IMPACT OF ZIMBABWE'S DECADE OF 'DYNAMICS IN REVERSE' ON ITS EXPORTS PERFORMANCE AND POVERTY

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A B S T R A C T

This paper takes a look at Zimbabwe's economy during the decade of 1999-2008 characterized by consistently negative GDP growth rates through the lenses of its export performance. It shows that no sector of the economy was spared from the devastating impact of macroeconomic instabilities, an ill-designed land reform combined with disregard for private property and erosion of the rule of law. It is estimated that total exports in real terms per capita were between 67 percent lower in 2008 than they were a decade earlier. And unskilled labor intensive exports experienced the largest contraction contributing to the loss of employment. Recent increases in volumes of exports and GDP in 2009-2012, following the restoration of macroeconomic stability, were too low to compensate for earlier losses: real GDP and exports per capita in 2005 US dollars stood at 60 and 62 percent of their peak levels in 1998. Given that Zimbabwe could take advantage of a rapidly growing import demand in South Africa as well as capital and technical expertise, the largest boost in exports came from platinum group metals, mostly nickel, extracted by South African owned companies. Some portion of falling exports in EU markets was redirected to South Africa, which emerged as the largest exports market for Zimbabwe and continued to be its major supplier of imports.

INTRODUCTION

The 1999-08 decade of political instability and economic mismanagement has extracted a heavy toll on Zimbabwe's economy. The GDP was falling every year over 1999-08. Although there are some differences in estimates of the size of contraction, the GDP per capita was in 2008 about half of its 1998 level. Had it been possible to reverse the time arrow, this would have been the case of a remarkable economic success story of doubling the GDP per capita within a decade. Instead, this is a spectacular case of economic failure offering important insights into the design of economic reforms and perils to be avoided and the cost of poor governance. Since the focus of the paper is on dynamics of decline, we do not examine the expansion in 2009-12, which, incidentally, provides strong ammunition to our thesis

that macroeconomic stability is one of the main ingredients necessary for economic recovery to take place.

The reconstruction of Zimbabwe's backwards trajectory merits serious analysis for at least one reason: it provides an almost laboratory case of what constitutes bad economic practice and what pitfalls a developing country should avoid in its struggle to alleviate poverty. When reversing the time arrow and examine institutional change and policies by moving backwards, this offers unique insights into what institutions and policies contribute to economic growth.

Yet, the unraveling of the Zimbabwean economy has not caught among economists the attention that it deserves. This should not suggest, however, the complete absence of analyses of the Zimbabwean experience. To the contrary, there are studies dramatically illustrating the welfare costs of deviating from good institutions and policies. For instance, Richardson (2005a and 2005b)

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demonstrates the importance of property rights and the perils of ignoring the rule of law in land reforms. He convincingly shows how the disappearance of property rights has undermined investor trust, land equity, and entrepreneurial knowledge and incentives contributing to Zimbabwe's economic collapse. In a similar vein, Muñoz's (2006) analysis of the impact of economic policies on Zimbabwe's export performance offers a compelling argument on the critical importance of exchange rate unification and tight macroeconomic policies to country's competitiveness in global markets.

While it might be tempting to relate Zimbabwe's economic downfall to any set of specific policies, e.g., the above-mentioned multiplicity of exchange rates or international sanctions, this would miss a larger point, namely, the synergy effect of a whole plethora of bad economic policies reinforcing each other. Two of them stand out: persistence of macroeconomic instabilities combined with policy responses only aggravating rather than remedying economic problems, and the program of "indigenization of the economy," which undercut the sanctity of private property rights, dealt a mortal blow to the rule of law, and largely destroyed commercial farms in Zimbabwe. Hill (2003) provides a vivid illustration of interdependent nature of government political actions in 1999-2002 unavoidably leading to the disintegration of Zimbabwean economy. Sandawana (2008) satirically ridicules in a format of a series of op-eds reporting on an almost weekly basis over a period 2002-07 the government economic policy actions pointing to their predictably disastrous consequences. Both accounts show an unfolding of a vicious cycle where bad policies would feed upon themselves creating a rapidly deteriorating business environment. In a nutshell, if all ingredients defy economic logic, it makes no sense to blame only one for an ensuing economic catastrophe. Last but not least, the argument that sanctions have been responsible for Zimbabwe's economic woes, albeit not examined here, does not seem to holdi[i]: economic decline had nothing to do with Zimbabwe's access to international markets; nor with access to multilateral financing, which Zimbabwe lost because it stopped servicing its debt to the IMF and World Bank. The decline spread over the 1998-2008 was entirely homemade with huge negative implications for employment and incomes.

The paucity of good quality economic data has been a barrier to economic analysis of the Zimbabwean economy. Neither international organizations nor state authorities were able to keep track of economic development in Zimbabwe. As an illustration, consider the following: in spite of the fact that real GDP was reported to fall every year over 1999-2008, Zimbabwe's GDP in current US dollars—as reported by the IMF (see IMF 2009) —has displayed huge volatility.

The rates of GDP per capita growth swung from minus 25 percent in 1998 and minus 15 percent in 1999 to whopping annual rates of growth of 40 percent, 58 percent, and 140 percent in 2000-02, i.e., the period during which the foundations were set for reverse dynamics of Zimbabwe's economy. Under these circumstances, the most reliable economic statistics are those of foreign trade. Their quality does not depend solely on locally collected information but on that in trading partners. Since the bulk of Zimbabwe's trade is with SACU (Southern African Customs Union), European Union and China, i.e., countries with decent quality of foreign trade statistic, although they always—as Rozanski and Yeats (1994) showed—need to be treated with caution, they offer a fairly accurate insight into Zimbabwe's foreign trade performance. To our knowledge, no attempt has been made to take a look at backwards dynamics of Zimbabwean economic development as reflected in its foreign trade performance.

This paper seeks to fill this gap; it uses mainly partners' foreign trade statistics, albeit not exclusively, to examine the extent of damage inflicted by economic policies on Zimbabwe's exports base. While there is no doubt that the decade of economic mismanagement extracted a heavy toll on the export capacity of Zimbabwe's economy, the questions begging answers are: What sectors were most affected? And how deep was the contraction? What factors content characterized the most negatively affected exports sectors? While in general the most-affected sectors can be easily identified, the issue of the depth of contraction and products most affected, together with their relationship to employment, does not appear to have been subjected to a thorough analysis.

The remainder of the paper is organized as follows. Section 1 examines the links between policies and macroeconomic performance pointing to an unexpected outcome—the increase in Zimbabwe's openness during the 1999-2008 decade. Section 2 takes a closer look at exports performance of three major sectors of the

economy: agriculture, mining or industrial raw materials, and manufacturing. Section 3 addresses the question of how deep was the contraction in real exports and sets Zimbabwe's dynamic against that of neighboring countries. Section 4 concludes.

