



ZIMBABWE ECONOMIC
POLICY ANALYSIS AND
RESEARCH UNIT

POSITIONING ZIMBABWE MANUFACTURING SECTOR AS A GROWTH DRIVER:

Lessons From Singapore and Taiwan

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ABSTRACT

Among the sectors that have been identified and are mostly cited in Zimbabwe as growth drivers are agriculture and mining. However, the successful growth stories for other countries such as Singapore and Taiwan are attributed to their vibrant manufacturing sectors. It can be established that the manufacturing sector in those countries became vibrant due to deliberate efforts made by their governments through policy interventions biased at boosting the sector. It is in the same vein that this paper is prepared; to assess the extent to which the Zimbabwe manufacturing sector can be boosted through policy and practice changes. By drawing lessons from countries such as Singapore and Taiwan as well as through case studies from some select manufacturing firms, the paper demonstrates that it is indeed possible to make the Zimbabwe manufacturing sector an economic driver. It identifies some key instruments that the Government of Zimbabwe can use to play a critical role in ensuring that the manufacturing sector is developed to become a useful economic anchor. The paper also recommends that companies should also be innovative and be able to adapt to changing social, political and economic variables and not continue to rely on outdated business models.

LIST OF ACRONYMS

GDP	Gross Domestic Product
SMEs	Small to medium scale enterprises
UNIDO	United Nations Industrial Development Organization
DLMA	Direct Local Market Allocation
IMF	International Monetary Fund
ESAP	Economic Structural Adjustment Programme
OGIL	Open General Import Licence
ERS	Export Retention Scheme
ZIMPREST	Zimbabwe Programme for Economic and Social Transformation
CZI	Confederation of Zimbabwe Industries
ZIMSTAT	Zimbabwe Statistical Agency
IDC	Industrial Development Corporation
NEC	National Employment Council
WMMI	Willowvale Mazda Motor Industries
ZESA	Zimbabwe Electricity Supply Authority
EDB	Economic Development Board
JTC	Jurong Town Corporation
JIE	Jurong Industrial Estate
SSP	Singapore Science Park
NCB	National Computer Board
MNC	Multinational Corporation
EDIMAN	Electronic Data Interchange for Manufacturing
ITRI	Industrial Technology Research Institute
HSBIP	Hsinchu Science-Based Industrial Park
TSMC	Taiwan Semiconductor Manufacturing Company
ZETREF	Zimbabwe Economic and Trade Revival Fund
AFREXIMBANK	Africa Export and Import Bank

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1. INTRODUCTION

The manufacturing sector comprise of firms engaged in chemical, mechanical, or physical transformation of raw materials, substances, or components into finished and semi-finished consumer or industrial goods¹. This transformation is usually conducted through use of plants, factories, or mills employing mostly power-driven machines and raw materials that are products of agriculture, forestry, fishing, mining, or quarrying as well as products of other manufacturing establishments².

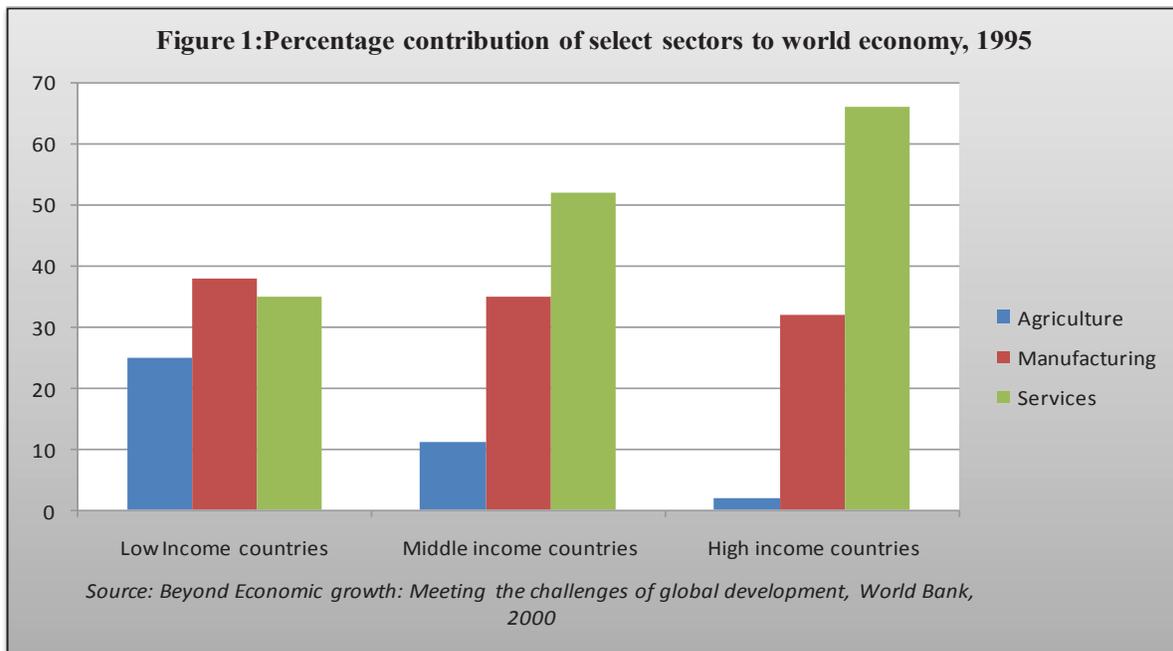
In any economy, the manufacturing sector can potentially play a key role in the overall economic development agenda as well as initiatives geared at employment creation and effective reduction of poverty. First, the manufacturing sector is a big employer of both skilled and unskilled labour. Second, at full capacity, the manufacturing sector also contributes significantly to GDP and can be used as a solid anchor upon which a strong economic takeoff can be premised. Third, the manufacturing sector also plays an important role by providing a key link between producers of raw materials and consumers of the manufactured products, thereby situating the sector to play a decisive role in determining the extent to which an economy can be self sustained. Fourth, the manufacturing sector can also be regarded as the avenue through which a country can transform itself from being a producer and exporter of primary agricultural and mining commodities into an exporter of high value finished products.

Evidently, the manufacturing sector has spurred meaningful economic growth and development and became the sustainable backbone of rapidly growing economies. For instance, from the 1950s, the main focus of the industrial policy by the Taiwanese Government was the promotion of the manufacturing sector through supporting sustenance of the export activities of small to medium scale enterprises (SMEs) (Cho and Yamawaki, 2009). For Singapore, its remarkable transformation is attributed to its twin engines of growth; manufacturing and services sectors (Teo and Ang, 2001). Similarly, economies of Brazil, South Africa were boosted by the manufacturing sector.

Globally, the manufacturing sector has continued to play an important role in shaping the global economy. Although it has continued to play second fiddle to the services sector, its role can not be ignored. For example, in 1995 the manufacturing sector contributed more to the global economy for low income countries in comparison to both agriculture and services sectors. The trend was however different for middle and high income countries, where the services sector played a more significant role in the economies (Figure 1).

¹Business Dictionary.com

²North American Industry Classification System obtained at US Census Bureau, 2010 at website <http://www.census.gov/epcd/ec97/def/31-33.HTM> accessed 14/03/2011

Figure 1: Percentage contribution of select sectors to world economy, 1995

It can also be revealed that during the period 2000-2008, the sector composition of world value added would show that although the shares for both the services sector and the manufacturing sector shows a decline (due to the effect of the global economic crisis), services continued to dominate, with its share falling from 67.3% to 65.9%, while the manufacturing sector share fell from 19.2% to 18.1%. The contribution is quite significant in comparison to agriculture, whose share increased from 3.6% to only 4% and the mining and utilities sector (from 4.5% to 6.2%) as well as to the construction sector, whose share increased from 5.4% to 5.7% (UNIDO, 2009).

There is also a general drift by countries from dependence on primary commodity production and exports towards reliance on value addition. Most developing countries which are rich in natural resources have been primarily depending on export proceeds from these raw materials. However, there is a noticeable change in strategies, with the focus now on adding value to these resources so as to export value added rather than raw materials. This has also seen the manufacturing sector gaining prominence as it plays a more pronounced role during the process of transforming raw materials into exportable finished products.

In the Zimbabwean context, the relative macroeconomic stability that accompanied the formation of the inclusive Government was largely expected to result in a sustained recovery of the manufacturing sector. Regrettably, this expectation is yet to be realized, amid concerns that the general policy and economic environment is not conducive and supportive to the recovery and growth of the manufacturing sector. Several challenges have been cited as being responsible, whose solutions lie in policy reform on the part of government, as well as practice and attitude changes on the players themselves. Such solutions can mostly be

drawn from experiences in other countries, which successfully turned around their economies through policies centred around the manufacturing sector, although utmost care has to be taken to ensure that the particular socio-economic and political factors obtaining in Zimbabwe are factored in. It is within this context that the study is being envisaged.

1.1 Study objectives

The study has the following mutually re-enforcing and complementary objectives that are key in the development of strategies aimed at dealing with challenges in the manufacturing sector:

- To understand the challenges the manufacturing sector is facing which is making it difficult for the firms to adapt to the socio-political and economic changes;
- To identify the policy gaps among the interventions that the government has been making over the years for prescribing corrective measures;
- To explore some strategies that have been adopted in other countries to position the manufacturing sector as the engine of growth and assess scope for duplication in Zimbabwe; and
- To recommend policy and practices needed to effectively deal with the challenges facing the manufacturing sector.

1.2 Methodology

The study employs desk research, utilising published information on the Zimbabwe manufacturing sector as well as the manufacturing sectors for the reference countries (Taiwan, Singapore, Brazil and South Africa). This also includes survey reports from the sector as well as other company specific information. In addition, key informants, who are mostly players in the manufacturing sector, were also contacted through interviews. In order to understand some firm specific micro issues, the study did some case study analysis of some firms from the manufacturing sector. Results from the interviews as well as those from the country experiences were used to form the basis for analysis and policy recommendations.

2.0 EVOLUTION OF ZIMBABWE'S MANUFACTURING SECTOR

The evolution of the Zimbabwe manufacturing sector can best be understood by looking at how the sector responded to the various policy instruments introduced by the Government. At independence and during the 1980s, Government instituted policies aimed at the gradual loosening of financial and trade restrictions and building a strong export drive (Mhone and Bond, 2001). However, government maintained controls over several aspects of the economy, with the objectives of redistributing and facilitating the general populace to benefit from services which hitherto, had been inaccessible. As a way of boosting exports, the government provided incentives to exporters in the manufacturing sector. To this end, the Export Incentive Scheme was introduced in the early 1980s, whereby exporters were paid 9% of the free on board value of exports. This was followed by the Export Revolving Fund, which was introduced in 1983. The Export Revolving Fund allowed exporters access

in advance to the foreign currency they needed to import inputs required to manufacture goods for specific export orders (Ndlela and Robinson, 1995).

Exchange controls inherited at independence were maintained. In actual fact, the import substitution strategy was centred on the regulation of foreign trade, with all foreign exchange earnings and capital inflows having to be surrendered to the Reserve Bank of Zimbabwe (RBZ); importers had to access foreign exchange through the Direct Local Market Allocation (DLMA) system (Bjurek and Durevall, 1998). Since companies had difficulties accessing foreign currency to import capital goods under the DLMA system due to foreign currency shortages, there were relatively few entrants into the manufacturing sector. Given that greenfield investments required imported capital goods, import controls constrained investments in the manufacturing sector, resulting in the creation of oligopolistic and monopolistic market structures. It is estimated that in mid-1980s about 50% of all goods manufactured in Zimbabwe were produced by one company, while 80% of these goods were produced by three companies or less (Bjurek and Durevall, 1998). To guard against the possibility of such monopolies abusing their positions through exploitative practices, government introduced price controls over several goods and services.

The inception of the World Bank and IMF supported Economic Structural Adjustment Program (ESAP), which was also adopted as a partial fulfilment of the specific conditions on the US\$700 million in new loans by the World Bank (Mhone and Bond, 2001), saw the adoption of market reforms between 1990 and 1995. Among the measures implemented which had a bearing on the manufacturing sector include the following:

- Privatisation of loss making parastatals and reduction of recurrent expenditure;
- Price adjustments in the energy sector (oil and electricity); and
- Domestic deregulation.

