

**EXPLORING THE FACTORS DETERMINING ETHICAL SUPPLY CHAIN
MANAGEMENT IN THE FAST-MOVING CONSUMER GOODS INDUSTRY**

**Dissertation submitted in fulfilment of the requirements for the degree
Master Technologiae: Logistics
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November 2020

DECLARATION

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ABSTRACT

The application of business ethics in Supply Chain Management (SCM) activities in the business environment has attracted much-needed attention from research academics and practitioners alike in recent years. SCM activities within organisational processes are subject to various ethical principles when facilitating contractual procedures between supply chain partners. In a broader context, ethical SCM has mostly been applied to the public industry. Less attention has been directed, however, towards private businesses that seek to employ ethical compliance towards SCM processes. In view of the growing importance of ethical conduct in the private industry, the purpose of this study is to explore the factors that determine ethical SCM in the Fast-Moving Consumer Goods Industry (FMCG) in Gauteng Province.

In this study, a quantitative research approach was employed to examine and test the factors that have an influence on ethical SCM in the FMCG industry within South Africa. A cross-sectional survey design was utilised to collect and test the empirical data collected from 221 purposively selected professional employees and managers in the FMCG industry in Gauteng Province. The collected data were analysed through the use of the Statistical Packages for Social Sciences (SPSS version 26.0) software and analysed using a combination of descriptive and inferential statistics. Specifically, the techniques used to analyse data include frequencies, percentages, mean scores, Exploratory Factor Analysis (EFA), t-tests, ANOVA, Pearson correlations and regression analysis.

Using the EFA technique, six legal components of ethical SCM were identified. These are moral standards, transparency, professional competence, corporate governance, accountability and fairness. Three components, namely supplier assessment and monitoring, relationship commitment and supplier collaboration, were extracted in the EFA procedure. A further three personal ethics components were extracted, namely intrinsic values, honesty and integrity and skills. Descriptive statistics reveal that most managers and professional employees within the FMCG industry believe that they follow the legal aspects of SCM ethics. They also indicated that their firms are effective in managing their suppliers. The managers and professional employees in the FMCG industry also perceived that they espouse a high standard of personal ethics in their SCM activities.

The results of the t-tests revealed that female respondents are more likely to adhere to personal ethics than their male counterparts. Results of the ANOVA tests revealed significant statistical differences on the race and occupational area categories of the FMCG employees that participated in this study. Under the race category, Whites and those of the Mixed race have different attitudes towards supplier collaboration when compared to other racial groups. Managers and professional employees from the procurement department have different attitudes on legal aspects when compared to those in other departments such as transport, warehouse, contract management and customer services employees.

Pearson correlations revealed that connections between the constructs were either weak or moderate. Regression analysis revealed that among all legal components and personal ethics factors, only fairness significantly and positively predicted supplier management.

The study recommends that the FMCG industry should recruit and develop managers and professional employees with a recruitment process that is more structural and process-driven as this promotes a unique brand of leaders that dictate sound and effective leadership processes. To maintain effectiveness amongst managers and professional employees, training remains a catalyst in increasing knowledge, skills and overall competency within the FMCG industry.

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LIST OF ABBREVIATIONS

ABBREVIATION	FULL ANNOTATION
AMA	Agricultural Marketing Authority
ANOVA	Analysis of Variance
ASYCUDA	Automated Systems for Customs Data
AVE	Average Variance Extracted
BWG	Biodiversity Working Group
COMESA	Common Market for Eastern and Southern African Community
CAGR	Compounded Annual Growth Rate
CR	Composite Reliability
CGSA	Consumer Goods Council of South Africa
CRM	Customer Relationship Management
CSM	Customer Service Management
CSR	Corporate Social Responsibility
DRC	Democratic Republic of Congo
EAC	East African Community
EDI	Electronic Data Interchange
EFA	Exploratory Factor Analysis
EVP	Ethics Values and Principles
FA	Factor Analysis
FAP	Fresh Assembly Point
FDI	Foreign Direct Investment
FMCG	Fast Moving Consumer Goods Industry

FSSC	Food Safety System Certification
GAP	Good Agricultural Practice
GDP	Gross Domestic Product
GRS	Global Reporting Standards
HACCP	Hazard Analysis and Critical Control Point
ICRR	Inter-Faith Centre on Corporate Responsibility
IE	Information Ethics
IT	Information and Technology
JIT	Just in Time
KFC	Kentucky Fried Chicken
KMO	Kaiser Meyer Olkin
LC	Legal Components
LSM	Living Standards Measurement
MFM	Manufacturing Flow Management
MOU	Memorandum of Understanding
NGO	Non-Governmental Organisation
OLS	Ordinary Least Squares
PCA	Principal Component Factor Analysis
PE	Personal Ethics
PWC	Price Waterhouse Coopers
SADC	Southern African Development Community
SAM	Supplier Assessment and Monitoring
SCM	Supply Chain Management
SD	Standard Deviation

SDF	Supplier Development Fund
SEDA	Small Enterprise Development Agency
SM	Supplier Management
SME	Small to Medium Enterprise
SPSS	Statistical Package for Social Sciences
SRM	Supplier Relationship Management
SV	Shared Variance
TIP	Temporary import permit
ZIPAR	Zambia Institute for Policy Analysis and Research

CHAPTER ONE

OVERVIEW THE STUDY

1.1 INTRODUCTION AND BACKGROUND

The Fast-Moving Consumer Goods (FMCG) industry is one of the principal industries determining the success of most national economies (Nandonde & Kuada, 2016:449). According to several authors (Bala & Kumar, 2011:23; Colicchiaa, Creazzaa & Dallarib, 2017:322), FMCG is an industry with generally low-cost products that have a relatively short shelf life and are usually purchased by consumers regularly. In South Africa, the FMCG industry is one of the largest economic industries, contributing substantially to the gross domestic product (GDP) (Mbhele, 2016:54). The FMCG industry is among the key economic segments in the food processing industry, which is one of the major industries in South Africa, generating substantial revenue for the country and providing employment opportunities to many (Fedderke & Szalontai, 2012:241). In addition, Statistics South Africa (2017:12) reports that the food and beverage industry generated incomes of over ZAR 40.2 billion and nearly ZAR 42.2 billion in 2016 and 2017, respectively. This is indicative of its contribution to the national economy, in which a significant percentage is from the FMCG industry. The Department of Agriculture, Forestry and Fisheries (2014:42) reports that the FMCG industry formally employed nearly 200 000 people. Furthermore, the food processing industry and its business practices impact on the success of this particular industry (Industrial Development Corporation, 2016:5).

Amongst the business practices that have emerged as important to the FMCG industry is Supply Chain Management, or SCM (Sanders 2012:3; Van Elzakkera, Maiaa, Grossmann & Zondervanc, 2017:68). The activity of SCM consists of the design and management of seamless, value-added flows of products, information and funds throughout the supply chain (MacCarthy, Blome, Olhager, Srai & Zhao, 2016:1700). Furthermore, Speier, Whipple, Closs and Voss (2011:726), and Klibi and Martel (2012:883), ascertain that adequate SCM strategies are required to assist the FMCG industries in becoming more resilient and less vulnerable to disturbances. To maintain growth in the FMCG industry, flexibility can be established through multi-carrier transportation, forming alliances with various carriers to switch carriers rapidly in the event of a disruption, as well as multiple routes to guarantee the smooth flow of materials

along the supply chain (Colicchia, Dallari & Melacini, 2010:683; Anne, Quarshie, Asta, Salmi & Leuschner, 2016:85).

To ensure that it adds the much-needed value to any business enterprise, SCM must be conducted ethically. According to some scholars (Hanks, Davies & Perera, 2008:25; Chin, Tat & Sulaiman, 2015:2), the activity of SCM operates within a regulatory framework set by the national government and extended by provinces and local government bodies to specific policies, legislation and regulations in line with ethical standards. Ethical SCM refers to managers' need to be able to recognise ethical issues, the cultural context of the organisation and the individual factors that can influence individual ethical behaviour in an organisation to deal with them more effectively and create an ethical organisational culture (Deshpande, George & Joseph, 2000:214; Ferrell, Fraedrich & Ferrell, 2015:78). The upholding of ethics within SCM is important as it carries a wide array of benefits. These include enabling workers to develop appropriate ethical learning strategies and policy responses to help build an ethical base carried into the workforce's moral judgements, which may relate to fair decisions, honesty and the competitive pricing of products (Rambe & Ndofirepi, 2017:4). Strong monitoring and evaluation systems provide the structure to compile and integrate valuable information into the policy cycle, thus providing the basis for sound governance and accountable policies in the SCMs public and private industry (Acevedo, Rivera, Lima & Hwang 2010:7; Mvubu & Naude, 2016:271). Without this monitoring and evaluation, the authors further state, unscrupulous individuals and organisations are likely to take advantage and implement devices for personal enrichment, leading to fraud, corruption and a host of other unethical practices.

Within the FMCG industry, it is acknowledged that ethical approaches to SCM are important in the creation of collaborative business environments with other industries and the retail industries involved (Hernández-Espallardo, Rodríguez-orejuela & Sánchez-pérez, 2010:101; Becker, Carbo & Langella, 2013:144). The past several years have witnessed an increasing interest in ethical SCM issues relating to business sustainability in the FMCG industry (Wisner, Tan & Leong, 2012:5; MacCarthy *et al.*, 2016:1698). Much of the recent sustainable SCM literature within the FMCG industry also suggests that superior supply chain performance is best assured when social, environmental and economic concerns are all addressed concurrently through the alignment of ethical issues (Carter & Easton, 2011:46; Heizer & Render, 2014:339). Ethical standards for supplier selection and ethical decision-making entail the rights

and responsibilities of supply chain professionals, relationships with suppliers, social values and sustainability in the management of suppliers (Burt, Petcavage & Pinkerton, 2010:196; Aschemann-Witzel, Hooge & Normann, 2016:1528; Chen, Jiang, Yang & Man, 2017:140). Since supply chain professionals work at the point of contact with business partners in the FMCG industry, their judgments, morality and intentions reflect on and determine their organisations' ethical or unethical behaviours (Byoung-Chun & Hyunjeong, 2016:59).

To address the above complexities and still operate competitively, South African firms in the FMCG industry still need to opt for strategies such as low-cost sourcing from different countries, centralised distribution centres and outsourcing (Nandonde & Kuada, 2016:450). For this reason, Vee and Skitmore (2013:117) reveal that the demand for formidable ethical practices is still on the increase to allow for any advancement in the FMCG industry to take place. The same authors further state that proper implementation must address ethical issues and policing of ethical guidelines by aligning them with how SCM practices operate. As a result, the proper implementation of policing of ethical guidelines is aligned through the SCM regulations issued in terms of the available legislation, which lay down the requirements for the governance of procurement processes and establish a high-level policy competence and ethical abundance in South Africa (Watermeyer, 2011:3; Pillay & Mafini, 2017:307).

1.2 PROBLEM STATEMENT

Over recent years, approaches to the subject of ethical SCM has shifted to a more significant approach on how businesses have been able to incorporate measures that enable good practices to be conducted within procurement (Beske-Janssen, Johnson & Schaltegger, 2015:664). Several authors (Hill, Eckerd, Wilson & Greer 2009:281; Schwepker & Schultz, 2013:347; Ermasova, Wagner & Nguyen, 2017:411) indicate that supply chain professionals who are responsible for managing intra- and inter-organisational problems often end up making unethical decisions that maximise only their personal or their firm's benefit, rather than pursuing mutually beneficial outcomes for all firms in the supply chain. Indeed, FMCG logistics operations in Africa can be quite different to those in more developed countries, with a wide variety of potential disruptions and delays which cause uncertainty (Christ & Ferrantino, 2011:749; Bloem & Bean, 2015:2). For this reason, the nature of uncertainty and how it is managed provides a wider view on both supply chain operations and the external operating environment as a major issue for logistics providers in the FMCG Industry (Steyn & Bean, 2011:30; Manlow & Nobbs, 2013:49; Mvubu, 2016:26). Scholars further assert that FMCG

firms find it difficult to create a meaningful corporate brand around a similar collection of products and resort to individual branding due to unethical procurement decisions (Bikram & Mandeep, 2013:6; Nandonde & Kuada, 2016:450). In addition, the concerns regarding ethical performance in the FMCG industry are becoming more significant and this necessitates the need to concentrate on addressing ethical issues and enable embeddedness of codes of ethics in FMCG firms (Moola & Bisschoff, 2012:101).

In addressing the factors that determine ethical SCM, some authors (Mawenya, 2008:15; Nandonde & Kuada, 2016:449) report that bribes and fraudulent transactions inflate project costs by about 20-30 per cent of the total FMCGs projected surplus in that defined industry in South Africa. Furthermore, Mbanje and Lunga (2015:332) assert that although many SCM actors in both the South African public and private industry have attended some training workshops on SCM, they still lack the appropriate knowledge for proper implementation and end up conducting themselves inappropriately. This calls for further enquiries regarding the factors that promote ethical SCM in the FMCG industry, to provide information to supply chain professionals regarding where exactly their focus should be directed when promoting the optimum performance of their supply chains.

Despite the effectiveness of codes of ethics in the supply chain industry and the call for an implementation approach in FMCG firms, there is still a paucity of research in this direction (Oladinrin & Ho 2016:76). Within South Africa, Mvubu and Naude (2016:271) conducted a study that focused on green supply chain management (SCM) constraints in the South African FMCG industry, while Agigi, Niemann and Kotzé (2016:1) addressed supply chain design approaches for supply chain resilience of the South African FMCG grocery manufacturers. Nemtajela and Mbohwa (2017:699) centred their attention on the relationship between inventory management and uncertain demand for FMCG organisations. Botes and Henrico (2016:148) focused on managerial competencies to enhance performance culture from an FMCG perspective, while Nguegan and Mafini (2017:2) focused on investigating SCM problems in the food processing industry. It has become evident that previous studies conducted in the FMCG industry directed little or no attention to ethical SCM. Furthermore, extensive reviews done on various databases reveal there is still a lack of evidence on the studies performed on investigating factors that drive ethical SCM in South Africa's FMCG industries. The current study seeks to fill that gap, thus identifying these factors and determining how they influence the functioning of the FMCG industry in South Africa.

1.3 OBJECTIVES OF THE STUDY

This study was intended to achieve a single primary and six secondary objectives.

1.3.1 Primary objective of the study

The primary objective of this study was to investigate ethical SCM factors in the FMCG industry in Gauteng Province.

1.3.2 Secondary objectives of the study

The following secondary objectives were set for the study:

1. Analysing the literature on the FMCG industry
2. Exploring the literature on ethical SCM
3. To determine the underlying factors of ethical SCM in the FMCG industry
4. To establish the level of compliance in ethical SCM in the FMCG industry in Gauteng Province
5. To determine the variation of the ethical SCM factors with demographic variables such as age, gender, race and educational level
6. To determine the influence of ethical SCM on supplier management (SM) in the FMCG industry

1.4 PRELIMINARY LITERATURE REVIEW

This section provides brief insights into the literature reviewed in this study. A detailed literature review is presented in Chapters 2 and 3 of this dissertation.

1.4.1 The Fast-Moving Consumer Goods Industry in South Africa

FMCGs are firms that market goods commonly transacted and consumed in a short period, up to one year (Nemtajela & Mbohwa, 2016:700). Bala and Kumar (2011:24) declare the four categories for FMCG organisations as personal care, food, home care and refreshment. Research in South Africa, conducted by Mokheseng, Horn and Klopper (2017:96), has revealed that the FMCG industry's importance in the country emanates from proper supply chain planning and design through the elimination of various problems. These problems include inferior customer service issues, communication problems, relatively too high or too low inventory levels for the level of customer service to be achieved, poor coordination of efforts, as well as long production and delivery lead-times.

South Africa's FMCG industry is concentrated with five main players accounting for about 60 per cent of all retail sales. They are referred to as the Big 5. These include Shoprite, Pick n Pay, Spar, Woolworths and the new player, Massmart (Statistics South Africa, 2013:11). A study by Nielsen (2016:3) suggests that the retail and wholesale industries specifically employ an estimated 2 825 000 people, making up 22 percent of the national labour force, which positions retail as an important industry in the overall South African economy. In addition, the retail industry is a large contributor to South Africa's economy, accounting for about 12.5 per cent of GDP and almost 22 per cent of the total workforce, which increases job creation in the country (Wholesale & Retail Seta, 2014:9).

Although the FMCG industry in South Africa provides a vast number of benefits to the economy, it experiences a number of pressing challenges. The local South African retailers are struggling to remain competitive against international rivals, partly because of labour unrest, high local wages and inflexible labour policies (Price Waterhouse Coopers, 2012:31). Furthermore, fluctuations in currency are another macro-environmental risk affecting retailers in the FMCG industry, particularly those that source key merchandise from abroad (Agigi *et al.*, 2016:4). Such firms face the risk of longer lead times, affecting not only product availability on the retailers' shelves but resulting in the inability to pass any consequent price increases onto consumers (*ibid*).

1.4.2 Ethical supply chain management

Ethical SCM may be perceived as a situation in which an official's decisions in a particular organisation are influenced by the interests of the organisation, which operates in a specific supply chain (Mawenya, 2008:3; Mbhele, 2016:54). Rajaguru and Matanda (2013:620) ascertain that ethics between partner firms has been a critical issue in SCM in which firms in the FMCG industry endeavour to balance the rights and duties of stakeholders, including society, employees, customers, investors and suppliers. Rambe and Ndofirepi (2017:1) point out that given the middleman role that employees of emerging retail firms play in the supply chain, from manufacturers to the consumers, the ethical perceptions of these employees are critical to the leveraging of businesses' strategic orientations. Rambe and Ndofirepi (2017:4) suggest that it is crucial for employees to behave ethically in an organisation as it contributes to moral judgements that may relate to decisions on the fair, honest and competent pricing of products. Therefore, ethical conduct such as patience, courtesy and humility towards customers and suppliers could be fundamental to effective relationships with stakeholders, particularly

given the intimate and personal relations between them (Van Der Walt, Jonck & Sobayeni, 2016:55).

Nevertheless, there has been a concerted effort to pinpoint a large number of unethical practices in the SCM terrain. These include embezzlement, extortion, fraud, fronting, irregular and unwanted purchases, inflated prices and ghost suppliers, to name a few (Woods & Mantzaris, 2012:123; Mantzaris, 2014:71). Botha (2012:5) further mentions that desisting from unethical practices such as bribery, theft, coercion, deception and unfair discrimination enable businesses to perform optimally as an expression of business ethics. Equally, the absence of transparency, accountability and appropriate and honest systems and processes in SCM systems leads to corruption and misuse of funds, which has cost South African citizens billions of rand (Munzhedzi, 2013:284; Nandonde & Kuada, 2016:45).

1.5 RESEARCH METHODOLOGY

This section presents a summary of the research methodology as applied in this study. A more comprehensive discussion of the research methodology is provided in Chapter 4 of this dissertation.

1.5.1 Research approach

Research methodology is divided into three approaches, namely quantitative, qualitative and the mixed methods approach. Based on the present study, the quantitative research method was used, which refers to research that involves collecting numerical data that explain a particular phenomenon (Hopkins, 2013:23; Creswell, 2014:12). The rationale behind adopting a quantitative approach is that to address its objectives, this study intends to obtain the views of numerous professional people employed in the industry, which is only possible through a quantitative approach.

1.5.2 Research design

A research design is a master plan that specifies the methods or procedures for collecting and analysing information needed for a research study (Malhotra, 2010:105). This study was conducted using a cross-sectional survey design, which involves the collection of data at one point in time from the sampled respondents, which was conducted using a questionnaire (Leedy & Ormrod, 2013:215).

1.5.3 Literature review

A detailed literature review on the FMCG industry and SCM ethics was conducted and reported in the second and third chapters of the research report. The literature was drawn from textbooks, peer-reviewed journal articles, conference papers and various library digital databases with the objective of developing an understanding of the theory behind the study.

1.5.4 Empirical study

Empirical research is research based on observed and measured circumstances and is derived from the collection of primary data through appropriate methods (Zikmund & Babin, 2013:99). In this study, this included the sampling design, procedures for data collection, data analyses and ethical considerations.

1.5.5 Sampling design

Sampling, as defined by Berndt and Petzer (2013:349), is the process of selecting a sample, so that by selecting some elements of the population, the researcher can draw certain conclusions about the population. In this study, the sampling design involved a determination of the target population, the sampling approach and technique and the sampling size.

1.5.6 Target population

A target population is defined by Welman, Kruger and Mitchell (2011:53) as a group of firms with a common set of characteristics. The target population for this study included SCM managers and professional employees of firms operating in the FMCG industry in Gauteng Province.

1.5.7 Sampling approach and technique

No sampling frame can be established for use in this study since there exists no documented list of the entire population of SCM managers and professional employees affiliated with the FMCG industry. This being the case, a non-probability sampling technique using a purposive sampling technique was employed to select respondents for this study. This implies that members of the target population did not have equal chances of being selected for inclusion in this study. A purposive sampling technique involved the selection of only those sampling elements that have information relevant to the aim of the study (Kumar, 2014:243). In this study, such respondents included SCM managers and professional employees who have been employed in the FMCG industry for at least two years.

1.5.8 Sample size

Sample size refers to the number of elements that are included in a research study (Gupta, 2011:196). In this investigation, the sample size was set at n=350 respondents. This sample size is based on previous studies focusing on the South African FMCG industry conducted by Nemtajela and Mbohwa (2016:702), Nguegan and Mafini (2017:4), Beukes, Prinsloo and Pelser (2013:4) and Botes and Henrico (2016:154) who used sample sizes ranging from 186 to 303 respondents, which fall within the same range as the current study.

1.5.9 Method of data collection and measurement instruments

For this study, data was collected through the distribution of a structured survey questionnaire. To expedite their administration, the questionnaires were distributed physically as well as by email.

The questionnaire was divided into three sections. Section A elicited information on demographic variables such as age, gender, race, marital status and educational level. Section B contained questions on legal components (LC) of SCM practices. Section C elicited information related to SM. The last section of the questionnaire was based on information relating to the personal ethics (PE) of FMCG employees affiliated to the SCM department. The relative ethical attributes and factors in these questionnaires were obtained from various validated questionnaires from previous studies (Muncy & Vintell, 1992:595; Bendixen & Abratt, 2007:13; Murray, 2003:295). A five-point Likert-type scale ranging from 1=strongly disagree to 5=strongly agree was used for the response options in Section B, C and D.

1.6 DATA ANALYSIS AND STATISTICAL APPROACH

The collected data were analysed using the Statistical Package for Social Sciences (SPSS Version 26.0). Simple descriptive statistics were used to analyse the demographic information of respondents as well as the levels of implementation of ethical SCM in the FMCG industry. The factors determining ethical SCM in the FMCG industry were identified using exploratory factor analysis (EFA). Thereafter, t-tests and the analysis of variance (ANOVA) were used to test for the mean differences between the different demographic categories such as age, gender, race and educational level.

1.7 RELIABILITY AND VALIDITY OF MEASUREMENT SCALES

Collis and Hussey (2014:53) define reliability as “the accuracy and precision of the measurement and absence of differences in the results if the research were repeated”. In this study, reliability was first assessed using the item-to-total correlations, which should be more than the suggested cut-off value of 0.3 (Nierobisch, Toporowski, Dannewald & Jahn, 2017:123). Cronbach’s alpha coefficient was used to assess the reliability of the measurement scales. According to Nunnally and Bernstein (2014:43), a Cronbach alpha value which holds a minimum threshold of 0.7, is considered adequate.

Validity determines whether the research truly measures what it intends to measure or how truthful the research results are (Blanche, Durrheim & Painter, 2013:489; Punch, 2014:239). There are different types of validity instruments, which include face-, content- and construct validity. Face validity was tested by requesting a panel of experts to review the questionnaire. Content validity was assessed through a pilot study of the questionnaire, using at least 40 conveniently selected respondents, as suggested by Ey, Zuo and Han (2014:150). Construct validity was tested through factor loadings of the individual items on the scale. A minimum cut-off value of 0.5 for the factor loadings was used (Tavakol & Dennick, 2011:54).

1.8 ETHICAL CONSIDERATIONS

Ethics in scientific research refers to the norms or standards that guide the research process (Gupta, 2011:21; Kumar, 2015:16). Most ethical issues in research fall into four categories, namely protection from harm, informed consent, right to privacy and honesty with professional colleagues (Leedy & Ormrod, 2013:104). The following ethical issues that are important for this study were followed:

- The researcher should request permission to survey various FMCG firms in Gauteng Province.
- All respondents were adequately informed regarding the purpose of the survey.
- Participation in the study was voluntary because respondents were not coerced to participate in the study and were allowed to withdraw at any stage of the research.
- All respondents were protected from any form of victimisation.
- To ensure confidentiality and anonymity, the names of respondents did not appear in any part of the questionnaire.

1.9 CHAPTER CLASSIFICATION

The research culminated in the development of a research dissertation. The six chapters of the dissertation are divided as follows:

Chapter 1: Introduction and background to the study

This chapter outlines the introduction and background of the research, the research problem, the research objectives, a preliminary review of the literature and a summary of the research methodology.

Chapter 2: The fast-moving consumer goods industry

This chapter was based on reviewing literature on the FMCG industry, regarding its composition, structure, recent developments, roles and contributions to the industry and its challenges. The literature was collected from both the international and South African environments.

Chapter 3: Ethical supply chain management

This chapter was based on reviewing the literature on ethical SCM. A major emphasis was placed on the ethical SCM factors identified in previous studies and how they impact on the performance of various industries.

Chapter 4: Research methodology

The philosophical underpinnings of the study, the research approach, design and strategy are discussed in detail in this chapter. Other issues comprehensively discussed include the sampling design, procedures for data collection, data analysis and ethical considerations.

Chapter 5: Data analysis and interpretation of results

This chapter focuses on the data analysis, presentation and the interpretation of the results.

Chapter 6: Conclusions and recommendations

This section focuses on providing conclusions drawn from the research results and provides some recommendations for the improvement of ethical SCM. Limitations of the study and implications for future research are also provided.

CHAPTER TWO

THE FAST-MOVING CONSUMER GOODS INDUSTRY IN SOUTH AFRICA

2.1 CHAPTER OVERVIEW

The purpose of this chapter is to analyse literature on the FMCG industry in South Africa. It is important to review this literature as the study is based on the FMCG industry. This chapter, therefore, provides an in-depth understanding of the research context. The chapter first discusses the structure of the FMCG industry. This discussion directs attention to aspects such as definitions and major stakeholders and their profiles. Thereafter, this chapter gives insight on the structure of the FMCG industry in terms of its main players, recent developments, its achievements and also the socio-economic contributions that the industry provides. In addition, special attention has been channelled to the challenges that the industry encounters in South Africa. Hence different mechanisms were discussed to combat these occurrences.

2.2 THE STRUCTURE OF THE FAST-MOVING CONSUMER GOODS INDUSTRY

This section discusses the structure of the FMCG industry. Various definitions of the FMCG industry are provided, followed by a discussion of its major stakeholders and their profiles.

2.2.1 Definitions

The term FMCG has been addressed and discussed by authors in various ways. Several authors (Silayoi & Speece, 2004:609; Hamiln & Wilson, 2004:663; Wei, Ou & Luo, 2009:52; Laforet, 2011:20) define the FMCG as an industry which involves products that are frequently purchased and are characterised by low involvement, low purchase transaction amount and low risk, for example, food and beverages such as candies, chocolates, ice-creams, cereals, milk, butter, juices and soft drinks. KPMG (2014:4) also opines that the fast-moving consumer goods industry is described as the largest industry in the world, being rapid and agile and comprising of a number of product variants. Similarly, Chung-Kee and Chuwonganant (2014:477) posit that the handling of perishable food products throughout the supply chain performs a crucial role and requires specialised equipment such as both mobile and static refrigerators.

In view of the diverse distinction in using this term, some authors (Smith, 2010:1; Mbhele, 2016:53) define FMCGs as those retail goods that are generally replaced or fully consumed over a short period of days, weeks, or months, and within one year. FMCGs, therefore, have a short shelf life, either as a result of high consumer demand or because the product deteriorates rapidly. The same authors further state that FMCGs are goods of daily use bought by retail

consumers, and consist typically of products such as toothpaste, coffee, soaps and detergents, deodorants and sugar. FMCGs are regarded as marketing goods commonly transacted and consumed in a short period of time, or up to one year (Smith, 2010:3). Moola and Bisschoff (2012:103) state that FMCGs have a vast customer demand and the manufactured items depreciate fast due to a short product shelf life. Kuar and Mann (2013:6) highlight that the FMCG industry offers various inherent product category characteristics such as risk, involvement, purchase transaction amount, and frequency of purchase, services and durables.

2.2.2 The Major Stakeholders in the South African Fast-Moving Consumer Goods Industry

The FMCG industry is one of the largest industries in the South African economy, which contributes substantially to the GDP of the country. The Consumer Goods Council of South Africa (CGCSA) is the representative body of the South African FMCG industry which houses and represents about 12 000 organisations in South Africa across the value chain of consumer goods and services (CGCSA, 2015:1). According to Mvubu and Naude (2016:274), the body promotes interaction between various stakeholders in the industry and represents the interests of the FMCG industry to government and other stakeholders.

The stakeholders involved in South Africa's FMCG industry include the Department of Agriculture, Forestry and Fisheries which focuses on the number of people that are formally employed by the food processing industry in South Africa (Agriculture, Forestry and Fisheries, 2014:43). In addition, the Industrial Development Corporation is another major stakeholder which plays a pivotal role in the FMCG industry by ensuring that there is food security in the country (Industrial Development Corporation, 2017:18). This signifies the active role stakeholders play to ensure the FMCG industry remains functional in the South African economy.

2.2.3 The key role players

The FMCG industry in South Africa is comprised of five key players, namely Shoprite, Pick n Pay, Spar, Woolworths and the new player, Walmart's Massmart group (Das Nair & Chisoro, 2017:26). These five major locally owned corporations in the FMCG industry incorporate a sound foothold in the industry by operating warehouses, wholesale outlets, hypermarkets, supermarkets, and convenience stores throughout South Africa (Ntloedibe, 2017:5). The big five corporations offer consumers a wide assortment of products sold in a convenient setting and

location with a primary focus on quality, service, ‘one-stop’ shopping, and an overall quality shopping experience (Haese & Van Huylbroeck, 2005:104; Basker & Noel, 2013:178).

2.2.4 Firm profiles

In this subsection, the profiles of the major firms operating in the South African FMCG industry are provided. These are Shoprite Holdings, Pick n Pay, Spar Holdings and Massmart. Informal traders, including the spaza shops, have also been included in this section as they are gaining significance in the industry.

2.2.4.1 Shoprite

Shoprite is the largest retailer in South Africa specialising in foodstuffs and household items and was the first FMCG retail outlet to establish branches in the southern African region. Shoprite has a large network of 1,581 corporate stores across Africa and almost 40 franchise stores in 14 African countries (Shoprite Holdings Ltd, 2014:6). Within South Africa, Shoprite has four core retail offerings that include Shoprite, Checkers, Usave and OK. Checkers Hyper stores target the high-end affluent consumers, whereas Shoprite focuses on the broad middle-to lower-market segments. Further, Shoprite’s OK franchise caters for a diverse range of mainly smaller convenience-oriented markets (which includes Friendly Supermarkets, amongst others) that are located in rural towns, suburbs and neighbourhoods in South Africa (Mwanza, 2015:1).

This FMCG retail affiliate consists of over 2,000 outlets in urban and rural locations of South Africa and has managed to penetrate areas throughout Southern Africa in Angola, Botswana, the Democratic Republic of Congo (DRC), Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Tanzania, Uganda, and Zambia (Dakora & Bytheway, 2014:198). Shoprite, with its Checkers brand (Checkers Housebrand and Checkers Choice) play a dominant role in the South African FMCG industry and hypermarkets. Table 2.1 presents the number of retail outlets in different countries.

Table 2.1: Geographic spread of Shoprite and its different outlets

	Shoprite	Checkers	Checkers Hyper	Usave	OK Furniture	Ok Express	House & Home	Hungry Lion
South Africa	400	180	31	266	255	23	45	124
Angola	7			14	5			7
Botswana	5	1		5	7		1	9
DRC	1							1
Ghana	3			1				
Lesotho	5			6	6	1		3
Madagascar	8							
Malawi	3			3				
Mauritius	3							
Mozambique	8			3	5			
Namibia	18	4		23	11		2	11
Nigeria	10							
Swaziland	9			5	4	1		1
Uganda	3							
Zambia	20			1	2			11
Total	503	185	31	327	295	25	48	167

Source: Shoprite (2017:3)

An analysis of Table 2.1 indicates that most of the retail outlets for the Shoprite-Checkers group are located in South Africa, followed by Namibia and Angola. The Hungry Lion division has outlets in most of the countries in the region due to its significance of being a fast-food retailer. Other countries such as Uganda, Mauritius and DRC have not been successful in attracting any of the divisions of the Shoprite-Checkers group due to the infancy in marketing strategies channelled towards these countries.

2.2.4.2 Pick n Pay

Pick n Pay is currently the second-largest grocery retailer in the country behind Shoprite. Pick n Pay has approximately 1 000 stores country-wide, which are both corporate-owned and franchised stores (Grocery Retail Market, 2016:5). This firm operates under the FMCG industry and employs over 50 000 in its corporate stores and operations throughout South Africa (Ziba & Phiri, 2017:12). Pick n Pay stores have a number of formats including hypermarkets, supermarkets, convenience stores and more recently, Pick n Pay Express

Franchise stores in collaboration with BP Southern Africa (Ntloedibe, 2017:7). Through the BP franchise, the entity has managed to introduce service stations with an introduction of Pick n Pay Express outlets in the major cities across South Africa.

The group offers three private-label ranges which offer consumers good quality at a lower price than branded products, namely Pick n Pay, Pick n Pay Choice, and Pick n Pay No Name. In addition, the retail division manages Pick n Pay-branded businesses such as food, clothing and general merchandise in hypermarkets, supermarkets, family-owned franchise stores, mini market franchises, butcheries, and gas station shops (Wholesale & Retail Seta, 2014:7). Due to the constant changes in the business environment, Pick n Pay is increasingly targeting lower-income earners, moving away from its traditional, high-income earners (Cairns, 2011:2). After Shoprite, most South African customers shop in Pick n Pay outlets (Supermarket & Retailer, 2013:3).

2.2.4.3 Spar Holdings

The Spar group is the third-largest supermarket retailer specialising in foodstuffs and general merchandise in South Africa. The FMCG corporate operates in nine African countries as well as the Republic of Ireland and South West England (SPAR International, 2015:3). Some of the supermarket chains in these African countries include Spar outlets in Botswana, Mozambique, Namibia and Swaziland (PWC, 2012:12). The retail formats and brands are comprised of Super Spar (hypermarkets), Spar and Kwik Spar (supermarkets), and TOPS (Spar liquor stores). With the vast number of its establishments in other countries, the group holds an estimated 26 per cent market share in the mass grocery retail market in South Africa (Naidoo, 2011:6).

Within South Africa, Spar stores are independently owned, and many of the purchasing decisions are made at the individual store level which enables its management and junior personnel to decentralise decision-making processes (Geller, 2017:7). Spar targets high-income consumers and locates its stores in more up-market neighbourhoods. In addition, Spar Holdings also opened a forecourt convenience store in 2013, Spar Express, in collaboration with the oil firm Shell, which enabled the group to do business with more partners and corporations. It is unclear, however, whether this concept has taken off. The retail chain has 4,025 permanent (non-franchisee) employees making it a huge employer in the trade and retail industry of South Africa (Spar International, 2015:31).

2.2.4.4 Woolworths

Woolworths is the fourth largest retail chain in South Africa specialising in food and clothing and is regarded as one of the leading retailers targeting higher living standards measurement (LSMs) in the southern region of the continent (King & Thobela, 2014:162). Woolworths has 1162 store locations in a number of African countries with 82 store locations and 33 franchises. With regard to the rapid expansion, the group bought back 54 franchise Woolworths stores at the cost of ZAR634 million in 2011 and a further 59 franchise stores in 2012, resulting in a massive capital share. In addition, Woolworths recently acquired back 42 franchise businesses in Botswana, Namibia, Ghana, Swaziland and South Africa making Woolworths the full owner of all previous franchises in South Africa and Africa. Woolworths has managed to venture into convenience stores and fuel forecourts, partnering with Engen and providing superior quality and product innovation targeting the high-end, affluent niche market (Hartley & Moorad, 2015:7). The retail chain employs approximately 38,000 people across all their operations in all the countries (Woolworths Holdings Ltd, 2014:6).

2.2.4.5 Massmart

Massmart is a South Africa based FMCG retail group, which was recognised as the best-mixed retailer in the year 2016 (Dakora, 2012:33). The US giant retailer Walmart acquired Massmart in 2011 and has managed to gain a strong foothold in South African's retail industry since then. The group operates retail supermarkets in the region of SADC with its outlets in eleven countries, namely Botswana, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Swaziland, Tanzania, Uganda, and Zambia (Das Nair *et al.*, 2018:7). Within South Africa, the retail outlet operates mass merchandisers and warehouses. A secondary division of its wholesale, Makro, is a leading wholesaler of general merchandise, home improvement equipment and supplies. Additionally, the leading wholesaler of basic foods has focused on high volume, low margin, and low-cost distribution of mainly branded consumer goods (*ibid*). The corporate has invested in food retailing with the addition of the Food-co brand outlets operated under Game and Makro.

Walmart-owned Game has diversified into food products, becoming a retailer of non-perishable groceries and a wholesaler of basic foods and commodities. For this reason, Game has managed to gain an advantage from Walmart's immense global supplier base, allowing it to benefit from lower unit costs also known as production economies (Das Nair & Chisoro, 2017:29). The retail group is yet, however, to gain traction in Southern Africa, especially in

remote areas of the countries in which it has outlets. The group has managed to engage in significant investments in new stores, the acquisition of stores, distribution centres and capacity to expand its footprint in South Africa and the rest of Africa. Capital expenditures started declining; however, after 2014, signalling saturation of the expansion strategy. The performance of Massmart from 2010 to 2016 is revealed in Table 2.2.

Table 2.2: Massmart performance indicators from 2010-2016

	2010	2011	2012	2013	2014	2015	2016
Real turnover (millions)	53488	56120	61363	68788	70599	72659	73589
Gross profit margin (%)	18.24	18.47	18.61	18.65	18.75	18.99	18.96
Net profit margin (%)	2.38	1.58	1.92	1.78	1.38	1.31	1.45
Return on Equity (%)	33.90	22.12	27.07	24.99	19.54	19.22	22.00
Return on Assets (%)	8.23	5.08	6.15	5.13	3.74	3.62	4.15

Source: Das Nair and Chisoro (2019:30)

Table 2.2 presents a report of Massmart's performance indicators over a period of six years. On average, real turnover grew by five per cent per annum during the six years. High sales growth did not, however, translate into high net profit margins, which have deteriorated over the same period (Das Nair, 2019:37). Noticeable investments in information technology systems, new stores and distribution centres between 2011 and 2013 increased expenses, leading the decline in net profit margins. In addition, closure of underperforming outlets between 2011 and 2012 resulted in once-off costs and inefficiencies.

2.2.5 Informal retailers

South Africa's townships and remote areas have over the past few years proven to be key in the economy's production and retail industry (Rudzani & Manda, 2016:214). The retail industry has managed to gain a strong foothold in these areas by gaining trust from manufacturers and wholesalers as they play an important role in delivering a channel of foods to consumers in the townships. Furthermore, this has promoted the expansion and development

of shopping centers in townships to target the aspirations of emerging consumers. Major retailers have also extended their services to these townships (Ramukumba, 2014:23). Although the expansion of shopping centers in townships has been seen as a threat to local micro-enterprises, the spaza shop remains a strong competitor within South Africa's retail market (Kambwale, Chisoro & Karodia, 2015:85).

A spaza shop is a small informal convenience store that traditionally stocked limited household items such as bread, maize meal, cooking oil, sugar and cigarettes. They are generally family-owned and operate from one of the rooms in a house or an outbuilding in the yard (Ramukumba, 2014:24). More than 20 per cent of spaza owners report that products are now delivered to their shops (Rudzani & Manda, 2016:214). The industry, however, encounters various challenges ranging from inventory shortages, access to funding, high levels of crime (robbery), severe competition, expensive logistics services due to distance from the source, and bad debt or the granting of too much credit (Kambwale *et al.*, 2015:87). Currently, Somali and Pakistan nationals dominate the spaza industry in the townships due to their strategy of group buying from wholesalers, enabling them to offer lower prices to customers than their local competitors (Ali, Rashid & Khan, 2014:69; Agwu & Emeti, 2014:105). These spaza stores have become common features in both the cities and townships throughout the country.

The informal industry in South Africa has gained traction in retail space. According to Chinomona and Pooe (2013:3) the informal industry in South Africa has an estimated annual revenue of seven billion rands (USD 660 million). Small retailers such as cafes, street vendors and kiosks also comprise an important role in the independent retail market in the country. Despite the significance of the informal retail market, imported products are rarely featured at these outlets other than offal and poultry products (Kambwale *et al.*, 2015:89). Additionally, informal retailers lack the capacity to buy imported goods directly and rely mostly on sourcing their products from local wholesale markets. The Small Enterprise Development Agency (SEDA), a governmental agency, aided small businesses with funding and advice, enabling the increase in the number of traditional small grocers.

In this section key areas regarding the structure and composition of the FMCG industry were discussed. Furthermore, the key areas revolving around the stakeholders and key role players were reported on, highlighting the profiles of the different FMCG firms operating in South

Africa. The next section reviews the literature on the on-going developments within the industry and how they have contributed significantly towards the economy.

2.3 RECENT DEVELOPMENTS IN THE FAST-MOVING CONSUMER GOODS INDUSTRY OF SOUTH AFRICA

The FMCG industry has managed to attain massive growth in the number and spread of supermarkets, particularly South African supermarkets, and into the rest of Southern Africa, particularly focusing on increasing intra-regional foreign direct investment (FDI) and financial liberalisation (Chigumira, Chipumho, Mudzonga & Chiunze, 2016:2). Several other factors have contributed to this growth and development, including rising urbanisation, increased per capita income, the rise of the middle class, construction of shopping malls, and economies of scale and scope arising mainly from the efficient supply chain and distribution systems (Briggs and Associates, 2015:5). Similarly, the ongoing developments in the FMCG industry have important consequences for consumers, suppliers, and the competitive landscape within the region of SADC with more focus being exerted to South Africa. The next section presents an assortment of the various developments achieved in the FMCG industry.

2.3.1 Rise of urbanisation

The obvious and most talked about opportunities on the African continent in recent times is the available market opportunity that has emerged from a sustained increase in Africa urbanisation, which is largely youthful, and the rise of an urban middle class often associated with increased consumption and varied tastes (Dakora, Kalitanyi, Mutematemi, Gyogluu, Bagui & Mason, 2016:23). The numbers and projections support such claims. Moreover, there are approximately 900 million people living in Africa with an urbanisation rate of 3.6 per cent. The average GDP is nearing 6 per cent with about seven sub-Saharan economies ranked among the 10 fastest growing economies in the world (Kearney, 2014:2). The combined consumer spending for African households was USD 860 billion dollars in 2008 and is projected to reach USD1.4 trillion in the next 10 years if growth in GDP remains consistent (McKinsey Global Institute, 2010:7). These are positive growth indicators that retail investors to the continent need to be aware of. In addition, it is projected that about 50 per cent of Africans will be living in cities by 2030 with 1.1 billion of working age by 2040. Furthermore, 128 million Africans could have a discretionary income by 2020 (McKinsey Global Institute, 2010:9). People with increasing discretionary incomes, tastes and preferences are every retailer's dream because therein lies a market opportunity for South African retailers whose markets are already mature

and saturated. The challenge associated with this market opportunity in the African context is that it is spread across 53 different nations, with differing consumer tastes, spending power and varying depths in retail structures.

2.3.2 Rise of the middle class

The ability of retailers and FMCG stores within several African countries have been modelled around the emerging middle class with disposable income and a taste for quality products and services. This concept of African markets has been followed and controlled by most players in the industry. A typical example includes McKinsey Global Institute (2012:14) who reveal through several reports that Africa has the fastest-growing population, the world's youngest population (with half labelled as millennials), and more than half of African households are projected to have an above minimum wage income by 2020. For this reason, the FMCG players and its suppliers could benefit from the forecasted growing middle class headed by these households.

Furthermore, disposable income is not increasing among this emerging middle class as fast as economic figures may predict, leading such consumers to be unstable and concerned about the cost of living and expenditure (Games, 2014:34). Similarly, this has resulted in various international players assuming that there is in reality, no middle class in Africa. Another argument, however, is that most formal retail development has been around the main cities and metropolitans (centres of economic activity) in the majority of African countries. The economic activities in cities, therefore, fuel the migration of people from rural to urban centres in search of employment and a better life. This has seen most FMCG retailers in countries such as South Africa enjoying a high volume of sales from urban consumers (Chigumira *et al.*, 2016:7). For this reason, it can be deduced that the newly established urban residents can be categorised under the middle-class bracket due to the mere fact that 60 per cent would have secured structured employment.

2.3.4 Economies of scale

The South African FMCG industry has been coupled by several growth and development factors that have helped the industry to enjoy benefits surrounded mainly with trading in huge volumes. Firstly, favourable trade conditions through the Southern African Development Community (SADC) trade agreements with preferential or zero to none import duties on certain commodities, and the proximity to South Africa, make it easier for South African supermarkets

to operate in the region relative to global chains, which enables bulk discounts including shipping and transportation in the region (Radebe & Sibonelo, 2016:13). A large proportion of imports on supermarket shelves in SADC are indeed from South Africa (Hall, Anseeuw & Paradza, 2015:168). This highlights critical regional dimensions which support a regional market integration approach in understanding certain supply chains in southern Africa.

The biggest retail FMCG outlets in South Africa and the Southern region, Shoprite and Pick n Pay, have also expanded in terms of the volume of sales and profits in South Africa with a Compounded Annual Growth Rate (CAGR) of sales (2010–2017): 10 per cent and 7 per cent, respectively; CAGR of profits: 13 per cent and 3 per cent, respectively and in the rest of Africa (CAGR of sales (2010–2017): 20 per cent and 19 per cent, respectively; CAGR of profits: 16 per cent and 42 per cent, respectively).

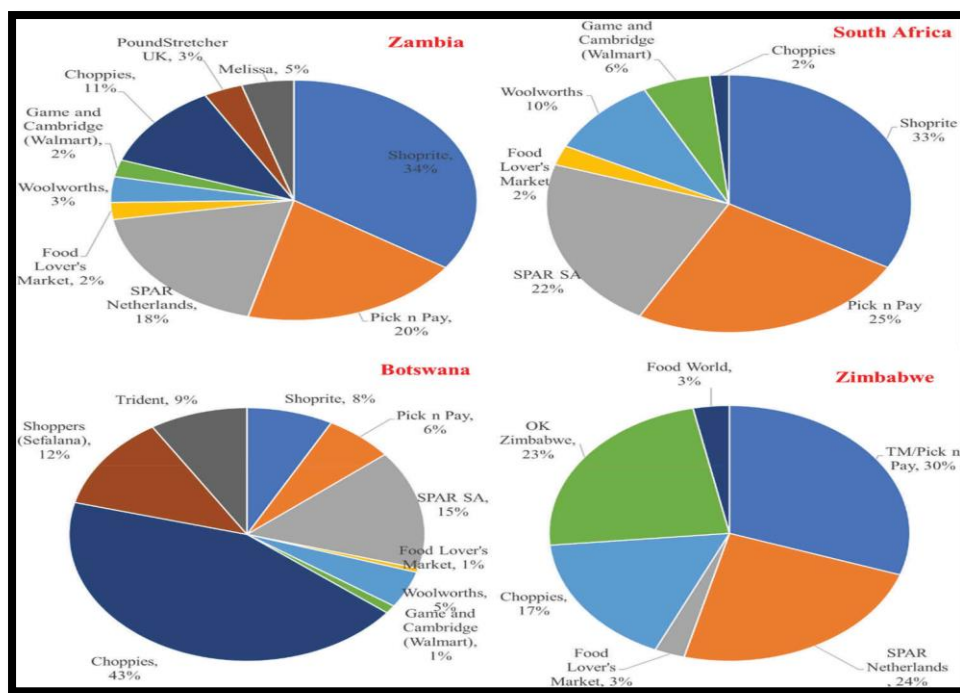


Figure 2.1: Market Share of the FMCG Retail Outlets 2016/2017

Source: Das Nair (2019:34)

Figure 2.1 highlights the market share of FMCG firms that operate in the region of Southern Africa. An illustration in the form of a pie chart provides the CAGR of Zambia, South Africa, Botswana and Zimbabwe respectively. It is evident that Shoprite has gained dominance in all

four countries, which is an indicator of positive production economies. Pick n Pay, however, continues to be a key role player in the four countries due to its excellent marketing strategies. This section analysed the impact of selected factors that have influenced the on-going developments in the FMCG industry in South Africa as well as in the region of Southern Africa. The factors analysed include the rise of urbanisation, economies of scale and the rise of the middle class, which relates to the drivers that increase the production output indicators of the economy of South Africa. The next section discusses the legislative framework of the FMCG industry with special attention directed to South Africa.

2.4 THE LEGISLATIVE FRAMEWORK OF THE FAST-MOVING CONSUMER GOODS INDUSTRY IN SOUTH AFRICA

The laws and regulations governing a particular industry are key with respect to how and when those businesses can operate within the confines of such laws. For this reason, these basic legal requirements are imposed on all FMCG retailers, supermarkets and suppliers with private standards. In South Africa, supermarkets and FMCG retailers insist that suppliers have Hazard Analysis and Critical Control Point (HACCP) accreditation to protect their quality conformance standards and procedures (Das Nair & Chisoro, 2016:25). Furthermore, the HACCP is an internationally recognised system for reducing the risk of safety hazards in food and beverages. This entails that the HACCP System requires that potential hazards are identified and controlled at specific points in the process, including biological, chemical or physical hazards.

In some cases, supermarkets and FMCG retailers in South Africa impose higher accreditation standards than HACCP, such as a Food Safety System Certification (FSSC 22000) which is also an international accreditation (Das Nair & Chisoro, 2016:25). Suppliers are taking it upon themselves, however, to gain higher accreditations in order to have a competitive edge over their rivals. Regardless of accreditation, it has since become a tradition that retailers send their own auditors to audit the supplier at the supplier's cost. Suppliers have done several estimates that HACCP in South Africa can cost as much as USD 5,500 (around ZAR 80,000) and FSSC 22000 can cost up to USD 13,800 (ZAR 200,000) per annum, with additional USD 6,900 (around ZAR 100,000) annual fees for maintenance and renewal of the memberships and licences at the end of a quarter or annually (*ibid*).

