear models for retail outlets A and B. Interactions between variables were tested and proved not to be statistically significant. The adjusted  $R^2$ , the F-statistics for both the log-linear and the linear models (for retail outlets A and B) were both found to be higher for the log-linear models than the linear models, indicating that the data fit the log-linear model better. The Durbin-Watson statistics for retail outlet A (1.593 and 1.659) fall in the region of indecision, therefore, autocorrelation cannot be considered to be severe. The Durbin-Watson statistic for retail outlet B (1.248 and 1.276) indicates the presence of mild but non-severe positive autocorrelation.

In the log-linear model, it is assumed that the coefficient estimates are linear and that their logarithms are also linear. If the assumptions of the Classical Linear Regression Model are satisfied, the log-linear model can easily be estimated using the OLS technique and estimated coefficients will have the least linearly biased property. In this model, the slope coefficients measure the elasticity of the dependent variable with respect to the independent variable(s) (Gujarati, 1999), or the percentage change in the dependent variable given a percentage change in the independent variable. For the linear regression model, the conditional mean value of the dependent variable is a linear function of the independent variable(s). In this case, the dependent variable remains constant for a unit change in the explanatory variable (Gujarati, 1999). Table 5.3 presents the estimated hedonic price functions for retail outlet A (2008) and retail outlet B (2007).

**Table 5.3 Estimated hedonic price functions of wine prices at retail outlet A (2008) and B (2007).**

<i>Variable</i>	<b>Retail Outlet A</b>		<b>Retail Outlet B</b>	
	<i>Linear</i>	<i>Log-Linear</i>	<i>Linear</i>	<i>Log-Linear</i>
Constant	63.94*** (3.55)	4.02*** (0.04)	63.37*** (7.49)	3.96*** (0.09)
Vin <sub>it</sub>	4.89*** (0.648)	0.07*** (0.01)	5.79*** (1.76)	0.09*** (0.02)
BBEE <sub>it10</sub>	-9.50** (4.14)	-0.13** (0.05)	-5.00 (32.38)	-0.17 (0.15)
Vtp <sub>it11</sub>	-5.79 (1.75)	-0.09 (0.02)	-4.21 (5.23)	-0.08 (0.06)
Rep <sub>it12</sub>	6.11*** (2.06)	0.09*** (0.23)	1.25 (4.37)	0.01 (0.05)
Org <sub>it13</sub>	1.60 (7.80)	0.08 (0.09)	6.32 (12.43)	0.08 (0.15)
D <sub>it12</sub>	-52.7*** (8.26)	-1.06*** (0.09)	-50.01 (32.38)	-0.94 (0.39)
D <sub>it13</sub>	-47.85*** (4.88)	-0.89*** (0.06)	-52.06*** (16.94)	-0.90*** (0.20)
D <sub>it14</sub>	-48.64*** (4.19)	-0.87*** (0.05)	-45.99*** (9.56)	-0.79*** (0.12)
D <sub>it15</sub>	-42.48*** (3.48)	-0.68*** (0.04)	-39.88*** (7.62)	-0.06*** (0.09)
D <sub>it16</sub>	-37.26*** (2.93)	-0.55*** (0.03)	-35.32*** (6.23)	-0.46*** (0.08)
D <sub>it17</sub>	-23.22*** (2.70)	-0.283*** (0.03)	-25.09*** (6.13)	-0.276*** (0.07)
D <sub>it18</sub>	61.16*** (3.96)	0.47*** (0.05)	10.53*** (9.43)	0.17*** (0.11)
D <sub>it19</sub>	89.87*** (8.41)	0.74*** (0.10)	39.07*** (23.09)	0.49*** (0.28)
DW	1.57	1.56	1.25	1.27
F-Stat	9.40***	12.24***	129.35***	133.40***
Adjusted R	0.2522	0.481	0.5655	0.6219
Df	226	226	1076	1076

Note: \*\*\*, \*\* denotes significance at the 1% and 5% levels of probability, respectively. The standard errors of estimated regression coefficients are reported in parentheses.

### *Reputation*

Therefore, using STATA (2009) which estimates regressions accounting for multicollinearity and heteroscedasticity, the estimated regression coefficients for Reputation for Outlet B were found to be statistically insignificant. The estimated coefficient for Reputation for retail Outlet A in the log-linear model of 0.09 indicates that a reputable winery's wine on average costs approximately 9% more than a similar wine bottle from an unknown winery, *ceteris paribus*. The estimated linear model coefficient of 6.113 indicates that a known winery on average costs R6.11 more than a wine bottle from an unknown winery. These results are consistent with the results of London and Smith (1998), who found that reputation had a significant impact on the price of wine.

### *Vintage*

The estimated positive coefficient of the Vintage attribute in both models for retail Outlet A and B reinforces the assertion that there exists a positive relationship between vintage and price. The log-linear estimated coefficients for vintage of 0.074 and 0.094 for retail outlet A and B respectively, indicate that a 1-year increase in the maturity period for wine results in a 7.4% and 9.4% increase in the price of wine, *ceteris paribus*. The linear model coefficients of 4.896 and 5.79 indicate that a 1-year increase in the age of a wine results in an approximately R5 and R6 increase respectively, in the wine price of both outlets. This is in accordance with the results of London and Smith (1998) who found that objective characteristics (including Vintage) were statistically significant as one of the main determinants of wine prices.

### *Empowerment Accreditation (BBEE)*

The expected sign for the BBEE coefficient is positive, given Skinner's (2007) conclusions that an empowerment-labelled wine yields a positive price premium (given that it is of good quality). The BBEE estimated coefficients for the log-linear and linear models for both outlet A and B carry the unexpected negative sign. The coefficients for both models for the two cellars are quite different, although the retail outlet B's estimated coefficients are not statistically significant. The BBEE estimated coefficients must however, be interpreted as having a composite effect with Fairtrade as Fairtrade was left out of the regression due to a high level of multicollinearity with BBEE. Therefore, its impact is is

part reflected by the BBEE attribute. The results from retail outlet A suggest that, at present, the log-linear coefficient of -0.135 would indicate that wines from BEE wineries and/or Fairtrade labelled wineries are priced at 13.5% less than their non-BBEE/Fairtrade winery counterparts. The linear model coefficient of -9.5 indicates that a wine from a BBEE winery is priced at approximately R9.50 less than a wine bottle from a non-BBEE winery. The first reason for these results may be that empowerment labels are not yet well established on the local wine markets as hedonic price analysis yields best results when the subject product is well established on the market. The second reason may be that the pricing strategy for these labels is such that they are underpriced during the introductory phase to attract consumers. Since the BBEE Act of 2003 encourages wine retail businesses to do business with BEE wine producers, attempts by the outlets to fulfil this criterion may prompt them to sell these wines at a lower price. The estimated regression coefficients for retail Outlet B were not found to be statistically significant.

#### *Grape Variety*

The variety type was divided into three categories: Red, White, and Rose. However, the estimated coefficient for Rose was not statistically significant, therefore it was excluded from the analysis. The coefficient estimates for both retail outlet A and B were not statistically significant. In both the linear and log-linear models, white wine took the value of 1 and red wine took on the value 0. The Variety type log-linear estimated regression coefficients for retail outlet A and B of -0.094 and -0.084 implies that white wine on average sells at approximately 9.4% and 8.4% less than red wine, respectively. The linear model estimated regression coefficients of -5.79 and -4.21 shows that white wine sells at about R5.80 and R4.20 less than red wine on average for outlets A and B respectively, *ceteris paribus*. This is in accordance with Priilaid and Rensburg's (2006) findings that varietal preference was ranked second most important among the observable characteristics of wine, and that on average red wine sells for more than white wine. Rose wines did not have statistically significant estimated coefficients for both models for retail outlets A and B. Merlot, Shiraz, Cabernet Sauvignon, Chardonnay, Port, Pinotage, red wine blends, and white wine blends were also included but their estimates coefficients were not found to be statistically significant, indicating that major differences among these wine varieties do not influence the pricing of wine for the survey samples. The adjusted  $R^2$  did not improve markedly with the inclusion of these variables.

## *Rating*

It is expected that the higher the quality rating of a wine, the higher the price of that wine. Rating was divided into 8 rating scores, that is, 1-star, 1.5-star, 2-star, 2.5-star, 3-star, 3.5-star, 4.5-star, and 5-star wines. For both linear and log-linear models for retail outlet A, the estimated coefficients for rating scores were statistically significant at the 1% level of probability. The comparison score is a 4-star wine. Retail outlet A log-linear model results show that a 4-star rated wine sells at a price 106% more than a 1-star rated wine; in the linear model, a 1-star rated wine costs R53 less than a 4-star rated wine. 1.5-star rated, 2-star rated, 2.5-star rated, 3-star rated, and 3.5-star rated wines in the log-linear model sell for 89%, 87%, 68%, 54%, and 28% less than a 4-star wine respectively. However, 4.5-star and 5-star wines sell for 47% and 74% more than a 4-star wine on average respectively, *ceteris paribus*. The linear model results indicate the same trend: 1.5-star, 2-star, 2.5-star, 3-star, and 3.5-star wines sell at R48, R49, R42, R37, and R23 less than a 4-star wine respectively, *ceteris paribus*. On the other hand, 4.5-star and 5-star wines sell for R61 and about R90 more than a 4-star rated wine respectively, *ceteris paribus*. Retail outlet B results had similar trends to retail outlet A results. However, the 1-star rated wine category estimated regression coefficient was found to be statistically insignificant. These results are comparable to those presented by Priilaid and Rensburg (2006), who found that expert ratings were influential determinants of wine prices.

