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South in Africa, metropolitan in culture: industrial development trajectory of South Africa.

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Abstract

Industrialisation in South Africa followed the resource determined forward and backward linkages in Rostowian fashion. From the nineteenth century agro-industries established the initial foundation of Schumpeterian entrepreneurial changes to agrarian life. The transition into industrialisation occurred within the Polanyian state intervention in the market to drive industrial development. The context of the mineral- agrarian economy determined state mitigation of the high cost structure of the economy. Geographical location, factors of production (labour, capital) and policy directives determined a market intervention. Import-substitution as strategic policy option as proposed by Prebisch, was followed, but the state refrained from full socialism or central market planning. The industrialisation of the South African economy gained momentum since the 1920 under protectionist state industrial policies. Powerful business groups, corporate entrepreneurs, especially from the mining sector, collaborated with state protectionism. The Gerschenkronian latecomer effect indeed played itself out in South African industrialisation, but local human capital developed innovative technology locally to enhance the industrialisation process. The trajectory of South African industrialisation reflects the establishment of a near first-world industrial base, grounded in a mix of scare factors of production (capital, entrepreneurship, skilled labour) and abundant factors of production (unskilled labour, natural resources). Weberian traits of the Protestant work ethic is a significant driver of economic, and specifically industrial development in South Africa. The specific context of a European minority population controlling the political economy, eventually impacted negatively on the modernisation and progress of the industrial sector in South Africa by the end of the twentieth century.

Introduction.

Africa is not considered an industrialised continent. Recently the ‘dismal growth performance of the African continent’ was considered to have produced the ‘worst economic disaster of the twentieth century’ (Artadi and Sala-i-Martin, 2003; Easterley and Levine, 1997; Collier and Gunning,1999). Considering South Africa’s industrialisation trajectory, allows an understanding of the outcome of state-market interventionist strategies to facilitate the development of an industrial sector during the twentieth century. The economic development of South Africa has followed a different trajectory. As a divided political entity before 1910, the constitutional unification in 1910 had direct consequences for the development path of the economy. As colonial economies of the British Empire, the agro-commercial economies of the Cape Colony and the Natal Colony, were primary economies based on agriculture and merchants trade through ports connecting the colonies to British trade networks. The agricultural activity in the Cape Colony delivered wheat, wine and fruit farming, resulting in territorial expansion allowing wool (sheep) and cattle farming to contribute to the livelihood of the settler and indigenous population. The mining of natural resources was limited to some copper, diamond and iron ore mining before the last quarter of the twentieth century. In the Natal Colony the indigenous Zulu people farmed with cattle, while the settler population

introduced the farming of cotton, sugar cane and maize. The discovery of coal deposits in the northern parts of the colony added to limited diversification into mining, but by the turn of the century the wealth of the Natal Colony lay in its geographical location on the east coast of the southern part of Africa. Trade through the port of Natal contributed significantly to the colonial economy. In the interior two Boer Republics were primarily agricultural oriented, with the export of wool through the Port Natal harbour constituted a significant portion of state revenue of the Republic of the Orange Free State. The South African Republic was a poor agricultural economy, producing primarily for subsistence, both by the European settlers and the indigenous African population. Economic activity in the four territories that would become the Union of South Africa in 1910, was primarily extractive – primary production and mining. The most progressive farmers were English-speaking settlers in the Eastern Cape and Northern Natal, while fruit and wine farming by the descendants of the Dutch colony in the Western Cape, developed capacity for agricultural diversification. By the last half of the nineteenth century the mineral discoveries (diamonds and gold) attracted international attention to the new growth possibilities of the region, causing extensive geo-political conflict and devastation of economic resources. The so-called mineral 'revolution' of the late 1870s and 1880s created the demand for basic manufactured goods. Secondary industries were elementary and served the needs of the mining sector by 1910. The rational economic strategy called for market consolidation, allowing agreements on the movement of factors of production, unrestricted transport to and from the mines and ports to stimulate trade. In 1910 the constitutional path was prepared for the development of the South African economy. (Jones and Müller, 1990; Coleman, 1982; Houghton, 1978).