UNRAVELING OF THE ZIMBABWEAN ECONOMY: STYLIZED FEATURES:

According to the OECD (2004), the economy contracted by 5 percent in 2000, 8 percent in 2001, 12 percent in 2002, and an estimated 18 percent in 2003. The contraction in output continued until 2009 dragging down also foreign trade. Zimbabwe's economy, which was in a tail spin for almost a decade, has two dubious world records of the early 21st century: highest inflation that turned into hyperinflation and deepest contraction in aggregate output experienced during peacetime. Some observers note, however, that the income loss in 1999-

2004 alone exceeded even the income losses incurred by Côte d'Ivoire, Democratic Republic of Congo, and Sierra Leone's during their respective conflicts (Clemens and Moss, 2005). In 1996-98, Zimbabwe was the fastest growing economy in Africa; in 1999-2008, it became the fastest shrinking economy in the world with an average contraction of the real GDP of 7 percent per year in 1999-2008. In consequence, Zimbabwe's economy has dramatically shrunk since 1998—the last year when GDP experienced growth of 3 percent in real terms: its total GDP in real terms stood in 2008 at 35 percent of the 1998 level. The GDP per capita in current prices fell from US$700 in 1997 to US$633 in 2003 and US$345 in 2008. In constant prices, beginning in 1996-98, there was a precipitous decline in both GDP per capital and exports of goods and services per capita (Figure 1).
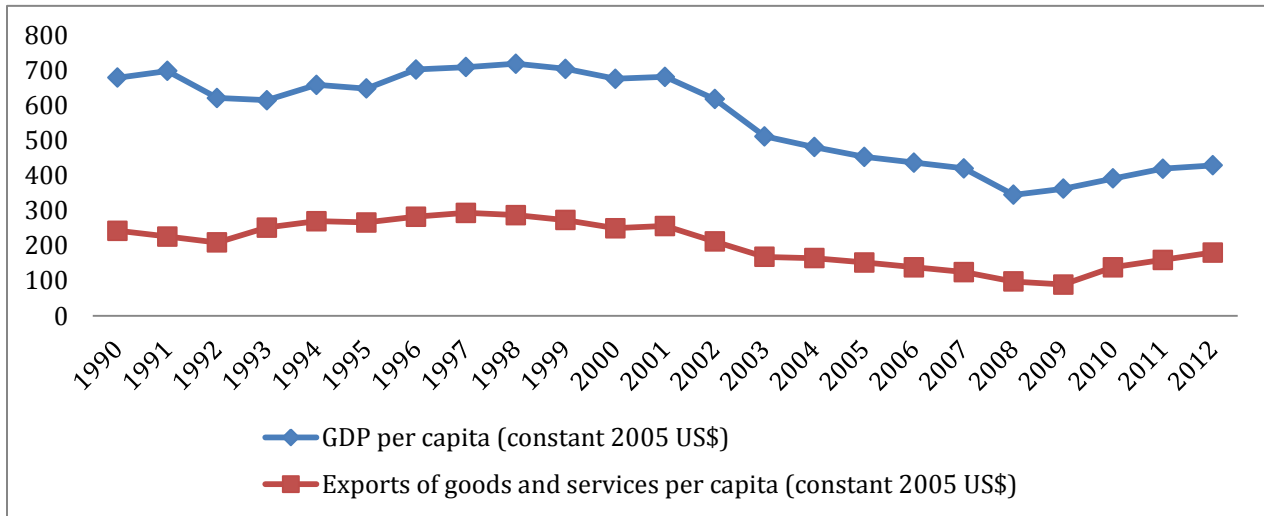

Figure 1: Volumes of GDP and exports of goods and services per capita in 1990-2012 (in 2005 US dollars).
Source: Own calculation based on data drawn from the World Bank WDI (World Development Indicators) database.

The most telling indicator that can be linked directly to contracting GDP and increasing poverty is life expectancy. Economic growth brings about increase in life expectancy while its prolonged contraction, as the case of Zimbabwe seems to illustrate, begets its retrenchment. Life expectancy at was increasing in 1960-87: from 51.5 years in 1960 to 54.9 years in 1970 and 61.7 years in 1987. Over 1987-2003, it fell to 43.1 years in 2003 and then began increasing to 47.1 years in 2008 and 51.2 years in 2011 (data from the World Bank database). Note that this is still below the level in 1960, the first year for which the data is available.

Two government policies stand out as contributing and reinforcing the downward spiral of the economy: budget

deficits financed by increasing monetary supply; and the government's program of "indigenization of the economy" in particular its ill-designed land reform launched in 2000. As for the first policy factor, inflation exceeded 50 percent already by 1999 and continued its march upwards to reach one thousand percent in 2006 and swiftly moving to stratospheric levels in 2007-08 to peak in September 2008 "… at about 500 billion percent" (IMF 2009, p. 5). While hyperinflation alone would have undercut both current economic activity and investments, as the experience of a number of South American economies in the 1980s has demonstrated, Zimbabwe's misery was aggravated by the ways that the government sought to deal with inflation by outlawing

its symptoms rather than dealing with the root of the problem, i.e. budget deficits financed by printing money. The government introduced price and interest rate controls, exchange controls, state monopsonies (e.g., Grain Marketing Board) and foreign currency surrender requirements on exporters thus further distorting an already distorted economy. The latter amounted to the confiscation of a portion of revenue from exports. These measures contributed to further distortions in the economy through increasing shortages of daily necessities and, predictably, the emergence of a black market and profiteering. Furthermore, since controlled prices were set at a fraction of market prices, there was a shift to produce goods not subject to central price controls thus further distorting the allocation of resources.

Another consequence of growing macroeconomic instability was that convertibility of the Zimbabwean dollar for current account transactions became increasingly limited. The domestic currency became increasingly overvalued in 2000-03, which prompted the government to establish special regimes for tobacco and gold exporters, while the parallel market premiums exploded (Muñoz, 2006). Black markets emerged where the US dollar was traded at exchange rates several times higher than the official rate[ii]. Already in 2002 (the end of third quarter), the US dollar was exchanged at ZWE$740 in parallel markets while its official exchange rate was ZWE$55 (Sandawana 2007). Subsequently, the gap between two rates expanded rapidly.

As for the second government policy, the impact of the announced confiscation of commercial farms went beyond the agricultural sector as it signaled the erosion of legal protection of private property rights across the board (Richardson 2005b). The main target of "indigenization of the economy" was confiscation of around 4,000 large-scale commercial farms—accounting for 70 percent of Zimbabwe's arable land and owned exclusively by white Zimbabweans—under the so-called "fast-track land reform" announced in February of 2000[iii]. However, already in 2000, the investors in other sectors of the economy felt also threatened, as many white-owned urban businesses and offices of foreign corporations were plundered (Power, 2003). Note that this was almost seven years earlier before the program was expanded to foreign-owned—or more precisely not owned by black Zimbabwean citizen—businesses with the adoption of the Indigenization and Economic

Empowerment Bill of 2007. The Bill required the transfer of 51 percent equity in firms' worth over US$500,000 to black Zimbabweans. To make things worse, gradualism and arbitrariness in implementation of the indigenization program further exacerbated uncertainty and undercut agricultural output in farms yet to be confiscated as well as in other non-agricultural businesses.

Hence, the indigenization had two direct impacts: first, the land reform brought about huge fall in agricultural output; and second, government's disdain for private property rights subsequently 'legalized' by the Indigenization Act triggered outflow of capital, discouraged new investments and erected a huge barrier to FDI inflows. While we do not have the data on capital formation in Zimbabwe during the decade, FDI inflows fell from an average of about US$150 million or 2.2 percent of the GDP in 1994-99 to around US$40 million or 0.9 percent in 2000-08[iv]. Imports of capital goods indicate, however, that investments were not brought to a complete halt[v]. The data shows a dramatic decline in the value of these imports, which peaked in 1996 at US$667 million and fell 70 percent to US$217 million in 2002. Yet, despite inflation followed by hyperinflation, these imports began recovering in 2003-07 and rose in 2007 to 80 percent of the 1996 peak level.

A more immediate and direct victim was the agricultural sector—the backbone of Zimbabwe's economy. It witnessed huge drops in output: in 2004, the maize production stood at around one-third of its level in 1999; wheat production at around 8 percent; and tobacco production at around one-fourth (Clemens and Moss 2005). According to an estimate, the land reform alone triggered 12.5 percent average annual decline in GDP growth in 2000-03 (Richardson, 2005b). Agricultural output fell below the levels needed to feed the local population and Zimbabwe ceased to be one of the largest exporters of foods in Africa and now relies on food aid. So did the volumes of agricultural exports fall and to a much larger extent than those of minerals.