Functional form is an important part of model specification. In the absence of theory to indicate the correct functional form, two functional forms are used and compared to identify the preferred model. Because the dependant variables differ, the models cannot be compared using R squared and F-statistics, so residual scatter plots and the Park Test are used (Gujarati, 1999). It must be noted, however, that scatter plots on their own cannot conclusively be used to assess which model better fits the dataset, and hence the use of the Park test to complement the residual scatter plots.

To assess the extent of the heteroscedasticity, scatter plots of squared error terms of residuals were plotted against predicted  $y$ -values. As Figures I1, I2, I3, and I4 indicate in APPENDIX I (on page 105), the linear regression models exhibit a better fit for the dataset, since the log-linear models' scatter plots have more outliers than the linear models. However, the log-linear model fits the data set better since it reduces the discernible scatter

plot patterns of the linear model as the aim of the test for a proper fit is not to have any discernible pattern in the scatter plots of the dataset. This could be due to the reduced level of heteroscedasticity in the log-linear model as Maddala (1992) states that log transformation is one of the simplest ways of ridding the dataset of heteroscedasticity. Retail Outlet B exhibits less degrees of heteroscedasticity than Retail Outlet A as its scatter plots exhibit less discernible patterns. This criterion cannot be used as a single measure by which these two models can be compared. Further tests using the Park Test were used as shown in Table 5.4.

**Table 5.4 Park Test parameter estimates**

	Outlet A		Outlet B	
<i>Variable</i>	Log-Linear	Linear	Log-Linear	Linear
<i>Constant</i>	-0.174***	-1222.25***	-0.544**	-991.55
<i>Predicted</i>	0.074***	32.353***	0.184**	36.72***
<i>Adjusted R<sup>2</sup></i>	0.030		0.025	
<i>Dw</i>	1.754		1.609	

The statistically significant parameter estimates indicate that heteroscedasticity is present in both retail outlet A and retail outlet B datasets, although not to the same degree. In both cases, the linear models seem to be more susceptible to heteroscedasticity as the estimated coefficients have *t*-values which are larger than their log-linear counterparts.

The linear models for both retail outlets A and B exhibited patterns in their squared error distributions indicating the presence of heteroscedasticity. Therefore, it can be concluded that for hedonic price analysis, the log-linear model is better than the simple linear model as it exhibits lesser degrees of heteroscedasticity.

## CHAPTER 6

### Results of the choice experiment for measuring consumer willingness to pay (WTP) for empowerment attributes of wines at a selected KZN – Midlands retail wine outlet

This chapter presents results from the choice experiment for measuring consumer WTP for empowerment attributes of wines. The results and conclusions thereof are only applicable to the consumers of this particular wine retail outlet (Retail Outlet A), as another wine retail outlet in a different part of the country may yield a different set of results. Therefore, these results may not be extrapolated to the entire wine industry as other wine consumers may have different buying attributes in the different parts of the country. For example, some wine consumers from the Western Cape may be more likely to be more knowledgeable about wine as they may have had more exposure to wine culture than their Limpopo or North-West Province counterparts.

#### 6.1 Conjoint results

Table 6.1 presents results from a hedonic price analysis of the retail wine outlet where the conjoint analysis was conducted, using the same attributes and levels as those used in the conjoint analysis.

**Table 6.1 Hedonic price analysis results of the conjoint analysis attributes used in the analysis for retail Outlet A**

<i>Variable</i>	<i>Coefficient</i>	<i>Standard Error</i>	<i>VIF</i>	<i>Adjusted R<sup>2</sup></i>	<i>DW</i>	<i>F-Statistic</i>
Constant	58.75***	2.19		0.2	1.495	40.2***
Rep	24.62***	2.61	1.07			
BBEE	-12.64**	5.59	1.09			
Ftd	0.13	15.27	1.08			
Org	-14.84	10.86	1.07			
D <sub>12</sub>	-25.44***	5.05	1.04			
D <sub>14</sub>	21.84***	3.08	1.07			
Vtp	-14.65***	2.504	1.01			

Note: \*\*\*, \*\* denotes statistical significance at the 1% and 5% levels of probability, respectively.

The implications of the results are not different from those presented in Chapter 5. Thus the  $v$  coefficient estimates for 'Reputation', 'BBEE', 'Quality star rating of 2', 'Quality star rating of 4', and 'Variety' are all statistically significant at least at the 5% probability level of statistical significance, while coefficient estimates for 'Fairtrade' and 'Organic' are statistically non-significant at least at the 10% probability level of significance. However, the adjusted  $R^2$  is much lower than those presented in Chapter 3. This might be due to missing attributes that are described in Chapter 3 but have been left out in this analysis. The VIFs are all below the threshold level of 10, indicating that multicollinearity is not severe. The F-statistic indicates that the overall model is well explained at the 1% level of probability. The following section presents wine consumer descriptives for the wine retail outlet.

## **6.2 Respondent characteristics**

As Table 6.2 shows, the greatest number of respondents were above 55 years of age (16 female and 8 male), followed by the 18-25 years age group (14 female and 8 male). These were followed by the 46-55 years age group (13 female and 7 male), who were followed by the 26-35 years age group (8 female and 7 male). The smallest age group was the 36-45 years range (5 female and 5 male). Most respondents had completed a tertiary level education degree or diploma (86% of males and 71% of females). This indicates that, on average, wine consumers surveyed at this particular wine outlet are educated. The highest number of respondents earned more than R120 000 per year in household income (49% of males and 45% of females). The second highest group earned between R61 000 and R120 000/year, and this group was followed by the group earning less than R24 000 per year (11% of males and 23% of females). The smallest group comprised those earning between R25 000 and R60 000 per year (17% of males and 11% of females). The highest number of respondents were married (20 males and 34 females); this group was followed by the single respondents (37% of males and 32% of females). Five of the respondents were widowed (6% of males and 5% of females), with only 2% of females divorced.



**Table 6.2 Characteristics of 91 wine consumers surveyed at a wine retail outlet in the KZN Midlands, 2008.**

Characteristic		Male	Female	Pooled
<i>Gender</i>		35	56	91
<i>Age<sup>1</sup></i>	18-25	8	14	22
	26-35	7	8	15
	36-45	5	5	10
	46-55	7	13	20
	>55	8	16	24
<i>Education Level</i>	Secondary Ed	5	16	21
	College Ed	12	16	28
	University Ed	18	24	42
<i>Annual Household Income<sup>2</sup></i>	<R24	4	13	17
	R25-R60	6	6	12
	R61-R120	8	12	20
	>R120	17	25	42
<i>Marital Status</i>	Single	13	18	31
	Married	20	34	54
	Divorced	0	1	1
	Widow (er)	2	3	5

Note: <sup>1</sup>Age is measured in years.

<sup>2</sup>Income is measured in (000) Rands.

All the figures under Males, Females, and Pooled represent the actual number of respondents (the total number of respondents is 91: 35 males and 56 females).

From cross tabulation descriptive statistics of the respondents (Table 6.3), it could be concluded that frequency of wine consumption increased with age. Respondents above 55 years of age had the highest frequency of wine consumption on a daily, weekly and monthly basis (2/4, 13/43, and 10/29, respectively). None in this group consumed wines occasionally. The highest number of occasional wine consumers was the 18-25 years age group (9/15). This group did not have any respondent who consumed wine on a daily basis; the majority from the same group consumed wine weekly. These results indicate that frequency of wine consumption increases with the advancement in age. A novice or inexperienced wine consumer may not have as developed a wine taste palate as a more

experienced wine consumer. Table 6.3 overleaf presents 91 wine consumers' knowledge, buying behaviour and consumption at a wine retail outlet in the KZN Midlands.

Out of the 21 respondents whose highest level of education was matric, 81% of them tried out new wine brands on a monthly basis, 9.5% weekly and lastly 4.5% yearly. Relative to other highest levels of education, the respondents whose highest level of education was university on average had the highest number of times of trying out new wines on a weekly, monthly and yearly basis (19%, 53%, and 26%, respectively). Of the 28 college-educated individuals, 25% tried out new wines on a weekly, 32% on a yearly and 43% on a monthly basis. The secondary-educated were ranked second in the monthly and third in both weekly and yearly categories of trying out new wine brands. Therefore, the inference is that since a university degree is most likely to lead to a higher salary than a college diploma or high school certificate, university graduates seem to be able to buy wine more frequently.

For the 42 university graduates, the sources of wine information were ranked as follows (from the most used to the least): out of the total number of university graduates of 42, Platter's *Wine Guide* was the most used source (38%), followed by the Wine magazines (24%), followed by women's magazines (21%) and lastly, men's magazines (17%). For 28 college graduates, wine magazines came out as the most preferred (39%), followed by Platter's *Wine Guide* (29%), women's magazines (21%) and lastly, men's magazines (11%). For respondents whose highest level of education was secondary school, out of the total number of 21 secondary educated individuals, women's magazine came out as the most important source of wine information (43%), followed by Platter's *Wine Guide* (29%) and the wine magazines (29%).