The manufacturing sector did not respond positively to the reforms, as evidenced by the decline in manufacturing sector activity during ESAP period as competition from imports intensified amid static domestic demand attributed to labour lay-offs. The situation was further exacerbated by a severe drought experienced during the 1991/92 period.³ Production volumes declined by over 9% due to the sharp fall in incomes with firms also having to contend with erratic electricity and water supplies (Ndlela and Robinson, 1995). The manufacturing sector's real (factor cost) contribution to GDP actually declined significantly by 18% from a peak of Z\$4.530 billion in 1991 (in constant 1990 terms) to Z\$3.724 billion in 1995 (Mhone and Bond, 2001).

³Scientific and Industrial Research And Development Centre (SIRDC), 'Zimbabwe Contribution of the Manufacturing Sector to Sustainable Development in Zimbabwe: A Survey by SIRDC for UNIDO found on website <http://www.unido.org/fileadmin/import/userfiles/timminsk/rio10-ind-zimbabwe-eng.pdf>, accessed 13 April, 2011.

In addition to policy reforms within the aegis of ESAP, other policy measures were introduced to try and cushion industry from the adverse repercussions of trade liberalisation on the manufacturing sector. For example, in efforts geared at enhancing export performance, while at the same time giving industries time to adjust to competition from competitive imports, the Open General Import Licence (OGIL) system was introduced in 1987. This gave import licences for priority areas, with the priority being for inputs for those sectors in which export volumes were assured (Ndlela and Robinson, 1995).

In addition, the mid-1990s saw the introduction of the Export Retention Scheme (ERS), which allowed exporters to retain a proportion of the foreign currency earned, which they would then use to import raw materials, spare parts or capital equipment. This saw a retention rate of 7.5% being set for the manufacturing sector, increased from 15% in 1991 to 30% in 1992, before being subsequently reviewed upwards to 50% in 1993. In 1992, most of the restrictions on how the ERS funds were to be used were removed, resulting in more discretion being given on the companies in using their foreign currency.

As a follow up programme to ESAP, Government introduced a successor policy blue print the Zimbabwe Programme for Economic and Social Transformation (ZIMPREST), from 1996 to 2000. Although ZIMPREST had the same policy thrust and economic strategies as ESAP, it also embraced social concerns and negative impacts of droughts⁴. Among its themes, those that had a bearing on the manufacturing sector included the following:

- Re-orienting the public sector;
- Investing in human resources;
- Facilitating public and private savings; and
- Restoration of macro-economic stability⁵.

Just like ESAP, the programme did not result in any noticeable improvement in the manufacturing sector. This downward spiral in manufactured output persisted until government decided to embark on interventionist policies between 2000 and 2008. The interventionist policies were largely designed to boost private sector performance, mostly through the provision of concessionary bank finance at negative real interest rates using a variety of lending windows operated by the Reserve Bank of Zimbabwe (UNDP, 2008). However, these measures ended up constraining the private sector, as the effectiveness of the measures was hamstrung by an overvalued exchange rate, severe shortages of foreign exchange, a shrinking domestic market, and a variety of supply-side bottlenecks that included energy shortages, limited foreign exchange to import critical raw materials as well as skills (UNDP, 2008).

⁴Scientific and Industrial Research and Development Centre (SIRDC), 'Zimbabwe Contribution of the Manufacturing Sector to Sustainable Development in Zimbabwe: A Survey by SIRDC for UNIDO found on website <http://www.unido.org/fileadmin/import/userfiles/timminsk/rio10-ind-zimbabwe-eng.pdf>, accessed 13 April, 2011.

⁵ibid

Despite the adoption of several measures by Government, introduced to contain the progressive contraction in the manufacturing sector (Table 1), limited progress was made.

Table 1: Some economic plans introduced in Zimbabwe, 1998-2006

Date	Economic Plan	Responsible Authority
March 1998	Three-Year Medium-Term Development Plan	National Economic Planning Commission, Office of the President and Cabinet
August 2001	Millennium Economic Recovery Programme (MERP)	Ministry of Finance
April 2003	National Economic Revival Plan (NERP)	Ministry of Finance
November 2004	Macroeconomic Policy Framework, 2005-2006	Ministry of Finance
April 2006	National Economic Development Priority Programme	Ministry of Economic Development

Source: UNDP, 2008

Thus the manufacturing sector's performance was really a response to the general macroeconomic environment, which was shaped by these various policy intervention tools. As the economy declined during the time, various manufacturing sector indicators bear testimony to this downward pattern (Table 2).

Table 2: Performance of the Zimbabwe manufacturing sector by the key indicators, 1980-2006

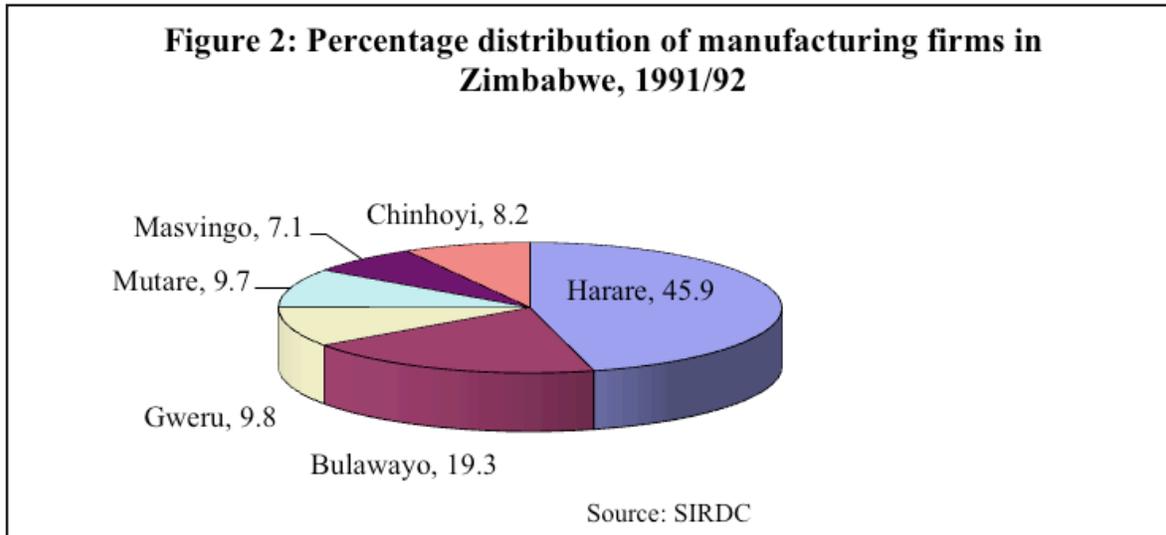
Manufacturing Indicator	1980-1990	1991-2000	2001-2006
Manufacturing value added average growth (%)	4.6	-0.70	-7.40
Manufacturing employment growth (%)	3.00	-0.70	-5.30
Manufacturing as % of GDP	20.35	17.70	15.00

Source: UNDP, 2008

The downward spiral in all major performance indicators for the manufacturing sector continued until 2009, when the current multi-currency system was introduced, which ushered in relative stability in the sector.

3.0 OVERVIEW AND CURRENT STATUS OF THE ZIMBABWE MANUFACTURING SECTOR

Zimbabwe boasts of a diverse manufacturing sector characterized by a geographic spread across the country, with the sector estimated to have about 1060 establishments (Mafunga P, 2009). However, as the economic downturn intensified, a lot of companies had either closed down or relocated to the capital and this contributed to the current situation where most manufacturing firms are now located in Harare. Notwithstanding the recent relocation of firms from smaller towns to Harare, it can be established that traditionally, even as far back as 1991/92, there was a bias towards the establishment of manufacturing operations in Harare by manufacturing firms relative to other locations (Figure 2).

Figure 2: Percentage distribution of manufacturing firms in Zimbabwe, 1991/92

According to the Ministry of Industry and Commerce the situation where companies have either closed shop in Bulawayo or relocated to Harare has now reached alarming levels, as about seventy five companies that were operating in Bulawayo had either closed shop or relocated to Harare over the last two years (2009-2011). This include about forty six companies in the motor industry, twenty four in the clothing industry and three manufacturing companies - National Foods, Hunyani and Starafrica which were the latest to relocate to Harare from Bulawayo⁶.

The Government was forced to respond to this uneven pattern by announcing a funding scheme, the Distressed and Marginalised Areas Fund (DiMAF) which was packaged as a solution to de-industrialisation that was resulting in some sectors lagging behind. As will be seen later, this is yet to kick off.

An analysis of how the sub-sectors in the manufacturing sector have been performing over the years might also give a better picture about sector at large. The manufacturing sector is composed of many sub-sectors, which were all affected by the economic decline, albeit with different magnitudes. Low capacity utilisation was the immediate impact of the economic challenges on the manufacturing sector. However, the emerging pattern is that the manufacturing sector recovering process is following a two tier pattern, with some sub-sectors performing well while others continue to struggle. Before looking at the current trends, past trends would help in understanding the current trends. The Business Tendency Surveys report covering 2006 - 2009 by the Zimbabwe Statistical Agency (ZIMSTAT) for example focuses on eleven sub-sectors of the manufacturing sector, and the report reveals that there were very few firms operating at full capacity (Table 3). The survey was based on a sample of 155 firms which responded to a questionnaire.

⁶The Minister of Industry and Commerce, Professor Welshman Ncube as reported in the Sunday Mail, 08 May 2011.

Table 3: Percentage of Establishments by sub-sector working at full capacity: 2006-2009

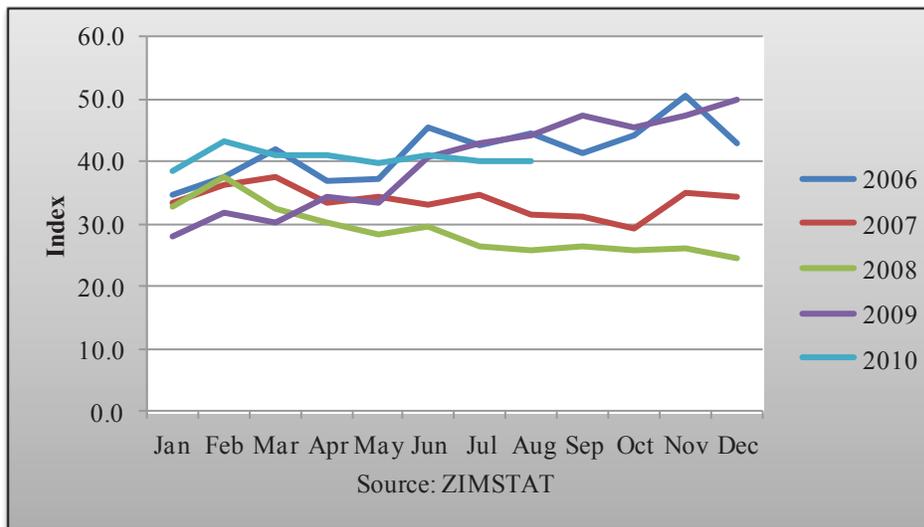
Sub-Sectors	2006	2007	2008	2009
Foodstuffs	29	7	0	7
Drinks & Tobacco	18	9	0	8
Textiles	38	25	13	14
Leather & Footwear	29	14	14	0
Wood & Furniture	14	14	0	0
Paper & Printing	36	18	0	0
Chemicals	25	10	5	0
Non-Metallic Minerals	50	0	0	0
Metals & Metallic Products	18	14	10	4
Transport Equipment	33	22	0	0
Other Manufacturing	14	14	13	29
All Manufacturing	27	13	5	5

Source: ZIMSTAT Business Tendency Survey, 2006-2009

Table 3 shows a gradual fall in the number of companies operating at full capacity over the years. As the economy started showing nascent signs of recovery in 2009, some sub-sectors registered an increase in the number of companies operating at full capacity. Notably sub-sectors such as foodstuffs, drinks and tobacco and textiles started operating at full capacity, although the numbers are still well below their 2006 levels. However, it is worrisome to note that in most sub-sectors, there were no companies operating at full capacity by the end of 2009, with the metals and metallic products; chemicals; as well as the leather and footwear sub-sectors actually registering a decrease in the number of companies operating at full capacity.

