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Mission Preposterous: A Review of *Moonshots and the New Industrial Policy*

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LINK TO ABSTRACT

Magnus Henrekson, Christian Sandström, and Mikael Stenkula (editors), *Moonshots and the New Industrial Policy: Questioning the Mission Economy*. Cham, Switzerland: Springer. 2024. **Open access**

The scribblings of economists have featured in the undulations of economic interventionism, parts of which are sometimes dressed up as 'industrial policy' or, now, 'innovation policy.' More than 100 years ago, Arthur Pigou, Nicholas Kaldor, J. M. Keynes, Oskar Lange, and Abba Lerner and their followers argued for a 'trial and error' or 'groping' conception of government action, as a way of discovering the best policies. The approach of "bold, persistent experimentation" articulated by President Franklin Roosevelt in his 1932 Oglethorpe University speech found some legitimation in the hallways of English academe. After the war, the idea of an 'industrial policy,' where state experts manage and direct investment in particular industries that market forces would have neglected was further elaborated by Paul Samuelson, Francis Bator, and many others.

But the failures of planning and active state direction in the 1960s and '70s led to a crisis of confidence in the *dirigiste* faction of the economics profession. Hayek's Nobel acceptance speech after the awarding of the 1974 prize raised questions about whether the 'science' of industrial policy was even feasible, much less desirable. During the 1980s and '90s, with the collapse of the centrally planned apparatus of the Soviet Union, the active state model seemed moribund. Many economists were skeptical about the ability of government officials to solve the twin problems of incentives and knowledge.

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Still, the drive to burnish the standing of a species of bureaucrats and intellectuals—'experts'—had only gone underground, not disappeared. Joseph Stiglitz, Dani Rodrik, Robert Reich, and others have called for not just regulation of market processes, but substantial intentional direction of investment and production. One important voice in the chorus is Mariana Mazzucato, notably her book *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (2014, Public Affairs).

It is always difficult to know if fads in economic scribblings cause policy change, or rather if policymakers invoke certain scribblings to justify what they wanted to do in the first place. In any case, this Restorationist 'mission-driven' or 'moonshot'-style conception of state action has become nearly universal among the advanced democracies, as leaders are bent on restoring the *ancien regime* that had—in their view—worked so well in the post-war period.

To assess the Restorationist movement's claims and results, Magnus Henrekson, Christian Sandström, and Mikael Stenkula have produced an edited volume of unusual quality and depth, examining theory, evidence, and "alternative paths" (2024, x). It is clear from the outset that the editors take a public choice–inflected position:

> Mission-driven innovation policies are politically enticing, casting policymakers in the light of visionaries who bravely tackle contemporary grand challenges. Concurrently, major corporations reap the rewards of expansive support schemes and stimulus packages unfolding across Europe and the United States. (Henrekson, Sandström, and Stenkula 2024a, viii)

The editors contribute three essays, including opening and closing "bookends," and then there are fourteen papers from a variety of authors, taking a variety of perspectives. Here I remark on a few of the chapters.

The first essay is by Dame Diane Coyle. She is famously skeptical of orthodoxy, and her work has made important contributions to economic metascience and the question of what GDP and other aggregate measures tell us about the health of an economy. In *Moonshots*, she notes that leaders instrumentally value simple, emotional political appeals. In fact, the demand for simple arguments, coming from the media and—Coyle's view—ultimately from voters themselves, is so overwhelming that it will evoke its own supply by the cynical, or by the well-meaning but naïve, analysts. Simple arguments provide a mobilizing and coordinating *political* function that should not simply be dismissed. The difficulty comes after the simple argument has persuaded, but before it has actually been implemented. That can lead to what Coyle calls "the pitfall of oversimple answers to complex policy challenges" (2024, 32).

Policy initiatives that lend themselves to 'mission' characterizations—we will build a bomb, we will land on the moon this decade—may be propelled this way.

But complex 'missions'—we will wipe out poverty, housing is a universal right—may not only fail, but the underlying conditions may substantially worsen as collateral damage of an overly simplistic problem statement.

> This is not to argue that policy narratives are unnecessary or even detrimental. On the contrary, successful policies need to align expectations and coordinate many different actors to bring about policy success…. [But] some of the popular examples of past missions oversimplify important aspects of the historical experience, while the practice of devising policy missions can diverge considerably from effective coordination narratives. (Coyle 2024, 32)

I should note that Coyle largely favors large-scale industrial policy and management of the economy, but she is doubtful that simplistic mission-driven initiatives are the best, or even a viable, mechanism for making such programs successful.

