

Submission to the Productivity Commission inquiry on the draft report on a possible transition to a low emissions economy

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7 June 2018

1. This submission is in response to the Commission's draft report on a possible transition to a low emissions economy, released on 27 April 2018.
2. My major concern is that although the report touches on the role that a rising population has played in driving up total emissions in New Zealand, there is no discussion - at all - of the specific role government policies have played in that respect (policies on non-citizen immigration), nor on the role that potential changes in immigration policy could play in offering a lower cost (to New Zealanders, the appropriate standard against which to measure these things) transition to the proposed low emissions economy.
3. As the Ministry for the Environment noted in its 2017 report on New Zealand's Greenhouse Gas Inventory, a growing population represents a significant challenge for New Zealand in meeting emissions targets (whether those set by the previous government, or the more ambitious targets envisaged by the current government). In fact, the Ministry included population as the first in its list of challenges.
4. New Zealand's population growth has been well above that of the typical advanced country, even though for some decades now our birth rate has been below replacement level, and even though for some decades the net emigration outflow of New Zealanders (at around 0.5 per cent of the population per annum on average) has been very high by international standards. The difference is accounted for by immigration policy. Because of our distance from other countries we have near-complete control over who comes to New Zealand and stays. And we have chosen to bring in numbers of non-citizens each year that, as a proportion of the existing population, are far in excess of what happens in typical advanced economies.
5. As is also widely recognised, the marginal abatement costs for reducing emissions are generally quite high in New Zealand. First, unlike most advanced countries, animal emissions make up almost half our total emissions and, as yet, science does not offer methods to reduce substantially the emissions while keeping the animals (which, in turn, generate much of the export earnings of New Zealand). In addition, as I understand it, other countries do not yet include agricultural emissions in their regimes to charge for or tax emissions. And, secondly, much of our power generation already uses renewable (mostly hydro) sources.
6. An increasing population has resulted in additional emissions, all else equal, through at least two channels:
 - a. The direct effects of more people needing more transport, more heating, more energy in their workplaces etc, and
 - b. The indirect effects, in which a rapidly growing population and a generally lagging export sector has accentuated pressures for increased intensification in agriculture,

with associated pushback against attempts to internalise the effects of environmental externalities (whether water pollution or methane emissions). With fewer people, it seems quite plausible that we'd have had fewer cows.

7. Because the marginal abatement costs of conventional approaches are generally accepted to be particularly high in New Zealand, it is even more important that preparing and finalising its report, the Commission should have been willing to examine the role of immigration policy. As Official Information Act requests to MfE (responsible for climate change policy advice) MBIE (responsible for immigration policy advice) have shown, core government departments appear to have done nothing at all to look at the possible connections. There may have been ministerial political constraints on the freedom of either ministry to do so. Those sensitivities should not have held back the Commission - a more independent agency - from seriously considering the connection, and analysing the costs and benefits of reducing non-citizen immigration relative to other possible mitigation strategies.
8. The argument for using immigration policy as a potential instrument in meeting emissions reduction objectives would not be strong if there were clear and material economic benefits to New Zealanders from the high target rate of non-citizen immigration (the centrepiece of which is the 45000 per annum residence approvals "target"). But those possible gains - most notably perhaps a lift in labour or multi-factor productivity - cannot simply be taken for granted in New Zealand. Despite claims from various lobby groups that the economic gains (to natives) of immigration are clear in the economics literature, little empirical research specific to New Zealand has been undertaken, and there is good reason - notably our remoteness - to leave open the possibility that any gains from immigration may be much smaller here than they might be in, say, a country closer to the global centres of economic activity, whether in Europe, Asia, or North America. Even many of those who are broadly supportive of New Zealand's past approach to immigration policy will now acknowledge (a) that the New Zealand specific literature is quite limited, and (b) that any gains to New Zealanders may be quite small. Your staff are, I know, well aware of my alternative approach which interprets modern New Zealand economic history as suggesting that high rates of non-citizen immigration have held back our productivity performance (i.e. come at a net economic cost to New Zealanders).
9. The overlay of an official emissions reduction target - a new factor - adds a new dimension to how best to think about immigration policy. Even if immigration policy, on its own, was slightly beneficial, in economic terms, to New Zealanders, those assessments need to be redone in the light of the constraints posed by the emissions reduction targets. In an economy with low marginal abatement costs through conventional price/tax instruments, the effect of any such reconsideration might be small. But in New Zealand, where all informed observers recognise that the marginal abatement costs are large through conventional means, it might well be that a lower immigration target would represent one of the most cost-effective ways to reduce total New Zealand emissions. And as our emissions reduction targets have been quite similar to - or now perhaps even more ambitious than - those of a number of other countries that have much lower population growth rates, there would be no serious basis for others to suggest that pulling back our immigration targets, to something more conventional among advanced countries, was in some sense free-riding or engaging in a "beggar thy neighbour" approach to the emissions issue. New Zealand simply isn't a cost-effective location to reduce emissions, but having taken on the commitment to a reduction, it doesn't