One of the measures used to measure the performance of the manufacturing sector and its sub sectors is the volume of manufacturing index; an index used to measure changes in the volume of production on a monthly basis. Selecting some few sub sectors which have been assigned larger weights in terms of contribution to overall manufacturing output (the weights are the relative output shares for the sub sectors relative to total output derived from the last Census of Industrial Production output) shows how the output from the sectors have also been declining over the years. Among those with bigger weights are metals and metallic products (221), drinks and tobacco (195), foodstuffs (135), chemicals (115), and textiles and ginning (110). The first three sub sectors will now be discussed in detail in turn.

The changes in the volume of manufacturing index for the food sector are also reflective of this downward trend in production levels (Figure 3).

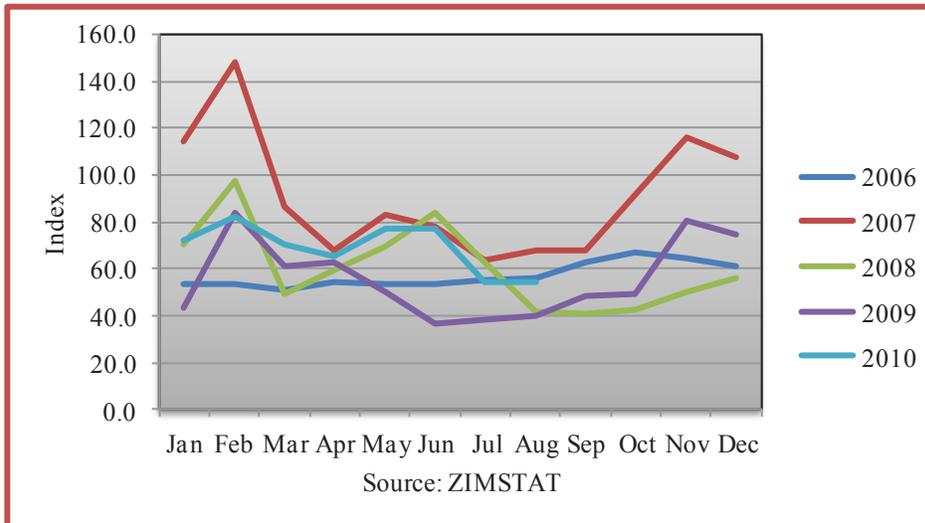
Figure 3: Volume of manufacturing index for the food sector, 2006-2010, Zimbabwe

The indices for the foodstuff sector show that generally, output over the months was higher in 2006 compared to the other years, except towards the end of 2009 when some showed that the index was higher. On average, there was a consistent decline in output levels over the years, except in 2009 when some recovery was realised as reflected by the increase in the index. The recovery in the sector in 2009 was relatively rapid, as shown by the December 2009 index of 50 which significantly increased by more than 50% in comparison to its 2008 level (24.5%). This shows that on average, output production increased by more than 50% between 2008 and 2009 in the foodstuffs sector. In addition, the level of production by the end of 2009 had also surpassed its 2006 level during the same period, given that at 50%, the index is actually about 16.9% higher than its 2006 level (42.8%). Comparing this with the fall in the number of companies producing at full capacity given in Table 3, this could rather be contradictory. However, the implication is probably that although there were more companies producing at full capacity in 2006 compared to 2009, the level of output is offset by the total number of companies, which had increased substantially compared to the 2006 level. Thus although many of them were not producing at full capacity, in 2009, manufacturing companies in the foodstuffs sector were able to produce output which was about 17% more than in 2006. An increase was also apparent in 2010 in comparison with the 2009 levels between January and June.

The volume of manufacturing index has its base year set at 1990 (1990=100). This implies that at the end of 2009, the production volume in the foodstuffs sector was only at 50% its 1990 level, and it is also worrying that for the whole period under review, the production level was below its 1990 level.

Another key sub-sector in the manufacturing sector is drink and tobacco sub-sector. The trends in the volume of manufacturing index reveal a slightly different picture compared to the foodstuffs sector (Figure 4).

Figure 4: Volume of manufacturing index, drinks and tobacco subsector, 2006-2010, Zimbabwe

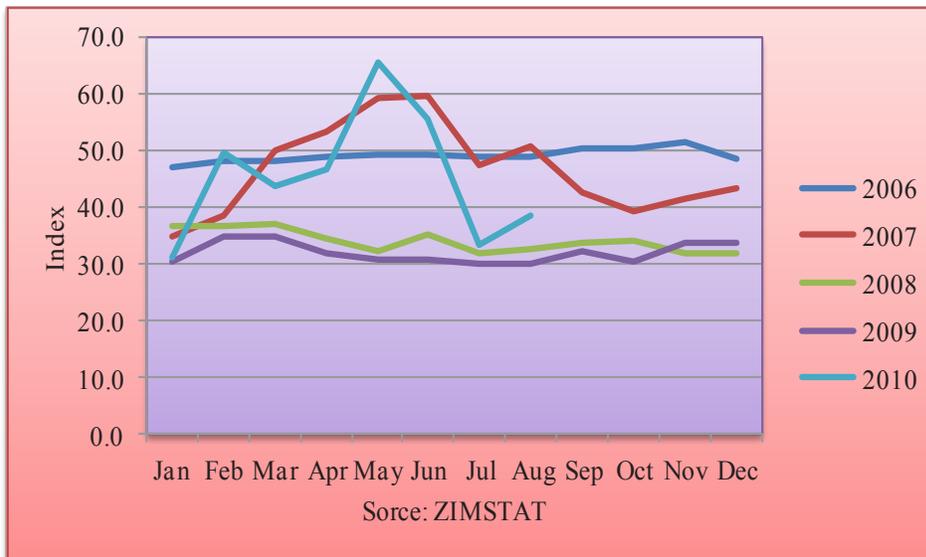


Over all the years, 2007 is generally the year with highest output levels, as the index for the year surpasses others almost across all months. It also turns out that over some months, the 2007 output was actually greater than its 1990 level (base year), particularly between January and March, as well as November and December 2007. In February 2007 for example, the output produced was more than 40% higher than its 1990 level.

Across the years over the months output levels fluctuated frequently; hence unlike the foodstuffs sector, there is no apparent downward pattern from 2006 to 2009. However, the trend for 2009 also shows that there was some improvement over the 2008 towards the later part of the year, with the 2009 output level for December being 34% higher than its 2008 level. However, taking the average index for each year over the month will reveal that on average, output in 2008 was higher than 2009, as the average production fell by about 7.7%.⁷ In addition, on average, output fell by about 33.9% in 2009 compared to 2007 where output was at its peak. In 2010, the recovery is also apparent as the index is greater than the 2009 level for the whole period to August 2009.

The sub-sector with the greatest weight is the metals and metallic products sector. The performance of the sector, as measured by the volume of manufacturing index, however shows an apparent downward trend between 2006 and 2009 (Figure 5).

⁷Adding across the months and dividing by twelve to get the average index for each year would result in an average index of 53.7% in 2009 compared to an average of 58.2% in 2008.

Figure 5: Volume of manufacturing index, metals and metallic products subsector, Zimbabwe

Although between the months of March and July, the year 2007 shows the highest indices, it is quite apparent that production level in the metals and metallic products have been on a successive decline each year compared to the previous year. In addition, the recovery experienced in late 2009 is not as pronounced as the other sub-sectors, given that there is only a marginal increase in the index in November and December compared to its 2008 levels. There was only an increase in output levels of about 5.27% in December 2009 compared to December 2008. The recovery was however rapid in 2010 as the graph shows a steep increase. A look at the mean index for each year will reflect better the downward trend in output in the sub sector (Table 4).

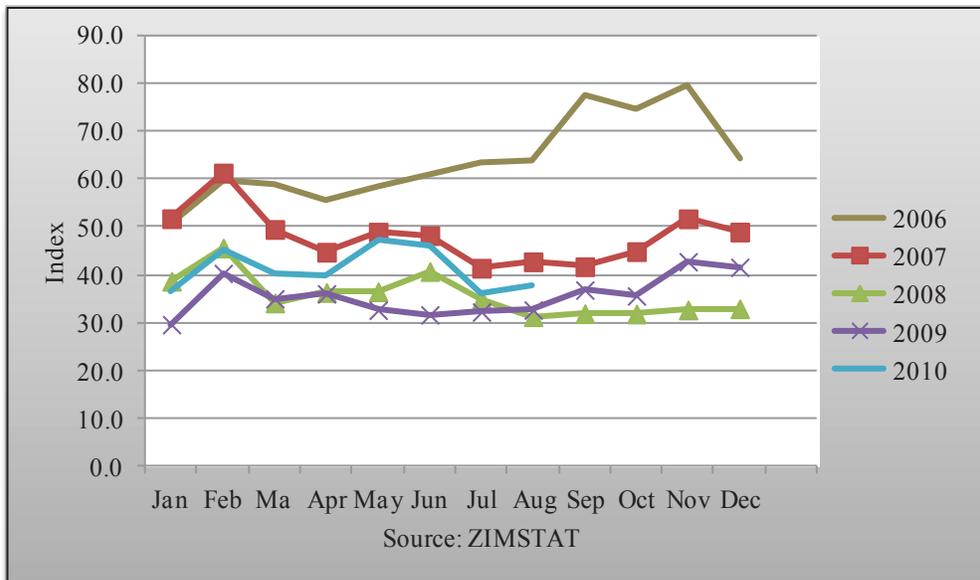
Table 4: Mean volume of manufacturing index for the metals and metallic products sub-sector, Zimbabwe, 2006-2009

Year	Mean Index	Percentage change
2006	49.2	-
2007	46.2	-6.097561
2008	34	-26.40693
2009	31.9	-6.176471

On average there was a very significant decline in 2008 compared to the previous year, as output fell by about 26.4%. Although there were signs of recovery towards the later part of 2009, on average output fell by over 6% compared to the 2008 output. During the four years to 2009, output had fallen by about 35.1%, which is a very significant fall.

Given the performance of the subsectors, it would be interesting to see how the manufacturing sector as a whole was performing. As expected, the volume of manufacturing index for the manufacturing sector also reflects the downward pattern over the period 2006-2009 (Figure 6). The indices for 2010 up to August⁸ have also been included, and these show that although the sector is recovering, the production levels still fall below their 2006 level.

Figure 6: Volume of manufacturing index, whole sector, Zimbabwe, 2006-10



The movement in the index is very consistent with most sub-sectors for the period 2006-2009, showing that the 2006 production levels are still above the subsequent years. However, the sluggish recovery towards the end of 2009 in comparison to 2008 is not quite apparent, as the two indices converge in December. However, the recovery becomes more pronounced if the 2010 index is brought into the picture. As can be seen, the index is above both the 2008 and 2009 levels all the way up to August, implying that the sector is registering some recovery in response to the economic stabilisation policies introduced by the inclusive Government. However, the situation is still worrying given that in August 2010; the level of output was about 41% below its 2006 level for the same period.

It is also not surprising that given the performance of the sub sectors, the volume of manufacturing index confirms that output levels for the whole sector are still well below their 1990 levels. In August 2010 for example, the index was below 40%, implying that output was more than 60% below its 1990 level. A lot still needs to be done therefore to ensure that the production levels are brought back to their 1990 level.