Constitutional union and state policy.

The economic system of the four territories prior to unification was primarily capitalist, but with weakly developed markets and co-existence with a non-market traditional communal system of production. A diversity of indigenous peoples, both hunter-gathers and pastoralists outnumbered the small European population. Two relatively distinct European settler entities developed in South Africa at a time of numerical domination by the indigenous population. A conglomeration of Western European settlers from the Netherlands, Germany and France formed a community of 'Afrikaners', desirous of socio-political independence and definitely non-submission to the British imperial authority. British settlers sustained commercial links to the country of origin, developing networks of financial and commercial exchange. The Afrikaner people were primarily farmers, and apart from the Western Cape wheat and wine

farmers, and the small sheep farming community of the Orange Free State, subsistence oriented. The prerequisites for the development of a modern industrialised economy were political stability, population management, security of socio-economic institutions of property rights, individual freedom and security of contract, market decentralisation to encourage individualism, entrepreneurship and grasping the opportunities of markets. The nascent market economy of South Africa by 1910 stood at the brink of industrial development. This depended on the Rostowian transformation of primary production into mechanised production, access to capital (sufficient domestic savings and investment) and a productive labour force. The 'take-off' was slow to occur, because of an absence of central market forces towards a shared economic goal.

At this point in the development of the local economy, only very limited manufacturing occurred. The primary source of foreign exchange was the export of primary products, gold, diamonds, hides and skins. These exports were not, as had been argued by Bairoch, the prerequisite for British industrialisation. The industrial revolution has already occurred more than a century ago, and local coal, or other minerals, went to Britain, as well as markets in Europe. The export of South African primary products sustained relative easy access for the domestic economy, to essential imports of consumer goods and vital inputs for the small local manufacturing industry. In the next decades this direction of advantage was strengthened.

Socio-political divisions between Afrikaans nationalist anti-British people and the English-speaking British loyalists, who also controlled the commanding heights of the economy (mining, finance, commerce), and the majority of the population who stood outside political decision-making, undermined a shared economic vision. Moving towards political consensus was slow, but by the early 1920s sufficient political stability delivered state policies towards the protection of local industry, and gradual support for commercial farming and mechanisation. The population of 5.9 million people in 1910 rose to 9 million by the mid-1930s. The white population comprised only around 21 % of the total population, the African black population around 68% and the Indian and Coloured communities around 11%. Sectoral contribution to the national income by 1912 was as follows: agriculture 17 %, mining 27%, manufacturing 7% and commerce 13.5%. The structural change occurred slowly and by the 1990s agriculture contributed less than 6% to gross domestic product, mining 12%, manufacturing 25%, commerce 13% and finance 13%.(SARB Quarterly Statistical Bulletins, 1920-1990).

By the 1930s the South African economy was still a primary economy, dependent on mining and agriculture. Exports comprised of raw materials, such as wool, diamonds, gold, wheat, fruit and other foodstuffs, hides and skins. Imports of secondary goods originated from the industrialised countries of Britain and Europe. By the late 1930s gold export still comprised 67% of total South African exports. (Schumann, 1938:100-103; Jones and Müller, 1992:114-15). The structural change did not follow from Rostowian mechanisation in agriculture, nor the supply of capital by the agricultural sector to finance manufacturing. The take-off occurred from a conscious nationalistic motivated inward-looking industrial development policy. The take-off was funded by mineral exports. Bestowed with the political power in the Union, the South African Parliament, systematically introduced protectionist policies towards local industries since 1914 in the form of protective customs duties. The participation of South Africa on the side of the Allied Powers in the First World War (1914-1919) stimulated local manufacturing production. After the war, industrialists and Afrikaner nationalist interests converged in systematically expanding state protection of local industries. The agency of the white population, representing foreign capital, local emerging nationalist capital, championed for the establishment of a Board of Trade and Industry in 1921 (first a part-time institution and later a permanent state body). Industrial protection through customs duties was not enough to assist in nurturing infant industries.

