## (4) Sousa, Ricardo. "Property of Stocks and Wealth Effects on Consumption." University of Minho, Portugal, 2003.

The author analyzes the role of the stock market as a determinant of private consumption, in addition to the potential differences of wealth effects originated by different categories of the property of stocks: the direct and the indirect. The author estimate the long run relationship to determine the magnitude of the impact of changes in the stock of wealth and their components on private consumption, and the short run to explain the dynamics of the adjustment of private consumption to the shocks on wealth and how these deviations from long run are corrected.

In the long run relationship, consumption is a function of human wealth and non human wealth, where the latter is disaggregated into non stock market and stock market wealth, and where the stock market wealth is also disaggregated into a direct and indirect property of stocks components. These specifications allow to obtain estimates of different marginal propensities to consume, where the author finds that the marginal propensity to consume out of wealth confirms the results obtained in previous works that show that the impact of 1 additional dollar of net wealth induces an additional 3 to 5 cents of consumption. Disaggregating stock market wealth into direct and indirect property reveals that the directly held type has an impact of about 3.5 times superior to that associated to the indirectly held. This is because direct property requires a permanent search for information from the stockholder in order to match the evolution of market prices, and consequently it provides a larger perception of wealth changes.

Estimating the short run relationship, the results suggest that the error correction is extremely slow which indicates that consumers gradually adjust their expenditures after the realization of gains and/or losses in income and wealth, and therefore only after the verification of a sufficiently long period of losses or gains that agents perceive as permanent does the consumption patterns change, which can be interpreted as an evidence of the presence of habit formation.