The influence of steel import tariffs on employees in the South African steel manufacturing industry

IA van Niekerk

orcid.org 0000-0002-9186-1708

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Supervisor: Dr AJ Meintjes

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Student number: 2126700

Declaration

I declare that the work in this mini-dissertation is my own personal work. I further declare that apart from the guidance that has also been acknowledged, the information contained in this mini-dissertation is the information that I researched myself. It is being submitted in the partial fulfilment of the requirements for the degree Magister in Business Administration at the Potchefstroom Campus of the North West University. It has not been submitted before for any other degree or examination to any other University.

I also declare that nobody but me is responsible for the final version of this mini-dissertation.

Izak van Niekerk

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Abstract

Steel is paramount to the functioning of the modern world. Over the last couple of years, the global steel industry has witnessed a significant increase in steel export from China, due to the lowering of local demand and excess supply. China subsidises their local steel industry, and this enables the manufacturers to export the excess steel at reduced costs. The South African local steel industry has experienced the consequences of the importation of Chinese steel. As a result, the local steel industry is under pressure as many role-players have ceased operations due to financial constraints and large numbers of individuals are now unemployed. The South African Government implemented import tariffs and anti-dumping duties (tariffs and duties) on certain imported steel products in an attempt to provide some form of relief for the local steel manufacturing industry. Research reveals that, the impact of tariffs and duties have had on other countries, but the impact on the South African market is yet to be tested. A further aspect that requires research is the impact the implementation of the tariffs and duties had on employee stress levels and turnover intentions. As the steel manufacturing industry is under pressure, it can only be assumed that the people employed are stressed due to uncertain futures and might be considering leaving the industry in the search for more stable employment opportunities.

The primary research objective aimed to determine whether the implementation of the tariffs and duties affected employee stress level and turnover intentions. The secondary research objective of this study was to determine whether individuals employed in the local steel manufacturing industry are aware of and understand what tariffs and duties are. An additional secondary objective of the study was to determine whether there are other aspects, which were derived from the available literature that affected employee stress levels and turnover intentions.

The research population was individuals employed in the local steel manufacturing industry. A research questionnaire was developed and circulated to a sample of 1 000 employees, of which 190 responses were received. The responses were collated into a single data sheet and were provided to the Statistical Consultation Services of the North-West University for statistical analysis. The statistical analysis confirmed the validity and reliability of the questionnaire. An exploratory factor analysis was performed to group the question into constructs as a data reduction method. Cronbach’s alpha

determined that the constructs were reliable. Tukey's honestly significance difference (HSD) test was used to compare constructs to identify any significant differences.

The study found that 98% of employees were aware of the tariffs and duties and 96% were aware that it had been implemented. The study further found that employees indicated to understand what tariffs and duties are and they did not require additional information on the topic. According to Tukey's (HSD) test employees with a grade 12 or less qualification had a lesser understanding of tariffs and duties compared to employees with a postgraduate qualification. The paired t-tests found that the implementation tariffs and duties did not have a practically significant effect on employee stress levels and turnover intentions. The study found that company performance and remuneration had the largest effect on employee stress levels and aspects related to work output reward (also includes remuneration) had the largest effect on employee turnover intention. It appears that the implementation of tariffs and duties could have an indirect effect on employee stress levels and turnover intentions, as tariffs and duties directly affect company performance and work output reward which in turn directly affects stress and turnover intention.

In conclusion, the study achieved its primary and secondary research objectives, and recommendations for future research have been included in Chapter 5.

Keywords

Steel, import tariffs, anti-dumping duties, stress, turnover intention

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Abbreviations

Abbreviation	Description
CRC	Cold rolled coil
e.g.	For example
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
HRC	Hot rolled coil
HSD	Honestly significant difference
i.e.	That is
ITAC	International Trade Administration Commission of South Africa
SARS	South African Revenue Service
SCS	Statistical Consultation Services, North West University
Std Dev	Standard deviation
VAT	Value-added tax
WCO	World Customs Organisation
WTO	World Trade Organisation

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1 Chapter 1: Nature and scope of the study

1.1 Introduction

Steel is paramount to the functioning of our modern world. It forms part of everyday life; it is used where we live, where we work and how we travel. Humankind has used steel over several thousands of years due to its unique mechanical and chemical characteristics compared to its relatively low production costs. These characteristics allow steel to be applied for a variety of uses where tensile strength and ductility are required (Pauliuk *et al.*, 2012:3).

South Africa is an emerging market environment characterised by a well-developed corporate sector (Tshivase & Kleyn, 2016:272). However, the local South African steel manufacturing industry has been under severe financial pressure over the last couple of years. Various factors, including but not limited to a strained relationship with the South African Government, weak global commodity prices and an oversupply in the international market of cheap state subsidised steel from China have seen the local industry face declining profits and increased job losses (Reuters, 2015).

According to Sun *et al.* (2017:13), China was able to sustain the exceptional economic growth of more than 10% over the last three decades. As a result, China experienced a massive demand for infrastructure development and investment, which resulted in an excess production capacity of steel. China was a major player in the global commodity price determinant, due to its insatiable demand for resources to fuel its aggressive growth strategy. However, China's recent slowdown in growth has seen the commodity demand decline (Oster, 2016). As growth in China slowed, it experienced an internal oversupply of steel, which led to increased exports that doubled during 2014. Furthermore, China is exporting steel at prices below the cost of production (Sky News Business Team, 2015). The Chinese Government implemented macro-control policies which were widely considered to be anti-market (Sun *et al.,* 2017:13).

It is evident that this scenario has put tremendous stress on the global steel market and one can only imagine the pressure it is putting on the South African market.

The industry recently saw the implementation of import tariffs and anti-dumping duties (tariffs and duties) imposed on steel imports from China (Ginindza, 2015). Although this

is likely to provide relief to a certain degree, little is known about the effect it has on the attitudes of the employees in the industry.

Research has found that a person's stress levels are influenced by their direct environment, which causes the person to deviate from their normal psychological and physiological behaviour (Parker & DeCotis, 1983). Employees undoubtedly would have experienced heightened levels of stress during the period preceding the implementation of the tariffs and duties due to the question of work security and the ability to honour personal financial commitments. Furthermore, there is a direct correlation between job stress and turnover intention (Yin-Fah *et al.*, 2010).

The cost of employing new employees is very high; from not only a recruitment perspective but also the time and training it will require to get the new employee to perform to the extent they have been employed to do sufficiently (Abbasi & Hollman, 2008 cited by Yin-Fah *et al.*, 2010). The struggling steel manufacturing industry cannot afford this cost.

The importance of the study is twofold; one testing an employee's understanding of tariffs and duties. Management should find this beneficial, as it could be an indication of the perceptions of the employees themselves in comparison to what is portrayed in the media. This could identify a misperception amongst employees and a need from management to provide clarity on the matter should there be a discrepancy between reality and perception.

Secondly, the impact, if any, the tariffs and duties have had on employee stress levels and turnover intent. During the study, additional aspects affecting employee stress levels and turnover intention will also be explored. The study could be useful to management in that it could be an indicator that employees are stressed and that there is a need for a further study on its causes and implications. This study should also provide insights into the correlation between a potential misperception regarding tariffs and duties and stress levels, further emphasising the need to improve communication and provide clarity on the matter.

A further indicator for management could show the change, albeit positive or negative, in employee turnover intention, providing an opportunity to implement behavioural and structural changes to either reinforce or counteract the employee turnover intention trend.

Turnover intention is the final step of withdrawal as the employee contemplates quitting and actively starts looking for alternative employment. Management strives to prevent this from happening as the potential cost implications can be high for the individual and the company (Lu & Gursoy, 2016:212). According to Ahmed (2016:16), company performance is negatively related to employee turnover intention. Therefore, as intent declines, company performance increases and this has a cost reduction effect on new employee retraining and hiring.

Furthermore, an increased turnover intention amongst employees could potentially lead to a loss of valuable skills and knowledge. It is important for management to identify this to enable it to implement initiatives and programs to curb any losses of key employees.

1.2 Problem statement

The study examines whether the implementation of tariffs and duties had any effect on the job stress levels and turnover intentions of employees in the South African steel manufacturing industry. The study also explores other aspects that influence employee stress levels and turnover intentions.

The research further aims to determine whether employees in the South African steel manufacturing industry perceive to understand what steel import tariffs and anti-dumping duties are and that it has been implemented.

1.3 Objectives of the study

This study explores the employees' understanding of these tariffs and duties. This study furthermore attempts to analyse whether there is a relationship between the employees' perception of these tariffs and duties and the employees' stress levels and turnover intention.

The research aims to achieve the following objectives:

The primary objective in this study is:

- Whether there is a relationship between employee perception of tariffs and duties and stress levels and turnover intention

The secondary objectives in this study are:

- Determine whether employees are aware of tariffs and duties and that it has been implemented
- Determine whether employees perceive to understand what tariffs and duties are
- What other aspects influence employee stress levels and turnover intentions

1.4 Research methodology

The study consists of a literature review of existing sources related to import tariffs and anti-dumping duties, job stress and employee turnover intention.

This study will use a quantitative research design. The unit of analysis comprises a sample of the population. Data will be collected via an electronic questionnaire and statistical analysis and inferences used to formulate conclusions.

The study will follow a cross-sectional approach as the implementation of the import tariffs and duties were a once-off event. The understanding and impact it had on employees, if any, should have taken place when the implementation was announced and should not differ over a period.

1.4.1 Unit of analysis

The population will be people currently employed in the South African steel manufacturing industry. The population has the following characteristics:

- Consists of all races
- Consists of all genders
- Any grade of employee (lowest grade up to executive management)
- Limited to employees who provide a secondary or support function in the steel manufacturing process, i.e. accounts payable, logistics, procurement, etc.
- All ages between 18 and 63
- Permanent employees. Contractors and consultants excluded

- Any education level

The unit of analysis will be based on the business units located in Vanderbijlpark, Vereeniging, Newcastle, Saldanha and Pretoria. Data will be easy to obtain as employees in the unit of analysis all have access to the internet and have individually allocated email addresses. These email addresses can be easily obtained with the relevant permission from management. A sample of 1 000 employees was selected, and 190 responses were received.

The selected unit of analysis is more informed about the impact import tariffs and duties could have on the company. Therefore, one can assume that they are aware of the existence of it and would have some form of an understanding of what it entails. This would provide the desired data to answer the first part of the research question.

This unit of analysis is also relevant to the second part of the research question in that, based on previous trends, this is the first area where employees are laid off due to the financial constraints faced by the company. Therefore, there should be a bigger impact on stress levels and turnover intentions in this unit of analysis.

1.4.2 Data collection

Background information will be obtained through a literature review of existing research, such as research papers, books, articles, etc.

Empirical data will be collected by using questionnaires. The questionnaire will be developed to include an introductory section regarding the participant's demographics, followed by specific questions regarding the primary research question. The participant's response will be captured by using a five-option Likert scale, including a neutral response option.

Questionnaires will be distributed to potential participants electronically via the internet and the internal email system of the company. Possible use of a third-party service provider, such as Survey Monkey for example, to distribute and collate completed questionnaires will be explored for viability.

1.4.3 Data analysis

Descriptive statistics will be used to report on the demographical data collected. The results will be used to determine whether the sample is representative of the population.

In this questionnaire, the import tariffs and duties are set as the independent variable, and the understanding, stress levels and turnover intentions are set as the dependent variables. Firstly, descriptive statistics will be used to determine to mean, variance and standard deviation values. Further statistical tools, such as t-tests using P-values, D-values, factor analysis, etc. will be used to determine the correlation between the variables. Cronbach's alpha will be used to determine the reliability of the data collected.

A statistical consultant will be used to assist with the research design, recommendations for appropriate statistical tests to be performed and with the analysis of the data.

1.5 Layout of the study

The study is structured as follows:

Chapter 1: Nature and scope of the study on what the tariffs and duties are and their intended function. The section explores the background and justification for conducting the study. The problem statement and research objectives are detailed, and the research methodology is provided.

Chapter 2: The literature review explores the existing research on import tariffs, anti-dumping duties, tariffs and duties in the South African steel manufacturing industry, job stress, turnover intention and the relationship between job stress and turnover intention.

Chapter 3: Provides details of the research methodology and tools used during the data collection phase and the statistical analysis of the data. The chapter details the methods used to determine the validity and reliability of the data.

Chapter 4: The data collected and the statistical analysis performed are discussed in detail, and key findings are highlighted.

Chapter 5: The conclusions that can be drawn from the study are detailed, as well as whether the study answered the primary and secondary research objectives. Limitations of the study are discussed, and areas for potential future research are listed.

2 Chapter 2: Literature review of anti-dumping duties, import tariffs, job stress and turnover intention

2.1 Introduction

Modern-day technology has allowed companies to operate globally with relative ease. This has resulted in a significant increase in international trade throughout the years. According to the Suny Levin Institute (2017), globalisation is the result of the increased international trade over several decades. The volume of world trade in 2005 was 27 times greater compared to world trade in 1950. According to Novy (2013:1) global trade has grown exponentially over the last few decades and the majority of countries that partake in global trade have shown a correlation in growth in the volumes they trade. The decrease in global trade costs, i.e. transportation costs and tariffs, is one of the contributing factors to the growth. This has enabled more participants to gain entry to the global market as it became a more viable avenue to pursue.

However, it appears that world trade has stagnated to some degree throughout 2012 and 2013, and predictions indicate that it could remain that way in the near future. This could be the result of the global slowdown in economic activities, most notably the struggling European economy and the Euro (Novy, 2013:1). Changes in the economic situations of major global role-players have a significant impact on the global economic market. China is one of the major role-players and was for many years growing at an impressive rate and had one of the highest growth rates in the world (Holland, 2017:40). However, China is experiencing an economic slowdown. This undoubtedly has a global impact, in that many other countries relied on China's dependence on raw materials and other imports to fuel their growing economy. This in turn realised back to other countries, and as a result, they realised economic growth returns based on the positive trade impact from China.

As China and other major role-players experience an economic slowdown, it is left with an oversupply in their local markets. More often than not, the oversupply spills over to the global market in an attempt to sell it. According to Messerlin (2004;105), several countries have imposed anti-dumping and other trade safeguards against China, while in contrast China is one of the lesser users of such measures against other countries.

Therefore, it is evident that tariffs and duties play a significant part in global economics. To successfully test the employee's perception of tariffs and duties, one needs to

determine what it entails. This will serve as the benchmark against which employee responses are measured to determine whether there is any correlation between employee perception and reality.

Secondly, the different variables that affect job stress and turnover intention need to be established. Using the identified variables, the study will be able to establish whether the impacts of the tariffs and duties affected employee stress levels and turnover intentions.

2.2 Defining import tariffs

An import tariff is a tax levied on products or services imported from another country. Its main purpose is often to increase the price of the imported goods or services in an attempt to restrict trade by making the imported goods or service more expensive than the local goods or service (Investopedia, 2017). Tariffs can be levied as a fixed fee per type of item (e.g. R1 000 on any imported car), known as a specific tariff. Alternatively, it can be levied against the item's value (e.g. 10% of the imported item's value). This is known as an *ad-valorem* tariff (Investopedia, 2017).

Import tariffs are collected by the local government and serve as an additional source of revenue. Many developing countries consider import tariffs an important source of domestic revenue (Javorcik & Narciso, 2008:2). The majority of developing countries make use of import tariffs on a wide range of products and services (Osang & Pereira, 1996:47). According to Felbermayr *et al.* (2015:296), revenue generated from tariffs has an impact on the welfare of the country when used as a demand shifter. Shifting demand from the international to the local producer ensures that welfare is distributed between locals instead of leaving the countries boundaries (Felbermyar *et al.*, 2015:297). Government uses import tariffs as an important tool when formulating their trade policy.