In the mining sector skilled workers, predominantly white, enjoyed the protection of the Mines and Works Act of 1911, reserving certain specific categories of work for white workers. The Chamber of Mines sought to deal with rising costs of deep-level mining by employing more African workers as opposed to better skilled white workers. White workers were protected by the Status Quo Agreement, negotiated between the white controlled Mine Worker's Union, and the Chamber of Mines. The agreement provided for the employment of two white workers for every 17 black workers. By 1921 the Chamber of Mines decided to abandon the agreement, seeking to lower labour cost. A violent strike erupted in 1922, quelled by Union armed forces. Having defeated the militant white workers, the new labour dispensation weakened white labour and led to growing employment of a growing African workforce. The military defeat of the strike shifted support from the ruling South African Party to the National Party and the Labour Party. In 1924 the National Party won the general election with the Labour Party as alliance partner. The Pact Government implemented a 'civilised labour policy', which afforded the white labour force advantages in employment reservation, higher wages ('civilised ' wages) and the right to organise themselves in trade unions. Through the Industrial Conciliation Act

of 1924 and the Wages Act of 1925 the skilled workforce was entrenched and the African workforce controlled in a structure of market distortion. (Feinstein, 2005: 82-89).

The ability to manage the labour force supported inward-looking industrialisation. Since 1924 industrialisation of the South African economy received extended institutional support. A permanent Board of Trade and Industry was appointed in 1924, and higher customs tariffs were introduced by the Customs Tariff Act, No 36 of 1925 to protect local industries. The global Depression of 1929 hit primary exporting South Africa adversely, but the dramatic collapse of agricultural and resources prices was exacerbated by the decision of the South African Government not to follow the British decision in 1930 to abandon the gold standard. While other Commonwealth countries, such as Australia followed Britain off the gold standard, South Africa defended the gold standard 'to display its confidence in gold'. The cost to the domestic economy was high: the South African currency was placed at a premium, exports collapsed, imports from countries off the gold standards flooded local markets and outcompeted local manufacturing. The South African Government finally followed the rest of the British Commonwealth off the gold standard in December 1932. (Lumby, 1982a: 209-211). Immediate recovery of foreign trade and the rapid increase in the gold price injected growth opportunities into the market.

State policies supported economic recovery. Product markets for land, labour capital in the African periphery remained inextricably linked to the industrial core of the British Commonwealth. Banks and other financial institutions, such as insurance companies, were predominantly incorporated in Britain. Local financial institutions entered the market for financial services, but only towards the late 1960s did the state mandate domestication of financial services institutions. Market recovery in the aftermath of the Depression, benefitted from nationalist state-directed inward-looking policies to secure the recovery of the mining sector, to stimulate industrial diversification and to promote exports.

An important deviation from the Latin-American model of industrialisation, is the absence in South Africa of any form of centrally planned plan-linked industrial development. The state was indeed influenced by business interests. The state responded to advice from commissions of inquiry and the Board of Trade and Industry on protectionist policies and incentives to stimulate manufacturing. The state did intervene in financial markets by introducing domestication policies in the insurance and banking industry to ensure the availability of domestic savings for domestic industrial development. In this way domestic savings, as

suggested by Rostow, funded industrialisation. The Insurance Act of 1943 introduced rigid investment requirements compelling long-term insurance companies to invest in prescribed state bonds and public stock. South Africa was a net recipient of FDI until the late 1960s, but then international pressure against the policies of the state, gradually reversed this trend. South African banks and insurance companies, as well as private finance houses of industry (FVB in the case of Afrikaner industrial development) and the mining sector (such as JCI, the investment house of the AAC), were significant in investing local capital in local development. This was an important driver of the diversification of the South African economy.

Two elements of industrial policy contributed to the strengthening of secondary industry.

