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HARNESSING LINKAGES FOR INDUSTRIAL DEVELOPMENT

Masere V. S,
Lecturer: Midlands State University, Economics Department
Gurira P,
Lecturer: Midlands State University, Banking and Finance Department
Matsika R,
Midlands State University, Insurance and Risk Management Department
Samugwede, H,
Midlands State University, Insurance and Risk Management Department

ABSTRACT

Zimbabwe, which is an area abundant of a natural resource has attracted entrepreneurs mainly from the Eastern countries who, under "nomal" circumstances, are expected to employ the resource in production; new jobs and support industries and hence perpetuate the cycle of growth. However the state of the nation's economy is evidence enough that as much as economy has vast deposits of natural resources, the economy and its populace are not benefiting from that. It is therefore the purpose of the study is to investigate the role of fiscal linkages in industrial development (proxied by manufacturing sector output growth) in Zimbabwe. Specifically, the study examines the relationship between diamond and platinum output growth rates and manufacturing sector growth as well as assessed ways in which the government can use fiscal linkages to resuscitate the declining manufacturing sector capacity. Literature provided evidence of mixed views on the impact of natural resources on economic growth. Findings from trend and correlation analysis revealed that manufacturing output growth has a strong positive relationship with diamond output growth and a week positive relationship with platinum output growth in Zimbabwe for the period 2010 to 2017. It is therefore recommended that the government implement policies that will encourage transparency and accountability in the management of natural resource remittances as well as putting into place systems to ascertain the channelling of these funds towards resuscitation of the manufacturing sector. This will go a long way towards arresting Zimbabwe's inflation problems and help reduce the outflow of foreign currency which will in turn help stabilise the country's currency.

Key Words: Fiscal linkages, Industry, development, manufacturing sector, natural resources

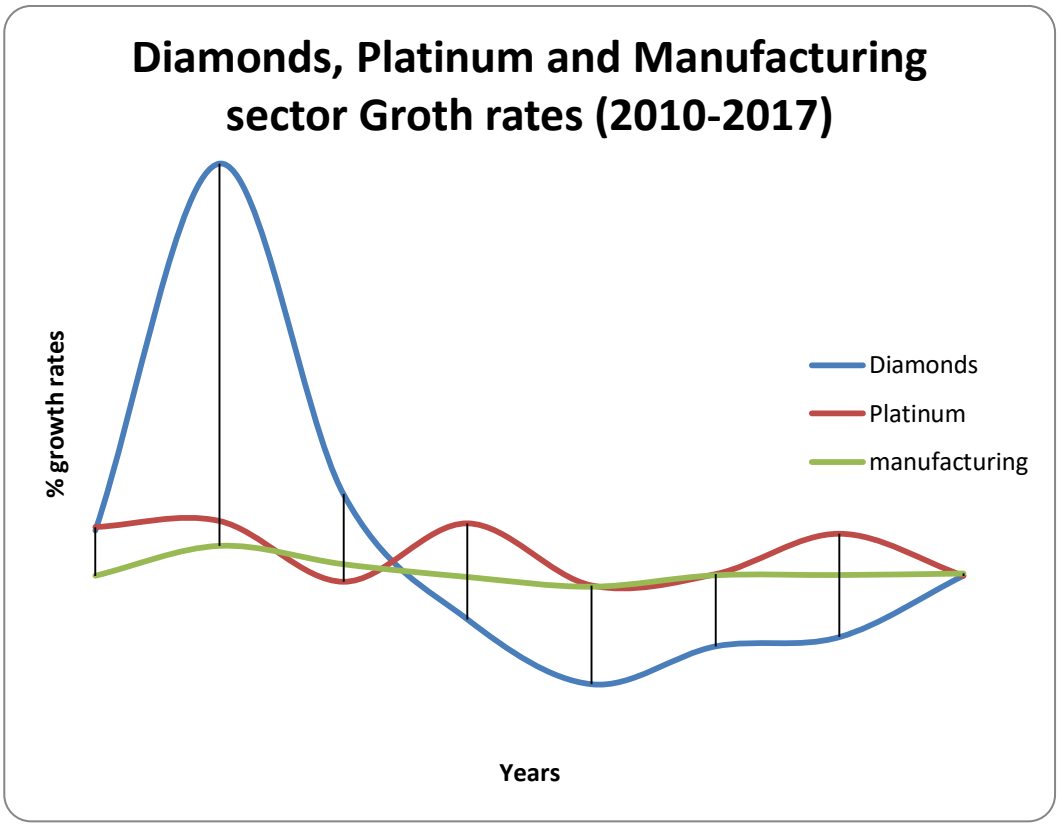
I. Introduction

According to Hirschman (1970), fiscal linkages are among the three possible linkages that exist between the commodity sector and the industrial sector. Fiscal linkages occur when a measure of resource rents are appropriated by the government and used to promote industrial development in unrelated sectors. Raw materials are scarce resources essential for manufacture (Elliott II, Hartarska and Bailey, 2007). Historically, economic growth resulted from an expanding