Some of her justification for relying on state action is that the time horizon of the state is longer, because of the "lower social than private discount rate." Perhaps she believes this because Kenneth Arrow argued (persuasively, I think) that the social discount rate *should* be lower. The problem with this argument is that the operative discount rate is not some abstract 'social' construct, but a very real—and very high—electoral or careerist discount rate. In a democracy, politicians are always focused first on trying to survive the next election. A policy with costs now, and benefits after the election, is difficult to persuade elected officials to accept. Her solution, as with Restorationists, is to put the making of economic policy out of the reach of democratic accountability. And that conclusion would follow, provided there is some reason to believe that a largely unaccountable permanent secular clerisy can be recruited to populate that priesthood. I am unpersuaded.

The second essay is by Randy Holcombe; his theme is, "engineering is not entrepreneurship" (2024, 43). To illustrate the distinction, Holcombe notes that European cathedrals, China's Great Wall, the Manhattan project for building the atom bomb, and John F. Kennedy's pledge to "land on moon, in this decade," were all great achievements of the state, but they were engineering. Entrepreneurship, by contrast, is a process of discovery and implementation of engineering advances, "discovery" through groping, trial and error.

A project can be an engineering success but entrepreneurial failure. One such, according to Holcombe, was the DeLorean automobile. The cars were designed and built and even imaged as a time-travel machine in *Back to the Future*! Mission accomplished. The problem arose when it came time to compare the costs of producing the automobiles with the willingness of citizens to pay for them. That was a failure: more resource value was used up in producing the car than was created for people who wanted to drive the car. The profit-and-loss system guides social value for entrepreneurs in a way that it does not, and cannot, for government engineering.

Holcombe's point is that even if the state can engineer, the very idea of an "entrepreneurial state" is a logical impossibility. The point of the Manhattan project, and of the moon landing, was that cost was largely irrelevant. In fact, as Holcombe notes, Mariana Mazzucato freely admits as much. But that gives away the game: Is a policy good? Is it worth doing? What—as Ronald Coase (1960) put it—is its "total effect"? A voluntary system of profit-and-loss generates answers "of its own accord," as Adam Smith would say, and profit-and-loss looms large within such a system. But it is a voluntary system of profit-and-loss that, for the state, is unavailable. Mazzucato might claim to be scrupulous about the total effect, but she lacks grounds for calling her statist approach entrepreneurial.

Now, invention and engineering are not useless. It is certainly possible that state action can make contributions on these margins. But Holcombe notes that Restorationists (my word, his concept) often elide innovations that arose from inventions, in an effort to claim credit for which the state is actually not entitled. It is entirely possible that the introduction of transistors was accelerated by the need for defense and space travel applications to be fast and light. The innovation, the transformation of transistors into components of consumer products, however, was due entirely to market-based entrepreneurship, with a number of significant failures and restructuring required before the products could be used.

Likewise, Holcombe considers invocations of "the internet": the internet is not a single thing, but a network of networks, with a variety of emergent ancillary activities that grow every day. But it is common for Restorationists simply to assert (as Mazzucato does) that the internet was produced by the government. In fact, the creation of the original set of connections, called Arpanet, was mostly a means of devising a communication system that could be encrypted and that could not be interrupted, with a variety of innovative protocols and provisions for redundancy and lossless transmission that did become part of the internet. But no one foresaw "the" internet; it emerged from entrepreneurship. In short, to use Holcombe's distinction: the state played a role in "inventing" the internet, but much of the actual innovation occurred in the private sector, without any kind of direction or management. As Robert Taylor, one of the "fathers" of the internet, famously said: "The origins of the internet include work both sponsored by the government and Xerox PARC, so you can't say that the internet was invented by either one alone" (quoted in McMillan 2012).

The impressive thing about Holcombe's essay is that, in spite of his doubts about the value of government direction of investment and research, he concedes the possibility that the state is capable of invention and discovery. But the concession strengthens his main argument, which is that government is incapable of acting as "entrepreneur," because it has neither the incentives nor good signals to make judgments about products and new processes in terms of their value to citizens. Since the state is concerned with mission and an objective, rather than cost and revenue, advocating an "entrepreneurial state" is a category error, and likely to mislead and distort citizens about the things that government might actually be able to do.