make much sense to create a rod for our own back by continuing to use policy to drive up the population, thus forcing reliance on even more costly alternative abatement instruments.

10. All else equal, lowering expected annual population growth rates by more than half a percentage point (by, for example, lowering the residence approvals target from 45000 to around 15000 per annum - in per capita terms, still about as liberal as the current US approach) would make a material difference to the projected path of greenhouse gas emissions. Over 20 years, all else equal, the population would be 10.5 per cent lower than otherwise. Direct emissions would, accordingly be considerably lower than otherwise projected, and the inevitable pressures to do little or nothing about agricultural emissions would be eased. The national benefit/cost ratios look likely to be considerable higher if a lower immigration target was added into the mix of instrument used to meet the commitments the government has made. There probably won't be off-the-shelf modelling exercises from other countries you can simply look to in evaluating such options (and you are now under self-imposed time constraints, having failed to consider the issue in your draft report). But in a sense that is the point of this submission. The issues facing New Zealand in meeting emissions reduction objectives are different from those facing many other countries and we need analysis that takes specific accounts of the issues, options, and constraints that New Zealand itself faces.
11. In conclusion, I would urge the Commission to begin to take seriously the role that rapid immigration policy led population growth has played in explaining the growth in New Zealand emissions since 1990, and the possible role that modifications to our immigration policy could play in facilitating a reduction in emissions, consistent with current or possible alternative official targets. No doubt technological advances will offer options for relatively painlessly reducing emissions to some extent. But those options will be available to all countries. As official agencies already recognise, New Zealand faces some specific challenges that are quite different to those other advanced countries will be dealing with. We make it much harder for ourselves to meet the emissions targets our governments have committed to if we persist with such an unusually large non-citizen immigration programme. The aim of a successful adjustment to a low-emissions economy is not to don a hair shirt and "feel the pain". The aim should be to make the adjustment with as small a net economic cost to New Zealanders – as small a drain on our future material living standards - as possible. Lowering the immigration target looks like an instrument that needs to be seriously considered if that goal is to be successfully pursued. In particular, you cannot legitimately ignore the issue - in what looks disconcertingly like a reluctance to tackle controversial or politically awkward options - and still lay claim to being the source of independent fearless advice and analysis that is really the only good argument for having the Productivity Commission in the first place.
12. On this points, I refer you to two post on my blog from around the time of the release of your draft report.

