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How do trade and financial integration affect the relationship between growth and volatility?

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Abstract

The influential work of Ramey and Ramey [Ramey, G., Ramey, V.A., 1995. Cross-country evidence on the link between volatility and growth. American Economic Review 85, 1138–1151 (December).] highlighted an empirical relationship that has now come to be regarded as conventional wisdom—that output volatility and growth are negatively correlated. We reexamine this relationship in the context of globalization—a term typically used to describe the phenomenon of growing international trade and financial integration that has intensified since the mid-1980s. Using a comprehensive new data set, we document that, while the basic negative association between growth and volatility has been preserved during the 1990s, both trade and financial integration significantly weaken this negative relationship. Specifically, we find that, in a regression of growth on volatility and other controls, the estimated coefficient on the interaction between volatility and trade integration is significantly positive. We find a similar, although less robust, result for the interaction of financial integration with volatility.

Keywords: Globalization; International trade and financial linkages; Macroeconomic volatility and growth

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In an influential paper, Ramey and Ramey (1995) documented an empirical relationship that has now come to be regarded as conventional wisdom—that volatility and growth are negatively correlated. This is an important result since it suggests that policies and exogenous shocks that affect volatility can also influence growth. Thus, even if volatility is considered intrinsically a second-order issue, its relationship with growth indicates that volatility could indirectly have first-order welfare implications.

How do trade and financial integration affect the relationship between growth and volatility? This paper attempts to answer this question, which has taken on increasing importance in view of the significant increases in the volumes of international trade and financial flows over the last four decades (see Lane and Milesi-Ferretti, 2001; Kose et al., 2005, in press-b). Cross-country trade linkages have of course been rising steadily during the past four decades. Cross-border capital flows, on the other hand, began to surge only in the mid-1980s. While the spread of trade linkages has been broad-based, only a relatively small group of developing economies, often referred to as "emerging markets," has undergone significant financial integration, as measured by gross capital flows across their borders. Many of these economies have experienced rapid growth but have also been subject to high volatility, most prominently in the form of severe financial crises that befell many of them during the last decade and a half.

These developments naturally lead to the question of whether, in a more integrated global economy, the relationship between growth and volatility has changed. The changes over time in the relative vulnerability of industrial and developing economies to external crises also raises questions about whether the growth–volatility relationship is influenced by the "growing pains" seemingly associated with rising trade and financial integration. In other words, are the level of a country's development and the extent of its integration into international markets important in determining the conditional validity of this relationship?

The Ramey and Ramey results are based on a data set that ends in 1985, just when the pace of globalization began to pick up and enveloped a number of developing countries as well. As we discuss later in the paper, some recent studies show that the negative relationship between growth and volatility has persisted into the 1990s. However, none of these papers provides a rigorous analysis of the role of rising trade and financial linkages in influencing this relationship. Thus, a central contribution of this paper is a comprehensive analysis of the roles of both trade and financial integration in driving the growth–volatility relationship.

In Section 1, we provide a brief overview of the theoretical and empirical literature examining the effects of globalization on growth and volatility. While there appears to be a general consensus that openness to trade flows stimulates domestic growth, it is also the case that such openness increases vulnerability to external shocks. The effects of financial integration on both growth and volatility are far less obvious. Thus, the question addressed in this paper is essentially an empirical one. This survey also indicates that neither existing theoretical studies nor empirical ones have rigorously examined the effects of increased trade and financial linkages on the growth–volatility relationship. Our analysis does not take a position on whether trade and financial integration affect growth and/or volatility independently but is more narrowly focused on the question of whether integration itself affects the marginal relationship between volatility and growth, after controlling for other factors.