Competitiveness of the South African Steel Industry

AUTHOR

Abstract

In this essay, we analyse the competitive nature of the South African steel industry and unpack the competition and concentration indices of the sector. The main aim of the paper is to quantify the competitive structure of the steel sector in the South Africa. The impact of the oligopolist nature of the sector on the South African steel prices is also examined, including the response by the market and policy makers in increasing the steel imports.
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I.   Introduction

Before companies can compete in the global market they must compete with local companies in the same sector. To be able to be both locally and globally competitive while remaining viable and sustainable, a business organisation as well as an industry must develop and rely on strategies that will promote competitiveness, including strategies such as the formation of and participation in either monopolies or oligopolies.

Whereas the term monopoly is self-explanatory, the Oxford dictionary defines an oligopoly in the business environment as a "state or situation of limited competition between a small number of producers, buyers or sellers of a specific product or range of products in a specific business environment". In the context of the discussion of the relative benefits of monopolies and oligopolies, Mohr and Fourie (2002:291), developed the concept of what they refer to as the concentration ratio, characterised as CR_x. The concept of a concentration ratio is used to determine the degree of concentration of a product in various industry structures and this can determine whether an industry is an oligopoly or not.

Arnold (2015:327), explains that the concentration ratio is the percentage of industry sales or assets or outputs or employment numbers, accounted for by a pre-determined, fixed, or limited number of businesses in an industry. The concentration ratio is usually expressed as a percentage that ranges between 0% and 100%. Further explanation of the dynamics of concentration ratio, is given by Mukherjee (2002:444), who explains that a higher concentration ratio implies that there is a smaller number of companies in a specific industry, whilst a low concentration ratio implies that there are a larger number of competing companies active in that specific industry.

The concentration ratio does not, however, show the distribution of players in a production sector. According to Arnold (2015:329), the Hirsch-Herfindahl index (HHI) was developed using industry data to calculate market participation. The formula for calculating the Hirsch-Herfindahl index is:

$$HHI = \sum S_x^2 * 100$$

The Hirsch-Herfindahl index is described by Dalmau-Atarrodona and Puig-Junoy (1998:451), as the sum of the square market share value of each business organisation, represented by 'S', a defined market. The Hirsch-Herfindahl index includes data from all companies producing a specific, similar product. According to Mohr and Fourie (2002:276), the concentration ratio, on the other hand, includes data obtained from only a few selected companies in the same market. From this, Naldi and Flamini (2014:2), conclude that a higher Hirsch-Herfindahl index indicates that there are few companies in an industry, and explain that this index indicates that there are more companies contributing to the sector. Jacobson (2007:343), states that the Hirsch-Herfindahl index can be used to measure the market share of merging companies to determine whether the aftermath of the merger will result in a monopoly in the industry.

The third measure of market concentration is the so-called Rosenbluth index, which measures the intensity and nature of competition within a sector. According to Ginevicius and Cirba (2007:5), the Rosenbluth index measures the number of companies or businesses in an industry and focuses on the smaller companies. Bikker and Haaf (2002:10), argue that the Rosenbluth index serves to indicate the position or rank of a company on a scale from 1 to 100, in descending order of size of their market share. Thus, the smaller market share of a company, the greater its ranking which increases its contribution to the index. According to Du Pisanie

(2013:12), the Rosenbluth index attaches a greater significance to the role of small companies in terms of contribution to the economic activity in small industrial towns than the Hirsch-Herfindahl index, which focuses only on large companies.

The fourth and last measure of market concentration, is the Gini coefficient which measures both the intensity and nature of competition within an industry or a sector. Mohr and Fourie (2002:280), explain that the Gini coefficient is a relative measure of market concentration to determine the inequality between companies in the relevant market. The Gini coefficient is expressed on a measurement scale of between 0 and 1, with 0 being the lowest coefficient and 1 being the highest.

According to Du Pisanie (2013:13), if a greater number of companies competing in a specific market have near-equal market share, the Gini coefficient will give a coefficient result of between 0 and 1. Verheirstraeten (1981:59), explains that if most of the companies have very low market share, but there are one or a few companies providing most of the market share, then the Gini coefficient will give a result of 1 or close to 1, as indicated in Table 1.