Woolworths, as an example, requires that its food suppliers farm sustainably under its 'Farming for the Future' initiative, in addition to other sustainability requirements. Secondly, Shoprite's fresh produce arm, Fresh-mark, has its Good Manufacturing Practices standard for all pack-

house facilities. Furthermore, most supermarkets and FMCG retailers require Halaal and Kosher certifications in South Africa (Abdul Talib, Salleh, Shamsuddin & Ashari, 2011:51). Within the poultry industry, almost all producers are Halaal approved, and abattoirs need to be approved by the state or government departments. Supermarkets also impose private standards on house brands for many of these products (Das Nair, 2019:36). In addition, supermarkets are increasingly requiring barcoding on the packaging of products in the countries assessed.

Most FMCG firms that operate in South Africa have outlets in the region of SADC, which makes the laws and regulations that are passed in these countries important and relevant to South Africa as the host country. In Zambia, the Institute for Policy Analysis and Research, (ZIPAR) highlighted by Ziba and Phiri (2016:63), advocates that possessing a barcode increases the chances of supplying supermarkets. Other countries, such as Zimbabwe, highlight that additional private standards in certain cases include minimum chemical use, organic production systems, minimum pesticides, and use of water-harvested systems. Additionally, farmers in Zimbabwe who supply to supermarkets are also required to be registered with the Agricultural Marketing Authority (AMA). Other global initiatives, such as Global G.A.P. (Good Agricultural Practice), also have implications for local suppliers trying to export to international markets (Das Nair & Chisoro, 2016:25).

2.5 THE SOCIO-ECONOMIC CONTRIBUTIONS OF THE FAST-MOVING CONSUMER GOODS INDUSTRY IN SOUTH AFRICA

The South African FMCG industry has over the past few years developed commercial and transformation programs that have uplifted the structure of the retailing industry in the country. Thus, since democracy, the South African FMCG industry has seen the construction of a new retail scape (Alcock, 2015:12). For instance, large retailers which tended to locate in more suburban settings have also moved to second economy areas, such as townships and rural areas, providing these societies with the opportunity to be exposed to the on-going transformative generational programs in the country (Skinner & Haysom, 2016:9). Several FMCG retail outlets such as Shoprite, Pick n Pay, Spar, Woolworths and Massmart have managed to adopt these socio-economic programs for the betterment of the economy.

2.5.1 Spar's rural hub model

The Spar group has been working on several projects centred at empowering local small farmers who struggle with meeting the required quality, volumes and consistency needed to

supply supermarkets (Das Nair *et al.*, 2018:14). Funding for the initiative was obtained from the Dutch Government, the Masisizana Fund and the Jobs Fund. The programme involved setting up a Fresh Assembly Point (FAP) which was jointly owned by local farmers and Spar as the mentor (Altenburg, Kulke, Hampel-Milagrosa, Peterskovsky & Reeg, 2016:13). The FAP has been assisting farmers in meeting international food safety and quality standards set by Global G.A.P necessary for small suppliers to access larger markets (Hartley & Moorad, 2015:43).

2.5.2 Pick n Pay's Enterprise and Supplier Development Scheme

This programme assists small suppliers to enter the retail market through providing mentorship, guidance and business development support. The programme provides preferential trading terms to small suppliers with a turnover of less than R3 million over a period of 12 months. Such preferential trading terms include a 1 per cent cash settlement, 1.5 per cent advertising, a 5 per cent rebate, and seven days payment terms from the weekly statement (Ncube, Nkhonjera, Paremoer & Zengeni, 2016:42).

2.5.3 Shoprite's community engagement

Shoprite being the industry leader in the FMCG industry, has managed to carry out several economic development programs. Checkers, through Freshmark, its fresh produce distribution arm, embarked on a 3-year programme (2008-2011) to assist 200 small-scale farmers in meeting Freshmark's minimum food safety and quality standards and regulations in South Africa, Swaziland, Namibia and Zambia (Das Nair & Dube, 2015:3). Failure, however, by small scale farmers to meet the global GAP standard and the Freshmark Good Manufacturing Practice standard entailed the exclusion of small scale suppliers from Shoprite's supply chain and distribution networks. The programme included robust and comprehensive training sessions, capacity building, data collection, compliance evaluation, provision of technical support and regular inspections which helped to improve the overall FMCG performance indicators in the southern region.

2.5.4 Massmart

Massmart group has managed to create, as part of the conditions imposed by the Competition Appeal Court in the Walmart/Massmart merger, to set up a Supplier Development Fund (SDF). The initial program comprised of a grant of ZAR 240 million over a period of five years to develop suppliers and infant entrepreneurs in South Africa (Das Nair, 2019:28). The group has

worked with other firms, including Techno-Serve, a non-profit organisation, to up-skill and train farmers to supply fresh produce to its retail outlets, in addition to providing preferential finance terms and inputs. In addition, the retailer invested ZAR 40 million in smallholder farming to support Massmart's move into the fresh produce and grocery market (*ibid*).

Other successful initiatives offered by the Massmart group within the FMCG industry include providing grants to refurbish power plants and factories such as Lethabo Milling, The Noodle Factory, Thistle Bakery and Marble Gold (Ncube *et al.*, 2016:46). Lethabo Milling, a maize milling firm based in the Free State, received financial support of ZAR 1.6 million as part of the initiative to develop its infrastructure. The grant gave room to another agreement with Massmart, which assisted Lethabo further by acquiring a loan from one of South Africa's commercial banks (Ncube *et al.*, 2016:47). The maize milling firm secured a guaranteed route to market through supplying Massmart stores in South Africa and has received additional support for training, waived listing fees, escalated payment periods and assistance with pricing mechanisms and models (Massmart Report, 2015:43).

2.5.5 Woolworths Enterprise Development Project

The Woolworths Enterprise Development Project has impacted mainly on existing vendors to help improve their empowerment credentials and uplift the introduction of small, medium, black-owned and black women-owned suppliers. It provides financial assistance, including shorter payment terms, and guaranteed business as well as a package of support that includes mentorship targeted up-skilling and assistance from experts (Woolworths Holdings Limited, 2010:6). More so, black enterprises can access the programme for three-to five-years, after which they are able to demonstrate that the enterprise has reached a certain level of growth and sustainability.

2.5.6 Regional economic contributions

The SADC region has benefited quite significantly from programmes initiated by the large FMCG firms operating in South Africa. Within the region, two concrete local content initiatives have been implemented by supermarkets in the past several years. A Memorandum of Understanding (MOU) was signed in 2013 between Shoprite and the Zambia Development Agency (Byamugisha, 2013:8). This MOU aimed at promoting small and medium-sized enterprises (SMEs) with support from the Ministry of Commerce, Trade and Industry. In addition, an MOU signed between Shoprite and the Private Enterprise Programme Zambia

under the Department for International Development, also supports SMEs (Byamugisha, 2013:8). Furthermore, Choppies Enterprises Limited, a large retail chain in Botswana, has driven small-scale enterprise development by buying products from small scale farmers in Botswana, a confidence booster in terms of growth for these farmers.

In Zimbabwe, supermarkets such as Choppies and Pick n Pay offer support to small scale businesses and suppliers, but to a limited extent. While such initiatives on the part of the major supermarket chains have yielded some positive results, the lack of sustainability and consistency remains a major drawback in Zimbabwe's FMCG firms (Naude & Chiweshe, 2017:4). Figure 2.2 gives information on the entry of Choppies in three different countries.

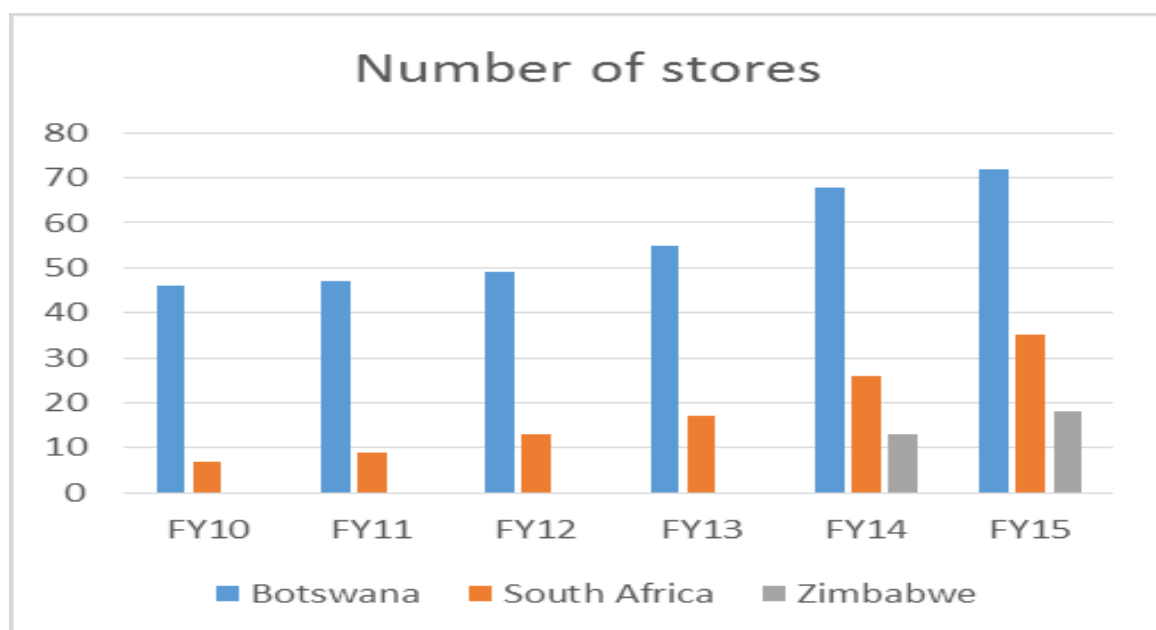


Figure 2.2: Growth of Choppies store numbers and mode of entry

Source: Choppies Enterprises Limited (2015:8)

Figure 2.2 illustrates in the form of a bar chart how Choppies Enterprises Limited has managed to penetrate markets in different countries. The figure indicates that South Africa has experienced a steady increase in the number of outlets that Choppies has established over a period of five years. Botswana still does, however, remain the biggest host country for Choppies Enterprises Limited.

2.6 ACHIEVEMENTS OF THE FMCG INDUSTRY IN SOUTH AFRICA

The FMCG industry within South Africa and the region has managed to achieve several measurable attributes that have contributed to the economy (Department of Economic Development, 2015:5). The main South African FMCG chains have expanded into Africa and in some cases outside the continent, which gives the industry more opportunity to relate to other business players from a global perspective (Das Nair, 2017:38). Shoprite was the first chain to expand out of South Africa to Namibia in 1990 and then Zambia in 1995, with the highest number of stores and operating in 15 countries on the continent (*ibid*). Pick n Pay, the next biggest chain, only opened its first corporate store in Zambia in 2010, fifteen years after Shoprite entered. Its entry into other countries in the region was mainly from 2013 (currently operating in six countries). Several other achievements have been attained by the industry giving room to more firms to operate in the region.

2.6.1 Access to markets

Shoprite, Pick n Pay and Spar, Woolworths, Walmart's Game and Fruit, and Veg City's Food Lovers Market have grown to be the industry leaders of the FMCG industry (UNCTAD, 2013:47). Choppies, a new entrant, is a Botswana-owned supermarket chain that has entered and grown rapidly in the past few years offering services similar to other big retail outlets (Das Nair & Chisoro, 2017:16). A large number of independent retailers backed by buying groups are also active in the supermarket industry, which draws the attention of global market leaders. While several of these are under the same group or name, sponsored by buying groups, they are owned by individuals who are major role players in the retail industry of South Africa. The following table indicates the ownership that different FMCG retailers in South Africa incorporate.

Table 2.2: Number of FMCG retail outlets and ownership in South Africa

Supermarket (Ownership)	Share (based on store numbers)
Shoprite (1284)	31 (%)
Pick n Pay (1280)	30 (%)
SPAR (890)	21 (%)
Woolworths (382)	9 (%)
Game/Walmart (203)	5 (%)

Supermarket (Ownership)	Share (based on store numbers)
Food Lovers' Market (+100)	2 (%)
Choppies (64)	2 (%)
TOTAL	100 (%)

Source: Das Nair and Chisoro (2017:8)

Table 2.2 reveals the FMCG retail outlet indicators in per centages. Shoprite, followed by Pick n Pay, still holds the highest share ownership. Noticeable improvements can be noted, however, from Game and Woolworths, which have five per cent and 21 per cent respectively. Choppies and Food Lovers Market have struggled to increase their share ownership due to the fact that Food Lovers Market have been targeting a niche market whilst Choppies operates mainly in townships and rural areas.

2.6.2 Employment growth

The biggest retail supermarket in the country, Shoprite, has made a distinct contribution towards employment levels in South Africa and the region. This has increased by 81 per cent from 76,318 employees in 2010 to 137,775 in the year 2016 (De Beer, 2013:140). This rapid growth in employment has largely been attributed to the group's organic growth strategy in South Africa and the region. Thus, these attributes have given the retail giant much attention in being a key contributor to the overall employment in the supermarket industry, accounting for approximately 50 per cent of the industry's total employment in South Africa (Sustainalytics, 2012:19).

Spar's employment figures remained stagnant between 2011 and 2013 before rising in 2014, which in turn gave confidence to the group. The increase in employment was a result of the Biodiversity Working Group (BWG) acquisition removing it from the traditional organic creating of employment. However, the employment trends contributed by the groups indicated that individually owned franchises had a marginal contribution towards the department of trade and industry's retail output in 2015. The further increase in 2016 might be due to the acquisition of the SPAR Swaziland business in April 2016.

Woolworths' employment figures have grown by a compound annual growth rate of 15per cent between 2010 and 2016. The group created 26,000 direct jobs in 2013, of which 23,000 are in

South Africa. The acquisition of David Jones in August 2014 added a further 7,200 jobs, bringing total employment to 38,000 jobs throughout the southern hemisphere (Kabukuru, 2014:142). In the year 2015, Woolworths created an additional 2,700 jobs, increasing employment to 41,000 employees. Overall, Woolworths currently contributes 43,000 jobs across 14 countries (Diyan, 2016:23).

Choppies, as a new entrant in the South African market, has proven to be a major game-changer in contributing to the South African employment rate. The group recorded a massive growth rate of 124 per cent from 2,000 employees in 2013 to 4,479 employees in 2016 (Langa, Mondliwa & Nkhonjera, 2018:14). The increase in employment, however, between 2015 and 2016 might be due to the acquisition of 21 stores in Kwazulu Natal and the Eastern Cape and not necessarily organic growth in employment. With this massive penetration in the South African market, the retail supermarket has gained brand recognition through its target market, mainly focusing on the middle class and having its retail outlets in townships (*ibid*).

2.6.3 Financial and investment gains

Shoprite is one of the retail ‘giants’ in the southern region that has managed to maintain consistent profitability growths. The group’s real turnover realised a compound annual growth rate of 6 per cent between 2010 and 2016, which allowed it to absorb several debt problems it faced before its boom (Makhitha, 2017:424). Furthermore, Shoprite’s profit margins significantly improved over the six-year period, with a slight decrease in gross profit margins between 2015 and 2016 due to political instabilities in the country. Overall, Shoprite’s growth in real turnover and profitability is mainly due to effective control of costs in all areas of the business and an efficient distribution model which might be considered one of the best in the retail and business industry on the continent. The following table provides data on the profitability levels of Shoprite.

Table 2.3: Shoprite’s Profitability growth indicators from 2010-2016

	2010	2011	2012	2013	2014	2015	2016
Real turnover (millions)	77320	78155	84767	90279	94722	100361	107535
Gross profit margin	21.23	22.06	22.56	23.19	23.15	24.70	23.11

	2010	2011	2012	2013	2014	2015	2016
(%)							
Net profit margin (%)	3.36	3.47	3.66	3.88	3.65	3.63	3.72
Return on Equity (%)	38.38	35.43	23.63	23.58	21.58	21.52	22.62
Return on Assets (%)	12.60	12.12	9.74	10.74	9.20	9.39	10.03

Source: Das Nair and Chisoro (2019:31)

Table 2.3 indicates the Shoprite profitability trends over a period of six years ranging from 2010 to 2016. On average, the net profit margin grew by four per cent per annum during these six years. Additionally, the high turnover and growth did not translate into high net profit margins which have deteriorated over the same period (Das Nair, 2019:37). However, some internal and external factors such as political environment, information technology systems, new stores and distribution centres between 2010 and 2013 increased expenses, leading to the decline of return on assets per centage.

Woolworths' real turnover grew faster than both Shoprite and Pick n Pay to achieve a compound annual growth rate of 13 per cent between 2010 and 2016. A gross profit margin of 39 per cent revealed year-to-year improvement over the entire period (Das Nair & Dube, 2015:5). Return on equity and assets started deteriorating after 2012, however, while the net profit margin dipped in 2015 before rising again in 2016. The high-profit margins from 2010 to 2014 are attributed to improved sourcing strategy, lower markdowns and good cost control. The group adopted direct sourcing strategies characterised by speed to market and shorter lead times as opposed to using agents and third parties. Furthermore, the acquisition of David Jones stores in 2015 increased sales and profit (Makhitha, 2016:100).

Strong performances from non-foods and groceries have incredibly driven growth in the retail industry. In the groceries section, Woolworths Food continues to differentiate on quality, freshness and innovation. Additionally, the buy-back of franchises in 2012 improved the group's profitability. Woolworths' strategy to remain profitable appears to be hinged on making existing customers spend more at their stores as opposed to targeting new customers

(Strydom, 2012:162). The group plans to do this by expanding their offering and increasing the size of the stores. The table below reveals Woolworths' growth indicators over a period of six years from the year 2010.

Table 2.4: Woolworths' profitability growth indicators from 2010-2016

	2010	2011	2012	2013	2014	2015	2016
Real turnover (millions)	26421	27177	28691	33572	35917	49660	53976
Gross profit margin (%)	33.66	37.23	37.91	38.69	39.22	42.44	45.04
Net profit margin (%)	5.38	6.38	7.16	7.37	7.27	5.51	6.68
Return on Equity (%)	37.04	40.69	45.87	43.74	39.70	21.79	21.88
Return on Assets (%)	13.96	17.99	20.39	21.28	12.39	7.52	8.8

Source: Das Nair and Chisoro (2017:26)

In Table 2.4, it is evident that Choppies, the new player in the retail industry, has managed to aggressively invest in total assets which recorded a compound annual growth rate of 30 per cent per annum between 2013 and 2016. On average, their South African investments constitute 25 per cent of the total corporate assets, although the entrance of the Choppies group introduced an organic and acquisitive growth strategy (Langa *et al.*, 2018:12).

This growth resulted in high levels of capital expenditure in property, plant and equipment and mergers and acquisitions. Since its entry in 2013, Choppies has invested in 64 stores in South Africa. In 2015, the group invested in two distribution centres in Rustenburg. In 2016, Choppies acquired 21 Jwayelani stores in KwaZulu Natal and the Eastern Cape and invested in a third distribution centre based in Durban. During 2016, capital expenditure was directed to infrastructural developments through strategically located distribution centres and related increases in the vehicle fleet.

2.6.4 Technology capabilities

The FMCG industry in South Africa has developed and implemented the internet and rise of mobile telephony which has leveraged several traditional retail barriers. Thus, the internet and mobile telephony offer opportunity in retail to capture the upper and middle-class consumers, which in-turn constitutes the largest number of the industry's customer base (Hall & Cousins, 2018:16). This phenomenon is becoming a reality in the world's most youthful continent, Africa. In addition, it can be estimated that the internet in Africa has a 16 per cent penetration rate. There are 167 million internet users with over 50 per cent being urban residents, about 67 million have smartphones and an estimated 51.6 million Facebook users (McKinsey Global Institute, 2013:19).

These impressive figures offer a unique opportunity not only for online retailing but also product advertising and market testing of various retail products in the FMCG industry. There is also the added benefit of receiving instant feedback on consumer choices and dissatisfaction. According to Paelo and Vilakazi (2017:46) it is estimated that by 2025 e-commerce will account for 10 per cent of retail sales in Africa's largest economies. This appeal is not only for a growing middle class with varied taste and choice but could also leverage supply chain barriers associated with traditional and primitive retail mechanisms. For example, a start-up called moWoza in Mozambique has leveraged some supply chain barriers between wholesalers and informal traders by creating an app that uses smartphones and text messaging to arrange for available taxi drivers to deliver parcels from wholesalers to informal traders (McKinsey Global Institute, 2013:10). The table below indicates figures from different countries and their level of internet penetration.

Table 2.5: Internet penetration rate in Africa

Free WI-FI, high-speed Internet connections and cheaper broadband	
Country	Per centage of Internet penetration
Morocco	51 (%)
Seychelles	43.2 (%)
Egypt	35.6 (%)
Mauritius	35 (%)
Nigeria	28.4 (%)
Kenya	28 (%)

Free WI-FI, high-speed Internet connections and cheaper broadband	
South Africa	17.4 (%)
Africa average	15.6 (%)

Source: Kgomoewana (2014:4)

Table 2.5 indicates the percentage of penetration of the internet in seven African countries. Seychelles and Egypt have the highest number of internet users, which allows more consumers the ability to purchase products from these FMCG retailers online. South Africa still remains the lowest in terms of internet usage due to high levels of poverty which reduces the ability of FMCG retailers to market their products online.

This section provided conclusive information relating to the achievements of the FMCG industry in South Africa. The profitability trends from the big five FMCG firms highlighted that steady growth rates had been recorded over a period of six years and therefore, an increase in the retail production industry was achieved. Investment gains also mean that more stakeholders could continue to play a pivotal role in developing this industry.

2.7 CHALLENGES FACING THE FAST-MOVING CONSUMER GOODS INDUSTRY IN SOUTH AFRICA

This section focuses mainly on the drawbacks, challenges, and implications the FMCG industry in South Africa has been facing over recent years. Special attention has been channelled to aspects comparable to the completion problems in the industry, geographical proximity to consumers, implications of the small to medium size suppliers, as well as the political landscape which continues to wreak havoc in the retail industry of South Africa and the continent as a whole.

2.7.1 Competitive dynamics amongst FMCG retailers

The strategic behaviour of incumbent retail outlets with market power can limit the participation of infant players in the industry. As highlighted by Das Nair and Chisoro (2015:117), a competition concern in several international jurisdictions and a common historical concern in South Africa, is the practice of dominant supermarket chains entering into leases with property owners in shopping malls that contain exclusivity clauses (Kobel, Këllezi & Kilpatrick, 2015:32). This prevents new players from acquiring lucrative retail spaces, limiting their ability to enter or expand their businesses. Attractive store sites are necessary to

build scale if a new entrant with a chain store format is to become an effective competitor who has proved difficult to implement.

Secondly, although the establishment of these exclusive leases might arguably be justified in the affirmative phases of the investment to allow the anchor retailer to recoup its investment, gain footfall, and establish a market, it is difficult to defend how such justifications can be reasonable for such extended periods. This is especially the case if supermarkets can recoup their investments within a few years of establishment (Das Nair & Chisoro, 2015:116). In this instance, it also appears that infant property developers, particularly for shopping centres in remote areas, who do not have bargaining power against major supermarkets, are more inclined to succumb to entering into exclusive leases to kick-start developments for their operations. For this reason, lack of competition has far-reaching consequences in remote areas where pricing is a key driver for low-income consumers.

Furthermore, small, specialised businesses in rural areas, such as grocers, bakers and butchers, are prevented from locating in centres if there is exclusivity. This indicates that the anti-competitive impact of exclusive leases is likely to be more strongly felt in such areas, especially because the nearest alternative shopping mall is further away than in urban areas, increasing transport and search costs for consumers. In addition, some of the South African FMCG retailers appear to have adopted the practice of entering into exclusive leases to the other countries of the region in which they operate.

In Botswana, however, the competition authority reached a settlement with a retailer that required exclusive leases, resulting in the removal of the clause and an undertaking that it would not continue with this practice. In Zambia, some retailers attested to having exclusive leases with property developers and shopping malls operating in the same areas in which their business is conducted. Similarly, other industry experts claimed that these leases no longer exist but did so before the Competition and Consumer Protection Commission discouraged such conduct.

2.7.2 Infantile nature of supply chain networks

Supply chains in Africa's FMCG and retail supermarkets are largely at a primitive level as the structure and strength of most supply chains remain underdeveloped (Games, 2008; Brozin, 2013; De Beer, 2013). For this reason, a factor among many accounts for 10 per cent of formal

trading between different African countries compared to 50 per cent for Asia and 70 per cent for Europe (KPMG, 2014:13). South Africa, on the other hand, has made strides in Africa as one of its top five investors (Grobbelaar, 2008:11; UNCTAD, 2013:41) and until recently (April 2014) remained Africa's largest economy. In her continued conquest of Africa, driven largely by a saturated market at home and by competition, retailing has remained the most visible of South Africa's investments in the rest of the continent (Games, 2008:266).

Expansion into Africa has, however, been hindered by several factors of which the inadequacy and infantile nature of supply chains remains a significant barrier. For this reason, Dakora *et al.* (2016:27) categorised the barriers in the supply chain for expansion of South African retail businesses into:

- Hard barriers that relate to physical infrastructure and utilities
- Soft barriers comprising of the environment of state governments with respect to legislation on imports and exports, regional and international bilateral trade and customs agreements.

2.7.2.1 Hard supply chain barriers

Hard supply chain barriers facing the FMCG industry include electricity generation problems and challenges faced during the utilisation of various transport modes such as air, road, rail and maritime. Roads, railways, ports, airports, and utilities are the main delivery systems for retail FMCG firms to get their goods or merchandise to the different economic hubs, yet the aforementioned physical infrastructure remains inadequate in most African economies.

2.7.2.1.1 Electricity generation problems

With respect to the generation of power (generation and distribution), Africa's biggest infrastructure challenge with over 30 African countries is power outages or interruptions in supply (World Bank, 2010:184). This translates to about half a billion people living in Sub-Saharan Africa without access to reliable electricity, and the rate of electrification is low, particularly in rural areas (KPMG, 2014:14). For FMCG retail outlets in some countries, power outages can occur for large portions of the year, such as an average of 144 days in Burundi, 63 days in Tanzania and 25 days in Senegal (World Bank, 2010:182).

Therefore, for those retail enterprises looking to expand, inadequate supply of electricity suggests huge costs (cost of investing in alternative sources of power), loss of sales and the breakdown of equipment, ultimately affecting the equipment's life span. This not only

increases the operating costs of doing business, thus profit margins but also affects growth in the GDP of countries, which in turn can affect inflation rates and consumer demand, particularly in the retail and supermarket industry.

2.7.2.1.2 Transport: Ports, roads, rail and airports

Of the various transport modes available for use by retail firms for doing business in Africa, ports and roads are the most common as air transport is very costly with rail infrastructure largely under-developed (Games, 2008:269). Despite road infrastructure being the main mode of transport for goods in Africa, the road density is very low with the capacity and condition of many roads for inland distribution very poor (World Bank, 2010:184; UNCTAD, 2013:52). Hence, transaction costs (transport and insurance costs) for doing business and trading in Africa is generally very high (UNCTAD, 2013:52).

2.7.2.2 Soft supply chain barriers

Examples of soft supply chain barriers facing the FMCG industry include the lack of uniformity in regulations and market structures for freight or cargo, conflicted geopolitical climates and dynamics, delays and bottlenecks for refrigerated transport as well as significance to proximity issues.

2.7.2.2.1 Lack of uniformity in regulations and market structures for freight/cargo

Supply chain barriers can be considered the most crucial in any business environment due to its far-reaching impact compared to the physical supply chain barriers, as the ‘soft barriers’ involve the ‘management of movement’ through regulation and market structures for freight (World Bank, 2010:186). In this case, Africa is largely landlocked with as many as 15 African countries having to navigate issues of multiple tariffs and border controls, inadequate logistics as well as corrupt officials at different stages of freight movement crosscutting different modes of transport due to inadequate numbers of similar customs transit systems continent-wide (World Bank, 2010:203).

In addition, the main challenge facing South African retail firms expanding outside of SADC, and to some extent, the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC), is that they face different tariffs and border control issues (UNECA, 2013:16). Not only do several countries have overlapping memberships which complicate rules of entry for foreign products but also rules, certificates, and administrative

competencies across different blocs vary from country to country even within the same economic community (UNECA, 2013:16).

Finally, the multiplicity of African port limitations needs to be considered. Most ports are logistically incompetent or ill-equipped to effectively deal with the tracking and tracing of shipments, resulting in bureaucracy, time loss in the shipment of goods and corruption by customs officials (Games, 2008:270; World Bank, 2010:205). A typical example would be Massmart which takes an average of 30 days to move goods from Durban to Uganda via Mombasa port (Kenya) and can take up to 47-55 days to ship goods straight to Nigeria (Games, 2008:270). The delays at the Apapa commercial port in Nigeria are well known and associated with bribery portrayed as normal business culture (Grobbelaar, 2008:37). Similarly, logistical incompetence can increase total shipping cost (relating to overland transport, port clearance, ocean shipping) of a standard 20-foot container travelling between South Africa and East Africa by up to 14 per cent and total port costs of up to 130 per cent (World Bank, 2010:206).

2.7.2.2.2 Conflicted geopolitical climates and dynamics

The political landscape in many African countries affects the expansion and growth of the FMCG industry in South Africa and the SADC region. In Zimbabwe, for instance, the Indigenisation and Economic Empowerment requirements of 2011 stipulate that 51 per cent of shareholding should be owned by indigenous Zimbabweans. Given this requirement, foreign investors are forced to therefore operate as joint ventures. For example, Pick n Pay operates as a joint venture with a local chain, TM Supermarkets. In contrast, the approach to retail FDI in Zambia has historically been very liberal, with policies actively encouraging the entry and growth of multinationals through tax breaks and import tariff concessions with few localisation requirements (Vilakazi & Paelo, 2017:9). In Botswana, the licensing of traders of goods regulated by the Trade Act of 2003 and the Trade Act Order of 2008 prevents wholesalers from selling directly to end consumers. To remain competitive in the face of expanding supermarkets, wholesalers have had to vertically integrate into retail (Das Nair, 2017:28).

Although all part of the Southern African Development Community, the countries in the region have different policies that protect local manufacturing industries. Some of these restrictions, such as duties and quotas, are put in place following lobbying by powerful interest groups in each country which, in some cases, serve to support only a handful of producers or manufacturers (Das Nair, 2019:38). Protection of national industries through local content requirements and trade restrictions affects the rate at which supermarkets can expand in the

region, especially if local suppliers lack scale and capabilities. Nigeria, Zimbabwe, Botswana and Mozambique have strong protectionist policies and retailers face several import restrictions. In Botswana, Zambia and Zimbabwe, for instance, there were outright bans on imports of poultry, maize meal and cooking oil in 2016/2017, while import duties continue currently to be levied on a range of other products to protect local suppliers (Altenburg *et al.*, 2016:6). This impacts supermarket internationalisation and results in different outcomes in different countries.

2.7.4 Delays and bottlenecks for refrigerated transport

The FMCG industry incorporates cold chain activities for its perishables products to reach its final consumer at the time needed. Certain bottlenecks in transit between countries can affect the cost-base and rates charged by transporters which in-turn increases the carrying costs that FMCG retailers in South Africa incur. Moreover, due to the nature of perishable goods, it remains vital that the transporter gets through the border within a specific time (based on their contract with the client or agent), although this is not always within the control of the transporter (Ncube, Roberts & Vilakazi, 2015:3). Depending on the cause of the delay, demurrage may be charged, and the client or their agent may bear the costs of the delay. A delay of can cost a transport firm US\$400 per day for a truck that is stationary, resulting in further delays (Vilakazi & Paelo, 2017:6).

In addition to border challenges, clearance systems between countries and across the SADC region are not harmonised. For example, although Zimbabwe and Zambia both use the Automated System for Customs Data (ASYCUDA), Zambia apparently uses an older system which does not integrate with the one in Zimbabwe, reducing the processing time of the Temporary Import Permits (TIPs) (Ncube *et al.*, 2015:8). ASYCUDA is an internet-based system through which importers and clearing agents may submit their clearance documents. South Africa, however, applies a different system, Easyclear, which also does not integrate with those in other countries. For this reason, the systems could be integrated to interoperate, which is an area for concern that has resulted in immigration policies of the region to diminish credibility further.

2.7.5 Significance to proximity issues

The FMCG industry has further been affected by factors that influence the spread of supermarkets such as the location and geographic proximity to supply networks, especially in the home country (Dakora *et al.*, 2016:36). For example, Pick n Pay ventured outside Africa

on a large scale through its acquisition of Franklins in Australia. However, after the acquisition materialised, significant investments were undertaken from 2010 to refurbish the Franklin stores. These operations were ultimately sold off to Metcash Limited in 2011 for multiple reasons, including the lack of significant scale needed to compete effectively and being too far away to leverage off its substantial home base.

This section revealed the challenges that FMCG retailers in South Africa face. A detailed analysis of these problems was carefully highlighted giving the salient factors that might have contributed to the problems FMCG firms in South Africa continue to face. The main challenges revolve around supply chain barriers, the political environment as well as competition, all of which continue to affect retailers in South Africa. Stakeholder involvement can be seen as a step towards solving competition problems amongst FMCG retailers in South Africa.

2.8 PREVIOUS SUPPLY CHAIN MANAGEMENT RESEARCH IN THE FAST-MOVING CONSUMER GOODS INDUSTRY IN SOUTH AFRICA

The FMCG industry plays a significant role in contributing to the economy of South Africa. Within South Africa, numerous studies have been conducted that focused on the FMCG industry but only unique studies have managed to focus on the FMCG industry with special attention to SCM processes.

Oke and Long (2007:176) validate the downstream of logistics operations of a South African FMCG producer. The study was conducted to investigate the logistics costs that are involved in the movement of goods between different facilities of a large South African FMCG manufacturer. The results of the study indicate that the products that were transported and their packaging were substantially larger in volume than they were in density. Thus, space utilisation in the trucks was a key factor in determining logistics costs. The study also revealed that the company focused on in this study (FoodMCG) had a supply chain that was not very flexible and therefore not responsive enough to ensure effectiveness in the organisation. Lastly, the analysis reviewed that armed robbery of the trucks and banditry was not a major issue affecting the logistics operations of FoodMCG.

A study by Sanchez-Rodrigues and Potter (2013:351) provides a comparison of FMCG logistics operations between the United Kingdom and South Africa. The main aim of the study was to address the challenges of FMCG logistics operations focusing on the UK and South

Africa. The study established that in South Africa the poor quality of road infrastructure is a major issue for logistics providers. The study further highlights the cost structure, taking into consideration who owns the vehicles within the networks, who pays the transport rate and the factors influencing the rate. A key distinction can be made with the use of subcontractors. In the UK, subcontractors are normally used to provide flexibility, whereas subcontracting does not seem to be a common practice in South Africa. Furthermore, the transport rate is paid by the entity that ships the product in the case of the primary distribution networks assessed and the entity that orders and receives the product in the case of the secondary distribution networks, regardless of whether they are from the UK or South Africa. With the exception of the South African primary distribution network, transport rates are influenced by the number of vehicles used, the vehicle utilisation and delivery time. In the South African primary distribution network, there is a fixed transport rate based on the volume carried in vehicles.

Agigi, Niemann and Kotze (2016:2) stress research on supply chain design approaches for supply chain resilience in the FMCG and grocery manufacturing industries. Respondents were twelve senior supply chain practitioners drawn from twelve firms operating within the FMCG industry of South Africa. The study revealed that all twelve participating firms have experienced labour action in the last five years and are in agreement in classifying the risk as a cyclical risk. Another result of the study is that South African FMCG grocery manufacturers use redundant design strategies involving multi-sourcing and strategic stock. These two strategies enable the firms to maintain continuity of operations. Most of the participating firms also indicated that they have flexible transportation arrangements, such as contracts, with various third-party logistics providers.

Mvubu and Naude (2016:271) conducted a study within South Africa which focused on green SCM constraints in the FMCG industry. In this study, a Durban factory was used to explore the constraints in which green SCM practices could be utilised. The research was also conducted to identify areas where green SCM in the FMCG industry in South Africa can be improved. The study identified seven potential green SCM constraints, namely the lack of knowledge and information sharing between upstream and downstream partners, waste, capacity, pollution, high consumption of resources, product recovery and lack of training and support.

Another study by Naude and Okeke-Uzodike (2018:424) focused on the perceived work-readiness of supply chain university graduates at a large FMCG firm. The main purpose of the study was to determine at which level (undergraduate or postgraduate level) students are better equipped for the work environment in the FMCG industry and to find out whether there is a gap between the knowledge base of graduates gained from the education system and the skills required by the labour market. The results of this study reveal that graduates are work-ready but require additional training and development from their employers. Further, it was established that graduates have the necessary competencies at undergraduate and postgraduate level. Lastly, there is a gap between the knowledge graduates learn at university and the skills required by the employer, such as critical thinking and decision-making skills. Respondents noted that the skills required at UKZN were not sufficient and, in order to bridge this gap, the employer should provide graduates with continuous training.

Buyer-supplier relationships were analysed by Loury-Okoumba and Mafini (2018:850) along with firm performance in the FMCG goods retail industry. In this study, an investigation of the perceived influence of buyer-supplier relationships on firm performance in the FMCG retail industry in South Africa was undertaken. This investigation was conducted in terms of engagement, commitment, trust, communication and cooperation between buyers and suppliers. The study also focused on the strategic effect of buyer-supplier relationships on firm performance with special attention being directed to the South African context regarding their potential contribution to the success of the FMCG retail industry. The results reveal that supplier performance in the FMCG retail industry is dependent on the strength of their relationships with buying organisations, compounded with trust being the most important relationship factor.

2.9 CHAPTER SUMMARY

This chapter reviewed the literature on the FMCG industry in South Africa. The literature first discussed the structure and composition of the FMCG industry. It was revealed that there are various players in this industry in South Africa, and they include companies such as Shoprite, Pick n Pay, Woolworths, Choppies as well as informal retailers. The chapter also presented the recent developments in the FMCG industry in South Africa. It emerged that major developments include the rise in urbanisation, the rise of the middle class and the use of economies of scale by large firms in the industry. Additionally, the chapter focused on the legislative framework relevant to the FMCG industry. The literature identified several

legislative pieces such as HACCP accreditation, FSSC 22000, Halaal and Kosher certifications and GAP. Furthermore, the socio-economic contributions of the FMCG industry were reviewed. Several socio-economic programmes were highlighted including the Spar rural hub model, Pick n Pay's Enterprise and Supplier Development Scheme, and Shoprite's community engagement programme.

The chapter also reviewed the achievements of the FMCG industry in South Africa. Such achievements include better access to markets, employment growth, financial gains and technology capabilities. Furthermore, the literature reviewed the challenges that FMCG firms in South Africa face. It emerged that challenges are centred on competition, the infantile nature of supply chain networks, conflicted political environments, bottlenecks for cold chain activities and proximity issues. Lastly, the chapter highlighted previous SCM research in the FMCG industry in South Africa. This section gave evidence on similar research done in the FMCG industry and the results that were collected from those studies.

CHAPTER THREE

ETHICAL SUPPLY CHAIN MANAGEMENT

3.1 CHAPTER OVERVIEW

This chapter reviews ethical concepts in the field of SCM. The first section discusses the concepts of SCM with special attention being directed to the processes and components that business firms implement in their operations. In addition, literature regarding the public and private industry highlight how organisations comply with SCM practices that govern the two industries, both locally and internationally. Thereafter, the importance of SCM to organisations are indicated, revealing the different players that influence the success of businesses that adopt SCM practices and processes. The next section of the chapter provides literature on ethics that determine SCM processes. The relevance of ethics in SCM is discussed, giving the different areas in which compliance of these ethics have been applied by different organisations. Thereafter, the last section of the chapter highlights the different cases of unethical conduct found in organisations in South Africa.

3.2 CONCEPTUALISATION OF SUPPLY CHAIN MANAGEMENT

This section presents literature on the different elements and components that are present in the field of procurement and SCM. The definitions, its sub-elements and the various organisations, such as the public and private industry, are discussed. The benefits and importance of SCM are also provided.

3.2.1 Definitions of Supply Chain Management

The concept of SCM has been defined differently by various scholars. Coyle, Langley, Novack and Gibson (2013:3) define SCM as a network of combined firms that must share information and co-ordinate processes in order to ensure a smooth, integrated flow of goods, services, information and cash through the pipeline. Several authors describe SCM as the strategic collaboration of networks between the manufacturer and the supplier to ascertain the optimum value of various role players by collaboratively managing inter and intra organisational processes, flows of products and services, information and capital decisions to achieve end user satisfaction (Wolf, 2011:223; Dubey, Gunasekaran, Childe, Papadopoulos & Wamba, 2017:335). Other researchers have defined SCM as the process of identifying, acquiring, accessing and aligning the management of resources and capabilities the organisation needs to

attain its goals and objectives (Cavinato, 2010:12; Golgeci, Karakas & Tatoglu, 2019:174). The common thread binding the above definitions is that SCM involves interconnected organisations that work together toward the distribution of goods and services from the suppliers to the end consumers.

3.2.2 Supply chain business functions

Supply chain business functions, in accordance with Marchesini and Alcantara (2016:7), are the different processes in which businesses provide customers with the expectation of some form of value to be achieved. Lambert, Garcia-Dastugue and Croxton (2008:10) focus on the important roles SCM plays in acquiring the advantages that organisations enjoy by applying the eight key logistics business processes. Therefore, the involvement of the key business processes in organisations directly influences the efficiency and effectiveness of these business operations (Marchesini & Alcantara, 2016:7). The businesses that adopt these business functions are, however, always faced with challenging aspects such as failure to meet customer needs at the lowest possible cost. Figure 3.1, identified by the Global Supply Chain Forum Model, illustrates the eight key business processes that organisations apply to their SCM functions.

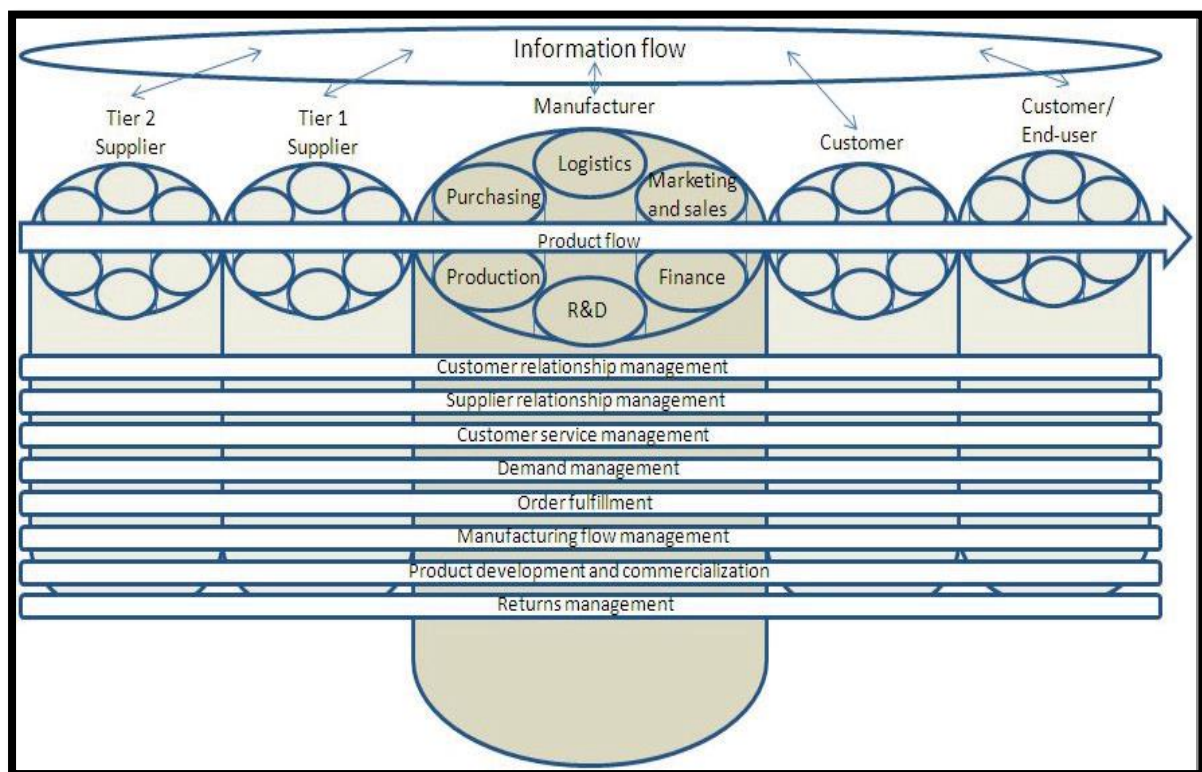


Figure 3.1: Global Supply Chain Forum Model

Source: Naslund and Williamson (2010:16)

Figure 3.1 indicates the different logistics processes and how they link to the SCM networks in organisations. A clear indication of information flow is highlighted in the diagram revealing how first tier and second tier suppliers communicate with the manufacturer, the customer and the end user. Support activities such as marketing and sales, research and development, finance and production are depicted, linking them with product and information flow and the different stages of production. The eight business processes are discussed in depth in Section 3.2.2.1 to Section 3.2.2.8.

3.2.2.1 Customer relationship management

Customer relationship management has been described by Ghazian, Hossaini and Farsijani (2016:43) as the supply chain business function that provides customers with value through achieving both tangible and intangible benefits by creating a link with targeted customers. Furthermore, the relationship that is attained develops a strategic link between those customers and the organisation which leads to that particular firm attaining a competitive advantage in that business environment. The importance of CRM revolves around its ability to analyse data on the historic trends of customers with a firm which helps the company absorb its customer base leading to improved sales growth margins (Soltani, Zareie, Milani & Navimipour, 2018:237). Improved sales growth margins may, as a result, position the organisation's level of competence to be more acceptable to other business firms.

3.2.2.2 Supplier relationship management

Supplier relationship management is a term that has been widely used by scholars to describe elements of SCM. According to Lii and Kuo (2016:144), supplier relationship management (SRM) is a network in which buyers and suppliers jostle for competitive advantage in the business environment, through exhausting the available resources as a result of the formation of organisational consortiums (Tseng, 2014:39). SRM plays an important role in ensuring that the organisation responds to dynamic and unpredictable changes occurring in the business environment (Zhang & Cao, 2018:148). Thus, changing global and regional trends have reduced product life cycles have caused the operational capabilities of supplier relationships to become strategic assets in organisations.

3.2.2.3 Customer service management

The business process relating to customer service management (CSM) is discussed extensively in this sub-section. CSM is defined as the process of aligning supply chain functions with different customer requirements in the delivery of a service through relationship networking of the various parties involved in the process (Scheidta & Chung, 2019:224). CSM is divided into two main categories of customer service behaviour. Firstly, this includes the role prescribed service behaviour which focuses on behaviours expected from employees when addressing customer needs (Teng, 2019:36). Secondly, the extra-role service behaviour which describes the discretion employees induce when serving customers at a workplace (Lyu, Zhu, Zhong & Hu, 2016:71). These behaviours are usually referred to as the service-oriented organisational citizenship behaviours resulting in better customer service level compliance by other businesses.

3.2.2.4 Demand management

Demand management has been highlighted by various authors as a term that is linked to SCM business functions. According to Lysons and Farrington (2012:93), the term demand management addresses the way in which supply chain business practices effectively cater to the requirements of the customer. The process involves the ability of the players involved to distribute goods using multiple roles that are provided by a manufacturer who collects orders from first tier suppliers (Lysons & Farrington, 2012:95). This facilitates the efficient and effective distribution through relevant networks and channels required for the demand management process.

3.2.2.5 Order fulfilment

Order fulfilment is a process that enables the required operations to allow an organisation to meet consumer expectations at the lowest operational cost (Ishfaq & Bajwa, 2019:1028). Thus, the processes enable a flexible flow of materials from the various sections in the manufacturing process with minimum disruptions. The most important components of this process address aspects such as advanced and complex collaborations between organisations and the suppliers that provide support networks as well as the customers (Gibson, Defee, & Ishfaq, 2015:6). Complex collaborations thus entail that there is a need for synchronisation of procedures between organisations and suppliers such as the nature and specifications of goods which are required for correct order fulfilment processes to take place.

3.2.2.6 Manufacturing flow management

The flow of goods and services can be established through relevant channels in the supply chain. According to Szejczewski, Sweeney and Cousens (2016:127) manufacturing flow management is a process in which supply chain activities needed for implementing finished products in a manufacturing plant are carefully directed towards an efficient distribution network through the manufacturing resource planning processes. The process has been of great importance as it promotes other processes, including lean manufacturing and the Just in Time (JIT) process. Fullerton, Kennedy and Widener (2014:416) highlight that manufacturing flow management systems support lean manufacturing through delivering finished products in the right quality and quantity, and in the right place at the right time. In line with this, a consistent flow of goods with the support of lean systems facilitates the efficient implementation processes of an organisation's planning operations.

3.2.2.7 Product development and commercialisation

Product development and commercialisation is the supply chain business function that coordinates suppliers and customers in the development of the product to reduce the throughput time of that product on the market (Cui & Wu, 2016:517). Hence, in collaborative product development, organisations integrate with expert players to access new technologies and knowledge. The success factors of product development and commercialisation include supplier integration practices, long term collaboration as well as Just in Time (JIT) practices (Melander & Lakemond, 2015:117). Therefore, the role of suppliers in this business function revolves around the crafting of new systems for product developers as organisations rely on sound ideas from product developing firms.

3.2.2.8 Returns management

Returns management plays an important role in identifying the different functions of SCM processes. According to Melander and Lakemond (2015:117), the term return management in supply chain is the reverse flow of products and materials from the end user to the point of the manufacturer. The process ensures that organisations work towards eliminating defects and design products that support the conformance in which they should serve. Zhang, Hui and Chen (2013:950) attest that integrating forward logistics operations with reverse logistics processes provide an important indicator for reducing costs and optimal usage of organisational resources. In this way, the overall relationship between the manufacturer and end user of products is closely monitored.

3.2.3 Dominant industries in Supply Chain Management (SCM)

SCM is divided into two industries, namely Public and Private, in which organisations globally operate.

3.2.3.1 Supply Chain Management in the public industry

The concept of SCM in the public industry has been defined by several scholars. Rolfstam (2013:4) defines public SCM as a process which involves the buying, transporting and packaging of specified goods and services by a government or public industry entity. The public industry contributes enormously to SCM practices by addressing critical factors such as the functionality of market related innovations and information related market failures (Georghiou, Edler, Uyarra, & Yeow, 2014:2). Similarly, the information related failures, such as deficiency networks, provide an opportunity for personnel to implement public purchase innovations through asymmetrical SCM practices (Vargo, Koskela-Huotari, Baron, Edvardsson, Reynoso & Colurcio, 2017:262).

