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A cross-section test of Cobb-Douglass production function between market capitalization and GDP ADAM AVAKIAN, Boston University, Boston, MA 02215, USA, BORIS PODOBNIK, Faculty of Civil Engineering, University of Rijeka, 51000 Rijeka, Croatia, H. EUGENE STANLEY, Boston University, Boston, MA 02215, USA — Most classical economic theories imply that both (a) economies with lower output (GDP) per person tend to grow faster in per capita terms and (b) economies with lower capital per person tend to grow faster in per capita terms. It is well-known that the former was found to be wrong. Taking market capitalization as a proxy for physical capital, we analyze a cohort of countries over a 17-year period (1994-2010) and we find the latter statement in agreement with empirical data implying a contradictive result that while capital data worldwide tend to converge, GDP data tend to diverge. However, for the countries analyzed, for which we have both market capitalization and GDP data, we find that even economies with lower output (GDP) per person tend to grow faster in per capita terms. The result that for all countries one obtains divergence while for a group of countries having both market capitalization and GDP data we have convergence is in contrast with the refutation of (a) but our results only apply to countries that have an exchange market, and are thus participating in globalization, indicating the convergent effect of globalization.

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