manufacturing sector which in turn depended on access to raw materials. Thus, nations fought and negotiated to gain access to abundant natural resources. An area abundant of a natural resource would attract entrepreneurs who would employ the resource in production; new jobs and support industries would follow and the cycle of growth would be perpetuated. Through this process, natural resource abundance came to be associated with the positive aspects of economic growth (Ding and Field, 2004).

Statistics supplied by Akplogan (2014) indicate that Africa is rich in natural (733 million hectares of arable land which is about 27% of the world's total) and human resources and could support an expansion of production and agricultural commerce. Furthermore, the proportion of manufacturing products among exports for all developing countries rose from 25% to 35% between 1980 and 2005 thus confirming that in Sub-Saharan Africa the proportion of exports of raw materials among all exports had fallen during the years 1998-2010. Moreover, recalling that industrialization has become a "preoccupation in economic debates" in the past 50 years, Akplogan pointed out that "exports of basic products cannot provide African countries with strong, sustainable economic growth since most African economies are based on agriculture with a low added-value". Because of this development, African countries were therefore urged to promote the growth of agricultural production on the one hand and the development of possibilities outside agriculture on the other hand, especially the processing of raw materials and services.

In Zimbabwe, since 2009, the then Finance Minister, Hon. Tendai Biti had relied on diamond remittances for financing of the budget. However, now and again, the Minister had been forced to reduce the budget due to unremitted diamond revenues where expected diamond revenues were far greater than those reported (Zimbabwe Budget Statements, 2009-2012). From year 2000 to 2013, diamond production, exports and Dividends/taxes/royalties paid to the government have been increasing whilst the years 2014 to date have witnessed a fall in these remittances (RBZ, Ministry of Finance (2000-2016). On the other hand, manufacturing sector capacity has been on a decline amid closure of companies. Statistics from the Ministry of Finance and Economic Development and ZIMSTAT (2017 Budget Statement, pg 17) indicate that services were the largest contributor to GDP followed by Mining and Quarrying for the years 2010 to 2013. However, for the years 2014 and 2017 agriculture was the largest contributor while the year 2016 saw mining and quarrying contributing the highest. On the other hand, the contribution of manufacturing to GDP increased between the years 2010-2012 but its contribution was next to non-existent between the years 2013-2017.



Source: Zimbabwe Budget Statements (2017,2018)

Figure 1

Figure 1 above shows the trend in diamonds, platinum and manufacturing sector growth for the years 2010 to 2017. Indications are that diamond output has been on a decline from 2011 to 2014 while the years 2014 to 2017 witnessed an improvement in the output. On the other hand, platinum output followed a more or less similar trend to diamonds though there weren't any marked falls in its output as compared to diamonds. Worth noting is that though platinum output fell for some years the growth rates were mostly in the positive. Manufacturing output fell from 13.8% in 2011 to -5.1% in 2014 then improved to 1 % by 2017.

Moreover, the underlying message from the 2017 pre-budget consultations was that greater and more urgent attention needs to be given to supply side interventions geared towards enhancing production across all sectors of the economy. More so, the annual 2018 pre-budget seminar held in November 2017 in Victoria Falls went under the theme "consolidating Economic development and Transformation through Domestic Resource mobilisation and utilisation, all this pointing to the importance of domestic resources, particularly minerals, for enhancing production in Zimbabwe. Efforts to date in that area include; the consolidation of the diamond industry, the capitalisation of the Zimbabwe Consolidated Diamond Company which saw a marked improvement in output, licensing of 10 diamond cutting and

polishing centres meant to add value to locally produced diamonds with most of these centres in the stage of building capacity in diamond processing and the opening of the school of diamond cutting and polishing in Mount Hampden which has trained over 1000 artisans in diamond sorting, valuation, cutting and polishing. The school has also automated the diamond cutting and polishing process thereby improving the skills and enhancing the diamond beneficiation process. Aurex, a subsidiary of RBZ, has also started beneficiating the country's diamonds and has moved into manufacturing of jewellery (2018 Budget Statement).