The first aspect was more state intervention through State-owned Enterprises (SOEs). These included the establishment of the Electricity Supply Commission (ESCOM) in 1923; the Iron and Steel Corporation of South Africa (ISCOR) in 1922, the Industrial Development Corporation of South Africa (IDC) in 1942 and the South African Oil and Gas Corporation (SASOL) in 1951. Smaller SOEs were in phosphate development, atomic energy production, and much later armament development (ARMSCOR). The transport sector was always organised in the Department of Railways and Harbours (SAS&H) and water supply through provincial and municipal entities. The SOEs were organised either as state departments after unification in 1910, or as SOEs to support industrialisation policies. SASOL was privatised in 1979, and ISCOR in 1987, parts of ARMSCOR and Telkom, the telecommunication fixed line supplier, after 1994, but transport, electricity and water remain SOEs. The state secured access to basic infrastructure, at subsidised prices, to the emerging industrial sector. The IDC contributed to minimise market risk, though advisory and management services to new enterprises and through the provision of seed capital. The state always invited private investment into SOEs, but control remained with the state, signifying the mutual co-existence between mining, industrial and financial capital on the one hand, and the state. (Jones and Müller, 1992: 171; Feinstein, 2005:124).

A significant contribution to industrial development and industrial diversification was made by the Afrikaans-speaking people’s nationalism. This nationalism inspired the establishment of Afrikaner-controlled businesses – from newspaper and printing, insurance, banking, diversified manufacturing, mining, wine production and agricultural processing and transport. These nationalistic ambitions dovetailed with state industrial policies, but initially brought intense competition with English-speaking and foreign capital in the mining and industrial sectors.

(Verhoef, 2006; 2009; 2010; 2014; Lipton, 1986: 259-266; Feinstein, 2005: 176-180). The convergence of nationalist capitalist aspirations of the Afrikaner people and the business interests of foreign capital in miming, industry and finance, with a relatively stable labour force, delivered strong growth and diversification of secondary industry up to the late 1960s.

The stimulus of the First World War gave a kick-start to local industries. The adverse effects of the Depression in 1929, and subsequent weakening of the primary sector, not solely because of the global collapse of primary products, but also the unilateral Government decision to defy international monetary trends, forced South Africa to acknowledge its integration into the world economy. Small manufacturing enterprises matured into larger corporations and needed access to international markets. Industrial protection assisted in the post-depression recovery, but it was primarily the Second World War demand and subsequent international recovery on the foundation of the Marshall Plan and European recovery, that supported South Africa's industrial progress. By the early 1960s the manufacturing industry had expanded significantly. For the first time in the history of South Africa, manufacturing contributed more to GDP than the combined contribution of agriculture and mining to GDP. The expensive protectionism succeeded in growing industry. The number of manufacturing industry establishments rose from 3 638 in 1915/16 to 12 727 in 1966. The number of employees in industry rose from 89 000 in 1915/16 to 941 848 in 1966; and the value of industrial output rose from R 71.3 million in 1915/16 to R5 104 million in 1966. (Department of Statistics, 1920-1967) The cost of promoting secondary industries were high. Between 1915/16 and 1939 more than half (55%) of imported raw materials utilised in the manufacturing industry, were imported and only 13.2% of the value of the imported raw materials were recovered by actual exports of manufactured final goods. In 1939 the value of imported raw materials for manufacturing was still 47.9% of the value of imported raw materials, but the value of exports from manufacturing only 6.4% of the value of imported raw materials for manufacturing (Lumby, 1982b:216, 227). The expansion of manufacturing activity was therefore a consistent cost to the country. It was a financial drain on the mining sector. The foreign exchange earnings of the gold and other mineral resources exports funded raw material imports towards domestic industrial expansion. It can be argued that South African industrialisation up to the Second World War was 'self-defeating' (Lumby, 1982a:218).The protected domestic market undermined international competitiveness, since the domestic market excluded foreign industrial competition through import duties and protective tariffs. The local manufacturing industry therefore expanded, but

was inefficient and relied on the use of a relatively large workforce, rather than optimal mechanisation.