Foreign trade was of course negatively affected by measures both directly reducing supply and increasing transaction costs and distorting incentives. The overvaluation of the official exchange combined with extremely lax fiscal and monetary policies undercut competitiveness of Zimbabwean exports. The growing of the parallel market premium led to smuggling at the expense of legal exports. Muñoz (2006) empirically

showed a strong negative relationship between the parallel market rate depreciation and the value of legal exports in Zimbabwe in 2000-04. Furthermore, with the price of imports rising and growing difficulties in accessing foreign currency, producers dependent on imported inputs would often go out of business if no domestically produced substitutes were available. Those who did not go bankrupt increasingly turned to customers abroad than sell their products domestically. The proximity of South Africa made it possible to some extent, as the dramatic increase in its share in total Zimbabwean exports seems to indicate[vi]. While strict foreign currency-surrender requirements, often amounting to confiscation of up to half of foreign currency earnings by the government, was clearly a disincentive to export[vii], the rewards of having access to hard currencies and escaping domestic inflation offset these losses for some products.

In all, the factors driving the developments in exports were similar to those driving the fall in aggregate output: wrong-headed policies and macroeconomic instabilities, on the one hand, and the government's program of "indigenization of the economy" in particular the ill-designed land reform, on the other hand. While the indigenization in other than sectors than agriculture suppressed both domestic and foreign investments, the ill-designed land reform has a direct negative impact on agricultural output and manufacturing based on agricultural inputs. At the other extreme, one would expect that exporters of raw materials and mining products would be less affected by suicidal economic policies for one major reason: many of these operations are enclaves as except for parts to mining equipment, their activities do not require imported inputs and their products are not subject to local processing to any significant extent. In contrast, exporters of other industrial products are highly sensitive to misaligned exchange rates, surrender requirements and other policy measures affecting transaction cost of conducting foreign trade. The following sections assess the extent to which the developments in Zimbabwe's foreign trade corroborate these expectations.

DISTINCTIVE FEATURES OF ZIMBABWE'S EXPORTS PERFORMANCE IN 1997-2008

While the farm seizures by squatters in early 2000 did not mark the beginning of Zimbabwe's decade-long economic tail spin, as it began with an economic crisis accompanied by riots and strikes in 1998-99, they

together with growing political instabilities vastly contributed to the gradual economic collapse that spread over the whole decade in 1999-2008. This raises many questions concerning the impact of the shrinking economy on exports composition and performance of various sectors. While one may expect the biggest negative impact on the agricultural sector followed by manufacturing and mining, an interesting question concerns the extent of change brought about by economic policies of 2000-08.

Long-term trends in Zimbabwe's exports: Viewed in a longer perspective of the last two decades, one may distinguish three phases in Zimbabwe's export performance: two phases of moderate growth in 1990-97 and 2003-07 and a phase of contraction in 1998-2002[viii]. During the first growth phase—triggered by liberalization of the foreign trade regime (Jenkins and Knights, 2002)—an average annual growth rate was almost 10 percent, followed by contraction at an annual growth rate of 3.5 percent, and a rebound at an average annual growth rate of almost 8 percent (Table 1). The third phase came to a halt in 2008 when exports fell 8 percent. Leaving aside the contraction phase, the differences in export growth performance between the 1990-97 phase and in 2003-07 point to a significant retrenchment in exports potential. The first phase of growth was significantly more robust than the second one five years later: For starters, it was much longer extending over 7 years rather than 5 years. Second, the value of exports during the peak year in 1997 stood almost 80 percent above the level in 1990, whereas the peak in 2007 was only 40 percent above the level in 2002. Third, the value of exports in 2002 stood at 82 percent of its peak level in 1997 and that in 2007 only 15 percent. The value of exports in 2008 was only six percent above its level in 1997[ix]. Last but not least, the redirection of exports away from the EU has been a long term trend: the share of the EU fell from 57 percent in 1990 to 21 percent in 2008 while that of neighbors, mainly South Africa, had been consistently increasing.

Exports in terms of value experienced modest growth: the LSG (least square growth) rate in the decade 1999-2008 was 2.8 percent (Table 2D). But the average conceals significant variation across various sectors of the economy with the exports of agricultural products contracting at the LS rate of (-) 7 percent and industrial products growing at 2.9 percent. The contraction in the value of agricultural exports and a modest increase in

manufactured exports were offset by a relatively fast growth in exports of industrial raw materials: their value increased almost four-fold in 1999-2008. Export performance of sectors producing industrial raw materials, that is, crude fertilizers, crude minerals, ores and metal scrap, and non-ferrous metals looks impressive when cast against a dismal performance of other sectors of the economy. Their foreign sales more than tripled in 1998-2008 and grew at an LSG rate of 20 percent with their share in total exports rising from 12 percent to 40 percent in this period. In consequence, the contribution of various sectors of the economy to total exports has rather significantly changed. The share of agricultural products exports in total exports fell from above 60 percent in 1998-2002 to below 40 percent in 2006-08 (Table 2C).

Table 1: Three phases of export growth in 1990-2008 (in percent).

Extent	Average annual growth rate	Least Square Growth rate	Index, peak low=100	Share of EU		Share of neighbors	
				first year	last year	first year	last year
Growth phase, 1990-97	9.8	8.6	179	56.9	48.6	n/a	13.3
Contraction phase 1998-2002	-3.5	-2.7	82	46.8	36.5	16.4	22.4
Moderate rebound, 2003-07	7.0	6.4	140	30.8	22.0	31.7	43.6
Contraction in 2008	-7.6	n/a	n/a	21.3	n/a	42.9	n/a

Source: Partners' trade data reported to the UN COMTRADE database.

The last decade witnessed not only the shift towards industrial raw materials but also an unexpectedly low increase in the concentration of exports as captured by the Herfindahl-Hirschman (H-H) index[x]. Leaving aside a sudden jump in the value of H-H index of exports of industrial products in 2008, these exports were moderately concentrated in 1998-2007 with the values of H-H index below 1,800. The high degree of concentration of both industrial raw materials and agricultural exports remained approximately at the same level in 1998-2008 (Table 2B).

So did the number of four-digit SITC products with exports exceeding US$1 million. The total number of products exported slightly declined, but their number in 2008 was still above that in 1998. There is a caveat: the threshold was more demanding in the early 2000s than in the late 2000s due to strong increase in prices and the accompanying depreciation of the US dollar.

These comments notwithstanding, Zimbabwe's exports performance was dismal. Only the mining sector displayed a considerable resilience to business-unfriendly policy and prevented the complete collapse of total exports. Exports of industrial products remained relatively stable in terms of value whereas exports of agricultural products contracted. The exports offer narrowed although less than one might anticipate.

Dramatic change in direction of Zimbabwe's trade, boiling down to the redirection of exports from the EU to South Africa, might have somehow reduced the impact of macroeconomic instabilities and hostility towards non-black Zimbabwean and foreign-owned businesses on exports performance. Zimbabwe's exports to neighboring countries—SACU, Mozambique and Zambia—weakened the size of contraction of exports between 1998 and 2002 and contributed to their miniscule rebound in 2003-07. Redirection of exports from the EU to neighboring countries, mainly to South Africa, had been significant and taken place at least since 1990, i.e., well before the turbulent 2000s. While we do not have information on neighbor-destined exports until the mid-1990s (Botswana until 2000), the share of exports going to regional markets increased during both the contraction and rebound phases. It went up from the peak of 13 percent in the growth phase in 1997 to 16 percent in 1998, when total exports fell 15 percent, and further increased in the last year of the contraction phase in 2002 to 22 percent indicating a cushioning effect of import demand in neighboring countries. Their export share further expanded during the moderate rebound phase in 2003-07.

