Industrial Development and Poverty Reduction in Botswana

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Abstract

The major objective of this article is to indicate how Botswana may achieve the industrial development envisaged in the economic linkage model and thereby generate sustainable employment that would lead to poverty reduction in the country. The findings of the study are that poverty reduction through industrial-based economic growth that leads to employment creation is the most effective way of dealing with poverty. This conclusion is supported by empirical evidence on poverty reduction from China, Indonesia and Singapore. For Botswana, evidence suggests that the public sector is now saturated and can no longer be a major source of employment. Therefore, the policy shift to an industrial-based economic growth for employment creation and poverty reduction under the Citizen Entrepreneurial Development Agency (CEDA) is a step in the right direction.

1.0 Introduction

Even though mineral-based economies (MBEs) like Botswana's often experience rapid and high rates of economic growth, the benefits of this growth do not generally "trickle down" to the majority who are not fortunate to find employment in the booming mining sector. As a result, despite their abundance of wealth, the incidence of poverty in these countries is often very high. Several factors have been found to account for this paradoxical outcome. First, MBEs are prone to enclave development in which the booming mining sector has limited backward and forward linkages with the rest of the economy (Radetzeki, 1977). As a result, they have limited employment from the backward and forward linkage industries. Second, mining is generally capital-intensive, which means that very few people would benefit directly from the sector through employment. Third, MBEs are generally characterized by an ever-widening wage-productivity gap which is due to intense labor bargaining for government to close the gap between wages of those employed in the booming sector and those of other sectors of the economy. The spending process that ensues from this is said to lead to the "Dutch disease" - de-industrialization and de-agriculturalisation (Corden and Neary, 1986; Auty, 1993). This means that, unless these problems are overcome by policy, employment creation from agriculture and the industrial sector will be small. Fourth, most MBEs are small in terms of both GDP and population size. Consequently, they are not able to take advantage of economies of scale unless they produce for export markets (Briguglio, 1998). In terms of employment generation, this means that unless firms are able to penetrate world markets and thus achieve economies of scale, they will only be able to generate employment for a few people.

Botswana is an MBE. The country has experienced a diamond-driven high and rapid economic growth over the last three decades. However, many commentators have argued that because of prudent macroeconomic policies, the impact of the Dutch disease has not been significant to adversely affect industrial development in the country

(Harvey and Lewis, 1990; Hill 1991, Sentsho, 2000). Rather, the country's weak industrial development is mainly due to the enclave nature of mining and the weak industrial base the country inherited at independence. This article argues that, rather than being a threat to industrial development and poverty reduction, mining offers government the opportunity to initiate industrialization through the provision of economic incentives. The objective of this article is therefore to indicate how Botswana may achieve industrial development envisaged in the linkage model and thereby generate sustainable employment that would lead to poverty reduction in the country.

The article is arranged as follows: section 2 covers the literature review, while Section 3 discusses the economic linkage model and poverty reduction. Section 4 discusses the application of the model to Botswana, while section 5 is the conclusion.

2.0 Literature Review

The literature on economic growth and poverty reduction generally focuses on four major questions (Quibria, 2000). These are (i) what is the fundamental cause of poverty? (ii) How does economic growth provide a solution for poverty? (iii) What type of growth is good for poverty reduction? And (iv) what kind of environment is conducive for such a growth?

According to Kannan (2000), there are at least four causes or views of poverty. First, poverty may be caused by inadequate intake of food (endemic hunger) or unavailability of food (famine). Second, poverty may be due to an individual's lack of access to basic needs like food, shelter, clothing, safe drinking water and ownership of productive economic resources. Third, poverty may be caused by lack of economic empowerment which may be due to inadequate basic education and health care as well as denial of political rights for self-determination. Lastly, poverty is said to be caused by deprivation from basic entitlements and capabilities for maintaining a minimum standard of living.

On the second question, Quibria (2000) points out that economic growth is the key to poverty reduction because it increases employment creation and hence government income to provide social services. This perspective is supported by the "Jobs for Africa" Report (1997) of the International Labor Organization (ILO) wing of the United Nations Development Programme. According to the report about 50 percent of people in Sub-Saharan Africa will be living below the poverty datum line in the 2000s. Furthermore, the report points out that the solution to this problem is for Africa to launch "...investment-led growth strategies that maximize employment and reduce poverty" (ILO, 1997). On the environment that is conducive for economic growth with equity, studies by Quibria (2000) and Oxfam (1997) emphasize trade openness, macroeconomic stability, market orientation, investment in physical and human capital, sound institutions and good governance.

