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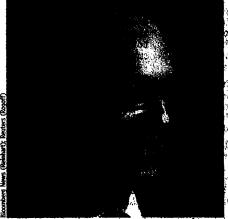
By Brenda Cronin

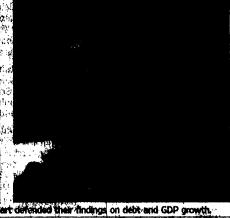
A graduate student and his two professors—in a paper that began as a homework assignment and only gradually transformed to a critique-ignited a digital firestorm among academics Tuesday by challenging a scholarly study seen by many as a bedrock of post-crisis economic thought.

The new paper, by University of Massachusetts Amherst economics doctoral student Thomas Herndon and professors Michael Ash and Robert Pollin, says Haryard University scholars Carmen Reinhart and Kenneth Rogoff were wrong in concluding in their 2010 study that a high level **the debt dooms an econ**omy to protracted slow growth.

The Reinhart-Rogoff paper, "Growth in a Time of Debt," found that countries with ratios of public debt to gross domestic product above 90% tend to see their economies not grow but rather contract about 0.1% annually. The finding was a sobering one for many governments still attempting to find their footing after the financial crisis, many by taking on more debt. The U.S.'s current debt-to-GDP ratio is estimated at slightly over 100%.

Messrs. Herndon, Ash and Pollin, in re-creating the Rogoff-Reinhart calculations, concluded instead that countries with debtto-GDP ratios above 90% saw GDP growth of 2.2%, a percentage point lower than the growth rate seen in countries with lower debt-to-GDP ratios.





Harvard professors Kenneth Rogoff and Carmen Reinhart defended their findings on debt and GDP growth.

"It's certainly a very different picture from stagnation or decline once you cross the wall at or around 90%" of public debt, Mr. Ash said. He says his paper "reopens the conversation about what happens at high public debt levels."

Mr. Rogoff, an economics professor, and Ms. Reinhart, a professor at the John F. Kennedy School of Government, defended their work Tuesday. In a statement, the authors said, "the weight of the evidence to dateincluding this latest commentseems entirely consistent with our original interpretation of the data" in the 2010 paper,

Mr. Rogoff and Ms. Reinhart noted that their conclusions for growth in individual countriesrather than the overall finding water limiter in infiltration to those found by the Anisotta at

searchers. However, they noted, "these strong similarities are not what these authors choose to emphasize.

The critique got its start in an econometrics course taught by Messrs. Ash and Pollin. Mr. Herndon was required to replicate the calculations in a significant work in economic literature. to demonstrate his facility with empirical economics. He chose the Reinhart-Rogoff paper, which Mr. Ash praised as "really ap-pealing in its straightforward approach."

Mr. Herndon, using publicly available data, worked on the assignment throughout the fall semester. However, he was unable to "square the results he kept getting with the results in the published work," Mr. Ask said. The Amberst group contacts the Harvard suffices and warm

April received their "working sprendsheet," for the 2010 paper. Their calculations continued to show 2.2% growth rather than a 0.1% contraction. The difference, the Amberst authors conclude. stems from three areas: how Ms, Reinhart and Mr. Regoff weighted their summary statisties, which years of data they included—and what appears to be a glitch in spreadsheet coding.

Ms. Reinhart's and Mr. Rogoff's other findings have been assailed. Last year, Michael Bordo, an economic historian at Rutgers University, and Cleveland Fed economist Joseph Hau-brich challenged the conclusion in their 2009 book "This Time Is Different," saying that the U.S. tends to recover swiftly, and not should from financial shocks.
(Me Reinhart and Mr. Rogoff de-ferring their work in the book.)