Jan Schnellenbach gives a behavioral-economics perspective on mission-driven initiatives, arguing that the approach will be "highly vulnerable" (2024, 61) to distortions because of behavioral biases and the inefficient use of heuristics that will harmfully distort results. Olaf Hallonsten gives an interesting, and sometimes scathing, assessment of "the new public intellectuals" (2024, 77–92) and their role in focusing attention on monumental and often wasteful efforts to leave a legacy, rather than trying to shape public policy for the better.

Rodney Yerger (2024a; b) contributes two empirical chapters, one broadly considering military and scientific contributions by government—in wartime, sometimes the state does accelerate invention, though at great cost—and also specifically looking at D.A.R.P.A. Yerger finds that D.A.R.P.A. does provide considerable value, but that it falls short when put up against the claims often made for it. In particular, the idea that D.A.R.P.A. represents a permanent and scalable source of innovations for an entrepreneurial state is simply not supported by the empirical evidence.

In another chapter, Maral Batbaatar, Johan Larsson, Christian Sandström, and Karl Wennberg (2024) consider evidence for claimed successes for entrepreneurial states worldwide, and conclude that—while there have been successes—the case for the process as a reliable generator of innovation is spotty. The chapter is a meta-analysis, examining 28 papers on 47 different "mission" projects, and categorizing them as success (about a third), failures (not quite ten percent), and "ongoing" (more than half). The problem is that many of the projects that are called "missions" do not fulfill the criteria laid out by the OECD. The authors are not even rendering a judgment about whether the mission is worthwhile—even a bad mission could conceivably be a mission, after all—but noting that initiatives presented as missions are nothing of the kind. The political value of *calling* something a "mission" means that a disturbing number of vague policy impulses are mischaracterized, sometimes in ways that reduce public faith in the very notion of missions in public policy. If everything is a mission, then nothing is.

Several of the papers consider particular "missions," evaluating the success of the initiative and considering whether that project really is, or should have been characterized as, a mission in the first. David Lucas and Christopher Boudreaux consider the U.S. mission to "end homelessness," in the aftermath of the Great Recession, with 2010 the starting point of the analysis. They show that not one of the goals has been achieved. In fact, in spite of the spending of billions of dollars, there has been very little improvement (Lucas and Boudreaux 2024, 153, 156). At a simple level, the big problem is the focus on demand subsidies, which increase total social cost without addressing the political "NIMBY"-ist restraints on supply. But the wider farce was a vast "mission" in which the objective was simply the spending of money, rather than achieving results.

The empirical chapter that I found the most interesting was the one by André Alves (2024). The subject—the attempt to "construct" a ship-building industry in Brazil—was a topic about which I knew nothing. As with other mission-oriented policies, the initial boost in spending seemed to represent "success," simply because the early portion of the project was simply to spend substantial resources at building capital facilities and shipyards. There is nothing especially difficult about spending resources, though corruption can derail even these early stages. Brazil succeeded in spending the resources, but failed to create a supply chain that could coordinate and organize the complex process of supply chains that can deliver components and skilled labor. As a result, Brazil had an enormous amount of resources tied up in the shipbuilding capital, but very little practical capacity to compete with other nations in the building of actual ships. The mythology of "missions" is that there is an initial public investment, followed by attracting private investment and a large increase in private employment as a result. The Brazilian experience is interesting because the initial jobs "created" by building facilities seemed to augur success. But capital capacity alone is not sufficient, and the fact that capital once structured in a certain way is then unavailable for other purposes represents a drag on the economy for years after the "mission" has ended.

The themes of farce, fraud, and failure come through also in the evaluation of "foreign aid," by Kathryn Waldron and Christopher Coyne. Waldron and Coyne (2024) take Mazzucato at her word, and consider the "seven pillars" of missions as means of guiding effective development through foreign aid. While in part the authors simply rehearse the litany of failures in large-scale foreign aid projects—dams and large facilities, on the scale of Brazilian shipyards—to achieve any long-term effect on local economies, they offer a traditional but quite persuasive explanation for the persistence of the failure: the scale and scope of the projects is too large, and too disconnected from local knowledge. As a consequence, the "mission" system of top-down planning is too separated from the creation of effective incentives. Without the ability to solve the incentive and knowledge problems, the problem of scale actually works against missions that, if conducted on a smaller scale, might be adapted mid-course.

