STEEL IMPORT SUBSTITUTION

MBI&P

Applying Import Substation Industrialisation (ISI) Strategy to the Steel Industry in South Africa

Rationale

IS policies are always effective particularly to commodities when they face sharp decline in prices as low-income elasticity of demand for primary products leads , in the long run, to the terms of trade of primary products deteriorating.

To achieve industrial development and reduce dependencies on advanced economies imports, less developed countries have adopted two alternative strategies, namely inward-looking strategy and outward-looking strategy. An inward-looking strategy is an attempt to withdraw, at least in the short run, from full participation in the world economy. This strategy emphasises import substitution, i.e., the production of goods at home that would otherwise be imported. The strategy employs a package of policies, called import substitution (ISI), consisting of a broad range of control, restriction and prohibitions such as import quotas and high tariffs on imports. The trade restrictions are intended to "protect" domestic industries so that they can gain comparative advantage and substitute domestic goods for formerly imported goods. This can economise on scarce foreign exchange and ultimately generate new manufactured exports without difficulties associated with the exports of primary products if economies of scale are important in import substituting industries and if the infant industry argument applies.

How is ISI APPLIED?

The government determines the sectors best suited for local industrialisation, erects barriers to trade on the products produced in these sectors in order to encourage local investment and then lowers the barriers over time as the industrialisation process gains momentum. In contrast, an outward-looking strategy emphasises participation in international trade by encouraging the allocation of resources in export-oriented industries without price distortions. It does not use policy measures to shift production arbitrarily between serving the home market and foreign markets.

Product selection

The product selection is based on three characteristics of imported products. First, the product selected must have extensive value chain with other products and different sectors. For this reason we chose steel and its articles thereof as steel is used in almost all sectors such as manufacturing, auto, agriculture mining, mechanical and electrical machines, construction etc.

Second we choose the product based on the trend of its imports to SA and Gauteng. The product that shows increasing trends of imports and whose production Gauteng has comparative advantage is selected. Table 1 below shows the growth in imports of top 20 products to SA. We see that Cereals leads with over 100% in growth of imports which may have been caused by the 2015/16 drought that led to significant imports of food products. Besides, cereal (mainly maize, rice and wheat) form part of South Africa's stable food and as such its price elasticity of demand is inelastic and any restrictive policy applied to its imports will only lead to loss of welfare. Other products that show significant increases in imports are machinery, iron and steel and there articles thereof, mechanical, nuclear reactors, boilers etc., optical, photographic and medical equipment, pharmaceutical products, as well as footwear and apparels. However, in all these products except iron and steel and there articles, our comparative advantage is lower than our competitors such as China, India and Industrial countries. Some of these such as mechanical and electrical machines are vital capital goods that are needed in our manufacturing sector and any policy to curtail such imports will lead to further decline in the manufacturing sector. Hence, on this score we select iron and steel and there articles thereof as data shows that articles of iron and steel had been experiencing positive trade balances between 2013 and 2015 but the fortunes have been reversed and the domestic market is now importing increasing amount of steel at 13%.

Table 1: Growth in percentage value of South Africa's Top 20 imported products

Code	Product label	%Growth in Imports 2013-14	% Growth in Imports 2014-15	%Growth in Imports 2015-16,	Imported value in 2016: ZAR
'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	1	-7	12	150 218 997
'27	Mineral fuels, mineral oils and products of their distillation	18	-30	-17	147 211 872
'85	Electrical machinery and equipment and parts thereof;	4	5	8	118 402 790
'99	Commodities not elsewhere specified	20	22	3	89 215 476
'87	Vehicles and parts thereof	0	-7	2	84 647 880
'39	Plastics and articles thereof	15	1	18	32 968 871
'90	Optical, photographic, measuring, medical or surgical ...	6	0	20	29 576 963
'30	Pharmaceutical products	3	7	15	27 669 374
'10	Cereals	-1	-7	103	20 188 904
'38	Miscellaneous chemical products	15	-1	10	20 164 575
'29	Organic chemicals	4	-2	7	17 765 028
'88	Aircraft, spacecraft, and parts thereof	47	2	75	17 060 445
'40	Rubber and articles thereof	3	-10	18	15 168 553
'72	Iron and steel	-10	1	6	14 564 551
'73	Articles of iron or steel	-7	-8	13	14 361 820
'28	Inorganic chemicals	7	-11	23	14 131 390
'33	Essential oils and resinoids;	12	5	19	13 104 413
'48	Paper and paperboard;	11	-4	21	13 092 088
'64	Footwear, gaiters and the like; parts of such articles	6	5	18	12 597 549
'62	Articles of apparel and clothing accessories,	12	13	17	12 533 431

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The third criterion is to identify a product whose production and exports will benefit Africa's industrialisation. Africa requires large amounts of steel in its infrastructure development, real estate and mining industry and the largest portion go the imports to other African countries of steel and its articles comes from Gauteng and South Africa. To retain the African market, we must enhance our competitive advantage in the production of steel products by limiting imports that will lead to the collapse of certain segments of the industry.