Table 1: Iron and steel sector competition indices
(Source: Statistics South Africa, 2012)

	2003	2004	2005	2006	2007	2008	2009	2010
Rosenbluth index	0.0536	0.0541	0.0468	0.0393	0.0397	-	-	-
Gini coefficient ratio	0.84	0.85	0.84	0.84	0.84	0.86	0.84	0.83

Statistics South Africa calculated the overall manufacturing sector market concentration measures over a period of time using the concentration indices discussed above and shown in Table 2. These measures were published in the Statistics South Africa report of 2011.The data sourced from Statistics South Africa did not differentiate between the iron ore and the primary steel manufacturing sectors, because the two sectors are recognised under one Standard Industrial Classification code, characterised as the SIC 371 code. According to the 2009 annual report of the Industrial Development Corporation, the steel sector contributes 15% to the total South African manufacturing sector. According to Statistics South Africa, the CR4 measure shows that four major steel producers in South Africa held 15% market share for three years.

Table 2: Manufacturing sector concentration ratios
(Source: Statistics South Africa Annual Financial Statistics, 2009–2011)

Steel manufacturing industry	CR4	Gini coefficient	Rosenbluth index	HHI
2009	0.1508	0.7876	0.0027	0.0125
2010	01377	0.7739	0.0028	0.0108
2011	0.1454	0.7622	0.0029	0.0112

When the number of manufacturing companies with equal production volumes is large, the Hirsch-Herfindahl index is 0. When there is only a single company the Hirsch-Herfindahl index is 1. In the case of the data shown in Table 2, where the average Hirsch-Herfindahl index is 0.0115, being the sum of the three values for the years 2009 to 2011 divided by 3 to obtain an average, it shows that the domestic steel industry consists of four companies with more or less equal production volumes, the average concentration ratio is shown to be in excess of the expected or projected index of zero or 0.

The findings of the Rosenbluth index and Gini coefficient support the findings of the Hirsch-Herfindahl index indicating that the market is more widely distributed than would be expected. These results are not material to a proper analysis of the concentration ratio for the steel sector, however, as the data shown in Table 2 relates to the aggregate of the indices for the overall manufacturing sector for a period of three years.

The abovementioned market concentration measures assist in determining the degree of competitiveness in any industry. A concentrated industry facilitates collusion, and hence monopoly pricing. Conversely, companies of an un-concentrated industry will tend to be competitive and result in efficient pricing of goods that is reflective of the cost of production and transportation. From the available data it can be concluded that the domestic iron and steel industry is, in reality, a monopoly. This conclusion supports the proposition stated in the South African Steel Producers Handbook report (2011:23), published by the South African Department of Mineral Resources, that there are six steel manufacturing companies that actually work together rather than competing, thereby forming a *de facto* monopoly. These six companies are, ArcelorMittal, Evraz Highveld Steel, Columbus Steel, Scaw Metals, Cape Town Iron and Steel Works and Cape Gate.

The monopolistic behaviour of the local steel production industry was identified following an investigation by the Competition Commission in April 2008 into potential collusion in the steel industry. In support of this premise, Nair (2008:4), points out that the Competition Commission investigation recommended that the Competition Tribunal impose administrative penalties against ArcelorMittal-South Africa, Cape Gate, and Cape Town Iron and Steel Works, for fixing of the price of steel scrap metal. The three steel companies

consequently faced penalties totalling 10% of their annual turnover in South Africa resulting in a substantial negative impact on their respective revenues.

For the Competition Commission to be able to monitor and limit the anti-competitive behaviour of these steel companies, it is necessary to understand the nature of the oligopoly in the steel industry. It has been proven that the steel manufacturing sector is dominated by a small number of companies which were found to have participated in price fixing in 2008. Research conducted by Kaplow (2011:4), indicates that the behaviour of a coordinated oligopoly is based on whether the participating companies have the incentive to cheat by undercutting or inflating prices. The ability of the South African steel sector oligopoly to benefit from the manipulation of the steel price is elaborated upon below.

