The article below, which gives a historic perspective on copper in Zambia can be the centrepiece of a discussion on PPD once a brainstorm has taken place. The article has been updated to reflect the current situation, but there are more links at the end to support this.

Copper in Zambia

Since the discovery of copper deposits in the 1920s copper has had an "extraordinary dominance" (Bostock & Harvey, 1972) in the country's economy. Many developing countries depend heavily on a few primary products for export as their means of earning foreign exchange. Zambia, however, is an extreme case of over dependence on the production and export of a single product; copper. Zambia is also characterized by an urban community shaped by the requirements of the copper industry and the growth of its labour force. The Zambian copper industry developed for the most part as a foreign-owned and controlled sector.

Philip Daniel notes that the technology, finance, equipment and skills were imported, while the product was exported, together with much of the operations profits. In addition, pre-independence political control of the area, greatly minimized the developmental impact of the copper industry upon the indigenous people and the country. Biases; race, urban\rural, wage, sector, & regional (all in favour of the white settlers and the copper mining industry,) formed by the colonizers developed into deeply ingrained components of the Zambian economic and political structures. With the economic and social structures inherited at independence, it was clear that Zambia's heavy dependence on copper would require a lot to change. Following seventy-four years of colonial rule, Zambia became independent in 1964.

Colonial rule began with the British South African Company which acquired mining and commercial concessions. Minerals were the driving force behind the British South Africa Company's entering Zambia. At independence, Zambia inherited an economy with very limited supplies of physical capital, but an unlimited supply of monetary capital acquired from mineral royalties and revenue from copper mines. The price of copper rose "unsteadily" (Bostock & Harvey, 1972) after 1964 to create a revenue surplus for the government. In 1969, Zambia was the largest producer of copper in the developing world and the third largest producer in the world after the United States and the former U.S.S.R., with production at 12.2% of total world production (Bostock & Harvey, 1972). When

Zambia gained its independence in 1964, its per capita GNP was one of the highest in Africa. Today, the country is listed under the low-middle income income category at around $1500 per capita.

The copper industry's contribution to Zambia's gross domestic product, government revenue and export earnings has been traced since 1965. Direct contributions to GDP have fluctuated between 25% to 50% of gross domestic product depending significantly on world market price (Daniel, 1979). Until 1970, more than 50% (Daniel, 1979) of government revenue came directly from the copper industry. Today, mining employs 90,000 people and contributes about three-quarters of the country's foreign exchange earnings and 25-30 per cent of government revenue.

However, the largest direct contribution of the copper industry goes to export\foreign exchange earnings, but Zambia's dependence on copper has been exacerbated by its inability to influence world market prices therefore negatively affecting its trading ability on the international scene, and leaving its economy and ultimately its development at the mercy of the consumers of the industrially advanced countries. According to Philip Daniel, mining industries are very much a problem of international economic relations for developing countries. Mineral producers in developing countries characteristically consume very small quantities of their own mineral products and instead trade most of them in "notoriously unstable markets dominated by advanced industrial consumers" (1979, pg.1). Zambia is caught in this web of international trade. It has very little say on the international market in terms of market pricing for a product that brings in over 60% of export earnings, and in addition it is affected by all international trade and environmental policies.

Copper mining and processing create a number of environmental problems. The Copper Belt has recorded a high number of respiratory illnesses among inhabitants of the area. Asthma and lung disease are two of the most reported cases. Open pit mining deforms the surface of the land and creates waste materials containing dangerous substances that pollute the water, soil and atmosphere. The two most dangerous substances are arsenic and carbon-monoxide produced by the smelters which contaminate the air and can produce acid rain which could affect the surrounding smelting areas and bodies of water and vegetation hundreds of miles away.

Zambia's use of the reverberator furnace (for smelting) which produces a large volume of sulphur dioxide gas in concentrations too low for "efficient sulphur recovery" puts Zambia on the list of countries still using smelting methods that have been declared inefficient and do not meet the pollution abatement regulations and standards of industrialized countries. (See CHILEAIR Case). Declining and fluctuating copper prices, coupled with the consequent decline in copper earnings have made it difficult for Zambia's state-owned mining enterprises to invest in new smelters and adequately address the environmental issues.

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Question:

What are the issues facing Zambia as a result of copper dependency?

Other links:

https://africajournalismtheworld.com/2015/09/21/zambia-economy-still-dependent-on-copper-and-producing-few-jobs/

BBC Video on impacts of price volatility:

http://www.bbc.co.uk/news/business-35559473

Copper prices:

http://www.infomine.com/investment/metal-prices/copper/all/