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Leonard Mushunje* (leonsmushunje@gmail.com), Midlands State University, 9055 Senga Road, Gweru, Zimbabwe., Gweru, Midlands, Zimbabwe. *Modelling the effects of variations in corporate tax effort on revenue output in Zimbabwe.*

From different taxation forms, corporate tax, has significantly become one of the major sources of revenue to the government. Whether the economy is shadow, enriched or booming, its government needs some revenue to promote and to lubricate its formal sector. Because of this corporate tax has become one of the sources. However, less on the effects of corporate tax on revenue yields seems to be known and understood in Zimbabwe. This paper tried to provide a better insight on the relation of the two. Our conjecture was to study the effects of varying corporate tax rate on revenue. We used the simple logistic harvesting model with varying effort coefficient. Quantitative, qualitative and geometric methods were used for model results and analysis. The research was more of theoretical with a small data set used only for validating the polynomial estimation model. Interestingly, all the methods seem to move in the same direction. The results suggest that revenue is inversely related to company tax. Lastly, we used a Lagrange polynomial to predict possible revenue output from any given corporate tax rate. To validate the polynomial function, we applied the mean absolute percentage error method which supported its use. (Received September 26, 2018)