

ABSTRACT

Productivity is a measure of production efficiency and it is the rate at which input resources are effectively translated into outputs. There are several measures of productivity which are all broadly categorised as partial or total (multi factor) productivity depending on the parameters used in calculations. Several plan compliance metrics, advantages and disadvantages of outsourcing as well remuneration mixes also emerged from literature review. There is a need to understand ways of measuring productivity and improving productivity under changing economic conditions to ensure that the South African mining industry is competitive. This project illustrates the productivity trends at selected Anglo American Platinum Limited (Amplat) mines namely, Bathopele, Kroondal and Mototolo. The project further investigated the trends in market factors and establishes the correlation coefficients between reported measures of productivity and market factors. Such market factors include: the Republic of South African (RSA) and United States of America (US) inflation rates, platinum price as well as the exchange rate (US dollar/RSA Rand). Amplat reported two categories of partial productivity, labour productivity and financial productivity. Fluctuating trends in productivity were observed for all three mines irrespective of the measure of productivity analysed. Fundamental causes of productivity differences between mines included: stoping width, relative rock density, grade, dilution, recovery factors (in the concentrators and smelters), metal ratios, mine call factor. There is a need to investigate productivity improvement by commodity to keep the mining industry competitive. It was concluded that labour availability and utilisation are becoming increasingly important, given the unionised nature of the mining industry.