

Interactive comment on “No way out? The double-bind in seeking global prosperity along with mitigated climate change” by T. J. Garrett

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I believe Dr Garrett has done us all a great service in this paper. In essence he has identified what could be called “the second inconvenient truth”. The first, of course, is the fact of human caused climate change. The second truth is that there is no easy way out. One might ask – “why would we think otherwise?” Because for the last 30-40 years we have been told by a variety of international and national bodies, that, in effect, there is an easy way out. We can have our cake and eat it too. While the rhetoric has moved from “sustainable development” to “green growth” - the message remains the same. Don’t worry - all people on earth can be rich, without substantial environmental effects. This article of faith – that we can have GDP growth and reduced CO₂ emissions is also adopted by the IPCC. But one needs to ask -

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suppose efficiency wouldn’t achieve the advertized CO₂ reductions? Suppose Jevons was right? Now, Dr Garret doesn’t “prove” that Jevons was right. But in an elegant simple manner, he shows that Jevons hypothesis is at least consistent with the data. Even if Jevons proposed mechanism doesn’t completely account for the effect, the data can’t be ignored. Some phenomena are at work here, and the result is that that although efficiency seems to save energy when looked at over a small space and time, in the end, those saving disappear. Garrett’s hind casting show that one assumes Jevons hypothesis, one gets results that are consistent with real world data. By using world wide data, Garrett, effectively sidesteps one source of potential error. Carbon intensity in the US may be dropping, but so is manufacturing generally. Globalization is a fact of life, but we can ignore the fact that we in the western world cannot defeat climate change by exporting our emissions to other countries. Especially to countries whose manufacturing sector is less efficient than ours! Why should Garrett’s results surprise us? Even a cursory look at the history of GNP and history of fossil fuel use shows us that they are deeply entwined. The only time we have seen any dip in the CO₂ data is during times of economic recessions. Given that history, any theory that assumes that you can have GDP growth without increased CO₂ bears a heavy burden of proof. We have had tremendous efficiency gains, especially since the 70’s oil shocks. But this has had little or no impact on the CO₂ data. Why? Perhaps such efficiency gains are ephemeral. Intuitively we can see why this might be the case. Despite our best efforts to buy “energy star” products – our electric bills go up. Any savings go to buy more electrical products that use more energy. Or, we use the saving from out fuel efficient car to take a trip to Europe. Or, we get a new fridge, and retire the old one - to the garage as a “beer fridge” The list goes on. This would be of no more that academic interest if so much public policy didn’t depend on it. Like many public policy initiatives, the mandate to “do something” overrides the mandate to actually accomplish something. The most obvious example is corn based ethanol. Like the efficiency approach to CO₂, on the surface it’s a “win-win” solution. It is home grown, renewable energy. A seemingly perfect solution to our energy problems But a closer look (after

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all the incentives have been put in place) shows it to be a lose-lose solution. No energy is saved. But the price of food is going through the roof. We have limited resources to throw at the climate change problem. We need to know how effective various approaches are going to be. If we invest a lot of money in efficiency gains, will that in fact slow the growth of CO₂? If not, perhaps we should re-orient. Put more money into non-carbon based energy or adaptation strategies. It looks like we will need them.

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