II. The Pricing Of Steel In South Africa

From the readily available historical information since its inception the South African steel industry has produced a supply of steel in excess of the domestic demand, and consequently was able to export the excess steel. Domestic steel was consistently priced competitively. According to Roberts (2006:170), this was because the local steel industry enjoyed advantages in terms of input costs such as relatively cheap and readily available raw materials such as steel, electricity, and coal. Schluter (1984:18), argues that as a result, it could be assumed that the South African steel industry was able to price its steel using the principle of export parity pricing.

The decision by the steel industry to choose an export parity pricing strategy was also informed by the rate of the price increases of the raw materials mentioned above. Accordingly, Roberts (2006:221), explains that the government policies and interventions that promoted the decrease of the average price of electricity by more than 40%, from 39.7 cents per kilowatt-hour in 1978 to 22.7 cents in 2008 also played a critically important role in the steel price remaining consistent during this period. However, due to Eskom's need in 2008 for additional income to finance the building new power stations, the electricity price increased by 75%, from 22.7 cents per kilowatt-hour in 2008 to 40.3 cents per kilowatt-hour in 2011, thus having a significant negative impact on the competitive pricing of steel.

The Department of Trade and Industry's report of 2014 relating to the impact of the electricity price increase on the manufacturing sector stated that sectors or industries that are electricity-intensive in their production processes are impacted more significantly than sectors that are not electricity-intensive. The report states that the open-pit mining operations of coking coal and iron ore were only marginally affected by the electricity price increase primarily because of their reliance on diesel-powered machinery in their mining operations.

Conversely, it was reported that in mines with underground operations, electricity accounts for between 3% and 5% of operational costs. Any increase in the price of electricity therefore cascades down to the coal consumers and the export coal market. In steel mills, electricity reportedly accounts for between 4% and 21% of operational costs, depending on the type of technology used. An increase in electricity would substantially increase the operational costs of a steel mill that uses an electric arc furnace, such as those used by Arcelor Mittal in Vanderbijlpark. Due to the electricity-intensive nature of the steel making process, an increase in electricity prices would significantly impact on the decision by the management or owners of the steel companies to use export parity pricing. The presumption is that if the South African steel was price competitive the steel pricing would follow the principle of export parity pricing as reflected in the following formula suggested by Johnson, Benin, You, Diao, Chilonda and Kennedy (2014:107):

Export parity price = Global price - shipping costs to South Africa - inland transportation costs

According to Roberts (2006:169), it is evident that domestic steel producers did not rely on export parity pricing but tended to rather use the import parity pricing principle. This approach to price determination entails the domestic steel producers fixing prices equivalent to that of similar imported products. The cost of imported steel products, however, includes not only the production costs, but also all the costs associated with the transportation to the consumer in South Africa.

The comparable formula for import parity pricing, as described by both Schluter (1984:18), and Johnson *et al.* (2014:107), is as follows:

Import parity price = Global price + shipping costs to South Africa + inland
transportation costs

A calculation by Roberts (2006:170), of the composition of the elements of the price of domestic hot rolled steel in 2002, is shown in Table 3 below.

Table 3: Breakdown of domestic import parity price of steel in 2002
(Source: Roberts, 2006:170).

Hot rolled coil steel of 1.5mm and 2mm thick	Price in rands
Import price	R 2 373
Shipping cost	R 282.50
5% duty	R 132.78
Offloading and administration	R 26.56
Inland transport	R 100
Import price (*excluding trading mark-up*)	R 2 914.84
Final local price (*excluding VAT*)	R 3 214.91

By comparison, the average global price of hot rolled coil steel in 2002 was $251, which was R2 605 (converted using the exchange rate of R10,38 to the US Dollar at the time), showing clearly that the comparative price of South African hot rolled coil steel was higher than the global price during that period, mainly due to the import pricing principle approach that was used. The prices of the components of the South African steel price, as shown in Table 3, were also determined using the import parity principle and used as the domestic prices for hot coiled steel during that period. The price of crude steel or other steel products such as hot coiled rods or steel bars, is not regulated in South Africa. Only the price of scrap metal, which includes scrap steel, is regulated by the policy directives issued in terms of Section 5 of the International Trade Administration Act of 2002. The Act provides guidelines for the price of scrap metal according to the export control regulations of 2002 and provides a preferential price control system for scrap metal and includes tariffs for the export of scrap metals.