The redirection of Zimbabwe's exports has been unidirectional: the major lever of change was expanding exports to South Africa and shrinking exports to the EU. While the average annual growth rate of total exports in 2001-08 was an unimpressive 2.5 percent (LSG rate over 2000-08 of 3.6 percent was slightly higher), Zimbabwe's South Africa-destined exports recorded an average growth rate of 22 percent. In contrast, exports to the EU

fell at an average of 5-6 percent per year. The share of the EU in Zimbabwe's total exports contracted 18 percentage points and the share of South Africa increased 24 percentage points over the same period from an average of 14 percent to 37 percent indicating a significance increase in the reliance on a single export market. Note also that the share of exports to the rest of the world in total exports fell from 32 percent to 27 percent in this period.

Table 2: Summary characteristics of exports performance in 1998-2008 by major sectors of the economy.

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Index, avg 2006-08
A. Number of 4-digit SITC sectors with exports exceeding or equal US$1 million												avg.1998-2000=100
Agricultural Products	44	47	57	55	45	46	42	44	47	41	42	88
Industrial Raw Materials	14	14	13	12	12	11	14	13	14	15	16	110
Industrial Products	49	66	73	61	66	72	64	68	63	56	55	93
Total	107	127	143	128	123	129	120	125	124	112	113	93
B. Concentration of exports: values of H-H index												
Agricultural Products	1,759	2,342	2,042	2,302	2,891	2,568	1,917	1,583	1,419	1,751	1,814	81
Industrial Raw Materials	3,094	2,092	2,136	2,636	2,359	2,035	2,890	3,088	3,122	2,369	2,933	115
Industrial Products	1,642	1,285	1,236	965	794	676	1,357	1,347	1,223	1,766	3,234	149
C. Composition of exports (in percent)												
Agricultural Products	62	63	61	66	62	54	52	41	32	30	34	52
Industrial Raw Materials	12	13	14	10	14	20	23	30	41	49	40	339
Industrial Products	26	24	25	24	24	26	25	29	27	21	25	97
D. Exports in current US$ millions												LSG in 1999-08
Agricultural Products	1,043	1,162	1,083	1,144	1,057	995	966	779	684	718	724	-6.5
Industrial Raw Materials	201	230	246	175	233	363	440	574	874	1,152	843	20.3
Industrial Products	427	441	454	416	407	469	468	551	564	494	535	2.9
Total above	1,672	1,834	1,784	1,735	1,697	1,827	1,874	1,905	2,122	2,365	2,103	2.8
All goods	1,778	1,919	1,855	1,809	1,728	1,867	1,927	1,975	2,227	2,414	2,232	2.8

Note: Agricultural products include items identified in Ng and Ataman (2008); industrial raw materials include SITC 27, 28, and 68; and industrial products SITC 5 through 8 minus 68.

Source: Own calculations based on Zimbabwe's partners' foreign trade data submitted to the UN COMTRADE database.

Agricultural sector still a net exporter against all odds but no longer of food: While the authorities and some international agencies blamed the severe drought in 2001-02 for food shortages and collapsing output of the agricultural sector, which had traditionally been the backbone of Zimbabwe's economy, several studies find little empirical data that would support this claim (Clemens and Moss, 2005). Based on a carefully-crafted econometric analysis, Richardson (2005b) convincingly shows; how the damage to property rights destroyed three key components of the marketplace, i.e., investor trust, land equity, and entrepreneurial knowledge and incentives; that rainfall played a minimal role in the GDP contraction; and estimates that the land reforms alone were responsible for an 12.5 percent average annual decline in GDP growth over 2000–03. He notes that the fall in the aggregate value of Zimbabwean farmland in a year "… was nearly three and a half times larger than all the World Bank aid ever given to Zimbabwe. This loss in wealth rippled throughout the economy, severely strained the banking sector, and led to a rapid downward spiral in the economy."

Indeed, the agricultural sector witnessed huge drops in output as the prime victim of Zimbabwe's chaotic land reform program, albeit not the only one. In 2004, the maize production stood at around one-third of its level in 1999; wheat production at around 8 percent; and tobacco production at around one-fourth (Clemens and Moss 2005). Agricultural output fell below the levels needed to feed the local population and Zimbabwe ceased to be one of the largest exporters of foods in Africa and now relies on food aid. Moreover, it deprived many people of employment and forced them to either move to urban areas or emigrate.

However, total exports of agricultural products continued exceeding their imports. But the surplus in agricultural trade had been dwindling. The value of agricultural exports was almost 14-times larger than that of its imports in 2001, but this ratio fell to six in 2002 and further contracted to 2.2 in 2007 and 1.25 in 2008. The surplus of agricultural exports over their imports fell from around US$1 billion in 1999-2001 to US$103 million in 2008. The collapse of raw food exports and reliance on their imports was one of the major contributing factors to the dramatic deterioration in Zimbabwe's balance of trade in agricultural products in the 2000s. Excluding grains and cereals, the value of net agricultural exports would fall from US$1,016 million in 1999 to US$505 million in 2008 as compared with the total net agricultural exports of US$963 million and US$103 million in this period (Table 3).

The aggregate numbers hide the fact that Zimbabwe has been a net importer of food products since 2002 mainly due to the combination of falling exports of maize and wheat and their increasing imports. Its surplus in food products of US$125 million in 2001 moved to a deficit of US$22 million, which reached US$424 million in 2008.

The contraction of domestic output of raw food products negatively impacted Zimbabwe's food processing industries apparently staving them off production inputs: although the value of their exports was 35 percent higher in 2008 than in 1999, the value of their imports almost tripled between 2000 and 2008 turning Zimbabwe into the status of a net importer of these products.

The contraction in exports took place across most agricultural products, although there was some variation. Total agricultural exports were falling each year in 2001-08 clearly demonstrating that not the weather had been responsible but the damage inflicted by the confiscation of large commercial farms by the government was. But some agricultural exports contracted less than others. The fall in exports of tropical products (mainly sugar and coffee and tea) was relatively small.

In terms of value, exports of feeds, oilseeds and tobacco fell by more than US$300 million in 2008 relative to 1999. Non-manufactured tobacco, accounting for between 40-50 percent of total agricultural exports in 1999-2008, was exclusively responsible for the contraction.

Against this bleak picture, two subsectors stand out as moderately successful stories: soya beans and oil seeds. Exports of soya beans collapsed in 2001-07 but rebounded in 2008 to US$12 million. Exports of oil seeds soared from an average of US$50,000 in 1994-2007 to US$12 million in 2008.

Exports of major agricultural products were falling each year over 2002-06 and slightly increased in 2007. Except for slight increases in value terms in 2004 and 2006, net exports were declining in 2002-08. In 2002, Zimbabwe definitely changed its status from that of a net exporter to net importer of food. Except for agricultural raw materials and processed food, exports in current prices of all other major agricultural subsectors fell implying a huge overall contraction in their output.

Table 3: Exports and net exports of agricultural products by major categories in 1999-2008 (in current millions of US dollars).

