The purpose of this study was to investigate the causal relationship between direct taxes and economic growth in Kenya, in particular to determine the nature of relationship between corporate income, personal income taxes and economic growth. It also aimed at identifying some of the factors affecting economic growth in Kenya such as labour and investment. The study employed Ordinary Least Square (OLS) method in analyzing time series data captured over the period 1970-2012. Granger causality test was then performed to test for causal relationship between direct taxes and economic growth. The empirical results shows that a unit increase in corporate income tax, personal income tax, and labour force would increase economic growth by 0.93, 0.14 and 1957.4 Kenyan million pounds respectively. It also found out that, a unit increase in investment would decrease economic growth by 0.25 Kenyan million pounds. This kind of negative effect on growth arises from investment such as foreign direct investment that receives compensations in terms of tax holidays, rebates and utilization of a given percentage of resources before paying taxes. The study therefore recommends that, the Government, with its move to the East should be more cautious to attract investments that are pro- growth and pro-development. Pro-growth investments in an economy attract more corporate income taxes from corporate profits from such investments and also leads to creation of employment that attracts personal income tax which promotes government expenditure without borrowing.