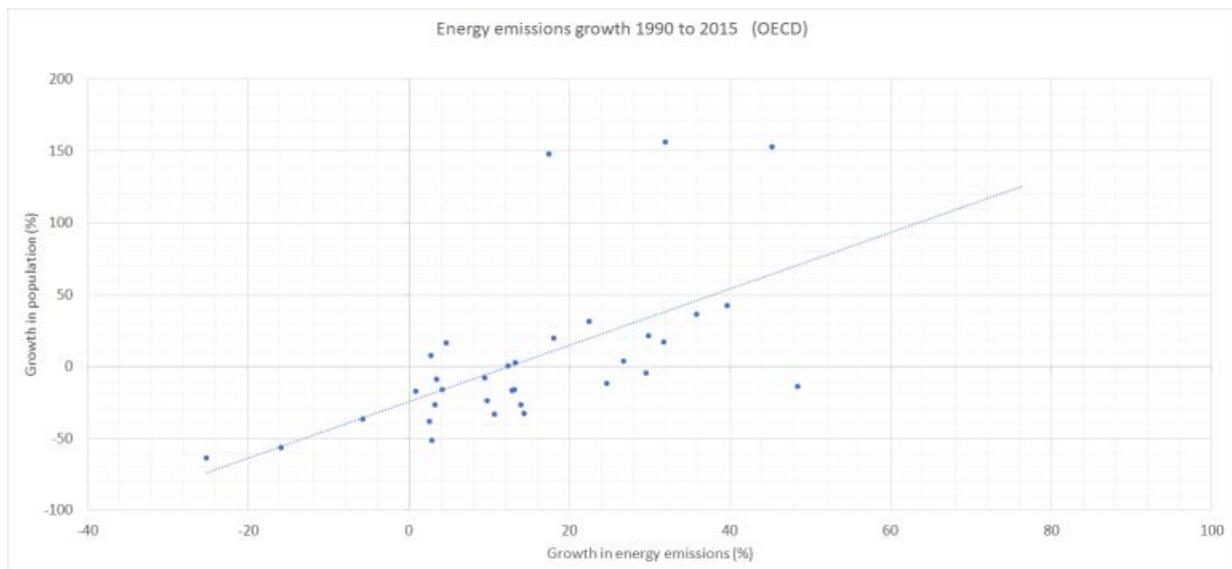
<https://croakingcassandra.com/2018/04/27/productivity-commission-and-the-path-of-least-resistance/>

<https://croakingcassandra.com/2018/04/26/emissions-population-growth-and-the-nzpc-inquiry/>

Extracts from one of the posts are reproduced as an appendix. You'll know all this material, but you need to start thinking seriously about the policy implications in New Zealand, a country where (quite rapid) population growth already is, and increasingly will be on current policies and fertility rate, driven by explicit government immigration policies.

Appendix:

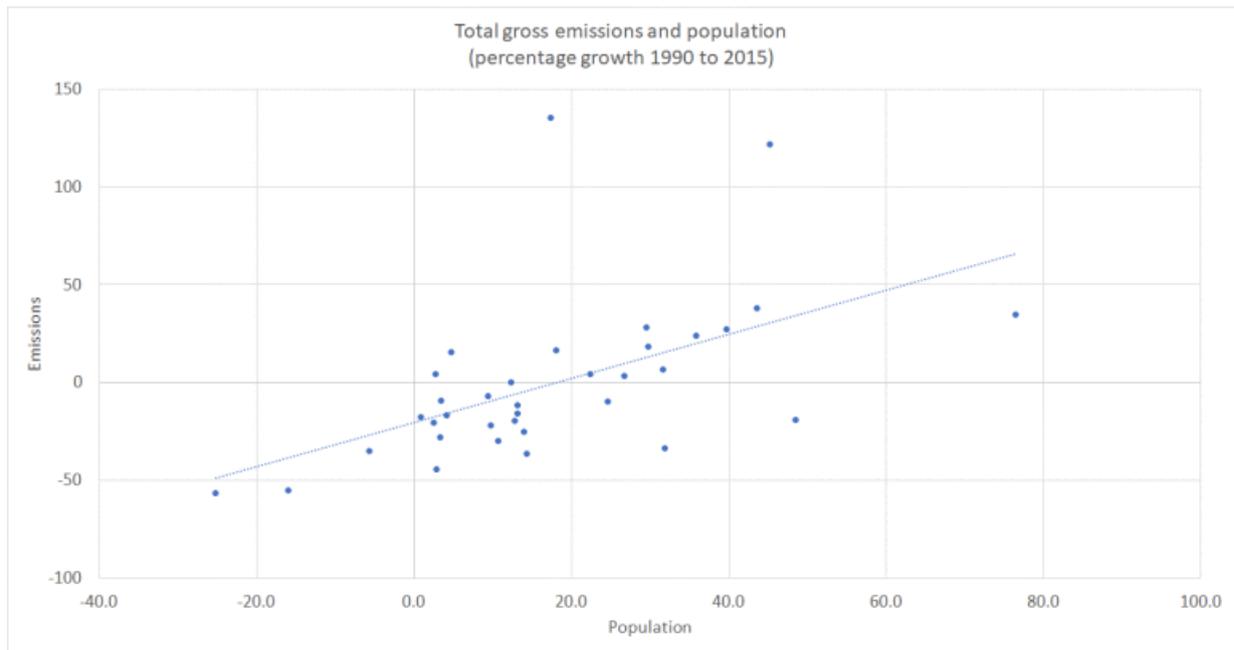
Here a few of the cross-country charts of the relations between population growth and gross emissions. This one is for all energy sectors (including transport).