In further examining the concept of public SCM, Storsjo and Kachali (2017:344) posit that a huge sum of government expenditure on public procurement and digital transformation in different countries contributes positively towards promoting innovation and value creation. An example of a technology available in SCM aimed at promoting efficient networks in supply chain is Public Procurement 4.0 which enables the use of data based approaches at various stages of the procurement process such as digital tools that ensure transparency on public spending (Kochanova, Hasnain, & Larson, 2017:7). Additionally, several benefits of these digital tools such as cost savings, efficient processes, reductions in administrative bottlenecks, increased transparency, improved innovation and more business opportunities, including entrepreneurship skills, have been achieved in supply chain organisations under state firms (Chibani, Delorme, Dolgui & Pierreval, 2018:5906).

3.2.3.2 Supply Chain Management in the private industry

Private industry SCM can be defined as an industry in which the acquisition of goods and services is performed independently from state or government involvement. The private industry has tackled several aspects in the supply chain industry through providing alternative solutions to address the needs and social challenges state organisations have been struggling to implement (Tsipouri, 2015:2). The critical aspects, such as interactive learning within purchasing teams and knowledge-based perspectives, have played a crucial role in enabling

organisations in the private industry to implement markets that are conducive for global innovation processes.

3.2.4 Importance of Supply Chain Management

The importance of SCM has been aligned with the introduction of systems that enable effectiveness in the flow of goods and information services. One of the systems, such as blockchain, has been introduced in supply chain areas to make the chain more transparent, authentic and trustworthy (Laaper, Fitzgerald, Quasney, Yeh & Basir, 2017:7). The integration of blockchain management into the supply chain creates a more reliable and authentic ecosystem. Furthermore, blockchain provides an untampered and unalterable record of transactions from the manufacturer to the final consumer. Additionally, all product and shipping details are collected through different technologies and validated before becoming a permanent record on the blockchain (Ramamurthy, 2016:3; Zyskind, Nathan & Pentland, 2015:2).

The involvement of blockchain in supply chain improves operations by applying a sound traceability system that aims to minimise the production and distribution of unsafe or bad quality products by improving the labelling and tracking systems (Van Kralingen, 2016:1). As a result, the track and trace systems have evolved from paperwork to the digital edge which improves the throughput times of organisational elements to fast track supply chain procedures such as electronic data interchange (EDI).

Organisations have benefited from another system that has been implemented by supply chain processes. Lean management is one of the systems that have been implemented in SCM processes which aims at achieving significant improvements in resource productivity, reducing the amount of energy, water, raw materials, and non-product output associated with production processes and minimising the ecological impact of industrial activity (Singh & Pandey, 2015:13). Additionally, lean implementation helps SCM by achieving significant improvements in resource productivity, reducing the amount of energy, water, raw materials, and non-product output associated with production processes and minimising the ecological impact of industrial activity (Ruiz-Benitez, Lopez & Real, 2018:191). According to Shah and Ward (2007:34), lean management is a configuration of practices as it ascertains relationships among the elements of lean. Practices of lean production vary from one firm or country to another, however, most focus on minimisation and eventual elimination of non-value adding

activities (Agus & Hajinoor, 2012:93). Thus, lean production can be considered to be one of the most important procedures when analysing the importance of SCM due to its waste minimisation abilities.

This section highlighted SCM principles and components that businesses apply in their daily routine operations. The section also indicated the importance of supply chain activities to organisations with special attention being directed to developing concepts such as blockchain. As a result, these new concepts provide organisations with sound and credible technological ideas to absorb in the new industrial era. The next section conceptualises ethics in business.

3.3 BUSINESS ETHICS

Business ethics is a science aimed at improving the human condition through research on ethical behaviour related to the corporate world (Collins, 2000:16). Trevino and Nelson (2014:20) define ethical behaviour in business as the conduct consistent with the principles, norms and standards of business practices that have been agreed upon by society. Ethics in business is a term that can be thought of as developmental, whereas morality is judgemental (Fisher & Lovell, 2012:30). This distinction can be argued by Green Hotels Association (2015:1) who describe morality as a term that involves a list of rules, codes of practice and restrictions on actions that might harm others. Ethics on the other hand are virtues of desirable values that help people to do good actions. Ethics is often defined as ‘doing good’ and interrelated with corporate social responsibility (CSR) (Schwartz & Carroll, 2008:23). Consequently, ethics and moral behaviour are terms that can be used interchangeably when dealing with organisational protocols and how employees should adhere to firm values and principles.

A framework depicting the various levels being practised to enhance ethics in business are highlighted in Figure 3.2. This shows how each level of compliance relates to business processes and functions. Thereafter, the link between ethical compliance and public awareness is also presented and the characteristics of both components are highlighted.

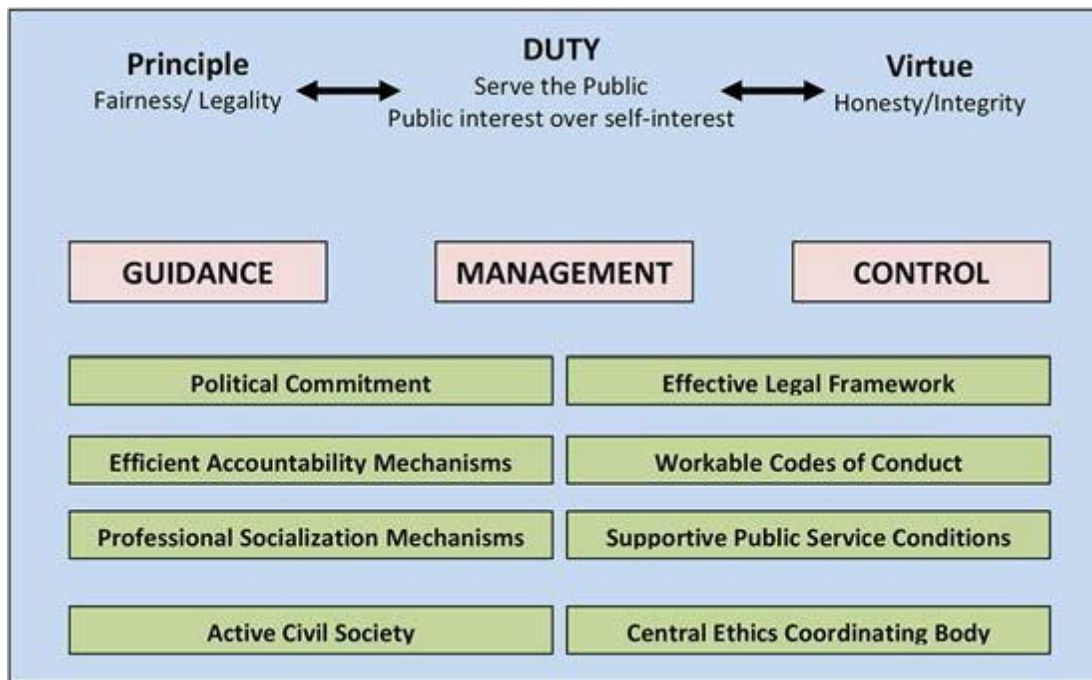


Figure 3.2: Business ethics framework

Source: OECD (2000:4)

Figure 3.2 highlights the three main drivers of effective business ethics conduct in organisations. Under each driver, sub-elements have been highlighted revealing their relevance in organisations. The first driver is guidance and explores the commitment of employees to uphold ethics, the level of professionalism by employees and how active they are in society to implement ethical conduct. Management is the second driver and analyses the effectiveness of the legal framework in organisations, controls the different bodies that co-ordinate a centralised ethical framework and assesses the public service conditions. The last driver, which is control, establishes the level of compliance in all eight elements and indicates how effective they are in achieving sustainable ethical practices in business.

3.3.1 Business ethics functions

Business firms have over the past years developed models that entail the use of social licenses to operate, such as societal legitimacy (Yates & Horvath, 2013:2). Hirschauer, Jantsch and Musshoff (2018:44) assert that a social license requires that a business earns trust and considers the legitimate interests of all its stakeholders. Consequently, CSR is increasingly seen as a crucial building block for obtaining socially desirable outcomes and a fair distribution of valuable outcomes among all legitimate stakeholders of the firm (Hirschauer *et al.*, 2018:46). According to Brunk (2012:553), consumer research blends business ethics and CSR together,

whereas consumer ethics aligns the measure of personal ethical perspectives on firm behaviour related to both business ethics and CSR. Business ethics and social responsibility can be evaluated from both a normative and descriptive perspective (Ferrell, Crittenden, Ferrell & Crittenden, 2013:52).

Business ethics from a normative perspective describes the principles, values and norms for organisational mandates and decision-making processes (Ferrell, Harrison, Ferrell & Hair, 2019:492). Moreover, analysing from a descriptive perspective, business ethics in an organisation refers to codes, standards of conduct and compliance systems and typically relates to decisions that can be judged right or wrong by customers (Ferrell *et al.*, 2013:53). Therefore, ethical decision-making is typically associated with internal organisational decisions by individuals or social units on appropriate conduct. Consequently, the decisions can impact internal and external stakeholders (Ferrell *et al.*, 2019:494). Weller (2017:20) ascertains that managers believe CSR is a part of business ethics and do not concur to scholars that highlight business ethics and CSR as interchangeable. Goby and Nickerson (2012:34) enumerate business ethics into six main categories, as discussed from Section 3.3.1.1 to Section 3.3.1.6.

3.3.1.1 Ethical decision making

The emergence of ethical decision making has contributed to enterprises becoming considerate of their management decisions. Hence, organisations are striving to be ethical in all their decision making (Lee, 2012:2; Soltani *et al.*, 2018:237). This is because ethical decisions are predominantly fair and non-discriminatory which enhances an organisations confidence when applying their policy implementation strategies. Within compliance adherence, these decision making practices do not discriminate personnel based on their gender, race, origin, social status or ethnicity (Ferrell *et al.*, 2019:494). Similarly, Hosmer (2008:17) defines ethical decision-making as any decision that may benefit or harm others, or that exercises the rights of some whilst denying the rights of others. Although ethical decision-making is a complicated and sophisticated psychological process, enterprises adhere mainly to maintain a good relationship with all their stakeholders (Ho, 2012:73). Thus, decision making involving ethics has improved organisational conflicts such as gender discrimination which is a practice that limits certain job descriptions according to a person's gender. A typical example includes a forklift driver job being restricted to male applicants only.

Decision makers are therefore guided by ethical principles and values when making decisions (D'Anjou, 2011:46). Furthermore, ethical decision making models have been developed to assist decision makers to make ethical decisions which enhance pro-active ethical perceptions within an industry. Although some of these models are behavioural-based, organisations consider ethical theories or principles (Hayibor & Wasieleski, 2009:7; Chibani *et al.*, 2018:5907). Moreover, these enterprises are compiling policies that encourage management to make ethical decisions (Ruighaver, Maynard & Warren, 2010:733). Ruighaver *et al.* (2010:734) also state that policies which encourage ethical decision making create a culture of ethics within the enterprise. In line with this, firms that involve management and subordinates in ethical decision making reveal sound ethical compliance due to decentralisation processes being implemented.

3.3.1.2 Corporate Social Responsibility

The second business ethics category is examined extensively in this section. Goel and Ramanatan (2014:50) state that Corporate Social Responsibility (CSR) functions on the principle that organisations are obliged to meet their roles and responsibilities to both their shareholders and stakeholders. CSR as a functional tool in business ethics ascertains the purpose of making a profit for shareholders giving room for enterprises who aspire to be socially responsible towards the community they operate in. This requires the enterprises to relate with communities, other enterprises, government, customers, suppliers and non-governmental organisations (NGOs) (Shamir & Garg, 2010:353; Gibson *et al.*, 2015:7). Other scholars, such as Maignan and Ferrell (2004:5), argue that enterprises have a moral and social responsibility towards all their stakeholders. Consequently, organisational stakeholders play a pivotal role in ensuring that CSR obtains recognition through primary organisational tools or processes.

CSR involves ensuring business sustainability through sound business practices that promote accountability and transparency (Jo & Harjoto, 2011:355). CSR considers that enterprises are influenced by different stakeholders and convert these influences into objectives and policies (Vilanova, Lozano & Arenas, 2009:58; Gibson *et al.*, 2015:9). Therefore, enterprises must create a good relationship with and engage with all stakeholders to convince them to support the enterprise goals and strategies (Lindgreen & Swaen, 2010:15; Musshoff, 2018:44). Galbreath (2010:512) argues that CSR is multifunctional in nature and requires inputs from all business functions. CSR has been associated with corporate governance, business ethics,

corporate citizenship and sustainable development (Bolton, Kim & O’Gorman, 2011:63; Nelson, 2014:20). Hence, these sub-elements, such as business ethics and sustainable development, are indicators which organisations should incorporate to ensure the implementation of sound performance measures.

3.3.1.3 Ethical leadership

Ethical leadership has been crucial in the identification of a leader’s credibility and his/her potential to exert meaningful influence (Den Hartog & Belschak, 2012:32). More so, the credibility of ethical leaders is likely to have an impact on trust between a leader and followers (Eisenbeiss & Giessber, 2012:14). This implies that in ethical leadership, firms prefer employees who are ethical leaders to avoid scandals associated with unethical behaviours (Brown *et al.*, 2005:118). According to Brown and Trevino (2006:597), ethical leaders are honest and trustworthy. Moreover, they are fair and principled decision makers and care about people and the broader society. Kalshoven, Den Hartog and De Hoogh (2013:165) stress that ethical leaders are role models due to their integrity, ethical standards and fairness (Brown *et al.*, 2005; Kalshoven *et al.*, 2013:166). According to several authors (Brown *et al.*, 2005:119; Brown & Mitchell, 2010:15), ethical leadership captures the dimensions of the leader both as a moral person and as a moral manager. In line with this, leadership does not limit moral personnel or the managers to advise on decisions that benefit the organisation such as suggesting new principles and policies that would assist the organisation’s business functions.

In determining other factors that relate to ethical leadership, Piccolo, Greenbaum, Den Hartog and Folger (2010:259) advocate that ethical leadership increases follower loyalty. According to several authors (Trevino & Brown, 2007:102; Kalshoven *et al.*, 2013:167), ethical leaders are expected to set ethical standards and expectations and communicate these standards and expectations to their followers. Ethical leaders use rewards, punishment, communication and modelling to influence the ethical behaviour of their followers (Brown & Trevino, 2006:596). Furthermore, ethical leadership elevates an ethical climate within an enterprise (Brown & Mitchell, 2010:17; Ferrell *et al.*, 2019:495). According to Piccolo *et al.* (2010:260), ethical leadership has an effect on the behaviour and performance of employees. Under these circumstances, managers need to identify the moral perspective of employees and try to employ strategies, such as seminars, which assist employees in developing those moral ethics that they lack.

Leaders embracing the moral person perspective value integrity and are trustworthy, caring, honest and fair. The moral manager or 'ethical leadership' facet proactively manages morality, and it refers to a leader's efforts to influence subordinates and guide their ethical behaviour, such as communicating ethical standards and disciplining employees who demonstrate unethical behaviours. These behaviours further include making fair and principled decisions, acting as role models for ethical conduct and recognising and rewarding ethical behaviour. Mayer *et al.* (2012:89) consider the moral manager facet as most unique to the ethical leadership construct. As a result, the role of managers in ethical leadership can go beyond behavioural aspects since subordinates are limited when it comes to giving their own opinions on a certain subject matter.

3.3.1.4 Corporate governance

Corporates have attained a lot of attention due to the rapid and diverse ways in which organisations are conducting their business activities. Moreover, the rapid slumps of world financial institutions is a result of a lack of corporate governance practices (Haspeslagh, 2010:131; Lyu *et al.*, 2016:73). Corporate governance is defined as the way a corporation is directed, administered or controlled, including relationships amongst many stakeholders involved (i.e. shareholders, management, employees, customers, creditors, suppliers, regulators, the community at large) (Isaev, 2010:4). Ostrosky, Leinicke, Digenan and Rexroad (2009:36) reveal that the tone of top management, codes of conduct, ethics programmes and fraud prevention efforts are critical components in identifying organisations that endorse corporate governance in their business practices. As a result, these critical components should be developed by other stakeholders to ensure sound corporate governance policies in organisations.

Poor corporate governance practices have had a detrimental effect on many public institutions across the globe (Herath & Freeman, 2012:89). Senior personnel including managers and executives have been arrested, and certain auditing firms have had their reputation destroyed and threatened many economies and state institutions, and above all jeopardised the public trust. Similarly, the main aim of corporate governance is to ensure return on their investment, profit increase and that business meet its social responsibilities (Letza, Kirkbride, Sun & Smallman, 2008:19). Organisations that aspire to achieve global recognition embrace corporate governance (West, 2009:10). Corporate governance entails morality and intrinsic values all over the world (West, 2009:12). Furthermore, corporate governance describes practices that

are both ethical and legal (Letza *et al.*, 2008:20; Herath & Freeman, 2012:89). Hence, having senior executives determine corporate governance policies has resulted in poor practices that have led to some managers being charged with criminal offences.

3.3.1.5 Sustainable development

In the modern world, organisations are now adopting new ideas and techniques within their operations with the main objective being to remain profitable against stiff competition. Hence, being profitable involves the ability of firms to be able to meet customer needs. However, the conditions to have an attentive structure in the development process should involve people's needs. (Hall, Daneke & Lenox, 2010:439). This is because human actions always produce desirable and undesirable changes (Mogensena & Schnack, 2010:59; Lyu *et al.*, 2016:74). Organisations must strive to avoid undesirable changes such as the unavailability of resources. Furthermore, social and environmental objectives must be placed on equal footing with economic objectives. More so, there is a need for firms to adopt renewable resources wherever possible, and spare non-renewable resources to extend their availability for generations to come.

Organisations need to develop themselves in a sustainable way. According to Ciegis, Ramanauskiene and Martinkus (2009:34), sustainable development involves three equivalent components: environmental, economic, and social development, as well as three dimensions of wellbeing, namely economic, ecological, and social. Put differently, sustainable development suggests a confluence of diverse social, environmental and economic objectives and raises a number of important questions (Hall *et al.*, 2010:440). Sustainable development is no longer an option, but a key guiding principle for public and private enterprises (Too & Earl, 2010:53; Chang, 2011:2030). Thus, sustainable development can nurture the equivalent components by enabling the operation of its dimensions through economic and social impact activities.

3.3.1.6 Information ethics

The rapid change in information technology (IT) has a significant influence on economy, politics, culture, lifestyle, norms and human behaviour (Chang, 2011:2029). Similarly, massive changes in the IT spectrum provides a vast convenience for individuals, whilst also creating new ethical issues (Ocholla, Onyancha & Britz, 2010:494). This is because human emotions can lead to unethical behaviours that can cost enterprises dearly (Chang, 2011:2029). Organisations need to be guided by ethical principles and values, which should inform them as

to who should use information, what information should be used, where information should be used, and when information should be used (Britz & Buchanan, 2009:4; Dadzie, 2011:65). For this reason, ethical principles and values should be formed from the lower levels of decision making to ensure that the information used applies in all departments and industries where the organisation operates.

Several authors have described unethical behaviours in various ways. According to Chang (2011:2029), the 2008 global financial crisis was caused by unethical behaviours. Enterprises must value information ethics (IE) in order to reap the full benefits of IT. IE provides IT professionals with points of reference when dealing with ethical issues (Chang, 2011:2029). Moreover, information ethics is aimed at developing and sustaining an information society (Dadzie, 2011:65). Therefore, it would be disastrous for any enterprise to operate whilst ignoring IE (Martinsons & Ma, 2009:817). In view of this, organisations have to put in place facilities that monitor IE, such as random audits, which limit any chance of incompetence to arise.

3.3.2 Applicability of business ethics within organisations

Business ethics are believed to be a set of moral beliefs and conducts that discourage acts of self-gain and encourage honest and modest ways of generating business income (Ghosh *et al.*, 2011:73). Business ethics play a vital role in engaging business practices as it serves as the backbone of organisational principles. More so, organisations are expected to provide services and products and acquire sales growth through the business' sales and operations (Kalshoven *et al.*, 2011:167). However, with an organisation's aim to acquire profits and the return of investment, it remains crucial to the firm that the strategies they employ in their processes are justified by moral and ethical standards for their investors (Lewis, 2002:13; Kalshoven *et al.*, 2011:167). Furthermore, these measures are not only applicable to their customers, but also to their employees, the community they operate in, the state and the media (Elango *et al.*, 2010:544; Byoung-Chun & Hyunjeong, 2016:59). As a result, the applicability of these measures on several stakeholders, such as customers and the community, accelerate organisational return on investment due to increased process involvement.

It is common in today's business culture to disregard ethics and corporate social responsibilities due to an organisations failure to increase sales growth and revenue (Ghosh *et al.*, 2011:73). Marketing campaigns and sales advertisements are part of the main activities organisations

have been implementing in their operations to match ethical guidelines meant to ensure the safety of the stakeholders, without conceding the effectiveness of the organisation (Ferrell & Ferrell, 2011:210). Therefore, having knowledge of and identifying the employees' common values and priorities is an element of the present culture incorporated by organisations (Koonmee, 2010:21). Thus, organisational policies recognising current work cultures benefits employees' work ethics through effective communication skills.

In today's world of business, certain dynamics that suit the needs of the organisation have taken place rapidly, both in the internal and external operations (Maignan, Gonzalez-Padron, Hult, and Ferrell, 2011:314). Several authors (Crea, 2002:34; Zhang & Cao, 2018:149) indicate that many organisations which operate successfully in certain environments adopt the philosophy of looking after the interests of both itself and other external parties, such as the society in which it operates in. Additionally, the organisation has the responsibility of taking care of its customers, middlemen and employees. Furthermore, the production of goods and services can be conducted in an environmentally friendly location which helps the organisation attain lean practices (Maignan *et al.*, 2011:315). In view of this, attaining lean practices helps organisations obtain global environmentally friendly recognitions which in-turn can be beneficial due to the incentives that arise from this recognition status.

Upon further determination of how applicable business ethics are to companies, Ferrell (2011:34) espouses that attaining maximum business profits can also result in the betterment of economic activities as this would revert the activities from being solely dependent on former suppliers for their success in the long-run. For this reason, firms that maximise profits should be transparent, and not to indulge in any kind of fraud or corrupt activities in achieving these profits (Ferrell & Ferrell, 2011; Maignan *et al.*, 2011:315). A growing trend in the present corporate industry is that emerging firms and organisations violate moral and ethical standards in their pursuit to achieve corporate financial gains (Harris, Sapienza & Bowie, 2009:45). Such actions by organisations to behave this way could lead to firm losses and compromised the firm's reputation (Ethisphere, 2010:5). Thus, firm losses due to the failure of social responsibilities can be resolved by employees participating in the amendments of moral ethical standards. This ensures transparency and fulfilment of organisational duties by all parties involved.

3.3.2.1 Employee Relations

Human Resources prescribes employee involvement whenever a vacancy arises which matches the specifications of the required task to be completed at a particular place (Tseng & Fan, 2011:326). Although employees generally are not comfortable with sudden job rotations, other employees see it as an opportunity to gain more work experience (Trevino *et al.*, 2004:70). Despite human social systems working perfectly, an ethical society would also want to minimise the abuses of the imperfect economic system selected, whilst still attempting to maintain the creativity, efficiency and effectiveness of that system (Maignan *et al.*, 2011:315). Hence, society should also expect organisations operating in that system to behave in a manner that minimises the abuse of power (Ethisphere, 2010:6).

3.3.2.2 Firm values

Firm values are the rules that guide individuals in deciding what is morally right or wrong (Tseng & Fan, 2011:337). Howard (2011:234) believes that organisations are responsible for not providing adequate information to their clients and customers. For this reason, firms often look at their own interests despite it bringing harm to their organisation (Maignan *et al.*, 2011:316; Tseng & Fan, 2011:337). Furthermore, large organisations need to exercise proper business ethics and give satisfactory and honest service to their customers, which should result in employee loyalty and trust (McMurrian & Matulich, 2006:11; Zhang & Cao, 2018:149). It is of paramount importance for goal competitiveness in conducting business operations, and therefore ethics and guidelines must be followed and adhered to. More so, it is often seen that different points of view are not absolute but only relative when it comes to their usage in terms of morality and ethics (Mish & Scammon, 2010:13; Boddy, 2011:367).

This section discussed business ethics and the processes and functions involved. The functions of business ethics were carefully explained, taking into account the sub-categories in which these functions are presented in organisations. This section also provided literature on how organisations apply business ethics with special attention being directed to employee relations and firm values of organisations. The information on business ethics also discussed the different stakeholders involved and how they adhere to the different codes of conduct. The next section analyses literature on ethical SCM and its relevance to business ethics.

3.4 SUPPLY CHAIN MANAGEMENT ETHICS

SCM ethics is of crucial importance in today's business operations and practices globally. According to Wisner *et al.* (2012:5), ethical procurement refers to the acquisition of goods and services from firms that protect or consider the weak in society such as SMEs and retail organisations. Ethics between partner firms has been a critical issue in SCM due to the fact that organisations have been attempting to balance the rights and duties of stakeholders including society, employees, customers, investors and suppliers (Boone & Kurtz, 2010:15). State institutions have highlighted several strategies and policies intended to identify and resolve conflicts among supply chain partners and stakeholders (Byoung-Chun & Hyunjeong, 2016:59). Unethical business practices still, however, occur in many buyer-seller relationships, especially between large firms in the retail and FMCG industries.

The importance of industry players to adhere to SCM ethics lies on having ethical standards for procurement requirements such as supplier selection along with ethical decision making, the rights and responsibilities of purchasing managers, relationships with suppliers, social values and sustainability in the management of suppliers (Burt *et al.*, 2010:60). For this reason, Johnson, Leenders and Flynn (2011:59) posit that the importance of ethical behaviour and decision making to enhance trust in buyer-supplier relationships emanates from co-ordinated procurement processes and procedures. This forces managers' ethical judgments to rely on relativism by ensuring that buyer-supplier relationships do not violate ethical standards but instead share tacit agreements of sound ethical behaviour among the members involved (Johnson *et al.*, 2011:61). However, organisations have noted that some supply chain managers are still subject to inter-channel conflicts and opportunism.

Opportunism occurs when supply chain personnel attempt to take advantage of a relationship in order to pursue their own interests. More so, perceptions of fairness and unfairness between supply chain members appear to affect the use of opportunism (Paswan, 2009:312). Additionally, with multiple stakeholders involved in supply chains, it is inevitable that conflict could arise between different members (Ferrell, Rogers, Ferrell & Sawayda, 2013:268). Mooi and Frambach (2009:292) ascertain that greater supplier power tends to reduce conflict between suppliers and stakeholders, whilst greater stakeholder power tends to increase conflict between buyers and sellers. Nevertheless, although conflict is not always detrimental, it can become an ethical issue in SCM when not addressed correctly.

3.4.1 Role of business ethics in Supply Chain Management

Ethics, Values and Principles (EVP) is a crucial component that businesses and corporates apply to their SCM processes. Wood (2002:9) developed a criteria in which EVP components were highlighted in relation to business ethics. The criteria consist of four levels of commitment to EVP, namely: relationship, channel, competition and environmental orientations (Svensson & Baath, 2008:400). The partnership criteria pressures the importance of organisations' commitment to EVP. In agreement with Wood (2002:9), Svensson and Baath (2008:400) also employed the same criteria to classify SCM ethics and orientation into four main categories, namely relationship, channel, competition and environmental orientations. These are discussed from Section 3.4.1.1 to Section 3.4.1.4.

3.4.1.1 Relationship orientation

Relationship orientation has been acknowledged as being central in building long-lasting relationships and in achieving valuable outcomes (Sharma, Young & Wilkinson, 2015:47). Cater and Zabkar (2009:786) stress that orientation nurtures loyalty which supports quality and supplier relationship maintenance. Supplier relationship commitment creates confidence that parties should not exploit the other's vulnerability, and thus builds ethics and norms that serve to transform buyers and suppliers from self-centred partners into members of a relationship with shared values and a sense of the common good (Villena, Revilla & Choi, 2011:563). In this view, relationship commitment focuses on long-term and partnership-based relationships that develop trust, respect, friendship and reciprocity over time, and facilitate cooperative behaviour whilst reducing transaction costs. Hence, Cater and Zabkar (2009:786) highlight that this amounts to one of the most limited approaches of SCM-ethics. Furthermore, constraints of these vertical unions on relationship orientation extends to buyer/seller relationships. The corporate orientation of SCM-ethics at this level poses a risk as it only depends on the atomistic features of EVP in a minor part of supply chains and business operations (Svensson & Baath, 2008:401; Sharma *et al.*, 2015:48).

3.4.1.2 Channel orientation

Channel orientation is defined as the systematic recognition by an organisation's strategic and tactical activities involved in managing various flows in the supply chain Cater & Zabkar, 2009:786). This entails a firm's ability to have supply chain orientation in its processes, and that employees are able to manage the upstream and downstream flows of products, services, finances and information across their suppliers and customers (Esper, Clifford Dee & Menzter,

2010:163). The authors further divided channel orientation into two dimensions, namely strategic and structural orientation. According to Golgeci *et al.* (2018:176) the difference between these two dimensions is that strategic orientation has implied characteristics whilst structural characteristics are formal.

3.4.1.3 Competition orientation

Competition orientation is defined as the ability to understand the competitor's short term strengths and weaknesses along with its long term capabilities and strategies, in order to generate competitive advantage in the organisation (Zhou *et al.*, 2009:74). According to Marjanova, Sofijanov, Davcev and Temjanovski (2015:654) competitor orientation highlights the significance of considerate competitors and their actions. Thus, SCM firms are often in a dangerous position because they concentrate on short term and personal issues and are not appropriately focused on competitors (Marjanova *et al.*, 2015:655).

3.4.1.4 Environmental orientation

Environmental orientation is an important aspect of environmentalism that reflects the degree to which the firm is involved in overcoming environmental degradation (Banerjee, 2002). Wong, Wong and Boonitt (2015:44) indicate that environmental orientation refers to an organisation's responsibility towards the environment. Thus, environmental orientation plays a big role in the importance of recognising the impact a firm has on the environment, and the need to minimise this impact. Various measures, therefore, should be put in place by organisations to reduce the harmful environmental impact of its daily activities (Wu, Ding & Chen, 2012:620).

3.4.3 Unethical Supply Chain Management practices

There are various definitions of unethical SCM practices. According to Van Rooyen, (2008:128) unethical conduct may be defined as fraud committed by an organisation that makes a misrepresentation to another entity causing false impressions and personnel involved to act to his/her own detriment. Van Rooyen (2008:128) further elaborates that a misrepresentation can be made by conduct alone or by words and conduct. Joubert (2013:179) denotes that a misrepresentation can be made verbally, in writing, by action or conduct. Vona (2011:179) reveals that supply chain fraud refers to the corrupting of the tender phase of the procurement cycle to ensure that a specific supplier is awarded the contract. Joubert (2013:179) denotes that

supply chain fraud has been described as the least visible but yet most common and costly category of fraud in industries.

Ethical malpractices have jostled lean procurement practices in the business environment. According to Woods and Mantzaris (2012:123) corrupt practices that are specific to procurement and supply chain transactions include bribery, extortion, embezzlement, nepotism, patronage systems, fraud, kickback schemes, false invoices, fronting in large organisations, inflated prices, ghost suppliers on the preferred suppliers' list, and facilitation fees required by officials responsible for processes. Gee (2015:245) pinpoints that opportunities arise from intermediate parties' identification of key players and decision makers in the purchasing process or structures (OECD, 2009:21; Woods & Mantzaris, 2012:127). These opportunities for corruption usually arise where the existing control systems are weak or malfunction, such as a sanction regime which is not strong enough or where the officials concerned have sufficient authority or discretion to make decisions which evade the rules (Cascarino, 2013:188). Some of the examples of unethical SCM practices are explained from Section 3.4.3.1 to Section 3.4.3.4.

3.4.3.1 Conflict of interest

A potential conflict of interest occurs when employees, often holding a position of authority and trust, have a personal interest that is in conflict with their official responsibilities (OECD, 2009:23). In addition to official responsibilities, such employees may take decisions in their job that give preference to a firm in exchange for personal benefit to themselves or their families. A typical example is an employee who is responsible for contract escalation approves the contract award to an unqualified firm in exchange for gifts from the firm or future employment, usually with very attractive remuneration by the firm for themselves or their families (Woods & Mantzaris, 2012:127). However, such conflicts of interest can also be committed by the employee alone without the involvement of suppliers.

An employee may act in isolation when he/she awards a contract to an unqualified firm where the employee holds a significant amount of shares in that firm or where the employee's family member is an employee of that firm (Woods & Mantzaris, 2012:127). Therefore, awarding the contract to the firm may ensure that the firm survives, which could indirectly secure the employment of the employee's family member with that firm.

3.4.3.2 Bid rigging

Bid rigging as a situation whereby competing firms collude so that a competing firm can secure a contract for goods or services at a pre-agreed price (Imhof & Huber, 2019:278). Froeb, Sibley, Doane and Pinto (2014:21) also describe bid rigging as a form of price fixing whereby competing firms synchronise their price proposals. It can also be directed towards an employee when he or she manipulates the bidding process to give an unfair advantage towards a supplier (Imhof, Karagoek & Rutz, 2018:236). Hence, a bid manipulation scheme attempts to influence the source selection process by limiting competitors from whom bids are sought. Froeb *et al.* (2014:24) underline that manipulation may include opening bids at a premature stage, calling solicitations during public holidays, leaking pertinent information to the favoured supplier in advance and shortening the solicitation time for submitting bids. Imhof *et al.* (2018:237) divide bid rigging into four categories from Section 3.4.3.2.1 to Section 3.4.3.2.4.

3.4.3.2.1 Complementary bidding

Complementary bidding occurs when some of the competing bidders agree to submit bids that are intended not to be successful so that another conspiring firm can win the contract (Weishaar, 2013:34). Such bids are not intended to secure the buyer's acceptance but are merely designed to give the appearance of genuine competitive bidding. It should be noted that complementary bidding schemes are the most frequently occurring forms of competition to conceal secretly inflated prices (Morselli, Laferrière, Reeves-Latour, 2012:34). For example, some of the competing bidders submit offers that they know the buyer can reject because of exorbitant pricing or the terms are unacceptable in order to create an awareness of legitimate bidding while ensuring that a pre-arranged competitor can be awarded.

3.4.3.2.2 Bid rotation

Bid rotation refers to the practice of competitors taking turns to win a contract award (Weishaar, 2013:33). More so, each conspiring firm is designated to be the successful bidder on certain contracts, while other conspiring firms are designated to win other contracts (Morselli *et al.*, 2012:34). Bid rotation is, in effect, a form of market allocation where competitors are entitled to their fair share of the total business without having to truly compete with others for that business. For example, Firm A might agree to submit a high bid that is sure not to win the job in order to let Firm B win the job at a higher price. In exchange, Firm B should agree to do the same at the next offering. This enables Firm A and Firm B to effectively take turns to win contracts while giving the impression of legitimate competitive bidding. Furthermore, the

result is that both firms are able to charge more for their services (Rombach, Porter, Fowler & Mucha, 2014:168). In line with this, buyers lose the benefit of true competitive bidding, and the price payable by the buyers is often higher than what the buyer could have obtained through true competitive bidding.

3.4.3.2.3 Market division

Market division schemes are agreements between competing firms whereby the competitors divide the market among themselves (Weishaar, 2013:34). In such schemes, the competitors basically divide the market according to geographic area or based on the type of customers. In the agreement, the competitors agree not to compete against each other's designated portion of the market. The result of these schemes is that the competing firms could either not bid against each other, or intentionally submit high prices to bid solicitations in a geographical area that is not allocated to them. In such cases, the buyer can lose the benefit of true competition and end up paying a higher price than the buyer would have obtained through true competitive bidding (Froeb *et al.*, 2014:26). Consequently, buyers have a disadvantage of paying inflated prices due to consortiums that are formed by competitive bidders. As a result, the credibility of most tender processes become compromised leading to corrupt elements.

3.4.3.2.4 Collusion between suppliers

Subcontracting fraud occurs when one firm gets awarded a contract and then awards subcontracts to the other conspiring firms in exchange for not submitting a winning bid (Rombach *et al.*, 2014:169). Similar to other bid rigging frauds, such subcontracting arrangements cause the buyer to lose the benefits of true competition and end up paying a higher price than the buyer would have obtained through true competitive bidding (Jimenez & Perdiguero, 2012:224). This type of supply chain fraud signifies the importance of having a centralised data base in which all suppliers can be closely monitored, allowing the buying organisation to assess any discrepancies that suppliers pose when bidding for contracts.

3.4.3.3 Unjustified single source awards

An unjustified sole source award scheme is often used to avoid competition and award contracts directly to a favoured supplier (Aryal & Gabrielli, 2013:26). Such awards can be accomplished by ignoring competitive bidding requirements, falsifying sole source justification or by splitting requirements to avoid competitive bidding thresholds (Rombach *et al.*, 2014:169). In such a case, the price payable by the buyer is often higher than what the

buyer could have obtained through competitive bidding, which is designed to produce the lowest or best price.

3.4.3.4 Creation of shell firms to facilitate fraudulent payments

A shell firm scheme occurs when an employee or group of employees working together establish a shell firm account in the firm's procurement systems so as to steal from the employer via fraudulent contracts, invoices, and/or payments (Imhof *et al.*, 2018:236). Typically, a shell firm scheme involves the provision of fictitious services rather than the purchase of fictitious goods as it is more difficult to verify that the services have not been performed (Chicot & Matt, 2018:481). However, there is another sub-category of the shell firm scheme known as a pass-through scheme which involves the purchase of goods (Tsipouri, 2015:1). In a pass-through scheme, instead of buying the goods directly from the vendor, the employee sets up a shell firm to buy the goods for the organisation (*ibid*). The employee then resells the goods from the shell firm to the organisation at an inflated price, giving them an advantage over other competitors.

3.4.4 Benefits of ethical Supply Chain Management practices conduct in business

According to several authors (Kaufman, Little & Wohlforth, 2007; Chicot & Matt, 2018:484) the benefits of ethical SCM conduct emanates from multiple stakeholders' gains in organisational settings and concepts associated with the balance of power between the private industry or branches of government. The organisational environment relating to representatives of stakeholders has evolved separately from that of public corporations, and the resulting organisational structures can potentially inform the management of self-interest. Specifically, competition over diverging interests can result in outcomes derived from result compatibility across diverse interests to focus on common interests (Ansari, Fiss, & Zajac, 2010:69). Hence, structural separation of responsibility in organisations has been recognised in managing competing demands and enhances advantages of adopting lean ethical supply chain practices (Meglio, King, & Risberg, 2015:30). Therefore, having these interests implemented by personnel in their operations has benefits for a firm's reputation, providing an opportunity to participate in global environmental competitions.

3.4.4.1 Accountability

It is important that organisations ensure that employees are held accountable for their internal control responsibilities (Meglio *et al.*, 2015:30). More so, sufficient punishment for procurement fraud or illegal conduct is obviously a critical element to an effective internal

control environment. A well-defined set of disciplinary measures must be established and communicated effectively to all employees, and it must apply to anyone who is established as guilty of fraud or corruption. Such consistent disciplinary measures enhance the credibility of the organisation and deter people from committing fraudulent acts (COSO, 2013:45). Hence, the implementation of internal control responsibilities tends to increase the success indicators of the firm's financial statements.

3.4.4.2 Establishes authority and responsibility

The procurement organisation's structure, which includes areas of authority and line of reporting and responsibility, is a critical part of the procurement function because, without it, the organisation cannot control the flow of procurement activities (Zabala-Iturriagagoitia & Edler, 2015:67). Depending on the organisation's needs and the level of risk that it is prepared to take, its procurement office can generally be organised into two structures, namely, a centralised model and a hybrid model, and each structure has its own advantages. The two advantages are discussed from Section 3.4.4.2.1 to Section 3.4.4.2.2.

3.4.4.2.1 Centralised Supply Chain Management structure

In a centralised procurement structure, decision making comes from the top, and its purchasing activities are handled by a central procurement group (Witjes & Lozano, 2016:38). A strong and effective centralised SCM team enables the organisation to achieve better value through economies of scale by effectively consolidating spending across the organisation. An important advantage of a centralised SCM structure is that it encourages good transparency provisions such as effective management controls, efficient documenting of procurement contracts and activities and clearer audit trails and knowledge sharing (Kusi-Sarpong & Sarkis, 2017:190). Such transparency features enable purchases to be checked for evidence of procurement fraud or any illegal activities (Zabala-Iturriagagoitia, & Edler, 2015:69). Therefore, the supply chain employees in a centralised structure are more easily trained and are therefore more skilful and knowledgeable with the proper and efficient use of SCM rules and regulations.

3.4.4.2.2 Hybrid model Supply Chain Management structure

A hybrid model, in which some purchasing such as the higher value and more complex purchases, is done at the centralised supply chain team level and purchasing, such as the low value and simple purchases, is handled at the respective departmental level, may be considered (Kusi-Sarpong & Sarkis, 2017:191). The hybrid structure enhances the organisation's leverage

through economies of scale, and at the same time, improves the service level to the end-users (Ansari *et al.*, 2010:71). As such, many organisations embarking on a goal-driven performance optimisation strategy are delegating more authority and responsibility to front-line managerial levels.

3.4.4.3 Enhances organisational commitment

Organisations must reveal a commitment to attract, develop and retain competent and ethical procurement professionals in alignment with the organisation's objectives (COSO, 2013:69). Therefore, a well-defined job description and achievable performance goals must be communicated to the employees (Lund-Thomsen & Costa, 2011:57). Performance goals should also be constantly reviewed to ensure that they are not unrealistic. Regular training and re-training of the supply chain staff on effective procurement techniques and ethical behaviour are also important to improve the employees' supply chain professionalism and ensure that they maintain the skills to perform effectively (Osei-Kojo, 2017:1620). Thus, the supply chain staff must also be trained and kept current on the organisation's policies and procedures. This involves how to respond when faced with ethical dilemmas and to emphasise the importance of behaving ethically at work.

The standards in hiring qualified and ethical employees and the training policies established reveal commitment by the organisation in attracting and developing competent and ethical people (Testa, Annunziata, Iraldo & Frey, 2016:1894). Finally, rewarding outstanding performance and ethical conduct through the advancement and better remuneration packages based on performance appraisals reveal that the organisation is committed to retaining competent and ethical employees (Testa *et al.*, 2016:1894). Therefore, it is also important to ensure that the remuneration package of a supply chain professional in the public industry remains competitive with the private industry.

3.4.4.4 Integrity of ethical values

The integrity and ethical values when establishing and setting the ethical tone of the organisation must be committed to in order to minimise fraud in the supply chain department (Roberts, 2015:82). Effective control starts from the top management level. Unless management leads by example to demonstrate their firm commitment to safeguard procurement integrity and uphold ethical values, employees are not likely to commit to or comply with the ethical code and standards (Neu, Dean, Everett, Jeff, Rahaman & Abu-Shiraz, 2015:50). For

example, when every employee and contractor is required to read and sign the established code of ethics, management must reveal its commitment by also signing the code and be seen doing so.

3.4.4.5 Analyses potential and risks of fraud

The organisation should identify risks, including potential for fraud, that might keep the organisation from achieving its objectives and analyse these risks so as to decide how the risk should be managed (COSO, 2013:9). Risk can be categorised as internal, such as project complexity, inadequate project planning and fraud, and external, such as technology changes, weather and economic conditions (Neu *et al.*, 2015:51). These risks can result in consequences such as limited competition, higher acquisition cost, delivered goods and services not meeting the user's requirements, inability to enjoy economies of scale and damage of an organisation's reputation and image due to improper use of public funds and resources (Roberts, 2015:82). After identifying the risks, organisations should analyse the significance of each risk and the probability of the risk occurring for the purpose of determining how the risk could be managed.

This section discussed issues related to ethical SCM practices in business and corporates. A well detailed analysis was conducted reviewing the role that businesses play in enhancing SCM ethics. Furthermore, a model was depicted to reveal the different types of orientations that are established in ethical SCM. Thereafter, different types of unethical SCM practises were discussed with special attention being directed to examples of procurement fraud established in different organisations. In conclusion, the benefits of good SCM ethics in organisations were discussed, revealing how organisations have managed to enhance good business conduct. The next section deliberates on the different cases of unethical SCM practices in business.

3.5 DOCUMENTED CASES OF UNETHICAL SUPPLY CHAIN MANAGEMENT PRACTICES IN BUSINESS

The SCM industry has been compounded by unethical practices. Globally, several cases of unethical conduct have been noted, implicating personnel and organisations. Within South Africa, cases of unethical conduct have been analysed, taking into account the effects and results of the unethical practices to businesses and the economy at large.

3.5.1 Global unethical Supply Chain Management practices

The cases reported in this section include Apple Incorporation vs Chinese supplier, the United States Navy case, McDonald's vs Shanghai meat supplier, Tarzeen Factory Fashions saga and the Kobe Steel case.

3.5.1.1 Apple Incorporation versus Chinese Supplier

This section analyses the case between Apple Incorporation and the Chinese meat supplier. A report that was published by Barboza (2011:4) states that Apple Incorporation violated human rights and labour standards within their supply chain operations. The case involved 137 workers from a Chinese supplier who sustained injuries and death from a toxic chemical that was used in making the slick glass screens for the iPhone mobile phones. The reason for the deaths of the employees emanated from a compromised tender process in which Apple Incorporation did not apply due processes in awarding the contract to the Chinese supplier. Apple Incorporation previously providing suppliers that violate labour and safety standards has compromised the firm's ability to produce high quality products. In response, Apple has increased the number of supplier audits from 39 in 2007 to 663 during 2014 (Apple Inc, 2015:2).

The case above demonstrates the importance of sourcing material only from reputable suppliers that also respect and observe the rights of their employees. Failure to observe this may have serious repercussions for both the buying and supplying firms when the human resource malpractices are brought into light and when corrective action is applied.

3.5.1.2 The United States navy case

Another case involves a United States Navy employee. Moran (2013:50) revealed that an employee was given the authority to determine the requirements and create the statement of work during the procurement planning phase (Moran, 2013:50). During the source selection phase, the employee approved the purchase and awarded a contract and simultaneously controlled the contract during the contract administration phase. The employee further compromised the process by intentionally writing vague contracts, resulting in a lack of system checks and balances to authenticate the contract before publication. The weaknesses of the control activities by the U.S navy employee increased fraud vulnerability in the procurement planning, source selection and contract administration phases of the U.S navy entity.

The United States Navy case demonstrates the importance of increasing the monitoring and supervision of employees, especially those working in supply chain departments. Furthermore, personnel training reduces employee subversion and increases the credibility of tender processes in different organisations.

3.5.1.3 McDonald's versus Shanghai meat supplier

This section examines the case between McDonald's and a Shanghai meat supplier. This high profile unethical corruption case published by Solomon (2014:25) is a case in which a meat supplier in Shanghai, China conducted unsafe practices of reusing meat that had fallen on the floor and selling expired meat products to McDonald's and Kentucky Fried Chicken (KFC). The meat supplier misrepresented the safety of his operations by falsely declaring his capacity of producing meat to more than 8000 restaurants in China. This was part of the requirements stipulated in the contracts of the two fast food restaurants. Beef and chicken being the main ingredients for McDonald's flagship products, making unsafe food practices posed an ethical issue for which the firm needed to take action. As a result, McDonald's has increased the number of surprise audits of their suppliers in China with internal audit teams and third-party auditors (Jourdan, 2014:24).

The above case illustrates that safety standards are of paramount importance in service delivery. In addition to the adherence to safety standards, firms should ensure that quality control checks must be in place before awarding contracts to a firm. The net effect has been compounded by a reduction in customer loyalty due to poor service delivery by McDonald's.

3.5.1.4 Tarzeen Fashions factory versus International supplier

This section discusses the case between Tarzeen Fashions factory and an international textile supplier. A report by Harvey (2014:67) indicates unethical supply chain practices in India's textile and garment industries. One of these cases includes a 2012 fire at Tarzeen Fashion's factory in Bangladesh that killed 112 people working overtime on orders placed by international suppliers. The collapse of the garment factory that killed these employees was a result of procurement malpractices by the international suppliers that paid exorbitant amounts of money for production that did not match the capacity that was present at the factory. As a result, the industry has initiated auditing suppliers in Bangladesh, forming an alliance of 26 retailers. This initiative requires audits of all suppliers in Bangladesh for fire and safety (Saini, 2014:3).

The Tarzeen Fashions factory case has revealed that unethical supply chain practices can compromise human capital efficiency in organisations. The case further illustrates that inflating prices to gain contracts poses a threat to human life, especially in cases where industrial work is being conducted. Thus, the inability to implement supplier audits has impacted negatively on the firm's reputation.

3.5.1.5 Kobe Steel case

This section analyses the Kobe Steel case. A report by Scheer (2017:1) indicates a case in which Japan's third largest steel maker (Kobe Steel) produced and supplied sub-standard materials to more than 500 potential customers around the world in the year 2017. Internal investigations at Kobe Steel revealed that the employees of the firm deliberately processed and passed product checks on the material which was of poor quality. The materials in question included copper and aluminium used in the production of trains, planes, and rockets, as well as steel wire and copper piping used in various industries, including nuclear energy. As a result, the material supplied caused major implications to its customers as the road construction projects have become compromised in terms of quality delivered. Kobe Steel has promised to conduct a thorough and expansive investigation, and the firm has indicated that they should compensate its customers financially.

The Kobe Steel case suggests that acquiring sub-standard materials has a negative production effect from both the firm and the customer's perspective. Employee supervision stands out as being an area in which organisations have failed to implement effectively. The result of this failure goes beyond poor quality and it can be seen as illegal according to corporate law regulations in different countries around the world.

3.5.2 Unethical Supply Chain Management practices in South Africa

The cases reported in this section include EduSolutions vs Department of Education, The South African Airways saga, South African Broadcasting Services vs Mafoko, Eskom vs Trillian, Passenger Rail Agency of South Africa vs Siyangena technologies and the Bosasa case.

3.5.2.1 EduSolutions versus Department of Education

This section investigates a case between EduSolutions and the Department of Education. A report compiled by Evans and Erasmus (2012:1) brought about a case in which a firm called

EduSolutions was awarded a contract in 2012 in an unethical manner. The firm supplied textbooks in Limpopo to the value of ZAR 320 million which was considered to be unfair, inequitable and cost ineffective. The contract of EduSolutions was considered to be unconstitutional and in breach of treasury regulations and the Public Finance Management Act of the South African constitution. This contract was allocated at an exorbitant tender price that compromised the credibility of the department's supply chain processes. The firm was then placed under investigation, barring the Department of Education to conduct any business with the private firm. As a result, the Department of Education terminated the contract with EduSolutions.

The EduSolution case reveals that contracts involving public funds should be channelled through legislative processes before the tender is awarded. This increases credibility from both the buying and supplying organisation as adequate due processes would have been followed. Failure to attend to legislative processes has implicated the supplier thereby placing them on high risk when conducting business with them.

