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Granger causality between construction sector and economic growth in Sri Lanka

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Many researchers have found that the construction industry has always been closely related to the national economy. This paper investigates statistically the existence of a causal relationship between the construction sector and economic growth in Sri Lanka using data over the period of 1959-2004. In finding the relationship, Construction Capital Formation (CCF) (i.e the share of building and other construction in Gross Domestic Fixed Capital Formation (GDFCF)) was used to represent the construction sector while Gross Domestic Product (GDP) was used for economic growth. The causal relationship between economic growth and construction investment was tested using Granger causality tests. In finding the relationship null hypothesis was tested by running the regressions. In regression analysis the stationary of the variables were tested using unit root test. Unit root tests prove that the second and third differenced of GDP and CCF is stationary respectively.

The results of regression analysis show that the Granger causality between GDP and CCF is in one direction; construction causes the economy to grow, and not vice versa. This supports the view of Ofori (1990), Chan (2001), and Hillebrandt (1985). They argued that construction flow causes economic output and not vice-versa. However, it contradicts the Tse and Ganesan's (1997) finding that GDP causes the construction flow and not vice versa using Hong Kong data. Although some propose that GDP growth causes the construction flow, we argue that a change in construction will affect the economic growth as it is essential to have a high rate of investment for rapid economic growth. As construction constitutes around 50% of this investment, it is expected that if there is a growth it must be accompanied by a rapid expansion of activity in the construction sector. Ball (1988) suggested that policy makers could use this conclusion in taking decisions, as they often use construction as a regulator of an economy.

It is found that construction investment leads GDP by one year. Chan (2001) found that construction leads the GDP by two years. While, Tse and Ganesan (1997) argued that GDP leads construction flows and not vice versa, at least in the short term. However, this study argues that the one year lead period is reasonable as the physical construction takes nearly one year. Only on completion is its effect realised in the overall economy.

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