Empirical studies also reveal an interesting relationship based on the "growth elasticity of poverty reduction." According to Oxfam (1997), a one percentage point growth in East Asian countries like China, Indonesia and Malaysia reduces the number of people living below the poverty datum line by around 3 percent or more. This figure is estimated at 2 percent or less for Africa and 1 percent for Latin America. Furthermore, the study points out that between 1970 and 1990, "China lifted 175 million people out of poverty while the population increased by 300 million. Indonesia lifted over 40 million people out of poverty while adding 60 million to its population" (Oxfam, 1997:1).

The most impressive record of poverty reduction through economic growth and employment creation is that found in Singapore. According to Zahralddin-Aravena

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(1998), at independence in 1959, Singapore had no sources of income except a deep-water harbor. There was widespread poverty, with most people depending on gambling and opium. However, within a period of three decades, Singapore had transformed itself into an industrialized country. Today, "Singapore is a seeming utopia, free of crime, poverty, litter, graffiti and unemployment" (op cit: pp9). All these came about because the country pursued industrial-based economic growth with equity.

3.0 An Economic Linkage Model and Poverty Reduction

Industrial development in mineral-based economies (MBEs) is based on the concept of economic linkages. There are several types of these linkages through which a booming sector may be linked to the domestic economy (Freudenburg and Gramling 1998; Turok, Ivan 1993). These include the backward linkage in which an incoming firm purchases inputs from domestic firms, the forward linkage in which the output of an incoming firm is used as a productive input in the domestic industry and the fiscal linkage which accrues to government in the form of royalties, taxes and dividends, as well as the public goods linkage which is mainly the use of the proceeds from the mining sector for recurrent and development expenditure in the public sector.

These linkages have important implications for industrial development and poverty reduction in a resource-based economy. First, in a case where the above linkages are very limited between the booming sector and the domestic economy, the country may experience what is known as *enclave development*. This path of economic development is generally characterized by limited industrial development and hence limited employment creation and poverty reduction. This is illustrated by the left trajectory in Figure 1.

Figure 1 Industrial Development for Poverty Reduction in a Resource-Based Economy: Botswana

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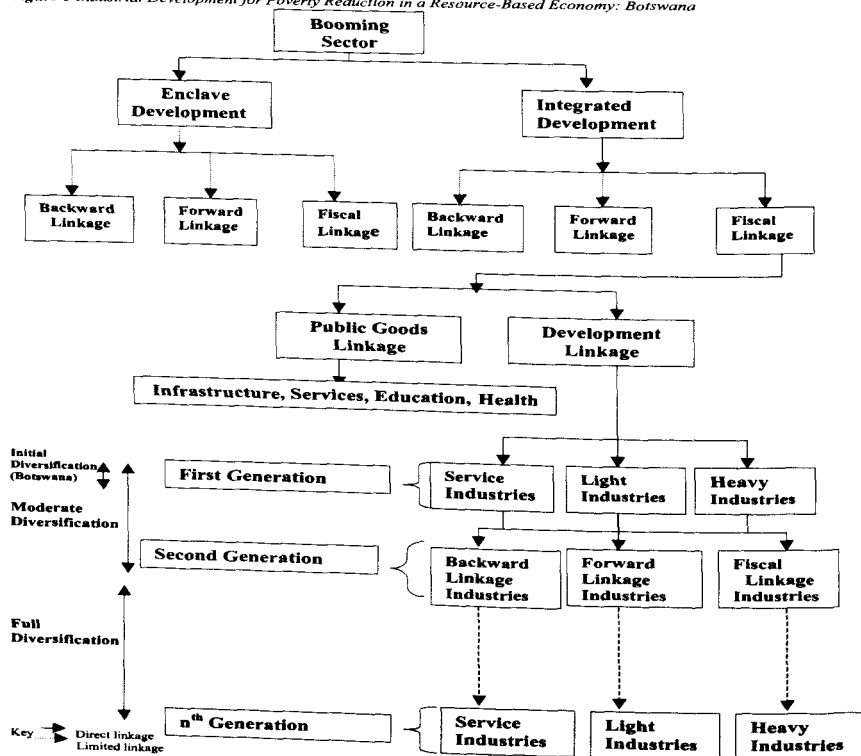
Conversely, if the booming sector is linked to the rest of the economy through all or some of these important linkages, the country would have what is known as *integrated development* (Freudenburg and Gramling 1998; Turok, Ivan 1993). Figure 1 also gives an illustration of the evolution of industrial development and economic diversification under this development scenario. The figure shows that under integrated development scenario, a country will generally have a substantial amount of revenues from the booming sector to provide the required infrastructure and economic incentives in order to initiate industrial development and employment creation for poverty reduction. Ideally, the linkage model suggests that these industries should range from the first generation to the nth generation industries.