Bhagwati (2014:9) further notes the use of tariffs to restrict the importation of goods and services, thereby providing a form of protection to local producers who are competing against foreign producers in the same local market. According to the World Trade Organisation (WTO) Tariffs (2017b), import tariffs provide a price advantage to locally manufactured products or services by making the imported product or service more expensive. Import tariffs raise the cost of importing a product or service, providing relief

and protection to producers in the local market and acting as a form of an internal trade barrier (Amadeo, 2017).

The use of import tariffs, therefore, raises the cost of a product or service, making it less attractive to the consumer. However, consumers are not prohibited from purchasing a foreign good or service (Investopedia, 2017). The import tariff rather serves as an incentive to the consumer to purchase locally produced goods or services when it is, due to the import tariff, competitively priced or even less expensive. Considering the local economic conditions in South Africa, consumers are more likely to be extra price sensitive and more often than not opt for the cheapest price of a good or service (Investopedia, 2017).

The type of import tariff used by government depends on the type of goods or services. It is uncommon that a government would impose one type of import tariff on all imported goods and services. Governments rather compile a tariff schedule that contains the import tariff on specific goods and services imported into the country (Suranovic, 2017). A further indicator of the extent to which a tariff is applied depends on the industry the country is trying to protect (Amadeo, 2017).

The South African Revenue Service (SARS, 2017b) states that all import transactions regarding commodities on a customs declaration must be made in accordance with the suitable tariff heading as per the tariff schedule. The import tariff payable is linked to the commodity under which the tariff heading falls. The South African tariff schedule is aligned to the international Harmonised Commodity, and Coding System contained in the World Customs Organisation (WCO) Harmonised System Convention. The WCO provides a framework named the “general rules of interpretation” that can be used to ensure that products or services are correctly classified. It is vitally important that products and services be classified correctly, as the incorrect classification could lead to the wrong import tariff being applied, thereby resulting in the under or overpayment of tariffs and taxes and potentially negating its intended purpose.

Tariff classification is contained in the Customs and Excise Act, no. 91 of 1964. The South African tariff book indicates the following duties payable to imported products or services:

Table 2-1: Tariff classification table

Description	Section
Normal customs duties	Schedule No 1 part 1
Excise duties	Schedule No 1 part 2A
Ad valorem duties	Schedule No 1 part 2B
Anti-dumping duties	Schedule No 2 part 1
Countervailing duties	Schedule No 2 part 2

Source: Customs and Excise Act, no. 91 of 1964)

A further function of tariff classification of products or services includes the requirement for permits to monitor import control, obligations regarding product or service origin and the use of rebate provisions.

From the discussion thus far, it is clear that import tariffs play an important part in South Africa. The government normally implements import tariffs based on the following reasons (SARS, 2017b):

- As a form of job preservation. In instances where the importation of a certain product or service might cause a local industry to suffer damages to the extent that it is forced to cut jobs, government can use import tariffs to dissuade consumers from buying imported products or services and thereby increasing demand for local products or services

- Infant industry protection. As a developing country, South Africa must ensure that it creates and grows industries to create more opportunities for citizens. Import tariffs are an important form of protection for these industries as it serves to level the playing field while to local industry develops to a point where it can compete globally without the assistance from import tariffs. The aim is to encourage consumers to support the growing local instead of the foreign established industry.

- Consumer protection. In certain instances, the government can deem a product or service to be harmful to the consumer. The use of import tariffs is therefore mostly used to discourage the consumer from buying the product or service.

- Trading partner retaliation. Trading countries normally enter into trade agreements on certain products or services. When one country feels aggrieved and is of the opinion that the trading partner is not playing by the rules, import tariffs can be used as a form of punishment causing purchases from the trading partner to decrease.

However, import tariffs, although serving an important function, also has some negative aspects. Import tariffs can cause local industries to become less efficient as they can offset their inefficiencies against the additional cost of competing imported goods or services (Investopedia, 2017). A further consequence is a breakdown of the relationship between countries and the emergence of a trade war, where a country implements tariffs against imported goods and services from a country in retaliation to tariffs implemented against them (Investopedia, 2017). Ultimately, both these aspects negatively affect the local consumer and could cause irreparable harm to an industry that could take a considerable amount of time to recover.

2.3 Defining anti-dumping

Many importing countries make use of anti-dumping policy as a means to protect local industries. This form of protection has been used for many years (Wu *et al.*, 2014:97) and has grown significantly over the last couple of years. It is one of countries most important trade policy instruments (Niels, 2000:476) and is considered the most significant form of protection where a country is required to use its discretion to determine whether a local industry requires additional assistance from the government (Besedes & Prusa, 2017:1). Dumping can considerably affect local producers and apply downward pressure on profits and prices of suppliers in the local market (Blonigen & Prusa, 2016:108). One of the main focus areas of anti-dumping policies relates to industries with an intensive research and development component, e.g. electronics, primary metals, chemical and mechanical (Niels, 2000:476).

According to the WTO, a country is considered to be dumping a product if it is exporting the product at lower price than what it costs in the local market. Dumping is a form of international price discrimination and can easily be identified by comparing the price of the product or service between the importing and exporting countries. However, it is rarely as simple as that, and a situation requires a much more stringent analysis of the

prices in the local (Export price) and foreign (Local price) markets to be able to perform a price comparison (WTO, 2017c).

Dumping is further defined in Article VI of the General Agreement on Tariffs and Trade (GATT) 1994, also known as the Anti-Dumping Agreement, "*as the introduction of a product into the commerce of another country at less than its normal value"* (WTO, 2017c). The Anti-Dumping Agreement also provides that members of the WTO can enforce anti-dumping measures based on the outcomes of an investigation conducted in line with the requirements as set out in the agreement. The Anti-Dumping Agreement sets out a procedural framework and rules about the initiation and conducting an investigation. It further notes that the following must be established during the investigation (WTO, 2017c).

Therefore, the GATT states that a government may take anti-dumping measures when the following three criteria are met (Niels, 2000:478):

- Dumping is taking place
- The local industry producing a product that is being imported is being injured, or the threat of injury is imminent
- There is a link between the dumping and the injury taking place

It should be noted that the Anti-Dumping Agreement provides a framework of how governments can react to dumping. It does not control or prescribe the actions of companies and their participation in dumping activities (WTO, 2017a).

The act of dumping is not illegal, and price variation is not uncommon in a market susceptible to the changes in supply and demand. Many exporters use dumping as a mechanism of entering new markets and gaining market share by offering products at a lower cost than local producers (Jindal, 2016:186). Undercutting prices could eventually force the local producer to exit the market. A foreign producer would consider dumping its product in other markets in instances where it sits with excess capacity and not enough demand for the product in their local market (Blonigen & Prusa, 2016:108). However, once an exporter has gained sufficient traction and market share in the importing market, prices are increased. Therefore, a frequent justification for anti-dumping laws is the advancement of the competitive process and to protect the consumer from monopoly power (Jindal, 2016:186).

In instances where there is evidence of the use of predatory pricing from a foreign producer, and the eventual exit of the local producer from the local market, the potential advantages of anti-dumping policy can be significant. Local producers would enjoy much needed strategic protection from foreign producers. Furthermore, anti-dumping policy, regarding the initial enquiry process to determine the veracity of the alleged dumping, could be abused as a means to establish a producer is pricing structure, thereby providing strategical information to a competing firm (Niels, 2000:473)

The action taken by a government against dumping is an important tool aimed at protecting and advancing the interest of local producers. Kao and Peng (2016:53) found that the implementation of anti-dumping protection had a material effect on local producers, moreover on their product pricing and profit margins. It further had a positive impact on the business conduct and strategies of local producers that were protected. However, this impact was not limited to local producers. There was also a change in the business conduct of foreign exporters.

McGee and Yoon (2016:1) contended that anti-dumping laws had been used for many years under the title of protecting local producers. It has frequently been used as a form of protectionism even when no dumping took place. Due to this misuse, there is normally a limited interest group gaining from the laws at the expense of the public, whereas the intended purpose was to protect the public at large. Anti-dumping laws border on encroaching on an individual's rights regarding free trade. These laws prohibit an individual from conducting business with another individual where it is subject to anti-dumping laws.

According to Niels (2000:476), anti-dumping policies are controversial due to their protectionist perception and anti-competitive consequences. Many opponents of anti-dumping regulation make the argument from a competition point of view, claiming that the effects of anti-dumping policies inhibit healthy competition that would, later on, be beneficial to the consumer. On the contrary, anti-dumping policies could lead to increased costs, decreased efficiency and violate the practical ethics regarding business and free trade. Instead of benefitting from the anti-dumping policies, consumers tend to miss potentially lower prices and ultimately have to pay more for a product or service they could have obtained cheaper (McGee & Yoon, 2016:12).

Niels (2000:475) is of the opinion that dumping has a positive side; it increases a country's welfare due to the availability of cheaper alternatives to the local product or service.

However, if one considers the criteria that have to be met in terms of the Anti-Dumping Agreement, it is unlikely the potential benefits from dumped imports would be significant enough to compensate for the injury or potential injury suffered by the local market taking into consideration that the initial intention of the Anti-Dumping Agreement is to promote free and fair trade.

2.4 Steel tariffs and duties in South Africa

The South African Revenue Service (SARS) apply customs duties on imported products regarding the Customs and Excise Act, 91 of 1964. As stated previously, the main purpose is to generate revenue and provide protection to the local industry. SARS calculates customs duties on the total value of the imported products according to the schedules contained in the Customs and Excise Act (SA, 2017a).

SARS imposes three types of customs duties on imported products:

- Customs duties, including *ad valorem* duties
- Anti-dumping and countervailing duties
- Value-added tax (VAT)

SARS imposes anti-dumping and countervailing duties on products that are deemed to be dumped in South Africa. The extent of the duties imposed is determined using an investigation into the cost of the imported product in its country of manufacture. The investigations further take into account any related incentives the country of manufacture is providing to aid the export of the product. SARS imposes these duties as a percentage of the value of the imported product (*ad valorem*) or as a fixed cost regardless of cost (SA, 2017a).

The International Trade Administration Commission of South Africa (ITAC) became operational on 1 June 2003. It is a schedule 3A Public Entity established under the International Trade Administration Act, No 71 of 2002 (ITAC an overview of ITAC, 2017). ITAC is responsible for providing an efficient and effective system that administers international trade. It aims to encourage economic growth and development

that will result in increased incomes, investment and employment in South Africa. ITAC controls the import and export of products into and out of South Africa. It is further responsible for conducting customs tariff investigations and the implementation of trade remedies (ITAC an overview of ITAC, 2017).

According to the ITAC Annual Report (ITAC, 2016:2), governments over the world have intervened to protect their local markets from a global excess in supply. The South African government engaged with various industry role players, including Eskom, and subsequently employed several measures to assist the local industry. Additionally, industry role players approached ITAC with ten applications for different forms of tariff support. The local steel manufacturing industry was one of the role-players that approached ITAC for assistance. To that effect, ITAC implemented several measures to provide increased support to the local steel manufacturing industry, moreover support to the primary steel manufacturer in South Africa. However, the industry has committed increased investment and improved employment to be able to benefit from the tariff support. ITAC has further incorporated a Pricing Committee to monitor the product pricing structure and the investment and employment commitments in an attempt to provide additional support to downstream steel merchants. ITAC implemented this oversight to ensure that downstream steel merchants do not incur undue damages because of the increased tariff support to the local steel manufacturer.

The local steel manufacturer applied for tariff support about 10 different types of products during the 2015/2016 financial year (ITAC, 2016:3). ITAC finalised the investigations in the allocated timeframe and subsequently approached the Minister of Trade and Industry for support to the local producers, investments and jobs of the steel industry as a whole. However, the downstream steel merchants had raised concerns to which ITAC responded by reaching an agreement with the local steel manufacturer to implement the remedial commitments as discussed above. ITAC noted the challenging global economic environment and the need for tariff support (import tariffs) to the local steel industry. The relief sought assists the local industry during the restructuring phase with the medium to long-term goal of becoming globally competitive.

Accordingly, ITAC recommended the following tariff support measures:

Table 2-2: ITAC recommended import tariff increases

Product	Previous tariff	Recommended tariff	Type of tariff
Galvanised, coated and painted flat steel	0%	10%	ad valorem
Large bore steel pipes	0% & 10%	15%	ad valorem
Wire rod and re-enforcing bar (rebar)	0%	10%	ad valorem
Structural steel	0%	10%	ad valorem
Semi-finished steel, cold rolled steel, steel sections and steel plates	0%	10%	ad valorem

Source: ITAC Annual Report 2016

The tariff on structural steel was temporality suspended until the local industry commenced manufacturing the product.

SARS implemented the recommended tariff support during the 2015/2016 financial year. ITAC noted the tendency of Asian producers to engage in price wars and were able to provide products at lower prices than the local industry (ITAC, 2016:6). One of the main goals of the tariff support was to enable local steel manufacturers to become globally competitive once again. ITAC found that there was a general oversupply of steel and steel related products in the global market, which resulted in low-cost exports. Because of this, the local steel manufacturing industry could not match the low prices of the foreign product and sustained significant damage. The tariff support intended to prevent further job losses and to stabilise the local steel manufacturing value chain. Another factor ITAC considered was the impact the implosion of the local steel manufacturing industry could have on supplementary industries such as iron ore. In the absence of a local steel manufacturing industry, iron ore would then be subject to export, and the volatility of the global commodity market, which could have an adverse effect on the iron ore industry and organisations operate therein.

2.5 Global steel trade and the South African market

ITAC compiled a report about the monitoring and analysis of steel imports into South Africa (ITAC trade monitor, 2016). The local steel industry directly contributes in the region of 1.5% to South Africa's gross domestic product (GDP) and indirectly supported 15% of GDP through other strategic sectors, employing more than 8 million people. The local steel industry is of great importance to the South African economy regarding both contribution and employment.

Global steel prices had declined steadily from 2011 and placed the local steel industry under pressure. This negatively affected the financial outlook of the local steel manufacturing industry role-players due to the decreased production capacity. As a result, ITAC increased import tariffs on several steel products to 10% *ad valorem.* South Africa was not the only country that was feeling the pressure. Many other countries around the world had taken steps to counteract the impact steel imports were having on their local economies:

- 17 countries had placed 71 anti-dumping duties to counter Chinese steel imports by June 2016
- nine countries had placed 24 anti-dumping duties to counter Japanese steel imports by June 2016

The increase in steel exports could be attributed to China's 49.5 billion kilograms of overproduction of steel. Similarly, Japan overproduced 17.4 billion kilograms of steel. This forced both countries to sell its steel to markets in other countries, as local demand for steel was far below supply (ITAC trade monitor, 2016).

In 2015, global steel production totalled 1.6 trillion kilograms. China produced 49.5% (803 billion kilograms) of the total volume of steel produced in 2015. During the first half of 2016, China exported 56.1 billion kilograms of steel. This is significantly more than any other country and emphasised the extent to which China had to find alternative markets for their steel products (ITAC trade monitor, 2016).

South Africa imported on average 291.8 million kilograms of steel per quarter during 2015. It appears that steel imports into South Africa peaked in 2015 as further imports have decreased due to the implementation of the import tariffs. Not surprisingly, China

accounted for the majority (60%) of steel imported into South Africa (ITAC trade monitor, 2016).