**Table 6.3 Wine knowledge, buying behaviour, and consumption of 91 wine consumers surveyed at a wine retail outlet in the KZN Midlands, 2008.**

Characteristics		Males(%)	Females(%)	Pooled(%)
<i>Frequency of wine consumption</i>	Daily	5.7	3.6	4.4
	Weekly	34.3	55.4	4.7
	Monthly	37	29	31.9
	Occasionally	22.9	12.5	16.5
<i>Wine selection method</i>	Friends	22.9	28.6	26.4
	Reputable brand	22.9	25	24.2
	Attractive label	3	1.8	2.2
	Reputable origin	29	26.8	27.5
	Reputable wine maker	23	17.9	19.8
<i>Preferred source of wine information</i>	Wine magazines	31	28.6	29.7
	Platter's Wine Guide	43	26.8	33
	Women's Magazines	3	41	26.4
	Men's Magazines	23	3.6	11
<i>Frequency of trying out new wines</i>	Weekly	20	17.9	18.7
	Monthly	54.3	59	57
	Yearly	23	23.2	23
	Never	3	0	1.1
<i>Attendance of wine events</i>	Once/year	14.3	21.4	18.9
	Twice/year	17	7.1	11
	Thrice/year	5.7	5.4	5.5
	>Thrice/year	26	30.4	28.6
	Never	37	35.7	36.3
<i>Pay attention to label information</i>	Pay attention	80	80.4	80.2
	Do not pay attention	20	19.6	19.8
<i>Important information sought on labels</i>	Alcoholic content	11.4	12.5	12.1
	Winery name	37	41	39.6
	Wine supports social cause	3	1.8	2.2
	Awards won by wine	9	10.7	10
	Wine origin	31	32	32
	Other	9	1.8	4.4
<i>Fairtrade label awareness</i>	Aware	29	28.6	28.6
	Not aware	71	71.4	71.4
<i>Fairtrade wine example</i>	Aware of example	11	14.3	13.2
	Not aware of example	89	85.7	86.8
<i>Give Fairtrade definition</i>	Aware of definition	20	21.4	20.9
	Not aware of definition	20	78.6	79
<i>BBEE-labelled wine awareness</i>	Aware	8.6	9	8.8
	Not aware	91.4	91	91.2
<i>BBEE Definition</i>	Aware	11.4	12.5	12
	Not aware	88.6	87.5	88
<i>BBEE wine example</i>	Aware of definition	8.6	7.1	7.7
	Not aware of definition	91.4	92.9	92.3

Wine consumption seems to be positively correlated with household income. The results show that the higher the household income, the higher the frequency of wine consumption. For consumers with a household income of less than R24 000 per year, wine may be considered a luxury. This supports the conclusion by Skinner (2007) that wine consumption is often a lifestyle of the affluent. The highest number of wine consumers in this survey earned well over R120 000 in household income per year. The Platter *Wine Guide* is mostly used by consumers who earn high household incomes (above R120 000 per year). This may be due to the fact that the Platter *Wine Guide* is the most expensive source among the given alternatives in the questionnaire. The Platter guide was followed by the *Wine magazines*. Women's magazines and men's magazines are the least-used sources of wine information for the affluent, while in households with relatively less incomes, women's magazines are the most preferred.

Out of the total number of female respondents, 55% consume wine on a weekly basis and 29% are more likely to select a bottle of wine that is loved by friends, before selecting one that has a reputable origin (27%), reputable brand (25%), and reputable wine maker (18%). Lastly, 2% would select a wine bottle based on an attractive label. However, their most important source of wine information was women's magazines (41%) and the *Wine magazines* (29%). The Platter *Wine Guide* comes in at third with 27% of respondents, while 4% use men's magazines. Most of the female consumers were quite enthusiastic about wine, with 59% trying out new wines on a monthly basis, 23% on a yearly, and 18% on a weekly basis.

A large percentage of the female wine consumers did not attend wine events at all (36%). Almost 30% attended more than three times a year and 7% attended at least twice a year, with 21% attending only once a year. About 80% of the female respondents paid particular attention to wine labels when purchasing a bottle of wine while 20% did not. Women ranked information provided on the label in the following order (from most important to least important): name of winery, wine origin, alcohol content, awards won by the wine, and lastly whether the winery supports a social cause. Around 71% and 91% of the female respondents were not aware of the existence of Fairtrade and BBEE labels, respectively. A large number of women wine consumers could not define and give examples of Fairtrade (79%) and BBEE-labelled wines (91%), although there is a Fairtrade poster that defines

what Fairtrade is in this particular wine retail outlet. Therefore, this implies that a high number of female respondents are unaware of these labels.

Of the 35 male respondents, 37% were monthly wine consumers while 34% were weekly and 29% were occasional consumers. Only 6% were daily consumers. When selecting a wine bottle, males first preferred a reputable winery, followed by (in order of preference) reputable origin, loved by friends, reputable wine maker, and attractive label. Around 43% of male respondents used Platter's *Wine Guide* as a source of wine information, 31% used the *Wine magazines*, 23% used men's magazines and only 3% used Women's magazines. About 54% of male respondents tried out new wines on a monthly basis, 20% on a weekly basis, 23% on a yearly basis. 3% of male respondents said they never tried out new wines at all.

Almost 26% of male respondents attended wine events more than three times a year, and only 6% of respondents attended wine events three times a year. This number is followed by respondents who attended wine events twice a year (17%), followed by those who attended wine events only once a year (14%). The information that males sought most on a bottle of wine before buying it was the name of the winery. The second most important was wine origin, followed by alcohol content, awards won by the wine, and lastly whether the winery supports a social cause. Around 29% of male respondents said they are aware of Fairtrade-labelled wines, while 9% said they were aware of BBEE labels. Only 11% of male respondents could give at least one example of a Fairtrade- and BBEE-labelled wine, while only 20% could define Fairtrade and 11% could define BBEE. This implies that generally males are unaware of the existence of these labels, and therefore an information gap exists between wine consumers and wine producers at this retail outlet. Using SAS Version 9, parameter estimates of the different attributes were calculated. Table 6.4 gives the parameter estimates obtained from the PROC results output.

**Table 6.4 Parameter estimates of wine attributes for Females, Males, and Pooled respondents, KZN sample, 2008.**

<b>Attribute</b>	<b>Females</b>	<b>Males</b>	<b>Pooled</b>
<i>Empowerment</i>	0.3939*** (0.0831)	0.4303*** (0.1013)	0.4041*** (0.0640)
<i>Fairtrade</i>	0.7427*** (0.0803)	0.5424*** (0.0990)	0.6526*** (0.0622)
<i>Vintage</i>	0.2779*** (0.0810)	0.3538*** (0.0990)	0.3063*** (0.0625)
<i>Reputation</i>	0.3452*** (0.0783)	0.4149*** (0.0975)	0.3682*** (0.0608)
<i>Organic</i>	0.0828 (0.0823)	0.1303 (0.1010)	0.1002 (0.0636)
<i>Price (R45)</i>	-0.2923*** (0.1070)	-0.0486 (0.1297)	-0.1944** (0.0823)

Note: Standard errors shown in parentheses.

\*\*\*, \*\* denotes statistical significance below the 1% and 5% levels of probability, respectively.

The Proc MDC procedure was used to fit the conditional logistic regression models for the pooled, female, and male datasets. The estimated parameter estimates of these models were used to evaluate the utility of each attribute relative to all the other attributes. The larger the absolute magnitude of the estimated parameter coefficient, the higher the value that consumers place on that attribute. When fitting the model, one level of each attribute was set to zero, hence was regarded as the base category. This ensured that numerical instabilities during optimisation were avoided. Therefore, for male, female and pooled results (both males and females), the first ranked attribute is Fairtrade. Fairtrade is followed by the Empowerment attribute, the third ranked attribute is the Reputation attribute, which is followed by Vintage and, lastly, the Organic attribute.

These results show that even though, at present, empowerment attributes may not command a price premium for customers at this retail outlet in the KZN Midlands, if consumers are made aware of the existence of these labels through advertising, a positive price premium may be realised. However, owing to these labels' newness on the market, the consumers lack the necessary information on these labels, indicating an information gap between producers (wineries) and consumers. This information gap may be one of the

reasons why these labels are currently commanding a negative price premium. This is because most of the consumers are unaware of the existence of such labels. Independent certification and accreditation bodies need to be involved in order for the consumers to have more confidence in these labels.

### **6.3 Estimated consumer willingness to pay for empowerment attributes of wine for Retail Outlet A**

While wine consumers in the sample do not currently pay a price premium for empowerment-labelled wines, with the help of advertising, these labels could yield a price premium as indicated by their positive and high calculated consumer willingness to pay (R20.79) in Table 6.5 overleaf. *Ceteris paribus*, the Fairtrade-labelled wine attracts a R33.57 price premium for both males and females (Pooled). This was calculated using equation (4.10) as shown below where the parameter estimate for a R45 wine price and the absolute parameter estimate for Fairtrade inserted for equation (6.1).

$$Price_{Fairtrade} = \frac{45-35}{0.1944} \times |0.6526| = R33.57 \quad (6.1)$$

Table 6.5 overleaf presents the monetary value estimates of the consumer WTP at a wine retail outlet in the KZN Midlands.