3.5.2.2 South African Airways versus Vusubheki Management Services

In this section, a case involving South African Airways and Vusubheki Management Services is analysed. A report by Motale (2017:1) details a case in which South African Airways was involved in corruption during a tender. The contract involved a ZAR 13.6 million CCTV maintenance and installation tender awarded to Vusubheki Management Services in 2016 without due procurement processes being followed. SAA's sourcing specialist was accused of compiling a fake document with forged signatures of the airline's senior management to ensure the contract was awarded to Vusubheki Management Services, an IT security solutions firm in Kempton Park. Furthermore, the tender was never presented to the bid adjudication committee (BAC) for approval and the submission report compiled by the firm's sourcing specialist was never signed by the Chief Executive Officer of the firm. As a result, SAA lodged a criminal offence against the firm's sourcing specialist and the firm has tabled several recommendations in which the firm should adopt to ensure ethical compliance in their supply chain department.

The above case demonstrates that document fraud increases the risk of firms having their trading licenses revoked. In such a case it has been revealed that suppliers such as Vusubheki Management Services have to apply due diligence when hiring personnel especially in

departments that involve adjudication such as procurement. The net effect of this has seen litigation procedures which are costly to both the organisation and the supplier.

3.5.2.3 South African Broadcasting Services versus Mafoko Security

This section examines the case between the South African Broadcasting Services (SABC) and Mafoko Security. Mdluli (2018:1) compiled a report in which the South African Broadcasting Services (SABC) unlawfully awarded a contract to Mafoko Security Patrols in the year 2018. The SABC awarded the contract amounting to ZAR 185 million. The security firm failed to meet the Broad-Based Black Economic Empowerment (BBBEE) evaluation criteria rating which required the winning bidder to score at least level 2. Mjayeli Security scored more points on the BBBEE score card, yet the employees at SABC unlawfully denied them the contract stating it had detrimental effects on the current staff who were previously employed as security at Mjayeli Security. The Mafoko Security Patrols contract was placed under investigation which lead to the chairperson of SABC's supply chain department being placed under special leave.

The SABC case puts the spotlight on the dangers of a poor analysis in the evaluation criteria and management processes. Similarly, misrepresentation of firms within their compliance capabilities poses a negative impact on these firms' overall performance abilities. As a result, misrepresentation has compromised the services offered by Mafoko Security Patrols.

3.5.2.4 Eskom versus Trillian

This section underpins the case of Eskom vs Trillian. A report by Selisho (2019:2) reveals a contractual malpractice which happened between Eskom and Trillian. Suppliers of Eskom, Trillian and global consultancy firm McKinsey were paid an amount of ZAR 1.6 million by the enterprise. The payment, processed by one of Eskom's employees, was unethical and fraudulent. McKinsey's local partner and a sub-contractor falsely declared the type and quality of coal which was needed by the national grid to generate electricity. As a result, inadequate power was generated resulting in the grid implementing load shedding to businesses and households in South Africa. The National Prosecuting Authority of South Africa managed to make a ruling in which McKinsey paid back the ZAR 1.6 million it received from Eskom.

The Eskom case suggests the need for organisations to restructure their operations and management departments to improve strategies. Thus, the absence of sound management has been aligned to the emergence of load shedding that has crippled the economy of South Africa.

3.5.2.5 Passenger Rail Agency of South Africa versus Siyangena Technologies

This section discusses the unethical activities conducted between the Passenger Rail Agency of South Africa (PRASA) and Siyangena Technologies. According to Postman (2019:1) a case between PRASA and a supplier, Siyangena Technologies, was considered to be unlawful. The information technology and security firm was hired in 2010 under PRASA's former CEO to improve integrated access security systems at railway stations. Siyangena had been awarded lucrative deals without following proper tender procedures. In this tender, Siyangena had installed outdated, overpriced and ineffective security systems which did not match the requirements of the contract. Several procurement officers from the firm were implicated since the sum of ZAR 4.5 billion was paid to the supplier without following due process. As a result, the firm has battled to maintain sound and effective tender processes due to the lack of transparency in their supply chain department.

The case above reveals that inadequate monitoring of tender processes may result in fraudulent activities by employees responsible for selecting suppliers. More so, it has been noted that organisations should put in proper bid evaluation committees by inviting independent and neutral personnel to conduct the bid processes.

3.5.2.6 The Bosasa Case

In this section, a comprehensive discussion is examined on the Bosasa corruption scandal. A case compiled by Smit, Jika and Skiti (2019:1) reveals a report in which a facilities management firm called Bosasa attained contracts from 40 national and provincial government departments unlawfully. These departments included education, catering, database management and juvenile detention centres, amassing to more than ZAR 12 billion. The bribery of politicians and government officials scored more than ZAR 12 billion in questionable state contracts, including at Limpopo's Department of Social Development and the national department of agriculture, forestry and fisheries. Out of about 10 000 payments provided by the treasury from its database, the sum of government contracts invoiced by Bosasa and its firms between mid-2003 and the beginning of 2019 amounted to ZAR 12 282 374 003 billion.

As a result, this has been regarded as the biggest fencing tender in the history of South Africa, Africa and probably the southern hemisphere.

The Bosasa case demonstrates that selecting one organisation to conduct several contracts for the state increases the risk of that organisation to act unlawfully. This can be drawn from this case, particularly on the fact that the supplier handled multiple state contracts in which it did not have the capacity to provide the required services. Thus, the firm has received large amounts of money for services they did not provide which has compromised state funds leading to a reduction in the country's GDP.

The section highlighted high profile cases that have been unethical both globally and locally in business. Similarly, the cases of unethical conduct were clearly examined in detail and the effects they had on businesses such as bribery, dishonesty and fraudulent payments were clearly addressed. Lastly, on-going cases of unethical practises by businesses in South Africa were highlighted stating the measures in which law makers have suggested for future business engagements.

The next section discusses SCM ethics in the FMCG industry.

3.6 SUPPLY CHAIN MANAGEMENT ETHICS IN THE FAST-MOVING CONSUMER GOODS INDUSTRY

This section explores the FMCG industry, taking into account the relationship between ethical SCM and the level of compliance presented in organisations affiliated to the FMCG industry. The section presents certain guidelines in ensuring that there is ethical compliance in firms that operate in non-governmental organisations. Further, it aligns the corporate industry and the food retail industry, the most dominant in the FMCG industry.

Ethical concerns are increasingly visible in the offerings of food to consumers and along the supporting supply chains (Barling, Sharpe & Lang, 2009:261). Supply chain ethics relates to managerial decisions on what is right or wrong. Social responsibility deals specifically with the obligation to maximise the positive effects and minimise the negative effects of those decisions on stakeholders (Ferrell *et al.*, 2015). Ethical concerns appear also in the European Union policy agenda revolving around sustainable agriculture and food which formulates a large part of the global FMCG industry. According to D'Itri and Helms (2018:1), ethical efficacy of FMCG firms within international supply chains has become increasingly of

paramount importance for organisations involved in global trade. While top-tier globally sourced and delivered goods and services meet high quality standards regardless of the place of origin, often there remains a perception of ethical failings by global supply chain partners' business practices.

Governments, firms and individuals frequently query the objectivity of trade practices along international supply chains and how firms operating in the FMCG industry allocate production facilities in regions of the world, with more lenient oversight of practices deemed unethical or illegal elsewhere (Barling *et al.*, 2009:262). OECD (2017:25) highlights that international non-government organisations have established standards and guidelines for corporate behaviour in world-wide commerce. The most widely recognised set of conduct guidelines for multinational firms include the Caux Round Table Principles for Business; the OECD Guidelines for Multinational Enterprises; the UN Global Compact; the Inter-faith Centre on Corporate Responsibility's (ICRR) Principles for Global Corporate Responsibility; and the Global Reporting Initiative (GRI) (D'Itri & Helms, 2018:1). Ethical concerns around the FMCG industry arise from the morality of the workings of food production and food supply systems through to consumption and their after-effects (Barling *et al.*, 2009:262). Any human intervention has the potential to give rise to ethical concerns, in other words, to impact upon others, including humans and other living things. Food ethics, therefore, can cover a wide range of issues.

Supplier audits are becoming increasingly important with emerging ethical concerns such as cybersecurity and the sourcing of products from conflict-affected areas (Herndon, 2014:124). Moreover, managing the supply chain audit is crucial for the successful implementation of a sound clearance of product alignment, especially in the food and retail industry. An identification of value-adding activities to produce the product, supporting members that provide resources to the primary members, including third-party certification, and the third type of actor such as the internal functions of procurement and ethics (Palmatier, Stern & El-Ansary, 2015:3). Ferrell and Ferrell (2016:7) indicate that the use of marketing channels and supply chains need to be managed strategically to avoid misconduct by employees in the FMCG industry. As a result, most members of the supply chain are not experts at managing risks associated with their own organisation or coordinating other members of the different distribution networks (Barling *et al.*, 2009:264).

Ethical concerns in the FMCG industry vary amongst actors in the supply chains and the concerns evolve and change over time (Young & Merritt, 2013:225). A challenge for greater transparency seeks to identify the areas where ethical SCM concerns in the FMCG industry arise and how it is being addressed by industry players (Barling *et al.*, 2009:276). Additionally, different stakeholders, notably the consuming public, have a pivotal role in identifying the ethical concerns that have not been fully addressed. This is centred mostly on the causal problem such as availability and fuller communication of information about the actions taken along the food retail supply chain to end consumers (Ferrell & Ferrell, 2016:8). Lastly, establishing more inclusive processes of communication and dialogue increases the chances of having supply chains that address changing values and priorities as they appear, and to enable amplification and cooperation to take place among all concerned parties.

3.7 CHAPTER SUMMARY

This chapter provided literature on several aspects such as the conceptualisation of SCM processes, the conceptualisation of business ethics, SCM ethics, cases of unethical SCM and SCM ethics in South Africa. The literature provided information relating to sub-components and elements that are in SCM. These were revealed to be CRM, SRM, CSM, demand management, order fulfilment, Manufacturing Flow Management (MFM), product development and commercialisation and returns management. Various areas that supply chain processes are most dominant in, such as the public industry, were also indicated. The literature also discussed the issues surrounding business ethics with a lot of attention being directed to the six main categories of business ethics and their applicability in the corporate world. Thereafter, SCM ethics were indicated by describing their relationships and how they affect supply chain processes. Furthermore, relationship orientations were discussed and more important examples of unethical practices in business clearly outlined, such as conflict of interest, bid rigging, unjustified single source awards and the creation of shell firms to facilitate fraudulent payments. This literature chapter also highlighted practical cases in which unethical business practices have taken place both locally in South Africa and internationally. Lastly, the chapter gave a brief overview of SCM ethics in the FMCG industry.

The next chapter outlines the research methodology that was followed in this study.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 CHAPTER OVERVIEW

The main aim of this chapter is to provide a discussion centred on the research methodology employed in this study. The chapter starts by outlining the two major types of reasoning, namely inductive and deductive reasoning. The next section provides a detailed discussion focusing on the research paradigms or philosophies of positivism, post-positivism, phenomenology and pragmatism. Furthermore, the chapter gives attention to the three leading research approaches which are qualitative, quantitative and the mixed method approach. These three approaches are briefly explained revealing how relevant they are in research studies. Thereafter, an overview of the research design strategies is outlined with special attention being directed to the survey that was relevant for this study. The discussion outlined the type of strategy used in the study which is the cross-sectional survey. The chapter then deliberates on how data analysis was conducted and the software which was used for statistical interpretation.

4.2 TYPES OF REASONING IN RESEARCH

The section discusses the types of reasoning present in methodology. The two types include inductive and deductive reasoning. Mousa (2017:38) defines the term reasoning as a rational process which entails the basis of conclusions from information exchanged. A comparative analysis of inductive and deductive reasoning is discussed in Section 4.2.1.

4.2.1 Inductive vs Deductive Reasoning

Several authors have defined the meaning of inductive reasoning. According to Molnar, Greiff and Csapo (2013:37) inductive reasoning is the process in which a general perception amongst a limited number of instances, examples, or observations are highlighted in order to find a description that applies to them all. Mousa (2017:39) adds that inductive reasoning can be described as the generalisation of single observations and experiences in order to reach overall conclusions or derive broad rule induction. Similarly, inductive reasoning enables inference with the unobserved, formulates novel conclusions about the unknown, and generates new knowledge (Molnar *et al.*, 2013:37). As a result, the inductive approach starts with observations and theories are formulated towards the end of the research (Punch, 2014:3). From another perspective, as suggested by Harreveld, Danaher, Lawson, Knight and Busch (2016:25),

inductive research begins with detailed observations of the world, then moves towards more abstract generalisations and ideas.

Deductive reasoning in research can be regarded as a valid and more objective line of perceptive reasoning about a valid premise (Harreveld *et al.*, 2016:55). Furthermore, Hayes *et al.* (2010:279) posit that inductive reasoning emphasises elements from a more subjective approach to argumentation, which may be characterised by a limitation of the base in terms of validity, but rather perceived as plausible if anything (Harreveld *et al.*, 2016:55). Therefore, deductive reasoning is regarded as more appropriate in this study as it seeks to provide support and follow quantitative research approaches. This is because the study seeks to explore various factors that determine SCM ethics in the FMCG industry. The next section addresses research paradigms.

4.3 RESEARCH PARADIGMS

Different authors have described the meaning of research paradigms in different ways. According to Bryman and Bell (2015:96), a research paradigm refers to norms, value judgments, standards, perspectives, positions, myths, philosophies and processes that are directed to people's activities. Hakansson (2013:4) highlights that research paradigms are regarded as the basis of a research project and the nature for rationales of projects with regards to validity and suitability. Within the field of research, different philosophies have been identified which include positivism, interpretivism (Hofer & Bendixen, 2012:55), post-positivism (Henderson, 2011:341) and phenomenology (Bryman, 2012:28).

Positivism is referred to in different ways. According to Lien, Pauleen, Kuo and Wang (2014:192) positivism can be described as an objective research approach that directs its emphasis to the objectivity of genuine components of life. In addition to its direct emphasis on factual beliefs, positivism further calls for scientific methods that may be used to understand real life problems (Leavy, 2017:13). In contrast, post-positivism refers to a paradigm which directs its attention on determining the correct meaning of an occurrence or real-life aspects which may be aligned to social backgrounds (Babbie, 2013:36). Hakansson (2013:7) posits that post-positivism integrates theories and practical data analyses of facts, designed for creating social components in society. Phenomenology is a philosophy that entails a proper understanding of life experience and engagements. A number of researchers have highlighted that phenomenological research is centered mainly on reliability and validity when it comes to

evaluating a human being's understanding of their life experiences (Lien *et al.*, 2014:191). Phenomenology focuses more on qualitative research studies, as indicated by Gallagher (2012:7), who highlights that this paradigm directs its attention on observing individuals' perceptions on a specific matter. To conclude on the different research philosophies, interpretivism may be regarded as a paradigm that directs its attention on analysing the contrasts of individuals and elements related to social factors and science (Bryman, 2012:28). Furthermore, the philosophy highlights a detailed understanding of subjective behaviours that may be indicated by certain individuals in social phenomena.

Within the field of research, studies that obtain their credibility through an objective approach may be presumed to be deductive. As discussed in Section 4.2.1, deductive reasoning suits this study because of its ability to produce results that are valid. This study, due to its characteristics of data analysis and interpretation of results with the use of statistical methods and techniques, is therefore suitable in adopting post-positivism. In such view, the main aim of the study is to explore SCM ethics and compliance in the FMCG industry which contemplate with the proposed philosophy of the post-positivism approach. The next section discusses the research approach employed in this study.

4.4 RESEARCH APPROACH

The field of research has three broad categories. These include qualitative, quantitative and the mixed methods approach. According to Hague, Harrison, Cupman and Truman (2016:105) quantitative research methods are studies that emphasise measuring the analysis of relationships between variables and constructs. This type of research approach predominantly uses numerical and statistical techniques to demonstrate such conclusions. According to Malhotra, Nunan and Birks (2017:150) the primary aim of using quantitative research methods is to develop and employ mathematical models and theories pertaining to a natural phenomenon. The use of quantitative research methods helps the researchers develop statistical partnerships on the strengths of relationships between variables (Bryman, 2012:64). Similarly, the quantitative method may be regarded as an approach that assesses the beliefs and attitudes of particular respondents in order to ascertain a particular research objective. For this reason, this method becomes the most appropriate technique when assessing beliefs and attitudes of respondents towards particular research patterns or phenomena (Muijs, 2010:6).

Contrary to quantitative research is qualitative research, concerned with the subjective assessment of attitudes, opinions and behaviours of categorical data (Malhotra *et al.*, 2017:151). Furthermore, qualitative research develops a concept and provides an in-depth account of a qualitative survey. Malhotra *et al.* (2017:151) describe qualitative research as a function of a researcher's insights and impressions, which generates results either in a non-quantitative form or in a form which is not subjected to rigorous quantitative analysis. According to Flick (2014:15) qualitative research has been established to be more dominant in the fields of engineering, psychology and anthropology where the views of respondents are mostly required.

The mixed methods approach may be defined as a method that encompasses an integrative approach, combining both qualitative and quantitative methodologies (Zou, Sunindijo & Dainty, 2014:320). The mixed method approach draws on the relative strengths of both qualitative and quantitative methods, giving it room to be more applicable to studies that are related to health sciences. With regards to the current study, the quantitative research method was chosen because of the nature in which data was collected. As a result, the data collected supported the use of numerical gathering as it gave results that are reliable and valid. Other scholars, such as Hague *et al.* (2016:112), argue that despite the criticisms of quantitative research for its inadequacy in terms of developing a concept and providing an in-depth explanation of qualitative enquiry, this method still provides sound reliability and validity tests.

4.5 RESEARCH DESIGN

Research design is a process in which a study can be executed by a research strategy or plan. In addition, the research design guides the researcher in the process of collecting, analysing and interpreting data observations through relevant design process strategies. Therefore, De Vaus (2013:22) suggests that the research design is the outline of a study that permits the researcher to come up with resolutions to the research problem identified. A number of research design approaches are appropriate to quantitative research. These approaches may be subdivided into five categories which include the descriptive method, the experimental method, observations, correlations, and surveys. According to De Vaus (2013:21) the descriptive method involves the study of descriptive characteristics of a study's population or phenomenon. Furthermore, this type of research can be associated with providing the researcher with answers such as 'what' as opposed to 'when', 'how' and 'why' (De Vaus, 2013:22). Malhotra *et al.* (2017:79) stress that descriptive and causal research designs are the

major types of a conclusive research design. For this reason, a descriptive research design employs scientific methods and procedures to collect and analyse data in an attempt to answer the research problem. A comparison of the differences between descriptive and casual research have been summarised in Table 4.1.

Table 4.1: Descriptive vs Casual research

	Descriptive	Casual
Objective	Describes market characteristics and functions	Determine cause and effect relationships
Characteristics	Marked by the prior formulation of specific hypotheses Follows a pre-planned and structured design	Manipulation of one or more independent variables Control of other mediating variables
Method	Secondary data Surveys, panels, observational	Experiments

Source: Malhotra *et al.* (2017:80)

Table 4.1 illustrates a detailed comparison of the two major types of conclusive research, namely descriptive and casual research. The table highlights how descriptive and casual research affect the research according to their objectives, characteristics and methods. Malhotra *et al.* (2017:81) stress that the objectivity of descriptive research focuses mainly on identifying the functions of the study while casual research seeks to determine the relationships.

The second research design approach discussed in this study is the experimental method. The experimental method is a process in which a researcher seeks to identify a process that influences a certain outcome (Creswell, 2013:48). Similarly, the process incorporates the ability of a researcher to provide two separate behaviours to two different focus groups and scrutinise their one-to-one performance outcomes.

The third research design approach is the observational research design approach. The observational research method refers to the unprejudiced observation of respondents' behavioural patterns. This entails that the researcher refrains from any kind of bias judgement towards a certain situation (Malhotra *et al.*, 2017:80). In contrast, the survey research method is the fourth research design approach that researchers employ in different studies (*ibid*). The

survey method may be described as a provision of trends, patterns and perceptions of a sample which identifies a specific target population under examination. This method employs structured questionnaires, observations or interviews as techniques to gather data from an identified sample (Zou *et al.*, 2014:318). For the purpose of this study, the survey method was chosen to be the one which best suits this research project. The next section discusses the research strategy and the different types of strategies widely used in research.

4.6 RESEARCH STRATEGY

Research strategies may be described as a guideline that seeks to specify the strategic approach of any research exploration. Several standardised research strategies available to quantitative research studies include ex-post facto, cross-sectional surveys, longitudinal surveys, experimental and case study research strategies (Hakansson, 2013:6). The selection of the indicated strategies are positioned on the fact that this study uses a quantitative approach. These quantitative research approaches are discussed in Section 5.6.1 to Section 5.6.5.

4.6.1 Cross-sectional survey

This method examines the frequencies and subsequently proposed relationships of a specific research. This is very much in line with the context of this investigation as it aims at ascertaining the direct and indirect links existing between SCM ethics in the FMCG industry. Furthermore, the particularity of the data collection process over a specific period allows it to be a cost and time efficient strategy.

4.6.2 Longitudinal survey

A longitudinal survey is defined by Ployhart and Vandenberg (2010:97) as a method that deals with repeating observations for a particular variable or group of respondents over a particular period. Relatedly, Sekaran and Bougie (2013:102) view it as a strategy designed for examining the characteristics of various subject matters. Therefore, longitudinal surveys are increasingly employed in psychological studies which investigate trend variance as well as sociology, where life events over a specified period are explored (Flick, 2014:20).

4.6.3 Experimental research strategy

An experimental research strategy is a method that is more deductive and focuses on establishing the causal relationships of an occurrence (Sekaran & Bougie, 2013:102). Furthermore, the experimental method involves the control of factors that could directly or

indirectly affect the outcomes of an experiment (Hakansson, 2013:6). A study by Creswell (2013:25) indicates that this method has been adopted in studies that relate to consciousness as well as political sciences.

4.6.4 Case studies

Case studies are strategies that aim at gathering data and information on a particular subject or problem (Sekaran & Bougie, 2013:110). Additionally, Yin (2013:6) states that case studies are research methods that investigate current phenomena, using different data collection approaches. Furthermore, Yin (2013:6) argues that case study research methodologies are most suitable when a study seeks to determine questions such as the ‘how’ or ‘why’ in studies whereby the researcher has limited or no control over events and when circumstances of a real-life problem have to be examined.

4.6.5 Ex-post facto

The term ex-post facto is defined as post effect research, subject to an analysis of underlying reasons for a delinquent once the problem has occurred (Simon & Goes, 2013:1). These authors further stress that ex-post facto utilises secondary data and is regarded as a method of determining the cause of a specific problem. The strategy ex-post facto has been widely used in several fields such as education (for example, Jarde, Losilla & Vives, 2012:97; Tuckman & Harper, 2012:1) and transport economy (for example, Hidalgo, Pereira, Estupiñán & Jiménez, 2013:133), and criminality (West & Lee, 2011:9). Thus, the ex-post facto approach is suitable for any study that seeks to establish the underlying cause of a problem after its manifestation. After discussing the different types of research strategies, it emerged that the cross-sectional research survey strategy was the most relevant technique for this study. This technique scrutinises the frequencies and subsequently proposes associations of specific research, in line with the context of this investigation that aims at exploring the factors that determine ethical SCM amongst professionals working in the FMCG industry. For this reason, the precision of the data collection process over a specific period allows it to be a time and cost-efficient strategy. The following section delineates on the literature that was discussed in Chapters Two and Three of the study.

4.7 LITERATURE REVIEW

Literature review is a term that is defined by several authors. According to Creswell (2013:55) the term literature review describes a process in which data is assembled in a systematic manner

by clearly outlining its significance for that particular study. Elfron and Ravid (2018:15) state that the content is influenced by the researcher's beliefs and assumptions about the knowledge and how it is attained. A literature review is important as it enables the researcher to pinpoint the hypothesis of the study using sound formulation structural processes (Glavan, 2016:78). For the purpose of this study, the literature covers sections such as the structure of the FMCG industry and the role of ethics in the SCM industry of South Africa.

Chapter Two focused on reviewing the literature on the structure of the FMCG industries and the major stakeholders such as the key role players and their firm profiles. In addition, the legislative framework of the industry was discussed giving careful attention to the laws and regulations that govern retailers that conduct business within the FMCG industry. Furthermore, the industry's achievements were taken into account and these include employment growth, access to new markets, financial gains and improved technological capabilities.

Chapter Three centred its attention on reviewing the literature of ethical SCM and its relevance to business practices. The chapter highlighted the role of business ethics in SCM, taking into account the unethical SCM practices that businesses have practised such as conflict of interest, bid rigging and creation of shell firms to facilitate fraudulent payments. Various sources were used to erect data from both hard and soft copies, such as online journals, peer-reviewed books and other relevant acts. The resources available at the VUT library, such as search engines, were used and include Google Scholar, Emerald, Science Direct, Taylor and Francis, Ebsco-host and JStor. The next section deliberates on empirical research and the different sub-elements present for sampling design.

4.8 EMPIRICAL RESEARCH

This section discusses the sampling design, the measurement instrument adopted for this study and the data collection approach. The next sub-section highlights these aspects in detail and provides an analysis on how they are suitable to this type of research.

4.8.1 Sampling Design

Sampling design is a systematic process in which a detailed plan of attitudes and opinions of a certain population are carefully scrutinised by that sample (Leavy, 2017:179). The sampling design is encompassed by four main design techniques which include: the target population,

sampling frame, sample size and the sampling method. These four design techniques are elaborated in the next section.

4.8.1.1 Target population

A target population consists of a subset of the population and a body of people or an assortment of objects under contemplation for statistical purposes (Collis & Hussey, 2014:38). The target population of this study consists of SCM professional employees working in the FMCG industry, focusing mainly on procurement, warehousing and transport departments. Thus, these SCM professionals can be categorised under different divisions and may include all the executive management, board of directors, and qualified personnel that may be in the capacity to link their job description to SCM roles and responsibilities.

4.8.1.2 Sample approach or technique

A sampling approach or technique may be described as a manner in which respondents ensure that the level of analysis is made simple to the intended population (Zikmund, Babin, Carr & Griffin, 2013:389). There are two sampling procedures, namely probability and non-probability. Probability sampling methods consist of simple random, stratified, systematic, and cluster sampling techniques (Zikmund *et al.*, 2013:399). In contrast, Wretman (2010:31) refers to non-probability sampling as a judgment-based approach of selecting a sample from a convenient basis. Non-probability sampling approaches include convenience, judgmental, snowballing, and quota. The probability and non-probability sampling approaches are briefly discussed below.

➤ Simple random sampling

Numerous authors have described simple random sampling as a sampling technique which is commonly used in many studies. For this reason, every respondent of a targeted population is viewed to have the same opportunity and probability to be selected for a survey, which denotes that each sample is selected individually (Sarstedt & Mooi, 2019:41).

➤ Stratified sampling

In this technique, a targeted population is divided into different groups known as strata, and each stratum is then subdivided into distinct subgroups. The basis of stratification resides on the basis that repartition must be mutually exclusive so that every element of a selected population needs to be allocated to one specific stratum (Sarstedt & Mooi, 2019:41).

➤ **Systematic sampling**

This type of sampling technique resembles an arranged approach. It refers to the selection of a sample by randomly starting from any given point. Thereafter, elements of a sample from that starting point are consecutively chosen (Levy & Lemereveal, 2013:17).

➤ **Cluster sampling**

This type of sampling requires dividing the population into different heterogeneous groups, with each group's characteristics similar to those of the population (Sarstedt & Mooi, 2019:41). In this instance, a targeted population is partitioned into different groups known as clusters. A group is then chosen using a simple random technique.

➤ **Convenience sampling**

In this technique, respondents of a study are conveniently selected by their accessibility and proximity to the researcher (Hague *et al.*, 2016:112).

➤ **Judgement sampling**

Judgement sampling signifies a number of aspects that are closely aligned to non-probability sampling. In this case, it can be regarded as closely related to convenience sampling in that the sample is chosen based on the researcher's expert knowledge and understanding of the population (Hague *et al.*, 2016:112).

➤ **Snowball sampling**

This type of sampling involves asking existing study respondents to recruit other individuals from among their acquaintances (Sarstedt, Bengart, Shaltoni & Lehmann, 2018:651). Furthermore, it is based on a referral approach in that a random sample of respondents is selected and interviewed. Consequently, subsequent groups are chosen depending on their identification by the interviewed group.

➤ **Quota sampling**

This is regarded as a two-phase judgement technique in which a population is subdivided into specific groups or quota. Sample elements are then conveniently selected by the researcher (Punch, 2014:8).

From the above sampling techniques, it is evident that researchers can employ these different types of approaches depending on the research being conducted. For this particular study, no sampling frame was established as there are no documented lists of the entire population of SCM managers and professional employees affiliated within the FMCG industry. This being the case, a non-probability sampling technique using a purposive sampling technique was employed to select respondents for this study. This implies that members of the target

population did not have equal chances of being selected for inclusion in this study. A purposive sampling technique involved the selection of only those sampling elements that have information relevant to the aim of the study (Kumar, 2014:243). In this study, such respondents included SCM managers and professional employees who have been employed in the FMCG industry for at least two years.

4.8.2 Sample size

This section first discusses the sample size that was employed to collect data from respondents. Thereafter, the section discussed the sample size recommendations documented by several authors who conducted quantitative studies. The sample size of this study was limited at N=350. Kumar (2014:252) defines sample size as the specific number derived from a certain group by a researcher. In this study, the historical sample size was used to determine the correct sample of the research. The historical approach was suitable for this study as it gave an indication of similar studies that adopted the same sample and yielded positive results. Table 4.2 illustrates the previous studies that employed a sample size similar to this study.

Table 4.2. Historical sample size

Title of the study	Author	Sample size employed
Managerial competencies to enhance performance culture; a FMCG perspective	Botes and Henriko (2016:154)	186
The FMCG Industry and Changes in Consumer Market Response in Rural South Africa	Ruhiiga (2011:94)	200
Relationship between inventory management and uncertain demand for fast-moving consumer goods organisations	Nemtajela and Mbohwa (2017:703)	255
Buyer-Supplier Relationships and Firm Performance in the FMCG industry	Loury-Okoumba and Mafini (2018:13)	244

Source: Compiled by author

Table 4.2 highlights the historical sample sizes of previous studies related to the FMCG industry. These were confined between 186 to 303 respondents. Thus, the sample size of this study is set at n=350 which is in the same range as that of the previous studies focusing on the

FMCG industry. After discussing the historical sample size, several authors provided recommendations based on the use of sample size in their quantitative studies. Geuens and De Pelsmacker (2017:87) established that a sample size of 150 respondents or more leads to higher statistical power which concludes that small and scientifically insignificant differences between scores may be statistically significant. Thus, a reasonably larger sample size could result in reliability measures being acceptable. Another study conducted by Venter de Villiers, Chinomona and Chuchu (2018:5) suggests that using Raosoft Software to calculate a sample size for quantitative studies decreases the possibility of attaining sampling errors. In such a view, less sampling errors necessitate reliable and validated results for quantitative research studies. With the recommendations on the sample size by the above authors, it can be justified that the sample size employed in this current study centred its attention on having respondents with a sample greater than 150, leading to a justifiable sample size of N=350.

The next section discusses the data collection procedures and measurement instruments adopted in the study.

4.9 PROCEDURES FOR DATA COLLECTION

There are several ways to collect data in the field of research methodology. In this study, a structured questionnaire was the most suitable as it resonated with the type of research at hand. Several methods were used to distribute the questionnaires to the professional employees working under different FMCG organisations within the Gauteng Province of South Africa. The first method used was the drop and collect method, which involved the face to face distribution and collection of hard copies of the questionnaires to and from the respondents. The questionnaires were delivered to the respective firms and workstations in which professional employees within the FMCG industry were situated. The other method used involved email surveys. Email surveys were suitable due to the proximity issues in which some respondents were geographically dispersed in the areas that were covered in this study. For this reason, delivering copies to the respondents in hard format was difficult. Thus, the email addresses for such respondents were collected from their workstations and used as a reference point for contacting them.

A structured timeframe is always essential when collecting data. The collection of data was conducted from November 2019 to March 2020. A total of 350 questionnaires were printed through the resources made available by the Research Department at VUT. Respondents who could not complete the questionnaires on sight were given two weeks, depending on the

flexibility of their work schedules. Additional resources provided by the Research Department at VUT included financial assistance to cover travelling and accommodation expenses. From the initial 350 questionnaires distributed, a total of 251 questionnaires were returned of which 30 were wrongly recorded. The total number of questionnaires returned that were fit for data analysis was 221, which represented a response rate of 63 per cent. A response rate is defined as the proportion of completed surveys by eligible respondents (Agustini, 2018:156). The response rate is further discussed in the next chapter (refer to Chapter 5.3.1).

4.9.1 Questionnaire cover letter

A cover letter may be regarded as one of the most important documents attached to a questionnaire. In other words, the main purpose of a cover letter is to inform the respondent on the questionnaire and the credentials that may be required for it, such as the details of requested actions on the part of the respondent (Bryman & Bell, 2015:208). A cover letter may be used as a tool to articulate various forms of communication or a particular research strategy, taking into account advanced contact mailings. This may assist the respondent in acquiring information pertaining to that particular study. In this study, the cover letter provided information such as the contact details of the researcher and the credentials of the project supervisors. The cover letter also stated that participation in the study was on a voluntary basis and that the credentials of the respondents would remain anonymous. The cover letter is attached at the end of the research project (refer to Appendix 1).

4.9.2 Questionnaire design

Questionnaire design is a method in quantitative primary data collection employed as a vehicle to present the questions the researcher desires respondents to answer (Brown, Wappling & Woodruffe-Burton, 2020:89). Several authors (Burns, Veeck & Bush, 2014:216) indicate that questionnaires provide researchers with information seeking documents issued to a stakeholder in order that organisations can gain valuable information. In such a view, the layout of a questionnaire and its format should be easy to navigate (Clow & James, 2014:205). Brown *et al.* (2020:93) argue that if questionnaires are to be employed in a self-administered manner, they should be neat and attractive as there is no interviewer present to assist. For this reason, a poorly presented and untidily printed questionnaire is likely to root non-responses or mistakes in data (*ibid*).

In this study, a structured research questionnaire was used to collect data from the targeted sample. The research questionnaire used in this study was partitioned into four sections comprising closed-ended questions. These closed-ended questions were divided from section A to section D. Section A comprised of seven questions eliciting information on the demographic profile of the respondent. The questions elicited information on gender, age group, race, highest educational qualifications, type of employment contract, employment period which eludes to the number of years of experience in the FMCG industry, and the occupational area which eludes to the department in which the FMCG professionals are based. Section B to section D were presented with a measurement scale on a five-point Likert-type scale that was affixed by 1 = strongly disagree to 5 = strongly agree to prompt the level of agreement.

The final use of the questions used in sections B-D were tailored from adjusting certain words and sentences to fit the respondents. With this regard, the process of wording and rephrasing included changing statements that prompted a negative meaning which was not suitable for reliability and validity of the statements. For this reason, all negative statements were refined in such a manner that the respondents would not have difficulty in ascertaining whether they had to agree or disagree. The questionnaire contained measurement items that were developed based on previous research projects. In this questionnaire, four sections were used, namely LC with 22 measurement items; SM with 10 measurement items; and PE with 19 measurement items. The measurement scales employed are listed in Appendix 1. An assortment of these constructs are to be presented with the use of Tables 4.3-4.5.

4.9.2.1 Section B construct items

Section B prompted responses on LC using 22 measurement items. These measurement items were attained from a previous study conducted by Bendixen and Abratt (2007:13). Table 4.3 presents the measurement scale adapted in this study.

Table 4.3: Scale development and reliability for Legal Components (LC)

Item Code	Item Description	Author(s) and Year	Industry and Region where the scale was applied	Reliability (Cronbach's Alpha) (α)
LC1	I can trust my firm in that it honours all commitments once they have been made			

Item Code	Item Description	Author(s) and Year	Industry and Region where the scale was applied	Reliability (Cronbach's Alpha) (α)
LC2	Contracts are clear such that everyone knows what is expected	Bendixen and Abratt (2007:13)	The FMCG industry of South Africa	0.88
LC3	Giving gifts/incentives is discouraged in business transactions involving my firm			
LC4	Receiving gifts/incentives is discouraged in business transactions involving my firm			
LC5	My firm is not only concerned with what is legal, but also with what is morally right			
LC6	Staff members who take bribes face penalties			
LC7	My firm is highly regarded as far as business ethics is concerned			
LC8	My firm has a strict code of ethics			
LC9	My firm's management and staff adhere to the code of ethics			
LC10	Employees are discouraged from awarding contracts to family and friends			
LC11	Management is active in combating unethical behaviour			
LC12	Documentation used in the firm is clear on what is expected			
LC13	It is very rare for people to get away with unethical behaviour in my firm			
LC14	Management at my firm has an open-door policy			
LC15	My firm's policies are implemented effectively to govern procurement managers			
LC16	My firm employs the same evaluation criteria in evaluating all proposals/bids for contracts			
LC17	Information provided by prospective suppliers in response to an invitation to bid is kept confidential by the procurement unit			
LC18	My firm conducts all procurement and bidding processes in an ethical manner			
LC19	Staff are accountable for all actions during procurement processes			
LC20	My firm ensures transparency in all procurement steps			
LC21	The firm's procurement processes encourage fair competition among prospective suppliers			
LC22	Supply chain staff are adequately trained on ethics, transparency and accountability			

Source: Bendixen and Abratt (2007:13)

Table 4.3 depicts the measurement scale, the industry in which it was adopted from and its reliability scale value. An alpha value of 0.88 was recorded and this entails that the study met the required threshold which provides a significant platform and the reason why this current study adopted a similar measurement scale.

4.9.2.2 Section C construct items

Section C elicited the responses on SM using ten measurement items that were previously validated by various authors. The measurement items were developed by Murray (2003:295). A detailed presentation of these items is listed in Table 4.4.

Table 4.4: Scale development and reliability for Supplier Management (SM)

Item Code	Item Description	Author(s) and Year	Industry and Region where the scale was applied	Reliability (Cronbach's Alpha) (α)
SM1	My firm is tough but fair in its price negotiations	Murray (2003:295)	The Pharmaceutical Industry of South Africa	0.78
SM2	My firm has regular meetings with its suppliers, which helps to maintain a good working relationship			
SM3	A loyal and enduring relationship with suppliers of products and services is important to my firm			
SM4	Everybody is given an equal opportunity to submit proposals for contracts			
SM5	My firm respects the confidentiality of supplier pricing and other information shared during negotiations			
SM6	My firm discourages its staff from denigrating their competitors' products			
SM7	My firm expects suppliers to be transparent, and is also transparent itself			
SM8	My firm has a selection process for awarding contracts to suppliers			
SM9	All suppliers are treated equally			
SM10	My firm observes ethical practices when doing business with its suppliers			

Source: Murray (2003:295)

Table 4.4 delineated the measurement scale that was used to give respondents an opportunity to share their views on how suppliers conduct business with them. A high alpha value of 0.78 met the minimum threshold of 0.7 which made the scale acceptable and fit for use in this current study. These scale items were developed by Murray (2003:295), who conducted a study that discussed ethical procurement practices.

4.9.2.3 Section D construct items

A compilation of 19 measurement scale items were adapted and employed to Section D of the questionnaire. The scale was designed by Muncy and Vintell (1992:595), and later developed by Bendixen and Abratt (2007:13). Table 4.5 displays these items together with the industry in which the study was conducted.

Table 4.5: Scale development and reliability for Personal Ethics (PE)

Item Code	Item Description	Author(s) and Year	Industry and Region where the scale was applied	Reliability (Cronbach's Alpha) (α)
PE1	I take a day off only when it is necessary	Bendixen and Abratt (2007:13) Muncy and Vintell (1992:595)	FMCG industry of South Africa	0.88
PE2	I typically report a co-worker's violation of the firm's policies and guidelines			
PE3	I avoid divulging confidential information to parties external to the firm			
PE4	I take the necessary time to do a job			
PE5	I avoid taking extra personal time during lunch hour, break and early departures			
PE6	I avoid falsifying time/quality/quantity reports			
PE7	I do not authorise subordinates to violate the firm's policies and guidelines			
PE8	I do not falsify internal time/quality/quantity reports for the organisation			
PE9	I desist from passing blame for errors to an innocent co-worker			
PE10	I keep away from claiming credit for the work of my peers			
PE11	I keep away from giving gifts/favours in exchange for preferential treatment			
PE12	I refrain from accepting gifts/favours in exchange for preferential treatment			
PE13	I refrain from overstating expense accounts by more than 10% of the correct amount			
PE14	I abstain from using firm services for personal use			
PE15	I abstain from removing the firm's supplies for personal use			
PE16	I desist from using the firm's time for personal business			
PE17	My firm has the adequate facilities to undertake expected procurement tasks			
PE18	In my firm, procurement staff have the necessary skills and experience to undertake the work on proposed projects			
PE19	My firm has a procurement training program in place			

Source: Muncy & Vintell (1992:595); Bendixen & Abratt (2007:13)

Table 4.5 indicates that both sources in which the measurement scale was adapted from achieved the minimum threshold of 0.7. This makes the questions adopted in this study reliable hence positioning less risk to the results such as measurement errors and results of the current research project.

The above discussion underpinned the measurement scale items that were employed for this study. The measurement scale items used achieved an alpha value that is higher than 0.7 making them reliable. Various sources were used to support the original authors who developed different measurement items. All the questions were therefore from validated sources. For this

reason, some authors have supported the concept that researchers should use validated measurement instruments. Leedy and Omrod (2015:228) established that the use of a measurement scale can transcend existing evaluation guidelines, which may be primarily concerned with advanced functionality or analysis, leading to results that would be easier to administer and interpret. Thus, the results of this study should not be difficult to administer and interpret. The next section covers the data analysis and statistical approach employed in the study.

4.10 DATA ANALYSIS AND STATISTICAL APPROACH

This section gives an overview of how the data analysis and statistical approach was conducted for this particular study. According to Leedy and Omrod (2015:228) data analysis is a process of defining, aligning and interpreting the data collected into an appropriate format that enables the facilitation of research objectives. The first stage conducted in this statistical approach was ascertaining the data preparation procedures to make sure the data would be suitable for actual analysis. Thereafter, data were analysed using descriptive statistics such as the tests for normality of data and the exploratory factor analysis which ascertains the factors that determine the level of ethical compliance by FMCG employees. SPSS (version 26.0) was employed to analyse data for descriptive statistics and exploratory factor analysis. Inferential statistics such as t-tests and ANOVA were employed to test for the mean differences between the different demographic categories such as age, gender, race and educational level.

4.10.1 Descriptive statistics

Descriptive statistics involves a summation and the description of the respondents including the firm profiles and certain tests such as inferential statistics (Heumann, Shalabh & Schomaker, 2016:8). In addition, they designate the dissemination and type of patterns revealed by the data. Thus, the groups of descriptive statistics employed included frequencies, mean scores and standard deviations. For the purpose of this study, the descriptive analysis was employed to determine the profile of FMCG firms as well as the demographic features of the respondents. The descriptive statistics groups are described in Section 4.11.1.1 to Section 4.11.1.3.

4.10.1.1 Frequencies

Frequencies form part of descriptive statistics and reveal the number of times respondents have selected items being questioned on (Neuman, 2011:394). In the initial stage, statistical

frequencies were conducted on the demographic profile of respondents. This gave information relating to the actual scores in percentages for both males and females. Thereafter, the frequencies were employed on each section giving information on how each participant responded to a particular question. The frequencies revealed how many respondents agreed or disagreed with each of the questions in a section. The frequencies are presented in a frequency table disclosing the different categories and options, the actual number occurring (n) and the percentage (%) of that score against the total sample.

4.10.1.2 Mean scores

Mean scores can be defined as a measure of central tendency for one construct that indicates the arithmetic average, in other words, the sum of all scores divided by the total number of these variables (Zikmund & Babin, 2013:104). It also gives an indication of the scores of a given characteristic divided by the number of these scores (Neuman, 2011:397). In this study, the mean was employed to establish the most important score amongst a set of items in a section. Thus, for a particular section under consideration in this study, such as section B (LC), the item with the highest mean was considered as the most important.

4.10.1.3 Standard deviation

A standard deviation (SD) is a statistical method conducted to measure the extent of distribution or variance between each score and the data around the mean (Cronk, 2018:93). A critical result as defined by Nunnally and Bernstein (2014:42) entails that whenever the SD is low, data should be closer to the mean, whereas a higher SD suggests that measures are widely dispersed (spread out) from the mean over a wider range of values (Nunnally & Bernstein, 2014:42). In this study, the SD was employed to confirm whether the data was normally distributed. Thus, normal distribution may be presumed when the values of the data are spread out evenly around one representative value (Lomax & Hahs-Vaughn, 2012:8). Hence, the scrutiny of SD posits values that should be convenient in further establishing the distribution of the data. The next section discusses the Exploratory Factor analysis procedure and how it was used as a tool to analyse data in this study.

4.10.2 Exploratory Factor Analysis (EFA)

EFA is a statistical method that increases the reliability of the scale by identifying inappropriate items that can then be removed (Sarstedt & Mooi, 2019:41). Furthermore, EFA asserts a group of extraction and rotation techniques that are all designed to model unobserved

or latent constructs (Osborne, Jason & Banjanovic, 2016:12). It is referred to as a common factor analysis. Thus, EFA assumes and asserts that there are latent variables that give rise to the manifest (observed) variables, and the calculations and results are interpreted very differently in light of this assumption (Osborne *et al.*, 2016:14).

This study adopted several phases that were used to conduct EFA procedures. In the initial stage, data were scrutinised using items that had factor loadings greater than 0.5, of which these were retained in the study (Downey, 2014:10). The next phase emphasised that factors with eigenvalues greater than one were retained as suggested by Osborne *et al.* (2016:14) in accordance with the Guttman's rule. In addition to the factor loading thresholds, the Scree Plot criteria were applied where all factors above the breaking point were retained (Warne & Larsen, 2014:106). The EFA procedure was performed on SPSS using Varimax Rotation which is the most popular method of rotation.

4.10.3 Inferential statistics

Inferential statistics are techniques that researchers employ when using samples to create an overview of the population from which the samples were drawn (Amrhein, Trafimow & Greenland, 2019:262). In this study, inferential statistics were conducted in an attempt to deduce (infer) from the sample data (respondents) the views of the population of professional employees in the FMCG industry in the Gauteng Province. Inferential statistical analyses were done by indicates of t-tests and one way ANOVA. A t-test is a statistical examination which indicates groups of two populations (Cronk, 2018:67). The test is deemed of great importance as it determines whether any two sets of data pose any significant differences amongst them (Amrhein *et al.*, 2019:263). The study comprised two demographic factors that included gender in which two categories were presented. From the first category, male and female was used to compare the two groups respectively. The other category was type of employment contract (a contract or permanent) in which the test was employed to compare employees according to their contract credentials.

After using t-tests to compare the gender variables in the study, other variables that contained two or more groups were analysed using the ANOVA inferential statistical method. Cronk (2018:79) defines ANOVA as a procedure that determines the proportion of variability attributed to each of the several components. The author further states that it is one of the most useful and adaptable statistical techniques available in data analysis. In this study, ANOVA

was used to test whether the level of compliance and driving factors in ethical SCM were different for respondents who varied in terms of the type of race, their employment period and their area of occupation.

To examine whether there were any associations between variables, a Pearson correlation was conducted. Pearson correlation is the measure of the strength of a linear association between two or more variables (Corder & Foreman, 2014:65). The measure of the correlation between the variables is essential as it analyses the extent to which predictor variables are correlated to the outcome variable of the study. In this study, the Pearson correlation was then used to assess the strength and associations between the LC, SM and PE measurement scale variables (refer to Sect., 5.12.1). After correlating the constructs, it was essential to test the relationships of the predictor variables and the outcome variable of the study. In order to determine the relationships, a regression analysis was performed to assess whether there were any statistically significant positive relationships. Regression analysis is a set of statistical methods that may be used to estimate the extent to which a dependent variable has an effect on an outcome variable. In this study, the regression analysis was performed between the dependent variables (established through the EFA) and the outcome variable known as SM.

4.10.4 Reliability and validity of measurement scale

This section discusses the reliability and validity of the measurement scale used in the study. Reliability was used to assess the integrity of the measurement instruments with the use of techniques such as the Cronbach's alpha that was employed to measure internal consistency. Thereafter, validity was used to analyse the accuracy of the results. Reliability is further discussed in Section 4.10.4.1.

4.10.4.1 Reliability

Reliability is defined as the extent to which a test or measure can produce similar results if repeated under identical circumstances (Judd, McClelland & Ryan, 2017:107). This study employed the Cronbach's alpha coefficient, the item-to-total values and composite reliability (CR) to measure the internal consistency of the measuring items. These measurement items are discussed in depth in the next section.

4.10.4.1.1 Cronbach's alpha

Cronbach's alpha, also known as the alpha coefficient, is regarded as one of the most widely used measures of internal consistency. Cronbach's alpha evaluates the correlation coefficient of measurement items in a particular test (Nierobisch *et al.*, 2017:126). Based on the pivotal work of Lee Cronbach (1951), it undertakes that each measurement item's observed score may be the outcome of adding the item's true score, measurement error and all measurement items to convey equal factor loadings (Judd *et al.*, 2017:134). In this study, it can be distinguished that the Cronbach's alpha estimates the extent of measurement error in a test. An alpha value of 0.7 or higher implies that the measurement scale values are acceptable whereas an alpha value below 0.7 signifies that the measurement items are not reliable (Nunnally & Bernstein, 2014:43).

4.10.4.1.2 Item total correlations

Item-total correlations are described as a psychometric measure used to critique the firmness of the reliability and consistency of measurement scales (Cronk, 2018:93). Consequently, a notable degree of measure can be employed to test whether there is an inconsistency on the item scale compared to the performance of the other items presented. Results that lack consistency should therefore be considered as waste, and for this reason, these items are rejected. Churchill (1979:66) attests that any item on the scale that is rejected leads to the improvement of the reliability. To ascertain the minimum cut-off threshold, a study conducted by Nunnally (1978:1) suggests that item to total correlation scores should be equal or greater than a value of 0.5 for the measurement items to be regarded as reliable.

4.10.4.2 Validity

The term validity refers to a measure of the points to which the degree of a specific measure of an instrument is meaningful and enables the depiction of inferences from the targeted populace (Yasar & Cogenli, 2014:506). Alder and Clarck (2011:164) emphasise that although it is very difficult to measure how valid results are, the different types of validity presented such as face, content and construct validity, provide a form of credibility. The different types of validity are underlined in Section 4.11.4.2.1 to Section 4.11.4.2.3.

4.10.4.2.1 Face validity

Face validity assesses the extent to which the measurement scales are aligned to the theoretical lens of the concept under investigation (Fallon, 2016:43). It measures the inclusiveness of the

measurement items of a construct, which to some extent provides a researcher with all the relevant aspects of the construct that may be incorporated in the measurement scale (Leavy, 2017:115). In this study, face validity was tested by using a panel of experts, both from the industry and institution faculty members, to review the questionnaire. The institution faculty members included both the supervisor and co-supervisor of the study, whereas industry experts were the professional personnel that have a vast experience both in the FMCG and the SCM industry. After the review process was completed, suggestions from all panel experts were welcomed advising on aspects such as the structure and wording of the questionnaire.