Because all these efforts, diamond output stood at 1.8million up from 1.3million recorded during the whole of 2016 by end of September 2017 (2018 Budget Statement). In addition, diamond and platinum which fall under the extractive sector were the only minerals which are still being protected by the 51/49% Indigenisation policy. Given government efforts to date to develop and protect the mining industry, specifically diamonds and platinum, It is therefore necessary to look at the role of fiscal linkages in industrial development (proxied by manufacturing sector output growth) in Zimbabwe. Specifically, the study will examine the relationship between diamond and platinum output growth rates and manufacturing sector growth as well as assess ways in which the government can use fiscal linkages to resuscitate the declining manufacturing sector capacity.

2. Literature

David and Wright (1997) identified several factors that facilitated rapid discovery and extraction of oil and minerals. These factors included public knowledge as embodied in geological surveys, mining education, an ethos of exploration, and incentives. Current literature suggests five main channels of transmission from natural resource abundance to slow economic growth which can be described in terms of crowding out: a heavy dependence on natural resources (see Auty2001; Gylfason and Zoega 2001). The channels are: The Dutch disease and foreign capital Natural resource dependence ; Rent seeking and social capital In second place, huge natural resource rents, especially in conjunction with ill-defined property rights, imperfect or missing markets, and lax legal structures in many developing countries and emerging market economies, may lead to rampant rent seeking behavior on the part of producers, thus diverting resources away from more socially fruitful economic activity (Auty, 2001; Gelb, 1988); Education and human capital Natural resource abundance or intensity may reduce private and public incentives to accumulate human capital due to a high level of non-wage income – e.g., dividends, social spending, low taxes; Saving, investment, and physical capital Natural resource abundance may blunt private and public incentives to save and invest and thereby impede economic growth and Money, inflation, and financial capital, It is possible that heavy dependence on natural resources actually hinders the development of the financial sector and also growth, as appears plausible, but other

possibilities also exist; in particular, some unspecified third factor may inhibit both financial development and economic growth.

Wright (1990) argued that natural resources were good for growth in industrial exports, while Sachs and Warner (1995) argued that they were bad for economic growth. Sachs and Warner evaluated a number of hypotheses for the negative effect of resources on growth, including rent seeking and corruption, protectionism, the pricing of tradable and nontradable goods, and shifts in labor demand from learning by doing sectors. They found limited evidence of natural resources affecting growth through bureaucratic quality. The evidence was stronger for protectionism. Goldberg, Wibbels, and Mvukiyehe (2008) conducted an analysis similar to Sachs and Warner for the American states for 1929-2002. They found negative relationships between natural resources and per capita income, a measure of very long run growth and between natural resources and growth. Wright and Czelusta (2004) argued that policies are critical determinants of the effects of natural resources on growth. Countries with policies that have focused on exploration, technology, and knowledge-related investments have been successful. Similarly bad policies or institutions can lead to undesirable outcomes such as rent seeking and corruption.

Akplogan (2014) postulated that "The relationship between the manufacturing sector and economic growth depends on the amount of natural resources in the country. Specifically, the study examined whether natural resources in African countries affect the relationship between the value added of manufacturing and agricultural sectors and GDP per capita in African countries according to their endowments of natural resource. The study found out that manufacturing value added has a positive and significant impact on the level of per capita product if and only if the value of the share of minerals and fuels in total exports is less than a certain critical value. Gylfason (2004) reviewed the relationship between natural resource dependence and economic growth, and stressed how natural capital intensity tends to crowd out foreign capital, social capital, human capital, physical capital, and financial capital, thereby impeding economic growth across countries.