4.0 Application of the Economic Linkage Model to Botswana

According to the economic linkage model employment for poverty reduction may be achieved through two channels, namely, the public goods sector and the industrial sector. This section gives a brief outline of how these sectors have performed in Botswana.

4.1 The Public Goods Sector The public goods linkage comes about as government uses the revenue that accrues to her from the mining sector to provide public goods such as infrastructure, education, health care and the provision of public service in general. The provision of these essential services provides employment which is essential for poverty reduction. Because Botswana was ruled from South Africa from the year of protectorate declaration in 1885 to independence in 1966, the creation of the public sector was perhaps the first form of employment creation that had a bearing on poverty reduction. With the discovery of minerals soon after independence, the public service continued to expand and absorb almost all graduates from high school and tertiary institutions. It was only in the 1990s, when it became evident that government could no longer continue to absorb all the educated manpower that graduates were allowed to seek employment in the private sector. Nevertheless, as indicated in Table 1, government remains the largest employer in the country, followed by services, manufacturing and finally the country's major engines of growth, mining and agriculture.

An important development today is the call for increased productivity in the public service and the rest of the economy in general. As part of this exercise, there is a call to "downsize" the public service to a manageable level and to privatize some government departments in order to make them efficient and effective in their service delivery. This policy means that the country's future employment needs no longer rest with government as a major employer, but with the industrial sector. Thus it is the industrial sector that is expected to become a major source of employment for poverty reduction in years ahead.

Table 2 A Comparative Contribution of Minerals to Real GDP, Real Government Revenue, Government Expenditure and Total Employment in Botswana

Year	Real GDP (P. million)	% of Real GDP Agric	% of Real GDP Gen. Govt	% of Real GDP Manufac.	% of Real GDP Mining	Govt Rev. (P. million)	% of Govt Revenue Minerals	% of Govt Revenue C-Pool	% of Govt Revenue Grants	Rec. Exphure 97400	Devt. Exphure* 5	FAP* 34	Employment Modern Sector	% of Total Employment Agric	% of Total Employment Govt	% of Total Employment Manuf	% of Total Employment Mining	% of Total Employment Services
1979/80	1360.00	11.7	14.2	4.1	29.7	609.63	32.9	33.2	12.3	343.85	265.78	-	83400	5	36	7	8	22
1980/81	1511.00	10.5	13.2	6.7	35.1	571.94	23.9	32.3	12.3	326.61	278.40	-	97400	5	34	6	7	26
1981/82	1623.80	9.9	13.3	7.7	38.7	598.44	25.3	29.0	12.0	419.85	769.36	2.78	100200	4	34	6	7	28
1982/83	1884.10	7.5	12.6	6.1	48.8	824.22	34.4	27.9	8.6	583.27	780.07	3.27	100500	4	37	7	7	27
1983/84	2101.20	5.8	12.5	5.7	50.7	1025.97	46.9	19.4	4.9	628.02	1124.47	4.96	110000	5	36	9	7	29
1984/85	2251.90	5.3	13.4	4.2	48.8	1300.06	51.3	13.2	3.6	699.85	1172.91	6.78	116800	3	39	8	6	28
1985/86	2420.60	5.5	13.5	5.1	46.8	1,507.11	54.6	12.4	4.4	772.82	1351.52	10.64	123500	4	40	9	6	27
1986/87	2636.10	4.7	14.9	5.6	46.5	1,987.37	56.7	12.8	5.8	757.60	671.15	10.26	140200	4	37	10	5	30
1987/88	3039.70	6.7	16.2	6.3	41.5	2,764.44	59.0	11.4	4.3	980.88	952.41	10.33	160800	4	35	10	4	30
1988/89	3702.50	5	14.9	6.5	40.5	2,683.60	58.0	12.8	1.5	1126.63	807.47	13.09	176200	3	35	12	4	30
1989/90	3911.30	4.9	14.6	6.5	37.1	2,506.50	53.6	12.8	3.1	963.96	730.42	14.15	198500	3	32	12	4	26
1990/91	4252.40	4.7	14.6	6.4	37.3	2,646.76	46.4	18.7	1.7	1180.98	714.13	19.67	222800	3	31	11	3	31
1991/92	4521.90	4.5	16.1	6.4	34.9	2,814.29	40.1	21.5	2.2	1340.13	730.12	16.50	227500	3	33	10	4	31
1992/93	4516.00	4.4	16.7	6.3	33.3	2,890.78	42.5	15.3	3.5	1474.43	840.48	16.97	226200	2	37	9	4	32
1993/94	4700.50	4.2	16.8	6	33.6	2,303.87	52.5	15.9	1.7	1553.11	709.74	16.07	231200	2	36	10	4	32
1994/95	4847.50	3.9	17.2	6	32.1	2,393.83	47.4	15.2	0.7	1536.82	731.92	18.42	231300	2	38	10	3	32
1995/96	5184.80	3.6	17.2	6	33	3,060.00	49.2	12.1	1.1	1673.40	926.74	24.20	234116	2	38	10	4	32
1996/97	5544.30	3.4	17.3	5.9	32.6	2,664.85	56.5	13.7	2.2	1499.74	844.28	22.16	237550	2	37	10	4	32