4.10.4.2.2 Content validity

Content validity refers to the degree to which the items on a test are fairly representative of the entire domain the test seeks to measure (Hair, Sarstedt, Hopkins & Kuppelwieser, 2014:112). In order to ensure content validity conformity, the questionnaire was pre-tested after implementing the submissions from the panel experts who participated in the questionnaire review process. The questionnaire was pilot tested with 41 professional employees within the FMCG industry based on a purposive sample drawn from the target population. The results of the pilot study indicated that the questionnaire had an impending ability to measure the factors that determine ethical SCM amongst the professional employees working in the FMCG industries of South Africa.

4.10.4.2.3 Construct validity

Construct validity is defined as the extent to which a test measures what it claims to measure (Tavakol & Dennick, 2011:54). This type of validity was measured using both convergent and discriminant validity. Convergent validity is concerned with the degree to which the measurement items reveal homogeneity within the same latent variable measured. Therefore, this test is recognised when the scores obtained with two or more different measurement instruments measuring the same latent variable are highly correlated. To measure and calculate convergent validity, the Average Variance Extracted (AVE) was employed. Fornel and Larcker (1981:47) indicate that with regards to the accuracy of this technique, a measured latent factor should have a relative alternate factor to the total variance, taking into account errors of the AVE. In this study, the minimum threshold of factor loadings that had a value of 0.5 and greater was acceptable (Tavakol & Dennick, 2011:54).

Discriminant validity has been described as a calculation performed to measure the degree to which the measurement items for various latent variables reveal similarities between different latent variables (Adriana & Berteau, 2011:217). For instance, discriminant validity assumes that items should correlate higher among them than they correlate with other measurement instruments since these items in theoretical terms are barred from relating (Adriana & Berteau, 2011:217). In this study, discriminant validity was ascertained through the Fornell and Larcker Criterion as suggested by Hair *et al.* (2014:112) which deliberates on the process of examining whether the average variance extracted (AVE) value is greater than the highest shared variance (SV). Thus, this process addresses the highest correlation between each construct. The next section discusses ethical considerations tabled in the study.

4.11 ETHICAL CONSIDERATIONS

The term ethics in scientific research refers to the norms or standards that guide the research process (Kumar, 2015:16). In research, ethical concerns can be scrutinised as they relate to respondents, researchers and sponsoring organisations. Likewise, the respondents, the researcher and the sponsoring organisations all have ethical issues, which should be considered when formulating a research project. In determining the level of professionalism, a researcher should always demonstrate respect in terms of all interactions with respondents including avoiding judging and discrediting them as well as ensuring that their views are devotedly recorded and given due consideration in the assessment process (Kumar, 2015:16). An important dimension of this respect relates to ensuring the protection of respondents with weakened autonomy and those who are marginalised or susceptible. In this study, four ethical research principles were considered, namely informed consent, protection of respondents, voluntary participation and confidentiality and the right to withdraw. These four principles are discussed from Section 4.11.1 to Section 4.11.4.

4.11.1 Informed consent

Informed consent is the provision of adequate information and declaration to individuals participating in the research on the consequences of the research processes and aftermath (Kumar, 2014:216). This is carried out to enable potential respondents to make fully informed decisions free of any pressure and coercion. Participation should be the voluntary choice of the respondents and should be based on sufficient information and an adequate understanding of the research and the consequences of their participation. This implies that the researcher must disclose all relevant information and any possible risks of participation, especially any issues

around what should happen to the data obtained. In the present study, respondents were provided with a cover letter detailing the aims of the study. Furthermore, a consent form was attached to the questionnaire to ensure the voluntary participation of respondents.

4.11.2 Protection of respondents

It is fundamental that no harm comes to the respondents as a result of their participation in the research (Babbie, 2013:39). This indicates not only that respondents must not be exposed to pain or danger in the course of the research (such as in psychological experiments or medical trials), but also that there must be no adverse consequences to a person as a result of their participation. The researcher must do their utmost to protect respondents from any harm and to ensure under the principle of informed consent that the respondent is fully appraised of all possible risks in participating (Cohen, 2013:2). Sometimes, participation in social research can necessarily cause a respondent to reflect on personal issues, bringing about emotional distress. In this study, the researcher's obligation was to ensure that the research interaction is not completed until resolution of the possible emotional distress that may have arisen and that there is recourse to follow-up with assistance or counselling.

4.11.3 Voluntary participation and confidentiality

As implied by the principle of informed consent, participation must be voluntary and not subject to any coercion or threat of harm for non-participation (Ritchie, Lewis, Nicholls & Ormston, 2014:81). In contrast, non-coercion is not taken to mean that there should not be payments for participation; however, any such payment should be commensurate with the amount of time and normal income expectations of the respondents and should not be excessive such that it would constitute a bribe or inappropriate inducement. In this study, respondents were assured that attending to the questionnaire which was distributed by hand to several FMCG firms in Gauteng Province was solely voluntary as the credentials of managers and professional employees, such as their signatures, was optional. In addition, confidentiality and anonymity were maintained as respondents were not expected to indicate their names anywhere on the questionnaire.

4.11.4 The right to withdraw

Consistent with the principle of voluntary participation, respondents must be aware that they can withdraw at any time and have any of their data already recorded removed from the analysis where this is possible (Sarantakos, 2005:21). In this study, respondents were allowed to

withdraw from the study at any stage. The contact details of the researcher were indicated on the questionnaire so that the respondent's contributions could be withdrawn from the study if they wished that this be the case.

4.12 CHAPTER SUMMARY

This chapter aimed at discussing all the key elements that are established in the research methodology section of a dissertation. In the first section, the chapter explored the research reasoning types (deductive and inductive) and a distinction between the two was carefully scrutinised. It emerged that the deductive reasoning type was suitable for this study because of its ability to produce valid results. The chapter then outlined the three main types of research approaches that are widely used in research and the different characteristics that each of these approaches carry. The quantitative approach was used in this study because of the nature of data collection which required numerical analysis and interpretation. Thereafter, the chapter focused its attention on the various research design methods such as the observation, survey and experimental methods. The survey method was adopted in this research as it specified the target population aimed for this study. Literature review of the study was briefly discussed. Furthermore, it emerged that the sample would be composed of SCM professional employees drawn from the FMCG industry. A sample size of $n=350$ respondents was the predetermined form, and the samples were selected using the purposive sampling technique. The SPSS (version 26.0) is the statistical software that was employed for data analysis. The chapter then concluded by discussing the approaches for enhancing the reliability and validity of the measurement scale.

The next chapter reports on the statistical results that emanated from the study.

CHAPTER FIVE

DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF EMPIRICAL RESULTS

5.1 CHAPTER OVERVIEW

The previous chapter outlined all structural and fundamental research design and methodological aspects considered in this study. The current chapter examines the approaches employed in analysing and interpreting the data that was collected for this particular study. All the data was accessed from the research questionnaires distributed amongst professional employees and managers affiliated to the FMCG industry in the Gauteng Province of South Africa. All respondents who participated in the study had to adhere to the research ethics principles stipulated for this study.

The purpose of this chapter is to present the final results from the collected data. This includes the analysis and interpretation of the results. The chapter starts with the presentation of the results of the pilot study. Data from the pilot study were collected from FMCG professionals and managers in FMCG retail firms operating in the Vaal Triangle Region of Gauteng Province. Thereafter, the results concerning the primary data were collected in the Johannesburg area with the use of the drop and collect method. The subsequent section focuses on the EFA procedure applied to extract factors from the three measurement scales under consideration in this study. T-tests and ANOVAs were then used to ascertain how the application of SCM ethics varies amongst managers and professional employees in the FMCG industry. Demographic variables such as age, gender, race, educational level, occupational area, employment contract and employment duration were applied to test for these statistical differences. A discussion of these results is presented through the correlation and regression analysis which tests the strengths and relationships between the constructs. The last section in this study discusses the reliability and validity of the scales and verifies their input in analysing the data.

5.2 RESULTS OF THE PILOT STUDY

Before the primary survey, the research questionnaire used in this study was subjected to a panel review and a pilot study. A pilot study is defined as a process that is conducted to investigate the viability of an experimental approach for a primary study (Majid, Othman, Mohamad, Lim & Yusof, 2017:1074). It is employed to address potential practical issues in research procedures. This process plays a significant role in ensuring that the results of the

study are not compromised as the research seeks to yield positive statistical results. In this study, a review of the questionnaire was conducted at a selected university of technology using a panel of three academics drawn from the Faculty of Management Sciences. The panel that was selected to review the questionnaire are experts in the field of SCM. Several aspects that were addressed include the sentencing structure, whereby the wording of the questions was modified to ensure that the questionnaire is able to capture the required information accurately. Moreover, the review was further directed to ensure that the framework of the study remained as clear as possible on guiding the respondents in understanding the proposed research survey.

After the panel review, a pilot study was conducted to check whether the scales met the prescribed 0.7 minimum cut-off threshold for internal consistency reliability. In the initial stage, 43 questionnaires were distributed to managers and professional employees working in various FMCG firms operating in Gauteng Province. From the 43 questionnaires distributed, 42 were returned and reliability tests performed using the SPSS software. All three measurement scales produced results that had a low Cronbach alpha of less than 0.4 which meant that the results were not reliable and suitable for use in the study (Scremima, Simoesb, Barrosc & Valderramasd, 2020:3).

A second pilot study attempt was conducted on a different sample within the FMCG industry in Gauteng Province. A total of 45 questionnaires were distributed and 41 were returned. On the second attempt, all three measurement scales had Cronbach alpha values that were greater than 0.7. It was realised that the low reliability values from the first pilot study conducted were due to the fact that the first set of respondents in the initial pilot study were not familiar with both the sentencing structure and requirements of the questionnaire. The final pilot study was then effected through selecting 41 (n=41) FMCG employees that were appropriately selected in the Gauteng region. Table 5.1 presents the results of the pilot study.

Table 5.1: Results of the pilot study

Scale	Sample Size	Average Mean	Standard Deviation	Average item-total correlation	Number of items	Number of items deleted	Cronbach Alpha
LC	41	4.40	0.47	0.450	22	0	0.950
SM	41	4.38	0.52	0.519	10	0	0.917
PE	41	4.49	0.39	0.328	19	0	0.903
LC= Legal Components; SM= Supplier Management; PE= Personal Ethics Scale: 1=Strongly disagree; 2= Disagree; 3=Neutral; 4=Agree; 5=Strongly agree							

Source: Compiled by author

Table 5.1 presents the results obtained from analysing the data on three measurement scales of the questionnaire. In this pilot test, the average mean score for all scales was 4.42, which indicates that the rate of response was high, resulting in acceptable mean score values. Regarding standard deviation, LC, SM and PE attained values of 0.47; 0.52 and 0.39 respectively. When analysing statistical data, standard deviations only indicate how spread out the data is and are neither good nor bad. A low standard deviation ($SD < 1$) indicates that the data points tend to be close to the mean of the set while a high standard deviation ($SD \geq 1$) indicates that the data points are spread out. As a result, the pilot test results indicate the data as closely associated with the mean values. Regarding the average item-total-correlation, the analysis established that scores for all scales were above the required minimum threshold of 0.3, as suggested by Tapsir, Pa and Zamri (2018:40). Sections B, C and D registered values of 0.450, 0.519 and 0.328 respectively.

The last column in Table 5.1 highlighted the Cronbach's alpha values of the four sections that were analysed during the pilot test. Shemwell, Chase and Schwartz (2015:63) suggest that an alpha value of 0.7 or above is considered acceptable and fit for use in quantitative studies. In this pilot study, Sections B, C and D registered alpha values of 0.950, 0.917 and 0.903 respectively. The high values achieved in this pilot study demonstrate that the measurement scales adopted had adequate internal consistency (Tapsir *et al.*, 2018:41). In this pilot study, no measurement scale items were removed, implying that the results are accurate.

The next section reports on the primary survey results of this study.

5.3 RESULTS OF THE MAIN SURVEY

This section presents the statistical results of the main survey. These include the descriptive and inferential statistics performed for the main study. A discussion with regards to how the respondents participated in the survey is discussed in Section 5.3.1.

5.3.1 The response rate

The term response rate may be defined as the proportion of completed surveys by the eligible respondents. Heartbeat (2018:5) asserts that response rates may be classified under two distinct functions, namely contacting the respondents, and gaining their cooperation which involves different intervals. As such, contacting the wrong respondents and not gaining full cooperation from the right subjects could implicate the results, thereby giving a low response rate (*ibid*). The actual number of respondents that participated in the study is presented in Table 5.2.

Table 5.2: Response rate

Total number of questionnaires administered	350
Total number of questionnaires returned	251
Unusable responses	30
Valid questionnaires retained for the final data analysis	221
Usable response rate (percentage)	63

Source: Compiled by author

Table 5.2 presents the number of questionnaires that were distributed in this particular study. A total of 350 questionnaires were distributed to SCM professionals working in different FMCG firms. From the initial 350 questionnaires distributed, a total of 251 questionnaires were returned of which 30 were either wrongly recorded or incomplete. The errors that were identified from these questionnaires include response type errors such as using numbers to respond to questionnaires instead of marking or ticking with an X. Other errors included respondents that left sections incomplete or indicated more than one response per question. The total number of questionnaires returned that were suitable for data analysis was 221, which represented a response rate of 63 per cent.

The next section provides an in-depth analysis of the descriptive statistics.

5.4 DESCRIPTIVE STATISTICS

This section discusses the results of descriptive statistics performed in the first phase of the data analysis. The first section contains information relating to the demographic profiles of the respondents. These include aspects such as gender, age category, race, qualification type, type of contract, employment period and occupational area (Section A of the questionnaire). An assortment of the first four demographic aspects which include gender, age, highest qualification and race were assembled under one table (Table 5.3) followed by graphical representations and their interpretations. Thereafter, similar presentations were performed on FMCG operational characteristics such as the type of contract, employment period and their occupational area. These are presented in Table 5.4.

5.4.1 Demographic results

The demographic details of the respondents are presented in Table 5.3. These include results related to gender, race, age category and highest academic qualification.

Table 5.3: Descriptive statistics results

VARIABLE	CATEGORY	FREQUENCY (n)	PER CENTAGE (%)
(A1) Gender	Male	121	54.8
	Female	100	45.2
Total		N= 221	100
(A2) Age	Under 30 years	9	4.1
	30-39 years	40	18.1
	40-49 years	123	55.7
	50-59 years	40	18.1
	60 years and above	9	4.1
Total		N= 221	100
(A3) Highest qualification	Below matric	2	0.9
	Matric	18	8.1
	Certificate	45	20.4
	Diploma	96	43.4
	Degree	58	26.2

VARIABLE	CATEGORY	FREQUENCY (n)	PER CENTAGE (%)
	Postgraduate	2	0.9
	Other	0	0
Total		N= 221	100
(A4) Race	African	133	60.2
	White	51	23.1
	Indian	20	9.0
	Mixed Race	17	7.7
	Other	0	0
Total		N= 221	100

Source: Compiled by author

The discussions of each specific category are provided in Sections 5.4.1.1 to Section 5.4.1.4.

5.4.1.1 Gender of respondents

The gender distribution of respondents is presented graphically in Figure 5.1.

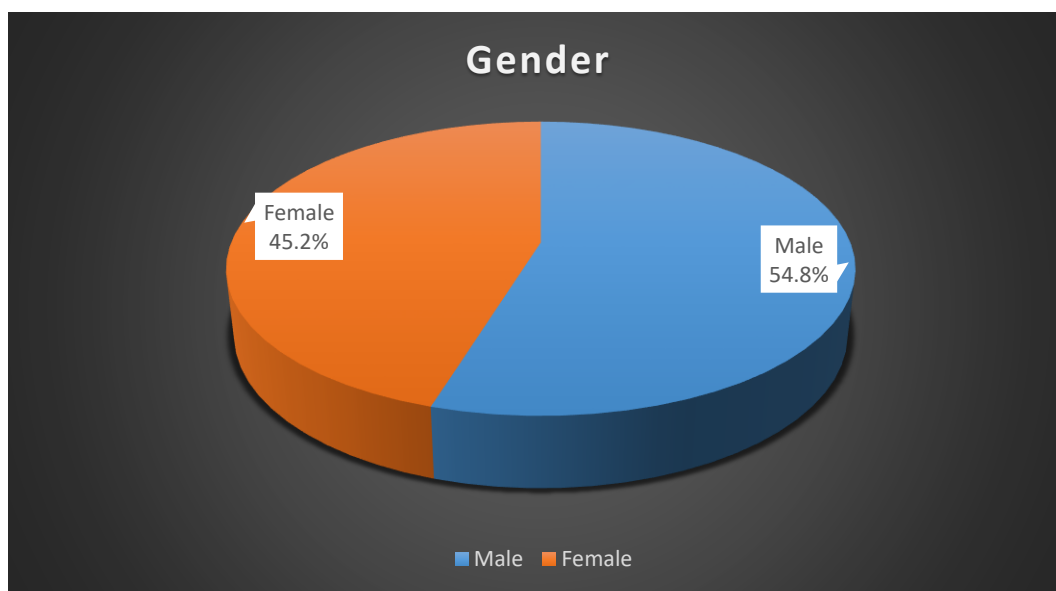


Figure 5.1: Gender distribution of respondents

Source: Compiled by author

As presented in Figure 5.1, male respondents have the higher representation at 55 per cent whereas females registered 45 per cent of the total (n=221) respondents. This equates to frequencies of (n=121) for males and (n= 100) for females.

5.4.1.2 Age distribution of respondents

The age distribution of respondents is presented in Figure 5.2

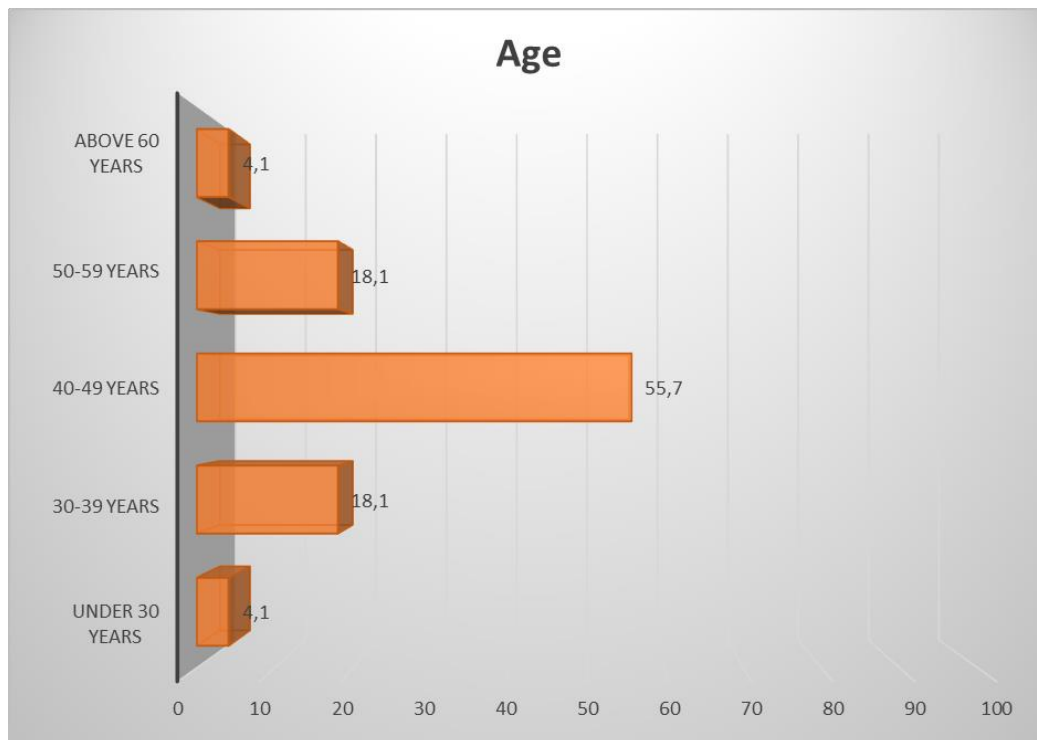


Figure 5.2: Age distribution of respondents

Source: Compiled by author

With regards to the age distribution, the results reveal that a large proportion of the FMCG employees were aged between 40-49 years (55.7%; n=123). This is followed by two age group categories that obtained the same number of respondents. Respondents aged 30-39 years of age obtained 18.1% (n=40) and those aged between 50-59 years also recorded a similar frequency of 18.1% (n=40). A total of 9 respondents (n=9) were aged under 30 years, which equates to a percentage of 4.1%. A total of nine respondents were aged above 60 years of age, which represents 4.1% of the sample.

5.4.1.3 Highest qualification of respondents

The qualifications of respondents are presented in Figure 5.3

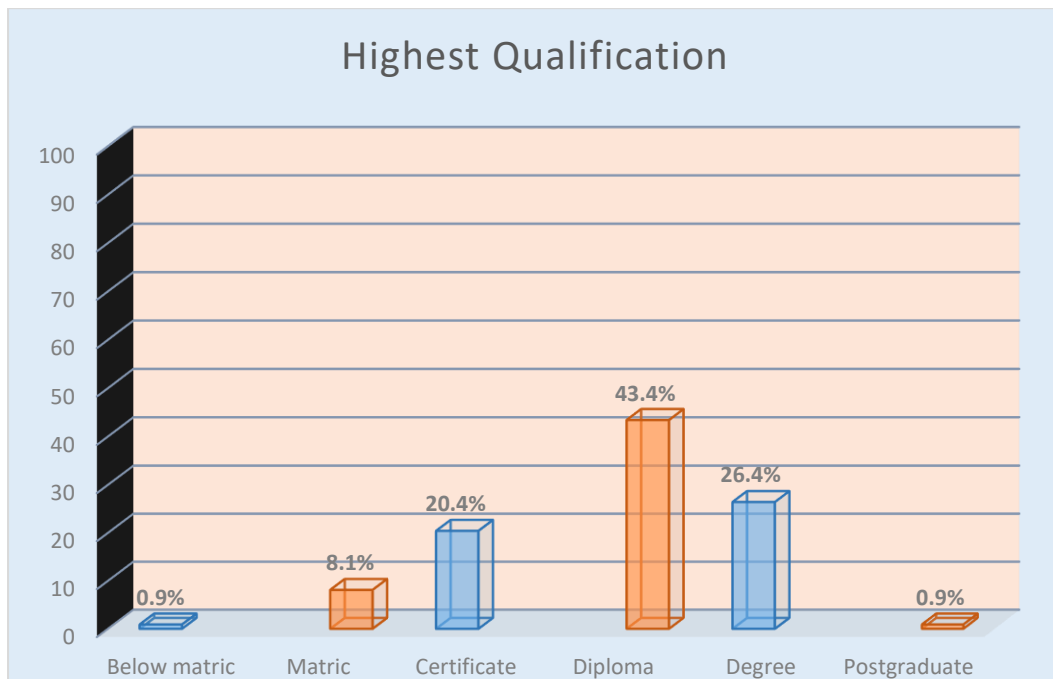


Figure 5.3: Highest qualification of respondents

Source: Compiled by author

The results in Figure 5.3 indicate that 96 of these employees are holders of diplomas, which accounts to 43.4%. A fair proportion was represented by degree holders totalling 26.4% of the total (n=221). Employees who hold certificates accounted for 20.4% (n=45) of the sample, whilst matric holders accounted for 8.1% (n=18). Employees who did not have matric made up 0.9% (n=2) of the total sample. The last group of respondents are those who hold postgraduate degrees at 0.9% (n=2).

5.4.1.4 Racial distribution of respondents

The racial distribution of employees is presented in Figure 5.4.

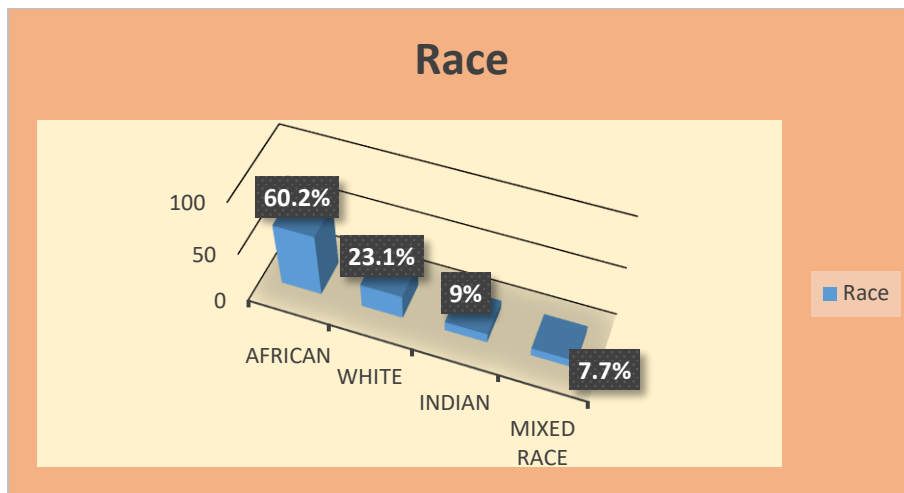


Figure 5.4: Racial distribution of respondents

Source: Compiled by author

Figure 5.4 depicts the race distribution of the respondents that participated in the study. Out of the 221 respondents, 133 were African which represents the majority of the sample at 60.2%. The White race (n=51) appeared to be the second highest representation of the sample, with a percentage of 23.1. This is followed by Indian (n=20) which accounts for 9% and Mixed race (n=17) for 7.7%.

5.4.2 Employment details of respondents

The second part of the analysis was about the employment details of the respondents. The characteristics that were considered included their type of contract, employment period as well as their occupational area. The results are presented in Table 5.4.

Table 5.4: Operational characteristics

VARIABLE	CATEGORY	FREQUENCY (n)	PER CENTAGE (%)
(A5) Type of Contract	Contract	79	35.7
	Permanent	142	64.3
Total		N= 221	100

VARIABLE	CATEGORY	FREQUENCY (n)	PER CENTAGE (%)
(A6) Employment Period	Less than 5 years	39	17.6
	6-10 years	41	18.6
	11-15 years	94	42.5
	16-20 years	35	15.8
	21 years or above	12	5.4
Total		N= 221	100
(A7) Occupational Area	Transport	15	6.8
	Warehousing	17	7.7
	Contract Management	20	9.0
	Procurement	119	53.8
	Customer services	50	22.6
Total		N= 221	100

Source: Compiled by author

The discussions of each specific category of employment details are provided in Sections 5.4.2.1 to Section 5.4.2.3.

5.4.2.1 Type of contract

The type of contract for respondents is presented in Figure 5.5.

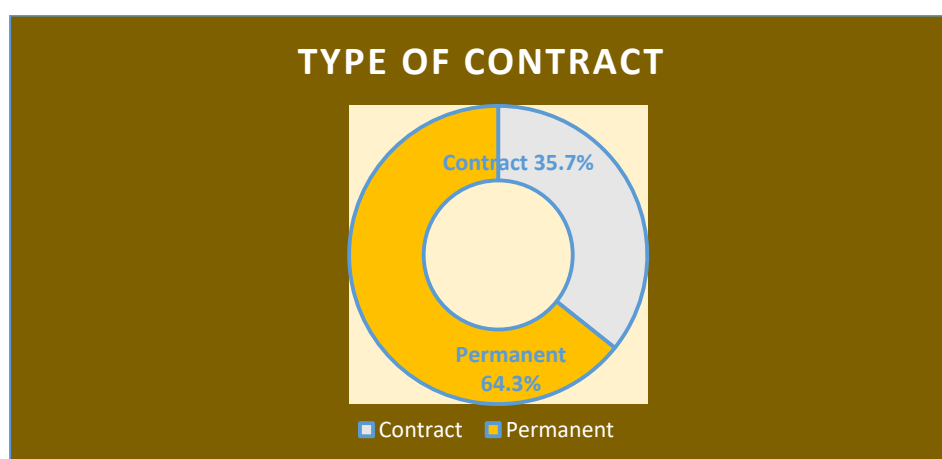


Figure 5.5: Type of Contract

Source: Compiled by author

Figure 5.5 depicts the type of contract that exists between the firms and its employees. The majority (64.3%; n= 142) of the respondents that participated in this survey are employed on a permanent basis. Contract employees equated to 35.7% (n=79) of the total respondents.

5.4.2.2 Employment period

The employment period of employees is presented in Figure 5.6.

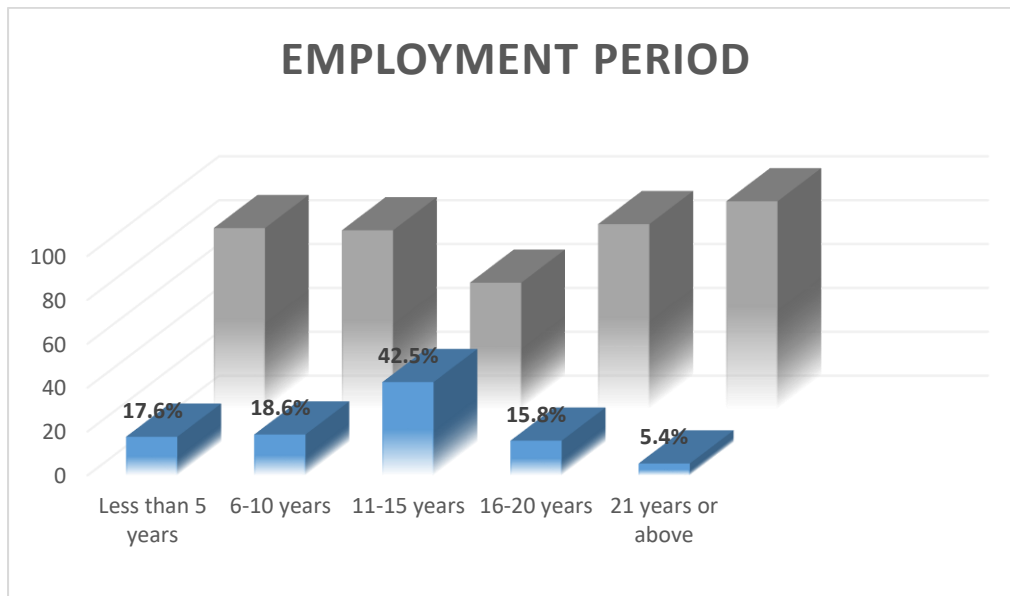


Figure 5.6: Employment Period

Source: Compiled by author

With regards to the employment period, 42.5% (n=94) of the employees have been in service for 11 to 15 years, whilst 18.6% (n=41) have been employed in the FMCG industry for between 6 to 10 years of service. At least 17.6% (n= 39) of respondents have worked in the industry for less than five years. The category of employees who have spent 16 to 20 years in service is 15.8% (n=35). The last group (5.4%; n=12) was composed of respondents who have worked in the FMCG industry for more than 21 years.

5.4.2.3 Occupational area

The occupational area for respondents is presented in Figure 5.7.

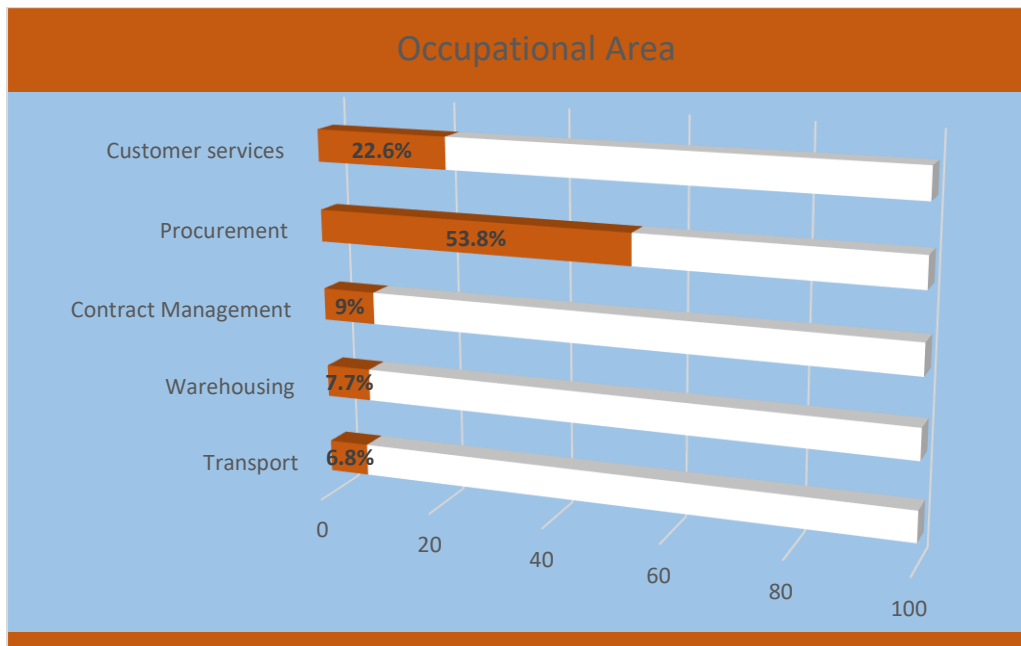


Figure 5.7: Occupational area

Source: Compiled by author

Of the 221 respondents that participated in this survey, a majority (53.8%; n=119) were drawn from the procurement department. The customer services department was fairly represented (22.6%; n=50), followed by those drawn from the contract's management department (9%; n=20) and the warehousing department (7.7%; n=17). The transport department had the least level of representation in the sample (15%; n=15). It is evident based on the demographic analysis that the procurement industry was the most dominant department, registering more than half of the total respondents surveyed. This result demonstrates that the current study is relevant since it was focused on determining the level of ethical compliance in the SCM environment, of which procurement is a major contributor.

The next section explores the EFA procedure of the three measurement scales under consideration in this study.

5.5 EXPLORATORY FACTOR ANALYSIS

EFA is a statistical method that is used by researchers to uncover complex patterns by exploring the data set and testing predictions (Young & Pearce, 2013:79). There are two forms of EFA, namely Factor Analysis (FA) and Principal Component Analysis (PCA) (Mvududu & Sink, 2013:77). Factor analysis refers to a process in which mass data is analysed and observed by shrinking it to a smaller data set that is more manageable and more understandable (Zhang & Browne, 2010:456). In contrast, PCA analyses the relationships between the individual and total (common and error) variances shared between items (McNeish, 2017:638). In this study, PCA with Varimax Rotation was performed to extract the dimensions of ethical SCM. Varimax Rotation is a statistical technique which is part of the oblique Promax criterion used at one level of EFA to clarify relationships among factors (Scharf & Nestler, 2018:121). After selecting Varimax Rotation, a PCA test was performed to check the number of factors influencing variables and to analyse which variables have similar components. In this study, three measurement scales (LC, SM and PE) were analysed in the EFA procedure.

EFA was performed using a set of three criteria to determine the factor structure of the three scales under consideration in this study. The three criteria included factor loadings, communalities, and the scree plot criterion. Factor loading is a set of entries where the parameters estimated are correlated in a simple structure used to perform the EFA procedure (Trendafilov, 2014:433). Arthur-Aidoo, Aigbavboa and Thwala (2018:5) suggest that the minimum threshold for retaining factor loadings when performing an EFA procedure should not be less than 0.5.

The second criteria used to determine the factor structure is known as communalities. Communality coefficients indicate the variance of a measured variable reproduced by a set of extracted factors also referred to as R^2 type effect size (Odum, 2011:16). Communality values indicate the amount of variance in each variable explained by the extracted factors. McNeish (2017:638) validates that when communality values are close to zero, the associated variable might be an outlier and pose a significant risk to the outcome of the model. In determining the cut-off threshold, communalities with values above 0.3 are acceptable, as recommended by Field (2013:526).

The third criteria used to determine factor structure is known as the scree plot diagram. The scree plot is used to identify eigenvalues from the factor components of a particular measurement scale (Tabachnick & Fidell, 2013:17). Furthermore, the scree plot is visually

examined to confirm the extracted factors that are above or at the sharp break between the slopes of the factors (Li, Wang, Chen & Dai, 2015:1168). A scree plot displays a downward curve which reveals the eigenvalues on the y-axis and the number of factors on the x-axis. In a scree plot diagram, eigenvalues equal to or greater than one are considered acceptable and retained back in the study (Watson, 2017:234). The next stage ascertained the sampling adequacy of the retained factors.

Several statistical decisions are necessary in testing for sampling adequacy before conducting the EFA (Watson, 2017:232). To check for the factorability of the data, Bartlett's Test of Sphericity and a Kaiser Meyer Olkin (KMO) test of sampling adequacy were performed. The KMO test ensures that the strength of relationships among variables are based on zero-order and partial correlations while measuring sampling adequacy for each variable and the overall model (Watson, 2017:232). Tabachnick and Fidell (2013:17) attest that in order to proceed with an EFA procedure in any particular study, the KMO values should exceed 0.50.

A second test performed to ensure sampling adequacy was the Bartlett's test of sphericity. The test was performed to estimate the degree to which the inter-correlation matrix produced is an identity matrix. The EFA procedure is considered appropriate when bivariate correlations in the identity matrix are zero or yield a significant cut-off of no greater than 0.001 (Mvududu & Sink, 2013:77). In essence, when p values are less than 0.05 on Bartlett's test, this highlights that the inter-correlation matrix is not an identity matrix, which confirms that linear combinations exist and individual variables are sufficiently correlated for a factor analysis to be performed (Watson, 2017:234). In this study, both the KMO and the Bartlett's test of sphericity were performed, and the results are presented in Table 5.5.

Table 5.5: The KMO measure and the Bartlett test results

CONSTRUCTS	KMO MEASURE	BARTLETT'S TEST		
		Approximate Chi-Square	Degrees of freedom	Significance level
LC	0.724	1274.635	171	0.000
SM	0.662	432.619	45	0.000

CONSTRUCTS	KMO MEASURE	BARTLETT'S TEST		
		Approximate Chi-Square	Degrees of freedom	Significance level
PE	0.743	1220.600	171	0.000
LC= legal components; SM= supplier management; PE= personal ethics.				

Source: Compiled by author

Table 5.5 indicates the results of the KMO and the Bartlett's tests that were performed on the three measurement scales. The KMO values of the three constructs registered values of 0.724, 0.662 and 0.743 which are above the minimum cut-off value of 0.5. The significance level was $p=0.000$ for all three constructs. Since the results of the Bartlett's and the KMO tests satisfied the recommended thresholds, it was determined that the collected data was factorable; hence, EFA could be performed. The EFA procedure was performed on the constructs adopted in this study (LC, SM & PE) in Sections 5.5.1 to Section 5.5.3.

5.5.1 Exploratory Factor Analysis for Legal Components (LC)

EFA for the LC scale yielded six factors. The retained measures had items with factor loadings greater than or equal to 0.50, with an eigenvalue either equal to or greater than 1 (McNeish, 2017:638). An additional test known as the scree plot was performed to illustrate graphically the factors that were retained under this construct. De Vellis (2012:5) indicates that the test involves constructing a plot of extracted factors against their eigenvalues in descending order of magnitude. Table 5.6 presents the results of the rotated six factor solution for the LC construct.

Table 5.6: Six-factor rotated solution for the Legal Components scale

ITEM CODE	Description	Factor					
		1	2	3	4	5	6
LC1	I can trust my firm in that it honours all commitments once they have been made	.120	.855	.038	.034	- .063	.060
LC2	Contracts are clear such that everyone knows what is expected	.128	.896	.024	.057	.064	.020
LC3	Giving gifts/incentives is discouraged in business transactions involving my firm	.250	.764	.043	.013	.048	- .009
LC5	My firm is not only concerned with what is legal, but also with what is morally right	.704	.233	.050	.050	- .039	.078

ITEM CODE	Description	Factor					
		1	2	3	4	5	6
LC6	Staff members who take bribes face penalties	.851	.023	.058	.113	- .003	.006
LC7	My firm is highly regarded as far as business ethics is concerned	.803	.119	- .070	.078	.211	- .046
LC8	My firm has a strict code of ethics	.661	.269	- .049	.058	.300	- .099
LC10	Employees are discouraged from awarding contracts to family and friends	.176	.027	.204	.144	.836	.006
LC11	Management is active in combating unethical behaviour	.108	-.001	- .003	.131	.855	.059
LC13	It is very rare for people to get away with unethical behaviour in my firm	.114	.035	.029	.720	.282	- .057
LC14	Management at my firm has an open-door policy	.100	-.038	- .005	.782	.127	.128
LC15	My firm's policies are implemented effectively to govern procurement managers	.039	.099	.075	.766	- .059	- .014
LC17	Information provided by prospective suppliers in response to an invitation to bid is kept confidential by the procurement unit	-.118	.049	.642	.082	.264	.037
LC18	My firm conducts all procurement and bidding processes in an ethical manner	.026	-.011	.870	.075	- .016	.001
LC19	Staff are accountable for all actions during procurement processes	.089	.062	.819	- .048	- .020	.110
LC20	My firm ensures transparency in all procurement steps	.062	-.049	.039	.026	- .028	.876
LC21	The firm's procurement processes encourage fair competition among prospective suppliers	-.087	.113	.094	.028	.084	.829
Eigenvalue		3.928	2.386	2.040	1.462	1.392	1.183
Reliability (Cronbach Alpha)		0.796	0.823	0.700	0.661	0.764	0.651
Total variance explained		20.673	12.558	10.736	7.697	7.324	6.229
Cumulative variance explained		20.673	33.231	43.967	51.664	58.988	65.217

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.

Loading <0.50 excluded from analysis

As revealed in Table 5.6, the EFA procedure for the LC scale produced six factors. From the initial LC scale, items LC4, LC9 and LC12 were discarded from the analysis due to high error variance and an occurrence of cross loadings across multiple factors (multiple factor loadings). Item LC 22 was also discarded from the EFA test because it had a low factor loading of 0.447. The retained components had factor loadings which were above the recommended threshold of 0.5. The six factors retained all registered eigenvalues that were greater than one. These results are further illustrated in the scree plot presented in Figure 5.8.



Figure 5.8: Scree plot for legal components

Source: Compiled by author

The scree plot (Figure 5.8) indicates that out of the 22 initial items in the scale, only 17 items were retained. It further indicates that six factors with eigenvalues greater than 1 were extracted as suggested by some scholars (Cattell, 1966:253; Watson, 2017:234). A detailed composition of each individual factor extracted from the LC scale is discussed in Section 5.5.1.1.

5.5.1.1 Naming and interpretation of factors

Factor 1, labelled as **Moral Standards**, consisted of four items (LC5, LC6, LC7 & LC8) and accounted for 20.67% of the total variance explained. Moral standards are concerned with cautious and logical reflections about the behaviour of employees in a workplace (Perezts & Picard, 2014:8). In essence, the moral principles which employees are expected to display enable an organisation to achieve a correct analysis of situations. Hence, a distinction has been made by Yuan, Vu and Nguyen (2018:35) who insist that ethics is a matter of understanding, whereas morality is a matter of doing. Thus, moral standards provide a rational criterion for employees to decide to behave in a principled manner, and it may not be associated with learning and life experiences (Mayer, Aquino, Greenbaum & Kuenzi, 2012:155). Morality is designed or shaped by the rules or instructions given by those with authority or expert personnel, whether or not employees approve certain decisions (Yuan *et al.*, 2018:35). For this reason, supervisors and managers in the workplace are encouraged to display systematic reflections on certain situations for employees to adhere to the organisation's code of ethics.

Factor 2, labelled as **Transparency**, consisted of three items (LC1, LC2 & LC3) and accounted for 12.56% of the total variance explained. Transparency can be defined as a perception that focuses on the disclosure of information that is shared voluntarily and intentionally (Lin, Eisingerich & Doong, 2017:12). More so, transparency reviews access to information and directs it to certain objectives that are aligned to an organisation's consumer policy guideline. Romani and Grappi (2014:945) outline that transparency in businesses is good for consumers, which necessitates the organisation's willingness to engage in sustainable and responsible ways of conducting business activities. A study conducted by Doorey (2011:589) indicates that transparency in SCM highlights a powerful tool that acts as an organisation's confidence mechanism amongst its stakeholders such as its suppliers and other industry players.

Factor 3, labelled as **Professional Competence**, consisted of three items (LC17, LC18 & LC19) and accounted for 10.74% of the total variance explained. Professional competence in business is described as a combination of organisational and individual abilities to undertake various tasks within the constraints of their workplace environments (Adesi, Owusu-Manu & Murphy, 2016:458). Nalewaik (2012:12) suggests that ensuring professional competence amongst organisations requires both technical and managerial competence in order to meet stakeholder expectations. Adesu *et al.* (2016:461) indicate that competencies are human characteristics for effective professional performance, providing some important characteristics such as knowledge, skills and special attributes for success in a particular endeavour. A study conducted by Perianez-Cañadillas, Charterina and Pando-García (2019:141) indicate that larger organisations tend to invest more resources in order to perform tasks, resulting in a higher preference for internal training within supply chains. Thus, it is plausible to assume that firm size has a far-reaching conditioning effect on the required competences in order for firms to conduct businesses in an ethical manner (*ibid*).

Factor 4, labelled as **Corporate Governance**, consisted of three items (LC13, LC14 & LC15) and accounted for 7.68% of the total variance explained. Corporate governance has been linked to the success and sustainability of industries that promote ethical compliance and functionality (Devaney, 2016:4). As such, developing SM and accountability remains a fundamental issue together with improving engagement from the other crucial players in the SCM environment such as the planning and control personnel. However, a number of issues and challenges in terms of corporate governance that are specific to firms have been widely scrutinised by industry experts in emerging markets of different countries (Turner, Fitzsimmons, Forster, Mahon, Peterson, & Stead, 2014:108). Such challenges include the limited levels of

participation by women as team leaders within the governance structures of their organisations. Secondly, it is necessary to develop appropriate training and support for procurement personnel in the context of relatively low levels of literacy and related skills. As a result, such actions could reduce conflicts between members and their boards as these appear to be present in modern day business activities (Turner *et al.*, 2014:108).

Factor 5, labelled as **Accountability**, consisted of two items (LC 10 & LC11) and accounted for 7.32% of the total variance explained. The factor attained a Cronbach's alpha of 0.764, which indicates an acceptable internal consistency value. This high Cronbach's alpha is the rationale for retaining the factor despite the fact that it consisted of two measurement items. Accountability is a system that organisations have imposed in their policy documents and is guided by virtue of contract, fiduciary duties and regulatory standing to intervene in certain circumstances of unethical practices (Tyler, Absher, Garman & Luppino, 2017:47). In essence, sound practical accountability measures in organisations create an opportunity to prioritise flexibility and legal accountability for social good. This, however, attracts open paths to pursue value at the expense of social good, which may or may not be what policy intends. Bradford, Luke and Furneaux (2018:163) denote that accountability is largely influenced by dominant stakeholders, such as crucial suppliers and funding organisations, which may have strict procedures required for submission of reports on outputs and impacts on collective turnover figures. As a result, formal accountability is directed to such stakeholders, whereas more informal types of accountability are channelled to less powerful stakeholders such as internal auditors (Abouassin & Trent, 2016:286).

Factor 6, labelled as **Fairness**, consisted of two items (LC 20 & LC21) and accounted for 6.23% of the total variance explained. This factor registered a Cronbach's alpha value of 0.651 of internal consistency. Although the factor had two items, it was retained in the study because of its acceptable reliability (refer to Sect., 5.12.1). A study by Cropanzano, Fortin and Kirk (2015:280) ascertained that fairness brings beneficial results to both employees and employers. As such, when employees advocate that they have been treated fairly, they display these attributes by revealing more positive work attitudes, higher job performance, and an acceptable citizenship behaviour. Kennedy and Santos (2019:529) assert that whenever fairness is projected in organisations when dealing with different stakeholders such as suppliers, trust can be ascertained within the different spheres of business mainly through employee engagement and non-exploitative intent. This promotes due diligence when addressing issues such as procurement and buying of goods in the supply chain industry.

The next section discusses the EFA procedure for SM.

5.5.2 Exploratory Factor Analysis (EFA) for Supplier Management (SM)

In this study, Section C of the measurement scale, labelled as SM, was presented and measured with three factors. These were represented and measured through three components: supplier assessment and monitoring, relationship commitment and supplier collaboration. The factors were identified through the EFA. A scree plot was employed to indicate how the three factors were extracted from the SM measurement scale. Table 5.7 presents the results of the extracted three factor solution for the SM scale.

Table 5.7: Three-factor rotated solution for the supplier management scale

ITEM CODE	Description	Factor		
		1	2	3
SM1	My firm is tough but fair in its price negotiations	.009	.150	.821
SM2	My firm has regular meetings with its suppliers, which helps to maintain a good working relationship	.062	.147	.855
SM3	A loyal and enduring relationship with suppliers of products and services is important to my firm	.084	.648	.412
SM4	Everybody is given an equal opportunity to submit proposals for contracts	.065	.865	.065
SM5	My firm respects the confidentiality of supplier pricing and other information shared during negotiations	.198	.708	.087
SM6	My firm discourages its staff from denigrating their competitors' products	.642	.106	.207
SM7	My firm expects suppliers to be transparent, and is also transparent itself	.831	-.088	.220
SM8	My firm has a selection process for awarding contracts to suppliers	.707	.174	-.107
SM9	All suppliers are treated equally	.520	.217	-.197
Eigenvalue		2.714	1.601	1.151
Reliability (Cronbach Alpha)		0.630	0.683	0.716
Total variance explained		30.153	17.785	12.792
Cumulative variance explained		30.153	47.938	60.730

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.

Loading <0.50 excluded from analysis

As revealed in Table 5.7, the EFA procedure for the SM scale extracted three factors. Measurement item SM 10 was discarded from the study because it had a low communality value of 0.026. Samuel (2016:1) indicates that it is advisable to remove any item with a communality score less than 0.3. The retained components had factor loadings that were above the recommended threshold of 0.5 (Field, 2013:692). The eigenvalues for the three factors were either equal to or greater than 1. Figure 5.8 presents the retained components of the SM scale in a scree plot diagram.