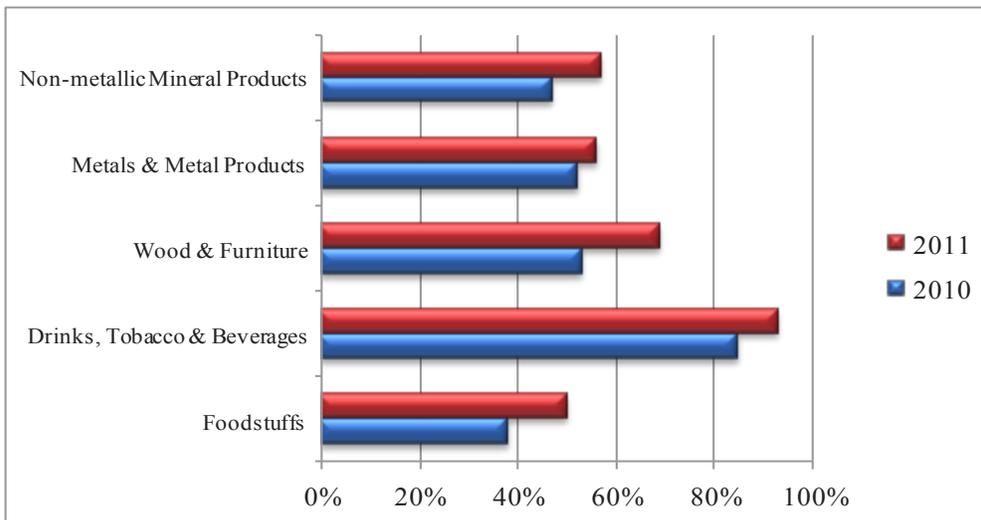
⁸Due to data limitations

A look at the current scenario would also reflect a pattern closely related to this historical evolution. Some positive developments have been recently witnessed in the manufacturing sector; after a negative contribution towards GDP of about 12% in 2008, the real sector contribution of manufacturing sector in Zimbabwe registered positive growth of 8% and 10% in 2009 and 2010 respectively (Ministry of Finance, 2010). During the first six months of 2011, the sector is estimated to have contributed 12% to GDP (Ministry of Industry and Commerce, 2011). While this positive development is noteworthy, there are several concerns in the sector which reflect that this growth is still lags behind full potential levels. For example, despite the existence of some challenges then, the manufacturing sector constituted about 24 per cent of GDP when measured in constant (1980) prices or 30 per cent in current prices in 1992, with manufactured exports estimated to have accounted for 33 per cent of merchandise exports (Ndelela and Robinson, 1995). This shows that the current performance of the sector is still well behind the 1992 levels.

According to the Confederation of Zimbabwe Industries (CZI) Manufacturing Survey of 2010, capacity utilisation remains the key challenge for many manufacturing firms, as the average capacity utilisation remained below 50%. Although there was an improvement in capacity utilisation from 32.2% at the end of the first half of 2009 to 43.7% at the end of the first half in 2010 (CZI, 2010), this was still far from satisfactory. In 2011, a further improvement was registered, with capacity utilisation increasing to about 57% (CZI, 2011). However, the two tier pattern is still apparent, as some sub-sectors are still facing serious capacity utilisation challenges.

High performing subsectors include the foodstuffs, drinks, tobacco, wood and metals which were able to utilise over 50% of their plant capacities in 2011. In addition, these subsectors all managed to register an improvement in capacity utilisation in comparison to 2010 (Figure 7).

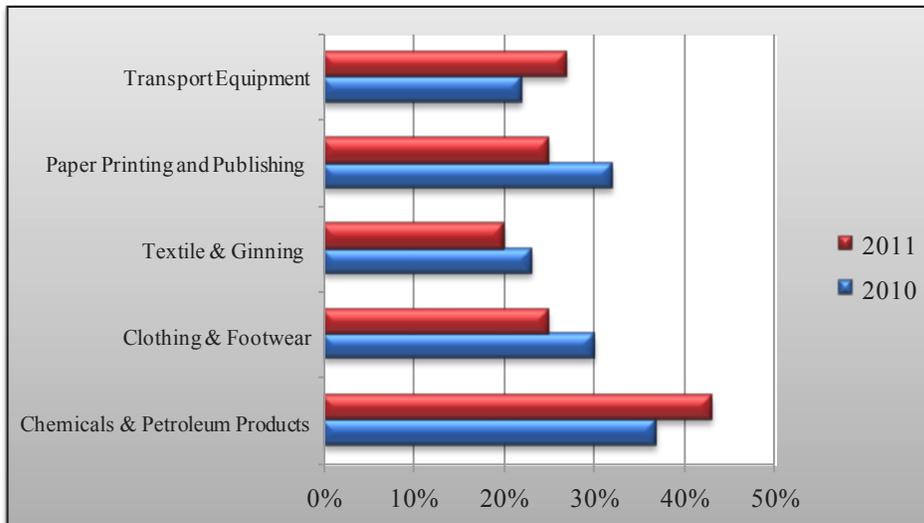
Figure 7: Capacity utilisation, high performing manufacturing subsectors, 2010 and 2011, Zimbabwe



Source: 2012 National Budget Statement

The situation was not too good however for the other subsectors, which registered poor performance. The chemicals, clothing and footwear, paper printing and textiles subsectors registered capacity utilisation that is well below 50%, with many of them seeing a further decline in capacity utilisation in 2011 compared to 2010 (Figure 8). The worst affected is the textile and ginning industry which are being outclassed by import competition.

Figure 8: Capacity utilisation (%) for low performing manufacturing subsectors, 2010 and 2011, Zimbabwe



Source: 2012 National Budget Statement

It is thus important to understand the specific challenges that are preventing the manufacturing sector from operating at full capacity in order to explore possible means towards ensuring that the sector is revived. This is done in the next section.

4.0 SPECIFIC CHALLENGES AFFECTING PLAYERS IN THE SECTOR: CASE STUDIES

4.1 Introduction

While challenges affecting the manufacturing sector can be generalized, there are some challenges which could only be specific to individual firms or specific products, calling for a different intervention strategy. As reported in the previous section, among the major subsectors which were found by the last Census of Industrial Production to be contributing more towards manufacturing production are metals and metallic products, drinks and tobacco and foodstuffs. In order to understand the major challenges affecting each of these subsectors, selecting some few companies in these sectors could serve as case studies for a better understanding of the sector.

4.2 Olivine industries: Coping with competition

Olivine Industries (Pvt) Ltd is part of the Industrial Development Corporation of Zimbabwe Limited (IDC) group of companies. IDC is a public conglomerate, incorporated through

an Act of Parliament (Chapter 14.10) in 1963, with a mandate to invest in industry as a state agency. Olivine was established in 1931, growing over the years to become one of the leading manufacturers in the country, supplying both the local and regional markets. Although Olivine Industries is a manufacturer of several (fast moving) products (such as margarines, candles, soaps, sauces, glycerine and the high protein meal used as an input into the stock feeds industry etc), the company's flagship product became its cooking oil brands. The company is also strategically located with five distribution centres in strategic areas of the country (Harare (2), Bulawayo, Gweru and Mutare).

The period of hyperinflation rendered Olivine an insignificant player in the cooking oil industry, with its products rarely found in the shelves among most fast moving consumer goods products. The company also failed to recover from the effects of the decline, as it is still struggling to recapture its market. When the Olivine cooking oil brand makes an appearance, it would be priced significantly above other imported brands, especially from South Africa, resulting in consumers preferring the latter. This has contributed significantly towards the company's viability challenges, as it is losing out to stiff competition from imports. The company is thus facing serious challenges and is now operating at well below its capacity.

The company thus attribute its failures to import competition, and believes its survival remain conditional upon changes in the tariff regime. The introduction of duty free imports, through the Statutory Instrument SI 191/2010 actually proved to be a major stumbling bloc, as this saw the influx of imported cooking oil being imported into the country at 0% duty, at a time when Olivine preferred duty of about 40% to effectively insulate it from the effects of cheap imports. Permitting the importation of the finished bottled cooking oil product duty free also causes a distortion in the market, given that the raw materials making the same products attract duty; imported crude soya bean oil (a semi processed raw material) attracts a duty of 5% while chips for blowing bottles also attracts 5% duty. This confers a comparative disadvantage to local companies facing shortages of the products in the local market. In addition, some of the products being sold in the domestic markets by foreign companies are actually being sold at cheaper prices in comparison to prices obtaining in their countries of origin. This could be a way of ensuring that their excess products are also sold, which is normally done at marginal cost prices rather than mark-up prices.

Importantly, even if foreign products can enter the market duty free, the costs of transportation and logistics are expected to create some upward pressure on the prices. It is the failure by Olivine Industries to gain comparative advantage during times when all raw materials are locally produced which is a cause for concern. According to Olivine, while the issue of duty is critical, there are also other factors that place the company at a disadvantage compared to foreign competitors, given that the per unit cost of production would be higher than those of other countries. Such factors include the following:

- (i) The per unit costs of electricity in Zimbabwe are higher than those being faced by competitors, which gives them some competitive edge in terms of pricing. This is

also compounded by load shedding, where generators would be used, which also increase the costs. In addition, some furnaces are expected to run continuously without stopping, resulting in power outages causing extensive damage to equipment which are expensive to repair;

- (ii) The country's labour laws are a hindrance towards quick adjustments given that it is almost impossible to lay off workers in tandem with the scaling down of related operations. This results in a huge wage bill, even at a time when most of the workers are redundant. In addition, the National Employment Council wages are always raised upwards even at a time when production is falling, thereby eroding profit margins. An example is one of the IDC companies, Powercell, which was forced into liquidation due to the high labour costs as it was forced to meet labour costs at a time when there were several challenges;
- (iii) Limited access to affordable long term lines of credit has posed serious challenge to the manufacturing sector. In consequence, companies operate with excess capacity, where the per-unit costs of production are higher. In addition, the aging and obsolete equipment which the company cannot replace due to lack of credit also exacerbates production inefficiencies. Currently, only short term loans are available, at high interests. In addition, the recovery of Olivine requires extensive recapitalization and retooling. Foreign competitors do not face such challenges.

The company thus believes the effective resolution of three key challenges, notably unfriendly labour laws, electricity charges and availability and access to finance, will undoubtedly result in the swift recovery of Olivine to assume its traditional leading position in the cooking oil market. In addition the repealing the Statutory Instrument SI 191/2010, which has allowed the local companies to be displaced by foreign products remains key in initiatives to resuscitate the operations of Olivine.

4.3 Almin Metal Industries: Demand driven supply

Almin Metal Industries (Almin) is one of the leading producers of metal products in the country. It produces aluminium products, used mostly in the construction and manufacturing industries as well as in the agriculture sector, where there are many aluminium products used as irrigation facilities. The products are also used in domestic household appliances, particularly cooking ware.

The company is also one of those severely affected by the economic decline, and is still struggling to recover from the resultant slumber. At the end of 2008, business was more or less coming to a complete halt, with Almin failing to undertake maintenance of existing equipment as well as sourcing spare parts. This was also compounded by persistent foreign currency shortages, with the RBZ surrender requirements imposing a tax on exporters who could not buy the much needed spares. As such, the company had to start from scratch with no inventories from previous periods when stability started in 2009. In addition, the equipment was not in the right shape to start production, hence rehabilitation became a priority amid

funding challenges due to lack of meaningful activity over the years. In addition, funding for raw materials, fuel and chemicals was a challenge.

The company was, therefore, able to commence operations on a very small scale in 2009, after managing to convince some contractors to start work on the understanding that payment would be made later. The company managed to get the plant running in 2009 and was able to sell only 124 tonnes of aluminium, which compares unfavourably with the 800 tonnes sold during peak times. Banks were generally not willing to finance orders, given the long term nature of the projects and there was a serious underutilisation of plants, with only about 12-15% of capacity being utilised.

In 2010, although working capital challenges continued to be a setback, some recovery was noted, with capacity utilisation increasing slightly to above 20% and sales jumping to about 226 tonnes. The problems persisted into 2011; where only about 350 tonnes are expected, representing a mere 40-45% of capacity utilisation. In view of attendant challenges the company has been unable to fully resuscitate its operations.

The major challenge affecting the recovery of the company is the low level of demand. The construction industry is the biggest consumer of Almin products followed by agriculture. The construction is currently depressed, with little commercial and residential going on, with the projects preferring steel to aluminium products. In the agricultural sector, irrigation activities that require the use of aluminium pipes are also subdued. Almin used to get a lot of orders from the Government, through the Department of Irrigation to spearhead various government programmes to set up irrigation systems. About 60% of the business used to be dominated by the agriculture related activities; hence lack of activity in the sectors is also affecting recovery of the company. This, therefore, implies that Almin can not recover to full capacity in isolation; even if the company were to get all the funding it needs now and produce many products, the company does not have a ready market for its products in the domestic economy. Against this background, subject to competitive pricing, Almin may need to explore new export markets.

