Alec Lofquist

The national innovation system of the United States is a strange beast. Despite the United States being on the forefront of innovation in previous decades[??], unlike other countries, the US still has no formal national innovation system plan in place. What would cause the national innovation system of the United States to drastically change?

First, is a change to the United States’ national innovation system really necessary? Is there something wrong with the system as it is now? There is no shortage of criticisms. Block and Keller’s article “Where Do Innovations Come From?” gives an excellent run-down on how the National Innovation System of the United States has mutated from what it was after World War II into what it is today: a shift from federally-funded private companies producing the nation’s innovations to a mix of publicly funded and federally assisted companies has occurred. At the conclusion of their article, Block and Keller explicitly state what they see as three major weaknesses in the system as it is now. First, the system suffers from extreme decentralization, to the point where it starts to affect productivity. It’s common for many departments to work on an identical problem without sharing results, causing a lot of wasted duplicate effort. Second, the public is largely ignorant of the importance of the role government currently plays in funding innovations. Third and finally, the availability of federal funding for R&D is shrinking, with the future uncertain (block\_keller).

I do not disagree that all three of these weaknesses exist, but I do not think that they all have the potential to cause significant change to the national innovation system of the US. Improving the extreme decentralization seems like a mere optimization to me, a problem which once fixed might slightly improve the effectiveness of the system overall, but won’t greatly affect the viability of the current NIS in the long run.

Public ignorance poses much more of a threat than decentralization. In a democratic country where representatives are elected based on majority vote, it could be a big problem if representatives that do not recognize the role that government plays to keep our national innovation system afloat are elected. I once again argue this isn’t as much of a threat as it seems: their plan for the country’s innovation system is probably not in the top ten of the list of sticking points for any political candidate. Why bother changing existing policies pertaining to the NIS when there are so many others that are much more viciously fought over? The greatest danger I foresee is an official attempting to shift funding around, which would fall under point three.

So what happens when the funding for the programs that uphold the national innovation system run dry, whatever the reason? It’s really not such a long shot to suppose that the money that is currently set aside could be relocated to projects that those in power deem “more important.” After some time, the “behind the scenes” federal funding that keeps the NIS functioning would undoubtedly cause radical damage to the current model, but realistically it’s unlikely that funding would be cut altogether. I expect a “ticking time-bomb” effect to take place: the model gradually becomes less and less effective as funding is reduced, until eventually an invisible line is crossed that sets the wheels of change in motion. Unlike the previous points, I am not going to try and play this one off – of the points discussed thus far, I think this one is most likely to have an effect – but the air of uncertainty surrounding its conditions leads to a very unproductive discussion (unless you happen to be an economist, which I am clearly not).

In chapter 8 of Mazzucato’s book *The Entrepreneurial State*, she explores the relationship between the government and the private sector. Through the example of Apple (which can be generalized to most large, successful companies), she brings up the point that most “innovations” by these companies build upon and depend on innovations created and funded by the government, such as the GPS, LCD display, and Internet – and that these companies do very little to “give back,” exploiting tax loopholes and creating poor jobs, through what she descriptively calls a “parasitic relationship.” (mazzucato)

I think that this criticism of the national innovation system of the United States completely misses the mark in terms of practicality, to the point of becoming a normative argument. You either blame the system for allowing the strategy or the people for abusing it. The second answer requires a normative justification and ultimately has little bearing on what people will *actually do* in anything other than a perfect society. Given the opportunity, most rational people will try to get away with giving less and keeping more, especially in the circumstance where the entity on the receiving end is shapeless, as is the case with taxes, so I do not think blaming those taking the opportunity is the right approach.

If you are to blame the system for allowing an “unfair” strategy to exist, the first question I have is why does the strategy continue to exist? If these tax loopholes are seriously hurting the government, why have they not been plugged? Even if these companies do not pay their “dues,” I argue the country’s government and economy are still receiving more than they would had these companies never created a successful product in the first place. I would expect a wildly successful product like the iPhone produced a positive effect on the whole – even if the taxes the government receives are a fraction of what they *could* be and the jobs produced aren’t very good. Compare that to the net effect on the country had the iPhone been a complete flop (this would be a very interesting parallel universe to explore). It seems to be that the first situation is undoubtedly better than the second. A problem is not actively being created by these companies’ efforts to keep as much capital as possible, though neither is it being used as a potential solution to existing problems such as the various deficits. Ultimately, I do not consider this a weakness, but rather another potential optimization, as in the case of decentralization.

Something I have yet to read on manufacturing goes here.

Does it still produce results?

Are these factors capable of making it *stop* producing results?

What will cause it to *actually change*?