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	INDEX 2008 1999 =100
RAW FOOD, OF WHICH	124	113	97	79	74	62	60	59	82	43	35
Meats and Dairy Products	44	48	33	13	13	11	10	14	30	10	23
Grains and Cereals	18	11	7	7	2	1	1	0	0	0	2
Vegetables and Fruits	62	54	57	58	59	50	48	46	52	32	52
CASH CROPS, OF WHICH	757	648	708	710	621	505	379	329	343	396	52
Tropical Products	99	89	90	80	75	102	91	92	51	73	73
Feeds, Oilseeds and Tobacco	657	558	617	630	545	402	286	236	291	323	49
OTHER FOOD, OF WHICH	52	59	80	69	82	87	86	85	94	75	143
Processed Food	50	56	76	65	77	81	83	83	89	68	135
NON-FOOD, OF WHICH	397	476	477	357	358	545	444	352	356	353	89
Agricultural Raw Materials	208	251	249	189	188	283	235	188	190	191	92
TOTAL ABOVE	1,330	1,296	1,362	1,215	1,135	1,200	969	826	875	867	65
Net exports (exports minus imports)											
RAW FOOD, OF WHICH	65	96	89	-25	-37	-68	-112	-43	-104	-363	-559
Meats and Dairy Products	41	46	32	12	11	9	6	11	26	5	12
Grains and Cereals	-31	2	3	-88	-99	-102	-161	-92	-165	-385	1226
Vegetables and Fruits	55	49	54	51	51	24	42	38	35	17	31
CASH CROPS, OF WHICH	738	629	688	690	594	470	338	280	303	360	49
Tropical Products	98	88	89	77	74	101	90	91	49	68	70
Feeds, Oilseeds & Tobacco	640	540	598	613	520	368	246	189	254	292	46
OTHER FOOD, OF WHICH	-9	11	44	18	26	24	-76	32	-6	-74	1090
Processed Food	-7	15	43	16	22	22	-74	33	-9	-78	1090
NON-FOOD, OF WHICH	182	227	225	167	55	258	211	169	169	180	99
Agricultural Raw Materials	182	227	225	167	55	258	211	169	169	180	99
TOTAL	976	963	1,046	851	637	684	361	438	362	103	11
Memo: food products*/	65	107	125	-22	-29	-69	-213	-39	-154	-424	n/a

Note: */ food products exclude cash crops; non-food and alcoholic beverages together with manufactured tobacco from the group "other food."

Sources: Partners' statistics reported to the UN COMTRADE based on taxonomy of agricultural products in Ng and Aksoy (2008).

While no reliable data are available, eyeballing through the data collected in Table 3 suggests that main victims of the contraction in exports were poor. Note that the fall in exports of unskilled labor intensive activities such as meat and dairy products and vegetables and fruits stood in sharp contrast to dynamics of less labor intensive agricultural raw materials.

Industrial goods: less of the same with a twist?
According to an empirical study linking composition of exports and endowments of African countries (Wood and Mayer, 2001), Zimbabwe was an outcast in the 1990's, albeit in a positive sense. The share of manufactured exports in its total exports defied the predictions derived from its endowments in factors of production, i.e., human and natural resources. Zimbabwe together with South Africa, Mauritius and Kenya were the only African economies with the shares exceeding 20 percent. They identified several reasons for this "misalignment." In addition to good infrastructure, effective administration and relatively decent exchange rate policy, the economic sanctions imposed on Zimbabwe, then Rhodesia following its unilateral declaration of independence, which were in effect over 1965-80, contributed to the development of indigenous industrial structure. With the end of sanctions, manufacturing remained competitive for two reasons: domestic sectors remained protected from competition from imports; and other countries, deprived of high quality infrastructure that would allow them develop competitive manufacturing, continued purchasing Zimbabwean industrial products (Wood and Jordan, 2000).

Other factors, however, appear to have contributed to Zimbabwe's stagnant, if not falling in real terms, exports of industrial products. The only ingredient left from the original list compiled by Wood and Mayer (2001) to explain the uniqueness of Zimbabwe exports performance was access to good infrastructure: two other components, i.e., effective administration and relatively decent exchange rate policy were visibly absent already beginning in 2000. In consequence, although the share of industrial exports remained above 20 percent in 1994-2008, this was against the background of stagnant exports of most other products, the increase in concentration of industrial exports, and a large contraction of low technology labor intensive exports.

Manufacturing exports grew in terms of value at the least square growth (LSG) rate of 2.9 percent in 1999-2008. But this was solely the result of a decent performance of a single four-digit SITC item, that is, "other ferro alloys" (SITC. 6715). Their share in manufacturing exports increased from 36 percent in 1999 to 56 percent in 2008. The LSG for this period would drop to 0.2 percent once one excluded other ferro alloys indicating stagnation of other industrial exports.

The reshuffling among top four-digit SITC exporters between 1998 and 2008 is indicative of the change in Zimbabwe's industrial exports baskets in terms of factor intensities and technology content[xi]. Leaving aside "other ferro alloys," which constantly topped industrial exports, Portland cement, diamonds uncut, plumbing fixtures replaced clothing and textiles among top exporters. Interestingly, the fall in textiles and clothing exports did not begin in the 2000's; it dates back to the early 1990s. Except for 1998-2001, when they were at around US$70 million, their value was falling from US$122 million in 1994 to US$93 million in 1996, US$53 million in 2003-04 and US$28 million. The time profile of exports of footwear and furniture was similar: their exports either stagnated or fell already in the 1990s and the next decade witnessed their continued contraction indicating earlier shifts in Zimbabwe's comparative advantage accelerated by economic mismanagement in the 2000s.

The shift from low-tech labor intensive activities, typical of clothing, to resource intensive exports was dramatic and took place against the backdrop of falling exports of labor intensive products. The share of low tech labor intensive products in industrial exports fell from 22 percent in 1995 to 21 percent in 1999 and 8 percent in 2008.

The share of resource intensive industrial products increased from 60 percent in 1999 to 80 percent in 2008 with "other ferro alloys" contributing 56 percent to total industrial exports. The share of medium to high tech, skilled labor intensive activities fell from 19 percent in 1999 to 13 percent in 2008. Furthermore, the values of both exports of low tech labor intensive and medium to high tech intensive products in 2008 were 47 percent and 31 percent below their levels in 2002. Although there is no data available linking directly export activities with employment, the picture that emerges from trade data is that of falling 'employment intensity' of exports activities. Clothing exports are a good illustration of it.

Exports of industrial raw materials: Exports of industrial raw materials were least affected by the economic implosion: their value expanded at double-digit growth rates in 2000-08 with their share in total exports having had grown from around 15 percent in 1995-99 to 45 percent in 2006-08. Yet, despite the impressive growth, these exports suffered from a similar weakness as that of other sectors of the economy, i.e., they became increasingly reliant on one or two four-digit SITC products.

Concentration in exports of industrial raw materials significantly increased with nickel products emerging as the main driver of the growth in exports of this product group. The aggregate exports of nickel ores (SITC 284) and nickel alloys (SITC 683) increased at a LSG rate of 29 percent in 1999-2008 while exports of other industrial raw materials increased at the LSG rate of 4 percent. In consequence, their share in total exports of this group rose from an average of 44 percent in 1997-2001 to 84 percent in 2007-08.

So did the share of South African markets as the destination of Zimbabwean minerals. Their share increased from an average of 8 percent in total Zimbabwe's exports of raw industrial materials in 1999-2001 to 53 percent in 2003 and 71 percent in 2008. South Africa took 82 percent of Zimbabwe's total nickel exports in 2008.

In lieu of conclusion: The shift from low-tech labor intensive activities, typical of clothing, to resource intensive exports was dramatic and took place against the backdrop of falling exports of labor intensive products. The share of low tech labor intensive products in industrial exports fell from 22 percent in 1995 to 21 percent in 1999 and 8 percent in 2008. The share of resource intensive industrial products increased from 60 percent in 1999 to 80 percent in 2008 with "other ferro alloys" contributing 56 percent to total industrial exports. The share of medium to high tech, skilled labor intensive activities fell from 19 percent in 1999 to 13 percent in 2008. Furthermore, the values of both exports of low tech labor intensive and medium to high tech intensive products in 2008 were 47 percent and 31 percent below their levels in 2002 with dire negative consequences for total employment.