Therefore, it is evident that the local steel market was and continues to be, to a lesser extent, flooded by steel exports from other countries.

2.6 ITAC HRC and CRC reports

According to ITAC report 524 (ITAC HRC report, 2015) and 517 (ITAC CRC report, 2015), several role-players in the local steel industry, including the largest local steel manufacturer, approached ITAC and sought relief in the form of import tariffs that fell into the mentioned categories. In the ITAC report titles HRC refers to Hot Rolled Coil and CRC to Cold Rolled Coil. The role-players provided evidence in support of their application and illustrated the impact imported steel had on the local steel industry as a whole.

Both reports indicated that the local steel manufacturer had incurred injury due to a decrease in sales volumes, which could be attributed to a material increase in imported products. Imports had significantly increased over the presiding three-year period and placed the local steel market under pressure. There was evidence of a global oversupply of steel and steel related products that lead to contraction of global steel prices and this directly placed the local steel producer at a price disadvantage.

As a result, the local steel industry had witnessed significant job losses due to increased production costs and the impact the importation of steel, mostly from East Asian countries. A further result of the pressure on the market was observed when local production and sales declined faster than the decline in demand. This directly led to a decrease in production capabilities and a loss in market share.

ITAC noted the role the local steel manufacturer had regarding the economy and the importance of employment in the entire local steel industry. Further, ITAC was of the opinion that the sought relief would enable the local steel manufacturer and other industry role-players to better utilise their production capabilities and thereby be in an improved position to leverage from economies of scale. As a result of the evidence provided and the findings from the reports, ITAC granted the sought relief and increased import tariffs from 0% to 10% *ad valorem* on steel products that fell within the above-mentioned categories.

What is evident from the reports was the injury to the local market and far-reaching effects it had on the industry and the people that work in it. Undoubtedly, people in the industry would experience levels of job uncertainty. The effect of imports on employee job stress and turnover intention has not yet been tested. Purely based on an initial overview of the literature examined thus far, it would tend to suggest people would have experienced an increase in both job stress and turnover intention.

2.7 Definition of stress

The work environment has changed tremendously over time and is becoming more and more demanding. Employees face high expectations regarding performance and increased levels of workload. As organisations continuously adapt to the ever-changing marketplace, employees further face change on a regular basis. Faced with all these job requirements, employees endure high levels of mental and emotional demand to be able to cope. Various factors in the work environment have an impact on the wellbeing of an employee that can lead to a variety of reactions such as physical illness, mental illness and negative behaviour (Sonnentag & Fritz, 2015:S72). Stress can be viewed as the manner in which someone reacts to threatening and challenging factors in their environment (Sur & Ng, 2014:81). People are stressed when they feel that they are not in control and there is a possibility that they will be unable to achieve their life goals. The stress experienced can be attributed to difficulties faced in their personal or professional life, or a combination of both (Agarwal, 2015:728).

According to Psychology Today (2017), stress is a combination of how an individual perceives a pressure situation (psychological) and their body's physical response to it, which can have an effect on several bodily functions from metabolism to muscles. An individual's body releases hormones when it perceives danger or imminent danger. These hormones trigger an individual's fight or flight response, preparing it to either confront the danger or escape from it. The release of hormones places the body in an agitated state that can take some time to calm down again to normal levels. However, the fight or flight response is a short-term response to a given situation. Long-term or frequent exposure to stressful events can have damaging physical and psychological effects on an individual, including heart disease and depression.

Stress, therefore, is part of an individual's response to a certain scenario and is part of life. The majority of individuals spend a considerable amount of time exposed to

stressful elements in the work environment. Therefore, there is a direct link between stress and employment (Hwang *et al.*, 2014:61). Controlled or moderate exposure to stress could be beneficial to an individual as they attempt to improve the situation, for example, stress can implore an employee to perform better. However, long-term or extended exposure to stress has the opposite effect and has a negative impact on an individual. Stress in the workplace is the cause of the majority of illnesses (Hwang *et al.*, 2014:61), which cascades down to the individual in the form of increased expenses related to the treatment of stress. It further leads to problems in their personal lives outside the work environment, including substance abuse, anxiety, depression, heart disease and suicidal tendencies.

Each individual's capacity to deal with stress differs. Some individuals can handle larger amounts of stress than others. Certain individuals can handle stress better than others when faced with the same situation. When an individual can cope with the stress, it can have a positive effect. However, the negative side of stress comes into play when the amount of stress experienced exceeds an individual's ability to cope with it (Hwang *et al*., 2014:63).

Occupational stress occurs when an individual is unable to cope with the amount of stress experienced at work. This could be due to the amount of stress experienced being more than what they can handle, or they are individually not well enough equipped to deal with stressful situations. An individual's internal locus of control plays an important part in their ability to deal with stress and is an important indicator whether an individual will either confront and solve a situation or attempt to flee from it. Employee commitment also plays a part in how an individual deals with stress, as a more committed individual, will show a greater resistance to stress (Agarwal, 2015:720).

According to Sahraian *et al.* (2014:1), psychological and physical problems of employees are related to high levels of stress. Occupational stress occurs when the resources and needs of an employee are not sufficient to satisfy the demand of the work.

Work-related stress is not something new and has been experienced by employees for many decades. What is notable is that its prevalence has increased significantly during modern times. The workplace and the type of work done have changed drastically and continued to change faster than ever before. Job demands and expectations are high as organisations have to compete in a very competitive business environment. As

demands and expectations rose, so to have the number of employees exposed to stressful situations. Stress is further not limited to a specific occupation, although certain occupations are naturally more stressful to an individual. The size of an organisation is insignificant, as any organisation can find itself in a stressful situation that affects its employees. The bottom line is, stress can affect any individual when confronted with a situation that induces heightened or prolonged levels of stress that an employee has difficulty coping with. The impact on the organisation can be profound as employee performance is directly linked to stress. Not only does it have a negative performance impact on the organisation, but there is also an increased occurrence of absenteeism, lower productivity and reduced output (Qureshi *et al.,* 2013:764). Occupational stress is a significant problem for organisations and employees, who may experience issues such as low self-esteem, feeling overwhelmed, unable to focus, chronic fatigue, negative personal thoughts and emotionally unpredictable behaviour (Sahraian *et al.*, 2014:1).

Modern day technology has made it possible for organisations to operate on a global platform. By doing this, organisations and their employees are exposed to a variety of cultures, and unavoidably, there will be cultural differences. These situations could be new to employees who have not dealt with it before and create a stressful environment that needs to be overcome. Employees further face competition from other employees and individuals regarding qualifications. The perception is that higher qualifications are an advantage in the business world and within an organisation. However, the time, effort and financial resources an employee or individual needs to invest to gain a perceived advantage could lead to higher levels of stress (Agarwal, 2015:722).

Lotfizadeh *et al.* (2014:79) found that occupational stress is a significant health hazard in the workplace and affects all classes of workers, albeit operational and non-operational (Managers, support, administrative, etc.). The effects of occupational stress lead to higher occurrences of accidents at and away from work. Other effects of occupational stress include employee withdrawal, dissatisfaction and mental health illness. According to the study, the industrial revolution led to organisations using mass production methods, which led to jobs becoming simpler, repetitive and routine. As a result, employees were often treated as a commodity that had to perform the simple task. This compounds the effects stress has on an employee and has increased its commonness significantly. Furthermore, these types of industries are often found in developing countries due to its cost-effectiveness. An aggravating factor is that

employees in developing countries may not know enough about stress to deal with and address it properly. This has seen the growth of occupational stress in developing countries and emphasises the importance for organisations to create the necessary awareness amongst their employees. Effectively educating employees and providing support to help them deal with stress does not only assist an organisation to perform better but is also a moral obligation they owe to their employees, as stress has a profound effect on their personal lives as well. Employees that are stressed are less productive, more unmotivated and less vigilant of safety risks at work. The lack of concentration and reduced ability to make intelligent decisions cause employees to injure themselves more while on duty. A large number of workplace-related injuries can be directly attributed to higher stress levels (Sharma & Singh, 2014:364).

These factors combined result in an organisation at a competitive disadvantage, and they tend to be normally less successful in a competitive market. Even more so, organisations that compete in the global market needs to be as competitive as possible to survive (Lotfizadeh *et al.*, 2014:79). Although stress is caused by a variety of factors in the modern-day world, organisations have to identify and address it timeously to mitigate risks and maintain any competitive advantages. Common causes for increased occupational stress in the workplace include work overload, lack of rewards, work environment, job description, structural changes and increased conflict situations at work. Lotfizadeh *et al.* (2014:80) further found that reducing stress amongst employees is greatly beneficial to the organisation and the industry it operates in. Additionally, it improved the socio-economic characteristics of employees and their society.

Therefore, according to Qureshi *et al.* (2013:765) stress causes an individual to operate differently than what they normally would. This is caused by the influence of a change event that places the individual outside of their comfort zone and requires the individual to act to address the change.

2.8 Definition of turnover intention

An individual's turnover intention indicates their disposition to leave an organisation for whatever reason. This is an important issue for any organisation due to the high costs related to the loss of skills and competence. Moreover, the organisation has to incur additional costs in recruiting and training a replacement employee. As a result, organisations lose productivity and become less efficient (Hwang *et al.*, 2014:62). The

loss of employees and the turnover related costs can be significant for organisations that have a high turnover ratio. Identifying the cause of increased turnover intentions are paramount for organisations that are highly specialised, such as the steel manufacturing industry. Loss of key personnel and skills developed over years of experience can be very difficult to replace. One of the biggest drivers of turnover intention is occupational stress. In the previous section, the various factors contributing to increased occupational stress were explored. Therefore, one can deduce that factors that affect occupational stress could directly contribute to increased employee turnover intentions.

Hwang *et al.* (2014:64) further found that turnover intention was the last step in the withdrawal process. In essence, an individual was of the opinion or had reached a point where the only viable solution to their perceived problem was to search for alternative employment. An individual perceives the prospect of finding a new job as positive as it would remove them from the negatives aspects they are experiencing in their current work environment.

Bothma and Roodt (2013:2) noted that the construct of turnover intention is seldom exactly defined. The assumption used in the study was that turnover intention was the final phase of the withdrawal process. Turnover intention formed part of the larger decision-making process when an employee contemplates actually leaving their job. The study corroborates the positive relationship between turnover intention and actually leaving the job. Employees use turnover intention as a coping mechanism to remove themselves from a current undesirable situation. The act of actually leaving a job consist of a permanent leave, i.e. leaving the employment of an organisation, or making a move inside the organisation using transfer to another department.

Employee turnover intention occurs when there is a conscious and deliberate inclination to separate oneself from an organisation. There is no single indication of what causes an employee's need to leave an organisation to increase. Instead, research indicates that normally the increased need to leave is attributable to a variety of factors. However, some common factors include poor communication, the perception of a negative work environment, job description, job expectations from the organisation, salary and the provision of fringe benefits (Qureshi *et al.,* 2013:765). Another contributing factor is employee dedication. As employee dedication to an organisation decrease, turnover intention increases (Dane & Brummel, 2014:120). However, intention to leave does not constitute actually leaving the job. Cohen *et al.* (2016:255) found a positive correlation

between intention to leave and actually leaving. Important from the research is that organisations should take note of increased levels of employee turnover intention as it could have significant negative impacts for them if the causes of the increased intention are not addressed timeously.

Another important aspect of turnover intention is an employee's willingness to leave their current job voluntarily (Wong & Laschinger, 2015:1827). The study found that job stress, tension, role complexity, job control, organisational commitment and time pressures were contributing factors to increase turnover intention and concur the negative correlation between turnover intention and organisational commitment.

However, the turnover intention is also influenced by external factors outside the organisation, such as the availability of alternative jobs and unemployment levels. According to Demirtas and Akdogan (2015:62), the turnover intention is influenced by external factors (alternative jobs), internal or organisational factors (leadership, rewards and environment) and personal factors (performance and satisfaction). An employee contemplating leaving their job will first evaluate their current job and determine whether it satisfies their needs. Where dissatisfaction is present, the employee starts thinking of leaving the job. However, before actually leaving, the employee tends to seek various forms of remedial action in an attempt to resolve the cause of the dissatisfaction. Only when an employee feels that the cause of the dissatisfaction cannot be remedied, they start searching for alternatives. When a potential alternative is found, the employee evaluates it to determine whether it will satisfy their needs once more. The employee starts planning an exit and determining whether it would be viable only when the utility of actually leaving the current job for the alternative job is worthwhile.

Kim and Kao (2014:220) found that stress was one of the most significant drivers of increased employee turnover intention. However, although stress was one of the biggest drivers, the study found that turnover intention increases due to a variety of factors and a combination thereof. Employee perception also plays a significant part in determining the level of employee turnover intention. Some employees perceive certain scenarios differently, and this could negatively add to their turnover intention.

What is important to note from turnover intention is the effect it has on the organisation and not necessarily, the fact the employee might quit. While an employee has increased levels of turnover intention, they are not performing optimally, and resultantly the organisation is not performing optimally.

However, leaving a job might not be the best remedy for an employee. According to Bothma and Roodt (2013:3), the decision to actually leave a job depends on a variety of external (e.g. availability of alternate jobs) and internal (e.g. stress, utility) factors. An employee will leave a job when there is a perception of greater utility and satisfaction in another job, thereby removing the unwanted characteristics that caused the increased turnover intention in the first place (Bothma and Roodt, 2013:3),. The keyword here is perception. Although these changes are positive for the employee, it has negative implications for the organisation. The loss of highly skilled employees is very disruptive for an organisation and its functions (Bothma and Roodt, 2013:3). The increased costs involved in finding a replacement employee can be high regarding remuneration and training. There is also a considerable time factor involved as it might take several months to find a suitable replacement (Bothma and Roodt, 2013:3).

2.9 The relationship between job stress and turnover intention

As illustrated above, various studies identified a positive relationship between occupational stress and turnover intention. Hwang *et al.* (2014:65) further found that employees who face situations that are more uncertain are likely to experience a greater level of occupational stress over an extended period. Increased occupational stress had a negative relationship with job satisfaction and job performance. The combination of increased stress and low levels of job satisfaction led to the increase in employee turnover intention. Firth *et al.* (2004:8) found that job security, continuity and a perception of procedural unfairness had a negative impact on an employee's job satisfaction levels. These factors contributed to a sense of an unstable and insecure work environment, thereby increasing job stress and turnover intention.

Arshadi and Damiri (2013:708) found similar relationships between job stress and turnover intention. The study classified stress as an emotion that increased turnover intention. An individual's self-esteem played a significant role on the level of stress experienced. Individuals with low self-esteem were more emotionally reactive to external influences compared to individuals with high self-esteem. Individuals with low self-esteem were more responsive to negative information. The effect was a notable increase in absenteeism, commitment and motivation, which are known drivers that increase job stress or occur as a result of increased job stress.

Hwang *et al.* (2014:71) identified the impact of occupational stress had on an employee's home life. The study found that occupational stress had a similar impact outside of work as inside. This increased stress experienced at work and home contributed to the internal and external factors that increased employee turnover intention. There is a strong relationship between work and home. Stress-related factors from both environments tend to exacerbate the one another, thereby having a compounding effect, increasing overall stress levels and turnover intention. Another important contributing factor was financial insecurity. Employees left their job in search of more lucrative and secure job opportunities.

Vance (2006) emphasised the importance of information as a contributing factor to occupational stress and turnover intention. Employees who felt misinformed in respect of organisational direction, expectations and job description were more likely to withdraw and become less involved, less committed, more stressed and had a greater need to leave the organisation.

