Forest Profit Expectations Dataset 1990-2013

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Data Documentation
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Restrictions: Unrestricted

Can Motu put this data on our website? Yes

Can Motu put this dataset documentation on our website? Yes

Contact Details

Motu Economic and Public Policy Research
Level 1, 97 Cuba St, Te Aro,
PO Box 24390
Wellington
New Zealand

Email   info@motu.org.nz
Telephone   +64 4 9394250
Website   www.motu.org.nz

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Data Documentation

Please note that this is informal documentation intended to help users.
It is not a polished document. Additions/corrections are welcomed at info@motu.org.nz.

1. Main Motu contact for this data:

Suzi Kerr, suzi.kerr@motu.org.nz

2. Other contacts for this data:

Matt Thirkettle, mkt68@cornell.edu

3. Data keywords:

Forest profitability

4. Dataset abstract:

This dataset updates the one developed in Olssen et al, (2012). This is a panel dataset giving expected forest profitability at time of planting across New Zealand for the years 1990-2013. As well as updating the existing data, some minor corrections were made; these are detailed in the additional notes below.

5. Motu Working Papers using this data set.

Example: Grimes, Arthur; Cleo Ren and Philip Stevens. 2009. "The Need for Speed: Impacts of Internet Connectivity on Firm Productivity," Motu Working Paper 09-15.

6. Variables:

Net Present Value (NPV), Internal Rate of Return (IRR), Land Equivalent Value (LEV), Equal Annual Equivalent (EAE). All measures are calculated as both 4-quarter and twelve-quarter averages.

7. Additional notes.

This dataset is too large to be placed on the Motu website for download. If you would like access to this dataset, please email info@motu.org.nz.

Price series

Changes were made to the underlying assumption on the log price series. Alex originally used FOB, which is the price that the forester gets at an overseas port. This is fine provided export costs are accounted for, such as fumigation and shipping costs. These add up to about $30/m^3. The original paper did not include export costs, so it is inconsistent to use FOB.

Instead, we use the domestic log price **(**http://www.mpi.govt.nz/news-resources/statistics-forecasting/forestry/indicative-new-zealand-radiata-pine-log-prices-by.aspx**).** The domestic price is about $30/m^3 less than the FOB price.

Log conversion factors

Alex uses the constant conversion factor 0.955tonne = m^3. This was on recommendation by AgriFax. AgriFax has updated their conversion factor. We use conversion factors 0.926tonne = m^3 for pruned logs; 0.893tonne = m^3 for unpruned logs; and 0.812tonne = m^3 for pulp logs. Contact person at AgriFax: Ivan Luketina, Agricultural Analyst, DDI: +64 (06) 323 1517.

Subjective discount rate

Using the new price data results in much of New Zealand being unprofitable to plant on. This is absurd; we suspect that the discount rate is too high. We originally used Bruce Manley's subjective discount rate. Bruce did not want to help us on this issue. So we contacted Gerard Horgan again. Gerard believes that reported subjective discount rates by foresters is and always has been too high.[1] Gerard pointed to some literature to suggest that the discount rate should be around 6-8% (allowing for capital gains).[2] We set the discount rate to a fair 7%. As a result much of New Zealand becomes profitable to plant again. In 2013 we predict that Nelson, CNI, Northland, and the North Island East Coast are all profitable, at least on semi-flat land.

Cost updates

The harvest cost data has been updated using the Agrifax Regional Log Price Cost Report for March 2014. The PPI index, available from Statistics New Zealand, has also been updated.

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[1] Foresters say they are pessimistic and have a large subjective discount rate. But the rate of return on forestry has been around 6-8% over the last 40 years. The forester sees a 6-8% return and then reinvests, implying that he is willing to accept a real 6-8% return on investment; but he would have liked to have seen a 10% rate of return. Alternatively, the forester is optimistic about his return on investment. He thinks he can get 10% return on his plantation stand, so he reports this as his subjective discount rate.

[2] See *Is Forestry Investment More Profitable?* By Gerard Horgan; *An Economic Analysis of Large-Scale Land Developments for Agriculture and Forestry* by J T Ward and ED Parkes; *Using Science to inform the place of forestry in the landscape* by Kit Richards.