Comments on Dowrick

Andrew K. Rose, UC Berkeley

arose@haas.berkeley.edu

Steve Dowrick has given us a long thorough but focused survey of education and growth. He gives a fine summary of the theoretical literature that has obsessed much of the macroeconomics profession for the 1990s and concludes that the issue of whether growth is better modeled as being endogenous or exogenous growth may not actually be that relevant in practice. More importantly to my mind, he has also provided a number of estimates from both the micro- and macroeconomic literatures on the effects of education on output, and concludes that they are large, even for an advanced OECD country like Australia. He believes there are large externalities and that the case for government intervention is secure. I agree with most of what he says which seems reasonable in both the small and the large.

My personal view is that a survey like this should always focus precisely on a well-defined question. In this case, Dowrick is interested in answers to the question: "What is the return to an additional year of education?" This creates a convenient taxonomy to organize the empirical estimates from the literature. It is divided into micro- and macroeconomic estimates at three levels: a) the returns to the individual; b) the returns to the nation, which may well be higher if there are externalities; and c) the returns to the world, which may be higher still if there are foreign externalities. Of course, there is also the possibility of negative externalities, and Dowrick considers the costs of extra education which also play into the analysis.

In future work like this, I would like to see more emphasis placed on the externalities themselves. How much do we really know from quantifiable microeconomic evidence on the

existence of large positive externalities? Since this is where the real case for policy intervention lies, I personally would feel more confident if I could cite a number of reliable studies that present strong evidence of positive externalities.

The reason I would find this is reassuring lies in the magnitudes of the returns to education cited. Almost all the returns to education and R&D are high – huge in fact. It makes me feel that I've personally under-invested! More generally, the returns are so high that they strain plausibility. Lots of education is wasted and much R&D might well be unproductive – is it all being taken into account? Let me put it another way. The returns are so large that the question of the paper's title is almost irrelevant, since the issue of levels vs. growth rate effects is a sideshow if the returns are so high. So is concern for under-investment in education, if the personal returns are as high as cited.

I also believe there is a lot of scope in this areas for a comprehensive meta-analysis. This is the increasingly accepted way to conduct a quantitative survey. The author chooses a coefficient of interest that has been estimated in a number of papers – for instance, the value of a marginal year of education. Each paper contributes a single observation of this underlying variable, and the resulting vector of estimates is treated as the dependent variable. The characteristics of the studies are treated as the regressors. Meta-analysis like this might enable us to understand the sources of variation in the estimates of the returns to education, and enable us to handle them with more confidence.