2.10 Summary

Therefore, employee intellectual capital is critical to the success of organisations. To retain this form of capital, organisations have to reduce the number of factors that tend to increase stress and turnover intention. Organisations have to take cognisance of these various factors and endeavour to address them timeously. The negative impact and high costs of replacing an employee are well known, as well the decrease in productivity and increased the propensity to injuries associated with occupational stress. A balanced and healthy work environment is crucial for retaining employees (Qureshi *et al*., 2013:768).

3 Chapter 3: Research methodology

3.1 Introduction

The purpose of research is the endeavour to obtain answers to a research question or hypothesis (Welman *et al.*, 2005:52). Additionally, research aims at developing new contributions into existing fields of research (O'Leary, 2017:14). The selection of which research methods and strategies to use are mostly determined by the research questions the researcher is attempting to answers. The chosen methods and strategy follow on the positivist paradigm in that the researcher follows an objective approach in exploring the social occurrences identified in the study. The positivist paradigm approach is suited to quantitative research designs, as the researcher can derive the causes and consequences of certain occurrences from facts and figures (Denscombe, 2014:2).

This study focussed on employees employed in the South African steel manufacturing industry. The main aim was to establish whether the employee's perception regarding tariffs and duties affects their stress levels and turnover intention. Furthermore, the study aims to establish whether employees understand what the implementation of tariffs and duties are.

Chapter one provides an introduction and conceptualises the importance of the local steel manufacturing industry. Based on preliminary findings and key assumptions made, the research question was formulated to address the two specific intentions mentioned previously. Section one further provides a brief overview of the structure of the research paper.

In chapter two a literature review on the following aspects that are pertinent to the study were researched to gain an understanding of what it consists of and what are potential influences on its perceived causes:

- Import tariffs, Anti-dumping duties, Tariffs and duties in the South African market, Stress and Turnover Intention

For purposes of the study, tariffs and duties are considered the independent variable, while its effect, if any, on employee stress levels and turnover intention are the dependent variables. As per the findings of the previous sections, the implementation of the tariffs and duties would to a limited extent provide financial relief to the struggling

local steel manufacturing industry. The literature study further identified several other work-related aspects that could influence employee stress and turnover intention. The study further aims to establish, to a lesser extent, the perceived impact these aspects have on employee stress levels and turnover intention.

This chapter focusses on defining the research methodology followed to examine the research questions and research objectives. The research aims to examine the relationship between the various constructs to enable the deduction of key findings as well as the formulation of conclusions and recommendations.

3.2 Research process

The following research process was followed during this study:

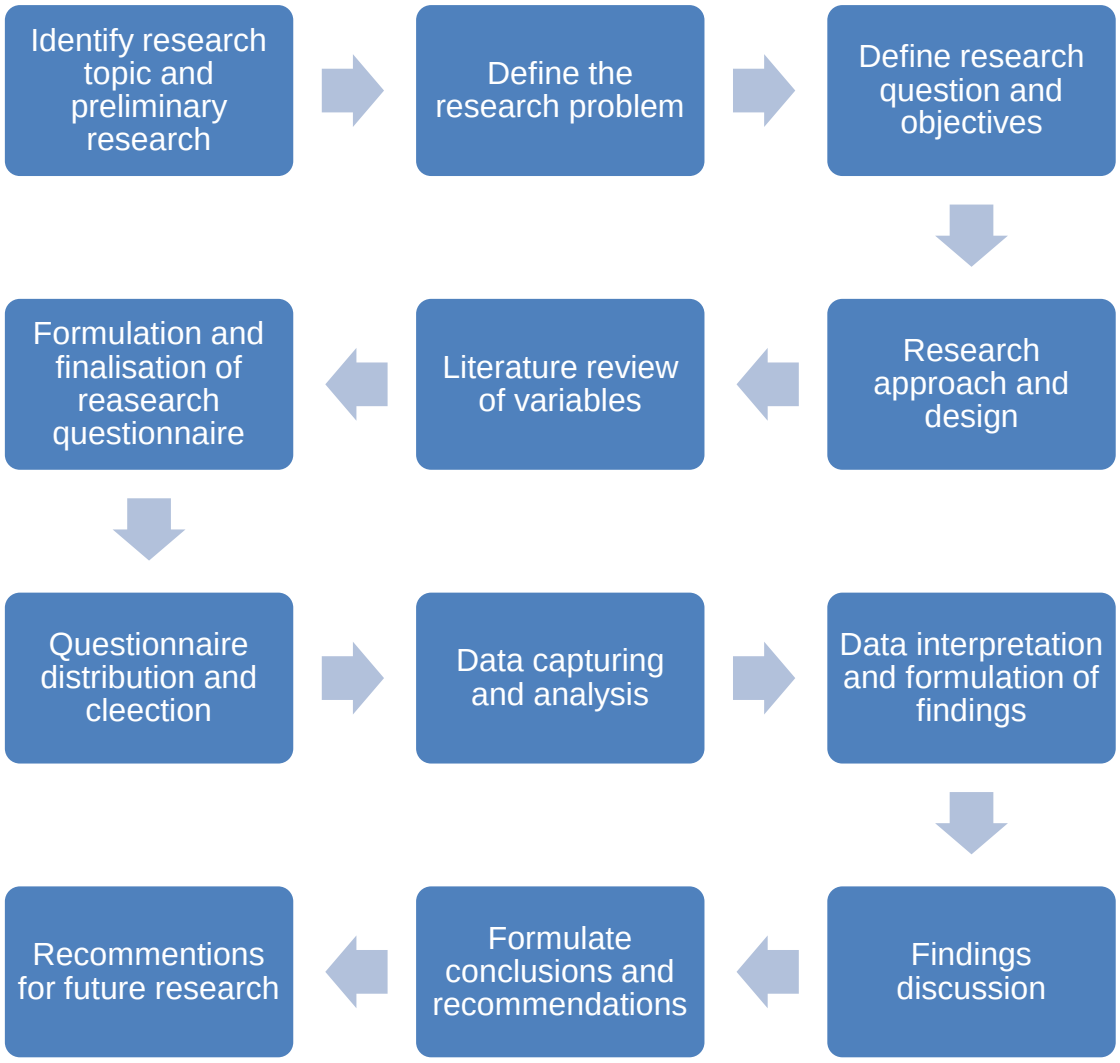

Figure 3-1: Research process (Source: Self-compiled)

3.3 Research design

A quantitative research design relies on the researcher's ability to quantify numerical data obtained from the study for further analysis. Quantitative research design is founded on the positivist principle (O'Leary, 2017:9) and is a form of empirical research investigating a social phenomenon or human behavioural observation where data is gathered by constructing research variables and assigning numerical values. The variables are testing using a predefined research instrument that enables the researcher to categorise responses into sections or constructs. The results obtained are analysed in an attempt explain an observation or predict future observational trends (Yilmaz, 2013:311).

This study used a quantitative research design, as the unit of analysis comprises a sample of the population. The research population consists of people employed in the South African steel manufacturing industry. Data were collected via an electronic questionnaire and statistical analysis and inferences used to formulate conclusions and recommendations.

The study followed a cross-sectional approach as the implementation of the tariffs and duties were a once-off event. The understanding and impact it had on employees, if any, should have taken place when the implementation was announced and should not differ over a period.

3.4 Research population, area and sampling

The population will be people currently employed in the South African steel manufacturing industry. The population has the following characteristics:

- All races
- Any gender
- Any grade of employee (Lowest grade to executive management)
- Limited to employees who provide a secondary or support function in the steel manufacturing process, i.e. corporate, accounts payable, logistics, procurement, etc.
- All ages between 18 and 63

- Permanent employees. Contractors and consultants excluded
- Any education level

The unit of analysis is located in Vanderbijlpark, Vereeniging, Newcastle, Saldanha and Pretoria.

This unit of analysis was made based on the assumption that it was more informed about the impact import tariffs and duties could have on the company. Therefore, one can assume that they are aware of the existence of it and would have some form of an understanding of what it entails.

This unit of analysis is also relevant to the research objective, in that, based on previous trends, this is the first area where employees are laid off due to the financial constraints faced by the company. Therefore, there should be a bigger impact on stress levels and turnaround intentions in this unit of analysis.

3.5 Data analysis

Questionnaires provide a researcher with a uniform and consistent measurement tool characterised by predefined and structured questions that are applied to a sample of the research population. Questionnaires are often used to test social aspects of human behaviour considering their perceptions and opinions of certain occurrences (McGuirk & O'Neill, 2016:10). According to Patten (2016), questionnaires provide an efficient and cost-effective method of collecting data, especially when the required data may be of a sensitive nature. Questionnaires can be distributed in mass and electronically, thereby allowing the researcher to reach as many possible respondents in the sample group and a minimal cost. Being able to reach as many respondents as possible is imperative, as the low response rate is a negative factor of using questionnaires.

An electronic questionnaire was used as the research instrument for the research. A copy of the questionnaire is attached as **Appendix 1**. The use of a research questionnaire was the most appropriate research instrument to examine the research question. The questionnaire content was derived from the preliminary research and literature review. The questionnaire development followed the following process:

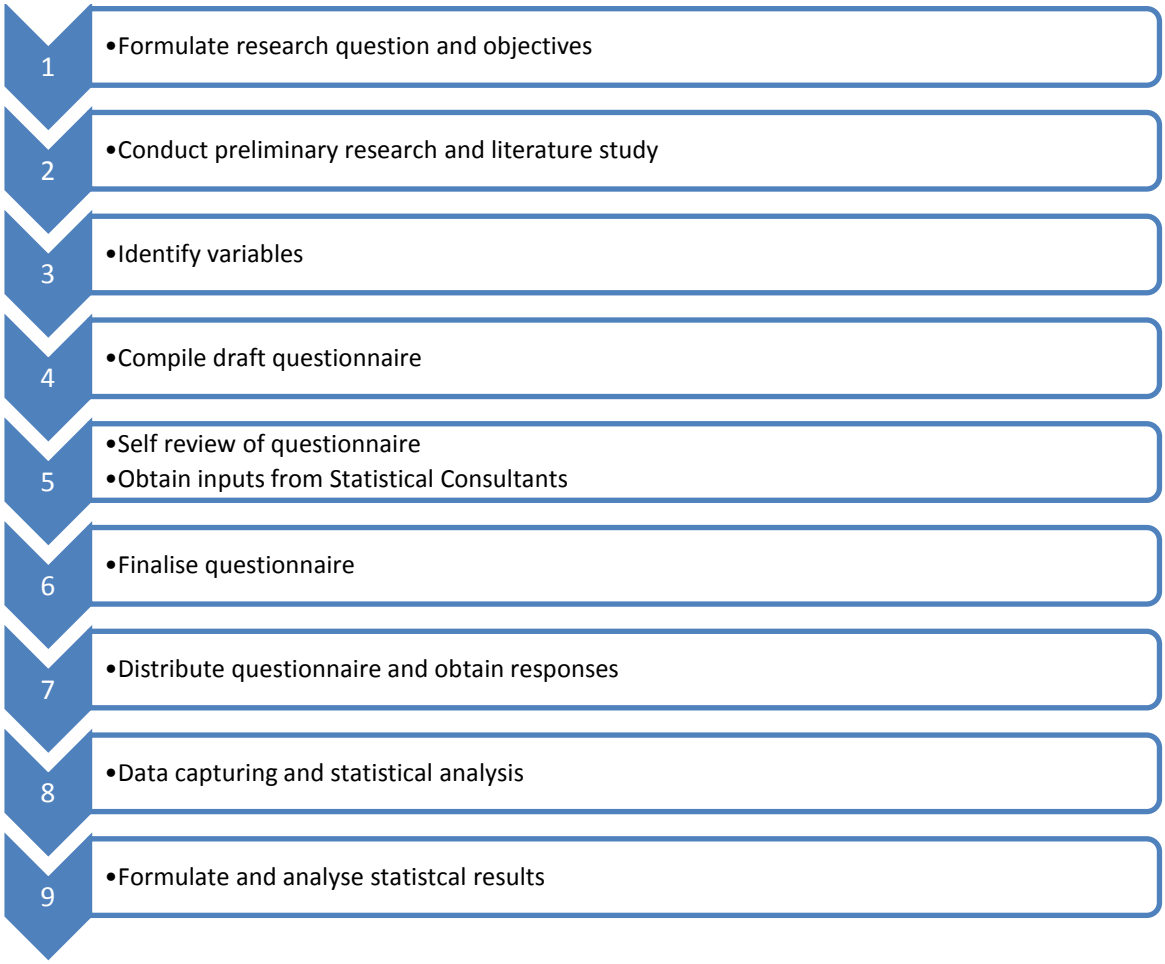

Figure 3-2: Research instrument process (Source: Self-compiled)

The literature study contributed significantly to the content of the questionnaire. During the literature study, very limited information was available regarding previous studies on similar topics. Although extensive research has been done on job stress and employee turnover intention, very limited research was available regarding the effect employee perceptions on tariffs and duties had on stress levels and turnover intentions. Therefore, the objective of the questionnaire was to determine whether employees understood what tariffs and duties were. Secondly, the questionnaire tested whether there was a correlation between tariffs and duties and employee stress levels and turnover intention. Based on the literature study, several additional aspects were included in the questionnaire to test the impact of employee stress levels and turnover intention. Considering the adverse effect increased employee stress levels and turnover intention have on a company, it was important to include additional constructs that could indicate elevated stress levels and turnover intentions. These constructs were specifically added to provide a potential explanation for increased stress levels, and turnover intention should the study reveal that tariffs and duties did not have a significant impact on it.

The questionnaire was finalised after inputs from the Statistical Consultation Services (SCS) of the North-West University. The SCS was specifically approached for their expertise in the statistical analysis field. The SCS made several recommendations, and the questionnaire was finalised after these changes were implemented.

The questionnaire contained the following sections relevant to this study:

Table 3-1: Questionnaire content

Section	Description	Importance
Cover page	Introduction and explanation regarding the purpose of the questionnaire	Contextualises the purpose of the questionnaire and provides anonymity to the respondent, results are confidential and details how it can be accessed
A	Demographics: Gender, race, age, qualification, work experience, department employed in and organisational level	Comparison of sample to population
B	Awareness of tariffs and duties	Tests the research objective, whether employees are aware of tariffs and duties
C	Understanding of tariffs and duties	Tests the research objective, whether employees understand what tariffs and duties are
D1	Stress levels before and after the implementation of tariffs and duties	Tests the effect on employee stress levels, second part of research question
D2 – D17	Several other constructs that affect stress levels	Test other aspects that could increase stress levels

Section	Description	Importance
E1	Turnover intentions before and after the implementation of tariffs and duties	Tests the effect on employee turnover intentions, second part of research question
E2 – E15	Several other constructs that affect turnover intentions	Test other aspects that could increase turnover intention

The table below describes the type of measurement performed in each section:

Table 3-2: Questionnaire measurement instruments

Section	Type of measurement
A	Descriptive statistics
B	Likert scale: Yes or No answer possibilities.
C	Likert scale: Range strongly disagree to strongly agree scale numbered from one to four.
D1	Likert scale: Range strongly disagree to strongly agree scale numbered from one to four.
D2 – D17	Likert scale: Range “Having almost no effect to Having a high effect” scale numbered one to four.
E1+E2	Likert scale: Range strongly disagree to strongly agree scale numbered from one to four.
E2 – E15	Likert scale: Range “Having almost no effect to Having a high effect” scale numbered one to four.