The import parity pricing principle that has been adopted by the South African steel industry does not relate the price of steel to its production costs. The steel mill production costs, including marketing costs, may be less than the steel import parity prices. In this context, Kapila and Kapila (2007:121), argue that import parity pricing of a commodity is applicable where there is no domestic manufacturing capacity of the specific product and that the cost of supplying the product to the local market will be at a landed price cost which includes transportation costs and import duties.

Import parity pricing can be used as justification for government to introduce regulations to govern the domestic steel price and provide for tariffs that will protect the local steel production industry. This is because import parity pricing has the following consequences, as articulated by Bhattacharyya (2011:270):

a. Import parity pricing inflates the profits of the local steel mills as the transportation costs that are included are usually higher for semi-finished and finished goods;
b. It does not take into account the cost of local production and instead uses a benchmarked cost of production in the overall wholesale price which ignores the actual labour and raw material costs; and
c. The domestic steel price will be subject to the same volatility as international prices which means that prices will change frequently as the currency exchange rate inflates or deflates.

Against this background, Bhattacharyya (2011:303), states that import pricing parity can be regarded as an efficient pricing policy if it takes into consideration the opportunity costs of producing the commodity locally. Bell, Anderson, Barnum, Dixon and Tan (2001:227), argue that import pricing parity can have negative consequences for consumers because the high commodity prices and the profit margins of the production company are not as a result of risk-taking and innovation. If the steel price determined by means of import pricing parity is regarded as being detrimental to the consumer welfare, the steel company will be guilty of excessive pricing, as stated in Section 8(a) of the Competition Act, No. 89 of 1998, as follows:

"It is prohibited for a dominant firm to –
(a) charge an excessive price to the detriment of consumers".

In this context, an excessive price is defined as:
"A price for goods or a service which –
(aa) bears no reasonable relation to the economic value of those goods or that service, and
(bb) is higher than the value referred to in subparagraph (aa)".

The investigation conducted by the South African Competition Commission in 2007 found that ArcelorMittal was guilty of the excessive pricing of steel in terms of the provisions in Section 8(a) of the Competition Act (1998). Kupla and Thomas (2014:320), agree with finding of the investigation done by the Competition Commission into the allegations that ArcelorMittal was charging excessive prices for steel. Similarly, Black and Hasson (2016:294), report that ArcelorMittal was fined R691.8 million as a penalty for contravening the Competition Act (1998).The outcome of the investigation showed that ArcelorMittal sold its steel to South African industries and the world market at the world prices, without giving the local industry a

discount on the transportation costs of domestically produced steel. It sold steel to China, the United States and other international markets at the same price at which it sold steel to South African industries.

A counterargument to that offered by Bhattacharyya (2011), is presented by Murgatroyd and Baker (2011:176), who suggest that the use of import pricing parity does not, in itself, constitute excessive pricing. They argue that there is a need to understand why certain commodities use import pricing parity and whether this is as a result of competitive market conditions in the specific sector or due to restricted production volumes that would occur under industry regulated conditions. In the case of the domestic steel industry, there are no production limitation regulations for steel nor regulation for steel prices, except for steel scrap metal.

Given the fact that ArcelorMittal and other domestic steel companies in South Africa operate in the highly competitive international steel market environment, Van der Merwe and Kleynhans (2017), point out that after the 2008 global financial crisis, China became a threat to the South African steel industry as China had been the largest global net exporter of steel since 2005. This view is supported by a Solidariteit report (2015), which indicated that in 2005 the global steel exports were widely distributed amongst steel producing countries. By 2014, China was providing over 50% of the steel being used globally. The Department of Trade and Industry's report to parliament in 2018 indicated that steel imports accounted for 60% of local consumption and that steel imports grew by more than 250% between 2000 and 2016 and, furthermore, that South African steel imports from China increased from 12% in 2000 to 54% in 2016.

