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Cost competitiveness of Ghana’s gold mining industry

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2019

https://hdl.handle.net/10539/29367

Atta, Samuel Kwame, (2019) Cost competitiveness of Ghana's Gold Mining Industry, University of the Witwatersrand, https://hdl.handle.net/10539/29367

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ABSTRACT

The mining sector is a major contributor to tax revenues and foreign exchange earnings in Ghana. Gold accounts for about 95% of all revenues generated from the export of metals. Declining gold price after peaking at an average of US$1 669/oz. in 2012, led to staff rationalization in the gold mining industry. The downsizing reached a crescendo when AngloGold Ashanti shut down its Obuasi mine in 2016 after laying off 4 312 employees. The happenings in the gold mining industry motivated this research to ascertain the cost competitiveness of Ghana's gold mining sector. This research was limited to large-scale mines due to the easy availability of verified data. The period of this study was between 2007 and 2016 to effectively capture a complete gold price cycle. Cost competitive analysis were conducted on all large-scale mines and companies in Ghana using a Microsoft Excel®-based algorithm from Tholana (2012) for constructing industry cost curves.

Newmont's Ahafo and Akyem mines were found to be consistent low unit cost producers. Ahafo and Akyem mines benefited from economies of scale, excellent recovery rate and efficient management. On the other hand, AngloGold Ashanti's Obuasi mine and Golden Star's Bogoso-Prestea mines were found to be consistent high unit cost producers. Obuasi mine was negatively affected by its inefficient labour intensive underground mining methods while the bane of Bogoso-Prestea mine was very low metallurgical recovery rates. Recovery rate and production output were found to have immense influence on unit cost of gold mines in Ghana and ultimately its position on the industry cost curve. Although variation in mill head grade has influence on unit cost for an individual mine, mill head grade had less influence on the position of the mine on the industry cost curve. This was because most surface mines were able to offset the effect of low grades with large production output. Annual escalation in electricity tariffs were also found to have far more effect on unit cost than fuel prices.

Ghana's gold mining industry had a cost competitive advantage over South Africa's gold mining sector from 2009 to 2016. However, unit cost in Ghana's gold mining sector was higher than the world's average unit cost throughout the period of study which implied that Ghana's gold mining industry was not cost competitive.