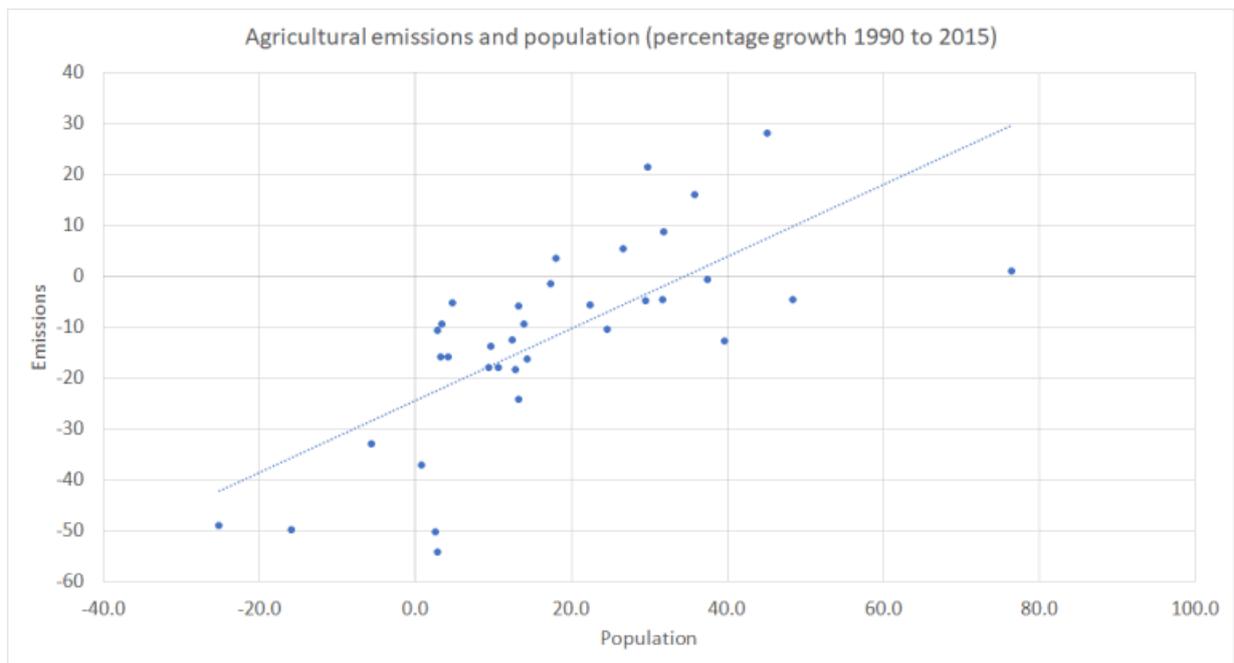
New Zealand is very close to the line (and the line remains upward sloping even if one excludes rapidly industrialising Chile, Turkey, and Korea – the three dots at the top of the chart).

The relationship shouldn't be a surprise: more people means, all else equal, more requirement for power, more need for transport, and so on. Over time, production processes tend to become more efficient, but for any given production technologies, more people will tend to mean more emissions.

Much the same relationships is present (again unsurprisingly) for total gross emissions.



and even, more to my initial surprise, for agricultural emissions



In fact, as I noted in an [earlier post](#)

Somewhat to my surprise there is actually even a (weak) positive relationship between population growth and per capita emissions and emissions per unit of GDP. I'm not quite sure why that would be, although in New Zealand (and Australia's) case, the migrants are moving to some of the OECD countries with, already, the highest emissions per capita and per unit of GDP.

The apparent relationship between agricultural emissions and population growth (even across advanced economies) is both interesting, and particularly germane to New Zealand. As I've argued elsewhere, it is plausible that if New Zealand had had much lower immigration (and thus lower

population growth) and, thus, a lower real exchange rate (according to the Reddell model), the political constraints on tightening water-quality standards (especially affecting dairy industry competitiveness) and on introducing agriculture to something like the ETS would have been less intense. The lower exchange rate would have provided a competitiveness offset. So it is likely that, all else equal, our immigration policy has even driven up our agricultural emissions.