

Since 1995, growth in productivity in the United States has accelerated dramatically, due in large part to the information technology sector. We argue that part of the apparent speed-up in productivity growth actually represents gains in the terms of trade and tariff reductions, especially for high-tech products. Unmeasured gains in the terms of trade and declines in tariffs cause real output growth and productivity growth to be overstated. Building on the GDP function approach of Diewert and Morrison, we develop methods for measuring these effects. The growth rates of our alternative price indexes for U.S. imports are as much as 2% per year lower than the growth rate of price indexes calculated using official methods. The unmeasured terms-of-trade gains can account for close to 0.2 percentage points per year, or about 20% of the apparent increase in productivity growth for the U.S. economy. But if upward biases are present in domestic price indexes—which are beyond the scope of the research in this paper—they would offset some of the effects of the biases in the export and import indexes on the measurement of output and productivity growth.