The real take-off of South Africa industrialisation occurred after the Second World War. As European economic recovery restored global demand on the back of the success of the Bretton Woods institutions, the South African manufacturing industry was at the crossroads. Unless diversification and improved efficiency was achieved, the drain on resources would stifle general economic growth. South Africa was in a favourable position after the war. The country could respond to international demand for growth opportunities, since domestic industries could respond to demand which the war-ravaged economies could not meet due to the complete destruction of manufacturing capabilities/infrastructure. Growth opportunities in the domestic market resulted in strong capital inflows into the domestic market, high demand oiled high inflation and relative political stability secured access to labour market. Sustained state protection for the domestic industrial sector ensured significant industrial expansion. Between 1939 and 1976 the number of industrial establishments rose from 8 614 to 15 222. The total number of the workforce in manufacturing industries rose from 236 123 in 1939 to 1 349 485 in 1976. The net value of output rose from R128 136 000 in 1939, to R7 836 374 000 in 1976. This expansion finally resulted in the structural change in the South African economy in 1965, when the industrial sector's contribution to GDP exceeded that of the mining sector for the first time. (SA Statistics, 1939-1978).

In the post-war period industrial diversification the massive expansion of operations of the iron and steel industry, with the central role performed by ISCOR, as well as the expansion and diversification of the chemical industry, contributed to the structural transformation. The establishment and expansion of SASOL was the main reason for the growth in the chemical industry (Verhoef, 2003; 2010). SASOL did not supply cheap fuel from coal to the local economy, but it established the core of research and development of world-leading chemical technology in South Africa, which ultimately stimulated local chemical industry diversification and global export of locally patented innovative CTL and later GTL technology. ISCOR provided subsidised steel for the construction of transport infrastructure, industrial infrastructure and engineering developments, which set the South African industrial development apart from any other industrial development in Africa.

The strong industrial diversification and growth occurred at a time when Africa excelled in decolonisation and destruction. The Congo crisis of 1960, the South African decision to leave

the British Commonwealth in 1961 and to become a Republic, fuelled domestic opposition against the policies of racial segregation. Gradually political opposition surfaced and by the mid-1970s erupted in sustained political destabilisation. The political economy of South Africa mitigated against more comprehensive global market integration. As South Africa was increasingly marginalised on the grounds of its domestic policy of racial segregation, state policies turned increasingly inward. During the late 1970s insurance companies were required to incorporate in South Africa and then banks and other financial institutions were required to have a majority local shareholders. As international sanctions increasingly shut down the flow of foreign investment, the high cost of sustaining an economy in the wake of international adversity, capital outflows, mounting domestic inefficiencies and socio-political instability, economic growth grounded to a halt. Feinstein argued that South Africa experienced 'a hundred years of economic growth, since the development of the mining industry and the slowdown of the 1970s. He is off course exaggerating the long trend of growth, but he actually points to the stagnation of the economy since the mid-1970s because of the socio-political impasse that finally mandated political changes to secure economic recovery. The political economy of South Africa since the late nineteenth century, both under agency of the British state and South African politicians from different ethnic orientations, succeeded in transforming a 'relative backward country, almost wholly dependent on a largely self-sufficient agricultural sector,… into a dynamic, modern, capital-intensive economy' (Feinstein, 2005:200). A dramatic structural break then set in during the mid-1970s.

The industrial take-off in South Africa thus occurred along the List proposition of the protection of infant industries. This was explained in the discussion on the industrial promotion policies since the 1920s. This explanation aligns with Rostow's view on the spreading of technology supporting industrial growth. The South African universities delivered research support through the training of mining engineers, chemists and metallurgical engineers who eventually worked in the iron and steel industries, the chemical industry (SASOL) and in the electricity and transport sectors. Many local engineers received doctoral qualifications abroad and assumed senior managerial positions in industry. South Africa indeed followed the Geschenkronian late-comer path by acquiring advanced technology from advanced economies, but also developed significant innovative technology securing it global leadership. The state off course subsidised the scientific development through the subsidisation of universities and the subsidisation of SASOL until the privatisation of the company.