The state of competitiveness of locally produced steel is illustrated in Figure 1 and indicates the increase in steel imports from 2000 onwards.
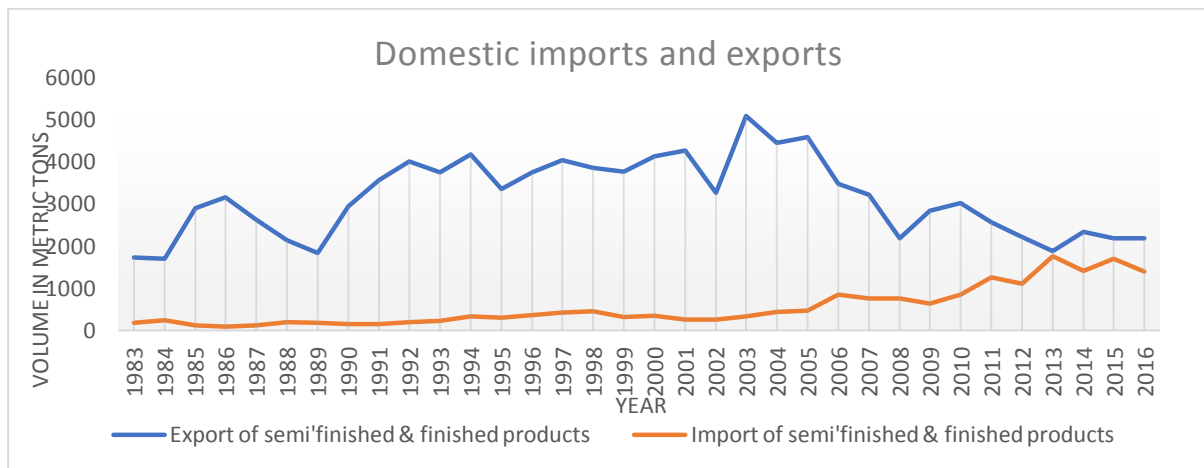

Figure 1: South African import and exports of semi-finished and finished steel products.
(Source: World Steel Association Annual Performance Reports 1983–2016).

The imports of semi-finished and finished steel products into South Africa amounted to 342 million tons in 2000 and increased to 1 392 million tons in 2016. The information provided in Figure 1 supports the argument of Murgatroyd and Baker (2011), that import pricing parity can occur as a result of competitive market conditions. The increase in imports increased the competition for customers between local and international steel companies, which might arguably be assumed to be one of the reasons for ArcelorMittal using import parity pricing for local steel products. Furthermore, the ArcelorMittal case proved that there is no clear price cap for the domestic steel market that would assist to avoid steel companies being found guilty of excessive pricing.

Although the domestic steel companies must compete with steel imports for customers, the price of steel must not be detrimental to the productivity and sustainability of the downstream businesses. Import parity pricing of steel has no advantage to the downstream industries and Black and Hasson (2016:294), conclude that consumers often bear the brunt of the high commodity prices. Downstream industries that use steel as a production material, such as the food canning industry, will undoubtedly feel the effects of paying international steel prices.

The South African Fruit and Vegetable Canners' Association lodged a complaint with the portfolio committee on Trade and Industry on 10 October 2010, stating that a tin can was the single largest cost item in the production of canned fruit, constituting 30% of the production cost. The association further indicated that ArcelorMittal produced about 60% of the steel used in the canned fruit industry. Concerns were raised about the steel import parity pricing used by ArcelorMittal which was negatively impacting the competitiveness of the domestic canned fruit industry compared to imported canned fruit. The portfolio committee concluded that

government must investigate the rising levels of imports, the competitiveness constraints in the steel industry, and the revision of the steel trade structures.

In this context, Howell *et al.* (2019:185), found that between 1964 and 1985 the South African Government maintained control on domestic steel prices with the aim of buffering the inflationary effect of steel price increases on the economy. During the 1960s and 1970s, South Africa's trade policies were characterised by high import tariffs and the protection of local industries. The liberalisation of trade in the 1990s opened doors for international companies, steel imports, and the adoption of import parity pricing. The nature and impact of the trade policies that South Africa implemented in the post-apartheid era are discussed below.