This, however, does not imply that the company is in a position to produce on a bigger scale as there are many bottlenecks towards full recovery (in addition to lack of demand). First, the company will continue to play second fiddle to other international players as it is not competitive on the international market due to high costs of production in Zimbabwe. The high cost of utilities, particularly for electricity and water, results in high production costs. On average, Almin pays about \$20,000 for electricity and \$6,000 for water every month, which imposes a significant burden on the overall cost structures. In addition, the Zimbabwe labour laws cause distortions in the local market as it imposes high per-unit labour costs, in comparison with some companies in the region such as those in Botswana and Zambia. Secondly, some products from outside the country are cheaper than those of Almin; some of them are smuggled through the border posts while others are cheaper as they are of such low quality that the consumers would be duped into buying them. Third, the costs of borrowing are prohibitive and access to cheaper funding remains difficult. It does not make

much business sense to borrow from banks at high interest rates in a market that is so risky. Banks have since indicated that they are now ready to fund projects, but companies can not tap into the resources as they are so expensive.

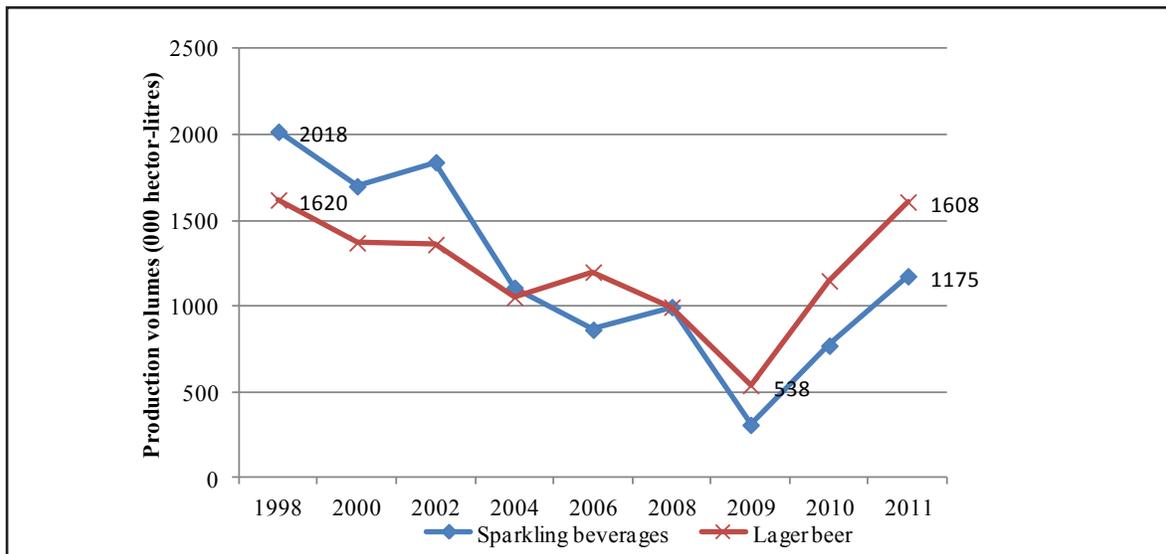
According to Almin the solution to resuscitating the metal products manufacturing sector lies with the Government. There is need to protect the local industry against unfair imports as well as to boost demand in the local market through policies; there is need to stimulate other sectors for all sectors to move in tandem.

4.4 Delta Corporation: Rising above the turbulent waves

Delta Corporation Limited is Zimbabwe's leading manufacturer of alcoholic and non-alcoholic beverages, with some interests in the Agro Industrial processing sectors as well. The company has been listed on the Zimbabwe Stock Exchange, since 1946. The company's beverage business primarily focuses on the manufacturing and distribution of Lager beer, Traditional Sorghum beer and Sparkling Soft Drinks. In that regard, the company has two Lager beer breweries; two soft drinks plants; 15 sorghum beer production centres; two Malt processing plants and one non-alcoholic traditional beverage (Maheu) plant.

Delta is regarded as one of the few companies that managed to hold their own during the period of hyperinflation and recovered very well following economic improvements. The path to recovery from the 2009 low level was very steep, particularly in the lager beer business though the company is yet to reach its all time high levels of 1 620 000 hecto-litres in 1998 (Figure 9). The same recovery pattern is also prevalent in the sparkling beverages market, where there has been an upward trend after 2009 although the production levels are yet to reach their 1998 level (Figure 9). However, for both the lager beer and the sparkling beverages industries, the company managed to keep some level of business going relatively well given the circumstances.

Figure 9: Delta Corporation Zimbabwe production volume patterns, 1998-2011



As evident in Figure 9, although the company is still to reclaim its production levels to their historic all time high, somehow the recovery is not as sluggish as the trend in most of the companies in the manufacturing sector. Indeed, there are indications that the company has managed to come out of the crisis; according to Delta, capacity utilisation for the larger business, sparkling beverages, sorghum beer now stands at about 78%, 84% and 59% respectively. Generally, capacity utilisation for the beverages sector now stands at 67% (Delta, 2011). Between 2009 and 2011, the company launched several new products, taking advantage of the improvements in the economy and these include ten new products in the lager beer business, 35 new products in the sparkling beverages market and six new products for the Maheu market (Delta, 2011). This implies that the company was thus not caught unprepared when the developments took place.

According to the company, they managed to prepare themselves during the crisis in order to be ready to seize opportunities brought about by political and macroeconomic stability. In other words, they were not only able to prepare for normalcy during the crisis, but they were also able to quickly recognise the start of normalcy and fully exploited the arising opportunities. They managed to retain their key skills during the economic crisis, with sound personnel training and development programmes being conducted locally at Delta Technical Institute and Mandel Training Centre. Most importantly, Delta managed to second some of their key personal to other countries in the SABMiller (the largest shareholder) and Coca-Cola Systems in Africa to prepare them for top leadership positions. In addition, the company also entered into strategic alliances with other companies, including acquisitions of raw material suppliers as well as those engaged in foreign exchange business, as a survival strategy, a position which is now being reviewed after normalcy had returned through disinvestments.

However, although the company has survived the crisis, there are still a lot of challenges that are hampering full recovery, particularly to the 1998 level. Key among these are factors that are giving rise to higher per-unit costs hence squeezing out profit margins and hence investment opportunities. Such factors include high power costs and unreliable electricity supplies as the power situation in the country is very inefficient and imposes high production costs. In addition, the labour laws are very restrictive, it is difficult to rationalise staff and it is also difficult to contain labour costs as NEC wages are increased almost every year when all other factors, including inflation, are stagnant. In addition, transportation costs are unreasonable due to the inefficiency of the railways, while water charges are too high due to the inefficiency of the local authorities. What is also an issue of concern for the company is the liquidity crisis in the market; funding at reasonable rates and periods is not available currently and this also makes borrowing for further expansion difficult.

4.5 Willowvale Mazda Motor Industries: Informalised out

Willowvale Mazda Motor Industries (WMMI), established by the Ford Motor Corporation of Canada to assemble the Ford range in 1961, is now part of the IDC group of companies, after

being purchased by IDC in 1967. In 1989, due to foreign currency and other technological challenges, the company sought a technical partner, which saw Mazda Motor Corporation of Japan coming on board in a joint venture agreement with IDC and Itochu Corporation of Japan. This alliance is credited for the productivity and world class technology used to produce quality vehicles for Zimbabwe and the region over the years.

WMMI can be regarded as one of the companies that are finding the going tough despite recent improvements in economic activity. The company attributes this to low incomes of consumers, who can not afford to buy new vehicles. However, it was also acknowledged that the type of vehicles that are currently being assembled are not lower end products as they are only meant for the higher end consumers. This has resulted in a mismatch between demand and supply, as consumers could have probably preferred buying new low end products which are no longer being produced.

Most of the challenges the company experienced during the economic crisis are still continuing. The company has aging equipment with no funding to replenish them. In addition the company has since lost the market to the informal market, characterised by small scale players importing second hand vehicles for resale, mostly from Japan. The company admits that even companies now prefer buying second hand vehicles rather than new ones from WMMI.

WMMI has since realised that the range of cars currently in production is slightly at odds with the market. However, this mismatch is largely a result of the agreement with Mazda Motor Corporation of Japan; the company has since shifted its attention from the low end products (like the Mazda 323s) to the high end products (e.g the BT-50), which makes it difficult for WMMI to make products which ordinary Zimbabweans can afford. The company is thus in the process of looking for another partner in a bid to come up with products that could be suitable for the local market.

WMMI also used to benefit from Government procurement regulations, where priority should be given to local institutions when procuring vehicles. However, currently government institutions also shun WMMI, preferring to import vehicles and in the process promoting foreign companies at the expense of WMMI. This could have seen WMMI gaining some significant business and probably be slowly getting to its feet.

The biggest challenge for WMMI therefore remains how to timely produce products which can compete effectively with second hand vehicles being supplied by the informal sector. In addition, some companies in South Africa for example have benefitted from their government's support programmes, which see their vehicles landing in Zimbabwe cheaper than WMMI vehicles due to rebate from the government's export subsidy programme under the Motor Industry Development Programme (MIDP) of 1995.

4.6 Emerging issues

While the firms are generally from different sectors, it can be established that there are many common challenges which, if addressed, could result in an improvement of companies across all sectors. Common issues include the following:

- Unavailability of cheaper and long term funding, needed for refurbishing run down machines as well as for boosting production for expansion purposes;
- High charges for utilities (electricity and water), which result in companies losing comparative advantage in comparison to international companies. This is also compounded by the inefficiencies in the production process by ZESA and local authorities, as well as load shedding which necessitates the use of costly alternatives such as generators; and
- Labour laws are too protective of employees at the expense of employers. Under a crisis, companies need the flexibility to hire and fire workers to align the labour costs with the general production volumes, a situation which is difficult in the country as high labour costs are imposed by the labour laws.

In addition, import competition is also attributed to the dismal performance of most firms, particularly in the food sector, where the local products have been displaced by foreign products in the market. However, given that the Ministry of Finance has already responded by re-introducing duty following the expiry of Statutory Instrument SI 191/2010 through the 2011 Mid-Year Fiscal Review Statement, the situation is expected to improve. Other challenges also include the unavailability of local demand to warrant an increase in production, a situation which prevails in the metals and metallic products industry, restricting the production of the products. Licensing and other costs are very high and negatively affect business. The overall cost of doing business needs to be lowered, with too many regulatory approvals needed. For example a company dealing in chemicals deemed hazardous has to have a license to store these chemicals, another license to transport these chemicals and another license to sell these chemicals, which is a licensing overload.

These challenges form the key issues which have to be addressed for the recovery of the sector. The findings are also consistent with those from the Business Tendency Survey, January to April, 2010 by ZIMSTAT (Table 5) when the firms were asked to mention the bottlenecks to recovery. It can be established that liquidity challenges is considered the major hindrance across all sub sectors while a weak domestic demand and shortage of raw materials (local and imported) are also considered as issues requiring attention.

Table 5: Key challenges affecting the manufacturing sector per industry, Zimbabwe, 2010

Constraints	Food Stuffs	Drinks & Tobacco	Textiles	Leather & Footwear	Wood & Furniture	Paper & Printing	Chemicals	Non Metallic Minerals	Metals & Metal Products
Shortage of Local raw materials	19	13	8	5	19	15	5	4	10
Shortage of imported raw materials	8	3	8	11	0	11	9	7	6
Weak domestic market demand	17	16	17	21	15	7	20	19	20
Weak export market demand	0	3	4	5	0	0	4	4	6
Heavy competition abroad	6	0	17	5	4	7	4	0	8
Breakdown of machinery	8	10	8	5	12	19	18	22	7
Shortage of machinery spare parts	3	6	0	0	12	4	4	15	4
Shortage of skilled personnel	0	0	0	11	4	4	5	7	1
Cash flow difficulties	25	29	33	32	35	22	25	22	30
Other	14	10	4	5	0	7	2	0	6
Total Percentages	100	100	100	100	100	100	100	100	100

With the challenges in mind, it is also important to understand how other countries were able to map out strategies to deal with challenges in their own countries before prescribing some recommendations. This is done in the next section.