The economic environment of the 2000s has negatively impacted all sectors of the Zimbabwean economy dramatically undercutting its competitive position in the world markets. The only bright spot was exports of nickel: without these exports, the LSG rate of total exports in 1999-2008 would drop from 2.8 percent to a negative rate of 2.5 percent and total exports would be around one-third lower. In other words, relative resilience of Zimbabwe's exports sector can be explained by nickel and other platinum group metals whose exports increased tenfold in 2003 alone and continued their rapid growth in 2004-08. Similarly, the only product that kept the value of industrial exports in a positive territory were ferro alloys: manufacturing exports grew in terms of value at a least square growth (LSG) rate of 2.9 percent in 1999-2008 without ferro alloys the share would fall to mere 0.2 percent per year indicating stagnation of other industrial exports. In contrast to 'survivors' among producers of industrial raw materials and industrial products, there was not a single agricultural product whose exports could reverse dramatic contraction in their exports in terms of value.

EXPORT PERFORMANCE IN REAL TERMS

Considering the depreciation of US dollar and growing prices in world markets, the increases in the value of exports do not indicate the growth in volume but its stagnation or even contraction. There is little doubt that the volumes of most exports significantly contracted. In other words, the question is not whether they fell but by how much. In order to assess the extent of contraction, we proceed in three stages: first, we examine developments in volumes and unit values of Zimbabwe's major exportables using mirror statistics; second, we examine their aggregate performance in the context of total exports; and, third, we then set Zimbabwe's exports performance against that of its neighbors.

Change in volumes: exports of major commodities: In order to assess the extent of the contraction in real exports, we have compiled the data on mirror imports from Zimbabwe of eight four-digit SITC products representing agricultural exports (tobacco, raw cotton and cut flowers), industrial raw materials (asbestos and nickel), and industrial products (other ferro alloys) and accounting for at least 50 percent of total Zimbabwe exports as reported in partners' statistics. Their share in total exports averaged 60 percent in 2000-08 and was 65 percent in 2008. The composition of the sample was in line with the respective totals as the share of respective sectors in total exports of selected commodities roughly equaled their share in total exports in 1996-2008.

As can be seen from data in Table 4 presenting products

selected and peak years of their respective exports in terms of volumes and values as well as information on the developments in unit values, not a single product reached in 2008 the level of volumes exported in the past but three products—nickel ores, nickel alloys, and ferro alloys—reached their peaks in terms of value in 2007-08. Five out of eight SITC four-digit products reached peaks of their export volumes in the 1990s and one in 2000. Except for nickel ores, the respective volumes of exports were below 60 percent of their peak

levels. Yet, exports of nickel ores peaked in 2005. Hence, not a major export subsector of the Zimbabwean economy was spared from the fall in the volume of exports: it is rather telling that two largest losers in terms of volume come from the agricultural sector (tobacco, not stripped) and raw industrial materials (asbestos), including also, rather surprisingly, exports of nickel alloys that were in 2008 50 percent below the volume exported in 1999.

Table 4: Values, unit values and quantities of Zimbabwe's exports of selected commodities (in percent).

		Peak	Index 2008	Peak	Index 2008	Index 2008, volume		Index 2008, unit value	
SITC	Product Description	volume	peak= 100	exports	peak= 100	1997= 100	2000= 100	1997= 100	2000= 100
1211	Tobacco, not stripped	1996	9	1997	9	11	16	88	111
1212	Tobacco stripped/stemmed	1999	38	1997	51	45	43	114	142
2631	Raw cotton, excl linters	2005	58	2001	77	89	67	88	120
2927	Cut flowers/foliage	2000	32	2003	43	52	32	105	140
2784	Asbestos	1999	10	1997	14	14	20	103	129
2841	Nickel ores/concentrates	2005	98	2008	100	...	6683	...	442
6831	Nickel/alloys unwrought	1999	52	2007	41	52	64	363	303
6715	Other ferro alloys	1997	45	2008	100	45	55	306	340

Source: Own calculations based on partners' data from the UN COMTRADE database.

Much stronger increase in unit values of industrial raw materials accompanied by a lower contraction in volumes of exports than in exports of agricultural products contributed to a rather significant shift in the composition of Zimbabwean exports: the share of industrial raw materials in aggregate exports of selected commodities increased from around one quarter in 1996-99 to more than 50 percent in 2006-08. Their share in total exports rose from an average of 12 percent in 1996-99 to an average of 42 percent in 2006-08. While the unit values of agricultural exports increased rather moderately up to 40 percent between 2000 and 2008, the unit values of nickel and ferro alloy recorded at least a three-fold increase over this period. Combined with a smaller contraction in volumes exported, the increase in prices for industrial raw materials weakened depressing effect of falling exports in terms of volumes on total exports revenue.

However, the growth in unit values in the 2000s was not sufficient to offset the fall in volumes of exports of most of these commodities. In order to account for the fall in volumes, unit value of not stripped tobacco would have to be 450 percent in 2008 above their level in 2000, for asbestos this would call for 300 percent, cut flower 120

percent stripped tobacco 60 percent, and raw cotton 30 percent. Unit values for nickel alloys and ferro alloys 50 percent lower would generate the same values of exports as in 2000.

The historical irony is that the contraction in the value of total exports in 1998-2000 was driven by falling unit values of main commodities exported by Zimbabwe. They were in 2000 between 10 percent (ferro alloys) and 39 percent (nickel mattes) lower than in 1997: the volume of other ferro alloys was 18 percent lower while that of nickel mattes was slightly (one percent) higher. The volume of raw cotton, whose unit value was 27 percent lower, was 34 percent above its 1997 level; the volume of cut flowers was 63 percent higher but the unit value 23 percent lower. These, however, were not enough to compensate for the contraction in the not stripped tobacco volumes of 36 percent in 2000 against 2007 and the unit price of 20 percent lower.

As signaled earlier, the only bright spot in an otherwise very bleak picture of Zimbabwe's exports performance in 1998-2008 were nickel ores and concentrates. The value of their exports increased from less than US$1 million in 2000 to US$54 million in 2002 and US$234 million in 2008. All these exports came from the Zimplat

mines, which were bought by the Impala Platinum, South Africa, from BGP Delta, an Australian mining company in 2001. This was rather an exceptional case of a foreign direct investment flowing into Zimbabwe during the 2000s. Considering that firms operating in natural resource extractive industries might have been somewhat immune to deficiencies in the overall quality of the business environment as they tend to be geographically concentrated and depend less on local supplies, this finding comes as somewhat of a surprise. It appears that extractive industries were not entirely spared from the reach of ill-designed economic policies.

Aggregate exports of selected commodities: quantities and values: What was the aggregate impact of changes in prices and quantities on total exports of these commodities and how they drove Zimbabwe's total exports in the 2000s? Since the group of selected commodities accounted for between half and two thirds of Zimbabwe's total exports, its performance determined overall exports dynamic during this period. Furthermore, the availability of data on unit values and physical amounts of exports allows one to distinguish between change triggered by the increases in unit values and volumes.

Table 5: Exports of major commodities in current prices and quantities and exported quantities in 1997, 2000 and 2008 in current prices in 1997-2008 (in millions of US dollars and percent).