The data illustrates the growth and structural transformation of the South African economy.

Table 1: National Income, per capita income and sectoral contribution, 1912-1985.

Year	National Income R'm	Per Capita Income R	Agriculture %	Mining%	Manufacturing %	Commerce %
1912	265.8	43.6	17.4	27.1	6.7	13.5
1918	335.8	49.6	20.2	20.7	9.8	15.8
1921	436.6	62.8	22.0	16.9	12.2	14.0
1924	251.0	60.2	18.8	19.4	11.6	14.5
1927	502.6	62.8	18.2	18.0	13.1	15.5
1930	506.4	59.2	13.9	17.3	15.4	14.5
1933	473.8	52.2	12.9	23.8	13.5	12.3
1936	671.2	69.8	12.9	23.8	13.5	12.3
1939	791.2	77.8	14.4	20.1	15.7	13.9
1942	1 069.6	98.8	12.8	20.6	17.7	13.6
1945	1 332.6	118.2	12.3	14.4	19.9	14.1
1948	1 701.0	142.2	16.3	10.1	21.4	15.7
1951	2 496.8	196.4	18.5	12.3	22.3	13.9
1954	3 104.0	131.2	15.9	10.7	25.2	13.0
1957	3 890.6	274.6	14.3	12.6	24.5	12.4
1960	4 510.05	283.0	11.0	14.0	23.3	12.2
1961	5 611	344.0	12.4	13.4	23.6	12.7
1964	7 404	388	10.5	13.0	22.8	23.4*
1967	9 511	459	11.7	11.7	23.4	23.0
1970	12 518	557	8.3	10.3	24.2	26.2
1973	19 921	819	8.2	12.0	21.9	26.4
1976	31 037	1 191	7.8	11.9	24.0	26.9
1979	49 153	1 979	6.7	17.9	22.2	23.9
1982	82 490	3 390	6.4	13.9	24.4	25.6
1985	125 919	3 728	5.8	15.4	22.8	25.7

Source: South African Reserve Bank Quarterly Bulletin, 1923-1986

*From 1964 the % of commerce includes finance

The structure of the economy displayed a growing contribution of the industrial sector. From the late 1930s the contribution of agriculture increased to the level of `927, but from 1957 the relative contribution of agriculture declined consistently to less than 6% by the mid-1980s. The contribution of mining to national income declined from just more than 23 % in the mid-1930s

to just over 15% by 1985. The significant structural shift occurred in the contribution of industry and commerce (which included the financial sector). The contribution of the industrial sector to national income exceeded that of mining since 1945. From the mid-1960s industry contributed more than the combined contribution of agriculture and mining to the domestic economy. The significant growth in commerce and finance (the tertiary sector) also surpassed the contribution of the primary industries since mid-1960s. This shows successful industrialisation in the South African economy, albeit not integrating the entire economy.

The policy of racial segregation sought to develop ethnically diversified state systems around separate economic centres. The only 'state planning' of industrial development was the official industrial decentralisation programme of the 1970s. The state offered fiscal incentives to industrialists to establish and develop industries on the decentralised locations of the homelands. This was an attempt to stimulate industrial development outside the existing industrial core and promote the development of the homelands. This policy had mixed outcomes. It was successful in establishing the automobile assembly industry in South Africa, as well as incentivising the automobile and related sub-components (parts) manufacturing industries. Full implementation implied heavy subsidisation by other sectors in the economy. It also coincided with mounting domestic political mobilisation against state policies and therefore grounded to a halt. The political failure of the policy had high costs for both the 'homelands' and the South African economy. Industrial decentralisation succeeded in developing industrial activity on axes of the industrial core, but on the border of homelands. These efforts escalated the cost of industrial production and therefore market intervention and distortion. Failure of optimal efficiency of all factors of production, rendered the economy incapable of responding efficiently to international market volatility. By the 1970s global recession in the wake of the successive oil price hikes, subjected the South African economy to rising prices and contraction in demand from its major trading partners in Britain and Europe. Simultaneous domestic political mobilisation and international pressure, together with the inability of the domestic market to sustain itself in isolation while global deregulation opened international markets, resulted in the major economic downturn gaining momentum (Jones, 2003).