5.0 COUNTRY EXPERIENCES: BAILING OUT THE MANUFACTURING SECTOR

5.1 SINGAPORE⁹

Singapore's economic transformation was driven by manufacturing in addition to finance and business services. Manufacturing has generally been contributing more than one-fifth of Singapore's gross national output since 1970, and accounted for about two-thirds of domestic exports in addition to being the country's largest employer of labour (Teo and Ang, 2001). However, a look at how the manufacturing sector evolved would reveal that it was largely due to supportive the government policy initiatives that the sector ended up being successful. The manufacturing sector progression can be looked at during four reference periods; the 1960s, the 1970s, the 1980s and the 1990s.

As Singapore was still a third world country, the Government adopted policies aimed at creating labour intensive industries during the 1960s. In 1961, an institution was established to put in place a programme that would bring in industries which would be labour based. The institution, the Singapore Economic Development Board (EDB) was expected to create incentives and an environment conducive to industrial development at a time when the image of Singapore as an investment destination was not known.

⁹The information on this subsection was largely obtained from Teo and Ang (2001).

On realising that EDB had too many functions, in 1968 another institution, the Jurong Town Corporation (JTC) was established and it took over part of the functions, mostly the development of industrial estates. The transformation of swampy land of Jurong into Singapore's first manufacturing base known as the Jurong Industrial Estate (JIE), was done under the jurisdiction of JTC. Incentives were given to attract all types of industries to set up shops into the Jurong Industrial Estate, which saw factories producing garments, textiles, toys, wood products and beauty products being set up. In order to attract foreign investors into the JIE, the EDB set up offices overseas with its first centres in Hong Kong and New York to attract foreign investments from these countries into Singapore.

The 1970s saw a shift into the approach as more capital intensive industries were now preferred. This was mainly facilitated by both the EDB and JTC, with EDB assisting industries to build up their technological capabilities while JTC stepped up the development of the existing industrial estates. This saw more high-tech oriented manufactured products such as computer parts, computer peripherals, software packages and silicon wafers. Investors were attracted into investing more in electronics, resulting in a significant entrance of multinational companies into the economy. The presence of multinational companies also saw an increase in research and development activities as these companies capitalised on their international presence to diffuse technology into the countries, resulting in growth of the manufacturing industries.

The EDB also strengthened its overseas presence and investor courting; between 1971 and 1976 it set up new centres in Zurich, Paris, Osaka and Houston. To ensure that the change in economic focus was also matched by availability of skills, training programmes were introduced. These include the Manpower and Training Unit, established in EDB to focus attention on industrial training, as well as the Overseas Training Programme, set up in 1971. The Overseas Training Programme focused on placing young Singaporeans in apprenticeship in Germany. In addition, EDB was instrumental in seeing off the establishment of the Joint Government Training Centres with Tata of India, Philips of Holland and Rollei of Germany. This speeded up investment into Singapore and also facilitated the easy transfer of skills.

The 1980s can be described as the period when Singapore now turned into technology-intensive activities including research and development (R&D), engineering design and computer software services. This saw the EDB, through the Skills Development Fund, setting up various institutes of technology as a way of meeting the manpower demands from such industries. The institutes were set up in collaboration with the Japanese, Germany and French governments. This saw young Singaporeans undergoing training in specialist technical skills in electronics and engineering.

In addition, the Government chipped in with another initiative; the setting up of the Singapore Science Park (SSP), to provide a focal point for research, development and innovation in Singapore and the Asia-Pacific region. Set up in 1980, the SSP has now become Southeast Asia's most prestigious location for R&D. It houses more than 200 MNCs, local companies and research institutes, including companies such as Sony, Exxon Chemical, Silicon Graphics,

Lucent Technologies, British Petroleum, Seagate Technology International, Centre for Wireless Communications and the Institute of Microelectronics. In order to allow the advancement of information technology to enhance industrial competitiveness by cutting off costs, the Government also established the National Computer Board (NCB) in 1981.

Through the advancement of technology intensive industries, Singapore began to manufacture items such as integrated circuits, computers, industrial electronic equipment and specialty chemical products. However, although international corporations were encouraged, the promotion of local enterprises also continued to be pursued. For example, The Small Enterprise Bureau, set up in 1986, focused on helping the local small enterprises to grow by addressing the needs and problems they faced. All local enterprises also benefited from the Government development assistance programmes catering for the needs of local businesses. These include the Local Industry Upgrading Program, which was aimed at building up the international competitiveness of local industries in order to bridge the gap with their multinational counterparts and forge closer ties between them.

The 1990s saw the economy being turned into one where knowledge-driven industries were playing a major role. The NCB set up data exchange standards and information networks to enable electronic transactions and upgrading manufacturing operations. Networks established included the Electronic Data Interchange for Manufacturing (EDIMAN), which was set up for the chemical and precision engineering industries and the Manufacturing Resource Planning (MRP) Online, set up for SMEs in the electronics and precision engineering industries. EDIMAN was a joint initiative by EDB, NCB and the Productivity and Standards Board (PSB), established to promote the use of electronic data interchange standards for the manufacturing industry, after a survey by EDB in early 1993 had revealed that many MNCs were keen to have EDI links with their local suppliers.

This sums up the backbone of Singapore's manufacturing success; policy initiatives which transformed the sector from a labour intensive one into one which is highly capital and technology intensive. Although companies played a big role in boosting the sector, it was the government that led the initiatives by putting in place conducive measures for the private sector to thrive. The measures were also complemented by a general high rate of savings, as Singapore encouraged savings in a big way, mainly through the Central Provident Fund, resulting in high savings rates then becoming a growth driver as well.

5.2 TAIWAN

A look at the evolution of Taiwan's manufacturing sector reveals that key among the pillars behind its success was the SMEs sector. The SMEs were mostly cottage industries, relying largely on easily accessible surplus labour in rural areas and they dominated the manufacturing sector. For example, in 1954 SMEs constituted 99.43 percent of Taiwan's total manufacturing firms, which changed to 95.26 percent in 1976 and 98.07 percent in 1996 (Hu M, 2003). In addition, among the SMEs in the sector, those operating on a very smaller scale, employing fewer than 10 persons, dominated the manufacturing sector in the 1950s, as these accounted for 90 percent of all firms (Hu M, 2003).

The same pattern is also reflected in terms of employment shares for the SMEs against larger scale manufacturing companies. In 1961, SMEs took 57.59 percent of the manufacturing sector's total employment although this started declining in the 1970s, when the larger firms took the lead in creating jobs, resulting in a decline in the SMEs employment share (Hu M, 2003). However, the SMEs firms generally expanded over time; in the 1960s many smaller firms expanded into relatively larger units, with the number of firms with 100 or more employees increasing (Hu M, 2003).

The government policies that were intended to transform the economy using the sector were therefore cognisant of the existence of the SMEs sector. As a result, when the export-oriented industrial policies were introduced in the 1970s, Taiwan's SMEs also benefited from the incentives put in place. The SMEs are estimated to have contributed about 70 percent of Taiwan's total exports in the late 1970s and early 1980s as about 70 percent of their total output was exported (Hu and Schive, 1998). In addition, the Taiwan government ensured that a dualistic financial system existed to benefit the SMEs sector in accessing credit. This included a formal financial market, where exporting SMEs could get subsidized export loans (Hu M, 2003) and the curb market, an unofficial, largely unregulated financial market involving small borrowers and lenders. The curb market in Taiwan grew substantially, such that in 1986, the ratio of the curb market to total bank borrowing was 48% (Phylaktis K, 1999). In addition, in order to ensure that a high-tech SMEs sector develops, the government formed a venture capital industry in the mid-1980s, operating under government guidance (Hu M, 2003).

However, not all government policies were intended for the SMEs sector, although they ended up benefiting as well as they grew bigger. The government also put in place institutions and platforms to allow private manufacturing firms an opportunity to grow. The Industrial Technology Research Institute (ITRI) was set up in 1974 by the government, to act as the national centre for promoting industrial technology (Liu, S 1998). It was established through a merger of the three research organizations: the Ministry of Economic Affairs (MOEA) the Union Industrial Research Laboratories, Mining Research & Service Organization, and the Metal Industrial Research Institute, into a private corporate entity.

ITRI is part and parcel of Taiwan's successful economic turnaround. As part of an agreement with the Radio Corporation of America (RCA), ITRI engineers were dispatched to the U.S. for training, and they are credited for successfully bringing semiconductor manufacturing process technology back to Taiwan, which became the foundation of Taiwan's semiconductor industry. ITRI was also instrumental in the setting up of the first manufacturing process for silicon wafer (1980); for the successful development of IBM-compatible personal computers, which lead to the prospering of the IT industry (1983); the development of the Carbon Fiber Bicycle Development (1985); R&D of Photoresistant Dry Film (1986) among others¹⁰.

¹⁰Industrial Technology Research Institute milestone, obtained from ITRI website <http://www.itri.org.tw/en/about/article.asp?RootNodId=010&NodId=0103> accessed 19 May, 2011.

The Taiwanese government also set up the Hsinchu Science-Based Industrial Park (HSBIP) in 1980, as a platform to attract investment in advanced technologies and high-tech enterprises. The Taiwan Semiconductor Manufacturing Company (TSMC) was the first big institution to be set up at the park in 1987. TSMC was a result of government initiatives, the aim being to create a world-class firm that would raise Taiwan's semiconductor industry to the level of very large scale integrated circuits. The idea was to create a private company, where government does not have more than 49% of shareholding and investment. Thus when officially launched, government investment in TSMC was 48.3%, with Phillips of Netherlands having 27.5% and the general public shareholding amounting to 24.2% (Liu, S 1998).

The HSBIP became the hub of Taiwan's high-tech economic miracle and is regarded as central to the development and transformation of the manufacturing sector into a high-tech growth pole. It was set up under the supervision of the National Science Council with an independent authority the Science Park Administration, being set up to manage the administration of the park, under the budget of the central government . In order to lure investors into the park, a series of incentives were put in place, which include a five-year tax holiday, venture capital from the government, low interest loan, reduced land rent, no limits on foreign equity, and ultramodern R&D facilities. Many manufacturing industries were developed into the park, most of which were the backbone of the country's economic miracle, and these include integrated circuits, computers and peripherals, telecommunications, opto-electronics, precision machinery and biotechnology (Chou T, 2007). Sales from industries in the park reached about US\$ 30 billions in 2000, which represented about 36.4 percent of total manufacturing GDP in Taiwan. Exports from the park represented 28 percent of Taiwan's total exports in electronic, electrical machinery and information communication products (Chou T, 2007).

Thus, Taiwan's approach towards boosting the manufacturing sector was characterised by boosting the SMEs sector and providing incentives and infrastructure for the manufacturing firms to tap in to gain competitiveness in the export market. Complementary measures also include investment in education, which was also key to Taiwan's success as well as the alignment of Government, labour and industry towards a common goal of competitiveness.

5.3 SOUTH AFRICA

The South African manufacturing sector has been transformed over the years, with periods of high growth and stagnation during the later years. However, the period of high growth provides an interesting picture, as it coincided with the time of restrictive and protectionist regime in South Africa, with barriers to entry and active participation of the state in economic activity. It can be established that the protectionist attitude towards the manufacturing sector dates back to the 1880s when monopoly concessions were awarded to local businessman to promote local production. This saw several monopolies emerging, particularly in the explosives, bricks, cement, tiles, liquor, sugar, leather, paper, gas and electricity products with incumbents protected from competition through the monopoly concessions (Schneider G. E., 2000).

The manufacturing sector growth was, *inter alia* attributed to huge public sector investments which facilitated the growth of production. The industrial policies pursued also facilitated the growth of the manufacturing sector, for example, between 1925 and 1973, the government of South Africa pursued an active policy of import substitution, and this was intended to stimulate domestic manufacturing and state investment in key sectors of the economy. The manufacturing sector was shaped by a sound interactive relationship among the state, state corporations, private players and the mining sector. The relationship emanated from the creation of huge state-owned corporations, protection of domestic industries, provision of a guaranteed local market for new industries, state repression of labour and a ready pool of funds from mining initiatives (Schneider G. E., 2000).