**Table 6.5 Monetary value estimates of the consumer WTP for different wine attributes at a wine retail outlet in the KZN Midlands.**

<b>Attribute</b>	<b>Pooled</b>	<b>Percentage of Conventional Price</b>
<i>Empowerment (BBEE)</i>	20.79 (8.80)	0.46
<i>Fairtrade</i>	33.57 (4.21)	0.75
<i>Vintage</i>	15.76 (6.67)	0.35
<i>Reputation</i>	18.94 (8.02)	0.42
<i>Likelihood Ratio (R)</i>	245.72***	

Note: \*\*\* denotes statistical significance below the 1% level of probability.

Whereas in the hedonic price analysis method the estimated coefficient for the Fairtrade dummy variable was not statistically significant, this analysis shows that respondents are willing to pay extra for Fairtrade-labelled wine. Respondents are willing to pay R15.76 more for a four-year vintage wine than they would for a two-year vintage. This result is as expected since the higher the vintage, the higher the perceived quality of the wine. Consumers are willing to pay R18.94 more for a reputable winery's bottle than they would an unknown winery. However, the monetary values should only be used to indicate relative ranking of attributes by consumers and not necessarily the amount of money that consumers are willing to pay as this is just a single case. The values may be different for a different outlet in a different location.

In lieu of the normal  $R^2$  to measure model suitability of fit, the Likelihood Ratio (R) was used in the conditional logistic regression model. The estimated R coefficients (presented in Table 6.5) for Pooled data were significant below the 1% probability level of significance. This implies that the data fit the model very well.



The conjoint analysis results show that even though at present, empowerment labels do not command a price premium for the study respondents, if consumers are made aware of the existence of these attributes represented by these labels through advertising, they may result in positive price premia being paid by consumers. However, owing to these labels' newness on the market, the consumers lack the necessary information about empowerment, indicating an information gap between producers (wineries) and consumers. This information gap may be one of the reasons why these labels are currently commanding a negative price premium. The following chapter provides the conclusions and recommendations for this study.

In this chapter, a detailed discussion about the current market price premium on various attributes of wine, including the empowerment attribute has been done. The study employed a revealed preference technique in the form of hedonic price analysis where the existing market prices were used to calculate the price premium. The empowerment label was found to command a negative price premium and this was attributed to the assertion that empowerment wine labels may still be new on the market and hence consumers may be less aware of them. The next part of the study used a stated preference technique in the form of conjoint analysis, to calculate consumer WTP on the assumption that consumers were aware of these labels. This is very important in answering the question of whether empowerment labelling can be used as a differentiation tool if consumers are willing to pay more for the attributes represented by these labels.

## CHAPTER 7

### Conclusions and recommendations

The hedonic price analysis results indicate that wine Reputation carried the expected positive sign for both wine cellars. These results show that at the two wine outlets, a wine bottle sourced from a known winery had a considerably higher price than a wine bottle from a comparatively unknown winery. These results were consistent with London and Smith (1998), thus indicating that the reputation of the winery has a significant positive impact on the overall pricing of wine, *ceteris paribus*. The positive estimated coefficient for Vintage indicates the positive relationship that exists between the age of a wine and its price. For both the linear and log-linear models at the two wine retail outlets, the longer the maturity period of the wine, the higher the price of that wine, *ceteris paribus*. These results were also in accordance with London and Smith's (1998) results. Variety preference was determined using three categories of wine: Red wines, white wines, and Rose wines. Rose coefficient estimates were not statistically significant relative to white wines, *ceteris paribus*. Red wines on average were found to be selling at a higher price than white wines. Wine bottles with a higher Platter's quality star rating sold for a higher price than those with a lower Platter's quality star rating. Therefore for the two wine retail outlets, the higher the rating of the wine, the higher the price that that wine would be expected to fetch.

However, it was established that at present for the sample outlets, the BBEE coefficient yielded a negative price premium, contrary to expectations. This has been attributed to the probable pricing strategies of the two wine retail outlets towards these empowerment labels that are still being established on the local market; the lack of consumer awareness campaigns about these labels; and the fact that these labels are still new on the local market and hence may not be well established enough to have an impact on the price of wine.

According to the conjoint analysis results, consumption of wine seems to be positively correlated with household income for this group of consumers. This implies that the most frequent consumers of wine have, on average, a higher household income than the less frequent consumers. Therefore, for the sample of KZN Midlands wine consumers, wine consumption seems to increase with an increase in the degree of affluence (the higher the disposable income) of the consumer, *ceteris paribus*. The Platter Wine Guide was found to

be the most preferred source of wine information among the affluent consumers. Consequently, as most of the sample wine consumers were found to be affluent and educated, they could afford to pay extra for anticipated emotional and ethical benefits. This might be the reason why Fairtrade- and BBEE-estimated coefficients had substantial consumer WTP monetary values.

This was in direct contrast with the results of the hedonic price analysis where the coefficient estimate of the Fairtrade label was not statistically significant, and the estimated BBEE coefficient carried the negative sign. Since hedonic price analysis is a revealed preference technique used to estimate the price premia on the existing market prices, the stated preference technique results used in this dissertation imply that although the price premium is negative for BBEE labels sold at the two wine retail outlets, increasing consumer awareness could yield a positive price premium (since the calculated consumer WTP monetary value estimate is substantial, *ceteris paribus*). All the other estimated coefficients (for Vintage, Variety type, Reputation, and Quality rating) yielded positive consumer WTP monetary value estimates. Since very few consumers in the sample were aware of the existence of these labels, there could be an information gap between the producers and the consumers of wine from this particular wine outlet.

The finding that BBEE attributes of wine do in fact yield positive price premia in domestic retail wine markets suggests that empowerment labelling can be used as a vehicle tool to increase the profitability of BBEE wineries. Government may wish to promote BBEE initiatives in the wine industry through promoting the adoption of empowerment labelling by wineries. Firstly, high fixed costs of accreditation may outweigh the added returns to empowerment labelling, especially for smaller wineries. Government can address this constraint by subsidising costs of accreditation for empowerment labels that focus on criteria consistent with BBEE. Secondly, if empowerment labels are not well known or not trusted by consumers, empowerment accredited wineries may fail to realise a price premium for their wines. Government can play a role in promoting consumer awareness of and confidence in generic empowerment labels in domestic wine markets. An example of a label that focuses on empowerment in South Africa is the EmpowerDex label. At the time of the survey the EmpowerDex was a very new label on the market and none of the wines in the sample were EmpowerDex-accredited. Future research may be conducted to establish the impact of the EmpowerDex label on domestic wine markets in South Africa.

## SUMMARY

After the abolition of slavery in South Africa in 1834, wine farm labourers' conditions were expected to improve as workers were to start receiving wages for their labour. However, wine farm workers remained poor and their wages relatively low. The master-labourer type of relationship that existed in the South African (SA) wine industry prior to the abolition of slavery continued even after its abolition. The *dop* system helped to trap workers in seemingly indefinite debt cycles to their employers and since cheap wine represented part payment of wages, many workers became alcoholics. The *dop* system helped to retain farm workers in a low wage industry.

During the apartheid era, the Cooperative Growers Association (KWV) controlled the wine supply chain from grape production to marketing, and used its influence between 1918 and 1988 to buy as much grapes as its members could allow. The control by the KWV of the wine industry provided very limited access to PDGs.

The abolition of apartheid paved the way for the engagement of foreign consultants and the import and use of virus free vines. Measures to end the domination of the largely white and male elite in the wine industry, and to stimulate participation by PDGs in the form of BBEE, were taken. BBEE is the economic empowerment of all black people through diverse but integrated socio-economic strategies (BBEE Act No. 53 of 2003). The other measure was through the conversion of KWV – a cooperative – to a private company, and replacing it with the South African Wine Trust (SAWIT) – initially guided by BEE and later under BBEE, with the intention of fast-tracking government's empowerment programmes across all sectors, agriculture included. Empowerment labelling of wine has been identified as one possible way of economically empowering the PDGs under the framework of BBEE.

Empowerment labelling can be seen both as labelling and branding. In the labelling process, the first stage is to set up standards. Standards are documented agreements containing technical specifications or other precise criteria to be used consistently as rules, guidelines or definitions, to ensure that materials, products, processes and services are fit for their purpose. The adherence to these set standards makes certification of products possible. Certification is a procedure whereby a third party gives a written assurance that a

process or service is in conformity with certain set standards. An accreditation institution is tasked with verifying that the certification bodies have the capacity to carry out certification programmes.

The physical or empirical indication of certification for compliance with particular standards is called labelling. A label is a visual representation of certification of a product. It differs from a brand in that a brand is a legal instrument of ownership of a label, encompassing identity, personality and image. It is most concerned about the reputation of the brand holder. A label is also seen as value-adding which forges a relationship between the brand and the consumer. In the wine SA industry, an often-mentioned good example of an empowerment project is the Thandi wine label. It was established in 1996 by Paul Cluver and his De Rust farm workers. It has become the flagship of empowerment deals in the wine industry, as it has won numerous awards for the quality of its wines.

