Title: Measurement of Government Output in Education and Health: Alternative Approaches Author(s): Michael S. Christian, Bruce E. Baker, Barbara M. Fraumeni, Alyssa E. Holdren, Matthew P. Williams Institution/Country: U.S. Bureau of Economic Analysis

In any country, expenditures on education and health represent a significant share of government expenditures; accordingly, resolving measurement issues for these two government functions is vital. This paper will extensively focus on alternative measures of the output of the education function of government, with a secondary focus on health. It will consider alternative measures developed by various statistical agencies around the world as well as develop alternative measures for education output for the United States. Government output in the United States is currently measured with a costweighted index of inputs. Alternatives to this approach fall into three categories: alternatives based on market prices or proxies thereof; alternatives based on volume or physical measures of output; and alternatives based on human capital. As the Atkinson interim report notes, the most commonly used alternative methodology to measuring the output of the education function of government is a volume measure, specifically enrollments, which are in some cases adjusted for quality. There has been little use of market prices or proxies thereof. A human capital approach to measuring education output can focus on the impact of education on lifetime income. When measuring the output of government-provided health services, a volume measure could be constructed using claims data and qualityadjusted life years (QALY's) could be a quality adjustment. The QALY's could also be used as the basis of a human capital approach.