Approval from management was obtained prior to the circulation of the questionnaires. A list of respondents fitting the sampling criteria discussed above was obtained, and questionnaires were circulated via emails. Responses were received via email and collated in an electronic folder for further analysis. Respondents were given ten working days to respond. All responses received after ten days were not included in the statistical analysis. Only responses received during the allocated ten days have been included in the analysis. Responses received were completely random, and all responses were captured. The SCS recommended a sample size of 120 respondents. In total, 190 responses were received and analysed. The 190 responses were captured into a Microsoft Excel data sheet for further analysis. Only questionnaire results were captured. Personal details of respondents were not recorded to ensure anonymity. The completed data sheet was sent to SCS for statistical analysis and testing.

3.6 Validity and reliability

The study focussed on testing whether employees in the steel manufacturing industry understood what tariffs and duties are and whether this had an impact on their stress levels and turnover intentions. The questionnaire used was self-developed as no suitable measuring tool could be found in the existing literature. The questionnaire was divided into predefined sections as highlighted above. Each section contains multiple questions that are inter-correlated. Factor analysis was applied to questions within a section that are highly correlated, but not necessarily correlate with a question from another section.

The consistency and applicability of questionnaire results onto the general population rely on its reliability and validity (Xing *et al.*, 2017:1009). According to Golafshani (2003:599), Van Zyl and Pellisier (2017:150), validity indicates whether the research conducted is sufficient to measure its intended purpose. It provides a degree of truthfulness to the research results. Validity provides that the selected research instrument allowed the researcher to achieve his/her research objective. Construct validity implies that the measuring instrument accurately measured the variable it was intended for (Setia, 2017:259). Constructs used in this study are based on existing literature and theory. Constructs were developed by applying key concepts obtained from the detailed literature review. Therefore, validity is necessary to accurately analyse and interpret the data collected for the study. The influence of the researcher in the entire process was limited to the compilation of the measuring instrument and data

capturing of responses. The researcher played no part in the respective respondent's completing the questionnaire.

Kaiser's measure of sampling adequacy was used to test the inter-correlations between the variables to establish whether it met the criteria to conduct an analysis. For purposes of this research, only values greater than 0.50 will be regarded as satisfactory and incorporated into the findings. The SCS used SAS (2016) to calculate the Eigenvalues of the constructs. Eigenvalue analysis indicates the number of factors needed to explain variable correlation (Yong & Pearce, 2013:85).

According to Golafshani (2003:598), Van Zyl and Pellisier (2017:148), the reliability of data refers to the replicability of the study results when a similar methodology be used. Should the results correlate with the findings of the initial study, the research instrument is regarded to be sufficient and reliable. The core concept remains the replicability of results. Reliability further entails whether the measurement results remain consistent when applied repeatedly, the measurement remains stable and the correlation between measurements of a period (Setia, 2017:259). A degree of similarity between measurement results indicates stability of the measurement instrument. A popular measure of reliability is the test-retest method, which entails the measurement is conducted again at a different time. In instances where the results indicate a degree of repeatability, the stability and consistency in results indicate the degree of reliability. However, several factors could influence the repeatability of measurement results. Over a period, internal and external influences could affect a respondent's viewpoint and therefore lead to different responses to the questionnaire. These discrepancies might be considered as measurement errors and reduce the measurement instrument's accuracy and consistency. It is important to note that a high degree of repeatability and reliability is not an indication of the validity of the measurement instrument.

The internal stability and reliability of the measurement instrument are tested with Cronbach alpha coefficients. Moreover, these tests are more important when the measurement instrument uses Likert scales (Gliem & Gliem, 2003:84). Cronbach's alpha reliability scores range between 0 and 1, with scores greater than 0.6 deemed acceptable and scores less than 0.5 deemed unacceptable (Gliem & Gliem, 2003:87).

3.7 Correlations among constructs

The SCS used SAS (2016) to calculate the correlation between the different factors. Positive values indicate a positive relationship between two variables, i.e. when one results in one variable increases, a similar effect can be observed in the other variable. The inverse applies where a negative correlation was calculated. When one variable increases, a decrease was observed in the other variable.

3.8 Effect Sizes

Researchers determine the p-value to establish a data set's statistical significance when conducting a study on a sample of the research population. However, the p-value reports on statistical significance and does not indicate its practical importance (Ellis & Steyn, 2003:51). Cohen's effect sizes (d-value) were calculated to determine the size and practical significance of the differences between factors (Cohen, 1992:156). According to Cohen (1992:157), the following values were used as a guideline when interpreting reported d-values:

- d=0.2, small effect;
- d=0.5, medium effect; and
- d=0.8, large effect with significant practical importance.

3.9 Ethical considerations

Welman *et al.* (2005:181) list the following ethical considerations the researcher should take note of during the study:

- The rights of respondents in the study should be protected and respected.
- The study should be limited to the researcher's competency. The researcher should avoid areas where they are not properly trained in.
- Duplication of existing studies should be avoided. This is achieved by conducting a comprehensive literature review.
- The researcher must acknowledge the contribution by other researchers. The use of sources without due acknowledgement and permission is not permitted.

- The results reported on should be a fair and truthful reflection of the study data collected.

The respondent's rights and anonymity were protected during the circulation and collation of the questionnaires. At no point was a respondent's identity connected to any research results. Participation in the study was voluntary, and no respondent was forced or enticed to complete a questionnaire in any way. The ethical considerations incorporated into the study are by relevant literature and guidelines set by the Ethics Committee of the North-West University. Due acknowledgement has been provided to other researchers where their respective studies have contributed to this study. Referencing of sources is according to the Harvard referencing format. The researcher obtained permission from management to distribute the questionnaires to employees using the company information and email infrastructure. All data collated has been provided as is to the SCS for analysis. The results obtained from the analysis are a true reflection and have not been altered. Furthermore, the data, results, findings and conclusion are confidential and will only be shared with appropriate third parties with prior written consent from the researcher and representatives of the North-West University.

3.10 Summary

The research population was individuals employed in the local steel manufacturing industry. A research questionnaire was developed and circulated to a sample of 1 000 employees, of which 190 responses were received. The responses were collated into a single data sheet and were provided to the Statistical Consultation Services of the North-West University for statistical analysis. The statistical analysis confirmed the validity and reliability of the questionnaire. An exploratory factor analysis was performed to group the question into constructs as a data reduction method. Cronbach's alpha determined that the constructs were reliable. Tukey's (HSD) test was used to compare constructs to identify any significant differences.

4 Chapter 4: Results and discussion

4.1 Introduction

This chapter presents the results of the study as set out in the research methodology as described in **Chapter 3** above.

A total of 190 responses were received from the research participants. The data received was collated into a single data sheet and presented to the SCS for further statistical analysis. The SCS used SAS (2016) to conduct the statistical analysis.

This chapter will provide a summarised overview of the demographic information of the study, followed by a discussion on the results obtained from the single item and construct analysis.

4.2 Demographic information of research respondents

The sample group consisted of employees employed in the corporate structures of local South African steel manufacturing industry. These employees are not directly involved in the steel manufacturing process, however, provide an administrative support role to the industry. The respondents consisted of 72% male and 28% female. According to Figure 4-1 the majority of respondents (51%) were aged between 30 to 50, while 39% were aged above 50 and 10% below 30. This indicates that the majority of respondents are middle-aged and a significant portion of the sample population (20%) are older than 56.

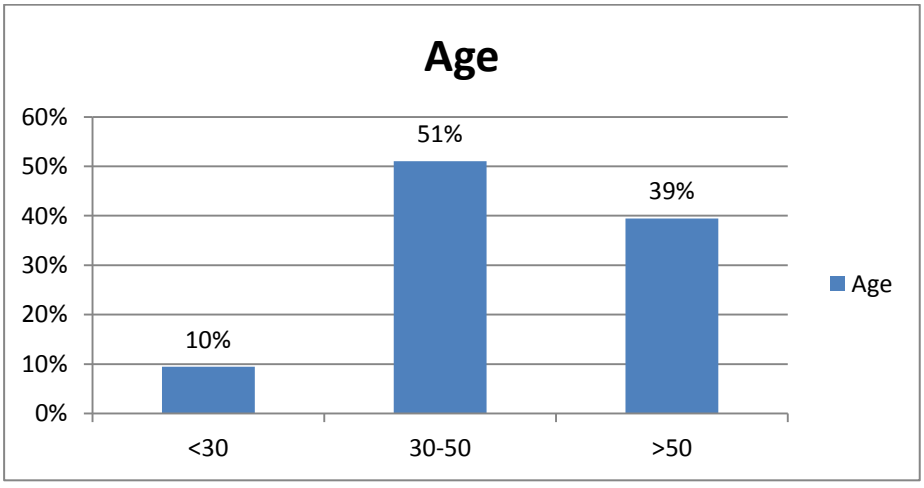

Figure 4-1: Respondent age composition

68% of respondents had a degree or higher (Degree, Honours, Master and PhD).

32% of respondents held a postgraduate qualification (Honours, Masters and PhD). However, the specific details of the qualifications were not measured, and the assumption is made that the respondents obtained their accreditation from reputable institutions.

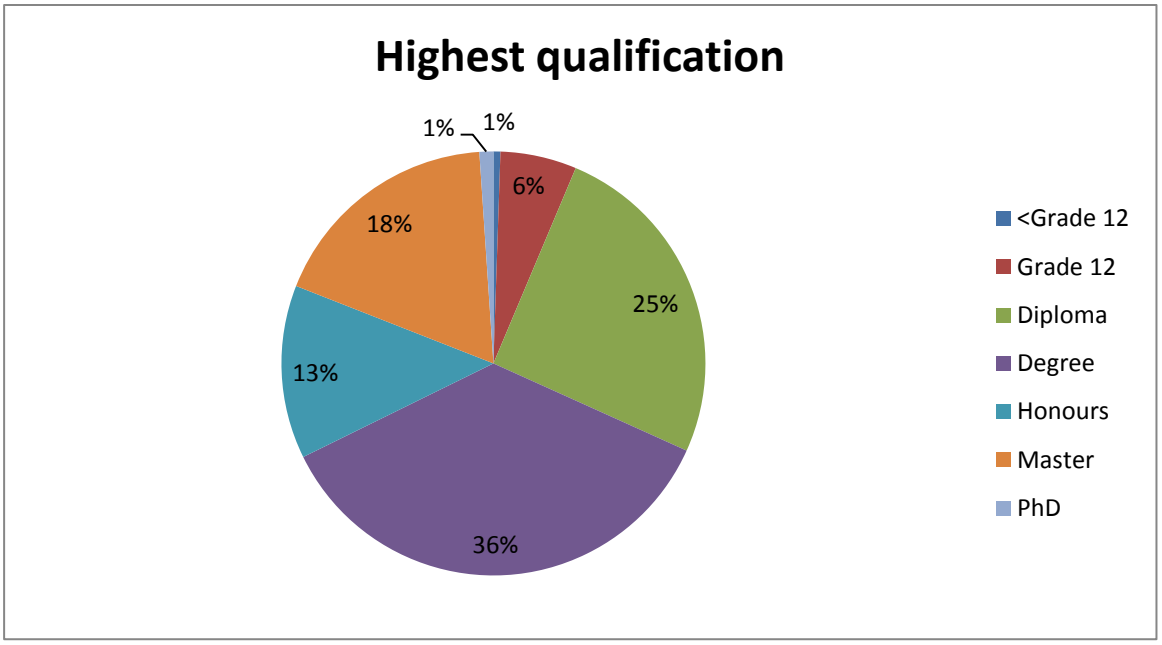

Figure 4-2: Qualification composition of respondents

The majority of respondents (66%) had more than 20 full years' working experience. Figure 4-3 provides a summary of all respondents. This figure corresponds to the age composition above and is an indication that the majority of respondents have spent a significant part of their working life (Age 18 to 63) in the steel manufacturing industry.

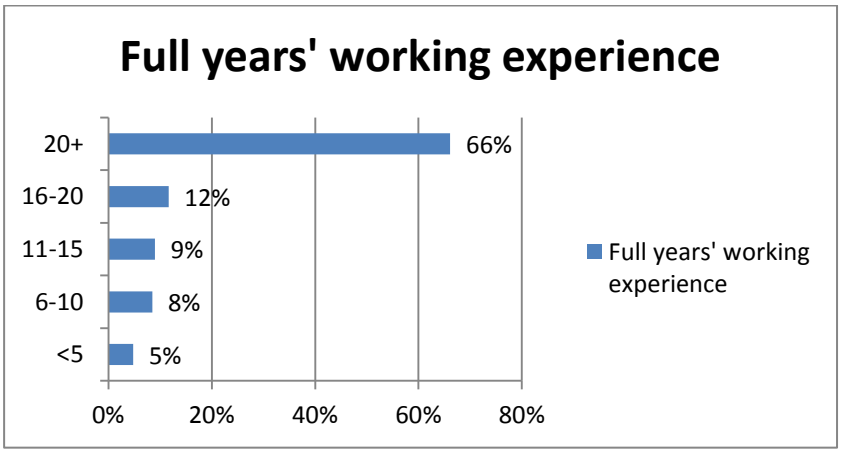

Figure 4-3: Respondents full years' working experience

Figure 4-4 provides a summary of the organisational level of the respondents. The majority of respondents were employed in middle management positions.

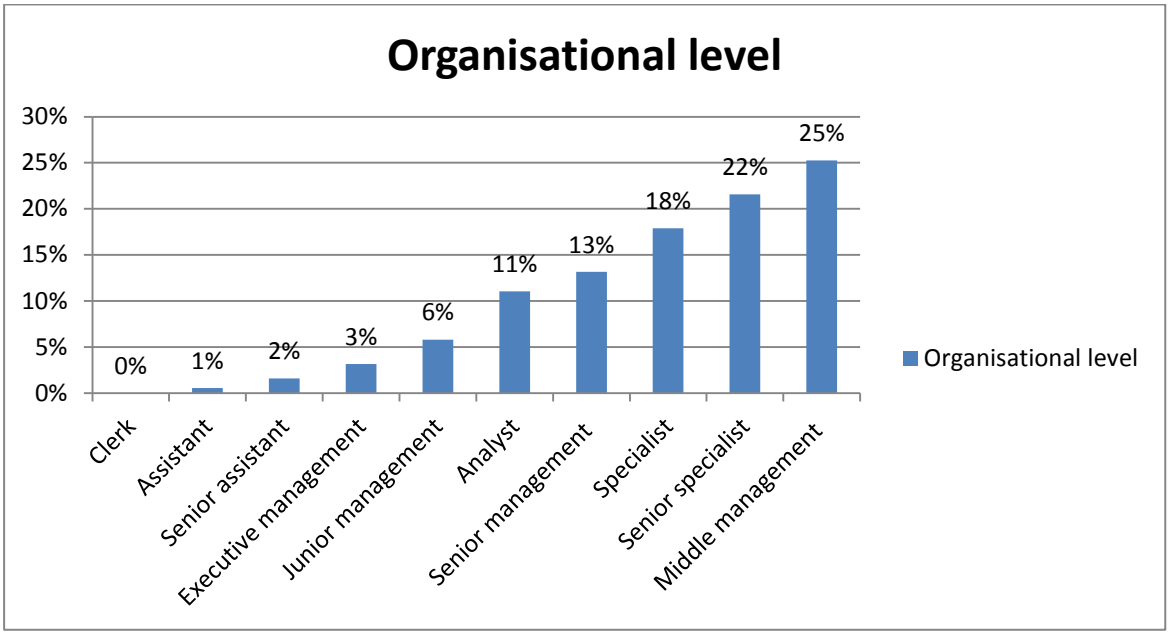

Figure 4-4: Respondents organisational level

Based on the above figure above, the majority of respondents can be classified as middle-level employees (Senior specialist, junior management, middle management). These employees are more involved in the operational running of the business and should be more cognisant of the impact imports, and tariffs could have on the industry.