In order to try and track the performance of empowerment labels, a revealed preference technique in the form of hedonic price analysis was undertaken for two retail wine outlets in the KwaZulu-Natal Midlands. Hedonic price analysis assumes that a product possesses a range of attributes that, when combined, form bundles of attributes that influence consumer utility. Hedonic price analysis is used when a product in question is already on the market, such that the different attributes that influence its price can be estimated. Different attributes that were deemed to influence wine price were used. These attributes included Fairtrade, Organic, Empowerment (BBEE), Reputation, Vintage, and Variety type. Different tests such as the Park Test and scatter plots were used to assess the heteroscedasticity and statistical fit of the model. The results established that due to probable price strategies for empowerment labels, or factors relating to consumers' lack of knowledge or awareness of these labels, empowerment attributes currently earn a negative price premium. Vintage, Reputation, and Variety type all yielded positive price premia, *ceteris paribus*.

To try and assess the viability of these labels given consumer knowledge of their existence, a stated preference technique (conjoint analysis using the conditional logistic model) was used to quantify consumer willingness to pay for empowerment attributes. Conjoint analysis is used to estimate the relative importance of various attributes in a choice process, and allows estimation of relative attribute ranking when considered jointly. It is

used when the product in question is not yet well established on the market. The data were collected through personal interviews employing systematic sampling methods. One wine retail outlet was used, and a minimum of 30 respondents was needed, although 91 respondents were interviewed in the survey from the outlet in order for the conjoint analysis to yield efficient results with robust standard errors. Respondents were expected to make a choice from each of the 16 choice sets of wine profiles presented to them, in addition to providing information on their wine selection behaviour. The results were analysed using the software package SAS Version 9.

Results showed that wine consumption is directly correlated with consumers' income levels therefore, the more disposable income the consumer had, the higher the degree of wine consumption. Typical profiling of wine consumers at the wine retail outlet where the interviews were conducted, indicated that most of the wine consumers had relatively high disposable incomes and were well educated, and therefore, could afford to pay extra for emotional and ethical benefits. Using the stated preference technique, the price premia yielded for empowerment and Fairtrade wine attributes were positive, indicating that consumers are willing to pay extra for the attributes represented by these labels provided that they were aware of their existence.

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# APPENDIX A: Survey questionnaire



University of KwaZulu-Natal  
School of Agricultural Sciences and Agribusiness  
Discipline of Agricultural Economics

Questionnaire Survey:

*Enhancing Competitiveness through Product Labels: South African Consumers'  
Willingness to Pay for Empowerment Labels*

**YOUR SURVEY RESPONSES WILL BE KEPT STRICTLY CONFIDENTIAL.**

**THANK YOU FOR YOUR PARTICIPATION IN THE STUDY**

## SECTION A: Personal information

1. Age  18 – 25  46 - 55  
 26 - 35  Above 55  
 36 - 45
2. Marital status  Single  Widow  
 Married  Divorced
3. Highest level of education obtained  Primary education  
 High school education  
 College education  
 University education

4. Household Income Range
- Less than R24000/ year
  - R25000 – R60000/ year
  - R61000 – R120000/ year
  - Above 120000/ year

**SECTION B: Wine information**

1. How often do you buy wine?
- Daily
  - Weekly
  - Monthly
  - Only for special occasions
2. How do you select a bottle of wine?
- Choose one most loved by friend(s)
  - Choose the most reputable brand
  - Choose one whose label looks attractive
  - Choose one with a reputable origin
3. What is your preferred source of wine information
- Wine magazines
  - John Platter's wine guide
  - Women's magazines
  - Men's magazines
4. How often do you try out new wines?
- Weekly
  - Monthly
  - Yearly
5. How often do you attend wine events?
- Once a year
  - Twice a year
  - Three times a year
  - More than three times a year
  - Never

6. When selecting a bottle of wine, do you pay particular attention to label information on the bottle?

- Yes
- No

7. If your answer to the above question was yes, what is the first information that you look for? Rank in order of importance.

- Alcoholic content
- Name of winery
- Whether the wine supports a social cause
- Whether the wine has won awards
- Origin of the wine
- Other

9. Have you ever come across a Fairtradelabelled South African wine? Yes  No

8. Can you please list at least one wine that is Fairtrade-labelled.....  
.....  
.....

10. If yes, what do you understand by a Fairtrade-labelled wine?.....  
.....  
.....

11. Have you ever come across a BEE-labelled wine Yes  No

12. If Yes, what do you understand by a BEE-labelled wine?.....  
.....  
.....

13. Can you please list at least one wine that is BEE-labelled?.....

### SECTION C: Choice Questions

Each of the following 16 questions presents you with two hypothetical wine profiles. Each of the hypothetical wines is described by six characteristics that may vary. In each case, you are required to evaluate the characteristics and choose your most preferred option (Product A or Product B). If you do not prefer either, please indicate “None” in the block on the right. The different characteristics are explained below:

**Empowerment:** *the wine is from a Broad Based BEE winery*

**Organic:** *the wine was made from organic grapes*

**Fairtrade:** *an assurance that producers of that wine receive a fair price for their produce and their workers are well treated and well paid.*

**Price:** *the price at which the wine sells*

**Vintage:** *age of the wine*

**Known:** *a winery you perceive as reputable (one that in your view makes good wines)*

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<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Non-empowerment	Empowerment Label	
Non-organic	Organic wine	
Fairtrade label	Non-Fairtrade label	
R35	R40	
4 years vintage	2 years vintage	
Known winery	Unknown winery	

15

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label Non-organic Non-Fairtrade label R35 2 years vintage Unknown winery	Non-empowerment label Organic wine Fairtrade label R45 4 years vintage Known winery	

16

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label Non-organic Non-Fairtrade R40 4 years vintage Known winery	Empowerment label Organic label Fairtrade label R45 2 years vintage Unknown	

17

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label Non-organic Non-Fairtrade R35 4 years vintage Unknown winery	Non-empowerment Non-organic Fairtrade label R40 2 years vintage Known winery	

18

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Non-empowerment Non-organic Fairtrade label R40 2 years vintage Unknown winery	Empowerment label Organic label Non-Fairtrade R45 4 years vintage Known winery	

19

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label Non-organic Fairtrade label R35 2 years vintage Known winery	Non-empowerment Organic label No-Fairtrade R45 4 years vintage Unknown winery	

20

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Non-empowerment Organic label Fairtrade label R35 4 years vintage Known winery	Empowerment label Non-organic Fairtrade label R45 2 years vintage Unknown winery	

21

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label	Non-empowerment	
Organic label	Non-organic	
Non-Fairtrade	Fairtrade label	
R40	R35	
2 years vintage	4 years vintage	
Unknown winery	Known winery	

22

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Non-empowerment	Empowerment label	
Organic label	Non-organic	
Non-Fairtrade	Fairtrade label	
R45	R35	
4 years vintage	2 years vintage	
Unknown winery	Known winery	

23

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label	Non-empowerment	
Organic label	Non-organic	
Non-Fairtrade	Fairtrade label	
R45	R40	
4 years vintage	2 years vintage	
Known winery	Unknown winery	

24



<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label Non-organic Fairtrade label R45 4 years vintage Unknown winery	Non-empowerment Organic label Non-Fairtrade R40 2 years vintage Known winery	

25

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Non-empowerment Non-organic Non-Fairtrade R35 4 years vintage Unknown winery	Empowerment Organic Fairtrade R45 2 years vintage Known winery	

26

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Non-empowerment Organic label Non-Fairtrade R35 2 years vintage Known winery	Empowerment label Non-organic Fairtrade label R45 4 years vintage Unknown winery	

27

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label	Non-empowerment	
Organic label	Non-organic	
Fairtrade label	Non-Fairtrade	
R40	R45	
4 years vintage	2 years vintage	
Unknown winery	Known winery	

28

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Empowerment label	Non-empowerment	
Non-organic	Organic label	
Non-Fairtrade	Non-Fairtrade	
R40	R35	
4 years vintage	2 years vintage	
Known winery	Unknown winery	

29

<b>Product A</b>	<b>Product B</b>	<b>Choice</b>
Non-empowerment	Empowerment label	
Non-organic	Organic label	
Non-Fairtrade	Fairtrade label	
R45	R35	
2 years vintage	4 years vintage	
Known winery	Unknown winery	