Between 1970 and 2000 macro-economic policy changed from non-market direct controls to deregulation and market-oriented policies. The fundamental transformation of a 'siege economy' under policies of racial segregation and separate development, was introduced. The new macro-economic framework under market-oriented policies had to support a single

democratic political economy, where monetary and fiscal policies were directed at addressing labour market reforms, because of the direct impact of these policies on employment. As South Africa dismantled racial segregation and followed international trends of deregulation and market-oriented macro-economic policies, the emerging changing institutional framework was a distinct result of global developments. When the country emerged from trade and cultural isolation, the new global context was advancing rapidly. Trade, technology and globalisation of exchange, distribution and production processes, placed the weakened South African economy at a distinct disadvantage. South African financial services were highly sophisticated, but as the country gradually joined the international community, it remained an emerging market. South Africa had to deal with a fundamentally changed international context. As signatory of the GATT Uruguay Agreement in 1993 (becoming effective in 1995), substantial revisions to the local industrial and commercial protectionist policies, left the industrial sector seriously exposed. An outward-oriented industrial policy opened the local market for competition, and as low productivity, production inefficiencies and declining growth prospects faced the economy, competition displaced underperforming industries. South Africa suffered the volatilities of all emerging markets, such as the 1998 Asian crisis. (Strydom, 2002: 31-50).

Table 2: GDP growth, MVA and employment, 1915-2000.

	GDP %	MVA %	Employment %
1916/17-1926/27	4.00	6.80	1.82
1926/27-1936/37	3.90	8.90	5.60
1936/37-1946/47	3.70	6.10	6.38
1946/47-1956/57	5.50	7.50	5.12
	GDP %	MVA %	Employment %
1946-1950	4.10	9.03	7.02
1950-1955	4.89	7.48	5.39
1955-1960	4.11	4.56	0.66

1960-1965	6.28	9.85	6.93
1965-1970	5.15	7.38	2.84
1970-1975	3.65	5.93	3.93
1975-1980	3.09	4.47	1.90
1980-1985	1.35	0.95	0.47
1985-1990	1.67	1.59	1.09
1990-1995	0.86	0.15	-1.25
1995-2000	2.45	1.11	n/a
	GDP %	MVA %	Employment %
1950-1960	4.50	6.01	3.00
1960-1970	5.71	8.61	4.87
1970-1980	3.37	5.20	2.91
1980-1990	1.51	1.27	0.78
1990-1998	1.45	0.36	-1.40
1990-2000	1.65	0.63	n/a
	GDP %	MVA %	Employment %
1970-1975	3.65	5.93	3.93
1975-1978	1.71	2.05	0.85
1978-1981	5.25	8.55	4.21
1975-1981	3.47	5.25	2.52
1970-1981	3.55	5.56	3.16

Source: South African Statistics: 1915-2000.

During the 1970s state expansionary macro-economic policies because of cost-push factors under growing international isolation, rushed inflation up well beyond the levels of inflation of South Africa's trading partners. By January 1986 inflation was at 21% on the previous year, showing slow response to contracting monetary policies. The South African Reserve Bank introduced a policy of inflation targeting in 1999, and subsequently a target of between 3 and 6 % inflation directed monetary policy, and no longer the M3. The most significant fact of South Africa as a Gerschenkronian 'late industrialiser', is that the country surpassed all other African countries in developing an advanced manufacturing base. South Africa also industrialised much earlier than the East Asian Tigers, but since 1980 industrial development slumped.

