Time-series techniques are used to investigate the relationship between the life expectancy (LE) and both total GDP and GDP per capita in China, for the period ranging from 1980 to 2016. The results of the Dickey-Fuller (DF) unit root test show that the variable is not stationary, while the log of total GDP and the log of GDP per capita become stationary in the first differences. The results of the cointegration test show the log of total GDP is cointegrated with the log of life expectancy while the log of GDP per capita with the log of life expectancy is not cointegrated. The Granger causality shows that all variables are bidirectional causality. In conclusion, the results indicate positive effects on life expectancy and both total GDP and GDP per capita.