**APPENDIX B: The SAS generated OPTEX procedure (first eight columns) and the coded choice design (last seven columns)**

Choice set	product	BEE	Org	Ftd	Pwn	Vin	Rep	Intercept	BEEe0	Orgb0	Ftdf0	Pwna0	Pwna1	Vind0	Repc0
1	1	e1	b1	f0	a0	d1	c0	1	1	1	0	1	0	0	1
1	2	e0	b0	f1	a1	d0	c1	1	0	0	0	0	1	1	0
2	1	e0	b1	f1	a0	d0	c1	1	0	1	0	1	0	1	0
2	2	e1	b0	f0	a2	d1	c0	1	1	0	0	0	0	0	1
3	1	e0	b1	f1	a1	d1	c0	1	0	1	0	0	1	0	1
3	2	e1	b0	f0	a2	d0	c1	1	0	0	0	0	0	1	0
4	1	e0	b1	f1	a0	d1	c1	1	0	1	0	1	0	0	0
4	2	e1	b1	f0	a1	d0	c0	1	1	1	0	0	1	1	1
5	1	e1	b1	f0	a1	d0	c1	1	1	1	0	0	1	1	0
5	2	e0	b0	f1	a2	d1	c0	1	0	0	0	0	0	0	1
6	1	e0	b1	f0	a0	d0	c0	1	0	1	0	1	0	1	1
6	2	e1	b0	f1	a2	d1	c1	1	1	0	0	0	0	0	0
7	1	e1	b0	f0	a0	d1	c0	1	1	0	0	1	0	0	1
7	2	e0	b1	f0	a2	d0	c1	1	0	1	0	0	0	1	0
8	1	e0	b0	f1	a1	d0	c1	1	0	0	0	0	1	1	0
8	2	e1	b1	f0	a0	d1	c0	1	1	1	0	1	0	0	1
9	1	e1	b0	f1	a2	d1	c1	1	1	0	0	0	0	0	0
9	2	e0	b1	f0	a0	d0	c0	1	0	1	0	1	0	1	1
10	1	e0	b0	f1	a2	d1	c0	1	0	0	0	0	0	0	1
10	2	e1	b1	f0	a1	d0	c1	1	1	1	0	0	1	1	0
11	1	e0	b1	f0	a2	d1	c1	1	0	1	0	0	0	0	0
11	2	e1	b0	f1	a1	d0	c0	1	1	0	0	0	1	1	1
12	1	e1	b1	f1	a0	d1	c1	1	1	1	0	1	0	0	0
12	2	e0	b0	f0	a2	d1	c0	1	0	0	0	0	0	1	1
13	1	e1	b0	f1	a0	d0	c0	1	1	0	0	1	0	1	1
13	2	e0	b1	f0	a2	d2	c1	1	0	1	0	0	0	0	0
14	1	e0	b0	f0	a1	d1	c1	1	0	0	0	0	1	0	0
14	2	e1	b1	f1	a2	d0	c0	1	1	1	0	0	0	1	1
15	1	e0	b1	f1	a1	d1	c0	1	0	1	0	0	1	0	1
15	2	e1	b0	f1	a0	d0	c1	1	1	0	0	1	0	1	0
16	1	e1	b1	f1	a2	d0	c0	1	1	1	0	0	0	1	1
16	2	e0	b0	f0	a1	d1	c1	1	0	0	0	1	0	0	0

## APPENDIX C: SA wine BEE scorecard

Core Component of BEE	Guideline Indicators	Target (examples)	Weighting (%) (given)	Total Score
Direct empowerment through:				
Equity Ownership (shares) Capitol assets <ul style="list-style-type: none"> <li>• Ownership</li> <li>• Crop/profit sharing</li> <li>• Rental</li> <li>• Building</li> </ul> Other Brand ownership	% of productive value		20	
Management and decision making	% black persons (and women) in executive and/or board committees		10	
Human resource development and employment equity through:			30	
Employment equity	Weighted employment equity analysis (as per the act)		10	
Skills development	Skills development expenditure as a proportion of the payroll		20	
Indirect empowerment through:			30	
Preferential procurement (as per BEE definitions)	Procurement from black-owned and black empowered enterprises as a proportion of total procurement value		20	
Enterprise development <ul style="list-style-type: none"> <li>• Joint ventures</li> <li>• Contracting</li> <li>• Mentorship</li> <li>• Access provision</li> </ul>	Investment in black-owned and empowered enterprises as a proportion of total assets		10	
Residual			10	
To be determined e.g. housing, wine, tourism, recreation facilities, etc (% of net profit)			10	
Total score (%)				

## APPENDIX D: Definitions of wine industry bee scorecard terms

1.	Access	Refers to the right and capacity to obtain, make use or take advantage of a particular service, irrelevant to the needs of the advantage communities.
2.	Black Economic Empowerment (BEE)	Refers to an integrated and coherent economic process that directly contributes to the economic transformation of south Africa, and brings about the economic empowerment of all black people, including women, youth, people with disabilities, and people living in rural areas.
3.	Black empowerment enterprise	Refers to a company that is at least 25.1% owned by black persons and where there is substantial management control.
4.	Black enterprise	Refers to a company that is 50.1% owned by black persons and where there is substantial management control.
5.	Black influential enterprise	Refers to a company that is 5 – 25% owned and managed black persons.
6.	Black people or blacks	Refers to a generic term, which means Africans, coloureds and Indian who citizens of South African.
7.	Black woman-owned enterprise	Refers to company with at least 25.1% representation of black women within the black equity and management portion.
8.	Community enterprise	Refers to an enterprise that has an empowerment shareholder who represents a broad base of members , such as local community or where the benefits supports a target group, and where shares are held via a non profit organisation or trust.
9.	Cooperative, collective enterprise	Refers to an autonomous association of persons who voluntarily join together to meet their economic, social and cultural needs and aspirations through the formation of a jointly owned and democratically controlled enterprise.
10.	Company enterprise	A legal entity registered in accordance with the laws of the Republic of South Africa for the purpose of conducting business and shall include companies, close corporations, other legal persona, partnerships and sole proprietorships.

11.	Control	Refers to the authority directly or indirectly to determine and influence direction, policies and management of a business, through ownership, governance and/or executive management.
12.	Corporate social responsibility	A company's positive impact on society and the environment, through its operations, products or services, and through its interactions with key stakeholders such as, employees, customers, investors, communities and suppliers.
13.	Corporate social investment	Refers to investment and expenditure in project that are external to the business or outward looking, for the purpose of uplifting and empowering targeted communities or community groupings, or society in general.
14.	Enterprise Development	Refers to investment in, and/or development of and joint ventures with black owned or black empowered enterprises and SMME's, with real economic benefit flowing the recipient enterprise allowing it to be set up and run on a sustainable basis.
15.	Executive Equity	A director who is a member of the board and a full time employee of the company, involved in the strategic, operational and a day-to-day management of the business and for which he receives remuneration.
16.	Employment Equity	As defined in the Employment Equity Act refers to the promotion of equal opportunity, and fair treatment in employment through the elimination of unfair discrimination; and implementation of affirmative action measures to redress the disadvantages in employment experienced by designated groups, in order to ensure their equitable representation in all occupational categories and levels in the workforce.
17.	Executive Management	Refers to executive directors and managers who have a significant role in the enterprise, have control over day-to-day operations and have decision-making powers
18.	Learnerships	Refers to a primarily workplace based learning, supported by structured institutional learning, which results in an accredited

		qualification.
19.	Non-Executive Director	A director who is a member of the board, and is not involved with the day-to-day management of the business, but focuses on the strategic direction and overall government of the company
20.	Ownership	Refers to ownership of equity interest with control over all of the voting rights attaching to that equity interest, as well as access to the economic benefits of such ownership, excluding any share options not yet exercised.
21.	Preferential Procurement	Refers to categories to preference applied in the allocation of contracts, which aim to include contracting with persons who have been historically disadvantaged by unfair discrimination on the basis mainly of race, gender and disability
22.	Procurement	Refers to all expenditure to acquire goods and/or services including capital expenditure, but excluding spending (non discretionary expenditure), where there is a natural monopoly or the supplier is imposed in terms of global policy for technical (but specifically not for commercial) reasons, or inter-entity charges for services rendered by other members of the group.
23.	Skills development	Refers to a process of training and development with the purpose of enhancing the individual's capacity to perform a particular function, as well the ability and opportunity to advance to higher levels of responsibility.
24.	SMME	Refers to small medium and micro enterprise as defined in the National Small Business Act 102 of 1996.

**APPENDIX E: Broad-based wine ownership of wine producing firms in SA**

<i>Black Owned Estates</i>	<i>Joint Ventures</i>	<i>Housing and Social Development</i>	<i>BBEE Brands</i>
Gelukshoop	Lutouw	Fair Valley	Thabani
Winola Park	Papkuilsfontein	Winds of Change	Thandi
Biz Africa	Bouwland	Freedom Road	Lindiwe
Robdevco	Carpe Diem	Helderkruijn	Tukulu
New Beginnings	Thandi	La Motte	Indaba
Africa Roots	Goedemoed		Karuwa
Thandi Wine	Erfdeel		Imvula Wines
	Cape Olive		Phambili
	Blouville Wines		Ses'fikile
	Boland Vineyards		Sagila Wines
	Cellar Hand		Buthelezi Wines
	Imvula Wines		Crossroads Wines
	Koopmanskloof		Epicurean Wines
	StellenRust		Kholisa Wines
	Thokozani		Kuyisa Wines
			Lathitha' Wines
			Mhudi Wines
			Pumlani
			Sizanani
			Vunani Wines



## APPENDIX F: EmpowerDEX generic rating fee matrix.

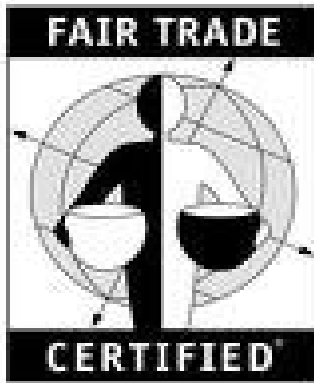
Validity Period	Annual Revenue							Number of Employees
	>R15m and <R25m	>R25m and <R35m	>R35m and <R50m	>R50m and <R100m	>R100m and <R250m	>R250m and <R500m	>R500m	
<b>12 Months</b>	7,500 + VAT	8,800 + VAT	9,000 + VAT	9,000 + VAT	10,500 + VAT	12,000 + VAT	16,500 + VAT	<b>1 to 10 Employees</b>
<b>12 Months</b>	7,500 + VAT	8,800 + VAT	9,000 + VAT	10,500 + VAT	12,000 + VAT	16,500 + VAT	18,300 + VAT	<b>10 to 50 Employees</b>
<b>12 Months</b>	7,500 + VAT	8,800 + VAT	10,500 + VAT	12,000 + VAT	16,500 + VAT	18,300 + VAT	21,120 + VAT	<b>50 to 100 Employees</b>
<b>12 Months</b>	7,500 + VAT	8,800 + VAT	12,000 + VAT	16,500 + VAT	18,300 + VAT	21,120 + VAT		<b>100 to 250 Employees</b>
<b>12 Months</b>	7,500 + VAT	8,800 + VAT	16,500 + VAT	18,300 + VAT	21,120 + VAT			<b>250 to 500 Employees</b>
<b>12 Months</b>	7,500 + VAT	8,800 + VAT	18,300 + VAT	21,120 + VAT				<b>&gt; 500 Employees</b>

Source: FNB, 2009.