3. Methods

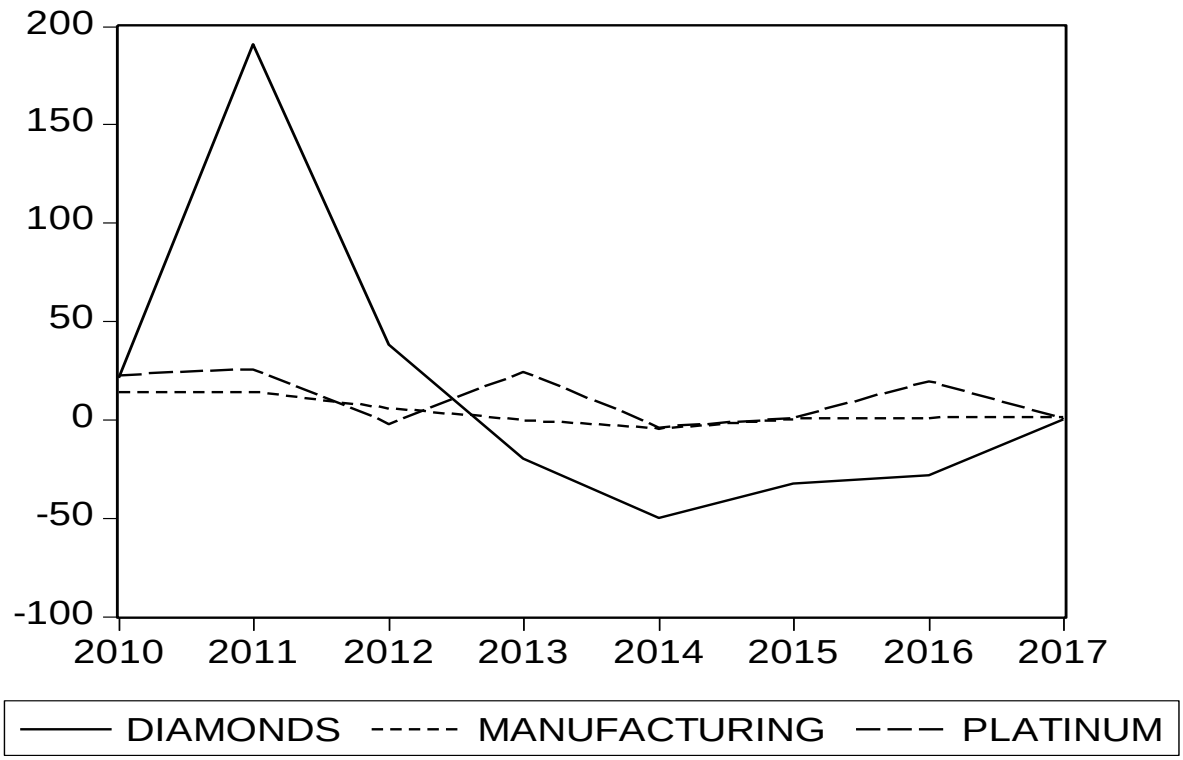
The relationship between mining output and manufacturing sector output was analysed using a trend analysis of the statistics for the years 2010 to 2017. In addition, the researcher performed correlation analysis between diamond and platinum output and manufacturing sector output.

4. Findings and Discussion

4.1.1 Trend Analysis

Figure 2 below shows that between the years 2010 and 2017, manufacturing output has been trending in the same direction as diamond output. Specifically, indications are that there seems to be a positive relationship between diamond output growth

and manufacturing sector growth. Manufacturing output grew as diamond output increased. This is observed for the years 2010-2011, 2014-2015 and 2016-2017. However, the trend was a declining one for the years 2011-2014. In general, there exists a positive correlation between diamond output growth and manufacturing sector output growth as indicated in Figure 3 below. On the other hand, the relationship between manufacturing output growth and platinum output growth seems to be unclear from Figure 2. The two seem to trend together between the years 2010-2011 and 2014-2015 but thereafter there seems to be an inverse relationship between them (see years 2011 to 2014 and 2015 to 2017).