III.   SOUTH AFRICAN TRADE POLICY

As a result of the collective initiative of the Department of International Relations and Cooperation and other global entities, the World Trade Organization was established in January 1995 by member countries as the only international organisation tasked with the formulation of regulations for the trade between member countries. As such, it adhered closely to the founding principles of the General Agreement on Tariffs and Trade (GATT). The researchers Van den Bossche and Zdouc (2013:1017), observe that the General Agreement on Tariffs and Trade was concluded in 1948 as the founding framework for international trade on the principle that the cost of international trade should be kept as low as possible.

While the regulation of trade tariffs is usually agreed between the countries involved for a fixed period of time, Narlikar (2005:29), explains there are situations where the World Trade Organization will permit a country to increase the pre-determined and agreed trade tariffs, especially when the country that is applying for a change in tariffs has evidence that supports the relevant provisions of the General Agreement on Tariffs and Trade. These provisions are discussed later in this section.

Trade tariffs are defined by Salvatore (2014:211), as a tax or duty that is levied on a commodity that is traded across national borders between member countries. Tariffs are differentiated into import and export tariffs. According to Van den Bossche and Zdouc (2013:419), and Vousden (1990:66), tariffs are further differentiated into what are called *ad valorem* tariffs or specific or compound tariffs, depending on the nature of the trade or transaction. An *ad valorem* tariff is described as a fixed percentage of the value of the traded commodity. The South African Customs and Excise Act, No. 91 of 1964, places iron and steel imports tariffs in Section 72 of the tariff book. According to the legislative provisions in the act, imported scrap steel as well as steel powder or granules, has a zero import tax rating. Imported semi-finished and finished steel products have a 10% import tax rating per kilogram, according to the South African Revenue Services website of 2018.

The provisions in the General Agreement on Tariffs and Trade referred to above also provide for the granting of exemption from certain specific tariffs or *ad valorem* tariffs. In this context, Kerr and Gaisford (2007:215), indicate that under certain circumstances the World Trade Organization will allow countries to increase trade tariffs, especially if the country that is applying for exemption from low tariffs has evidence that supports the following provisions in the General Agreement on Tariffs and Trade:

"Article XIX: Emergency Action on Imports of a particular product"
"1.a.   If, as a result of unforeseen developments and of the effect of the obligations incurred by a contracting party under this agreement, including tariff concessions, any product is being imported into the territory of that contracting party in such increased quantities and under such conditions as to cause or threaten serious injury to domestic producers in that territory of like or directly competitive products. The contracting party shall be free in respect of such product, and to the extent and for such time as may be necessary to prevent or remedy such injury, to suspend the obligation in whole or in part or to withdraw or modify the concession."

Article XIX of the General Agreement on Tariffs and Trade allows countries to temporarily raise tariffs for certain products as part of safeguarding fragile industries that are in distress. As an example of this exemption, an importing country can, for a certain period of time, raise tariffs when its domestic producers are suffering due to competition from imports. Other important provisions in the General Agreement on Tariffs and Trade that are intended to assure a fair basis for inter-country trade are:

"Article I: General Most Favoured Nation Treatment"
1.   "With respect to custom duties and with respect to all rules and formalities in connection with importation and exportation of goods. Ant advantage, favor, privilege or immunity granted by any contracting party to any product originating in or destined for any other country shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties."

"Article VI: Anti-Dumping and Countervailing Duties"

1.   "The contracting parties recognize that dumping by which products of one country are introduced into the commerce of another country at less than the normal value of the products, is to be condemned if it causes or threatens material injury to an established industry. A product is to be considered less than its normal value, if the price of the product exported from one country to another:

a.   Is less than the comparable price of the like product when destined for consumption in the exporting country, or

b.   In the absence of such domestic price, is less than either:

i.   The highest comparable price for the like product for export to any third country in the ordinary course of trade, or

ii.   The cost of production of the product in the country of origin plus a reasonable addition for selling cost and the profit margin."