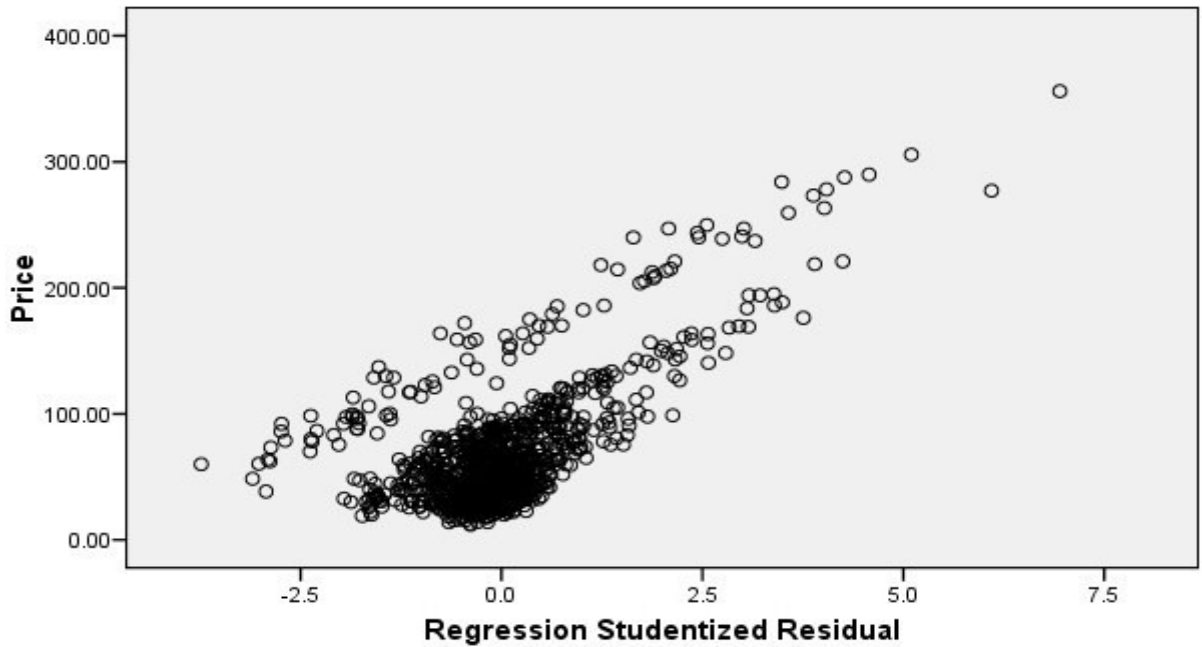
**APPENDIX G: Empowerdex roundels (labels).**



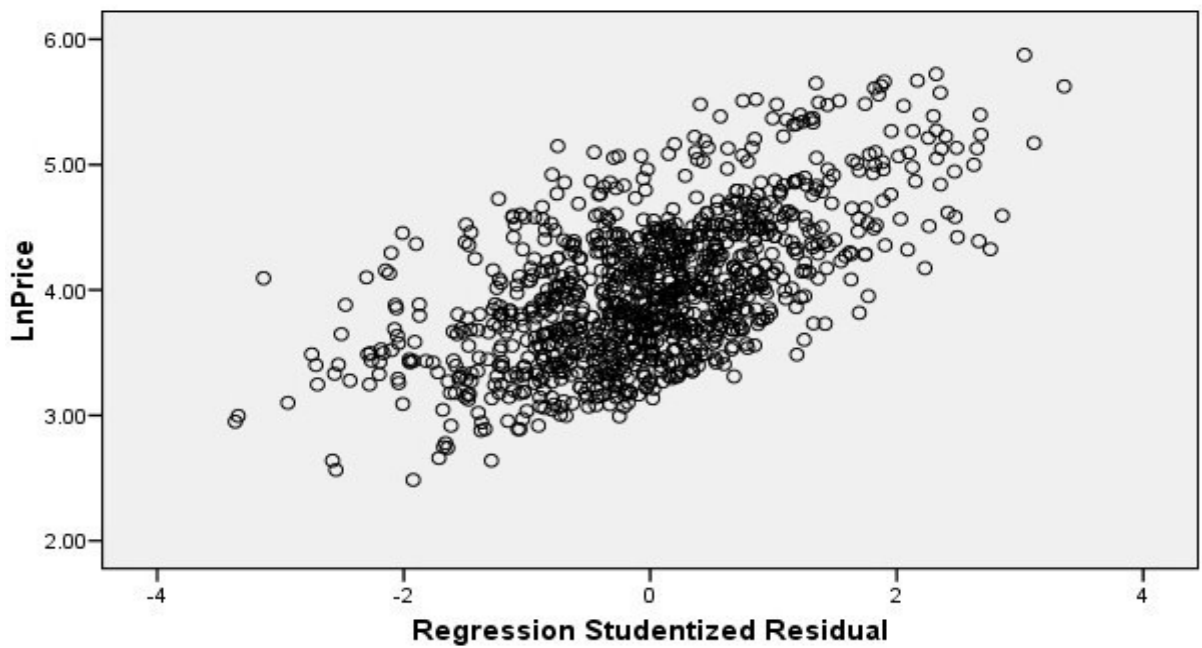
## APPENDIX H: The Fairtrade label.



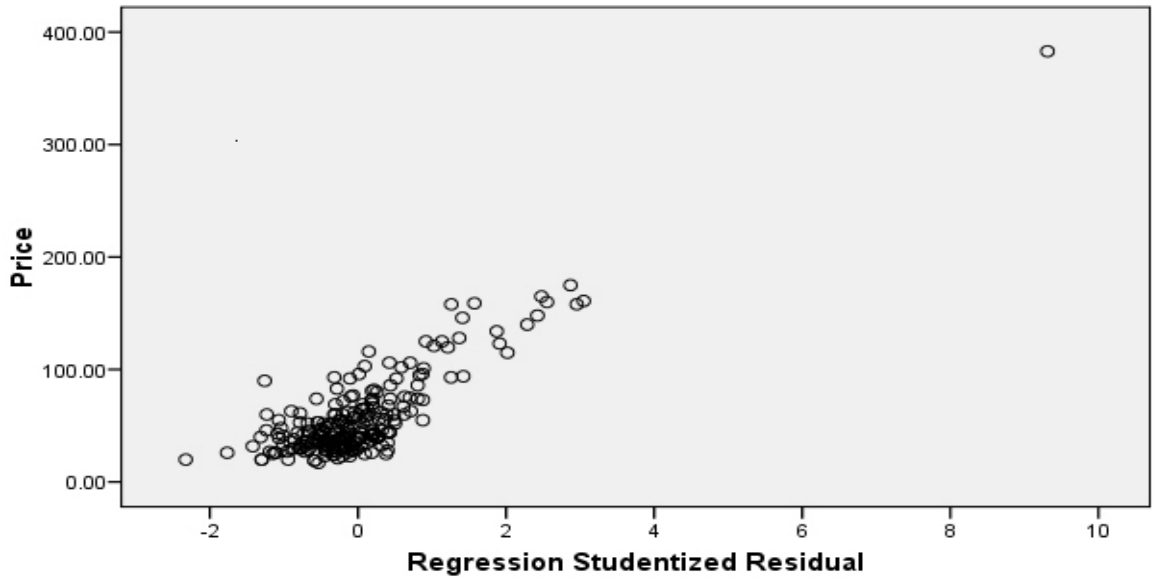
**APPENDIX I: Linear and Log-linear scatter plots for outlets A and B**