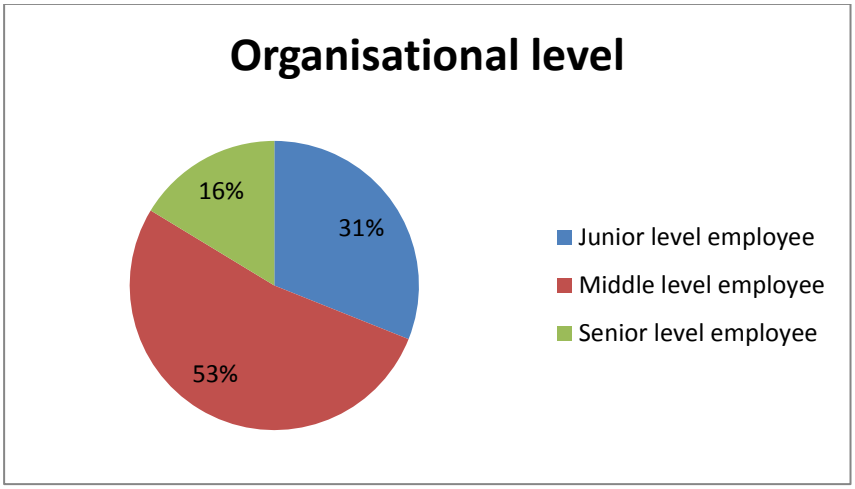

Figure 4-5: Respondent organisational level grouping

4.3 Respondent understanding of tariffs and duties

Section B of the questionnaire required the respondents to answer either yes or no on the questions below.

B1: Are you aware of the steel import tariffs and duties?

B2: Are you aware that these import tariffs and duties have been implemented?

The overwhelming majority of respondents answered yes to both questions. However, it should be noted that this is merely an indication of the respondent's awareness of the tariffs and duties, and is by no means an indication of their understanding of what the tariffs and duties are and its perceived implications for the local steel manufacturing industry.

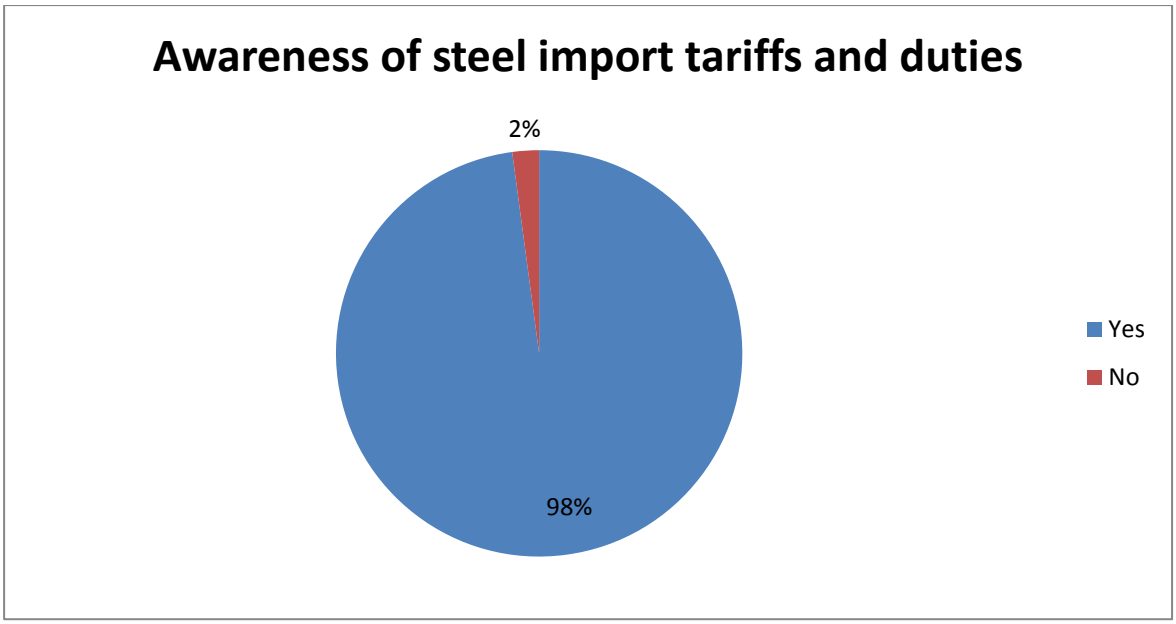

Figure 4-6: Respondent awareness of tariffs and duties

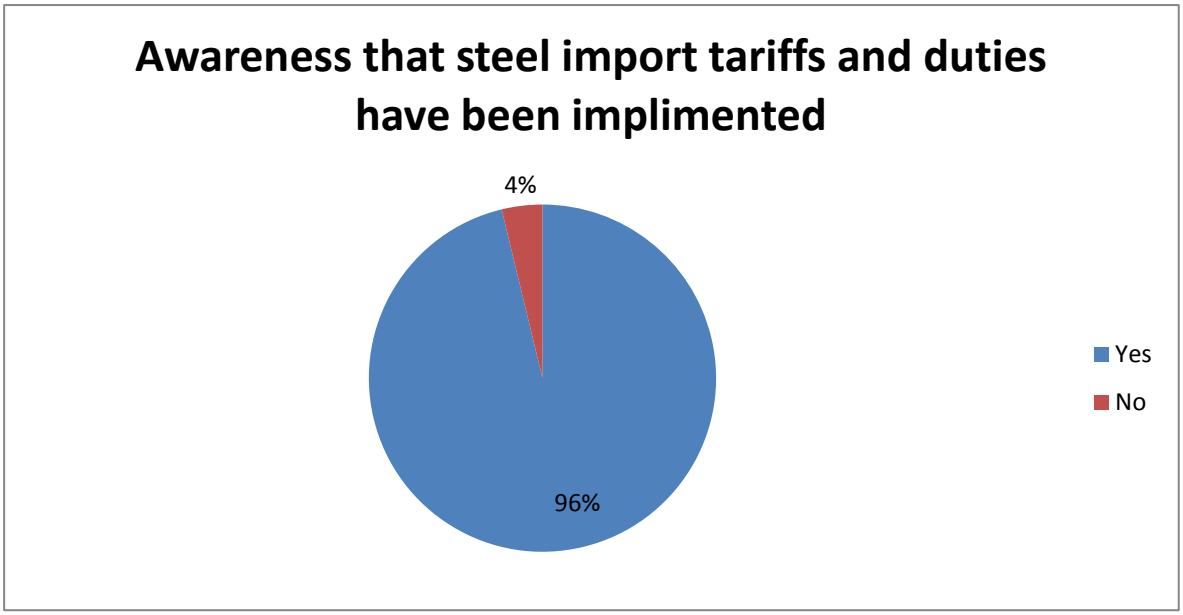

Figure 4-7: Respondent awareness of tariff and duties implementation

4.4 Paired factor testing

The study aimed at testing whether the implementation of tariffs and duties had any effect on employee stress levels and turnover intention. The questions indicated in the table below were specifically developed to test an individual's perception of stress and turnover intention before and after the implementation of tariffs and duties. Respondents were required to rate their perception on a four-point Likert scale, where one was strongly disagree, and four strongly agree.

Table 4-1: Paired factor testing

Question	**Before implementation**	**After implementation**	**Construct**
I feel generally stressed	Question D1.1	Question D1.2	Effect on stress
I feel my job is secure	Question E1.1	Question E1.2	Effect on job security
I am happy in my job	Question E2.1	Question E2.2	Effect on job satisfaction
I am actively seeking for other job opportunities	Question E3.1	Question E3.2	Effect on turnover intention

Paired t-tests were used to calculate the effect sizes between the paired factors. The test was performed to establish whether any practically statistical significant differences in the means and distributions of each respectively paired factor (Welman *et al.*, 2005:231).

Table 4-2 indicates the calculated d-values of the paired factor testing:

Table 4-2: Calculated d-values for paired factors

Construct		N	Mean	Standard deviation	Mean diff	P-value	D-value
Effect on stress	Before	185	3.07	0.94	0.36	<0.001*	0.38
	After	185	2.70				
Effect on job security	Before	184	2.08	0.80	0.12	0.014*	0.15
	After	184	2.20				
Effect on job satisfaction	Before	185	2.93	0.77	0.03	0.40	0.04
	After	185	2.95				
Effect on turnover intention	Before	183	2.14	0.98	0.01	0.80	0.01
	After	183	2.17				
* Statistically significant on 0.5 level according to t-test for dependent groups							

The statistical analysis and d-value calculations indicated that there are no practically significant differences between the stated constructs before and after the implementation of tariffs and duties. Therefore, although employees are currently stressed, it appears that the implementation of tariffs and duties did not have a material impact on the employees of stress and turnover intention. Coincidently, it appears that employees do not currently have the intention to leave their current employer.

4.5 Construct formulation

Factor analysis was used in Section C, D and E of the questionnaire to group the questions into constructs by using data reduction. Each section is discussed separately below:

4.5.1 Section C: General questions – Import tariffs and duties

The calculated Kaiser's overall MSA was 0.67, indicating a result larger than 0.5 and therefore that factor analysis was deemed appropriate. The Eigenvalues of the correlation matrix was calculated and served as an indication of the amount a variance that could be explained by the number of factors. According to the results, two factors were retained and could explain 70% of the variance. The final commonality estimates indicated that communalities varied from a high of 82% (C2) to a low 39% (C6).

Based on the rotated factor pattern analysis, the factors were grouped, and the following constructs were formulated:

Table 4-3: Section C construct formulation

Question number	**Section question grouping**	**Construct number**	**Construct name**
C1	I understand what the import tariffs and duties are	**CC1**	**Understanding**
C2	I understand the effects the import tariffs and duties have on the steel industry		
C3	The import tariffs and duties will be beneficial to the steel industry		
C4	Has the company done enough to explain what import tariffs are	**CC2**	**Information**
C5	Has the company done enough to explain the impact of import tariffs and duties		
C6	Do you require more information on import tariffs and duties		

Construct CC1 was formulated to test the respondents understanding of what the tariffs and duties are and what its perceived implication could be. Construct CC2 was

formulated to test whether the respondent requires additional information about tariffs and duties.

4.5.2 Section D: General questions – Stress

The calculated Kaiser's overall MSA was 0.85, indicating a result larger than 0.5 and therefore that factor analysis was deemed appropriate. The Eigenvalues of the correlation matrix was calculated and served as an indication of the amount a variance that could be explained by the number of factors. According to the results, four factors were retained and could explain 59% of the variance. The final communality estimates indicated that communalities varied from a high of 71% (D2) to a low 37% (D4).

For purposes of the construct formulation of this section, only question D2 to D17 was considered. Questions D1.1 and D1.2 were grouped into the "Effect on stress" construct (CD1) and tested separately. The decision was made to test these questions separately as it tested the respondent's perception of stress before and after the implementation of the tariffs and duties.

Based on the rotated factor pattern analysis for questions D2 to D17, the factors were grouped, and the following four constructs were formulated:

Table 4-4: Section D construct formulation

Question number	**Section question grouping**	**Construct number**	**Construct name**
D4	Work safety	**CD2**	**Personal matters**
D10	Personal matters		
D11	Health		
D13	Job satisfaction		
D15	Work-life balance		
D17	Relationship with colleagues		
D6	Company performance	**CD3**	**Company performance**
D8	Finances		
D9	Remuneration		
D12	Job insecurity		
D14	Changes within the company		

Question number	**Section question grouping**	**Construct number**	**Construct name**
D2	Work environment	**CD4**	**Company environment**
D3	Work culture		
D5	Workload		
D7	Company communication	**CD5**	**Company communication**
D16	Relationship with management		

Questions D2 to D17 required the respondents to rate affect the subject (As indicated in the “Section question grouping” column in the table above), had on their respective stress level.

4.5.3 Section E: General questions – Turnover Intention

The calculated Kaiser’s overall MSA was 0.83, indicating a result larger than 0.5 and therefore that factor analysis was deemed appropriate. The Eigenvalues of the correlation matrix was calculated and served as an indication of the amount a variance that could be explained by the number of factors. According to the results, three factors were retained and could explain 59% of the variance. The final communality estimates indicated that communalities varied from a high of 75% (E8) to a low 37% (E12).

For purposes of the construct formulation of this section, only question E4 to E15 was considered. Questions E1.1, E1.2, E2.1, E2.2, E3.1 and E3.2 were grouped into constructs CE1 Job security (Question 1.1 and 1.2), CE2 Job satisfaction (Questions 2.1 and 2.2) and CE3 Turnover intention (Questions E3.1 and 3.2) and tested separately. The decision was made to test these questions separately as it tested the respondent’s perception of job security, job satisfaction and turnover intention before and after the implementation of the tariffs and duties.

Based on the rotated factor pattern analysis for questions E4 to E15, the factors were grouped, and the following four constructs were formulated:

Table 4-5: Section E construct formulation

Question number	Section question grouping	Construct number	Construct name
E7	Workload	CE4	Work environment
E8	Work environment		
E9	Work Culture		
E10	Working conditions		
E4	Insufficient remuneration	CE5	Work output reward
E5	Job insecurity		
E6	Lack of future opportunities		
E14	Lack of appreciation		
E15	There are better opportunities available in the market		
E11	Safety	CE6	Personal
E13	Personal matters		

Questions E4 to E15 required the respondents to rate affect the subject (As indicated in the “Section question grouping” column in the table above), had on their respective intention to leave their current employer.

4.5.4 Construct formulation conclusion

Based on the results achieved and the constructs formulated, the validity of the measuring instrument is considered adequate and acceptable. The retained constructs are sufficient to provide the required information for further analysis.

4.6 Reliability

The table below indicates the calculated Cronbach’s alpha values to establish the reliability and consistency of the respective constructs that were derived from the measuring instrument (Field, 2009:675).

Table 4-6: Cronbach's alpha values of constructs

Construct number	Construct name	Questions	N	Cronbach's Alpha
CC1	Understanding	C1, C2, C3	189	0.80
CC2	Information	C4, C5, C6	185	0.68
CD2	Personal matters	D4, D10, D11, D13, D15, D17	183	0.78
CD3	Company performance	D6, D8, D9, D12, D14	185	0.75
CD4	Company environment	D2, D3, D5	188	0.69
CD5	Company communication	D7, D16	188	0.49
CE4	Work environment	E7, E8, E9, E10	188	0.83
CE5	Work output reward	E4, E5, E6, E14,15	186	0.78
CE6	Personal	E11, E13	188	0.48

Cronbach's alpha values range from 0 to 1. A value closer to 1 indicates a greater level of internal consistency. Given that the nature of the study focusses on psychological aspects, values greater than 0.6 are considered acceptable Field, 2009:675). The constructs tested as per the table above indicate values that were greater than the 0.6 thresholds and therefore are considered acceptable. However, two constructs, CD5 and CE6, indicated values less than 0.5. According to Tavakol and Dennik (2011:53), lower Cronbach's alpha values can be expected when the number of variables in a construct is limited. Both these constructs consisted of only two factors. These constructs have been included for further analysis. Therefore, based on the results from the Cronbach's alpha test, the measuring instrument is deemed reliable.

4.7 Construct discussion

The constructs below were designed to explore additional factors that affect employee stress level and turnover intention. The arithmetic mean indicates the average score of all the individual scores of each construct. The standard deviation is an indication of how the data is scattered around the mean and is an indication of the degree of variation in the data (Welman *et al.*, 2005:230). All constructs were tested using a four-point Likert scale. For purposes of this discussion, all scores below 2.5 will be considered that respondents either disagreed with the questions or that the question had a lesser effect on them. Each construct is discussed separately below.

