Senate Standing Committee on Economics

ANSWERS TO QUESTIONS ON NOTICE

Treasury Portfolio

Budget Estimates

4 – 6 June 2013

Question: BET 298

Topic: Completing the Picture – Environmental Accounting in Practice

Written: 17 June 2013

Senator MILNE asked:

298. Completing the Picture – Environmental Accounting in Practice showed that depletion of natural resources had increased from \$3 billion in 2000-01 to \$6 billion in 2009-10 (table 4.10). This is very low relative to the value of mineral exports (\$109 billion) or the gross operating surplus (\$75 billion) of the mining industry. At the hearing Mr Hockman referred to the depletion data being net of the value of newly discovered minerals or increases in the value of remaining deposits.

What would be the 'gross' depletion of established natural resources?

Answer:

The scope of ABS measures of depletion of subsoil assets relates to all subsoil assets within the asset boundary of the 2008 System of National Accounts (SNA) and is linked to the value of the underlying subsoil asset. However, the value of the subsoil asset is calculated on the basis of future expected resource rents (termed 'economic rent' in the Australian System of National Accounts) arising from the use of these assets in production (the resource rent is comprised of the value of depletion for the current year and a return to the owner of this resource). Ideally, the ABS would be able to anticipate future developments in mineral discoveries, extraction techniques and commodity prices in order to estimate a pattern of future resource rents. Instead, the ABS assumes that the recently observed resource rents for each type of subsoil asset will continue for the life of the asset. The choice of assumptions used affects the value of the subsoil asset and the value of its measured depletion.

The estimate of 'depletion' reported in Table 4.10 of ABS *Completing the Picture* (cat. no. 4268.0.55.001) also contains an estimate of the value of land degradation. This item relates only to farm land and is estimated as the value of value of farm production lost due to declining soil quality. For the period 2009-10 the value of land degradation was estimated at \$421 million (ABS Year Book 2012, cat. no. 1301.0, Table 2.41).

The depletion of natural resource published by the ABS is not reduced by the value of newly discovered minerals, nor is it reduced by increases in the value of the remaining deposits. Depletion of natural resources is the decline in the value of the deposit directly and solely attributable to the physical removal and using up of these resources. Though the 2008 SNA does not use the terms 'gross' and 'net' depletion, the measure produced by the ABS is a gross measure in the sense that no off-sets are applied to reduce the size of the depletion measure.

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The measure of gross operating surplus for the mining industry is derived as gross output less intermediate consumption. In concept, this measure contains a return on produced capital, a measure of the consumption of fixed capital, a return to the owner of the subsoil asset and a measure of natural resource depletion. That is, the measure of depletion is a subset of the measure of gross operating surplus. The substantial quantity of net (produced) capital stock observed for the mining industry (\$310 billion at 30 June 2010) means that the greater proportion of gross operating surplus observed for the mining industry amounts to a return on produced capital and consumption of fixed capital (i.e. depreciation). In addition, among these components comprising gross operating surplus, the relative proportion taken by the measure of depletion will tend to rise as the life of the subsoil asset approaches zero. The very long asset lives currently observed for Australia's most valuable subsoil assets means that year to year measures of depletion are presently small in comparison with the value of the underlying asset.