

Measurement of Non-market services in Norway with examples from education.

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In Norway, as in many other countries, we have paid attention to the problem of measuring volume growth of non-market services. In particular, we have tried to establish direct measures of volume growth in two important fields of Government service production: education and health.

In parallel with the national accounts work to establish indicators of the service production, Statistics Norway has been working with a project for better statistics on Central Government services. The ambitions for the larger project for Central Government statistics is to produce statistics showing resources used in relation to results achieved in many fields of government. The focus is on measuring outcomes, not 'only' outputs.

The conceptual model used is that Government is seen as doing various activities that give rise to costs and output. In general, the costs can be observed, although these observations sometimes could be more detailed. The activities can in general be described in detail and quantitative indicators can often be found measuring them. Output is seen as the direct result of the government activities. Training and guidance given, knowledge presented to students are possible descriptions of output from education activities. Just as interesting is what the students learn from these activities. This can be described as an outcome or result from the activity. Typically this is not only a consequence of the effort and quality put into the education activity, but also of the capabilities and abilities of the student and the effort that they put into the learning process. Results can be described at several levels. In Norway, there are studies of the contribution from a year of studying at different level to the lifetime income of the students. Of course many intervening factors beyond control of education institutions contributes to variations in lifetime earnings.

Education is a test area in the project for measuring government services. We will summarize the indicators proposed and the way they can be seen as measures of outcome (or output).

The volume indicators used for deflation in the national accounts are rather simple. We use the number of (full time) students. For higher education, growth rates of the number of students in each institution are weighted together by cost shares. The cost shares are in our opinion expressing the varying activities that are supplied by the institutions, but could have a quality component as well.

For each institution, the number of students is more a quantity measure than a measure of volume of output. For non-market activities, we can observe unit costs even when unit prices are unobserved. It is not unusual to see the equilibrium condition applied in models of other (market) industries, than in the optimal state, unit costs equals unit price. Of course, there are lots of additional assumptions to this, and also we observe quantity units and not units of volume. It is a problem when volume growth rates using input price deflation differ radically from the direct assessment of volume growth. There should be limits to the possible yearly change in productivity in education if the education system has the same sensible management.

It is difficult to assess quality changes from observations on students' achievements. Quality changes of the inputs should not be neglected in productivity measurement projects.