Table 2: Percentage growth of exports of South Africa's Top 20 imported products

Code	Product label	**%E**xport growth 2013-14	**%E**xport growth 2014-15	**%E**xport growth 2015-16	**Exported value in 2016: ZAR**
'71	Natural or cultured pearls, , and articles thereof; imitation jewellery; coin	-10	-13	33	175 737 530
'87	Vehicles and parts thereof	20	7	32	134 164 059
'26	Ores, slag and ash	-4	-31	29	112 038 989
'27	Mineral fuels, mineral oils and products of their distillation;	6	0	0	104 025 303
'72	Iron and steel	22	-23	33	77 253 218
'84	Machinery, mechanical appliances, nuclear reactors, boilers; parts thereof	11	-14	23	75 697 159
'08	Edible fruit and nuts; peel of citrus fruit or melons	21	17	18	42 320 086
'85	Electrical machinery and equipment and parts thereof;	25	-11	12	26 812 197
'76	Aluminium and articles thereof	11	-26	46	22 157 782
'22	Beverages, spirits and vinegar	10	1	14	17 581 320
'39	Plastics and articles thereof	21	-22	32	17 500 714
'73	Articles of iron or steel	11	-13	10	15 784 220
'29	Organic chemicals	21	-27	18	131 59 181
'47	Pulp of wood or of other fibrous cellulosic material;	34	7	27	12 237 519
'38	Miscellaneous chemical products	31	4	2	12 159 654
'28	Inorganic chemicals	10	12	2	10 828 075
'48	Paper and paperboard; articles of paper	13	-9	23	8 864 707
'90	Optical, photographic, cinematographic, measuring, medical or instruments	32	-2	20	8 750 320
'20	Preparations of vegetables, fruit, nuts or other parts of plants	18	0	17	8 249 597

'99	Commodities not elsewhere specified	51	51	56	8 068 292

Source: Trademap data, 2018

Further motivations to protect the steel industry

1 The market for steel products already exists within the SA, SADC and other African countries, as evidenced by imports of steel products to SA and exports of the same products to other African countries.

2. It is easier for SA to protect its domestic market against foreign competition than to force trading partners to lower trade barriers against our manufactured exports.

3. Foreign firms will be induced to establish tariff-jumping factories in Gauteng/SA to overcome the tariff walls that we shall erect hence leading to more greenfield investment and employment creation.

Recommendation

Hence, we advise that through policy agitation, Gauteng should petition the national government to apply trade restrictions for the following products of iron and steel as contained in Table 3

Table 3: South African imports of steel products in 2016

Product imports of steel products in 2016	Million rand
H7318: Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, washers	2608.789
H7307: Tube or pipe fittings (for example, couplings, elbows, sleeves)	1356.746
H7308: Structures(for example, bridges and bridge-sections, lock-gates, towers, lattice masts, roofs, roofing frame-works, doors and windows	1042.542
H7306: Other tubes, pipes and hollow profiles (for example, open seam or welded, riveted or similarly closed), of iron or steel	795.9967
H7312: Stranded wire, ropes, cables, plaited bands, slings and the like, of iron or steel, not electrically insulated	763.9613
H7323: Table, kitchen or other household articles and parts thereof (pot scourers and scouring or polishing pads, gloves)	687.4316
H7304: Tubes, pipes and hollow profiles, seamless, of iron (excluding cast iron) or steel	628.545
H7325: Other cast articles of iron or steel	608.9922
H7315: Chain and parts thereof, of iron or steel	488.4949
H7311: Containers for compressed or liquefied gas, of iron or steel	416.2346
H7320: Springs and leaves for springs, of iron or steel	413.8238
H7302: Railway or tramway track construction material of iron or steel	324.9904

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Alternative strategy to attract FDI into key manufacturing industries

Alternatively the government may open market strategy to attract foreign investment into specified sectors. This strategy focuses on export-promotion, whereby policy measures such as export subsidies, encouragement of skill formation in the labour force and the use of more advanced technology, and tax concessions generate more exports, particularly labour intensive manufactured exports in accordance with the principle of comparative advantage.

While some countries in the emerging markets are large consumers of commodities of which we produce plenty of, the resultant trade is skewed such that we export mainly resources to these countries and we import manufactured goods from these countries such as China and India. Hence, Gauteng's export missions must be tied with investment motivations to encourage large exporters of manufacturers from India and China to invest in Gauteng to reduce the imbalance and revitalise our manufacturing and industrial base as well as create sustainable jobs.

Historical data in table 3 shows that South Africa is a net importer of capital goods such as, electrical goods and equipment, business machines (computers, cell phones) and mechanical machines. We can go back twenty years and still find the data showing a consistent trend of significant imports of such goods.

Table 3: Trend of South Africa's Imports of Capital Equipment (billion rand)

	2008	2009	2010	2011	2012	2013	2014	2015	2016
H84: Nuclear reactors, machinery and mechanical appliances	114.47	83.77	89.25	112.25	126.13	143.94	144.46	150.79	150.75
H85: Electrical machinery and equipment	71.74	58.24	63.67	68.94	74.42	101.48	104.89	121.56	118.80
C23: Equipment components	48.20	29.98	37.93	43.77	51.47	58.99	70.08	79.31	88.09

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Recommendation

In the longer term, South Africa/Gauteng must enhance investment into hi-tech manufactures that will not only substitute the imports but also result in exports to Industrial countries India, Brazil and China. This can be achieved by:

- Adopting an integrated industrial development strategy that encourages investments in the manufacturing of semiconductors and machine components.
- Government should encourage manufacture and exports of product components that are used in the assembling of finished products. This way it will benefit from the global product manufacturing value chain just as countries in South East Asia such as Indonesia, Malaysia, Thailand and Taiwan are doing.
- The following countries are important sources of **FDI inflow** that target manufacturing and retail sectors: **USA, UK, Germany, France, Japan, China and India**