Notes: Agric = Agriculture; Gen. Govt = General Government; Manuf = Manufactures; Rev. = Revenue; Rec. Exphure = Recurrent Expenditure;
Devt. Exphure = Development Expenditure; FAP = Financial assistance Policy.
*Real Government Revenue and Real Export Earnings converted from nominal to real figures using GDP deflator.
**Converted from real export earnings in Pula to Real US$ export earnings using exchange rates
in Appendix 2.1; # Preliminary figures.
Source: CSO: Statistical Bulletins, various years

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4.2   The Industrial Sector A major advantage of MBEs is the abundance of mineral wealth which can be used to initiate industrial development through the provision of economic incentives. The industries that emerge as a result of this policy would be important for the creation of sustainable employment and poverty reduction. Botswana's major effort to achieve industrial development started with the Financial Assistance Policy (FAP) of 1982. The policy offered financial grants to firms which produced goods and services for either the domestic or foreign markets. Furthermore, the policy encouraged production methods that were labor intensive as a means of maximizing employment creation for poverty reduction. Table 1 shows that a substantial amount of funds were put into this scheme. However, when the scheme proved unsustainable due to problems of institutional capacity and widespread rent-seeking, it was closed in the year 2000 and replaced by the Citizen Entrepreneurial Development Agency (CEDA). CEDA continues with, among others, the objective of achieving industrial development for employment creation and poverty reduction. The scheme provides interest-subsidized loans to citizen-owned firms with potentially viable and sustainable projects. It is hoped that through this scheme Botswana will achieve economic diversification by (i) diversifying the agricultural sector into horticulture, poultry and dairy farming, (ii) manufacturing into both low-tech low-labor skill manufacturing and high-tech high-labor skill manufacturing; and services into financial services, tourism and transport. All these are expected to generate employment for poverty alleviation in line with the predictions of the economic linkage model. If this can be realized, the share of employment in agriculture, manufacturing and services will be expected to increase significantly and reduce the country's current high incidence of poverty.

5.0 Conclusions

The major objective of this article was to indicate how Botswana may achieve industrial development envisaged in the economic linkage model and thereby generate sustainable employment that would lead to poverty reduction in the country. The conclusions that emerge from the study are: (i) poverty reduction through industrial development that leads to employment creation is the most effective way of dealing with poverty. (ii) Empirical evidence on poverty reduction from the most populous East Asian countries, China and Indonesia, strongly supports this proposition. Furthermore, in Singapore, poverty vanished in a period of about three decades as a result of industrial-based economic growth with equity. (iv) Evidence suggests that the public sector in Botswana is now saturated and can no longer be a major source of employment. Therefore, the policy shift to a diversified industrial development for employment creation and poverty reduction under CEDA is a step in the right direction. All that is required now is to make the policies effective in order to realize the industrial development envisaged in the economic linkage model.

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