"Article XI: General Elimination of Quantitative Restrictions"
1.   "No prohibitions or restrictions other than duties, taxes or other charges, whether made effectively through quotas, import or export licenses or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party."

"Article XVI: Subsidies"
1.   "If any contracting party grants or maintains any subsidy including any forms of income or price support, which operates or indirectly to increase exports of any product form, or to reduce imports of any product into its territory. It shall notify the contracting parties in writing of the extent and nature of the subsidization. In any case in which it is determined that any serious prejudice is caused or threatened by any such subsidization, the contracting party granting the subsidy shall upon request discuss with the other contracting party the possibility of limiting the subsidization."

"Article XXIV: Territorial Application – Frontier Traffic – Customs Unions and Free Trade Areas"
"4. The contracting parties recognize the desirability of increasing freedom of trade by the development, through voluntary agreements, of closer integration between the economies of the countries party to such agreements.
5. Accordingly, the provisions of this agreement shall not prevent the formation of customs unions and free trade areas provided that the duties shall not on the whole be higher or more restrictive than the general incidence of duties, prior to formation."

The provision in Article I indicates that every country that is a member of the World Trade Organization must be treated equally. If an exporting country implements low tariffs for one trading partner, then those low tariffs must be applied to all member countries of the World Trade Organization in the same sector or industry. When the president of the United States of America, Donald Trump, introduced a 25% import tariff on steel imports into America in March 2018 to protect the American steel industry against steel imports from China, as reported in the *New York Times* newspaper of the 1 March 2018, the United States of America was required by the World Trade Organization to apply the same 25% import tariff on all its steel imports from all the other member countries, including South Africa. South African steel exports to the United States of America are therefore no longer exempt from the 25% import tariff, as was reported in the *Mail and Guardian* newspaper of the 24 October 2018.

Against this reality, Article VI of the General Agreement on Tariffs and Trade encourages importing countries to impose tariffs on goods that are being dumped into its country by foreign exporters. In this context, Salvatore (2014:213), defines dumping as the sale of export goods to another country at a price that is less than that which is charged in the domestic market, or at a price that is less than the cost of production and shipping. Nicholson and Snyder (2014:309), report that many countries such as South Africa, the United States of America and Canada have complained that China has been dumping steel in their countries since 2015. Some countries have responded to the dumping of steel by China by introducing measures such as increasing the import tariffs on Chinese steel imported into their countries. There is a generally held but rebuttable presumption that steel is subsidised for the export market by the Chinese government in order to assure the maintenance and sustainability of the steel industry in China as a means of underpinning the Chinese economy for ideological and socio-political reasons.

Article XVI of the General Agreement on Tariffs and Trade also requires member countries of the World Trade Organization to timeously communicate any introduction or increase of import tariffs, more specifically the subsidies for products manufactured for export to other member countries of the World Trade Organization, as well as the extent of such subsidies, as a means of avoiding unfair trade. The provisions of the General Agreement on Tariffs and Trade does, however, allow member countries of the World Trade

Organization to enter into regional trade agreements that will serve to reduce or eliminate export subsidies or tariffs between these countries or establish free customs areas. South Africa has various such trade agreements with other individual African countries and also has regional trade agreements with the African Union countries where tariffs and subsidies have been agreed upon. These tariffs and subsidies agreed in regional trade agreements are included in the South African Revenue Service tariff book of 2018.

With the demise of the apartheid policies and the transition to a political democracy after 1994, South Africa became a member of World Trade Organization and liberalised its trade and industrial policies. The liberalisation of trade policies included the reduction and restructuring of import tariffs, export subsidies and surcharges. As a member of the World Trade Organization, South Africa is obliged to protect any sector from unfair trade practices, such as the levying of countervailing duties on mineral product imports that are subsidised in the countries of origin. On the 15 August 2014, the Industrial Development Corporation announced on its website that it had launched a programme aimed at assisting small and medium-sized mining and mineral beneficiation projects which the World Trade Organization had approved. The project included financial support for steel manufacturing companies which could provide evidence of distress. The financial support from the Industrial Development Corporation excludes trade rebates. Other interventions that have been implemented and noted by Howell *et al.* (2019:180), are import restrictions that have been imposed to protect certain high-cost manufacturing sectors such as steel.