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Exports in current prices	1,270	912	1,051	1,042	1,031	1,030	1,105	1,167	1,148	1,281	1,634	1,440
Q 1997 in current prices	1,270	1,176	1,045	1,072	966	1,005	1,081	1,254	1,357	1,412	1,876	2,086
(annual change)	...	-7	-11	3	-10	4	8	16	8	4	33	11
Q 2000 in current prices	1,253	1,178	1,054	1,042	962	1,003	1,076	1,222	1,298	1,345	1,733	1,936
(annual change)	...	-6	-11	-1	-8	4	7	14	6	4	29	12
Q 2008 in current prices	686	649	576	574	468	760	671	814	1,029	1,015	1,336	1,440
(annual change)	...	-5	-11	0	-19	63	-12	21	26	-1	32	8
Exports in 1997 prices	1,270	996	1,301	1,254	1,343	1,227	1,160	1,044	908	882	830	686
Exports in 2000 prices	1,072	847	1,097	1,042	1,111	1,029	988	881	781	757	706	574
Exports in 2008 prices	2,086	1,680	2,075	1,936	2,024	1,997	2,031	1,813	1,719	1,925	1,749	1,440
Memorandum:												
Current exports % of Q 1997	100	78	101	97	107	102	102	93	85	91	87	69
(annual change)	...	-22	30	-3	10	-4	0	-9	-9	7	-4	-21
Current exports % of Q 2000	101	77	100	100	107	103	103	96	88	95	94	74
(annual change)	...	-24	29	0	7	-4	0	-7	-7	8	-1	-21
Current exports % of Q 2008	185	141	182	181	221	135	165	143	112	126	122	100
(annual change)	...	-24	30	-1	22	-39	22	-13	-22	13	-3	-18
Share in total exports	61	51	55	56	57	60	59	61	58	58	68	65

Source: Own calculations based on partners' data from the UN COMTRADE database.

Table 5 presents the values of current exports together with quantities exported in 1997 (Q 1997), in 2000 (Q 2000) and in 2008 (Q 2008) expressed in current prices. The annual change in the current value of quantities exported in a selected year kept unchanged over 1997-2008 measures the impact of changes in unit values or exports prices[xii]. Taking take the unit values available for a given period and multiplying them by the

quantities from the subsequent periods by these same prices amounts to evaluating current quantities at prices fixed in time, which essentially "removes" the price effect[xiii]. As in the above case, we did calculations in terms of 1997, 2000 and 2008 prices. We also included calculations of current exports in terms of values of exports of Q1997, Q2000 and Q2008: these ratios trace change in volumes in a given year to quantities exported

in one of the years above (Table 5). The data shed light on determinant of exports performance during the 1998-2002 contraction and the 2003-07 modest rebound phase with the latter being the result of favorable change in unit values that offset falling volumes of exports of our sample of commodities except for nickel ores[xiv]. The cumulative annual change in Q1997 exports in current unit values over 1998-2002 was negative 22 percent whereas the cumulative annual change in exports in 1997 prices was 4 percent. Real exports in 1997 prices stood at 97 percent of their 1997 level: the 1997Q exports in 2002 were at 79 percent of their level in 1997. Note also that current exports in percent of Q1997 export were below 100 only in 1998 and 2000 indicating that quantities exported in these years were below their levels in 1997. Thus, the contraction was first and foremost the result of the fall in exports prices and only marginally due to the falling volumes. Since the share of selected commodities was in 2002 almost the same as in 1997, this observation can be safely generalized to total Zimbabwean exports during this period.

In contrast, the improvements in prices of exported commodities drove the increase in current values of exports. Current exports were lower each year in 2003-07 than Q1997 and Q2000 exports expressed in current prices; the cumulated annual rates of growth of Q2000 in current prices was 60 percent over 2003-07 while this total for exports in 2000 prices was negative 36 percent; and exports in 2007 in 1997 and 2000 prices were 28 percent points below their levels in 2003 and 14 percent points in 2008 prices. Note also that the ratio of current exports to Q2008 exports in current unit values fell from 165 in 2003 to 122 indicating the fall in volumes exported. Thus, had it not been for the growth in prices for Zimbabwe's major exported commodities, exports earnings would have been falling during this period.

The impact of exports of nickel ores on exports earnings was huge. A 63 percent increase in Q2008 exports in 2002 was entirely due to the increase in their unit value from US$0.03 in 2001 to US$4.61 in 2002: this multiplied by the quantities exported in 2008 produced this spectacular surge. In spite of this surge, however, the 2002 value of Q2008 exports was 26 percent below the current value of exports in 2002 showing the extent of extinction of exports of other commodities between 2002 and 2008.

Even though there were no exports of nickel ores in 1997 and they were miniscule in 2000[xv], commodities exported in quantities as they were in 1997 expressed in 2008 prices would generate 45 percent higher export earnings and those exported in 2000 would bring 34 percent larger exports earnings than the current value of exports in 2008.

One may estimate total exports in terms of exports baskets in real terms in 1997, 2000 and 2007 assuming that the shares of commodities in total exports would remain at the same level as they were in these respective years. Were the same quantities of products exported in 2008 as they were in 1997, the value of total exports would be US$3.4 billion (Table 6). The same value of exports in 2008 would be for products exported in 2000. Put differently, equivalents of Q1997 and Q2000, i.e., commodities exported in these years in 2008 prices would be US$3.4 billion as compared to the current value of total exports of US$2.2 billion or 54 percent more. Correspondingly, the value of exports in 2008 expressed in 1997 or 2000 prices would be half of their value in current prices.

In all, the meaning of these numbers is straightforward: exports in 1997-2008 were not stagnant but they were shrinking rapidly. In terms of volume, they were 38 percent lower in 2008 than they were in both 2000 and 1997.

Table 6: Estimates of values and volumes of exports in 2008 in current and 1997 and 2000 prices and corresponding volumes in 2008 (in millions of US dollars).

	2008		2008
Exports in 1997 prices	1,133	Exports in Q1997	3,442
Exports in 2000 prices	1,022	Exports in Q2000	3,445
Exports in 2008 prices	2,232	Exports Q2008	2,127
Change in unit values: 2008 versus 1997	0.97	Change in volume: 2008 versus 1997	-0.38
Change in unit values: 2008 versus 2000	1.18	Change in volume: 2008 versus 2000	-0.38

Source: Own calculations based on partners' data from the UN COMTRADE database.

The fall in volumes exported in 2008 was more than offset by the increase in prices or unit values of exports: they almost doubled (97 percent increase) in 2008 as compared to 1997 and more than doubled (118 percent increase) as compared with the prices in 2000. Put differently, had 1997 or even 2000 real exports been sustained, the value of exports in 2008 would have been around 50 percent higher. This assumes, however, a zero growth scenario: not a very demanding benchmark for exports performance during a period of a rapid expansion of the world economy. Neighboring countries, sharing similar factor endowments and climate conditions, provide a more adequate benchmark.

Exports' dynamics: comparative perspective: For the reasons of geography and similarities in factors endowments, Zimbabwe's neighboring countries are good candidates against whom Zimbabwe's foreign trade performance record could be benchmarked. They are located in the same region and enjoy similar conditions in access to world markets. While for the latter reason, it would make sense to include all members of SACU (Southern African Customs Union), but the gaps in foreign trade data of Lesotho and Swaziland has made it impossible[xvi].

As can be seen from data in Table 7, Zimbabwe was an outlier. Zimbabwe's LSG rate of exports growth in 2000-08 was by far the lowest among comparator countries but the share of exports in the GDP the highest for the reasons earlier discussed. In terms of exports per capita, Mozambique almost closed a ten-fold gap vis-à-vis Zimbabwe in 2000 and Zambia overcame Zimbabwe with US$430 per capita or more than twice its level.

Table 7: Zimbabwe's exports dynamics in regional perspective in 2000-08.

EXPORTS	Annual growth rates			LGS	-	Value of exports		
	2006	**2007**	**2008**	**2000-08**	**2008 (US$ mln)**	**Per capita 2000**	**Per capita 2008**	**in % of GDP**
Botswana	1.7	12.6	-4.6	9.1	4,838	1,388	2,431	39.8
Mozambique	36.4	1.3	10.0	23.9	2,653	17	122	27.8
Namibia	34.8	19.7	17.1	18.1	4,729	632	2,252	54.4
South Africa	11.9	21.7	15.5	14.8	73,966	537	1,510	27.1
Zambia	108.3	22.5	10.4	24.9	5,099	75	430	37.6
Zimbabwe (mirror)	12.8	8.4	-7.6	3.6	2,230	163	196	56.9

Source: Own calculations based on data from the UN COMTRADE database.