4.7.1 Constructs related to tariff and duty understanding

The constructs below related to the respondents understanding of tariffs and duties and whether they required more information on the topic. The four-point Likert scale ranges from strongly disagree (One) to strongly agree (Four). It appears from the findings that respondents understood (Construct CC1) what tariffs and duties are and the effect it could have on the local steel manufacturing industry. Moreover, according to question C3, respondents were of the opinion that the tariffs and duties would be beneficial to the steel industry (Mean 3.28, StdDev 0.71). The construct relating to information about tariffs and duties (CC2) indicated that enough had been done to provide sufficient information regarding tariffs and duties and that respondents do not require further information.

Table 4-7: Constructs related to tariff and duty understanding

Construct #	Construct	N	Mean	SD	Min	Max
CC1	Understanding	190	3.32	0.58	1	4
CC2	Information	189	2.57	0.68	1	4

4.7.2 Constructs related to stress level

The constructs related to stress tested the respondent's perceived effect each one of the questions had on their respective stress level. The four-point Likert scale required respondents to rate the effect the topic had on their stress level, with one having no effect and four having a significant effect. The construct related to company performance had the most significant effect on respondent stress levels. Accordingly, respondents indicated that company performance (Question D6) had the most

significant effect on their stress level compared to all other questions (Mean 3.59, StdDev 0.64). This indicates that when the company they work for is not performing adequately, employees are more stressed. The second largest effect related to finances (Question D8) (Mean 3.35, StdDev 0.82). Both D6 and D8 fall under the company performance construct.

It further appears that the company environment and company communication had a moderate effect on respondent stress levels. Personal matters had the smallest effect on respondent stress levels.

Therefore, company performance affected respondent stress levels the most. The findings are understandable as the questions related to company performance centre around how the company performance, financial performance and employee remuneration, job insecurity and changes within the company. As employees are dependent on their employer for their livelihood, it is expected that when employees perceive a level of uncertainty regarding company performance, it would have a potential direct effect on their livelihood and thereby explains the increased effect on their stress levels.

Table 4-8: Constructs related to stress level

Construct #	Construct	N	Mean	Std Dev	Min	Max
CD2	Personal matters	190	2.30	0.65	1	4
CD3	Company performance	190	3.16	0.62	1	4
CD4	Company environment	190	2.79	0.71	1	4
CD5	Company communication	190	2.60	0.74	1	4

4.7.3 Constructs related to turnover intention

The constructs related to turnover intention tested the respondent's perceived effect each one of the questions had on their respective turnover intention. The four-point Likert scale required respondents to rate the effect the topic had on their stress level, with one having no effect and four having a significant effect. The construct related to work output reward had the largest effect on respondent turnover intention. The construct consisted of factors such as insufficient remuneration, job insecurity, lack of appreciation, lack of future opportunities with their current employer and the perception of better employment opportunities in the market. It appears from the data that

insufficient remuneration (Question E4) had the largest effect on employee turnover intention (Mean 2.92, StdDev 1.05).

It further appears that work environment had a moderate effect and personal had the smallest effect on the employee's intention to leave their current employer.

Table 4-9: Constructs related to turnover intention

Construct #	Construct	N	Mean	Std Dev	Min	Max
CE4	Work environment	190	2.31	0.73	1	4
CE5	Work output reward	190	2.73	0.74	1	4
CE6	Personal	190	1.85	0.75	1	4

4.8 Effect sizes of constructs

For purposes of this discussion, four demographic categories were selected for construct testing. Each demographic category was grouped into three subcategories as indicated in table 4-10.

Table 4-10: Demographic category groupings

Demographic category	Number of options in category	Grouping number	Grouping description
Age	9	1	< 30
		2	30 to 50
		3	> 50
Highest qualification	7	1	Grade 12 or less
		2	Diploma or degree
		3	Postgraduate qualification
Department employed	12	1	Operational
		2	Strategy
		3	Support
Organisational level	10	1	Junior level employee

Demographic category	Number of options in category	Grouping number	Grouping description
		2	Middle-level employee
		3	Senior level employee

Each demographic category grouping was tested against each construct in an attempt to determine whether significant differences exist. Tukey's honestly significance difference (HSD) test was used to determine whether there were any significant differences between groups when compared to constructs. A significant difference between groups indicates that the groups differ from each other. The means of the different groups are compared to determine whether significant differences are present (Abdi & Williams, 2010:1).

4.8.1 Age effect on constructs

The age groupings were tested against the constructs to determine whether there was a significant difference in perception.

Table 4-11: Age-grouping detail

Demographic category	Grouping number	Grouping description	Grouping detail
Age	1	< 30	Self-explanatory
	2	30 to 50	Self-explanatory
	3	> 50	Self-explanatory

Table 4-12 provides a summary of the Tukey comparisons performed for age groupings:

Table 4-12: Tukey HSD comparisons – age

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
Understanding	1	18	3.28	0.67	None	-	0.02	0.13
	2	97	3.29	0.58		0.02	-	0.13
	3	74	3.36	0.58		0.13	0.13	-
Information	1	18	2.33	0.75	None	-	0.27	0.44
	2	97	2.54	0.65		0.27	-	0.18
	3	74	2.67	0.71		0.44	0.18	-
Personal matters	1	18	2.10	0.58	Between 2 and 3	-	0.51^{Δ}	0.09
	2	97	2.44	0.67		0.51^{Δ}	-	0.43
	3	75	2.15	0.59		0.09	0.43	-
Company performance	1	18	3.20	0.44	None	-	0.07	0.24
	2	97	3.24	0.61		0.07	-	0.31
	3	75	3.04	0.65		0.24	0.31	-
Company environment	1	18	2.74	0.72	Between 2 and 3	-	0.25	0.15
	2	97	2.92	0.68		0.25	-	0.39
	3	75	2.64	0.72		0.15	0.39	-
Company communication	1	18	2.92	0.73	None	-	0.38	0.61^{Δ}
	2	97	2.63	0.74		0.38	-	0.22
	3	75	2.47	0.73		0.61^{Δ}	0.22	-
Work	1	18	2.25	0.72	None	-	0.14	0.04

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
environment	2	97	2.36	0.75		0.14	-	0.10
	3	75	2.28	0.70		0.04	0.10	-
Work output reward	1	18	2.97	0.75	Between 2 and 3	-	0.19	0.55^{Δ}
	2	97	2.83	0.68		0.19	-	0.37
	3	75	2.54	0.77		0.55^{Δ}	0.37	-
Personal	1	18	1.86	0.74	None	-	0.12	0.21
	2	97	1.96	0.84		0.12	-	0.30
	3	75	1.71	0.60		0.21	0.30	-
$^{\Delta}$ - Medium effect in practice, practical significant								

The Tukey comparison identified practically significant differences between groups two and three for constructs personal matters, company environment and work output reward. The results indicate that the construct personal matters had a greater effect on stress levels for respondents aged 30 to 50 compared to respondents aged over 50. A similar result was observed between the same groups and construct company environment. The construct work output reward had a greater effect on the turnover intention of respondents aged 30 to 50 compared to respondents over. Respondents in the age group 30 to 50 are in the middle portion of their working lives and are influenced more by the mentioned constructs than respondents over 50, who are in the final stages of their working careers and would experience a lesser effect.

4.8.2 Highest qualification effect on constructs

The highest qualification groupings were tested against the constructs to determine whether there was a significant difference in perception.

Table 4-13: Highest qualification grouping detail

Demographic category	Grouping number	Grouping description	Grouping detail
Highest qualification	1	Grade 12 or less	Self-explanatory
	2	Diploma or degree	Self-explanatory
	3	Post graduate qualification	Self-explanatory

Table 4-14 provides a summary of the Tukey comparisons performed for highest qualification groupings:

Table 4-14: Tukey HSD comparisons – Highest qualification

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
Understanding	1	12	2.92	0.81	Between 1 and 3	-	0.47	0.63^{Δ}
	2	116	3.29	0.59		0.47	-	0.22
	3	61	3.43	0.48		0.63^{Δ}	0.22	-
Information	1	12	2.44	0.61	None	-	0.17	0.24
	2	115	2.56	0.70		0.17	-	0.07
	3	61	2.61	0.68		0.24	0.07	-

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
Personal matters	1	12	2.65	0.84	None	-	0.51$^{\Delta}$	0.34
	2	116	2.22	0.64		0.51$^{\Delta}$	-	0.23
	3	61	2.37	0.62		0.34	0.23	-
Company performance	1	12	3.45	0.62	None	-	0.43	0.59$^{\Delta}$
	2	116	3.18	0.60		0.43	-	0.17
	3	61	3.07	0.65		0.59$^{\Delta}$	0.17	-
Company environment	1	12	2.92	0.77	None	-	0.25	0.07
	2	116	2.73	0.72		0.25	-	0.19
	3	61	2.86	0.66		0.07	0.19	-
Company communication	1	12	2.79	0.66	None	-	0.26	0.33
	2	116	2.61	0.71		0.26	-	0.10
	3	61	2.52	0.81		0.33	0.10	-
Work environment	1	12	2.52	0.70	None	-	0.31	0.29
	2	116	2.28	0.77		0.31	-	0.05
	3	61	2.32	0.65		0.29	0.05	-
Work output reward	1	12	2.62	0.77	None	-	0.22	0.04
	2	116	2.78	0.71		0.22	-	0.17
	3	61	2.65	0.79		0.04	0.17	-
Personal	1	12	1.71	0.89	None	-	0.15	0.22
	2	116	1.84	0.73		0.15	-	0.08
	3	61	1.90	0.77		0.22	0.08	-

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
$^{\Delta}$ - Medium effect in practice, practical significant								

The Tukey comparison identified a practically significant difference between groups one and three for understanding. The construct understanding specifically tested a respondent's understanding of what tariffs and duties are. It is significant to note that respondents with grade 12 or less (Group one) had a mean score of 2.92 (Std Dev 0.81) compared to respondents that had some form of postgraduate qualification (Group three), which had a mean of 3.43 (Std Dev 0.48). It, therefore, appears that respondents that had a higher education level had a greater understanding of what tariffs and duties are.

4.8.3 Department employed effect on constructs

The department employed groupings were tested against the constructs to determine whether there was a significant difference in perception.

Table 4-15: Department employed grouping detail

Demographic category	Grouping number	Grouping description	Grouping detail
Department employed	1	Operational	Contracts, finance, logistics, procurement, raw materials, sales and marketing
	2	Strategy	Strategy and projects, technology
	3	Support	Corporate, human resources, internal assurance, legal

Table 4-16 provides a summary of the Tukey comparisons performed for department employed groupings:

Table 4-16: Tukey HSD comparisons – Department employed

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
Understanding	1	68	3.39	0.57	None	-	0.23	0.12
	2	76	3.26	0.55		0.23	-	0.08
	3	46	3.31	0.66		0.12	0.08	-
Information	1	68	2.55	0.73	None	-	0.10	0.07
	2	75	2.63	0.58		0.10	-	0.16
	3	46	2.50	0.78		0.07	0.16	-
Personal matters	1	68	2.41	0.69	None	-	0.20	0.36
	2	76	2.27	0.62		0.20	-	0.17
	3	46	2.17	0.62		0.26	0.17	-
Company performance	1	68	3.27	0.62	None	-	0.22	0.34
	2	76	3.13	0.60		0.22	-	0.14
	3	46	3.04	0.65		0.34	0.14	-
Company environment	1	68	2.87	0.77	None	-	0.22	0.08
	2	76	2.70	0.66		0.22	-	0.16
	3	46	2.81	0.69		0.08	0.16	-
Company communication	1	68	2.71	0.80	None	-	0.26	0.17
	2	76	2,51	0.66		0.26	-	0.09
	3	46	2.58	0.77		0.17	0.09	-
Work	1	68	2.43	0.77	None	-	0.31	0.08

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
environment	2	76	2.18	0.71		0.31	-	0.25
	3	46	2.36	0.65		0.08	0.25	-
Work output reward	1	68	2.84	0.76	None	-	0.22	0.24
	2	76	2.67	0.72		0.22	-	0.02
	3	46	2.66	0.73		0.24	0.02	-
Personal	1	68	1.86	0.78	None	-	0.06	0.16
	2	76	1.91	0.76		0.06	-	0.22
	3	46	1.74	0.69		0.16	0.22	-
$^{\Delta}$ - Medium effect in practice, practical significant								

The Tukey comparison identified no practically significant difference between the groups and constructs.

4.8.4 Organisational level effect on constructs

The organisational level groupings were tested against the constructs to determine whether there was a significant difference in perception.

Table 4-17: Organisational level grouping detail

Demographic category	Grouping number	Grouping description	Grouping detail
Organisational level	1	Junior level employee	Assistant, senior assistant, clerk, analyst, specialist
	2	Middle level employee	Senior specialist, junior management, middle management

Demographic category	Grouping number	Grouping description	Grouping detail
	3	Senior level employee	Senior management, executive management

Table 4-18 provides a summary of the Tukey comparisons performed for organisational level groupings:

Table 4-18: Tukey HSD comparisons – Organisational level

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
Understanding	1	31	3.53	0.49	None	-	0.39	0.49
	2	100	3.29	0.61		0.39	-	0.07
	3	59	3.25	0.57		0.49	0.07	-
Information	1	31	2.69	0.60	None	-	0.21	0.19
	2	99	2.53	0.72		0.21	-	0.04
	3	59	2.56	0.66		0.19	0.04	-
Personal matters	1	31	2.18	0.66	None	-	0.18	0.26
	2	100	2.30	0.63		0.18	-	0.08
	3	59	2.35	0.68		0.26	0.08	-
Company performance	1	31	2.96	0.61	Between 1 and 3	-	0.27	0.56^{Δ}
	2	100	3.13	0.63		0.27	-	0.27
	3	59	3.31	0.57		0.56^{Δ}	0.27	-
Company environment	1	31	2.56	0.79	None	-	0.33	0.37
	2	100	2.82	0.72		0.33	-	0.04

Construct	Group	N	Mean	Std Dev	Tukey comparisons significance at the 0.05 level	D-value		
						1	2	3
	3	59	2.85	0.64		0.37	0.04	-
Company communication	1	31	2.44	0.81	None	-	0.16	0.37
	2	100	2.57	0.73		0.16	-	0.24
	3	59	2.74	0.71		0.37	0.24	-
Work environment	1	31	2.11	0.68	None	-	0.34	0.32
	2	100	2.37	0.76		0.34	-	0.05
	3	59	2.33	0.69		0.32	0.05	-
Work output reward	1	31	2.46	0.67	Between 1 and 3	-	0.35	0.58^{Δ}
	2	100	2.73	0.77		0.35	-	0.17
	3	59	2.86	0.69		0.58^{Δ}	0.17	-
Personal	1	31	1.76	0.72	None	-	0.14	0.15
	2	100	1.86	0.69		0.14	-	0.04
	3	59	1.89	0.86		0.15	0.04	-
$^{\Delta}$ - Medium effect in practice, practical significant								

The Tukey comparison identified practically significant differences between groups one and three for constructs company performance and work output reward. It appears that company performance had a greater impact on the stress levels of senior-level employees compared to junior level employees. Similarly, work output reward affected the turnover intention of senior-level employees more compared to junior level employees.

4.9 Summary

190 individuals responded to the measuring instrument. Kaiser's overall MSA and Cronbach's alpha values confirmed the validity and reliability of the measuring instrument as adequate.