The South Africa manufacturing sector also managed to benefit from the existence of natural resources in the economy. Unlike many countries in Africa where profits generated from mining activities are repatriated by the foreign owned companies to their countries of origin, South Africa was able to introduce measures where the profits generated from gold and diamond mining would be re-invested in the local market. The measures introduced to encourage industrialisation made production for the local market more profitable than exporting, and gave an incentive for mining entities to ensure that their profits are pooled for use by manufacturing firms. It is believed that key to these policies was the Tariff Act of 1925, which resulted in tariffs being imposed on imported goods to make locally produced goods more competitive. The tariff rates under the Act, ranging between 20 and 25 percent, were significant enough to make it quite profitable to produce for the domestic market, particularly due to the availability of investment funds available from gold mining profits. In addition, new banking laws were introduced, which created difficulties for South African banks to move funds out of the country in bulk. Coupled with other incentives provided by the Government, the manufacturing sector became extremely profitable to invest in (Schneider G. E., 2000).

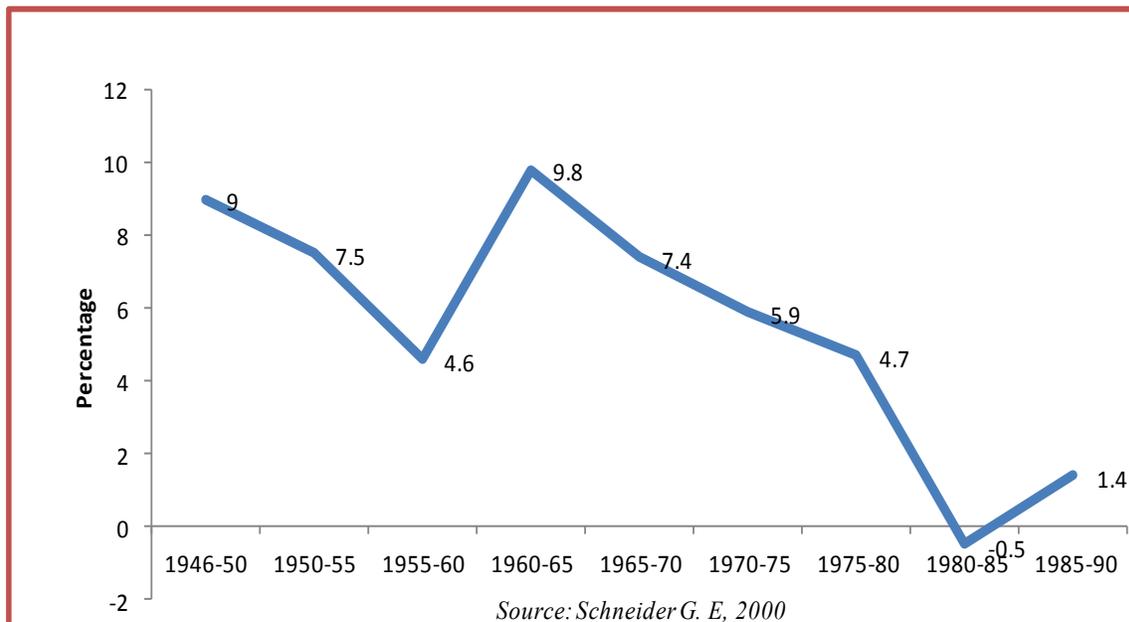
The success of the manufacturing sector is also attributed to a vibrant steel industry, spearheaded by a state-owned entity, South Africa Iron and Steel Company (ISCOR), established in 1927. Steel products were a critical input in the vibrant mining industry and proved critical in the emergence of an engineering sector. ISCOR also benefited from cheap electricity from Electricity Supply Commission (ESCOM), a state owned power utility established in 1923. ISCOR thus became more competitive in comparison to internationally produced steel.

By the late 1930s, an apparent pattern was noticed where imports were still significant despite moves towards reducing them for locally produced goods. Thus the Board of Trade and Industries was engaged in an assurance campaign, where business people were told that they would be given the lucrative protection measures upon the establishment of certain essential new industries. This is attributed to the stimulation of the local production of agricultural implements, electric motors, certain chemicals, pulp and paper, and textiles through new industries (Schneider G. E., 2000).

The South African government also took measures to ensure that access to funding is improved, after many firms had indicated that they were having some problems in accessing funds for further expansion. The Industrial Development Corporation was thus set up in 1940, with a mandate to provide funds for new or expanding industries. Over the years, IDC invested in several industries, which include phosphates (1952), copper (1963), coal-based chemicals, synthetic rubber (1962), Alusaf aluminium smelter (1967) and industrial chemicals (1967).

Thus the growth of the South African manufacturing sector during the period can be explained by the provision of state financing, stronger protectionist measures, and active participation by the state in the economy. Since the mid 1970s to the early 1990s however, although the some growth continued to be witnessed, the growth of the South African manufacturing sector had decreased (Figure 10). The stagnation of the manufacturing sector since the 1970s can be attributed to many explanations. These include insufficient attention given to the achievement of technological autonomy; restrictions on black labour that limited mobility, training, education, and the size of the domestic market; domestic unrest generated by apartheid; international sanctions and disinvestment generated by apartheid; and costly state programs, including uneconomic new state corporations.

Figure 10: Manufacturing sector growth rate, South Africa, 1946-90



5.4 BRAZIL

The manufacturing sector is also regarded as one of the keys to Brazil's economic development, particularly during the late 1950s and the 1970s. This was achieved under the broad industrialization policy of Brazil, whose major objective was to replace imported manufactured products with local ones. Policies which aided the manufacturing sector include the import substitution policies which were followed from 1945 until 1980s and

encompassed export promotion strategies in 1968. The manufacturing sector responded well to these policies; the share of the manufacturing sector to GDP increased from 20 to 30 percent between 1966 and 1974, while the sector's export share to total exports increased from about 6 to 16 percent in the same period. Between 1964 and 1974, Brazil's manufactured exports increased eighteen fold in dollar terms, at an average annual rate of 33 percent (Carvalho J. L and Haddad C S., 1980).

The early phase of the import substitution period (1946-53) was characterized by a highly overvalued exchange rate. Under this system, foreign exchange available for imports was divided into five categories and auctioned off. In general the exchange rate system and other incentives laid a basis for import substitution of finished consumer goods and food products. The most-preferred import category was chemicals and capital equipment. Its nominal exchange rate was usually one-third that for the least-favoured finished consumer goods import category (Carvalho J. L and Haddad C S., 1980).

During the import substitution period in Brazil (1950-90), restrictions were imposed on imports through high tariffs for manufactured products, with applied tariffs fluctuating around 25%. This allowed manufacturing firms to prosper, and the industrial sector, which was mainly the manufacturing sector, expanded rapidly to reach 40% of GDP in the 1980s (Lattimore R. and P. Kowalski, 2008). However, this growth was mainly at the expense of the agriculture and service sectors, as resources were deliberately moved to the areas of manufacturing. The import substitution program resulted in the broadening and deepening of the non-food manufacturing sector, as a large number of large manufacturing sub-sectors were developed in Brazil over this period. This saw the expansion and growth of the machinery and equipment manufacturing, the automotive and aviation industry, chemical manufacturing and textiles, clothing and footwear manufacturing (Lattimore R. and P. Kowalski, 2008).

In 1990, the government abandoned its restrictive regime in favour of a liberalised regime, resulting in significant reductions in trade barriers encompassing goods and services, tariff and non-tariff barriers and quantitative restrictions. This saw the simple mean tariff on non-agricultural products falling from 33% in 1990 to 13% in 2005 (Lattimore R. and P. Kowalski, 2008). Trade liberalisation also had some negative side on manufacturing as some firms, which had been incentivised into joining the Brazilian market due to the high levels of protection during the import substitution programme opted out after liberalisation. For example, in the fine chemical industry alone, it is estimated that about 1451 industrial projects were stopped or not continued in the decade following trade liberalisation (Lattimore R. and P. Kowalski, 2008). However, many industries were already flourishing and had gained some comparative edge in the market.

5.5 Emerging issues

While the success of the manufacturing firms, especially in Singapore and Taiwan, was due to the firms' innovativeness and abilities, the determinant role was played by the Government.

The governments of Brazil and South Africa also played significant roles, although not as pronounced as in the other countries. Once a decision was made to use the manufacturing sector as the driver, the government created incentives and made financing available to ensure that companies can take advantage. The incentives include conducive infrastructure, protective measures, promotion incentives aimed at attracting FDI through overseas centres and efforts to make funding available to the manufacturing companies.

6.0 CONCLUSIONS AND RECOMMENDATIONS: DRAWING LESSONS FOR ZIMBABWE

6.1 The role of Government

The Government of Zimbabwe should play a critical role in ensuring that the manufacturing sector is developed to become a useful economic anchor in addition to mining and agriculture. As seen from the experiences of other countries, it is the Government that has to set the tone for the pace of the manufacturing sector growth. Although there have been some efforts made by the government to assist the sector, the efforts were not enough to bail it out as revealed by the low productivity levels. Among the roles that Government can play to drive the sector firmly onto a sustained growth path are the following:

Mobilising financial resources

One key expectation from the companies is for the Government to mobilise resources to ensure that the companies get cheap funding rather than borrowing from banks. The inclusive government has made some strides towards this, given that a number of initiatives towards mobilising finance have been initiated. On 9 March 2011, Government signed the US\$100 million Zimbabwe Economic and Trade Revival Fund (ZETREF) with AFREXIMBANK. This was specifically intended to provide funding for the manufacturing sector, particularly for refurbishment of plants and procurement of raw materials. The Government also signed the Bilateral Investment Protection and Promotion Agreement (BIPPA) with the Republic of Botswana on 21 March 2011, which is intended to unlock about P70 million lines of credit for local industry (MoF, 2011).

However, a look at what is obtaining on the ground reveals that these initiatives have not been of any meaningful benefit to the companies. Some of the manufacturing firms contacted during the study indicated that they have never heard of the ZETREF facility which is actually expected to benefit them. Those who indicated that they had knowledge about the facility indicated that having access to the funds is still a challenge, given that the disbursement mechanisms of the money from the banks are still enshrouded in mystery for the manufacturing firms. It was also pointed out that the banks that were tasked with the disbursement of the funds (TN Bank, FBC Bank, Bank ABC and NMB Bank which have signed agreements with AFREXIMBANK on the modalities of the facility) have not yet done enough to market the initiative. This implies that Government did not plan the logistics for accessing the money with the urgency the matter deserved.

The difficulties in the ZETREF facility were also acknowledged by the Finance Minister during a debate in Parliament¹¹. The Minister pointed out that while the facility has been operational since September, 2010, only 7 percent of the funds had so far been disbursed, with the slow uptake of the funds also being a cause for concern to the Ministry. There is therefore need for the Ministry to take corrective measures, particularly by ensuring that the marketing of the facility is improved while the disbursement mechanism by the banks is reviewed.

The funding that was expected to flow to the manufacturing sector from the BIPPA is also characterised by challenges for the manufacturing firms. Enquiries by some manufacturing firms on the disbursement mechanism revealed that one of the criteria used to benefit from the scheme is the volume of business that the company is doing in Botswana. Given that most of the companies have not been exporting while limited resources have also been preventing them from importing, many companies will not be able to access the funds. This implies that the Government still has a lot of work to do in mobilising cheap resources for manufacturing firms.

Although this is a standard measure by banks, manufacturing firms are also of the opinion that the good intentions by the international institutions such as AFREXIMBANK can be easily frustrated by the due diligence measures that banks take as a way of safeguarding and managing risk associated with the money. The current state of the manufacturing sector firms, in terms of liquidity and profitability on the backdrop of the period of inactivity due to the hyperinflationary environment would more likely than not result in a risk averse bank turning down application for funding. The ability of most manufacturing sector firms to rise up from a state of almost total demise to profitable entities remains questionable, resulting in low probabilities of successful borrowing. It is on this basis that more funding options, particularly those managed by the Government rather than private sector firms, are being called for. This could involve Government using part of its revenue to fund manufacturing sector firms.