This raises an interesting question about the extent of Zimbabwe's fall vis-à-vis comparator countries. One way of answering this query is to calculate hypothetical values of Zimbabwe's exports assuming that its 1999 exports were growing at an average rate of aggregate exports growth of comparators in 2000-08. Table 8 provides their values. As can be easily seen, the gap between actual and hypothetical exports began to increase rather rapidly beginning in 2003 indicating that the damage inflicted upon the economy in 2000-01 began to be felt by the real sphere of the economy. Against the average performance of comparator countries, the contraction in Zimbabwe's exports began in 2003. In 1999-2002, Zimbabwe's exports growth in current prices kept pace with the average for comparators. By 2005, the ratio of Zimbabwe's exports to total exports of its comparators was half of what it was in 1999-2002 (Table 8). Put differently, the average growth rate was twice as high as that for Zimbabwe.

Table 8: Actual versus hypothetical exports in current prices in 1999-2008.

Exports	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Hypothetical	1,651	2,022	2,028	1,863	2,498	3,178	3,703	4,288	5,153	5,910
Actual	1,651	1,855	1,809	1,728	1,867	1,924	1,974	2,227	2,414	2,230
Actual in % of Hypothetical	100%	92%	89%	93%	75%	61%	53%	52%	47%	38%
Memorandum:										
Ratio of Zimbabwe's to total	6%	6%	6%	6%	5%	4%	3%	3%	3%	2%

Source: Own calculations based on data from the UN COMTRADE database.

Based on the above discussion, one may put a likely contraction in exports triggered by wrong-headed economic policies well above 50 percent. Had Zimbabwe's exports in 1999 kept pace with the average for neighboring countries, their exports in current prices would be almost three times as high as their actual values were in 2007-08. While it is impossible to give a precise estimate of how much lower the incidence of poverty would have been had there been no contraction in exports, the shift away from products characterized by high labor intensity clearly indicates a dramatic loss in jobs in export-oriented sectors.

CONCLUSIONS

The mutually reinforcing bad economic policies in the 2000s dealt a devastating blow to Zimbabwe's economy. No sector of the economy was spared from the devastating impact of macroeconomic instabilities, ill-designed land reform combined with disregard for private property and erosion of the rule of law. Total exports in real terms were between 30-40 percent lower in 2008 than they were a decade earlier. A modest increase in the value of exports during this period was only due to the increase in prices of major exportables: the 2000 exports basket would generate 50 percent higher exports revenue than exports in 2008. Viewed dynamically against the average performance of neighboring countries, Zimbabwe's loss was much higher: had its exports grown at their average rate, its value would have been three times higher than the actual exports.

Yet, some sectors fared better than others showing varying degrees of resilience to economic policies. In general, the largest contraction was in exports of agricultural products followed by industrial goods and minerals, i.e., industrial raw materials. While large mining and farming (tobacco) operations appeared to be more immune to unfriendly business climates, small scale agricultural and industrial activities turned out to be highly sensitive to ill-designed economic policies and weak economic governance. Their exports registered the largest declines.

The export basket shifted away from low-technology labor-intensive products to natural resource-based products. But this was mainly the result of lackluster performance of agricultural and industrial exports exacerbated by changes in factor content of the latter. Within industrial exports, low-technology labor-intensive activities were crowded out by natural-resource based products. Given Zimbabwe's endowments and developments in exports in the 1990, government policies may not bear the full responsibility but they certainly accelerated their decay.

Growing reliance on a narrower variety of exports accompanied the shift towards natural-based products. Zimbabwe's exports were traditionally relatively highly concentrated with a few commodities generating the bulk of export revenues. But the concentration of exports increased further in 1994-2008 by most measures, although the increase began to take place already in the late 1990s. The shares of the top five, ten, and twenty four-digit SITC sectors in total exports significantly increased in 2000-08. Fewer products shaped the dynamics within each group of products. Ferro alloys were solely responsible for the growth in the value of industrial products in 1999-2008 and nickel exports overshadowed exports of other industrial raw materials.

But the most important conclusion boils down to the following: institutions and policies including macroeconomic stability do matter. The deterioration in their quality exacted a heavy price on Zimbabwe's population. Viewed through the lens of foreign trade, it contributed to the fall in exports of products characterized by high labor intensity and thus deprived many of employment. As mentioned earlier, it has led to the fall in life expectancy—the most visible sign of poverty.

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[i] For a coherently spelled argument, see http://garikaichengu.com/2011/07/30/lifting-sanctions-will-spark-zimbabwes-economy/ Lifting Sanctions Will Spark Zimbabwe's Economy, By Garikai Chengu, African and African American Research Institute Fellow, Harvard University Posted by garikaichengu · July 30, 2011. However, as we shall see, the contraction began before sanctions and former Rhodesia, facing incomparably much more comprehensive sanction, experienced much lower contraction.

[ii] Various ad hoc measures, such as the introduction of a managed foreign exchange tender system early in 2004 or the gradual relaxation of the surrender requirements have failed to prevent the appreciation of the official exchange rate, simply because " ..... the demand for foreign exchange continued to pick up" (Mounoz, 2006 p. 4).

[iii] As Clemens and Moss (2005) note: "Most Zimbabweans (including white farmers) say that land reform was both necessary and inevitable. The tragedy of Mugabe's approach is that it has harmed those whom a well-ordered, selective redistribution program could and should have helped. Generally the farms have not been given to black farm managers or farm workers." Moreover, although the official goal was to divide the farms into hundreds of thousands of small plots for traditional black farmers, most plots ended up in the hands of Mugabe's political supporters and government officials (Richardson, 2005).

[iv] FDI data are taken from UNCTAD World Investment Report database and GDP from the World Bank WDI database.

[v] As elsewhere, these are based on exports to Zimbabwe reported by other countries to the UN COMTRADE database.

vi This share increased from an average of 10 percent in 2000-02 to 37 percent in 2008 while the share of EU fell from 39 percent to 23 percent over the same period (derived from trade statistics reported to the UN COMTRADE by Zimbabwe's trading partners).

vii The surrender requirement is a tax on exports, as exporters are obliged to convert a portion (50% in 2003) of foreign currency earnings into domestic currency at official exchange rates several times below black market exchange rates. Since every dollar converted loses almost all of its value, exporters have an incentive to keep money abroad further aggravating the severe shortage of foreign currency

viii The contraction was triggered mainly by the fall in unit values of major exported commodities rather than shrinking volumes of exports. See the discussion in Section 3.

ix As we show further on, the moderate rebound was the result of significant increases in prices of exported mining products and the expansion in exports of platinum group metals, mainly nickel.

x The Herfindahl-Hirschman (H-H) index is a measure of concentration equal to the sum of the squared shares of exports of products in total exports. It assumes values ranging from zero to 10,000: zero when all shares are equal and 10,000 if only one product is exported. Values between 1,000 and 1,800 are considered as depicting moderate levels of concentration.

xi We use a simple classification developed by Landesman and Stehrer (2003), which distinguishes among three broad categories of production activities: (1) low technology and labor intensive activities, (2) resource intensive activities, and (3) medium- to high-technology production activities.

xii These are equivalents of the Paasche index with the volume in a given (base) year expressed in prices in successive years or $\sum(p_{It1}*q_{it0})/\sum(p_{It0}*q_{it0})$. It denotes the impact of change in exports prices.

xiii In mathematical terms, this is the fixed-base Laspeyres index.

xiv For the description of the phases in Zimbabwe's exports growth, see Table 1 in Section 2.A above.

xv They amounted to 953 tons as compared to 62,530 tons in 2008, so their price effect was negligible.

xvi For Lesotho the data in the UN COMTRADE database are available only for 2000-04 and Swaziland for 2000-07.