According to the results, employees are aware of the tariffs and duties and that it has been implemented. Employees appear to have an understanding of what the tariffs and duties are and have indicated that there is no further need for more information on the topic. According to the Tukey HSD test, employee qualification had an impact understanding of tariffs and duties. The test revealed that employees with a postgraduate qualification had a better understanding of tariffs and duties compared to employees that have a grade 12 or less.

The paired t-tests indicated that there was no significant difference in the employee stress levels and turnover intentions before and after the implementation of tariffs and duties.

The additional aspects explored to determine a potential impact on stress level, and turnover intention found that factors related to company performance had the largest effect on employee stress levels, while factors related to work output reward had the largest effect on employee turnover intention. The Tukey HSD test indicated that the stress levels of employees aged between 30 and 50 were affected more by personal matters, work environment and work output reward (Turnover intention) compared to employees aged over 50.

The Tukey HSD test further indicated that the stress levels and turnover intention of senior-level employed were affected more by company performance (Stress) and work output reward (Turnover intention) compared to junior level employees.

5 Chapter 5: Conclusions and recommendations

5.1 Introduction

The South African steel manufacturing industry is a significant contributor to employment and the nation's GDP. However, the industry remains constrained due to the importation of steel from abroad. Although the South African Government has implemented tariffs and duties on certain steel products, it is still uncertain whether this relieve has achieved the desired results.

Undoubtedly, when the steel manufacturing industry is under pressure, and its economic future is uncertain, the additional pressure will spill over to downstream steel merchants and the individuals employed in the overall steel industry. The existing literature on the effect of stress and turnover intention on an individual and a company is abundant and has been well documented by several researchers.

The purpose of this study was to establish whether individuals employed in the South African steel manufacturing industry were aware of the tariffs and duties and that it had been implemented, whether they understood what tariffs and duties are, whether there was a need for more information regarding tariffs and duties and whether tariffs and duties had an effect on employee stress levels and turnover intentions. The study further explored additional aspects that affected employee stress levels and turnover intentions. The additional aspects explored were based on the existing literature on the topics.

A questionnaire was compiled to test the above-mentioned statements, and 190 responses were received. The responses were captured into a master data sheet and sent to the Statistical Consultation Services of the North-West University for statistical analysis. The results confirmed the adequacy of the questionnaire regarding validity and reliability. Paired t-tests and exploratory factor analysis were used to analyse the data and for the formulation of constructs. The Tukey HSD test was used to compare the effect sizes between the different constructs. The results and findings of all the statistical test have been collated into the previous section.

The conclusions that can be drawn from the findings are discussed in this section, followed by recommendations for further research.

5.2 Conclusions and recommendations

5.2.1 Effect on stress and turnover intention

The primary objective of the study was to establish whether there is a relationship between employee perception of tariffs and duties and stress levels and turnover intention. The statistical analysis indicated that employees currently perceive to be stressed, but had no current intention to leave the employee of their current employer. The analysis further indicated that the implementation of tariffs and duties did not have a significant impact on employee stress levels and turnover intentions.

Therefore, no recommendation can be made.

5.2.2 Understanding tariffs and duties

The secondary objective of the study was to determine whether employees are aware of tariffs and duties and that it has been implemented. The results confirmed that the majority of individuals that participated in the study are aware of tariffs and duties and that it has been implemented. The study further aimed to determine whether employees perceive to understand what tariffs and duties are The results indicate that individuals understand what the tariffs and duties are. However, it was noted that qualification had a significant effect on the individual understanding of tariffs and duties as individuals with only a grade 12 or less appeared to be less informed compared to individuals with a postgraduate qualification.

However, although a difference in understanding was observed, the overall finding indicates that individuals are aware of and understand what tariffs and duties are. This is expected as the implementation of tariffs and duties was identified as a key objective to provide relief to the local steel manufacturing industry. It was widely communicated within the industry. However, not much has been reported regarding whether the relief has had its intended results.

It is therefore recommended that the management of the local steel manufacturing industry provide information to the employees regarding this aspect.

5.2.3 Other aspects affecting stress and turnover intention

The secondary objective of the study was to determine what other aspects influence employee stress levels and turnover intentions. The secondary objective pertaining to additional aspects that could affect stress and turnover intention were identified through the existing literature and included in the study. The aim was to establish whether other aspects affected employee stress levels and turnover intention. Employees indicated that company performance and remuneration had the largest effect on employee stress levels and aspects related to work output reward (Also includes remuneration) had the largest effect on employee turnover intention. These findings coincide with the findings in the existing literature. However, it should be considered that although employee stress levels and turnover intention were not significantly affected by the implementation of tariffs and duties, it is assumed that overall company performance is directly affected by tariffs and duties. Company performance, remuneration aspects and work output reward are directly attributable on the financial viability and profitability of a company.

Therefore, one can conclude that should the implementation of tariffs and duties had the desired results, the company would be able to address the above-mentioned aspects that affect employee stress levels and turnover intentions. It appears that tariffs and duties have an indirect effect on stress levels and turnover intentions, as it has a direct effect on other aspects that the study has revealed has a direct effect on stress levels and turnover intentions.

5.3 Evaluation of the study

The findings of the study have addressed the primary and secondary research objectives. Conclusive results provide an answer to each of the stated research.

The primary objective in this study is:

- Whether there is a relationship between employee perception of tariffs and duties and stress levels and turnover intention. The paired t-tests indicated that there was no significant difference in the employee stress levels and turnover intentions before and after the implementation of tariffs and duties. The statistical analysis and d-value calculations indicated that there are no practically significant differences between the stated constructs before and after the implementation of tariffs and duties

The secondary objectives in this study are:

- Determine whether employees are aware of tariffs and duties and that it has been implemented. The majority of respondents (98%) in the study indicated that they were aware of the tariffs and duties and 96% of the respondents were aware that the tariffs and duties had been implemented

- Determine whether employees perceive to understand what tariffs and duties are. Constructs were formulated from the questionnaire responses to test the respondents understanding of tariffs and duties and whether they required more information on the topic. The study indicated that employees perceived to understand what tariffs and duties are and the effect it could have on the local steel manufacturing industry. The study further revealed that employees perceived that enough had been done to provide sufficient information regarding tariffs and duties and they do not require further information.

- What other aspects influence employee stress levels and turnover intentions. Factor analysis was used to evaluate the additional aspects to determine whether it had a potential impact on stress level and turnover intention. The study found that factors related to company performance had the largest effect on employee stress levels, while factors related to work output reward had the largest effect on employee turnover intention. The Tukey HSD test indicated that the stress levels of employees aged between 30 and 50 were affected more by personal matters, work environment and work output reward (Turnover intention) compared to employees aged over 50. The Tukey HSD test further indicated that the stress levels and turnover intention of senior-level employed were affected more by company performance (Stress) and work output reward (Turnover intention) compared to junior level employees.

5.4 Limitations of the study

The sample population of the study was limited to individuals currently employed by the largest steel manufacturer in South Africa. The sample was further limited to individuals employed in the secondary support function of the steel manufacturer due to reasons stated above.

Individuals employed by other steel manufacturers and the downstream steel industry were excluded.

5.5 Suggestions for future research

The following suggestions can be made for future research:

- The expansion of the sample population of the study to include employees that are directly involved in the steel manufacturing process.
- The expansion of the sample population of the study to include employees of downstream steel manufacturing merchants.
- Whether the implementation of tariffs and duties achieved its intended results.
- The actual impact the implementation of tariffs and duties had on the South African steel manufacturing industry.
- The impact the implementation of tariffs and duties had on downstream steel merchants in the South African steel industry.

5.6 Potential managerial implications

Management identified the implementation of the tariffs and duties as one of the key targets to achieve to help save the company and prevent mass employee layoffs and plant closures. Having achieved this, management will be interested to establish what effects this has had on employees and whether further research will be required to provide more information about its consequences. The study could further provide management with an indication of the importance of understanding and address the effect other externalities have on the psychology of its employees.

5.7 Summary

The study found that 98% of employees were aware of the tariffs and duties and 96% were aware that it had been implemented. The study further found that employees indicated to understand what tariffs and duties are and they did not require additional information on the topic. According to Tukey's (HSD) test employees with a grade 12 or less qualification had a lesser understanding of tariffs and duties compared to employees with a postgraduate qualification. The paired t-tests found that the

implementation tariffs and duties did not have a practically significant effect on employee stress levels and turnover intentions. The study found that company performance and remuneration had the largest effect on employee stress levels and aspects related to work output reward (also includes remuneration) had the largest effect on employee turnover intention. It appears that the implementation of tariffs and duties could have an indirect effect on employee stress levels and turnover intentions, as tariffs and duties directly affect company performance and work output reward which in turn directly affects stress and turnover intention.

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Appendix 1 – Research questionnaire

Dear participant

My name is Izak van Niekerk. I am an MBA student at the North West University (NWU) School of Business and Governance.

The South African steel industry is under pressure due to several reasons, one being the influx of cheap state subsidised steel from China. Our steel industry has witnessed massive job losses across the sector. Industry role-players have succeeded, in conjunction with Government, to implement several import tariffs and duties on imported steel products, which aims to provide much needed economic relief to the steel industry.

The purpose of this questionnaire is to establish what your understanding of the import tariffs and duties are. Secondly, it aims to determine whether the implementation of these import tariffs and duties have affected on your stress level and turnover intention.

Your participation in this survey is voluntary and all information collected will be kept strictly confidential. The questionnaire will not take more than 15 minutes to complete. Thank you in advance for your assistance in this research project.

Kind regards
Izak van Niekerk

Section A: Demographic information

Please answer the following questions by marking the relevant selection

1.1 Gender?

F	1
M	2

1.2 Race?

Asian	1
Black	2
Coloured	3
Indian	4
White	5

1.3 Age?

20 and younger	1
21 – 25	2
26 – 30	3
31 – 35	4
36 – 40	5
41 – 45	6
46 – 50	7
51 – 55	8
➢ 56	9

1.4 Highest qualification?

< Grade 12	1

Grade 12	2
Diploma	3
Degree	4
Honours	5
Master	6
PhD	7

1.5 Full years' of working experience?

Less than 5 years	1
6 – 10	2
11 – 15	3
16 – 20	4
20 +	5

1.6 Department employed?

Contracts	1
Corporate	2
Finance	3
Human resources	4
Internal assurance	5
Legal	6
Logistics	7
Procurement	8
Raw materials	9
Sales and marketing	10
Strategy and	11

projects	
Technology	12

1.7 Current organisational level

Executive management	1
Senior management	2
Middle management	3
Junior management	4
Senior specialist	5
Specialist	6
Analyst	7
Clerk	8
Senior assistant	9
Assistant	10

Section B: Your understanding of import tariffs and duties

Please answer the following questions by marking the relevant selection.

	Question		
B1	Are you aware of the steel import tariffs and duties	Yes	No
B2	Are you aware that these import and tariff duties have been implemented?	Yes	No

Section C: General questions – Import tariffs and duties

Please read each question and indicate to what extent you do agree or not.

1	2	3	4
Strongly disagree	Disagree	Agree	Strongly agree

	Question				
C1	I understand what the import tariffs and duties are	1	2	3	4
C2	I understand the effects the import tariffs and duties have on the steel industry	1	2	3	4
C3	The import tariffs and duties will be beneficial to the steel industry	1	2	3	4
C4	Has the company done enough to explain what import tariffs are	1	2	3	4
C5	Has the company done enough to explain the impact of import tariffs and duties	1	2	3	4
C6	Do you require more information on import tariffs and duties	1	2	3	4

Section D: General questions – Stress

Please read each question and indicate to what extent you do agree or not.

1	2	3	4
Strongly disagree	Disagree	Agree	Strongly agree

	Before the implementation of import tariffs				Question		After the implementation of import tariffs			
D1.1	1	2	3	4	I feel generally stressed	D1.2	1	2	3	4

Using a scale from 1 to 4, rate the effect the following has on your stress level (1 being no effect at all and 4 having a significant effect)

	My stress levels increase due to the following:				
D2	Work environment	1	2	3	4
D3	Work culture	1	2	3	4
D4	Work safety	1	2	3	4
D5	Workload	1	2	3	4
D6	Company performance	1	2	3	4
D7	Company communication	1	2	3	4
D8	Finances	1	2	3	4
D9	Remuneration	1	2	3	4
D10	Personal matters	1	2	3	4
D11	Health	1	2	3	4
D12	Job insecurity	1	2	3	4
D13	Job satisfaction	1	2	3	4
D14	Changes within the company	1	2	3	4
D15	Work life balance	1	2	3	4
D16	Relationship with management	1	2	3	4
D17	Relationship with colleagues	1	2	3	4

Section E: General questions – Turnover intention

Please read each question and indicate to what extent you do agree or not.

1	**2**	**3**	**4**
Strongly disagree	Disagree	Agree	Strongly agree

	Before the implementation of import tariffs				**Question**		**After the implementation of import tariffs**			
E1.1	1	2	3	4	I feel my job is secure	E1.2	1	2	3	4
E2.1	1	2	3	4	I am happy in my job	E2.2	1	2	3	4
E3.1	1	2	3	4	I am actively seeking for other job opportunities	E3.2	1	2	3	4

Using a scale from 1 to 4, rate the effect the following has on your intention to leave the company (1 being no effect at all and 4 having a significant effect)

	I would currently leave my job because of:				
E4	Insufficient remuneration	1	2	3	4
E5	Job insecurity	1	2	3	4
E6	Lack of future opportunities	1	2	3	4
E7	Workload	1	2	3	4
E8	Work environment	1	2	3	4
E9	Work Culture	1	2	3	4
E10	Working conditions	1	2	3	4
E11	Safety	1	2	3	4
E12	Lack of information	1	2	3	4
E13	Personal matters	1	2	3	4
E14	Lack of appreciation	1	2	3	4
E15	There are better opportunities available in the market	1	2	3	4

This concludes the survey. Thank you for your participation, your contribution is appreciated. Please send the completed survey back to izakv0@gmail.com at your earliest convenience.

Appendix 2 – Letter of confirmation of language editing

Dynamic Language & Translation Specialists

Antoinette Bisschoff
71 Esselen Street, Potchefstroom
Tel: 018 293 3046
Cell: 082 878 5183
antoinettebisschoff@mweb.co.za
CC No: 1995/017794/23

Wednesday, 01 November 2017

To whom it may concern,

Re: Letter of confirmation of language editing

The dissertation **The influence of steel import tariffs on employees in the South African steel manufacturing industry** by **IA van Niekerk** was language and technically edited. The referencing and sources were checked as per NWU referencing guidelines. Final corrections remain the responsibility of the author.

Antoinette Bisschoff

Officially approved language editor of the NWU since 1998
Member of SA Translators Institute (no. 100181)

Appendix 3 – Letter of confirmation of statistical analysis by SCS

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Statistical Consultation Services

Tel: 018 299-2018
Fax: 018 299- 2557
Email: wilma.breytenbach@nwu.ac.za

7 November 2017

To whom it may concern

MBA DISSERTATION OF MR I VAN NIEKERK (STUDENT NUMBER: 20126700)

We hereby confirm that the Statistics department of the North-West University has analysed the data and assisted with the interpretation of the results of the dissertation of Mr I van Niekerk (student number: 20126700).

However, any opinion, findings or recommendations expressed in this document are those of the author and the Statistics department (Potchefstroom Campus) does not accept responsibility for the correctness of the reporting of results.

Yours sincerely

Wilma Breytenbach

MSc
Senior subject specialist