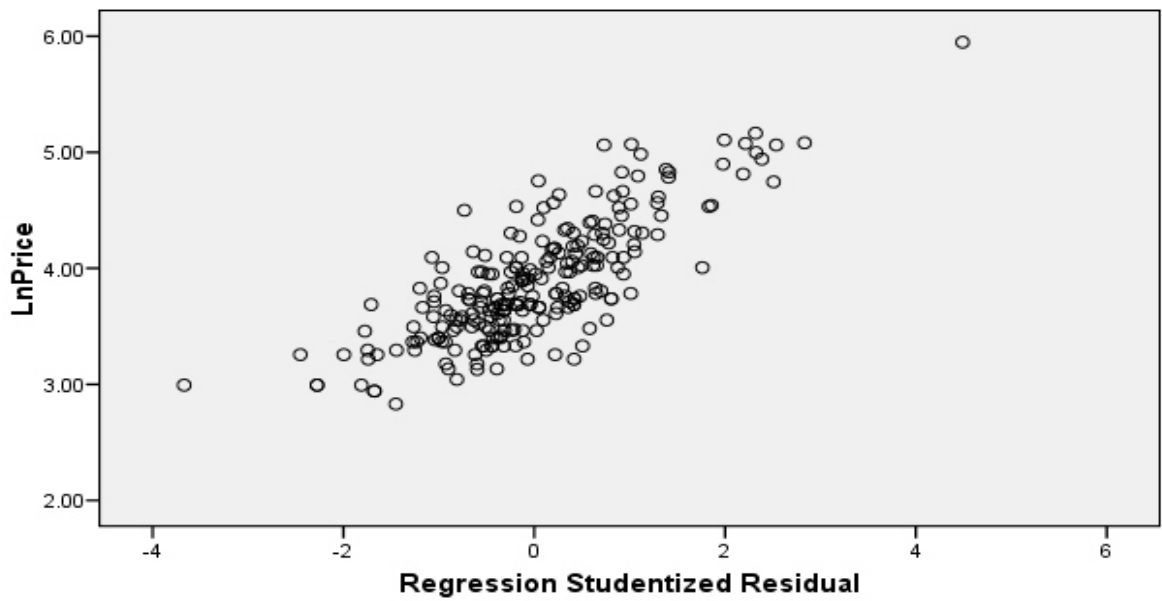
**Figure I1** Linear regression model scatter plot for wine retail Outlet A



**Figure I2** Log-linear regression model scatter plot for wine outlet A



**Figure I3** Linear regression model scatter plot for wine outlet B



**Figure I4** Log-linear regression model scatter plot for wine outlet B

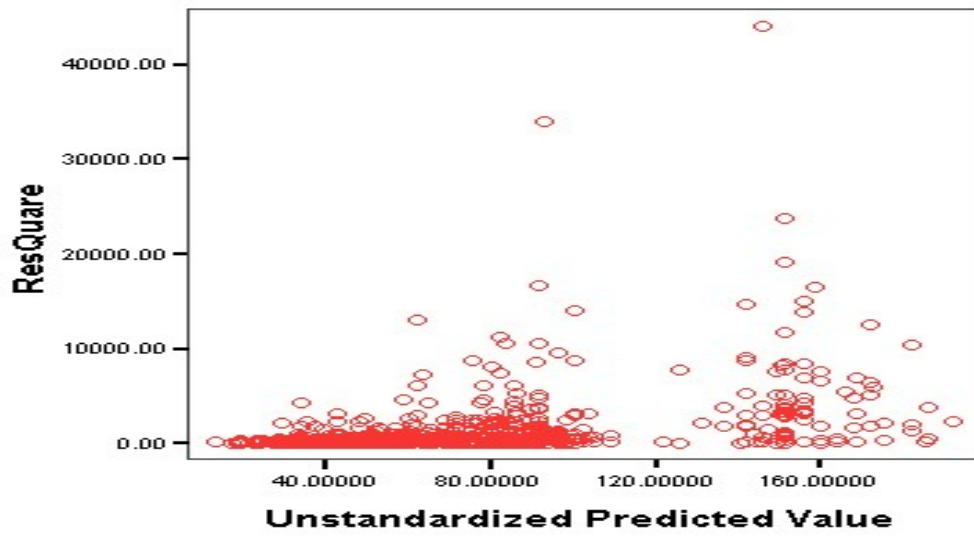


Figure I5 Wine retail outlet A linear model scatter plots

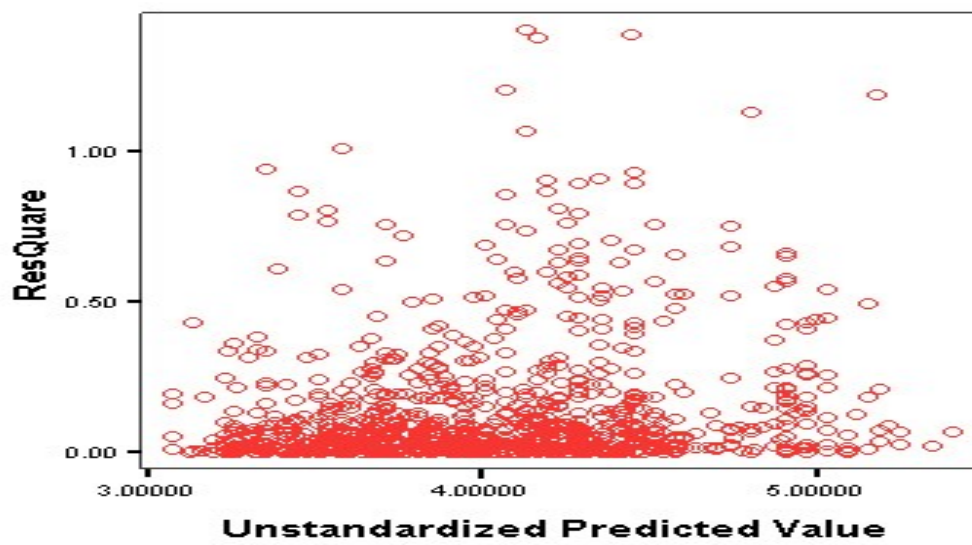


Figure I6 Wine retail outlet A log-linear model scatter plots

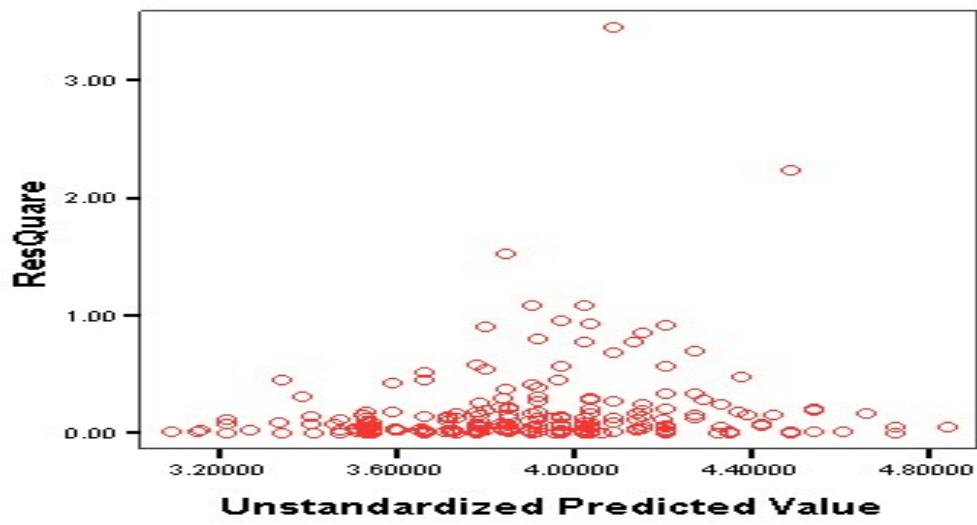


Figure I7 Wine retail outlet B linear model scatter plots

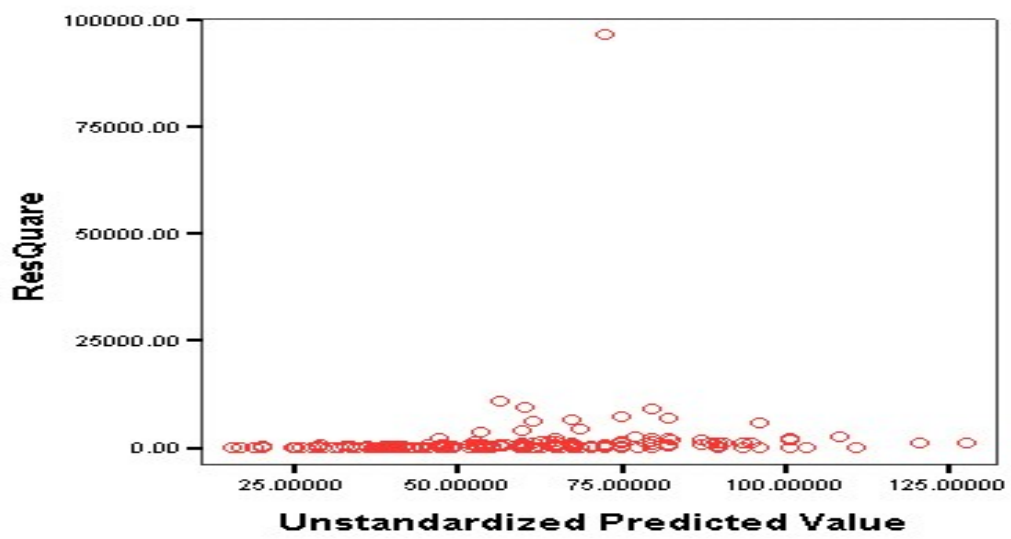


Figure I8 Wine retail outlet B log-linear model scatter plots