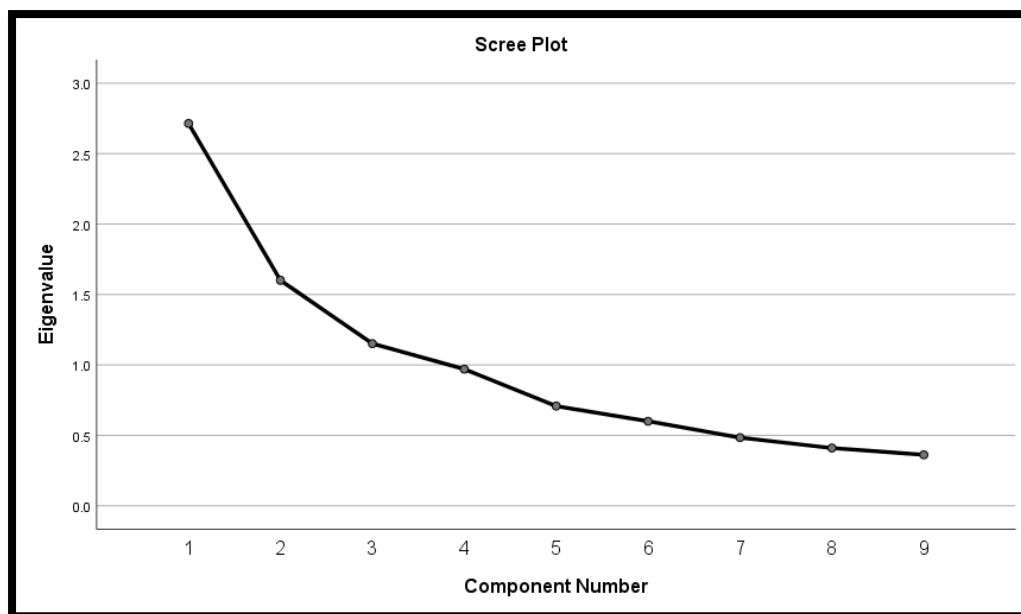


Figure 5.8: Scree plot for Supplier Management

Source: Compiled by author

Figure 5.8 depicts the scree plot for the SM measurement scale that was extracted from Section C of this research survey. The scree plot illustrates nine components out of the initial 10 components from the measurement scale. Three of the nine factors had eigenvalues that surpassed the required threshold of equal or greater than one. A detailed discussion of these three factors are provided in Section 5.5.2.1.

5.5.2.1 Naming and interpretation of factors

Factor 1, labelled as **Supplier Assessment and Monitoring (SAM)**, consisted of four items (SM6, SM7, SM8 & SM9) and accounted for 30.15% of the total variance explained. Supplier assessment has been defined as a set of metrics or measures used to quantify the efficiency and/or effectiveness of an action (Romule, Bak, Colicchia & Shaw, 2019:818). Gustafsson and Karlsson (2012:12) highlight that supplier assessment requires the determination of an appropriate performance measurement for each supplier to ensure correct attention is directed to a potential organisational challenge. In such a view, a study conducted by Kshatriya, Dharmadhikari, Srivastava and Basak (2017:77) insists that supplier-buyer feedback exchange is paramount in identifying, eliminating, and preventing inefficiencies across the supply chain. Hence, assessing the performance of suppliers provides a detailed evaluation process, which assists the management to monitor supplier performance with the emphasis on their

inefficiencies and the gap between ‘where we are now’ and ‘where we want to be in the future’ (Romule *et al.*, 2019:820).

Factor 2, labelled as **Relationship Commitment**, consisted of three items (SM3, SM4 & SM5) and accounted for 17.79% of the total variance explained. Relationship commitment is described as a reflection on the motivation of the focal firm to work together with its suppliers to solve environmental, technical and managerial problems occurring in their businesses (Chae, Choi & Hur, 2017:43). Relationship commitment can be sub-divided into two groups, namely normative and instrumental commitment. Normative relationship commitment indicates that the buying organisation seeks to attain emotional factors and values to maintain a long-term and continuous partnership with its suppliers (Wang, Feng, Zhao & Song, 2018:880). In such a view, having long term partnerships may advocate in creating business networks where participating firms can be able to develop mutual trading agreements and objectives. In contrast to normative relationship commitment, is instrumental relationship commitment which focuses on the focal firm’s willingness to maintain partnerships with suppliers based on remuneration agreements for any services rendered for by the buying organisation (Lo, Shanshan, Zhiqiang & Xiande, 2018:527). More so, this type of relationship commitment limits the participation of suppliers due to its lack of SM development programs that can be delivered without remuneration or contractual obligations (Wang *et al.*, 2018:882). As a result, normative relationship commitment remains a catalyst for continuous improvement in relationships between the focal firm and its suppliers.

Factor 3, labelled as **Supplier Collaboration**, consisted of two items (SM1 & SM2) and accounted for 12.79% of the total variance explained. Madden, Scannapieco, Killian and Adorno (2017:66) suggest that factors with alpha values above 0.7 that have two items (statements) can be retained for further analysis. Supplier collaboration can be described as an act of strategic alliance within trading firms that have common goals, vertical integration (partnerships), dyadic interaction (long-term commitment) and channel integration to ascertain business relationships (Hudnurkar, Rathod, Jakhar & Vaidya, 2016:401). A number of benefits by businesses that collaborate with their suppliers have been achieved. Greco, Grimaldi and Cricelli (2015:153) indicate that firms that collaborate with suppliers achieve operational benefits such as decreased costs through improved lead time on delivery of goods, enhanced quality through better product design, and sharing of specialised knowledge with the support of technology driven mechanisms between supply chain partners. Although several benefits can be achieved through collaboration between organisations and suppliers, several drawbacks

are still present in this regard. Hudnurkar *et al.* (2016:405) state that the involvement of external stakeholders (suppliers) in supply chains has been coupled with indepth actions on both product and process innovation performance to ascertain effective SCM practices. In this regard, constant engagement in the form of industry seminars is required to deal with such challenges.

The next section discusses the EFA procedure of the PE scale.

5.5.3 Exploratory Factor Analysis (EFA) for Personal Ethics (PE)

EFA for the PE measurement scale yielded five factor dimensions. Measurement scale items PE9, PE12 and PE17 were deleted due to cross factor loadings. Item scale PE5 was discarded because it had a low factor loading of 0.453, which is below the cut-off threshold of 0.5 (Field, 2013:692). From the initial five factors extracted in the EFA procedure, only three factors were retained in this study. Factors 4 and 5 were discarded because they had poor reliability as indicated by low Cronbach's alpha values of 0.590 and 0.387 respectively. The rotated factor solution for the PE scale is presented in Table 5.8.

Table 5.8: Five-factor rotated solution for the PE scale

ITEM CODE	Description	Factor				
		1	2	3	4	5
PE1	I take a day off only when it is necessary	.769	-.061	.046	.134	.037
PE 2	I typically report a co-worker's violation of the firm's policies and guidelines	.778	.109	.066	.127	.152
PE 3	I avoid divulging confidential information to parties external to the firm	.809	.127	.027	.047	-.007
PE 4	I take the necessary time to do a job	.657	.383	.219	-.063	.080
PE 6	I avoid falsifying time/quality/quantity reports	.326	.641	.166	.136	-.258
PE7	I do not authorise subordinates to violate the firm's policies and guidelines	.127	.793	.016	.084	.109
PE8	I do not falsify internal time/quality/quantity reports for the organisation	.004	.767	.079	.106	.102
PE10	I keep away from claiming credit for the work of my peers	.146	.149	.125	.768	-.147
PE11	I keep away from giving gifts/favors in exchange for preferential treatment	.088	.105	.046	.830	.227
PE13	I refrain from overstating expense accounts by more than 10% of the correct amount	.066	.147	-.005	.212	.784
PE14	I abstain from using firm services for personal use	.130	-.078	.238	-.127	.680
PE15	I abstain from removing the firm's supplies for personal use	-.003	.237	.602	-.031	.376
PE16	I desist from using the firm's time for personal business	.083	.260	.534	.168	.066
PE18	In my firm, procurement staff have the necessary skills and experience to undertake the work on proposed projects	.142	.003	.768	-.049	.072
PE19	My firm has a procurement training program in place	.034	-.064	.739	.124	-.030

ITEM CODE	Description	Factor				
		1	2	3	4	5
Eigenvalue		3.759	1.729	1.491	1.204	1.133
Reliability (Cronbach Alpha)		0.785	0.683	0.641	0.590*	0.387*
Total variance explained		25.059	11.524	9.941	8.027	7.550
Cumulative variance explained		25.059	36.582	46.524	54.551	62.102
* = Factors discarded because of low reliability						

* = Factors discarded because of low reliability

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.

Loading <0.50 excluded from analysis

As revealed in Table 5.8, the EFA procedure extracted five factors but two factors (4 and 5) were discarded for further analysis because they had low reliability. The three retained components had factor loadings greater than 0.5 which is the required minimum threshold for this particular study. The measurement items that were retained in this study are illustrated by the use of a scree plot diagram in Figure 5.10 below.

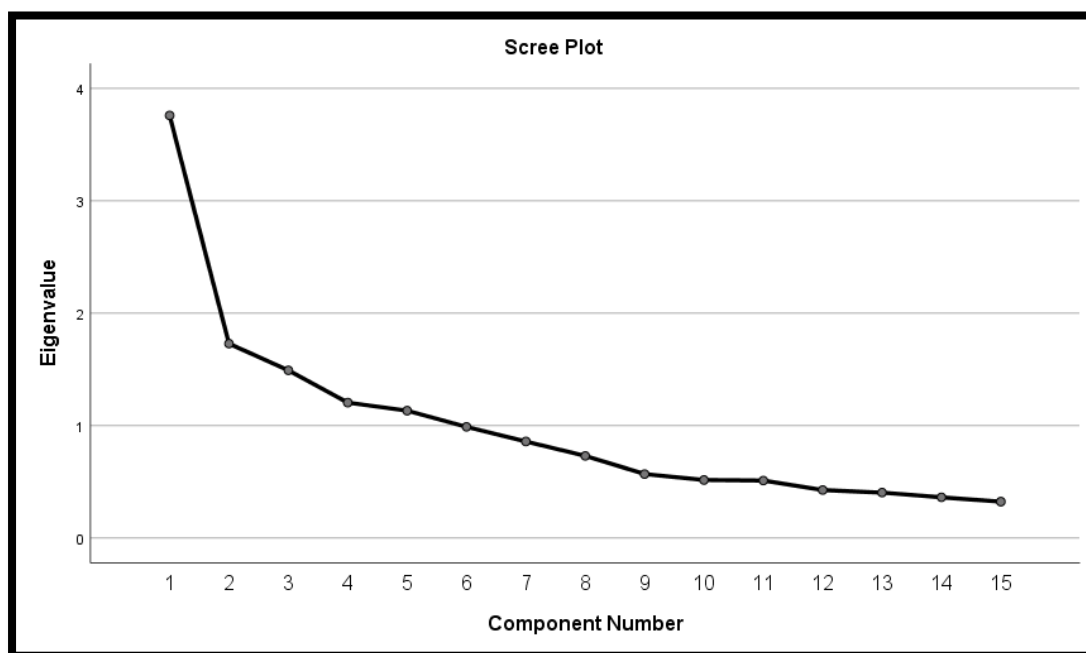


Figure 5.10: Scree plot for Personal Ethics

Source: Compiled by author

The scree plot (Figure 5.10) indicates that out of the 19 initial items in the scale, only 15 items were retained. It further indicates that five factors with eigenvalues greater than one were extracted, although two of those five factors were discarded because of low reliabilities <0.6. A detailed discussion of the three PE factors are provided in Section 5.5.3.1.

5.5.3.1 Naming and interpretation of factors

Factor 1, labelled as **Intrinsic Values**, consisted of four items (PE1, PE2, PE3 & PE4) and accounted for 25.06% of the total variance explained. Intrinsic values can be described as a set of consistent ethical perceptions that entail a specific interaction with personal and cultural norms (Mladenovic, Nonna & Anna, 2018:3). The term values is a norm that is used to measure the ethical and ideological integrity of humanity. As such, a well-crafted value system is a moral code which assists in distinguishing between morality in a narrow sense and morality in a much broader perspective (Wang & Calvano, 2015:595). Organisations have designed a system in which the beliefs of a specific mode of conduct or end state of existence is personally or socially preferable to an opposite or converse mode of conduct (Mladenovic *et al*, 2018:4). For this reason, values tend to be more difficult to change or alter than attitudes, although attitudes are based on values. Thus, work values are more specific than personal values, and have direct implications for the behaviour and attitudes of employees in organisations (Ke & Wang, 2014:77). A set of characteristics developed by Cronan, Mullins and Douglas (2018:203) details that intrinsic values relevant to individuals are achievement, concern for others, honesty, and fairness. Whenever these work-related values are achieved in an organisation, efficiency and effectiveness should be ascertained at all levels of organisational processes and practices.

Factor 2, labelled as **Honesty**, consisted of three items (PE6, PE7 & PE8) and accounted for 11.52% of the total variance explained. Honesty is an expression of the character of an individual and becomes a part of a platform through which people identify and perceive leaders' values (Ayoum, Rowe & Yassine, 2015:941). More so, executives in most organisations have a duty to understand their firm's policies and guidelines, as well as its mission, and how they are expected to achieve them (Carrington, Neville & Whitwell, 2014:2761). Similarly, there is always a need to know and follow the laws of the policy makers, particularly as they pertain to business practices (*ibid*). The nature of ethical compliance by policy makers states that supervisors in organisations must be honest about critical aspects such as production and turnover revenues at the end of every quarter (Gu & Neesham, 2014:529). While being dishonest is not always an offence, it can result in numerous consequences for an organisation (Ayoum *et al.*, 2015:942).

Factor 3, labelled as **Integrity and Skills**, consisted of four items (PE15, PE16, PE18 and PE19) and accounted for 9.94% of the total variance explained. Erhard and Jensen (2014:3) posit that integrity is concerned with the ability of an individual to ensure necessary

requirements for workability, by determining the processes that qualify for performance measurement goals and objectives. Thus, integrity ensures that performance should not only be measured by results but instead focus on other performance indicators such as the well-being and admiration of others. Organisations also play a vital role in determining the level of integrity that should be adhered to by its employees. Institutional integrity is defined as the persistence of an organisation's distinctive values and competence responsibilities (Goodstein, 2015:178). In support of the distinctive values required of institutional integrity, King (2015:154) states that integrity is of great importance particularly to those affiliated in organisations that promote ethical SCM. In light of this, the embodiment of purpose and the set of values employees believe in should be well respected as this promotes high morale for those employees undertaking those roles and responsibilities in organisations. As such, the skills that are required to ascertain the integrity of personnel can be formed from a variety of activities in a firm's strategic and planning portfolios, such as formal education, leadership development training programmes, coaching, mentoring, teamwork, networking, unstructured on-the-job learning and changes in role and tasks (Mathieu, Neumann, Hare & Babiak, 2014:85).

The next section discusses the descriptive statistics of the retained factors.

5.6 DESCRIPTIVE STATISTICS FOR CONSTRUCTS

This study explored ethical SCM factors with the use of three constructs, namely LC, SM and PE. These factors were explored by analysing the descriptive statistics with the use of frequencies and percentages of the retained factors. This section includes statistics such as the minimum and maximum values, overall and mean scores, standard deviation, skewness and kurtosis of the factors retained in the EFA procedure from the previous section. The application of skewness and kurtosis in this section was essential as it provided information regarding the distribution of the data. This was further essential as it determined whether parametric or non-parametric tests would be used when analysing the statistical mean differences within the data (refer to Sect., 5.7.1).

Skewness is defined as the measure of the degree of asymmetry, or departure, from the symmetry of a distribution (Mohammed, Adam, Ali & Zulkafli, 2020:2). When determining symmetry of distribution, two aspects are considered. This includes checking whether there is positive or negative distribution (Islam, 2019:872). Mohammed *et al.* (2020:2) indicate that whenever the frequency curve of a data has a longer tail to the right of the centre than to the

left, the data is said to be skewed to the right or has a positive skewness. If the reverse is the case, the data is said to be skewed to the left or to have negative skewness (*ibid*). Kurtosis is defined as a measure of unimodality versus bimodality of a distribution (Rosco, Pewsey & Jones, 2015:3630). A distribution having a relatively high peak is called leptokurtic whilst a distribution that is flat-topped is called platykurtic (Yusoff & Wah, 2012:3).

The next section discusses the descriptive statistics of the three measurement scales adopted in the study.

5.6.1 Descriptive statistics for the Legal components scale

The LC construct employed in this study was composed of six variables extracted in the EFA procedure. These include:

Factor 1: Moral standards (Items LC5, LC6, LC7 & LC8)

Factor 2: Transparency (Items LC1, LC2 & LC3)

Factor 3: Professional Competence (Items LC17, LC18 & LC19)

Factor 4: Corporate Governance (Items LC13, LC14 & LC15)

Factor 5: Accountability (Items LC10 & LC11)

Factor 6: Fairness (Items LC20 & LC21)

A summary of the responses to the six ethical indicators of the LC scale has been presented with the use of tables. The information was presented on a Likert-type scale configuration presented as follows; 1(strongly disagree), 2 (disagree), 3(neutral), 4 (agree), 5(strongly agree), respectively. The overall mean score was determined by computing the average of the item indicated on each scale. The overall mean score indicates the degree of satisfaction with a specific scale.

Standard deviations for the six LC sub scales revealed that the data were arranged close to their respective mean scores and were as such normally distributed. The normality of distribution of the six individual scales was further tested using skewness and kurtosis. The overall skewness and kurtosis values fell within the acceptable threshold limits (-2 to =2 for Skewness, and -3 to =3 for Kurtosis), further confirming the normal distribution of the captured data.

The results of the analysis of descriptive statistics for the six LC sub scales are presented in Section 5.6.1.1 to Section 5.6.1.6.

5.6.1.1 Descriptive statistics for Moral Standards

The descriptive statistics for Moral Standards are presented in Table 5.9

Table 5.9: Descriptive statistics for Moral Standards

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
LC5	My firm is not only concerned with what is legal, but also with what is morally right	1	5	3.98	.876	-.856	.867
LC6	Staff members who take bribes face penalties	1	5	4.04	.854	-1.049	1.503
LC7	My firm is highly regarded as far as business ethics is concerned	1	5	4.05	.857	-1.268	2.464
LC8	My firm has a strict code of ethics	1	5	4.00	.892	-1.310	2.299
Overall scale				4.01	.870	-1.126	1.783
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.9 indicates the results of the analysis of respondents' views on moral standards. Items LC5, LC6 and LC8 indicate mean and standard deviation values of ($\bar{x}$ =3.98: SD $\pm$ 0.876), ($\bar{x}$ =4.04: SD $\pm$ 0.854) and ($\bar{x}$ =4.00: SD $\pm$ 0.892) which reveal that respondents agreed with the view that their firms are concerned with how employees conduct themselves morally, hence they are willing to cooperate and desist from taking bribes from suppliers who offer them gifts and money in return for acquiring services and contracts unlawfully. Item LC7 (My firm is highly regarded as far as business ethics is concerned) achieved the highest mean score of ($\bar{x}$ =4.05: SD $\pm$ 0.857).

The overall mean for the scale was ($\bar{x}$ =4.01: SD $\pm$ 0.870), which is close to the 'agree' position on the Likert scale. This result suggests that managers and professional employees perceive that moral standards are being upheld in their firms. By implication, firms in the retail industry have put in place measures that ensure that SCM ethics are followed. Such developments give significance to the private industry's ethical and legal guidelines for SCM management practices.

5.6.1.2 Descriptive statistics for Transparency

The descriptive statistics for Transparency are presented in Table 5.1

Table 5.10: Descriptive statistics for Transparency

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
LC1	I can trust my firm in that it honours all commitments once they have been made	1	5	3.95	.737	-.741	1.274
LC2	Contracts are clear such that everyone knows what is expected	1	5	3.97	0.722	-.537	.472
LC3	Giving gifts/incentives is discouraged in business transactions involving my firm	1	5	4.05	0.784	-1.065	2.018
Overall scale				3.99	0.748	-0.781	1.255
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.10 presents how respondents perceive the level of transparency in their organisations. Items LC1 and LC2 indicate mean and standard deviation values of ($\bar{x}$ =3.95: SD $\pm$ 0.737) and ($\bar{x}$ =3.97: SD $\pm$ 0.722) which reveals that they agreed with the view that their organisation is concerned with how transparent their employees are when they perform contractual obligations with other stakeholders of the business. LC3 (giving gifts/incentives is discouraged in business transactions involving my firm) achieved the highest mean of ($\bar{x}$ =4.05: SD $\pm$ 0.784). This gives an indication that respondents had a positive attitude towards the organisation's legal framework. The overall mean scale was ($\bar{x}$ =3.99: SD $\pm$ 0.748) and therefore respondents are closer to the agree point on the Likert scale. Managers and professional employees concurred, therefore, that there was transparency in the SCM activities of their firms.

5.6.1.3 Descriptive statistics for Professional Competence

The descriptive statistics for Professional Competence are presented in Table 5.11

Table 5.11: Descriptive statistics for Professional Competence

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
LC17	Information provided by prospective suppliers in response to an invitation to bid is kept confidential by the procurement unit	1	5	4.20	.730	-1.318	3.584
LC18	My firm conducts all procurement and bidding processes in an ethical manner	1	5	4.30	.799	-1.401	2.668
LC19	Staff are accountable for all actions during procurement processes	1	5	4.56	.799	-2.225	5.192

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
Overall scale				4.35	0.776	-1.648	3.815
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree5=Strongly Agree							

Source: Compiled by author

Table 5.11 highlights that item 1 (LC17- Information provided by prospective suppliers in response to an invitation to bid is kept confidentially by the procurement unit) scored the lowest mean of ($\bar{x}$ =4.20: SD $\pm$ 0.730). The highest mean was scored by item 3 (LC19- staff are accountable for all actions during procurement processes). These results reveal that respondents strongly agree that their firms impose strict protocols in dealing with employees that act unduly during procurement procedures and processes. The overall mean score was ($\bar{x}$ =4.35: SD $\pm$ 0.776), which is very close to the ‘agree’ position on the Likert scale. This result indicates that their firms are proficient in executing SCM activities.

5.6.1.4 Descriptive statistics for Corporate Governance

The descriptive statistics for Corporate Governance are presented in Table 5.12.

Table 5.12: Descriptive statistics for Corporate Governance

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
LC13	It is very rare for people to get away with unethical behaviour in my firm	1	5	4.09	.802	-1.172	2.411
LC14	Management at my firm has an open-door policy	1	5	4.14	.833	-1.221	2.171
LC15	My firm’s policies are implemented effectively to govern procurement managers	1	5	4.10	.833	-1.055	1.700
Overall scale				4.11	0.823	-1.150	2.094
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree5=Strongly Agree							

Source: Compiled by author

Table 5.12 presents respondents’ structure and composition of governance structures within their organisations. Items LC13 and LC15 indicated lower mean and standard deviation values of ($\bar{x}$ =4.09: SD $\pm$ 0.802) and ($\bar{x}$ =4.10: SD $\pm$ 0.833) which reveals that they partially agree with the view that their organisation’s governance structures are well aligned with ethical SCM processes. LC14 (Management at my firm has an open-door policy) achieved the highest mean

of ($\bar{x}$ =4.14: SD $\pm$ 0.833). This reveals that respondents agree with the firm's policy structures on governance issues. The overall mean scale was ($\bar{x}$ =4.11: SD $\pm$ 0.823) which indicates that governance procedures that are implemented in the FMCG industry are well aligned to the expectations of employees and suppliers on 'what to do and what not to do'. Therefore, managers and professional employees concur that the implementation of corporate governance in the FMCG industry is satisfactory.

5.6.1.5 Descriptive statistics for Accountability

The descriptive statistics for Accountability are presented in Table 5.13.

Table 5.13: Descriptive statistics for Accountability

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
LC10	Employees are discouraged from awarding contracts to family and friends	1	5	4.01	.858	-1.019	1.603
LC11	Management is active in combating unethical behaviour	1	5	4.01	.882	-1.151	1.880
Overall scale				4.01	0.87	-1.085	1.742
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.13 indicates that both items in this scale recorded similar mean values. Item 1 (LC10- Employees are discouraged from awarding contracts to family and friends) scored a mean of ($\bar{x}$ =4.10: SD $\pm$ 0.858). Item 2 (LC11- Management is active in combating unethical behaviour) also scored a similar mean of ($\bar{x}$ =4.10: SD $\pm$ 0.882). The two items registering the same mean indicates that respondents agreed to the two statements that stipulate the firmness of FMCG companies taking action on employees that disregard ethical compliance rules and regulations as issued in terms of the firm policy. The overall mean scale for accountability was ($\bar{x}$ =4.01: SD $\pm$ 0.87), which is closely inclined towards the agree position on the Likert scale. In view of these results, managers and professional employees perceive that there is a high level of accountability within SCM in FMCG firms.

5.6.1.6 Descriptive statistics for Fairness

The descriptive statistics for Fairness are presented in Table 5.14.

Table 5.14: Descriptive statistics for Fairness

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
LC20	My firm ensures transparency in all procurement steps	1	5	4.18	.681	-1.019	2.841
LC21	The firm's procurement processes encourage fair competition among prospective suppliers	1	5	4.19	.739	-1.206	3.021
Overall scale				4.19	0.71	-1.113	2.931
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.14 indicates that item 1 (LC20- My firm ensures transparency in all procurement steps) scored a lower mean of ($\bar{x}$ =4.18: SD $\pm$ 0.681). A higher mean score of ($\bar{x}$ =4.19: SD $\pm$ 0.739) was attained by item 2 (LC21- The firm's procurement processes encourage fair competition among prospective suppliers) of the scale. A higher mean score on item two of this measurement scale indicates that respondents have confidence in how firms have fair selection processes when awarding contracts to suppliers. The overall mean scale was ($\bar{x}$ =4.19: SD $\pm$ 0.71) which reveals that the respondents are closer to the agree point on the Likert scale. Therefore, managers and professional employees agree that there is a high degree of fairness within their respective organisations.

The next section explores descriptive statistics of the SM scale.

5.6.2 Descriptive statistics for the Supplier Management Scale

Three factors were retained in the application of the EFA to the SM measurement scale. These factors are as follows:

Factor 1: SAM (Items SM6, SM7, SM8 & SM9)

Factor 2: Relationship Commitment (Items SM3, SM4 & SM5)

Factor 3: Supplier Collaboration (Items SM1 & SM2)

The three sub scales were examined with the use of descriptive statistics to ascertain the mean, SD, skewness and kurtosis. The information was presented on a Likert-type scale configuration presented as follows: 1(strongly disagree), 2 (disagree), 3(neutral), 4 (agree), 5(strongly agree), respectively. Standard deviations for the three SM sub scales indicated that the data were arranged close to their respective mean scores and were as such normally distributed. Nunnally

and Bernstein (2014:42) posit that whenever data is low, data is closer to the mean score. The normality of the data distribution was further analysed using the results of the assessment of skewness and kurtosis for the three sub scales. Data presented in Tables 5.15, 5.16 and 5.17 indicates that the average skewness and kurtosis vales for the three sub scales were -1.242 and 2.667 respectively. The kurtosis value of 2.667 is very close to the recommended value of 3, thereby signifying normally distributed data (Bastianin, 2020:640). The descriptive statistics were developed and discussed in Sections 5.6.2.1 to Section 5.6.2.3.

5.6.2.1 Descriptive statistics for Supplier Assessment and Monitoring

The descriptive statistics for SAM are presented in Table 5.15

Table 5.15: Descriptive statistics for Supplier Assessment and Monitoring

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
SM6	My firm discourages its staff from denigrating their competitors' products	1	5	4.24	.758	-1.317	2.721
SM7	My firm expects suppliers to be transparent, and is also transparent itself	1	5	4.24	.780	-1.077	1.528
SM8	My firm has a selection process for awarding contracts to suppliers	1	5	4.21	.780	-1.179	2.145
SM9	All suppliers are treated equally	1	5	4.30	.788	-1.381	2.411
Overall scale				4.25	0.777	-1.234	2.201
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.15 presents respondents' perceptions on how suppliers are evaluated and monitored within their organisations. Items SM6, SM7 and SM8 indicated lower mean and standard deviation values of ($\bar{x}$ =4.24: SD $\pm$ 0.758), ($\bar{x}$ =4.24: SD $\pm$ 0.780) and ($\bar{x}$ =4.21: SD $\pm$ 0.780) which reveals that they partially agreed with the view that suppliers are adequately assessed when awarding contracts, and that continuous monitoring takes place between suppliers and the buying organisation to enhance effectiveness. SM9 (All suppliers are treated equally) achieved the highest mean of ($\bar{x}$ =4.30: SD $\pm$ 0.788), which demonstrates that suppliers are treated equally within the industry. The overall mean scale was ($\bar{x}$ =4.25: SD $\pm$ 0.777). Therefore, managers and professional employees feel that there is satisfactory supplier monitoring and assessment in the FMCG industry.

5.6.2.2 Descriptive statistics for Relationship Commitment

The descriptive statistics for Relationship Commitment are presented in Table 5.16.

Table 5.16: Descriptive statistics for Relationship Commitment

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
SM3	A loyal and enduring relationship with suppliers of products and services is important to my firm	1	5	4.14	.753	-1.205	2.853
SM4	Everybody is given an equal opportunity to submit proposals for contracts	1	5	4.20	.768	-1.277	2.821
SM5	My firm respects the confidentiality of supplier pricing and other information shared during negotiations	1	5	4.24	.765	-1.245	2.327
Overall scale				4.19	0.762	-1.242	2.667
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.16 indicates that item 1 (SM3- A loyal and enduring relationship with suppliers of products and services is important to my firm) scored the lowest mean of ($\bar{x}=4.14$; $SD \pm 0.753$). This indicates that respondents were neutral about how FMCG firms have put in place strategies to ensure that the focal firm has normative induced relationship commitment mechanisms for sustainable working conditions with its suppliers (Lo *et al.*, 2018:528). The highest mean was scored by item 3 (SM5- My firm respects the confidentiality of supplier pricing and other information shared during negotiations). The overall mean score for the SM scale was ($\bar{x}=4.19$; $SD \pm 0.762$), which confirms that managers and professional employees in the FMCG industry are committed to engaging with their suppliers on SCM related activities.

5.6.2.3 Descriptive statistics for Supplier Collaboration

The descriptive statistics for Supplier Collaboration are presented in Table 5.17.

Table 5.17: Descriptive statistics for Supplier Collaboration

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
SM1	My firm is tough but fair in its price negotiations	1	5	4.10	.738	-1.187	3.011
SM2	My firm has regular meetings with its suppliers, which helps to maintain a good working relationship	1	5	4.12	.766	-1.185	2.612
Overall scale				4.11	0.752	-1.186	2.812
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.17 indicates that item 1 (SM1- My firm is tough but fair in its price negotiations) scored a lower mean of ($\bar{x}$ =4.10: SD $\pm$ 0.738). A higher mean score of ($\bar{x}$ =4.12: SD $\pm$ 0.766) was attained by item 2 (SM2- My firm has regular meetings with its suppliers, which helps to maintain a good working relationship). With regards to SM2 achieving a higher mean, this indicates that respondents agreed more on having supplier involvement meetings that necessitate working relationships that are not compromised. The overall mean scale was ($\bar{x}$ =4.11: SD $\pm$ 0.752). An average mean score of $\bar{x}$ =4.11 for the supplier collaboration scale suggests that managers and professional employees agree that collaboration is an important mechanism in ensuring synergy between suppliers and the buying organisation.

The next section discusses descriptive statistics of the PE scale.

5.6.3 Descriptive statistics of the Personal Ethics scale

A summary of the responses to three ethical dimensions of the PE scale were presented in this section with the use of tables. The PE scale consisted of the following sub scales:

Factor 1: Intrinsic values (Items PE1, PE2, PE3 & PE4)

Factor 2: Honesty (Items PE6, PE7 & PE8)

Factor 3: Integrity and Skills (Items PE15, PE16, PE18 & PE19)

The PE scale was analysed with the use of descriptive statistics to ascertain the mean, SD, skewness and kurtosis of the constructs. The information was presented on a Likert-type scale configuration presented as 1(strongly disagree), 2 (disagree), 3(neutral), 4 (agree), 5(strongly agree), respectively. The average SD of the three sub scales under consideration in this study was closely associated with the mean values. This implies that data for these particular sub

scales were normally distributed across all factor variables. The overall skewness and kurtosis values for the three sub scales fell within the acceptable threshold limits (-2 to =2 for skewness, and -3 to =3 for kurtosis), further confirming the normal distribution of the captured data.

A summary of the descriptive statistics for the three PE sub scales is presented in Sections 5.6.3.1 to Section 5.6.3.3.

5.6.3.1 Descriptive statistics for Intrinsic Values

The descriptive statistics for Intrinsic Values are presented in Table 5.18.

Table 5.18: Descriptive statistics for Intrinsic Values

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
PE1	I take a day off only when it is necessary	1	5	4.14	.881	-1.124	1.218
PE2	I typically report a co-worker's violation of the firm's policies and guidelines	1	5	4.19	.827	-1.300	2.433
PE3	I avoid divulging confidential information to parties external to the firm	1	5	4.12	.808	-1.217	2.461
PE4	I take the necessary time to do a job	1	5	4.16	.848	-1.357	2.637
Overall scale				4.15	0.841	-1.250	2.187
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.18 indicates the results of the analysis of respondents' views of the employees' intrinsic values. Items PE1, PE3 and PE4 indicate mean and standard deviation values of ($\bar{x}$ =4.14: SD $\pm$ 0.881), ($\bar{x}$ =4.12: SD $\pm$ 0.808) and ($\bar{x}$ =4.16: SD $\pm$ 0.848). This reveals that respondents agree on the personal attributes that contribute to good ethical standards which employees are required to display when conducting their duties and obligations. PE2 (I typically report a co-worker's violation of the firm's policies and guidelines) achieved the highest mean of ($\bar{x}$ =4.19: SD $\pm$ 0.827). The overall mean for the scale was ($\bar{x}$ =4.15: SD $\pm$ 0.841), which suggests that managers and professional employees in the FMCG industry espoused intrinsic values that contribute to ethical SCM practices.

5.6.3.2 Descriptive statistics for Honesty

The descriptive statistics for Honesty are presented in Table 5.19.

Table 5.19: Descriptive statistics for Honesty

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
PE6	I avoid falsifying time/quality/quantity reports	1	5	4.05	.835	-.935	1.155
PE7	I do not authorise subordinates to violate the firm's policies and guidelines	1	5	4.06	.866	-.885	.755
PE8	I do not falsify internal time/quality/quantity reports for the organisation	1	5	4.10	.965	-1.110	.910
Overall scale				4.07	0.889	-0.977	0.940
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Source: Compiled by author

Table 5.19 highlights that item 1 (PE6- I avoid falsifying time/quality/quantity reports) scored the lowest mean of ($\bar{x}$ =4.05: SD $\pm$ 0.835). This result indicates that respondents felt that they were inclined to avoid misrepresentation of information in their SCM. The highest mean was scored by item 3 (PE8- I do not falsify internal time/quality/quantity reports for the organisation). The overall mean score for the SM scale was ($\bar{x}$ =4.07: SD $\pm$ 0.889), which reveals that respondents were close to the 'agree point' on the Likert scale. Hence, managers and professional employees in FMCG firms perceive that they exude a high degree of honesty in their SCM activities.

5.6.3.3 Descriptive statistics for Integrity and Skills

The descriptive statistics for Integrity and Skills are presented in Table 5.20.

Table 5.20: Descriptive statistics for Integrity and Skills

Item	Description Valid: (N=221)	Minimum	Maximum	Mean	Standard deviation	Skewness	Kurtosis
PE15	I abstain from removing the firm's supplies for personal use	1	5	4.14	.800	-1.174	2.144
PE16	I desist from using the firm's time for personal business	1	5	4.20	.750	-1.135	2.191
PE18	In my firm, procurement staff have the necessary skills and experience to undertake the work on proposed projects	1	5	4.24	.771	-1.172	1.964
PE19	My firm has a procurement training program in place	1	5	4.38	.935	-1.647	2.222
Overall scale				4.24	0.814	-1.282	2.130
Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree							

Table 5.20 presents the perceptions of respondents to personal skills and integrity in their organisations. Items PE15, PE16 and PE18 indicate mean and standard deviation values of ($\bar{x}=4.14$: SD ± 0.800), ($\bar{x}=4.20$: SD ± 0.750) and ($\bar{x}=4.24$: SD ± 0.771) which reveals that they agreed with the view that personal attributes such as skills and experience to perform tasks is key in eradicating unethical practices such as making use of organisational resources for personal use. PE19 (My firm has a procurement training program in place) achieved the highest mean of ($\bar{x}=4.38$: SD ± 0.935). This gives a clear indication of respondents having a positive attitude towards acquiring more skills that enable them to reduce organisational malpractices such as supplier collusions. The overall mean score was ($\bar{x}=4.24$: SD ± 0.814), which further indicates that managers and professional employees within the FMCG industry are in support of the view that they possess acceptable levels of personal integrity and skills.

This section provided a summation of factors based on the extracted components from the EFA procedure. The extracted factors were presented with the use of descriptive statistics tables. The descriptive statistics were used to examine how respondents in this study felt on each of the sections from questions drawn from the study's research questionnaire.

The next section addresses the inferential statistics that were performed in the data analysis section.

5.7 INFERENCE STATISTICS

Inferential statistics are produced through complex mathematical calculations that allow researchers to infer trends about a sample based on a particular study (Amrhein *et al.*, 2019:262). Cumming (2014:267) posits that inferential statistics are performed to ascertain the probability that an observed difference between groups is a dependable one, or one that might have occurred by any chance in this study. In this study, statistical inference was performed on the data that was culminated from Sections B, C and D of the research questionnaire. Inferential statistics were employed to establish the variation of ethical SCM factors on demographic categories such as gender, type of employment, race and educational level. The two techniques used to measure the variation of such factors were the independent sample t-test and ANOVA. Thereafter, post-hoc tests were performed to determine where the statistical mean differences lie in each category of those factors.

The next section deliberates on the independent sample t-tests that were performed in Section 5.7.1 of the study.

5.7.1 Independent sample t-tests

An independent sample t-test is an inferential statistical test that determines whether there is a statistically significant difference between two groups (Bradley & Brand, 2016:241). Independent sample t-tests may also assume the variances of two groups by ensuring that the provisioned categories are equal in the population. In making such a determination, it is of paramount importance to test for equality of variance. In such a view, the assumption of homogeneity of variance can be tested using Levene's Test of Equality of Variances. Levene's test of equality is used to assess the statistical assumption of homogeneity of variance between subject categories (Bradley & Brand, 2016:241). In order to determine the functionality of this test, the homogeneity of variance provides an *F*-statistic and a significance value (*p*-value) (Wasserstein & Lazar, 2016:130). When the significance value is $p > 0.05$ the group can be treated as equal (*ibid*). However, if $p < 0.05$ this entails unequal variances and a violation of the assumption of homogeneity of variances (Bradley & Brand, 2017:310).

After determining the functionality of the test using *P* and *F* values, the *T* value is another important score used to determine mean differences. The *T* value or *T* score is used to measure how big the difference is in relation to the variation of the data sample (Krzywinski & Altman, 2013:1042). More so, the *T* score is the difference that can be calculated to represent units of standard error. A *t*-value of 0 indicates that the sample results are accurately equal in terms of the null hypothesis (Kim, 2015:542). As the difference between the sample data and the null hypothesis increases, the absolute value of the *t*-value increases (Lee & Lee, 2015:230).

Another important function in an independent sample t-test is the measure of effect sizes. An effect size is a quantitative measure of the magnitude of the experimenter effect (Peng & Chen, 2014:36). In this study, Cohen's *d* application was employed to determine the effect sizes of the categorical groups in which the t-tests were performed. In determining the magnitude of each group, parameters of values were established, and these include small (0.2), medium (0.5) and large (0.8) values when interpreting an effect (Sullivan & Feinn, 2012:282). Thus, effect sizes are an important aspect of statistical analysis, as they quantify the direction and magnitude of a variable's effect (Olivier, May & Bell, 2017:6775). Pen and Chen (2014:36) posit that the determination of an effect size when performing a t-test provides a clinical importance that can form the basis for ascertaining the post-hoc interpretation of study results.

Effect sizes for all t-tests performed in this study were calculated using a formula developed by Cohen (1977:255). The formula is calculated as follows:

Cohen's $d = (M_2 - M_1) / SD_{\text{pooled}}$

Where;

- M_1 = mean of group 1
- M_2 = mean of group 2
- SD_{pooled} = pooled standard deviations for the two groups; The formula is: $\sqrt{[(s_1^2 + s_2^2) / 2]}$

The cut-off values for Cohen's d include small (0.2-0.4) **, medium (0.5-0.8) *** and large (greater than 0.8) ****. These thresholds are recommended by Durlak (2009:919) when interpreting the effect sizes. The results are presented in Tables 5.21, 5.22 and 5.23.

Table 5.21: Computation of effect sizes for Legal Components

Category	Legal Components	M2	M1	Pooled Std dev	Effect Size (Cohen's d)
Gender	Moral standards	4.03	4.00	±0.69	0.04
	Transparency	4.02	3.96	±0.64	0.09
	Professional Competence	4.31	4.39	±0.62	0.13
	Corporate Governance	4.17	4.06	±0.63	0.17
	Accountability	4.09	3.95	±0.79	0.18
	Fairness	4.34	4.36	±0.58	0.03
Employment Contract	Moral standards	4.02	4.01	±0.67	0.01
	Transparency	4.00	3.97	±0.65	0.05
	Professional Competence	4.32	4.41	±0.61	0.15
	Corporate Governance	4.09	4.14	±0.62	0.08
	Accountability	3.99	4.03	±0.77	0.05
	Fairness	4.38	4.30	±0.58	0.13

*Effect sizes are categorised as small (0.2-0.4) **; medium (0.5-0.8) *** and large (greater than 0.8) *****

Table 5.21 depicts the computation and calculation on the effect sizes performed on the two group categories. The tests were computed to check whether there were effect sizes of the two group categories on the LC factor. Based on the results, none of the factors attained a small, medium or large effect size. Therefore, this indicates that the comparison of the above mentioned groups did not yield any effects, as suggested by Durlak (2009:919).

Table 5.22: Computation of effect sizes for Supplier Management (SM)

Category	Supplier Management	M2	M1	Pooled Std dev	Effect Size (Cohen's d)
Gender	Supplier Assessment and Monitoring	4.20	4.29	±0.53	0.17
	Relationship Commitment	4.20	4.20	±0.60	0.00
	Supplier Collaboration	4.09	4.12	±0.66	0.05
Employment Contract	Supplier Assessment and Monitoring	4.27	4.21	±0.54	0.13
	Relationship Commitment	4.19	4.20	±0.60	0.02
	Supplier Collaboration	4.10	4.13	±0.67	0.04

Effect sizes are categorised as small (0.2-0.4) **; medium (0.5-0.8) *** and large (greater than 0.8) ****

In Table 5.22, effect sizes were calculated on the SM factors against the gender and employment type category. With regards to the gender and employment type category none of the groups recorded yielded notable differences in effect sizes.

Table 5.23: Computation of effect sizes for Personal Ethics

Category	Personal ethics	M2	M1	Pooled Std dev	Effect Size (Cohen's d)
Gender	Intrinsic Values	4.28	4.05	±0.64	0.36**
	Honesty	4.06	4.08	±0.70	0.03
	Integrity and Skills	4.29	4.20	±0.56	0.16
Employment Contract	Intrinsic Values	4.16	4.13	±0.66	0.05
	Honesty	4.00	4.18	±0.68	0.27**
	Integrity and Skills	4.26	4.21	0.56	0.09

Effect sizes are categorised as small (0.2-0.4) **; medium (0.5-0.8) *** and large (greater than 0.8) ****

Table 5.23 reports on the computation of effect sizes performed on PE factors and the gender and employment type. Based on the results presented in the table above some factors recorded effect sizes. With regard to the gender category, Intrinsic Values registered a small effect size of (**0.36****). Under the employment type category, the variable Honesty also recorded a small effect size of (**0.27****). Thus, employees' PE effect sizes differ in terms of Intrinsic Values and Honesty.

The next section of the study intends to elaborate the independent sample t-tests that were performed on the retained factors. Firstly, independent sample t-tests were performed on the

two gender categories, namely male and female. The two categories were measured on (1) LC (consisting of six factors), (2) SAM (consisting of three factors) and (3) PE (consisting of three factors). The Levene's test of equality was used to assess the statistical assumptions of these groups and the results are presented in Section 5.7.1.1 of the study.

5.7.1.1 Comparison of legal component factors by gender

The t-test was used to test the independence of the six factors from the gender category. The results are reported in Table 5.21.

Table 5.24: T-test for Legal Components by gender

Legal Components	Male Mean & Std dev	Female Mean & Std dev	p-value	t-value	F-value	Effect size
Moral standards	3.99 (±0.71)	4.03 (±0.66)	0.690	-0.399	0.019	0.04
Transparency	3.96 (±0.70)	4.02 (±0.57)	0.478	-0.711	2.046	0.09
Professional competence	4.39 (±0.61)	4.31 (±0.62)	0.309	1.019	0.000	0.13
Corporate Governance	4.06 (±0.68)	4.17 (±0.58)	0.230	-1.205	0.001	0.17
Accountability	3.95 (±0.78)	4.09 (±0.79)	0.204	-1.274	0.093	0.18
Fairness	4.36 (±0.57)	4.34 (±0.58)	0.803	0.250	0.005	0.03

**Statistical significant difference: $p \leq 0.05$ (Pallant, 2016)*

*Effect sizes are categorised as small (0.2 – 0.4)**; medium (0.5 – 0.8) *** and large (greater than 0.8) *****

Table 5.24 reports that a t-test on gender was conducted to compare the statistical differences ($p < 0.05$) on LC between males and females. With regards to the p values, Moral Standards recorded ($0.690 > 0.05$), Transparency ($0.478 > 0.05$), Professional Competence ($0.309 > 0.05$), Corporate Governance ($0.230 > 0.05$), Accountability ($0.204 > 0.05$) and Fairness ($0.250 > 0.05$). This reveals that the responses of both females and males were not statistically significant as the p value on all factors were greater than 0.05. This also indicates that both male and female managers and employees in the FMCG industry share similar attitudes regarding their adherence to legal aspects of ethical SCM. As a result, the six factors that govern legal aspects in FMCG firms are evenly distributed across all gender categories.

5.7.1.2 Comparison of Supplier Management factors by gender

The t-test was performed to establish the distribution of three SM factors across gender categories. The results are presented in Table 5.22.

Table 5.25: T-test for Supplier Management by gender

Supplier Management	Male Mean & Std dev	Female Mean & Std dev	p-value	t-value	F-value	Effect size
Supplier Assessment and Monitoring	4.29 (±0.53)	4.20 (±0.53)	0.181	1.342	.070	0.17
Relationship Commitment	4.20 (±0.59)	4.20 (±0.60)	0.989	-0.013	0.128	0.00
Supplier Collaboration	4.12 (±0.70)	4.09 (±0.62)	0.783	0.276	1.158	0.05

*Statistical significant difference: $p \leq 0.05$ (Pallant, 2016)

Effect sizes are categorised as small (0.2 – 0.4)**; medium (0.5 – 0.8) *** and large (greater than 0.8) ****

Table 5.25 illustrates the independent sample t-test that was conducted on SM factors across the gender categories. With regards to the t values, Suppliers' Assessment and Monitoring scored ($t=1.342$), Relationship Commitment ($t=-.013$), and Supplier Collaboration ($t=1.158$). In terms of the p values, SAM scored ($0.181 > 0.05$), Relationship Commitment ($0.989 > 0.05$) and Supplier Collaboration ($0.783 > 0.05$). None of the three factors had an effect size that was either small (0.2-0.4), medium (0.5- 0.8) or large (> 0.8). This provides evidence that no statistical differences were established between the two groups measuring supplier management. This further implies that the attitudes of males and females towards SM in the FMCG industry are similar.

5.7.1.3 Comparison of Personal Ethics factors by gender

The t-test was used to identify the distribution of three PE factors across gender categories. The results are presented in Table 5.26.

Table 5.26: T-test for Personal Ethics by gender

Personal Ethics	Male Mean & Std dev	Female Mean & Std dev	p-value	t-value	F-value	Effect size
Intrinsic Values	4.05 (±0.69)	4.28 (±0.58)	0.013*	-2.503	0.304	0.36**
Honesty	4.08 (±0.68)	4.06 (±0.72)	0.829	0.217	0.131	0.03
Integrity and Skills	4.20 (±0.60)	4.29 (±0.52)	0.241	-1.176	0.357	0.16

Statistically significant difference: $p \leq 0.05$ (Pallant, 2016)

Effect sizes are categorised as small (0.2 – 0.4)**; medium (0.5 – 0.8) *** and large (greater than 0.8) ****

Table 5.26 reports that a t-test on gender was conducted to compare the statistical differences on PE factors between males and females. In terms of the t values, Intrinsic Values scored ($t=-$

2.503), Honesty ($t = 0.217$), Integrity and Skills ($t = -1.176$). With regards to the p values, Intrinsic Values recorded ($0.013 < 0.05$), Honesty ($0.829 > 0.05$), Integrity and Skills ($0.241 > 0.05$). Based on the results of the p values, a statistically significant difference was established on intrinsic values ($p = 0.013$) where female respondents revealed a greater propensity than their male counterparts, with a small effect size of 0.36. This implies that female respondents tend to demonstrate more established intrinsic values in observing their personalised ethics compared to their male counterparts in their SCM activities.

The statistically significant differences between the male and female respondents who participated in this study on intrinsic values poses a number of suggestions. The results reveal that female respondents have more potent intrinsic values than their male counterparts. These intrinsic values are the primary factor actuating their adherence to SCM ethics. This suggests that female managers and employees within the FMCG industry have strong and internalised value systems that enable them to deal more effectively with stakeholders such as suppliers in matters that involve issues like queries and disputes. They are therefore better positioned to deal with matters requiring personal contact with suppliers and customers than are their male work colleagues. They are also likely to be more ethical than males in SCM activities since they possess stronger intrinsic values.

After performing independent sample t -tests on gender categories, further t -tests were performed on the type of employment (permanent and contract) since this category also contained two groups. Three sections retained from the EFA procedure were used to test for the statistical mean differences on the type of employment, as shown from Section 5.7.1.4 to Section 5.7.1.6.

5.7.1.4 Comparison of Legal Component factors by employment type

The t -test was performed to establish the distribution of six LC factors across the type of employment category. The results are presented in Table 5.27.

Table 5.27: T-test for Legal Components by employment type

Legal Components	Contract Mean & Std dev	Permanent Mean & Std dev	p-value	t-value	F-value	Effect size
Moral Standards	4.01 (±0.61)	4.02 (±0.73)	0.974	-0.033	1.329	0.01
Transparency	3.97 (±0.67)	4.00 (±0.63)	0.744	-0.327	1.356	0.05
Professional Competence	4.41 (±0.58)	4.32 (±0.63)	0.275	1.094	1.362	0.15
Corporate Governance	4.14 (±0.56)	4.00 (±0.67)	0.562	0.581	1.080	0.08
Accountability	4.03 (±0.70)	3.99 (±0.83)	0.706	0.377	0.132	0.05
Fairness	4.30 (±0.61)	4.38 (±0.55)	0.307	-1.024	1.214	0.13

Statistically significant difference: $p \leq 0.05$ (Pallant, 2016)

Effect sizes are categorised as small (0.2 – 0.4)**; medium (0.5 – 0.8) *** and large (greater than 0.8) ****

Table 5.27 indicates the two employment categories in which an independent sample t-test was used to check whether there are any statistical mean differences between the two groups. With regards to the t values, Moral Standards scored (t= -0.033), Transparency (t= -0.327), Professional Competence (t= 1.094), Corporate Governance (t= 0.562), Accountability (t= 0.377) and Fairness (t= -1.024). The p value which measures the statistical significance had factor 1 (Moral Standards) with (0.974> 0.05), factor 2 (Transparency) with (0.744> 0.05), factor 3 (Professional Competence) with (0.275> 0.05), factor 4 (Corporate Governance) with (0.706> 0.05), factor 5 (Accountability) with (0.706> 0.05) and factor 6 (Fairness) recording (0.307> 0.05). From these p values it can be seen that no statistical differences were observed in any of the six LC considered in this study on the measure of employment type. This suggests the following LC of SCM ethics is similar in managers and employees in the FMCG industry regardless of their type of employment (permanent or contract)

5.7.1.5 Comparison of Supplier Management factors by employment type

The t-test was conducted to identify the distribution of three SM factors across the type of employment of FMCG employees. The results are presented in Table 5.28.