The Government also tried to react to funding challenges through another funding initiative for manufacturing sector firms in marginalised areas, especially Bulawayo which had witnessed company closures as they relocated to Harare. The Distressed and Marginalised Areas Fund (DiMAF) was intended to provide low cost funding to the tune of US\$40 million, of which the Government has already committed US\$20 million through the 2011 Budget review Statement, and the balance coming from Old Mutual Zimbabwe. Bureaucratic procedures in Government however saw the facility not taking off in 2011, despite the worsening situation on the ground. This calls for government to prioritise funding schemes which deal with problems at their nascent stages instead of taking ages to come up with disbursement mechanisms when the problems is mushrooming.

¹¹The Business Herald, 'US\$70 million economic facility ready', June 20, 2011

Protection of local industry

As part of the global world, Zimbabwe has also made commitments, particularly in regional integration initiatives under SADC and COMESA etc to allow the domestic market to be accessible to foreign firms at reduced and free duty. The period of economic downturn also saw local companies being more or less reduced to spectators in the domestic economy as foreign products dominated the shelves. This makes foreign competition one of the key challenges for local companies to capture the market, a challenge which they can not effectively deal with on their own. This is particularly on the backdrop of lack of competitiveness of the sub-sectors, such as textiles and others where cheap imports from China are capturing markets. Under the regional integration agreements, Zimbabwe also has a leeway to protect some of its strategic industries, at least temporarily while the industry is recovering.

It is in the same vein that a decision has to be taken to adopt some temporary protection measures to give local industries an advantage over foreign competition. Such an initiative would not be unique to the country as it has been adopted by other countries pursuing an import substitution strategy. This should be done for those industries that are mostly pressed down due to foreign competition such as food products. While consumers can afford to get the products cheaper, they are actually contributing to the demise of their own industry in the process, a situation which is not healthy. It is in this context that efforts by the government to re-impose duty on the finished products that were entering the market duty free with effect from 1st of September, 2011 are welcome. In addition, the Government needs to ensure that distortions are removed in the production system by not tolerating a situation where raw materials attract duty while the finished product by the raw materials comes duty free. Examples include the previous situation where imported cooking oil (bottled) was duty free while crude soya bean oil attracting 5% duty; or duty on raw material being higher than on the finished product such as edible vegetable fats like margarines attracting an import duty of 15% while some raw materials like wrappers attract a 20% duty making the locally produced margarines becoming not competitive in terms of pricing. It can be established that key to the success of the manufacturing sectors in Singapore, Taiwan and Brazil was the protection of local industries through import substitution programmes. This is also something that is being called for in Zimbabwe.

However, this also has to be done in a holistic manner. Recent experience, where local producers of chicken responded to a ban on chicken imports by increasing prices by about 100%, resulting in the shelving of the ban can be used as the basis for calls for practice changes on the part of the manufacturing firms themselves, as they are bent on profiteering once given an opportunity. This implies that the government should also ensure that the existing regulatory framework can be adequately used to protect consumers against abuse once the protective measures are introduced.

In addition, the key to the success for protecting local industry is a viable plan to restore competitiveness, as protection can not be indefinite but only temporary. Thus protection

may be needed only if there is a credible plan to restore competitiveness; Taiwan refused to protect industries that did not have credible plans for competitiveness.

Using Parastatals as Key Economic Drivers

As demonstrated by the Singapore and South African experience, state owned manufacturing firms can be used in order to dictate direction and pace in turning around the fortunes of the sector. This, however, would require a model entity that uses best practices and not subject to unnecessary manipulations aimed at pursuing non-core and unprofitable business ventures. A look at the current state of parastatals in Zimbabwe would reveal that they have been run down over the years due to failure to adopt proper mechanisms to be self sufficient and operate independently without heavy reliance on government funding. It is therefore important that the Government identifies one key entity, such as IDC, which it uses to drive its policy for the manufacturing sector. Such an entity can be created by borrowing from the Taiwan and Singapore experience, where staff can undergo serious training in other countries through various arrangements, with state of the art equipment and be productive, in order for the spill over effects to also go to other private companies. The Industrial Technology Research Institute (ITRI) of Taiwan (which was actually created by merging existing government institutions offering complimentary services in research) was instrumental in diffusing technology into the country, through benefiting from such initiatives.

In order for the institution to play a meaningful role, it is important to select products which the country can easily gain comparative advantage through value addition, where downstream firms can also grow together with the upstream firm. For example, the processing of mineral products, which would be processed into metal products and jewellery, would result in great benefits to several industries and sectors, including the mining industry. The same applies to the processing of agricultural products, such as canning of the products, which would benefit from the rich agro-base of the economy and also benefit downstream industries. The government would thus be expected to chip in with resources to kick start the process, beyond which the institution would be expected to be self financed and not be perennial drainers of the fiscus.

As demonstrated from Singapore and Taiwanese experience, for synergies to be fully enjoyed, there should be institutions in place to drive the promotion of the manufacturing sector agenda. In Singapore, the manufacturing sector succeeded due to the relentless efforts by the Singapore Economic Development Board, the Jurong Town Corporation, the National Computer Board among others, institutions which were created with specific mandates to deal with a particular aspect of the manufacturing sector in mind. It is thus important that government adopts a strategy to use one institution as an anchor for the manufacturing sector, an institution which can be established in partnership with the private sector as was the case with the Taiwan Semiconductor Manufacturing Company. This would be the company through which government can position as a model for the private sector to emulate.

Supporting Infrastructure

The extent to which infrastructural development can contribute meaningfully to the recovery and growth of the manufacturing sector can be looked at in two ways. First, the governments of Malaysia and Taiwan were very careful in ensuring that the manufacturing industry is centralised at strategic location points, which saw the creation of manufacturing centres/ clusters which had all conducive infrastructure and other incentives to attract investors to set up plants in those centres. This is also something that can be imitated, particularly if one or two areas are selected as manufacturing sector hubs, especially for those products where the country has comparative advantages. In order to attract investors into the centre, it is critical that the centre be in close proximity to road and rail networks and water facilities. This was the reason why it was easy to attract investors into the Hsinchu Science-Based Industrial Park in Taiwan and the Singapore Science Park, which became successful industrial hubs.

Given that one of the key challenges towards the growth of the manufacturing sector are issues to do with infrastructure, the establishment of such strategic centres can also help centralise the manufacturing industry process, with proximity to the strategic infrastructure helping in attracting investors.

Second, the Zimbabwe manufacturing sector can not rise if the general infrastructure for electricity, water and railways remain in the current pathetic state. As acknowledged by stakeholders, one of the key challenges firms are facing is high charges for electricity and water, which are largely a reflection of old infrastructure requiring an overhaul. It is therefore, important that reforms in the power and water sector as well as improvement in railway and sea network (especially for ICT sector development) also be looked at within the context of them being strategic issues for the growth of the manufacturing sector. It is therefore critical that the private sector be called in to assist, given that continuous pumping of money into these institutions over the years has not yet realised fruits.

Using SMEs

The Taiwanese successful story was hinged on the manner in which the SMEs sector was harnessed into the production process. The SMEs sector's importance in the overall economic development thrust was recognised at the early stages and efforts were made to ensure that the sector also benefits from key incentives targeting the manufacturing sector. It was thus not surprising that they contributed significantly to the overall export earnings. In the same manner, the Zimbabwe SMEs sector can also be used as a platform for the growth of the manufacturing sector.

The SMEs sector in Zimbabwe plays an important role, as it is estimated that it contributes about 60 percent of the GDP and 50 percent to total employment (Ministry of Women Affairs, Gender and Community Development, 2010). It can actually be established that the manufacturing sector has the highest number of formal SMEs, operating across various

categories such as agro-processing, engineering, metal fabrication, welding and beverage manufacturing. However, although it is mostly expected that big manufacturing sector firms would have grown by graduating from being SMEs, there are very few firms that could have developed into bigger entities in Zimbabwe. Actually, during the period of economic downturn, a reverse trend, where some companies were downsizing into informal and SME activity was witnessed.

The vibrant SMEs sector is therefore not being efficiently utilized, as a potential source of economic activity. The greatest challenge towards the development of SMEs in Zimbabwe been identified as lack of sufficient market information, particularly due to poor research and an unsupportive government (Research ICT Africa, 2006). Although there is a responsible Government ministry, the Ministry of Small and Medium Enterprise and Development, it turns out that it does not even have a comprehensive database of the players in the sector, making it difficult for the ministry to promote the growth of the industry through proper marketing strategies. A shift in government attitude towards SMEs sector is therefore being called for.

Following the Taiwanese model, the government should try to ensure that financing mechanisms are established to ensure that SMEs get the necessary finance, which can also be done through subsidized export loans for exporting SMEs as well as other tailor made products similar to the curb market in Taiwan. In addition, the government should also take a lead in exploring markets for SMEs products, and ensure that the sector produces for specific markets. This has to be preceded by the establishment of a register, where all key players in the sector are recorded for proper incentive dissemination strategies. This has already been acknowledged by the Government, given that the Short Term Economic Recovery Programme (STERP) (2009) identified the need to carry an SME census and create a database covering the spread, concentration and numbers of SMEs, employment, product varieties and all other relevant economic indicators. It is important that this be speeded up, so as to map up proper incentives to ensure that the sector grows. What is also important is the creation of a simplified regulatory framework for SMEs to prosper.

Policy and practice changes

The Government also need not remain rigid in terms of policy and attitude in a globalised economy where competition from other countries matters a lot. One good example the stance on genetically modified organisms (GMO). The country is losing out in terms of competitiveness with foreign competition in the food industry is that local farmers are competing against GMO farmers, who are able to produce products at lower costs. While GMOs are not allowed, the importation of these same products is somehow tolerated, which is an indication of double standards on the part of government. There is need to move with the times and ensure that Zimbabwean farmers are able to use the latest and best technology (which include GMOs).

The government can also map up its strategies on our unique advantages, one of which are the skills of our labour compare to our neighbouring countries. Government should therefore devote more resources towards skills development to enable the country to become faster at developing skills than any other country in the region. These skills would eventually enable Zimbabwe to become successful in low-volume-high-mix manufacturing.

6.2 The role of companies

Companies should also be innovative and be able to adapt to changing social, political and economic variables and not continue to rely on outdated business models. As seen from the Delta success story, manufacturing sector firms can also speed up the recovery process by being innovative and remaining conscious of developments in the economic environment. It can be seen that some firms are still struggling to bounce back into the limelight due to their opting to stick to traditional ways of doing things rather than innovating. The way the market is changing also calls for firms to move with it as those that continue to be static would be swept by the wayside.

Although import competition is able to penetrate the local market due to better operating conditions in their own countries, the foreign companies are also innovative and can produce cheaper products which the Zimbabwean market can appreciate. One of the possible reasons why Olivine Industries's 'Olivine' cooking oil product is 'expensive' is due to some attributes that it has which are absent in some imported South African brands¹². However, despite them being considered to be of lower quality, the products are now very popular with consumers. This calls for the production of a similar product by Olivine rather than sticking to products which are not competitive. While this had been appreciated by Olivine, resulting in the introduction of the Soyola brand, which was more or less of the same quality with the imported products, this was not pursued in earnest as the product was still not competitive. Olivine, together with other companies in the food sector, thus should also join the importing firms in producing cheaper products rather than remaining focused on its traditional products. This can be done by a revision of their costing methods, given that in a dollarized economy, employing a cost-plus pricing method might not work.

The same situation also applies to WMMI, which continues to be out-competed by second hand motor vehicles without strategizing on how to capture the domestic market. While it can be appreciated that the only reason the company is producing expensive brands which the market does not appreciate is because of its arrangement with Mazda Japan, it is not clear why the company can not refurbish the Mazda 323, for example, and sell them as second hand vehicles. In other words, the company has the capacity to join the second hand market but it has not yet done that. IDC can use Deven for example, to produce such kind of vehicles as the company is almost defunct due to inactivity.

This therefore shows that although the government is expected to play a role in boosting the sector, the private sector has to play the larger part by remaining conscious to the market needs and responding to it through innovation and strategising. This calls for the need to embrace new technologies as required by the dynamic manufacturing environment.

¹²In the baking industry for example, it is acknowledged that some products can only come out well if Olivine cooking oil is used rather than the imported brands. The company also disclosed that there are some consumers who would rather buy Olivine brand as they found the imported brands to be of poor quality.

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