The explanation of the successful industrialisation of South Africa lies firstly in the opportunity of the market. Industrial development was slow during the last half of the nineteenth century, since capital was primarily invested in the capital-hungry gold mining industry. Then towards the first decade of the twentieth century, capital investment came to an abrupt halt (Frankel, 1967; Van Eck,1961). The relatively unexplored market for domestic industrialisation then presented a huge scope for import-substitution. By the first decade of the twentieth century imports as a proportion of GDP, as well as manufacturing imports as a proportion of GDP both exceeded 50%. Thus ISI shifted development policies towards industrialisation. As reflected in Table 2, manufacturing valued-added (MVA) rose to 9.03% in the first decade after the war and remained above 5% until the mid-1970s. By then South Africa had a relatively mature manufacturing sector, exporting a growing volume of local production. By 1916 industrial exports comprised only 8.2% of total exports, but rose to 26.3% of total exports by 1956 and 31,4% of total exports by 1972. An abundance of natural resources and other factors of production, facilitated industrial development on the back of firm import-substitution policies. As reflected in Table 2, the decline in MVA started in the mid-1970s and continued into stagnation. During the 1970s massive hikes in the international gold price, earned South Africa huge windfalls in resource exports, thus depressing the ratio of manufacturing exports of total exports. The commodity price boom had a considerable impact on the allocation of investments into the different sectors of the economy. Higher resource prices contribute to the appreciation of the ZAR, high foreign exchange earnings and low interest rates. During the 1970s the investment in specifically the chemical sector (SASOL's two new developments, Sasol ll and Sasol lll) contributed to strong growth in industry. Domestic development of new technology

in the chemical industry was a strong injection to local industrial development. State local content policies assisted the development of the local motor vehicle industry, supported by ISCOR's low-cost iron supplies. (Bell and Madula, 2002: 102-109).

Domestic industrial stagnation followed the global slowdown in growth since the 1970s. The short-lived expectation of the international commodity price boom that South African could make the shift from ISI to Export Oriented Industrialisation (EOI),was halted, as the commodity price boom grounded to a halt during the later 1970s. Then followed overall OECD stagnation during the first half of the 1980s – and South Africa experienced the lag effect of those developments, as those trends in Britain and the OECD (Britain had just joined the EU) impacted adversely on South African exports. An EOI strategy was severely contained by emerging market contraction and inability to compete internationally, as per capita income declined and growth slowed down. This was a trend Easterly noted across the developing world: the median per capita growth of developing countries was 2.5% per annum between 196-1979, but smashed to0.0% between 1980-19987. (Easterley, 2001: 3).

How do we explain this stagnation?

In South Africa socio-political instability accounted for a significant contraction in output, both in the mining and manufacturing sector. International isolation contributed to foreign exchange inflow constraints. As market-oriented policies were introduced and trade liberalisation implemented, import substitution was virtually reversed. Domestic industries could not compete with cheap imports from East Asia. A skills shortage undermined the transformation of the economy to compete with high-technology global industries. The strong growth was rather in the FIRE sectors: finance, insurance, real estate and business services sectors. The sophistication of the local financial services sector provided the platform for rapid global competitiveness and expansion. South Africa was better situated to advance in the 'New Economy', than in manufacturing. The South African slowdown occurred in the wake of the successful Japanese and German competition with USA manufacturing sectors since the 1960, as well as the industrial competition from South East Asia. South African preparation for the new information technology economy was marred by the political economy of black political transformation. The focus of power rather than human capital development undermined the sustainability of the advantage the country had during the 1960s. Ultimately, strained and tense state-business alliances shifted dynamically, but held a stable core during the take-off years of local industrial development. The sophistication of the economy, in all sectors, mining,

manufacturing, services (financial sector) in the age of globalisation and deregulation, coupled with the structural break caused by production inefficiencies and stagnation, forced the political system into fundamental realignment.

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