

Memorandum to the NMa, 1 September 2011

From Nicholas Francis, Partner, Reckon LLP

1. Reckon LLP produced a report for the Netherlands Competition Authority (NMa) that provided analysis to inform the NMa about productivity growth and rates of change in unit costs, as part of its method decisions for GTS price controls.¹ I refer to this report as Reckon (2011).
2. The NMa subsequently asked Reckon LLP for views on the following issues which were set out in an email from the NMa dated 22 August 2011:

“[On] 17 May 2011 the NMa published draft method decisions for GTS for the regulatory periods 2006-2009 and 2010-2013. One of the parameters of the method decisions is the productivity growth. In order to establish the productivity growth GTS is expected to be able to achieve, the NMa has argued (among other things) that:

- GTS can best be compared with gas network operators, and not with the sectors of the Dutch economy.
- The study by Jamasb et al is particularly relevant for determining the productivity growth for GTS.

GTS subsequently submitted their views on the draft method decisions. Regarding the productivity growth, GTS argues (among other things) that:

- The best comparison group for GTS are different sectors of the Dutch economy (instead of gas network operators in other countries), and the NMa should therefore take the midpoint of the bandwidth of the sectors of the Dutch economy (0%) as the imposed productivity growth.
- The study by Jamasb et al contains several flaws (from a methodological point of view), implying that it is not suitable for a comparison with GTS in order to determine the productivity growth for GTS.”

3. I agreed with the NMa to focus on: (i) the position that the NMa took in its draft method decision not to compare GTS with sectors of the Dutch economy; and (ii) the position that the NMa took in its draft decision that the Jamasb et al study is particularly relevant for its decisions about GTS’s expected productivity growth. This memo does not review the specific arguments or submissions made by GTS.
4. As well as taking its normal meaning in the economics literature, the reference above to the “productivity growth” of GTS can refer to expected changes in certain measures of GTS’s costs, relative to CPI. These changes would reflect both the productivity improvements achieved by GTS and any changes in the prices of the inputs (including labour) that it uses, relative to CPI.

¹ Reckon (2011) “Productivity growth of GTS”, <http://www.nma.nl/images/Productivity%20growth22-187983.pdf>

Comparisons with sectors of the Dutch economy

5. Reckon (2011) provides:
 - (a) Estimates of growth rates in output price indices, productivity measures and unit cost measures for different sectors of the Dutch economy, based on data from the EU KLEMS dataset.
 - (b) Estimates of growth rates in measures of productivity and unit costs for gas transportation companies (or groups of such companies). These come from studies we reviewed as well as some further quantitative analysis reported in Reckon (2011). Apart from some analysis of the operating expenditure of GTS, these estimates concern foreign gas transportation companies from the US, Australia and the UK.
6. As shown above, the NMa says that in its draft method decision it argued that in order to establish the productivity growth that GTS is expected to be able to achieve, GTS can be best compared with gas network operators and not with sectors of the Dutch economy.
7. The data for sectors of the Dutch economy allow for estimates to be made over a long time period and for 30 different sectors. The large sample size is a good feature of these estimates given the measurement problems that arise in the estimation of changes over time in measures of productivity and costs per unit of output.
8. The estimates for foreign gas transportation companies reported in Reckon (2011) cover shorter time periods and suffer from some limitations for the purposes of comparisons with GTS:
 - (a) The circumstances in which the foreign gas transportation companies operated may differ from those in which GTS operates. For instance, some of the estimates for the Australian and UK gas transportation companies reported in Reckon (2011) concern a period following privatisation which may have allowed for a transitory period of high productivity growth, whereas GTS has not been subject to privatisation.
 - (b) The estimates of changes in measures of unit costs for foreign gas transportation companies will reflect changes, relative to their national consumer price inflation index, in the input prices (including wages) that these companies have faced. Such changes in wages and other input prices may vary between countries, for example because of differences between national inflation indices.
9. The estimates for sectors of the Dutch economy reported in Reckon (2011) are less vulnerable to these limitations, particularly the second one. The estimates for these sectors will reflect changes in the labour costs experienced in the Dutch economy relative to the Dutch CPI.
10. My view is that the NMa should not focus exclusively on the estimates for foreign gas transportation companies reported in Reckon (2011) and disregard the estimates for sectors of the Dutch economy.

11. Reckon (2011) recognised that any comparison between GTS and a particular sector of the Dutch economy will be vulnerable to criticism: there will be differences between GTS and that sector that could affect the opportunities for productivity improvements and the input price inflation experienced. This criticism means that for the purposes of comparisons with GTS, it is better to compare GTS with a group of estimates that covers a wide range of sectors of the Dutch economy rather than to focus on a small number of sectors.

Treatment of Jamasb et al (2008) as particularly relevant

12. Reckon (2011) included a review of Jamasb et al (2008) which reports estimates relating to the rate of change in measures of the total costs (including a profit element) per unit of output for a sample of regulated US inter-state gas transmission pipelines.²
13. Reckon (2011) suggests caution in seeking to draw inferences for the GTS price control from Jamasb et al (2008) alone: see in particular paragraphs 3.39 to 3.41. The estimates from that paper appear as outliers when compared with the estimates from the EU KLEMS dataset for sectors of the Dutch economy. The estimates from Jamasb et al (2008) could reflect a period of high productivity growth in US pipeline companies following regulatory reforms.
14. Jamasb et al (2008, abstract) reports that since the early 1990s “in the US the long-standing regime of cost-plus regulation was complemented by increasing pipe-to-pipe competition.” Whilst there have been some regulatory reforms to the gas transmission system in the Netherlands, these are not the same as the changes experienced by US inter-state gas transmission pipelines. However, a comparison with GTS may be reasonable if the NMa believes that GTS has faced (or will face) the development of competition (e.g. in its role as a gas hub).
15. There are features of the methodology used in Jamasb et al (2008) which mean it does not provide a completely reliable set of estimates for the companies it covers. For example, it relies on the estimation of an efficiency frontier for each year of data using a technique (data envelopment analysis with two or three output measures) that cannot provide a complete picture of changes in companies’ efficiency from one year to the next. The nine-year period of data is also relatively short compared to some of the other estimates presented in Reckon (2011).
16. To be fair to the analysis reported in Jamasb et al (2008), any analysis that seeks to provide estimates of changes over time in measures of unit costs and productivity for particular companies, or sectors of the economy, is likely to be vulnerable to criticism. The data available tend not to be as good as one would have hoped for. For this reason, I suggest that the NMa sets productivity parameters for the GTS price control that seem reasonable in light of a range of different estimates, rather than placing reliance on any one study, company or sector.

² Jamasb T, M Pollitt and T Triebs (2008) “Productivity and efficiency of US gas transmission companies: a European regulatory perspective”, *Cambridge Working Paper in Economics* 0812, Faculty of Economics, University of Cambridge