

## [Why detailed planning simply isn't possible](#) [1]

Written by [Tim Worstall](#) [2] | Saturday 2 June 2012

Sometime ago here I mused on whether the socialist calculation problem would ever be solved. Would it be possible for computing speed and information gathering to ever become fast enough and detailed enough that it would in fact be possible to properly plan an economy? My conclusion was "not yet at least" for which I am grateful for the calculation of when it might be possible has just been [done for us](#) [3].

I said before that increasing the number of variables by a factor of 1000 increases the time needed by a factor of about 30 billion. To cancel this out would need a computer about 30 billion times faster, which would need about 35 doublings of computing speed, taking, if Moore's rule-of-thumb continues to hold, another half century. But my factor of 1000 for prices was quite arbitrary; if it's really more like a million, then we're talking about increasing the computation by a factor of 1021 (a more-than-astronomical, rather a [chemical](#) [4], increase), which is just under 70 doublings, or just over a century of Moore's Law.

If someone like Iain Banks or Ken MacLeod wants to write a novel where they say that the optimal planned economy will become technically tractable sometime around the early 22nd century, then I will read it eagerly. As a serious piece of prognostication, however, this is the kind of thinking which leads to "where's my jet-pack?" ranting on the part of geeks of a certain age.

But note, that's the number for the Soviet economy of the early 1960s. When, according to the very mathematicians attempting to solve this problem, there were some 12 million products whose supply needed to be calculated. Gavin Kennedy tells us that the problem has rather grown since then what with technological advance and the further [division of labour](#) [5]:

Brad DeLong dramatised the stark gap between today's Yanomamo stone-age, hunter-gatherers along the Orinoco River with modern New Yorkers along the Hudson River, by referring to the availability and access to products. New Yorkers have access to tens of billions of products supplied in complex product chains from across the entire globe, as against only several hundred for the Yanomamo people, limited as they are solely to whatever they can provide for themselves within their tribal territory.

So to be able to plan a modern urban economy we've added another *one thousand times* the complexity.

I think our answer is now clear. In any sort of timescale that matters to any of us here and now, planning of the economy simply is not going to be possible. I am willing to leave open the possibility that it will be possible at some time: but anyone desiring to make that assertion had better work out how to keep me alive for the centuries it will be before it can possibly be true. Be quite happy to eat my hat in return for that extended lifespan.

**Links:**

[1] <http://www.adamsmith.org/blog/economics/why-detailed-planning-simply-isnt-possible>

[2] <http://www.adamsmith.org/taxonomy/term/5778>

[3] <http://crookedtimber.org/2012/05/30/in-soviet-union-optimization-problem-solves-you/>

[4] [http://en.wikipedia.org/wiki/Avogadro%27s\\_number](http://en.wikipedia.org/wiki/Avogadro%27s_number)

[5] <http://www.adamsmith.org/blog/economics/of-pins-and-things>

[6] [http://disqus.com/?ref\\_noscript](http://disqus.com/?ref_noscript)

[7] <http://disqus.com>