Source: E-Views 4

Figure 2: Trend Analysis

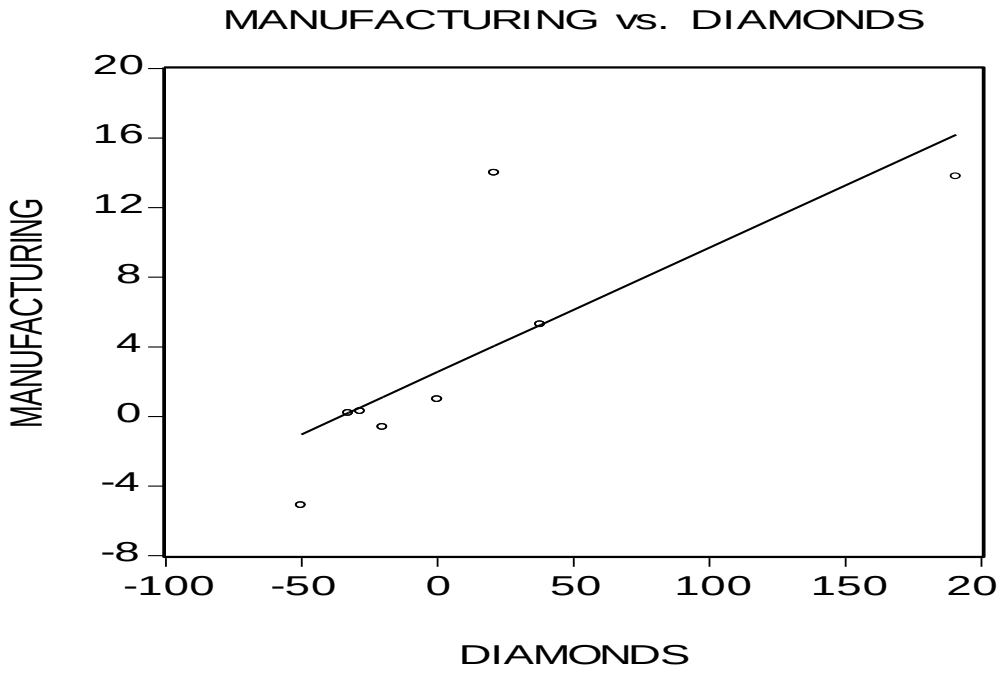


Figure 3: Scatter with Regression

4.1.2 Correlation Analysis

Table 1: Correlation Matrix

	DIAMONDS	MANUFACTURING	PLATINUM
DIAMONDS	1.000000	0.790552	0.433879
MANUFACTURING	0.790552	1.000000	0.552722
PLATINUM	0.433879	0.552722	1.000000

Source: E-Views 4

Table 1 shows correlation coefficients of the three variables. The decision rule is to conclude that there is a strong relationship between the variables for a coefficient of and above +/- 0.8. The correlation coefficient between manufacturing and diamonds is positive and equal to 0.790552 which is approximately 0.8 (to 2d.p). This implies the presence of a strong positive relationship between manufacturing output growth and diamond output growth. Specifically, 80% of the variation in manufacturing output growth is explained by diamond output growth. This is in line with the conclusion obtained from the trend line and scatter plot with regression (Figure 1 and Figure 2 respectively). A correlation coefficient of 0.552722 between

manufacturing output growth and platinum output growth shows that there exists a weak positive relationship between the two variables. Approximately 60% (to 2d.p) of the variation in manufacturing output growth is explained by platinum output growth.

4.1.3 Discussion

Evidence from both the trend analysis and correlation analysis has shown that manufacturing output growth is strongly positively related to diamond output growth and a weekly positively related to platinum output growth. This implies that both minerals have an effect on manufacturing sector growth, a proxy for industrial development, in Zimbabwe though their impact is different. As diamond and platinum output grows then manufacturing output also grows. These findings are in line with Wright (1990) who postulated that natural resources were good for growth in industrial exports and both diamonds and platinum are among the minerals exports in Zimbabwe. Moreover, Wright and Czelusta (2004) also subscribe to a positive relationship provided there exist "good policies". This implies that the efforts to date by the government to add value and beneficiate our natural resources as well as to continue protecting diamonds and platinum, through the indigenisation policy, are actually paying off through industrial development. In addition, Akplogan (2014) study found that manufacturing value added has a positive and significant impact on the level of per capita product if and only if the value of the share of minerals and fuels in total exports is less than a certain critical value. Akplogan also suggested that the amount of natural resources also affects this relationship and it is no secret that Zimbabwe is richly endowed with natural resources such as minerals. However, other literature on this area points to a negative relationship between natural resources due to bad policies (Wright and Czelusta 2004), crowding out: a heavy dependence on natural resources (see Auty 2001; Gylfason and Zoega 2001), and capital intensity (Gylfason 2004).

5. Conclusion and Recommendations

The purpose of the study was to investigate the role of fiscal linkages in industrial development (proxied by manufacturing sector output growth) in Zimbabwe. Specifically, the study examined the relationship between diamond and platinum output growth rates and manufacturing sector growth as well as assessed ways in which the government can use fiscal linkages to resuscitate the declining manufacturing sector capacity. Literature provided evidence of mixed views on the impact of natural resources on economic growth. Findings from trend and correlation analysis revealed that manufacturing output growth has a strong positive relationship with diamond output growth and a week positive relationship with platinum output growth in Zimbabwe for the period 2010 to 2017. Zimbabwe, which is an area abundant of a natural resource, has attracted entrepreneurs mainly from the Eastern countries who, under "normal" circumstances, are expected to employ the resource in production; new jobs and support industries and hence perpetuate the cycle of growth. However the state of the nation's economy is

evidence enough that as much as economy has vast deposits of natural resources, the economy and its populace are not benefiting from that. It is therefore recommended that the government implement policies that will encourage transparency and accountability in the management of natural resource remittances. Moreover, systems have to be put into place to ascertain the channelling of these funds towards resuscitation of the manufacturing sector. At the moment most of government revenue is being channelled towards servicing of government external debt and financing of government recurrent expenditure, however evidence from this study suggest the need for redirecting revenues generated from the country's natural resources towards the manufacturing sector. This will go a long way towards arresting Zimbabwe's inflation problems and help reduce the outflow of foreign currency which will in turn help stabilise the country's currency.

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