Table 5.28: T-test for Supplier Management by employment type

Supplier Management	Contract Mean & Std dev	Permanent Mean & Std dev	p-value	t-value	F-value	Effect size
Supplier Assessment and Monitoring	4.21 (±0.54)	4.27 (±0.53)	0.499	-0.678	0.002	0.13
Relationship Commitment	4.20 (±0.58)	4.19 (±0.61)	0.967	0.041	0.511	0.02
Supplier Collaboration	4.13 (±0.70)	4.10 (±0.64)	0.765	0.300	0.670	0.04

Statistically significant difference: $p \leq 0.05$ (Pallant, 2016)

Effect sizes are categorised as small (0.2 – 0.4)**; medium (0.5 – 0.8) *** and large (greater than 0.8) ****

Table 5.28 illustrates the independent sample t-test that was conducted on SM factors across employment type. With regards to the t values, Supplier Assessment and Monitoring scored ($t = -0.678$), Relationship Commitment ($t = 0.041$) and Supplier Collaboration ($t = 0.300$). In terms of the p values, SAM scored ($0.499 > 0.05$), Relationship Commitment ($0.967 > 0.05$) and Supplier Collaboration ($0.765 > 0.05$). It is clear that no statistical differences were established between contract and permanent employees. Hence, across the employment types considered, managers and employees tend to assess and monitor suppliers in the same fashion.

5.7.1.6 Comparison of Personal Ethics factors by employment type

The t-test was conducted to identify the distribution of three PE factors across the employment type category. The results are presented in Table 5.29.

Table 5.29: T-test for Personal Ethics by employment type

Personal Ethics	Contract Mean & Std dev	Permanent Mean & Std dev	p-value	t-value	F-value	Effect size
Intrinsic Values	4.13 (±0.66)	4.16 (±0.66)	0.791	-0.265	0.295	0.05
Honesty	4.18 (±0.63)	4.00 (±0.72)	0.071	1.816	0.228	0.27**
Integrity and Skills	4.21 (±0.51)	4.26 (±0.60)	0.503	-0.671	0.055	0.09

Statistically significant difference: $p \leq 0.05$ (Pallant, 2016)

Effect sizes are categorised as small (0.2 – 0.4)**; medium (0.5 – 0.8) *** and large (greater than 0.8) ****

Table 5.29 reports that a t-test on gender was conducted to compare the statistical differences on PE factors between males and females. In terms of the t values, Intrinsic Values scored ($t = -0.265$), Honesty ($t = 1.816$), Integrity and Skills ($t = -0.671$). With regards to the p values, Intrinsic Values recorded ($0.791 > 0.05$), Honesty ($0.071 > 0.05$), Integrity and Skills with ($0.503 > 0.05$). Factor 2, Honesty, recorded a small effect size of 0.27 but its p value was greater

than 0.05. Although one of the factors (Honesty) had a small effect size, none of the factors indicated a statistically significant difference on PE across the employment type category. Thus, across the employment type category, PE are similar among managers and employees working in the FMCG industry.

The next section focuses on the ANOVA analysis that was performed on the group categories that contained at least three or more independent variables.

5.7.2 Analysis of Variance

A one-way ANOVA is used to determine whether there is a statistically significant difference between three or more independent (unrelated) groups. The one-way ANOVA compares the difference between the groups interested in and determines whether any of those indicates are statistically significantly different from each other (Geweke & Amisano, 2014:272). ANOVA depends on the law of absolute variables where the observed variance in a specific variable is distributed into parts attributable to numerous sources of variation (Van-Ginkel & Kroonenberg, 2014:80). In its most simple structure, ANOVA gives a statistical trial of whether at least two or more population groups are equivalent or not.

Before checking the mean differences using the one-way ANOVA test, the assumption of the homogeneity of variances in the data set were performed using the Levene's test. The results of the homogeneity test on the three aforementioned measurement scales (LC, SM and PE) were performed and the results were indicated to reveal whether the variance is homogeneous and significant on all factor variables. Furthermore, the robustness of equality of indicates was also performed to check the normality of the factors using the Welch and Brown-Forsythe tests. The Brown-Forsythe test is a robust test based on the absolute differences within each group from the group median (Gregory, Carroll, Baladandayuthapani & Lahiri, 2015:838). The test acts as an alternative to the Bartlett's Test for equal variances. A Welch test was also conducted, which Parra-Frutos and Molera (2019:8) indicate is used to ascertain for equal population indicates when equal population variances are not present.

In this study, the ANOVA test was performed on five categories, namely age, highest qualification, race, employment period and occupational area. After ANOVA tests were performed, post-hoc tests were conducted on categories that revealed a statistically significant difference of $p \leq 0.05$ (Pallant, 2016:216). A post-hoc analysis involves observing the data after a study has been concluded and trying to discover patterns that were not primary objectives of the study (Pereira, Afonso & Medeiros, 2015:2639). In this study, the post-hoc

test indicated the extent to which the statistical differences occurred. The next section (5.7.2.1) intends to elaborate on the ANOVA tests performed in the age category.

5.7.2.1 ANOVA Test: Age and Legal Components

The ANOVA test was conducted between LC, SM and PE constructs and the age of the respondents. The age categories are: < 30, 30-39, 40-49, 50-59 and 60 and above. Table 5.30 reports the comparison of LC by age.

Table 5.30: ANOVA for Legal Components by age

Age	Under 30 years	30-39 years	40-49 years	50-59 years	60 years and above	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Moral Standards	4.00 (±0.64)	4.14 (±0.64)	3.96 (±0.72)	4.10 (±0.55)	3.78 (±0.98)	0.950	0.436
Transparency	3.71 (±0.68)	4.13 (±0.64)	3.94 (±0.66)	4.09 (±0.51)	3.85 (±0.89)	1.493	0.205
Professional Competence	4.33 (±0.91)	4.38 (±0.54)	4.31 (±0.62)	4.42 (±0.64)	4.44 (±0.50)	0.332	0.856
Corporate Governance	4.11 (±0.47)	4.13 (±0.66)	4.02 (±0.68)	4.35 (±0.39)	4.03 (±0.69)	2.139	.077
Accountability	3.94 (±0.80)	4.02 (±0.71)	3.98 (±0.82)	±4.15 (±0.65)	3.72 (±1.09)	0.664	0.617
Fairness	4.39 (±0.65)	4.23 (±0.54)	4.36 (±0.58)	4.36 (±0.62)	4.50 (±0.43)	0.581	0.677

**Statistically significant difference: $p \leq 0.05$ (Pallant, 2016)*

Table 5.30 reveals that there were no statistically significant differences ($p < 0.05$) across all the LC factors and age. This indicates that despite differences in age, FMCG managers and employees exhibit similar attitudes in adhering to moral standards and transparency when awarding contracts, as well as professional competence, implementation of corporate governance, accountability in financial matters, and practising fairness within the business environment. These empirical results are supported by Fourie and Contogiannis (2014:15) who conducted a study on the impact of business ethics education on attitudes toward corporate

ethics. Their study revealed that none of the demographic factors considered, such as age and educational level, had a significant effect on the attitudes of personnel.

Table 5.31: ANOVA for Supplier Management by age

Age	Under 30 years	30-39 years	40-49 years	50-59 years	60 years and above	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Supplier Assessment and Monitoring	4.28 (±0.34)	4.23 (±0.54)	4.24 (±0.54)	4.21 (±0.55)	4.50 (±0.48)	0.560	0.692
Relationship Commitment	4.25 (±0.52)	4.09 (±0.59)	4.20 (±0.61)	4.21 (±0.57)	4.52 (±0.65)	1.003	0.407
Supplier Collaboration	4.11 (±0.60)	4.15 (±0.71)	4.06 (±0.68)	4.21 (±0.55)	4.17 (±0.79)	0.483	0.748

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

Table 5.31 reports on the ANOVA test conducted between SAM, Relationship Commitment, Supplier Collaboration and the age of employees in the firm. The categories for age are under 30 years, 30-39 years, 40-49 years, 50-59 years and 60 years and above. With reference to the results purported in Table 5.31, there were no statistically significant differences on SM factors across all age categories. For this reason, respondents that participated in this study relate to the SM mechanisms in the same manner, regardless of their different age groups.

Table 5.32: ANOVA for Personal Ethics by age

Age	Under 30 years	30-39 years	40-49 years	50-59 years	60 years and above	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Intrinsic Values	4.11 (±0.64)	4.19 (±0.61)	4.16 (±0.67)	4.12 (±0.71)	4.14 (±0.53)	0.068	0.992

Age	Under 30 years	30-39 years	40-49 years	50-59 years	60 years and above	F- value	P- value
Honesty	4.37 (±0.75)	4.12 (±0.65)	4.03 (±0.70)	3.98 (±0.77)	4.30 (±0.39)	0.935	0.444
Integrity and Skills	4.14 (±0.63)	4.06 (±0.70)	4.30 (±0.50)	4.23 (±0.55)	4.42 (±0.67)	1.772	0.135

* Statistical significant difference $p \leq 0.05$ (Pallant, 2016)

The results presented in Table 5.32 reveal that there were no statistically significant differences ($p < 0.05$) across all PE factors and age. This indicates that the PE such as Intrinsic Values, Honesty, and Integrity and Skills of respondents on the different age categories are similar. This further implies that the behavioural patterns of employees on SCM ethics related matters are positive and compliant to the organisation's expectations. The next section discusses the ANOVA tests that were performed on the race category.

5.7.2.2 ANOVA tests on the race category

This section explores the variation of the LM, SM and PE scales against the race categories that participated in this study. The race categories include: African, White, Indian and the Mixed race category. The results of these tests are presented in Tables 5.33, 5.34 and 5.35.

Table 5.33: ANOVA for Legal Components by race

Race	African	White	Indian	Mixed race	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Moral Standards	3.98 (±0.74)	4.07 (±0.66)	4.04 (±0.50)	4.04 (±0.57)	.194	0.900
Transparency	3.96 (±0.65)	3.92 (±0.69)	4.13 (±0.41)	4.29 (±0.57)	1.969	0.120
Professional Competence	4.33 (±0.67)	4.32 (±0.53)	4.37 (±0.47)	4.61 (±0.49)	1.084	0.357

Race	African	White	Indian	Mixed race	F- value	P- value
Corporate Governance	4.07 (±0.67)	4.15 (±0.59)	4.23 (±0.58)	4.20 (±0.51)	0.642	0.589
Accountability	3.98 (±0.79)	4.02 (±0.81)	4.06 (±0.75)	4.12 (±0.74)	0.199	0.897
Fairness	4.36 (±0.58)	4.28 (±0.59)	4.30 (±0.71)	4.53 (±0.33)	0.834	0.476

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

Table 5.33 reports on the ANOVA test conducted between Moral Standards, Transparency, Professional Competence, Corporate Governance, Accountability and Fairness and the race aligned to the respondents that participated in this study. The race categories are African, White, Indian and Mixed race. Based on the results presented in Table 5.3, no statistically significant differences were observed across all race categories. This denotes the entrenchment of similar attitudes among the different racial groups of the managers and employees in the FMCG industry in following the LC aligned to ethical SCM.

Table 5.34: ANOVA for Supplier Management by race

Race	African	White	Indian	Mixed race	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Supplier Assessment and Monitoring	4.28 (±0.52)	4.21 (±0.59)	4.31 (±0.52)	4.07 (±0.42)	0.939	0.423
Relationship Commitment	4.22 (±0.56)	4.14 (±0.71)	4.17 (±0.55)	4.25 (±0.63)	0.281	0.839
Supplier Collaboration	4.14 (±0.64)	3.90 (±0.76)	4.22 (±0.53)	4.38 (±0.57)	2.967	0.033*

*Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

Table 5.34 reports on the ANOVA test conducted for Supplier Assessment and Monitoring, Relationship Commitment and Supplier Collaboration scales in terms of the race of the employees that participated in this study. These results attest that a statistically significant difference was observed on the supplier collaboration construct with ($p=0.03 < 0.05$). This result suggests that two racial groups, namely Whites ($\bar{x}=3.90$; $SD=\pm 0.76$) and those of the Mixed race ($\bar{x}=4.38$; $SD=\pm 0.57$) differ with other racial groups in their attitudes towards supplier collaboration.

Since statistically significant differences were observed between SM and these two racial groups, post-hoc analyses were performed to determine where these mean differences lie. A post-hoc analysis involves observing the data after a study has been concluded and attempting to find patterns that were not primary objectives of the study (Pereira, Afonso & Medeiros, 2015:2639). More so, the post-hoc analysis may be performed to ascertain different metrics for new objectives that were not planned before the commencement of a study. In this study, the post-hoc analysis was performed to assess the level of significance of the statistical differences observed on the supplier collaboration construct. The results of the post-hoc analysis for Supplier Collaboration on race are presented in Table 5.35.

Table 5.35: Post-hoc analysis on Supplier Collaboration and race

Dependent Variable	(I) Race	(J) Race	Mean Difference (I-J)	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Supplier Collaboration	African	White	.23338	.137	-.0459	.5126
		Indian	-.08966	.941	-.4963	.3170
		Mixed Race	-.24701	0.461	-.6838	.1897
	White	African	-.23338	.137	-.5126	.0459
		Indian	-.32304	.244	-.7704	.1243
		Mixed Race	-.48039*	0.046*	-.9553	-.0055
	Indian	African	.08966	.941	-.3170	.4963
		White	.32304	.244	-.1243	.7704
		Mixed Race	-.15735	.886	-.7167	.4020
	Mixed Race	African	.24701	.461	-.1897	.6838
		White	.48039*	0.046*	.0055	.9553
		Indian	.15735	.886	-.4020	.7167

*Statistically significant difference $p \leq 0.05$

Table 5.35 reveals that the differences were established between employees who were White ($\bar{x}=3.90$) and those who were of the Mixed race ($\bar{x}=4.38$) with regard to supplier collaboration. The post-hoc test revealed that the statistical difference between the two groups was ($p=0.046 < 0.05$). As a result, White and Mixed-race employees share different views to African and Indian employees on the collaboration of suppliers. This result suggests that White and those of the Mixed race differ in terms of their attitudes and implementation of matters pertaining to SCM ethics, especially supplier collaboration.

Table 5.36: ANOVA for Personal Ethics by race

Race	African	White	Indian	Mixed race	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Intrinsic Values	4.14 (± 0.67)	4.22 (± 0.50)	4.19 (± 0.79)	4.06 (± 0.81)	0.307	0.820
Honesty	4.07 (± 0.70)	4.06 (± 0.68)	4.18 (± 0.58)	3.96 (± 0.88)	0.317	0.813
Integrity and Skills	4.23 (± 0.58)	4.31 (± 0.59)	4.30 (± 0.39)	4.07 (± 0.55)	0.820	0.484

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

The results presented in Table 5.35 indicate that there were no statistically significant differences ($p < 0.05$) across all PE factors and race. Therefore, despite race, employees' intrinsic values, their integrity, and skills together with how honest they are in the workplace is distributed evenly. For this reason, race does not vary in terms of employee's perceptions towards their own PE. The next section discusses the ANOVA tests that were performed on the type of qualification category.

5.7.2.3 ANOVA Tests by Qualification Type

The ANOVA tests were performed to investigate whether there were any statistically significant differences on FMCG employees according to their academic qualifications. The results of the ANOVA tests are presented in Tables 5.37, 5.38 and 5.39.

Table 5.37: ANOVA for Legal Components by qualification type

Highest Qualification	Below Matric	Matric	Certificate	Diploma	Degree	Postgraduate	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Moral Standards	3.75 (±1.06)	4.15 (±0.35)	4.07 (±0.68)	3.96 (±0.74)	4.00 (±0.66)	4.75 (±0.35)	0.850	0.516
Transparency	4.00 (±0.00)	3.90 (±0.65)	3.96 (±0.58)	3.99 (±0.68)	4.01 (±0.64)	4.67 (±0.47)	0.543	0.743
Professional Competence	4.33 (±0.47)	4.46 (±0.70)	4.34 (±0.63)	4.27 (±0.69)	4.46 (±0.42)	4.33 (±0.47)	0.851	0.515
Corporate Governance	3.00 (±1.41)	4.26 (±0.53)	4.11 (±0.52)	4.05 (±0.69)	4.18 (±0.60)	4.67 (±0.47)	2.070	0.070
Accountability	4.00 (±1.41)	4.14 (±0.59)	3.90 (±0.82)	3.95 (±0.82)	4.12 (±0.73)	4.75 (±0.35)	1.004	0.416
Fairness	4.50 (±0.70)	4.28 (±0.69)	4.28 (±0.54)	4.34 (±0.63)	4.44 (±0.45)	4.50 (±0.71)	0.535	0.750

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

Table 5.36 depicts the ANOVA test was conducted between Moral Standards, Transparency, Corporate Governance, Accountability, Fairness and the academic qualifications of employees in the organisation. The categories for academic qualifications are below matric, matric, certificate, diploma, degree and postgraduate degree. The ANOVA test revealed that none of the LC factors used for analysis on qualification type yielded a statistically significant difference of ($p < 0.05$). Thus, the legal framework that has been developed to govern ethical SCM practices is evenly distributed on all FMCG employees' despite their level of education.

Table 5.38: ANOVA for Supplier Management by qualification type

Highest Qualification	Below Matric	Matric	Certificate	Diploma	Degree	Postgraduate	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Supplier Assessment and Monitoring	4.75 (±0.00)	4.34 (±0.45)	4.24 (±0.57)	4.28 (±0.43)	4.12 (±0.66)	4.63 (±0.18)	1.359	0.241
Relationship Commitment	4.50 (±0.71)	4.19 (±0.60)	4.17 (±0.59)	4.22 (±0.58)	4.14 (±0.64)	4.67 (±0.47)	0.473	0.796
Supplier Collaboration	4.00 (±1.41)	4.11 (±0.56)	4.10 (±0.58)	4.08 (±0.69)	4.20 (±0.70)	3.25 (±0.35)	0.933	0.461

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

The results presented in Table 5.38 indicate that there were no statistically significant differences ($p < 0.05$) across SM factors and the type of qualification that the employees possess. This indicates that processes that have been put in place to monitor and assess the performance of employees are achieved equally. Thus, the type of qualification does not benchmark employees' perceptions towards supplier development and management processes.

Table 5.39: ANOVA for Personal Ethics by qualification type

Highest Qualification	Below Matric	Matric	Certificate	Diploma	Degree	Postgraduate	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Intrinsic Values	5.00 (±0.00)	4.21 (±0.62)	4.17 (±0.49)	4.16 (±0.69)	4.08 (±0.73)	4.50 (±0.71)	0.966	0.439
Honesty	4.67 (±0.47)	4.35 (±0.65)	4.13 (±0.61)	4.00 (±0.74)	4.05 (±0.69)	3.50 (±0.24)	1.428	0.215

Highest Qualification	Below Matric	Matric	Certificate	Diploma	Degree	Postgraduate	F- value	P- value
Integrity and Skills	4.25 (±1.06)	4.21 (±0.65)	4.16 (±0.69)	4.31 (±0.51)	4.22 (±0.51)	3.88 (±1.24)	0.699	0.625

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

In Table 5.39, an ANOVA test was conducted between Intrinsic Values, Honesty, Integrity and Skills, and the educational qualifications attached to the employee's credentials. The categories for the type of qualifications were below matric, matric, certificate, diploma, degree and postgraduate degree. The ANOVA test revealed that there are no statistically significant differences between Intrinsic Values ($F= 0.966$, p -Value 0.439), Honesty ($F=1.428$, p -Value 0.215) and Integrity and Skills ($F= 0.699$, p -Value 0.625). This indicates that the personal ethical conduct of respondents according to their type of qualification is similar across the qualification type category.

5.7.2.4 ANOVA tests by occupational area

ANOVA tests were performed to investigate whether there are any statistically significant differences on FMCG employees according to their occupational area. Where statistical differences were identified, a post-hoc turkey test was performed to reveal those affirmed mean differences. The results of these tests are presented in the tables below.

Table 5.40: ANOVA for Legal Components by occupational area

Occupational area	Transport	Warehousing	Contract management	Procurement	Customer services	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Moral Standards	3.93 (±0.66)	3.66 (±0.92)	4.04 (±0.67)	4.06 (±0.66)	4.05 (±0.67)	1.341	0.256
Transparency	3.64 (±0.73)	3.69 (±0.78)	4.02 (±0.69)	4.07 (±0.61)	3.99 (±0.60)	2.572	0.039*

Occupational area	Transport	Warehousing	Contract management	Procurement	Customer services	F- value	P- value
Professional Competence	4.51 (±0.75)	4.04 (±0.58)	4.30 (±0.61)	4.30 (±0.66)	4.57 (±0.36)	3.290	0.012*
Corporate Governance	4.27 (±0.52)	3.94 (±0.79)	4.27 (±0.43)	4.10 (±0.66)	4.08 (±0.60)	.864	0.486
Accountability	4.10 (±0.71)	3.82 (±0.79)	3.85 (±0.78)	4.02 (±0.78)	4.10 (±0.81)	.663	0.618
Fairness	4.30 (±0.62)	4.44 (±0.30)	4.25 (±0.55)	4.36 (±0.59)	4.35 (±0.63)	.293	0.882

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

Table 5.40 reveals the results of the ANOVA test that was conducted between Moral Standards, Transparency, Corporate Governance, Accountability and Fairness with the occupational area of employees in the firm. Statistically significant differences were noted with regard to transparency ($F=2.572$, $p\text{-Value}=0.039^*$) in the procurement department. This result implies that the attitudes towards transparency are different in the procurement department when compared to the rest of the occupational areas. Other mean differences were noted in terms of professional competence ($F=3.290$, $p\text{-Value}=0.012^*$) in the warehousing and customer services departments. This result signifies that managers and professional employees in the FMCG industry differ from those in other departments in terms of their professional competence.

Subsequently, due to the significant differences observed regarding transparency and professional competence, post-hoc tests were performed. The results for transparency within the procurement department were statistically insignificant ($p= 0.512$). However, with regards the professional competence construct, there was a statistically significant difference ($p= < 0.05$). The results are presented with the indication of post-hoc analysis in Table 5.41.

Table 5.41: Post-hoc analysis on Professional Competence

Dependent Variable	(I) Occupational area	(J) Occupational area	Mean Difference (I-J)	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Professional competence		Warehousing	.30706	.421	-.1827	.7968
		Contracting	-.02333	1.000	-.4848	.4382
		Procurement	-.07669	.952	-.3707	.2173
	Transport	Warehousing	.47190	.178	-.1143	1.0581
		Contracting	.21111	.842	-.3541	.7763
		Procurement	.21419	.692	-.2392	.6676
		Customer services	-.05556	.998	-.5427	.4316
	*Warehousing	Transport	-.47190	.178	-1.0581	.1143
		Contracting	-.26078	.683	-.8067	.2851
		Procurement	-.25770	.466	-.6867	.1713
		Customer services	-.52745*	.017*	-.9920	-.0629
	Contracting	Transport	-.21111	.842	-.7763	.3541
		Warehousing	.26078	.683	-.2851	.8067
		Procurement	.00308	1.000	-.3968	.4030
		Customer services	-.26667	.451	-.7045	.1711
	Procurement	Transport	-.21419	.692	-.6676	.2392
		Warehousing	.25770	.466	-.1713	.6867
		Contracting	-.00308	1.000	-.4030	.3968
		Customer services	-.26975	.063	-.5486	.0091
	*Customer services	Transport	.05556	.998	-.4316	.5427
		Warehousing	.52745*	.017*	.0629	.9920
		Contracting	.26667	.451	-.1711	.7045
		Procurement	.26975	.063	-.0091	.5486
		Warehousing	-.10084	.980	-.5933	.3916
		Contracting	.23347	.629	-.2255	.6925
		Customer services	-.19653	.443	-.5166	.1236
	Customer services	Transport	-.09778	.989	-.6569	.4613
		Warehousing	.09569	.988	-.4375	.6289
		Contracting	.43000	.132	-.0725	.9325
		Procurement	.19653	.443	-.1236	.5166

* Statistically significant difference $p \leq 0.05$

Table 5.41 of the post-hoc analysis indicates that there were significant differences ($p=0.017$) observed for the professional competence of employees who work under the warehousing department ($\bar{x}=4.04$) and customer services ($\bar{x}= 4.57$) when compared to those in other departments.

Consistent with the result above, a study conducted by Cao and Zhang (2011:166) in Japan focusing on risk and ethical performance in supply chain reveals that employees working under customer services and operations tend to display high levels of professionalism and competence because of their responsibilities in dealing with the organisation's most important stakeholders, the customers. Similarly, the results presented in the post-hoc analysis indicate that manager and professional employees in customer services and warehousing departments exhibit different attitudes towards professional services in comparison to those in the rest of the departments.

Table 5.42: ANOVA for Supplier Management on occupational area

Occupational area	Transport	Warehousing	Contract management	Procurement	Customer services	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Supplier Assessment and Monitoring	4.05 (± 0.68)	4.38 (± 0.37)	4.33 (± 0.50)	4.23 (± 0.52)	4.17 (± 0.57)	1.284	.277
Relationship Commitment	4.09 (± 0.84)	4.29 (± 0.33)	4.23 (± 0.72)	4.18 (± 0.54)	4.23 (± 0.67)	.317	.867
Supplier Collaboration	4.00 (± 0.93)	3.79 (± 0.75)	4.03 (± 0.75)	4.14 (± 0.63)	4.20 (± 0.55)	1.463	.215

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

The ANOVA test was conducted between SAM, Relationship Commitment and Supplier Collaboration with regards to the different departments employees in the FMCG industry occupy. The categories for occupational area were transport, warehousing, contract management, procurement and customer services. The ANOVA test revealed there were no statistically significant differences between SAM ($F= 1.284$, p -Value 0.277), Relationship

Commitment (F= 0.317, p-Value 0.867) and Supplier Collaboration (F= 1.463, p-Value 0.215). This suggests that SM related manners are embraced in the same way by all FMCG employees despite the department that they are affiliated to.

Table 5.43: ANOVA for Personal Ethics on occupational area

Occupational area	Transport	Warehousing	Contract management	Procurement	Customer services	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Intrinsic Values	4.18 (±0.53)	4.37 (±0.50)	3.93 (±0.73)	4.14 (±0.68)	4.21 (±0.63)	1.184	0.319
Honesty	4.31 (±0.62)	4.12 (±0.84)	3.78 (±0.54)	4.02 (±0.74)	4.21 (±0.58)	2.055	0.088
Integrity and Skills	4.28 (±0.46)	4.41 (±0.52)	3.93 (±0.62)	4.30 (±0.52)	4.18 (±0.65)	2.474	0.045*

* Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

Table 5.43 reports on the ANOVA test conducted between Intrinsic Values, Honesty, Integrity and Skills with the occupational area of the employees. From these results, a statistically significant difference was observed between contract management and procurement employees of ($0.045 < 0.05$). Upon discovering a statistical difference on contract management and procurement employees, a post-hoc analysis was performed to ascertain where the statistical significances lie. The results of the post-hoc test are presented in Table 5.44.

Table 5.44: Post-hoc analysis on integrity and skills

Dependent Variable	(I) occupational area	(J) occupational area	Mean Difference (I-J)	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Integrity and Skills	Transport	Warehousing	-.12843	.967	-.6738	.4169
		Contracting	.35833	.334	-.1675	.8841
		Procurement	-.01289	1.000	-.4347	.4089
		Customer services	.10833	.965	-.3449	.5615
	Warehousing	Transport	.12843	.967	-.4169	.6738
		Contracting	.48676	.067	-.0211	.9946
		Procurement	.11555	.931	-.2836	.5147

Dependent Variable	(I) occupational area	(J) occupational area	Mean Difference (I-J)	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
	Contracting	Customer services	.23676	.559	-.1954	.6690
		Transport	-.35833	.334	-.8841	.1675
		Warehousing	-.48676	.067	-.9946	.0211
		Procurement	-.37122	0.05*	-.7432	.0008
	Procurement	Customer services	-.25000	.443	-.6573	.1573
		Transport	.01289	1.000	-.4089	.4347
		Warehousing	-.11555	.931	-.5147	.2836
		Contracting	.37122	0.05*	-.0008	.7432
		Customer services	.12122	.701	-.1382	.3807
	Customer services	Transport	-.10833	.965	-.5615	.3449
		Warehousing	-.23676	.559	-.6690	.1954
		Contracting	.25000	.443	-.1573	.6573
		Procurement	-.12122	.701	-.3807	.1382

*Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

Table 5.44 of the post-hoc analysis reveals a difference established between employees who work under the contract management department and procurement of ($p=0.05$). This indicates that contract management and procurement employees have different attitudes towards integrity and skills than transport, warehousing and customer services employees.

The next section attends to the ANOVA tests that were performed on the employment period category.

5.7.2.5 ANOVA tests by employment period

The ANOVA tests in this section were performed to examine whether there are any statistically significant differences on FMCG employees according to an employee's employment period. The results of these tests are presented in the tables below.

Table 5.45: ANOVA test for Legal Components by employment period

Employment Period	Less than 5 years	6-10 years	11-15 years	16-20 years	21 years and above	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Moral Standards	3.99 (± 0.55)	4.00 (± 0.77)	4.09 (± 0.57)	3.94 (± 0.91)	3.77 (± 0.86)	0.778	0.541

Employment Period	Less than 5 years	6-10 years	11-15 years	16-20 years	21 years and above	F- value	P- value
Transparency	3.91 (±0.64)	3.98 (±0.70)	4.03 (±0.62)	3.99 (±0.59)	3.97 (±0.83)	0.250	0.910
Professional Competence	4.38 (±0.63)	4.32 (±0.63)	4.37 (±0.56)	4.26 (±0.75)	4.53 (±0.46)	0.524	0.718
Corporate Governance	4.09 (±0.59)	4.21 (±0.55)	4.04 (±0.58)	4.17 (±0.87)	4.17 (±0.67)	0.634	0.639
Accountability	3.99 (±0.67)	4.11 (±0.63)	3.96 (±0.83)	4.06 (±0.84)	4.00 (±1.07)	0.289	0.885
Fairness	4.29 (±0.64)	4.23 (±0.61)	4.37 (±0.56)	4.46 (±0.53)	4.50 (±0.43)	1.048	0.383

*Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

Table 5.45 reports on the ANOVA test conducted between Moral Standards, Transparency, Professional Competence, Corporate Governance, Accountability and Fairness against the employment period of the respondents. The categories for the employment period are less than 5 years, 6-10 years, 11-15 years, 16-20 years and above 20 years of employment. Upon examining the results in Table 5.42, it is evident that there were no statistically significant differences on the six variables that were adopted to measure the employment period of the employees who participated in this study. In light of this, it is clear that no statistically significant differences were recorded on all six factor variables ($p < 0.05$) that were conducted to measure how employees differ according to the number of years they have served in a firm. Thus, the responses of employees on legal aspects are evenly distributed across the different years employees have worked in a firm.

Table 5.46: ANOVA test for supplier management by employment period

Employment Period	Less than 5 years	6-10 years	11-15 years	16-20 years	21 years and above	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		

Employment Period	Less than 5 years	6-10 years	11-15 years	16-20 years	21 years and above	F- value	P- value
Supplier Assessment and Monitoring	4.16 (±0.55)	4.30 (±0.50)	4.22 (±0.54)	4.27 (±0.55)	4.52 (±0.42)	1.245	0.293
Relationship Commitment	4.14 (±0.68)	4.17 (±0.52)	4.17 (±0.57)	4.22 (±0.64)	4.56 (±0.56)	1.248	0.292
Supplier Collaboration	4.05 (±0.78)	4.22 (±0.54)	4.06 (±0.72)	4.14 (±0.51)	4.17 (±0.69)	.508	0.730

*Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

In Table 5.46, the ANOVA test was conducted between SAM, Relationship Commitment, Supplier Collaboration and the period in which the employees have served in their workplace. The ANOVA test revealed that there are no statistically significant differences between SAM ($F= 1.245$, p -Value 0.293), Relationship Commitment ($F=1.248$, p -Value 0.292) and Supplier Collaboration with ($F= 0.508$, p -Value 0.730). The ANOVA test reveals that employees' attitudes towards SM processes are similar across the number of years in which employees have been working in the FMCG industry.

Table 5.47: ANOVA test for Personal Ethics on employment period

Employment Period	Less than 5 years	6-10 years	11-15 years	16-20 years	21 years and above	F- value	P- value
	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev	Mean & Std dev		
Intrinsic Values	4.31 (±0.57)	4.04 (±0.62)	4.11 (±0.63)	4.18 (±0.85)	4.31 (±0.56)	1.118	0.349
Honesty	4.21 (±0.69)	4.09 (±0.59)	3.95 (±0.68)	4.10 (±0.86)	4.33 (±0.53)	1.539	0.192
Integrity and Skills	4.30 (±0.51)	4.22 (±0.50)	4.20 (±0.59)	4.24 (±0.61)	4.52 (±0.62)	.998	0.409

*Statistically significant difference $p \leq 0.05$ (Pallant, 2016)

The results presented in Table 5.47 indicate that there were no statistically significant differences ($p < 0.05$) across PE factors and the employment period category. This gives evidence that the attitudes of employees' PE towards SCM ethics are evenly distributed across the employment period category. Thus, employees respond in a similar manner towards aspects such as divulging in a firm's confidential information to external third-party service providers. This is supported by a study that was conducted by Ke and Wang (2014:77) as they insisted that PE factors were absorbed by employees evenly across their scope of work and duties.

The next section addresses the conceptual framework developed for the study together with the hypothesis statements.

5.8 PROPOSED CONCEPTUAL FRAMEWORK

A conceptual framework is described as an overall reflection of the possible courses of action or the preferred approach to a thought or idea. The framework reveals the strength of the correlations that exist between each dimension of the proposed research predictors and the outcome variable (Grant & Osanloo, 2014:13). Several benefits of using a conceptual framework have been enlisted by different scholars. Ravitch and Carl (2016:54) advocate that the conceptual framework assists researchers in situating and contextualising formal theories into research problems as a roadmap. In this study, the conceptual framework was developed from the variables that were extracted from the EFA procedure (refer to Sect., 5.5). The conceptual framework reveals the two predictor variables, namely LC (consisting of six sub-elements) and PE (consisting of three sub-elements) that lead to SM which was the outcome variable. Figure 5.11 depicts the proposed conceptual framework of the study.

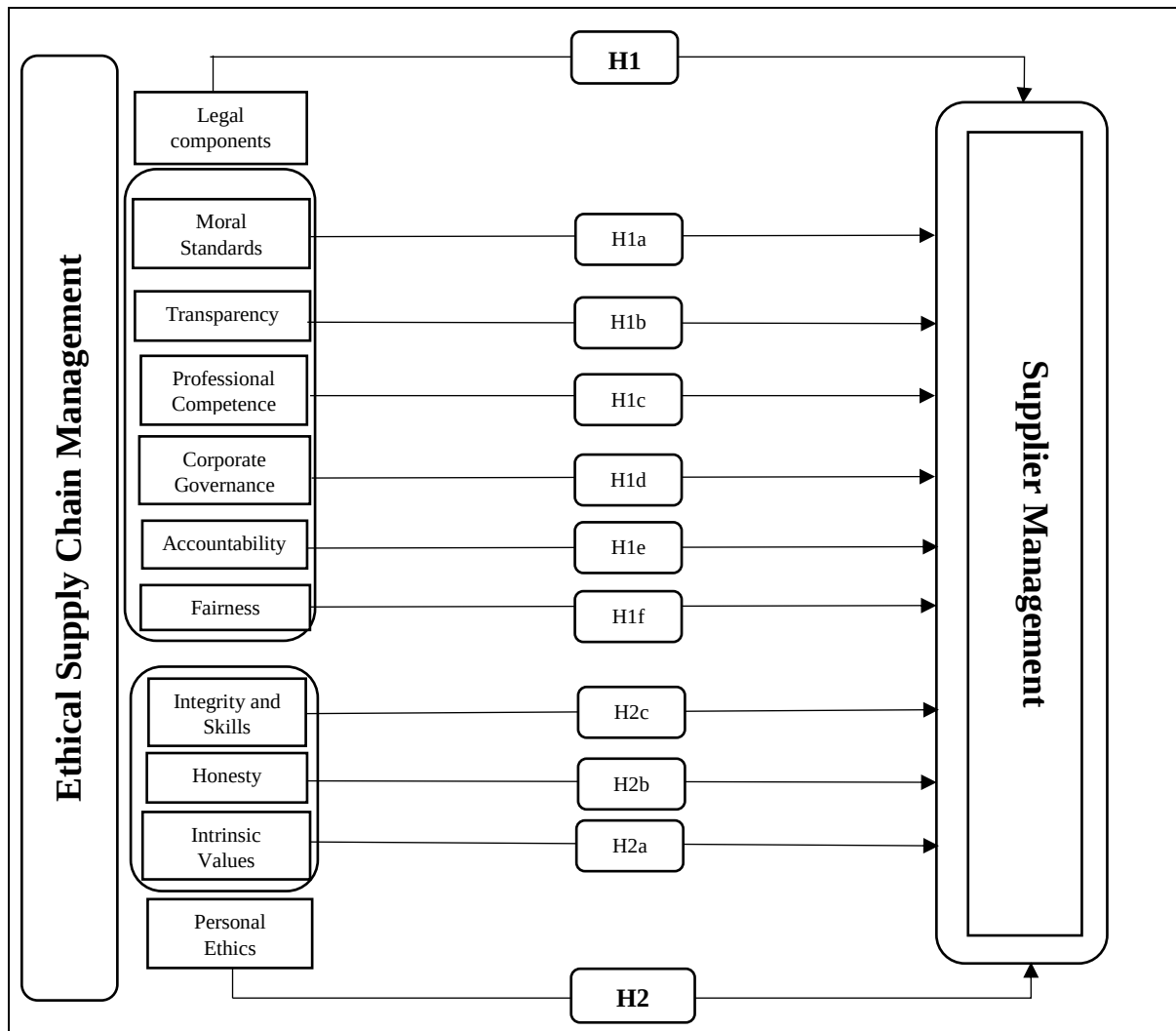


Figure 5.11: Conceptual framework: The relationship between Supply Chain Management ethics and Supplier Management

Source: Compiled by author

5.8.1 Hypothesis statements

Based on the conceptual model of the study illustrated above, the following sub-hypothesis statements were formulated.

H1: There is a significant positive relationship between SCM ethics and SM in the FMCG industry of South Africa.

H1a: There is a significant positive relationship between moral standards and SM in the FMCG industry of South Africa.

H1b: There is a significant positive relationship between Transparency and SM in the FMCG industry of South Africa.

H1c: There is a significant positive relationship between Professional Competence and SM practices in the FMCG industry of South Africa.

H1d: There is a significant positive relationship between Corporate Governance and SM in the FMCG industry of South Africa.

H1e: There is a significant positive relationship between Accountability and SM in the FMCG industry of South Africa.

H1f: There is a significant positive relationship between Fairness and SM in the FMCG industry of South Africa.

H2: There is a significant positive relationship between PE and SM in the FMCG industry of South Africa.

H2a: There is a significant positive relationship between Intrinsic Values and SM in the FMCG industry of South Africa.

H2b: There is a significant positive relationship between Honesty and SM in the FMCG industry of South Africa.

H2c: There is a significant positive relationship between Integrity and Skills and SM in the FMCG industry of South Africa.

With regards to the supported results of the current study, the conceptual framework proposed in the current study has ample support from previously conducted empirical research (Muncy & Vintell, 1992:595; Murray, 2003:295; Bendixen & Abratt, 2007:13; Anku, 2016:62) in which it was also established that there is a significant relationship between SCM ethics and SM practices such as supplier collaboration amongst the FMCG industries of South Africa. To further demonstrate the linkage of SCM ethics and SM, studies conducted also suggest that there is a conceptual nexus of a significant correlation between the legal framework of ethical SCM and the relationship commitment of suppliers (Ferrell, Rogers, Ferrell & Sawayda, 2013:278; Zhang, Liu & Wang, 2020:11). Furthermore, in line with the results of the current study, Karim, Smith and Halgamuge (2008:3603), and Narasimhan & Schoenherr (2012:1193) also established that integrity and skills is a strong predictor of SM practices. Thus, the conceptual framework proposed in the current study is of paramount importance in exploring the factors determining ethical SCM in the FMCG industry.

The next section discusses the correlation analysis of the retained factors.

5.9 CORRELATION ANALYSIS

Correlation analysis is a statistical method used to evaluate the strength of relationships between two quantitative variables (Franzese & Iuliano, 2018:2). When determining the measure of associations between variables, three main tests are performed. These include Pearson's product moment correlation, Spearman's rank correlation and the Kendall's correlation coefficient (Bishara & Hittner, 2017:295). In this study, Pearson's moment correlation was used to test for the strengths of relationships on the assigned variables. Pearson's coefficient correlation is the measure of the strength of a linear association between two or more variables (Makowsk, Ben-Shachar, Patil & Ludecke, 2020:306). In order to ascertain values in which the data being evaluated is fit for use, the Pearson correlation coefficient, r , can take a range of values from +1 to -1 (Mukaka, 2012:70). A value greater than 0 indicates a positive association which entails that as the value of one variable increases, so does the value of the other variable (*ibid*). However, a value less than 0 indicates a negative association and this posits that as the value of one variable increases, the value of the other variable decreases. In order to establish the strengths between variables, LC and PE were correlated to SM.

Table 5.48 reviews these results in detail below.

Table 5.48: Correlation Analysis: Legal Aspects and Personal Ethics on Supplier Management

Factors	MS	TR	PC	CG	ACC	FR	IV	HO	IS	SM
MS	1									
TR	.384**	1								
PC	.028	.086	1							
CG	.225**	.105	.103	1						
ACC	.296**	.079	.186**	.310**	1					
FR	-.027	.102	.222**	.055	.094	1				
IV	.047	.132*	.097	.125	.127	.143*	1			
HO	.084	-.015	.127	.063	.054	.067	.357**	1		
IS	-.009	-.017	.032	-.065	.132*	.136*	.075	.125	1	
SM	.135*	.160*	.104	.060	.122	.189**	.075	.250**	.068	1

MS= Moral standards; TR= Transparency; PC= Professional Competence; CG= Corporate Governance; ACC= Accountability; FR= Fairness; IV= Intrinsic Values; HN= Honesty; IS= Integrity and Skills; SM= Supplier Management

Factors	MS	TR	PC	CG	ACC	FR	IV	HO	IS	SM
. Correlation is significant at the 0.01 level (2-tailed) *. Correlation is significant at the 0.05 level (2-tailed) *small $r = .10-.29$; ** marginally $r = .30-.49$; * large $r = .50-1.0$										

5.9.1 Correlation between Legal Components and Supplier Management

Table 5.48 reveals that there was a weak positive correlation between moral standards and SM ($r=0.135$; $p=0.000$). This implies that when FMCG employees' moral standards increase their attitudes towards SM related activities increases marginally. An increase in employees' moral standards therefore stimulates a slender increase on SM. Thus, moral standards are positively and significantly correlated on SM related processes as indicated in a study conducted by Adesanya, Yang, Iqdara and Yang (2020:421).

Secondly, the results revealed another weak positive correlation between SM and transparency of $r=0.160$; $p=0.017$. This result suggests that an increase in transparency leads to a small increase in SM. Derwick and Hellstrom (2017:210) conducted a study that focused on transparency in SCM in which the results simulated a small positive correlation between transparency and SM processes. This result illustrates that whenever transparency increases there is a marginal increase on SM activities.

The correlation matrix also revealed a weak positive and insignificant correlation between professional competence and SM of $r=0.104$; $p=0.123$. This indicates that although professional competence and SM correlated the relationship was insignificant. This result can relate to an experimental study conducted by Gold and Heikkurinen (2018:327) in which competence and fallacy resulted in unintended consequences of stakeholder claims on responsibility in suppliers. As a result, those unintended consequences may result in a weak and insignificant positive correlation.

Table 5.48 recorded another positive correlation between accountability and SM. The results revealed that accountability was positively correlated to SM registering ($r=0.122$; $p=0.071$). These results suggest that as accountability increases, SM changes to a small extent.

With regards to the LC, the last factor labelled as Fairness recorded a weak positive correlation on SM of $r=0.189$; $p=0.005$. This indicates that as fairness increases, SM marginally increases. This result posits that whenever fairness is achieved on situations that require adjudication by

managers and professional employees, a marginal positive change may also be achieved on SM related activities.

5.9.2 Correlation between Personal Ethics and Supplier Management

The correlation matrix reveals that only one PE construct (Honesty) is positively correlated to SM. Honesty recorded a weak positive correlation with SM $r=0.250$; $p=0.054$. This indicates that as honesty in managers and professional employees increases, there is a small improvement in their ability to manage suppliers.

The next section deliberates on the regression analysis that was performed between independent factor variables and the outcome variable of the study.

5.10 REGRESSION ANALYSIS

Regression analysis is a statistical method which is performed mathematically to sort out a series of multiple factor variables (Zou, Lan, Wang & Tsa, 2017:266). This method of analysis is used to determine which variables have a relationship and how they relate to one another (Qiu & Chen, 2012:1287). The basic form of regression models includes unknown parameters (β), independent variables (X), and the dependent variable (Y) (Cressie & Wikle, 2011:350). In this study, regression analysis was performed using two linear regression models. The first regression model encompassed six independent variables (Moral Standards, Transparency, Professional Competence, Corporate Governance, Accountability and Fairness) measured against the dependent variable (SM). The second regression model was then run to measure the relationship of three independent variables (Intrinsic Values, Honesty, Integrity and Skills) and the outcome variable being SM. In order to ascertain the mathematical calculations of the independent (X) variables and the dependent (Y) variable, two ordinary least squares (OLS) regression equations for these models were computed and presented in Table 5.49.

Table 5.49: Ordinary least squares regression equations

Regression Model	Dependent Variable	Independent Variable/s	Equation
1	LC	MS, TR, PC, CG, ACC & FR	$LC = \beta_0 + \beta_1(MS) + \beta_2(TR) + \beta_3(PC) + \beta_4(CG) + \beta_5(ACC) + \beta_6(FR)$
2	PE	IV, HN & IS	$PE = \beta_0 + \beta_1(IV) + \beta_2(HN) + \beta_3(IS)$
LC = Legal Components; MS= Moral Standards; TR= Transparency; PC= Professional Competence; CG= Corporate Governance; ACC= Accountability; FR= Fairness; IV= Intrinsic Values; HN= Honesty; IS= Integrity and Skills			
* β_0 is the constant or intercept for LC, and β_1 -6 are the coefficients of the independent variables			
* β_0 is the constant or intercept for PE, and β_1 -3 are the coefficients of the independent variables			

Table 5.49 reports on the statistical equations that were used to perform regression tests on the two models. Table 5.49 indicates the affirmation between the constant (β_0) and the coefficients of the independent variables. The outcome of the regression analysis was presented in regression models 1 and 2 of the study.

5.10.1 Regression model 1: Legal Components and Supplier management

Table 5.50 presents the regression model summary of LC and SM.

Table 5.50: Regression model 1: Legal components and Supplier Management

Independent variables: Legal components	Dependent variable: Legal components						
	Unstandardised Coefficients		Standardised Coefficients Beta	T	Sig P	Collinearity Statistics	
	β	Std. Error				Tolerance	VIF
Constant	2.956	.338		8.736	.000		
Moral Standards	.048	.046	.079	1.050	.295	.759	1.318
Transparency	.067	.047	.104	1.444	.150	.833	1.201
Professional Competence	.030	.047	.044	.638	.524	.917	1.091
Corporate Governance	-.002	.046	-.004	-.052	.959	.881	1.135
Accountability	.036	.039	.068	.928	.354	.820	1.220
Fairness	.119	.049	.165	2.416	.017	.933	1.072
R= 0.133 Adjusted R² = 0.04 F= 1.306 p<0.05*							

Source: Compiled by author

An analysis of the results of regression model 1 as presented in Table 5.50 reveals that LC explained approximately ($R^2 = 0.045$) and accounted for almost 4.5% of the variance explained in the SM construct of the current study. This result suggests that almost 95.5% of the variance in SM is explained by other extraneous factors that were not examined in this study. These factors may include Risk and Reward Sharing (Singh, 1997), Buying firm power asymmetry (Chuah, Wong, Ramayah, Jantan, 2010:742), Information Sharing (Srivastava & Singh, 2013:12) and Trust (Ahmad & Hall, 2017:50) which also may influence SM.

A further analysis of the results of regression model 1 indicates that only one construct (Fairness) significantly and positively predicted SM ($\beta=0.165$; $t=2.416$; $p= 0.017$). This result demonstrates that fairness in the contractual agreements between buying and supplying enterprises positively predicts the ability of firms to manage their suppliers. This result is

consistent with previous literature by Ahimbisibwe, Muhwezi and Nangoli (2012:457) who advocate that mutually reciprocal contractual agreements between buying and supplying firms in Uganda could incentivise the SM capacity of the buying firm. The results of this study point to the importance of developing contracts that benefit both buyers and suppliers as this has an effect on how the former are committed to managing, monitoring and assessing the activities of their suppliers. When suppliers discover collaborative win-win relationships, they make attempts to ensure that the buyers (customers) are also satisfied with their service.

Another study by Wang, Zhang, Li, Huo and Fan (2020:213) reveals the influence of supplier transaction investments on Chinese buyers. In this study it emerged that fairness on obligations of the contract between Chinese local suppliers and international buyers results in transparency and safeguards the interests of both parties on aspects such as buyer-supplier relationships that enhance the effectiveness of detailed contracts. Thus, a transparent process in awarding contracts promotes fair processes that benefit all parties involved.

After an extensive analysis on the LC factors, the results regarding regression model 1 further imply that fairness is the most important LC when compared to the rest of the constructs considered in this study. Thus, more attention should be directed in ensuring that SCM processes between buying and selling firms are fair as this helps to ensure complacency when addressing procurement related contracts.

Apart from fairness, the effect of transparency on SM deserves to be mentioned. The results reveal that transparency ($\beta=0.104$; $t=2.416$; $p=0.150$) exerted some level of influence on SM, but it was statistically insignificant, as revealed by the beta value. However, the value is marginal and is statistically insignificant since the p value is above 0.05. As a result, the variable was not considered as significant and supported (refer to Section 5.11).