The management of trade tariffs, rebates, and surcharges is the responsibility of the International Trade Administration Commission of South Africa which was established in 2003 by the Department of Trade and Industry. The International Trade Administration Commission of South Africa was given the mandate to foster economic growth and development in order to raise profits for companies that export their goods and to promote investment and employment in South Africa and within the Southern African Customs Union region, which includes Botswana, Lesotho, Namibia and Swaziland. The South African Revenue Services collects the different tariffs as a form of a tax, as determined by the Customs and Excise Act, No. 91 of 1964.

Through the International Trade Administration Commission of South Africa which is supported by the Department of Trade and Industry, South Africa levies an import tariff of 10% on finished steel products, which increases the domestic price of finished steel products. The International Trade Administration Commission of South Africa provides for a zero import tariff on imported crude steel, ostensibly on the understanding that imported crude steel will stimulate the downstream manufacturing steel sector.

The abovementioned 10% steel import tariff was decided upon by the International Trade Administration Commission of South Africa with the proviso that ArcelorMittal and other steel producers would:
a.   Reduce steel prices so that the domestic downstream steel companies could procure steel at lower and competitive prices.
b.   Continue to offer export rebates for beneficiated and value-added South African steel products; and
c.   Together with government develop a steel pricing model that would stimulate growth of the domestic downstream sector.

The benefits of the abovementioned resolution are yet to be seen in the South African steel industry, especially with South Africa's trade partners also implementing their own import tariffs. The International Trade Administration Commission of South Africa clearly needs to be alerted to the fact that the tariff on imported steel products will also affect other industries that are part of the free customs area with South Africa.

The continuing financial distress of steel companies highlights the need for South Africa to re-examine its commitment to the trade terms of the General Agreement on Tariffs and Trade, especially with regard to the inadequate protection provided to the steel manufacturing industry since South Africa became a member of the World Trade Organization. The strategies used to improve the financial sustainability of steel companies should take cognisance of the terms of the World Trade Organization in an effort to rescue the South African steel industry within the provisions of the General Agreement on Tariffs and Trade.

IV.   Conclusion

Despite the price elasticity of steel, South Africa has been self-sufficient in the production of steel since 1967 and had, up to 2015, been a net exporter of steel to other African countries for five decades. This is an indication that the local steel industry was able to contain its production costs and manage production risks thereby enabling it to compete with other countries for export markets.

For five decades South Africa had the largest steel production market share on the African continent attributable to the production capacity of a small number of steel companies. The market concentration coefficients indicated that four companies in the local steel sector contributed to the total local steel production output between 2009 and 2011. This led to the conclusion that the industry was concentrated and was of an

oligopolistic nature. This can result in companies behaving uncompetitively and poses a risk of steel price tampering.

Historically, the price of local steel was controlled by the government during the apartheid years due to the trade policies and incentives that were offered to lower the cost of production. This was achieved by subsidised electricity prices and readily available coal and iron ore. The change in trade policies or subsidies after the election of the democratic government in 1994 contributed to the change in the price of steel to consumers.

The lack of regulation of the local steel price has resulted in local companies using import parity pricing which entails the fixing of the steel price to be equivalent to the import steel prices, despite the fact that imported prices include import duties and additional transportation costs. The local industry has justified the use of import parity pricing on the basis of having to be competitive with other countries, but this has proved to have been to the detriment of the local downstream sector.

As a member of the World Trade Organization, South Africa can apply for subsidies or protection for the local steel industry, with the justification of alleviating the burden of an increase in steel costs on the downstream steel sectors such as construction and food packaging industries. The provisions of the General Agreement on Tariffs and Trade makes provision for countries making such applications. However, the industry protection measures in forms of tariffs must be applied to all South Africa's trading partners. In an effort to remedy the decline in the local steel industry, the Department of Trade and Industry has issued industrial developmnt incentives.

In this context there is a need for future studies to examine the literature on the impact of a successful primary manufacturing industry such as the steel industry on the socio-economic viability and sustainability of a country's economy.

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