The rest of the LC constructs (Moral Standards, Professional Competence, Corporate Governance, Accountability) did not exert an influence on SM. This result denotes that these factors are not important in determining both the degree and future levels of SM in buying firms. This result could be attributed to the fact that factors such as Accountability, Corporate Governance and Moral Standards may lead to a degree of fairness if applied consistently and in a measured and accurate manner. Therefore, these factors may form part of the fairness variable when determining the extent to which ethical SCM influences FMCG industries of South Africa.

5.10.2 Regression model 2: Personal Ethics and Supplier Management

Table 5.50 presents the regression model summary for PE and SM.

Table 5.51: Regression model 2: Personal Ethics and Supplier Management

Independent variables: Personal ethics	Dependent variable: Supplier management						
	Unstandardised Coefficients		Standardised Coefficients Beta	T	Sig P	Collinearity Statistics	
	β	Std. Error				Tolerance	VIF
Constant	3.760	.259		14.493	.000		
Intrinsic Values	.018	.046	.028	.388	.698	.845	1.184
Honesty	.063	.044	.106	1.452	.148	.845	1.184
Integrity and Skills	.025	.052	.034	.484	.629	.908	1.102
R= 0.133 Adjusted R² = 0.04 F= 1.306 p<0.05*							

Source: Compiled by author

An analysis of the results of regression model 2 as presented in Table 5.50 reveals that PE described approximately ($R^2 = 0.04$) and accounted for almost 4% of the variance explained in SM in the current study. This result suggests that almost 99.9% of the variance in SM is defined by other peripheral factors that were not examined in this study. Such PE factors which may not have been examined but influence SM may include motivational mechanisms and self-concepts, among others. Regression model 2 reveals that none of the three factors examined have a significant effect on SM since their p values were higher than 0.05.

The construct 'Honesty' ($\beta=0.106$; $t=1.452$; $p= 0.148$) exerted some level of influence on SM, but it was not statistically significant. This indicates that although honesty was statistically insignificant, it still exerted a positive relationship on SM. Such a result is consistent with previous studies conducted by Svensson (2009:262) and (Alexander, Walker & Naim, 2015:515) who indicate that honesty is a good predictor of SM practices. This indicates that more attention is needed on research that involves PE factors such as honesty on its impact and influence on SM practices.

5.11 HYPOTHESES DECISIONS

Table 5.52 reports on the results from this study and states the decisions relating to the research hypotheses.

Table 5.52: Hypothesis decisions for constructs

Hypothesis	Relationship	Beta coefficient	t Value	p-Value	Supported/not supported
H1a	MS → SM	.079	1.050	.295	Not supported and insignificant
H1b	TR → SM	.104*	1.444	.150	Supported and insignificant
H1c	PC → SM	.044	.638	.524	Not supported and insignificant
H1d	CG → SM	-.004	-.052	.959	Not supported and insignificant
H1e	AC → SM	.068	.928	.354	Not supported and insignificant
H1f	FR → SM	.165*	2.416	.017*	Supported and significant
H2a	IV → SM	.028	.388	.698	Not supported and insignificant
H2b	HN → SM	.106*	1.452	.148	Supported and insignificant
H2c	IS → SM	.034	.484	.629	Not supported and insignificant

LC = Legal Components; MS= Moral Standards; TR= Transparency; PC= Professional Competence; CG= Corporate Governance; AC= Accountability; FR= Fairness; PE= Personal Ethics IV= Intrinsic Values; HN= Honesty; IS= Integrity and Skills SM= Supplier Management

Source: Compiled by author

Table 5.52 presents the decisions made regarding the proposed hypotheses suggested for the two main predictor constructs with its sub scales. Three constructs developed in this study indicated a significant and positive relationship on the outcome variable which was SM. These hypotheses included H1, H1f and H2 which recorded p values less than < 0.05 . For other hypotheses, H1b and H2b were supported although they were insignificant because the p values were higher than > 0.05 . The remaining hypotheses H1a, H1c, H1d, H1e, H2a and H2c were insignificant and not supported. This indicates that these constructs (Moral Standards, Professional Competence, Corporate Governance, Accountability, Intrinsic Values and Integrity and Skills) do not predict SM.

Having deliberated on the hypothesis decisions made in the study, a consideration of the underlying internal consistency and validity concerns relating to the measurement instrument was deemed essential. The next section discusses the results for these tests.

5.12 VALIDITY AND RELIABILITY

In this section, a discussion of the results for the tests for validity and reliability are provided. First to be presented are the results for the exploration of the various techniques used to test for validity. Section 5.12.1 discusses the results of the tests for reliability.

5.12.1 RELIABILITY ANALYSIS RESULTS

Reliability is defined as the extent to which a test or measure can produce similar results if repeated under identical circumstances (Judd *et al.*, 2017:107). Reliability assessment is measured through the use of three techniques, known as the Cronbach's alpha test (Cronbach α), the Composite Reliability test (CR) and Item-Total correlations. Although three techniques may be used to determine internal consistency, the present study employed the Cronbach's alpha coefficient to test for the accuracy of the results. A computation of the Cronbach's alpha thresholds is presented in Table 5.53.

Table 5.53: Cronbach's Alpha established threshold values

Values	Decisions
$\alpha \geq 0.9$	Excellent
$0.8 < \alpha \leq 0.9$	Good
$0.7 < \alpha \leq 0.8$	Acceptable
$0.6 < \alpha \leq 0.7$	Questionable
$0.5 < \alpha \leq 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source: Cronbach (1951)

Table 5.53 reveals the values and decisions that were presented by Cronbach when checking for internal consistency values. According to these results, the Cronbach's alpha value is considered to be acceptable when it is equal or above the recommended lower cut-off value of 0.7. Table 5.53 reveals the reliability of the measurement scales used in the study.

Table 5.54: Cronbach results of the study

Thresholds values	Constructs	Obtained values per sub-factors	Overall (α) per construct	Decisions
$\alpha \geq 0.9$	Legal components (LC)		0.733	Acceptable
$0.8 < \alpha \leq 0.9$	Moral standards	0.796		Acceptable
$0.7 < \alpha \leq 0.8$	Transparency	0.823		Good
$0.6 < \alpha \leq 0.7$	Professional Competence	0.700		Acceptable
$0.5 < \alpha \leq 0.6$	Corporate Governance	0.661		Questionable
$\alpha < 0.5$	Accountability	0.764		Acceptable
	Fairness	0.651		Questionable
	Supplier management (SM)		0.682	Questionable
	Supplier Assessment and Monitoring	0.630		Questionable
	Relationship Commitment	0.701		Acceptable
	Supplier Collaboration	0.716		Acceptable
	Personal ethics (PE)		0.703	Acceptable
	Intrinsic Values	0.785		Acceptable
	Honesty	0.683		Questionable
	Integrity and Skills	0.641		Questionable

Source: Compiled by author

Table 5.54 reports on the Cronbach's alpha values of the three measurement scales that were used for analysis in this study. From the initial three measurement scales (LC, SM & PE) sub-factors were also measured to check for their individual internal consistency reliability. These sub-factors were extracted from the EFA procedure that was performed in this study to check for the complex patterns that were present in this data set (refer to Section 5.5). In this section, it emerged that measurement scales LC and PE both attained overall Cronbach values that were above the recommended minimum threshold of 0.7. With regards to the SM scale an overall Cronbach's alpha value of 0.682 was recorded which is below the recommended threshold. However, since this study was of an exploratory nature, values above 0.6 were accepted and retained back in the study.

The internal consistency results achieved in this exploratory study are in line with previous studies that supported the use of such thresholds. In a study conducted by Juul, Van Rensburg and Steyn (2012:83) a lower Cronbach's alpha value of 0.6 was declared acceptable and the results indicated a good internal consistency. Likewise, Hajjar (2018:33) suggests that a value of Cronbach's alpha between 0.6 and 0.8 is acceptable and fit for use in exploratory studies. Tapsir, Pa and Zamri (2018:40) conducted a quantitative research in which the Cronbach's alpha for the nine dimensions ranged between 0.675 and 0.932. Several authors Ursachi, Horodnic and Zait (2015:681) assert that the generally accepted rule is that an alpha value of 0.6-0.7 indicates an acceptable level of reliability, and 0.8 or greater prompts a very good level. After the scrutiny of these previous studies, Cronbach's alpha values of 0.6 or higher were retained as useful in this study.

5.12.2 SCALE VALIDITY

This section discusses the four main types of validity that were performed in this study. These include face, content, construct and predictive validity. These types of validity are discussed in Section 5.12.2.1 to Section 5.12.2.4.

5.12.2.1 Face validity

Face validity is based on superficial impressions regarding the extent that a measure appears to capture a construct (Crano, Brewer & Lac, 2015:65). In this study, face validity was tested using the knowledge and expertise of the two supervisors of the current research project. Through the input induced by the project co-ordinators, several aspects were dealt with including fixing the sentencing structure, whereby the wording of the questions was modified to ensure that the questionnaire was able to elicit the required information accurately. Other technical aspects attended to included the design and coherence of the tables in which questions would be presented.

5.12.2.2 Content validity

Content validity refers to the extent to which the items on a test are fairly representative of the entire domain the test seeks to measure (Bagozzi & Yi, 2012:25). In order to ascertain the content validity, a pilot study was performed on the research questionnaire. The pilot study involved the distribution of 43 questionnaires to several FMCG firms situated in Gauteng Province. Professional employees and managers participated in the survey by completing the questionnaire. A report of the results of the pilot survey is presented in Section 5.2 revealing

high internal consistency values in all three scales. The pilot survey provided feedback on how the research questionnaire could be improved for data collection in the main survey. The respondents that were included in the pilot study were excluded from the main survey in order to avoid selection bias.

5.12.2.3 Construct validity

Construct validity is defined as the extent to which a test measures what it claims to measure (Barbie, 2013). Construct validity can be sub-divided into two main components, namely convergent and discriminant validity. The current study employed both convergent and discriminant validity in ascertaining the measurement scale results.

➤ Convergent validity

Convergent validity refers to the degree to which scores on a test correlate with (or are related to) scores on other tests that are designed to assess the same construct (Hair *et al.*, 2014:112). In this study, convergent validity was tested using the factor loadings computed in the EFA procedure, particularly by considering those loadings that were higher than 0.5 (McNeish, 2017:638). All items that had factor loadings above 0.5 were retained as they were deemed to have satisfactory convergent validity.

➤ Discriminant validity

Discriminant validity is the extent that measures of constructs that are theoretically unrelated are actually unrelated (Alder & Clurck, 2011:164). The present study employed inter-factor correlations to test for discriminant validity. As revealed in Table 5.48, positive correlations below 1.0 were observed, signalling that discriminant validity was acceptable.

5.12.2.4 Predictive validity

Predictive validity is defined as an index of how well a test corresponds to a variant which is gauged in the future, at a time following which the test has been given (Bagozzi & Yi, 2012:31). The results from the regression analysis using model one and two highlighted that there were significant positive relationships between the independent and dependent constructs, thereby confirming the existence of high predictive validity in the study.

5.13 CHAPTER SUMMARY

The main aim of Chapter Five was to explore the factors that determine ethical SCM in the FMCG industry. The first section of the chapter examined the profile of the respondents and this indicated that most demographic groups required were represented in the study. The second section of the chapter was to determine the EFA procedure. The EFA yielded six LC factors, namely Moral Standards, Transparency, Professional Competence, Corporate Governance, Accountability and Fairness. Three factors, namely SAM, Relationship Commitment and Ability and Supplier Collaboration were extracted under SM while three components, namely Intrinsic Values, Honesty and Integrity and Skills were extracted under PE. Independent sample t-tests indicated that female respondents observe PE to a greater degree when compared to their male counterparts. ANOVA tests performed indicate that White and Mixed race respondents had different perceptions towards collaborating with suppliers than Black and Indian employees. The tests further revealed mean differences in the occupational area category, with those working under contract and customer services departments being more inclined towards LC such as competence on professionalism. Further tests performed on the data included Pearson correlations and Regression analysis. Correlations between the constructs were either weak or moderate. Regression analysis indicated that only the fairness construct was supported and significant revealing that fairness is a strong predictor of SM.

The next chapter provides the conclusions and recommendations.

CHAPTER SIX

CONCLUSIONS, RECOMMENDATIONS, LIMITATIONS AND IMPLICATIONS FOR FURTHER RESEARCH

6.1 CHAPTER OVERVIEW

The preceding chapter provided a report on the analysis, presentation of the data and an interpretation of the research results. Based on the literature reviewed and the empirical evidence supplied, the current chapter seeks to provide the conclusions of the study and make recommendations for managers and professional employees in the FMCG industry.

Firstly, this chapter reviews the chapters of the dissertation. Thereafter, conclusions based on the research objectives are provided. The chapter also provides practical recommendations on how ethical SCM may be implemented in the FMCG industry. The chapter then concludes by outlining the theoretical and practical implications as well as a number of limitations of the current study and then presents suggestions for future researchers and the overall conclusions of the study.

6.2 REVIEW OF DISSERTATION CHAPTERS

This study aimed at exploring the factors that determine ethical SCM in the FMCG industries of South Africa. The study was targeted at examining the factors that have an influence on ethical compliance within the FMCG industry. It was also intended to investigate mean differences against various demographic factors pertaining to managers and professional employees in this industry. The dissertation comprised of six chapters in which chapter one introduced the study by discussing the background of the study, the research problem, the research objectives, the research design, data analysis procedures as well as outlining the ethical considerations.

In the second chapter, an extensive review of the literature was performed focusing on the FMCG industry of South Africa. The chapter focused on topical issues such as the structure and composition of the FMCG industry as well as its recent developments and growth mechanisms. Thereafter the chapter discussed the legislative framework that governs the industry, citing the important laws and regulations which the industry should adhere to when operating within the South African retailing space. The chapter also directed its attention to discussing the social economic contributions and the achievements of the industry.

The third chapter discussed ethical SCM and its relevance and attributes both on a global and local scale. The chapter started by outlining the concept of SCM, reviewing its components and characteristics. Prior to the discussion of ethical SCM, the chapter started by discussing business ethics and outlined the core functions that govern ethical responsibility in firms and organisations. The chapter then discussed SCM ethics, directing much attention to the role of business ethics in SCM. The chapter also revealed unethical SCM practices that are common in organisations. The chapter then concluded by outlining practical cases that have been practised by organisations both locally and globally. Thus, these cases were discussed and a brief overview was provided revealing how such malpractice can be averted.

The fourth chapter on the methodology was employed to discuss key research concepts such as research philosophy, research methodology and research methods and the research design adopted for the study. In addition, concepts relating to reliability and validity of the study were also discussed putting into context how these concepts are used to measure collected data. The methodology chapter concluded by outlining how ethical consideration is put in place when data is being collected by researchers.

Chapter five, entitled “Data presentation, analysis and interpretation of the research results”, implemented the proposed methodology to analyse, present and interpret the data. The chapter analysed the respondents’ socio-demographic factors, the empirical objectives and the hypotheses using both descriptive and inferential statistical techniques such as EFA, t-tests, ANOVA and regression analysis. The statistical tests were performed using SPSS version 26.0.

6.3 CONCLUSIONS OF THE STUDY

The primary purpose of the present study was to explore factors determining ethical SCM in the FMCG industry. To achieve the primary objective, the study formulated six secondary objectives and these are:

1. Analysing the literature on the FMCG industry
2. Exploring the literature on ethical SCM
3. Determining the underlying factors of ethical SCM in the FMCG industry
4. Establishing the level of compliance in ethical SCM

5. Determining the variation of the ethical SCM factors with demographic variables such as age, gender, race and educational level
6. Determining the influence of ethical SCM on SM in the FMCG industry

6.3.1 Conclusions based on the literature review of the FMCG industry of South Africa

The first secondary objective of the study was to analyse the literature on the FMCG industry. In this chapter, it emerged that although the FMCG industry is mostly dominated by large retailers such as Pick n Pay, Shoprite, Massmart, Woolworths and Spar the existence of the informal traders should not be ignored. The informal retail industry, which dominates in the rural areas and townships of South Africa, contributes enormously towards the distribution of goods from larger retailers. Although this industry has a huge impact on South African households a lot of challenges have been identified. The challenges identified in the literature range from inventory shortages to access to funding from state institutions that provide retail support to local entrepreneurs. In addition, other problems that are being encountered by FMCG retailers in the informal industry include high levels of crime, severe competition, expensive logistics services due to distance from the source, and bad debt or the granting of too much credit by the retailers which are not secured.

The chapter further revealed the competitiveness of the FMCG industry and how traders and retailers endure their businesses in order to ensure survival. In this particular instance, it emerged that infant retail traders, particularly for shopping centres in remote areas, who do not have bargaining power against major retailers such as Shoprite, are more inclined to enter into exclusive contracts to order and replenish their stocks for their operations. As a result, a lack of competition has far-reaching consequences in remote areas where pricing is a key driver for low-income consumers. The chapter also explored the recent developments that have been achieved by the industry. In this section, key issues revolving around the expansion of the industry have been identified with economies of scale which has emerged to be the key driver in FMCG firms being able to achieve such distinctive attributes. The economies of scale have been compounded by the huge trade volumes which retailers have been able to enjoy by conducting business in other regions such as Zimbabwe and Botswana.

The study further demonstrated that the issue of political tensions has also contributed in diminishing relations with partners from other countries in the SADC region. This can be ascertained by information that has pointed to the fact that very strict and unreasonable conditions are being posed as requirements for FMCG retailers to trade in some regions. Some

of the harsh conditions include acquiring of trading licenses which in turn has contributed in the closure of some FMCG firms operating in countries such as Zambia. For this reason, the closure of retailers and trading partners in other countries has had a negative impact on the sales turnover and growth of the industry in South Africa and the rest of the continent.

6.3.2 Conclusions based on the literature of ethical SCM

The secondary objective focused on exploring literature on ethical SCM. This was discussed in chapter three of the study. The chapter emphasised that business ethics functions such as ethical decision making, CSR, ethical leadership, corporate governance and sustainable development and information ethics act as the core enablers in the guidance of SCM ethical related procedures. The literature linked to ethical SCM revealed that the applicability of SCM ethics in organisations is supported by ethics, values and principles. As such, four ethical orientation mechanisms have been identified and these include relationship, channel, commitment and environment orientation. Thus, the use of these four components assists professional employees to attend to SCM ethical related procedures effectively.

Literature from this chapter also indicated that unethical malpractices in organisations can be committed by an employee without the involvement of suppliers. Such unethical malpractices include conflict of interest in which an employee may act in isolation when awarding a contract to an unqualified firm. This takes place when the employee holds a significant amount of shares of that firm or where the employee's family member is an employee of that firm. Therefore, this type of conflict of interest could indirectly benefit the employee's family member by awarding them a contract with adequate due processes.

6.3.3 Conclusions based on determining the underlying factors of ethical SCM in the FMCG industry

In the third secondary objective, the EFA procedure was employed to determine the underlying factors of ethical SCM in the FMCG industry. Initially, there were three measurement scales considered in the study, namely LC, SM and PE. EFA was run separately on each of these scales to identify the dimensions under each one of them.

6.3.3.1 Identification of the underlying dimensions of Legal Components

From the first ethical SCM factor, known as LC, six dimensions were identified. The first factor under LC was labelled as **Moral Standards**, which describes the moral principles which employees are expected to display in an organisation in order to achieve a correct analysis of

situations. Under this factor, important conclusions were drawn from the interactions in which moral standards relate between lower level and top management employees in organisations. It also emerged that distinctive boundaries should be placed between ethics and morality, whereby Mayer *et al.* (2012:155) insists that ethics relates to knowing and morality focuses more on the implementation of what is known.

The second factor was labelled as **Transparency**, and is described as a review and access to information and directing it to certain objectives that are aligned to an organisation's consumer policy guidelines. With regards to this factor, research established that transparency acts as a good driver towards necessitating good organisational relations between buying organisations and suppliers. However, it was noted that transparency might cause a breach of intellectual property rights as employees might end up disclosing information that is private and confidential to their suppliers.

Professional Competence is the third factor labelled under LC. The factor discussed critical elements that relate to an employee's professional conduct when handling organisational matters that include ethical compliance. The study indicated that for professionalism to be achieved across all individuals affiliated in a certain industry, technical and managerial training is needed. Thus, competence helps achieve more technical capabilities whenever training is conducted on elements that require employees to behave ethically. Additionally, research has revealed that internal training within supply chains of organisations increases the chances of employees to transfer knowledge of ethical compliance to other stakeholders such as suppliers.

The fourth factor was labelled **Corporate Governance**, and it discussed the sustainability of industries that practice and maintain ethical SCM. Several conclusions were derived from this factor and these include the functionality and challenges of the mechanisms that are needed for corporate governance processes. It has emerged that for corporate governance issues to function adequately, continuous attention should be directed to improving engagement from crucial players in the SCM environment such as the planning and control personnel. Although such important aspects have been identified, several challenges are still present for organisations to implement these measures. These challenges include the limited levels of participation by women as top managers within the governance structures of their organisations.

The fifth factor under LC was labelled **Accountability**, which describes the systems that have been put in place by organisations that help govern employees on how they conduct fiduciary

duties and regulatory processes that are used in dealing with circumstances of unethical practices. Several crucial conclusions drawn on this factor included the requirements of strict procedures by employees whenever they deal with submission of reports on contracts that have been awarded.

The last factor under LC was labelled as **Fairness** and examined the behavioural response of employees when dealing with procurement and supply chain contracts. Literature from this component revealed that fairness institutes positive working relationships between the buying organisation and its suppliers. More so, research conducted by Kennedy and Santos (2019:529) established that creating a fair environment between suppliers and buying organisations entails trust which then leads to improved contractual performance.

6.3.3.2 Identification of the underlying dimensions of Supplier Management

In applying the EFA procedure to the SM scale, three underlying dimensions were identified. The first factor identified under this component was labelled as **SAM**, which discussed the mechanisms that are used to quantify the roles and responsibilities of suppliers in order to adhere to contractual obligations. The factor described key aspects involving supplier responsibilities such as the need for sound communication networks that should be present in a supply chain to eliminate bottlenecks and inefficiencies in delivery targets. It was also established that assessment and monitoring is of paramount importance to SCM processes as it ensures a detailed evaluation process, which assists management to monitor delivery targets such as the cold distribution channels.

The second factor under SM was labelled as **Relationship Commitment**. The factor discussed the motivation that should be instituted between the buying organisation and its suppliers. This factor was divided into two forms of commitment, namely normative and instrumental commitment. From the research conducted in this particular study, instrumental relationship commitment was established to be ineffective as it focused on developing suppliers with the main aim of acquiring remuneration and contractual obligations at the expense of the other parties involved. However, with regards to normative commitment, it emerged that it is the most reliable form of relationship commitment as it seeks to build long term partnerships for continuous improvement.

The third factor to be considered under SM was labelled **Supplier Collaboration**. Key aspects on how suppliers interact were discussed and these include their strategic alliances, long term partnerships and channel integration. From this factor, it was discovered that collaboration with

suppliers results in a number of benefits achieved such as decreased costs through improved lead time on delivery of goods, enhanced quality through better product design and sharing of specialised knowledge. The study also established that although several benefits have been identified, several limitations are still present. It has emerged that the involvement of suppliers on a firm's product and innovation process limits the buying firm to institute internal procedures that might be private and confidential. As a result, such drawbacks may limit effective SCM practices on the parties involved.

6.3.3.3 Identification of the underlying dimensions of Personal Ethics

The last set of factors that were considered by the EFA procedure were identified from the PE construct. Under this component, factor 1 was labelled as **Intrinsic Values** and it described the personal norms employees institute when dealing with organisational ethical perceptions. Under intrinsic values, the research established that work values provide extensive details compared to personal values. This result entails that work values have direct implications on the behaviour and attitude of employees in organisations. Another critical result examined the use of intrinsic values for the benefit of organisational processes. It was established that in order for efficiency and effectiveness to be ascertained at all levels of organisational processes and practices, work related values need to be implemented.

The second factor under PE was labelled as **Honesty** and relates to the individual characteristics of employees and the way they conduct themselves in an environment where contractual processes take place. It emerged that in order for employees to remain honest when handling procurement and supply chain related processes, it is the organisation's duty to provide its employees with policy documents that act as a guideline of the procedures that are needed for a particular project being conducted. Thus, ethical compliance should be instituted by both the employer and the employee of an organisation.

The last factor under the PE component was labelled **Integrity and Skills**. This factor pertains to critical issues relating to employees' personal ethical norms such as working requirements and performance measurement attributes. The study established that integrity should not only be measured by results but instead focus on other performance indicators such as the well-being and admiration of others. In addition, research from this study has confirmed that the skills that are required to ascertain the integrity of personnel can be formed from a variety of activities in a firm's strategic and planning portfolios, such as formal education and leadership development training programmes.

From the above discussion, the use of the EFA procedure to identify underlying patterns of the three main measurement scales (LC, SM & PE) adopted in this study provided an indication of important factors that many firms in the FMCG industry should take into consideration when analysing and investigating ethical SCM practices.

6.3.4 Conclusions based on establishing the level of compliance in ethical SCM

The fourth secondary objective in this study was achieved through descriptive statistics. After factors were extracted through the EFA procedure, a determination of how respondents participated according to the presentation of each factor was essential. The descriptive statistics presented the SD and the overall mean results and an average range was also indicated in all descriptive tables. The overall mean was closely associated to the 'agree' point on the Likert scale which is a strong indicator that most managers and professional employees that participated in this study displayed a positive attitude towards questions that related to ethical compliance. The SD values reveal that data presented in this was closely associated to the mean values. Thereafter, the descriptive statistics were then performed to reveal if the data collected in this study was normally distributed or not. In determining how the data was distributed skewness and kurtosis values were presented which indicated that data was closely associated to the mean values. This suggests that the descriptive statistics consisted of data that were normally distributed signalling parametric data. In such a view, such a determination of the factors under the skewness and kurtosis meant that parametric inferential statistics were performed, and these included a t-test, ANOVA, Pearson's correlations and regression analysis.

6.3.5 Conclusions based on determining the variation of the ethical SCM factors with demographic variables

The fifth secondary objective was achieved through the use of two main inferential statistics performed in this study known as the independent samples t-tests and the ANOVA (refer to Sect., 5.7.1). Firstly, independent t-tests were performed to establish the mean differences of factors across gender and employment type categories. A comparison of the mean differences across the gender categories for each factor demonstrated that female respondents have a stronger inclination to observe PE when compared to their male counterparts. In addition, the t-tests revealed that the employment type of employees does not vary according to how they perceive LC, SM practices and PE attributes. Thus, only small effect sizes were recorded on both gender and employment categories. This depicts the existence of minor variations in the

attitudes of both male and female managers and professional employees in the FMCG industry in terms of their inclinations to follow their PE.

ANOVA tests were performed to ascertain the mean differences on the age, race, educational level, employment area, employment period and occupational area of managers and professional employees in the FMCG industry. With regards to the race category, mean differences were observed between Whites and those of the Mixed race compared to Africans and Indians. Post-hoc tests revealed that Whites and those in the Mixed racial category share different views on the collaboration of suppliers when compared to Africans and Indians.

ANOVA tests also revealed that managers and professional employees' perceptions varied according to their area of occupation. The ANOVA tests performed revealed some mean differences with regard to transparency ($F=2.572$, $p\text{-Value}=0.039^*$) in the procurement department. In this manner, the attitudes towards transparency are different in the procurement department when compared to the rest of the occupational areas. Mean differences were further noted between professional competence and customer services. A follow up post-hoc analysis was performed which indicated that these differences ($p=0.017$) exist within the managers and professional employees who work under the warehousing department and customer services when compared to those in other departments.

Further mean differences occurred on the integrity and skills factor where those working in contract management and procurement employees differed from their counterparts in the rest of the departments. Subsequent post-hoc analysis revealed that the differences were between employees who worked under the contract management department and procurement ($p=0.05$). Thus, those working in contract management and procurement departments have different attitudes towards integrity and skills when compared to their colleagues in other departments.

6.3.6 Conclusions based on determining the influence of ethical SCM on supplier management in the FMCG industry

The study achieved the last secondary objective by performing correlation and regression analysis. This objective was achieved by applying Pearson correlations and regression analysis on the collected data. Correlations between the six LC dimensions (Moral Standards, Transparency, Professional Competence, Corporate Governance, Accountability and Fairness) and SM were all weak and positive. Among the three PE dimensions, only Honesty was positively correlated to SM. Overall, the correlation results suggest that both LC and PE have a weak positive association with SM.

Regression analysis was also performed to ascertain if there are any significant relationships between LC as well as PE dimensions and SM. Two regression models were run. The first regression model comprised of six independent variables, which were the LC dimensions, namely Moral Standards, Transparency, Professional Competence, Corporate Governance, Accountability and Fairness. The SM factor was entered as the dependant variable. Only one LC dimension labelled as Fairness significantly exerted a positive relationship on SM. This study thus concludes that fairness is the most important legal aspect when compared to the other five constructs that yielded insignificant results. Apart from fairness being a firm predictor of SM, the results from the study also established that transparency has a direct influence on SM, although it did not yield a positive significant result. The study further concludes that transparency is positively related to the management of suppliers in the FMCG industry.

6.4 RECOMMENDATIONS

The results of the study suggest that there are several challenges that should be addressed within the FMCG industry of South Africa with regards to its processes and operations. Accordingly, this section puts forward several recommendations that could be useful to the FMCG industry in improving its application of ethical SCM.

6.4.1 Recommendations based on the operations of the FMCG industry

The FMCG industry in South Africa has since gained a lot of traction in the retail space which has induced a number of structural related challenges. In this context, the training of managers and professional employees remains a catalyst to increase their knowledge, skills and overall competency within the FMCG industry. This entails that whenever increased training programmes are offered to employees, efficiency is achieved as more employees apply new skills to the organisation. Thus, the training and development of FMCG managers and professional employees can further alleviate poverty if these programmes are conducted in a community-based manner and approach. Such programmes could increase the projects of firms in the FMCG industry to develop more retail outlets, especially in rural and township areas.

The second recommendation based on the operations of the FMCG industry is the need to recruit and develop managers and professional employees. The recruitment processes in the industry needs to be more systematic as this promotes the development of a unique brand of leaders that dictate sound and effective leadership processes. In this regard, a proficient team

of managers should ensure that due diligence is applied in all SCM processes that require attention such as procurement processes and customer services. The systematic upgrading of the recruitment processes within the FMCG industry could ensure that the industry remains competitive in line with regional and international standards. Such attributes should aim at delivering the organisation with highly qualified managers and professional employees that give a distinct feature of all who encompass the core functions that should be enlisted in the business. A typical example involves Shoprite enlisting certain requirements for the group executive of the product and planning department. Such departments being core in the retail industry, require specialised expertise for the duties of the department to be undertaken effectively.

Another important recommendation that should be considered is the optimisation of the storage facilities of FMCG firms. Optimum storage space should be adopted through a centralised system in which all retail outlets in one area can utilise the same space, thus saving space and resources. A centralised use of storage space enables retail outlets to identify products and services that share similar demand and products that are of great return to the firms. Firms can also then outsource the services of staff that are employed at the facility, reducing turnover retention problems, and enabling the retail organisation to focus on their core function of customer services.

6.4.2 Recommendations based on ethical SCM compliance

It is necessary for the FMCG industry to adopt new ways in which employees redefine ethical compliance through organisational processes that are morally conducive. As such, professional employees and managers need to guard the age of addressing key factors that enable the work environment to be practised without unethical malpractices such as conflict of interest, manipulation of contractual obligations and fronting of pricing. Such malpractices can be reduced through a number of extensive recommendations that are discussed in detail in this section.

6.4.2.1 Create guidelines for good codes of conduct

The implementation of a set of protocols that relate to good conduct is essential in the day to day running of businesses. In this study, the literature discussed established that employees' have an obligation to set out certain rules and principles that act as a guideline on the presentation of workforce duties. This arrangement has constantly created bottlenecks in which employees can decide on what to practice and what not to practice. In this regard, many

organisations continue to encounter a breach in the code of conduct since these expectations are not enlightened to the knowledge of every employee. In order to circumvent these obstacles, a clear set of guidelines that outline good conduct should be part of an employee's orientation with the use of practical scenarios and assessments which should be developed to ensure compliance of these measures. Such practices encourage a culture of organisational commitment to practicing sound and compliant adherence such as professional competency when handling customer services related matters. Such mechanisms institute minimum violations of the policy guidelines that organisations have put in place.

6.4.2.2 Reinforce consequences for unethical behaviour

Several consequences for employees that have breached the policy guidelines of employees should be fully outlined. In this context, whenever employees practice unethical behaviour such as unauthorised disbursements of organisational funds, a clear and precise action should be taken to ensure employees' actions are considered. Some of those consequences which detail a strict adherence to protocol is to ensure that whenever an employee acts unethically, suspension of duties that relate to that line of work should be instituted. Thus, stricter convictions, such as unpaid suspensions, should be realised as this gives the organisation an opportunity to reimburse the funds that were previously unaccounted for through the employee's salary. Such developments may also serve as an example to other employees who would want to act in the same manner, causing them to distance themselves from unethical behaviour.

6.4.2.3 Institute ethical behaviour development practices

The institution of various ethics development practices should be provided to employees in order to expose them to the concept of ethics and to empower them with skills to make ethical decisions. In light of this, a comprehensive programme of ethics training needs to be designed and implemented in order to create and maintain an ethical organisation. In order for such attributes to be enlisted, the training should encompass lectures, videos and cascade training which is presented by direct supervisors, web- or computer training, games, quizzes, case studies, role plays and simulations. Thus, consideration must be given to designing specialised training for those individuals who may be confronted by ethical dilemmas, for example, working in an environment where bribery is common. In such a view, the training department should take responsibility for the coordinating and organising of the ethics training, as they are the specialists in this field.

6.4.2.4 Evaluate management on ethical leadership practices

The evaluation of management's leadership process to benchmark ethical compliance has been recognised to be one of the most important recommendations to the FMCG industry. In reviewing compliance measures in an industry, it is of paramount importance for the board of the organisation to constantly review how professional employees and managers apply policy development measures that inhibit a culture of malpractice by junior and low level employees across key industries of that particular firm. In regulating such practices, the stakeholders should be able to enlist an evaluation criterion which all management employees are expected to comply with on an annual or quarterly basis. With enlisting these measures, managers and supervisors must be driven to craft and create compliance measurement techniques that could improve and limit ethical malpractices. Such improvements can institute and lead to employees being more accountable and honest and to carrying out their roles and responsibilities with due diligence and integrity.

6.4.3 Recommendations based on the relationships of constructs

The results obtained from regression tests reveal that FMCG professional employees and managers need to develop better LC and PE attributes, as these enhance ethical SCM processes. Five LC attributes (Moral Standards, Transparency, Professional Competence, Corporate Governance and Accountability) need to be enhanced in order to improve ethical compliance on professional employees affiliated within the FMCG industry. Only one factor, labelled as Fairness under LC, exerted a positive and significant relationship towards SM processes. With regards to the PE attributes of organisational employees, all three PE factors (Intrinsic Values, Honesty and Integrity and Skills) need to be enhanced in order for FMCG employees to be able to attend to suppliers' processes in a more ethical and professional manner. In order for enhancement of these recommendations to be attained, crucial elements of development within SCM processes should be reviewed with the assistance of external moderators who are equipped with the relevant skills to eliminate breaches in ethical compliance.

6.5 LIMITATIONS OF THE STUDY

In this section, some limitations are discussed which were presented during the course of the research study through results from the analysis and interpretation of results. The study of ethics is very broad and requires an extensive scope of input from various organisations on which the study directed its emphasis. The sample from which data were drawn was based in the Gauteng Province of South Africa. A confinement in the sample limits the credibility of the

research since the data only reveals the patterns of employees situated in one area and who practice ethical responsibilities under a similar organisational environment. Thus, results drawn from this study may only apply to the FMCG industry in Gauteng Province and cannot be generalised to similar sectors in other provinces of the country. Respondents were also chosen using the non-probability purposive sampling technique, which subjects this study to sampling bias. Additionally, questionnaires used in this study were based on adapted measurement scales that were originally developed for use in other environments, such that a greater number of ethical SCM factors could have been identified if a survey instrument had been developed specifically for this study. Finally, the study was susceptible to non-response bias as there was a large number of targeted respondents who did not complete the questionnaires.

6.6 IMPLICATIONS FOR FURTHER RESEARCH

In view of the abovementioned limitations and other factors there are several implications for further research. Firstly, more ethical SCM factors could be identified by increasing the number of items in the measurement scales. Secondly, similar studies can be conducted in other industries apart from the FMCG sector. The sample in future studies should be drawn from other regions of South Africa as well. Further studies can also consider testing the relationships between the ethical SCM factors identified in this study and supply chain performance, the latter which is the ultimate goal of SCM. Similarly, a mixed method approach which also considers a socio-technical approach to ethical SCM might also yield a more robust research study. Such a study should detail more input in terms of research design techniques by adding the relevant views that may not be detailed extensively with the use of the quantitative research method.

6.7 THEORETICAL AND PRACTICAL CONTRIBUTIONS OF THE STUDY

This section provides an overview of the theoretical and practical contributions of the study. The discussion offered in this section is provided in the succeeding sub sections.

6.7.1 Theoretical and practical contributions of the study

Several theoretical underpinnings that contributed to the body of knowledge are noted. The study also enlisted underlying factors that determine the influence of ethical SCM. These factors were identified using the EFA procedure. Most of the previous research concentrates on business ethics in general, whereas this study has narrowed this subject to the area of SCM. The study has also directed its focus to the FMCG industry where there is limited evidence of

such studies, especially within South Africa. The study has also identified or developed specific ethical SCM factors in terms of the dimensions of LC, SM and PE that may not have been identified in previous research. The study further contributes to the theory on the impact of demographic factors on the application of ethical SCM in the FMCG industry.

The study has some practical contributions. Firstly, the study provides managers and professional employees in the FMCG industry with information on the ethical factors that are important in SCM activities. These factors are the dimensions of the LC, SM and PE scales identified in the EFA. Secondly, the study showed that among the various factors, fairness and transparency are most important in influencing the management of suppliers. In diagnosing supplier management problems, managers and professional employees in the FMCG industry may therefore direct more attention to these two ethical SCM factors than the rest. The management of suppliers emerged as a critical activity in ethical SCM processes and is dependent on legal aspects (LC) and personalised values (PE). This being the case, both LC and PE could be enhanced to ensure that they contribute to better performance of suppliers, which is important given that all merchandise sold in retail outlets are purchased through the input of suppliers.

6.8 CONCLUDING REMARKS

This chapter provided seven concluding sections of this dissertation. Firstly, it presented an overview to the chapter citing a brief description of what was attended to in the previous chapter then outlined the sections that were going to be discussed in the current chapter. Thereafter, the chapter presented a summary of all chapters that were considered and indicated the major outcomes in each of those chapters. The conclusions of the study were then examined, revealing how each result addresses the objectives that were defined in the first chapter of the dissertation. The chapter then discussed some recommendations that could be followed within the FMCG industry in ensuring that ethical SCM goals are attained. An outline of the study's limitation has also been presented and major inputs were discussed focusing on how to combat occurrences that provide such limitations as outlined. The chapter then discussed the study's theoretical and practical contributions. An outline of how theoretical and practical contributions contribute to the body of research were presented, revealing how the study is important to both the development of theory and how it can be useful to the FMCG industry.

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APPENDIX 1

Questionnaire



Faculty of Management Sciences
Research conducted by
Mr Tafadzwa Chivhungwa
Cell: 0727946253
Email: chivhungwatafy@gmail.com

Dear Respondent,

You are requested to participate in an academic research study conducted by Mr Tafadzwa Chivhungwa, a Masters student from the Department of Logistics at Vaal University of Technology. The purpose of the study is to gather information on supply chain management ethics in the Fast Moving Consumer Goods (FMCG) industry in South Africa. You have been chosen to participate in the study based on your experience of working in the FMCG industry. I therefore believe that you will provide relevant information.

Please note the following:

1. This study will provide an anonymous survey. Your name will not appear on the questionnaire and the answers you give will be treated as strictly confidential. You cannot be identified in person based on the answers you give.
2. Your participation in this study is very important. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
3. Please answer the questions in the attached questionnaire as completely and honestly as possible. This should not take more than 20 minutes of your time.
4. The results of the study will be used for academic purposes only and may be published in an academic journal. You will be provided with a summary of the results on request.
5. Please contact the project supervisors, Prof C. Mafini; chengedzaim@vut.ac.za or Dr E. Chinomona, elizabethc@vut.ac.za if you have any questions or comments regarding the study.

Please sign this letter to indicate that:

- You have read and understood the information provided above.
- You give your consent to participate in the study on a voluntary basis.

Respondent's signature
(Optional)

Date

SECTION A: DEMOGRAPHIC PROFILE

In this section we would like to find out a little more about yourself. Please place a cross (x) in the appropriate block.

A1	Gender	(1) Male	(2) Female
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A2	Age	(1) Under 30 years	(2) 30-39 years	(3) 40-49 years	(4) 50-59 years	(5) 60 years and above
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A3	Highest qualification	(1) Below Matric	(2) Matric	(3) Certificate	(4) Diploma	(5) Degree	(6) Postgraduate	(7) Other (Please specify)...
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A4	Race	(1) African	(2) White	(3) Indian	(4) Mixed Race	(5) Other (Please specify)
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A5	Type of Contract	(1) Contract	(2) Permanent
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A6	Employment Period	(1) Less than 5 years	(2) 6-10 years	(3) 11-15 years	(4) 16-20 years	(5) 21 years or above
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A7	Occupational Area	(1) Transport	(2) Warehousing	(3) Contract management	(4) Procurement	(5) Customer services
Other: Please specify						

SECTION B: LEGAL COMPONENTS

We would like to find out a little more about your views regarding the legal components of supply chain management in the FMCG industry. Please indicate the extent to which you agree or disagree by encircling the corresponding number between 1 (Strongly disagree) and 5 (Strongly agree).

LEGAL COMPONENTS		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I can trust my firm in that it honours all commitments once they have been made	1	2	3	4	5
2	Contracts are clear such that everyone knows what is expected	1	2	3	4	5
3	Giving gifts/incentives is discouraged in business transactions involving my firm	1	2	3	4	5
4	Receiving gifts/incentives is discouraged in business transactions involving my firm	1	2	3	4	5
5	My firm is not only concerned with what is legal, but also with what is morally right	1	2	3	4	5
6	Staff members who take bribes face penalties	1	2	3	4	5
7	My firm is highly regarded as far as business ethics is concerned	1	2	3	4	5
8	My firm has a strict code of ethics	1	2	3	4	5
9	My firm's management and staff adhere to the code of ethics	1	2	3	4	5
10	Employees are discouraged from awarding contracts to family and friends	1	2	3	4	5
11	Management is active in combating unethical behaviour	1	2	3	4	5
12	Documentation used in the firm is clear on what is expected	1	2	3	4	5
13	It is very rare for people to get away with unethical behaviour in my firm	1	2	3	4	5
14	Management at my firm has an open door policy	1	2	3	4	5
15	My firm's policies are implemented effectively to govern procurement managers	1	2	3	4	5
16	My firm employs the same evaluation criteria in evaluating all proposals/bids for contracts	1	2	3	4	5
17	Information provided by prospective suppliers in response to an invitation to bid is kept confidential by the procurement unit	1	2	3	4	5
18	My firm conducts all procurement and bidding processes in an ethical manner	1	2	3	4	5
19	Staff are accountable for all actions during procurement processes	1	2	3	4	5
20	My firm ensures transparency in all procurement steps	1	2	3	4	5
21	The firm's procurement processes encourage fair competition among prospective suppliers	1	2	3	4	5

22	Supply chain staff are adequately trained on ethics, transparency and accountability	1	2	3	4	5
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SECTION C: SUPPLIER MANAGEMENT

We would like to find out a little more about your views regarding how you perceive supplier management in line with the ethical conduct of the FMCG industry. Please indicate whether you agree with the statements by encircling the corresponding number between 1(strongly disagree) and 5 (strongly agree).

SUPPLIER MANAGEMENT		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	My firm is tough but fair in its price negotiations	1	2	3	4	5
2	My firm has regular meetings with its suppliers, which helps to maintain a good working relationship	1	2	3	4	5
3	A loyal and enduring relationship with suppliers of products and services is important to my firm	1	2	3	4	5
4	Everybody is given an equal opportunity to submit proposals for contracts	1	2	3	4	5
5	My firm respects the confidentiality of supplier pricing and other information shared during negotiations	1	2	3	4	5
6	My firm discourages its staff from denigrating their competitors' products	1	2	3	4	5
7	My firm expects suppliers to be transparent, and is also transparent itself	1	2	3	4	5
8	My firm has a selection process for awarding contracts to suppliers	1	2	3	4	5
9	All suppliers are treated equally	1	2	3	4	5
10	My firm observes ethical practices when doing business with its suppliers	1	2	3	4	5

SECTION D: PERSONAL ETHICS

We would like to find out a little more about your views regarding personal ethics in the FMCG industry. Please indicate whether you agree with the statements by encircling the corresponding number between 1 (strongly disagree) and 5 (strongly agree).

PERSONAL ETHICS		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I take a day off only when it is necessary	1	2	3	4	5
2	I typically report a co-worker's violation of the firm's policies and guidelines	1	2	3	4	5
3	I avoid divulging confidential information to parties external to the firm	1	2	3	4	5
4	I take the necessary time to do a job	1	2	3	4	5
5	I avoid taking extra personal time during lunch hour, break and early departures	1	2	3	4	5
6	I avoid falsifying time/quality/quantity reports	1	2	3	4	5
7	I do not authorise subordinates to violate the firm's policies and guidelines	1	2	3	4	5
8	I do not falsify internal time/quality/quantity reports for the organisation	1	2	3	4	5
9	I desist from passing blame for errors to an innocent co-worker	1	2	3	4	5
10	I keep away from claiming credit for the work of my peers	1	2	3	4	5
11	I keep away from giving gifts/favors in exchange for preferential treatment	1	2	3	4	5
12	I refrain from accepting gifts/favors in exchange for preferential treatment	1	2	3	4	5
13	I refrain from overstating expense accounts by more than 10% of the correct amount	1	2	3	4	5
14	I abstain from using firm services for personal use	1	2	3	4	5
15	I abstain from removing the firm's supplies for personal use	1	2	3	4	5
16	I desist from using the firm's time for personal business	1	2	3	4	5
17	My firm has the adequate facilities to undertake expected procurement tasks	1	2	3	4	5
18	In my firm, procurement staff have the necessary skills and experience to undertake the work on proposed projects	1	2	3	4	5
19	My firm has a procurement training program in place	1	2	3	4	5

Thank you for taking time to complete this questionnaire. Your views are much appreciated.

APPENDIX 2
DECLARATION FOR LANGUAGE EDITING



25th November 2020

Tafadzwa Chivhungwa
Vaal University of Technology

To Whom It May Concern,

This is to certify that I have proofread and edited Tafadzwa Chivhungwa's M Tech in Logistics dissertation titled 'Exploring the factors determining ethical supply chain management in the fast-moving consumer goods industry'.

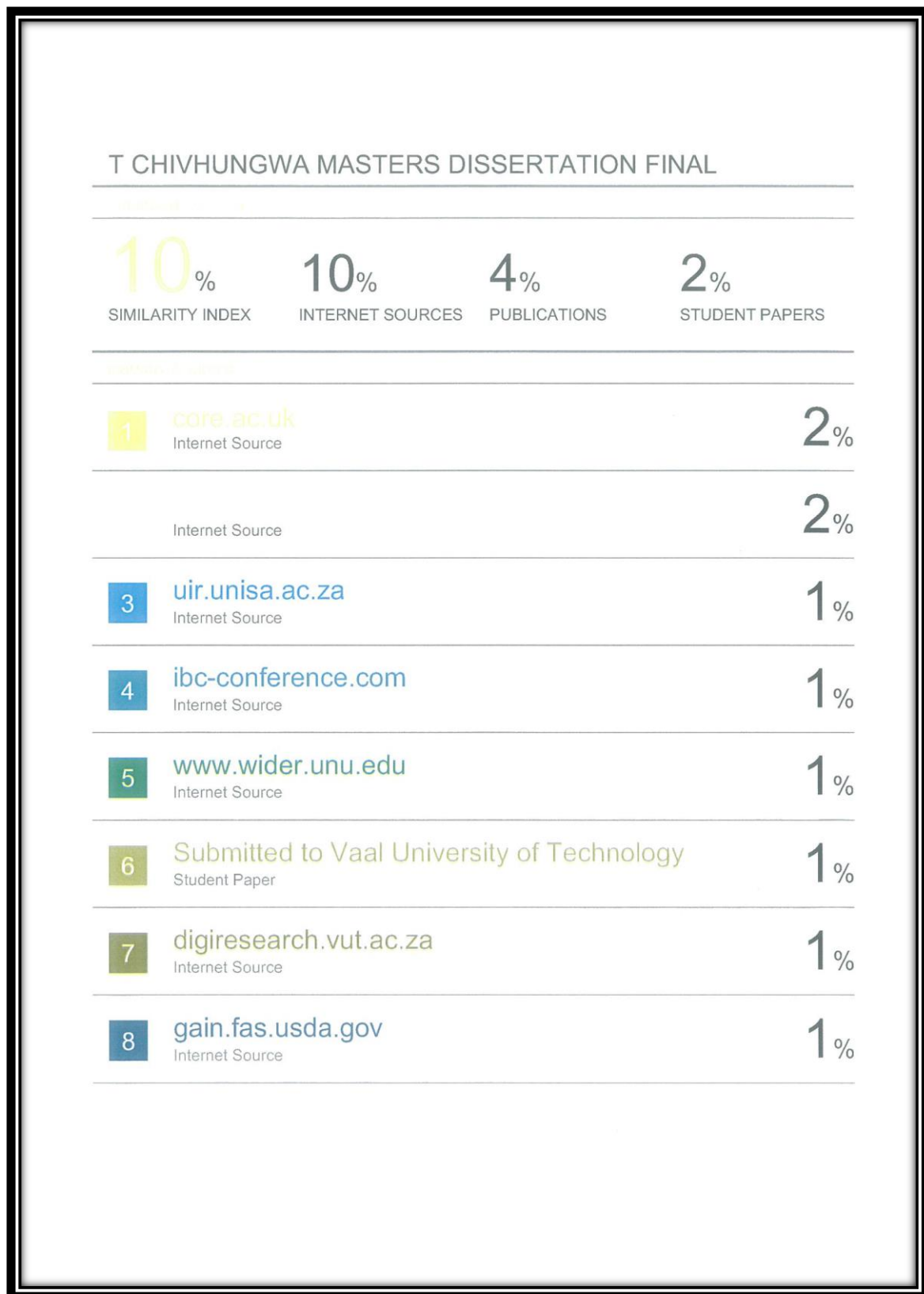
Please feel free to contact me with any queries.

Regards

Kate Mey

APPENDIX 3

TURNITIN REPORT



Exclude quotes On

Exclude bibliography On

Exclude matches < 1%