Richard Björnemalm, Christian Sandström, and Nelly Åkesson (2024) offer a "Public Choice Perspective" on the activities of three Swedish agencies tasked with fostering and promoting innovation. The agencies were the Innovation Agency, the Energy Agency, and the Agency for Regional and Economic Growth. Thirty-three annual reports were considered, with evaluations of 654 instances of "innovation missions;" more than 80 percent of the recorded evaluations were positive, some strongly so. Then the authors compared these results with other, often much more critical evaluations from independent authorities. The "Public Choice" portion of the analysis then makes the important but often overlooked point that official evaluations of mission-oriented policies are going to be subject to strong confirmation bias, since the agencies charged with the mission are also those asked to conduct evaluation of their own work. In many cases, the "evaluation" has more to do with whether the budget was disbursed according to the schedule rather than with any purported objectives of the spending.

The empirical section closes with a chapter by the editors, Henrekson, Sandström, and Stenkula (2024b). They integrate the other empirical chapters, and add three more cases: The War on Cancer, the promotion of U.S. homeownership, and the Swedish "Million" Program. They offer seven "takeaways" from that analysis: (1) Wicked problems cannot be solved by missions; (2) Politicians and agencies act in their self-interest; (3) Missions can be captured by rent-seeking temptations; (4) Political actors lack knowledge to define missions and target them accurately, leading to vague and often pointless goals; (5) Missions distort competition and entrepreneurial innovation; (6) Missions create moral hazard and distort incentives; and (7) Missions discount costs, especially the opportunity cost of the resources they absorb.

The final section considers "alternative paths." Mark Sanders, Erik Stam, and Roy Thurik (2024) consider disguised assumptions of the "entrepreneurial state" concept. The general problem is that an "entrepreneurial state" is only likely to work if it is embedded in an "entrepreneurial society." But that's the paradox: in an entrepreneurial society, an entrepreneurial state is largely unnecessary, and will serve mainly to distort incentives for genuine innovation. Yet without an entrepreneurial society, an entrepreneurial state will be little more than a target for rent-seeking operations, and the "entrepreneurs" will be trying to seek private gain at public expense. In neither case is the entrepreneurial state a worthwhile aspiration.

David Rose (2024) offers an explanation for the persistent attractiveness of large-scale mission orientations and top-down initiatives. He claims that it is an evolutionary atavism, arising from a sensible desire in small groups with primitive institution to have a sense that "someone is in charge." Like Hayek, Rose proposes that the problem is the resultant moral intuitions that are the real problems, and that the only solution is to offer moral arguments to combat the atavism, arguments in favor of private entrepreneurship and against government action.

Roger Svensson's (2024) chapter begins with accepting the premise that government financing may spur innovation. But he notes that choosing to offer explicit subsidies, or even more forcefully declare "missions" on certain dimensions, presumes a level of information by state actors that is not justified by evidence or practical experience. An alternative, one that preserves a government role but suspends the requirement of knowledge and foresight by state officials, would be tax incentives for money that private entities choose to spend for their own reasons. The only administrative requirement is documenting expenditures, and since tax rates are generally 40 percent or less that means that the private investors still have substantial "skin in the game."

The final chapter, by editors Henrekson and Stenkula (2024), reprises some of the issues that distinguish bottom-up innovation and top-down "mission-driven" innovation initiatives. They offer a detailed eight-point evaluation of these differences, but the major point is particularly interesting. Henrekson and Stenkula argue that the nature of "ecosystems" to support innovation emerges organically, and simultaneous with the innovations themselves, in bottom-up systems. "Missions" often presuppose that support ecosystems can be created, but, instead, the top-down initiatives are often obliged by their very nature to attempt to build supply chains everywhere, everything, all at once. This is very expensive, at best, and at worst likely simply to collapse under its own weight, as in the case of Brazilian ship-building.

The book is both conceptually rich and empirically extensive. It would seem that the proper attitude is skepticism—at best—about new hype for the old idea of mission-driven policy. *Moonshots* is a timely book, fair-minded and carefully researched. And **open-access**. It is worth reading and talking about.

At the start of *Mission: Impossible*, the agency tells the agent his mission, "should you choose to accept it."

When it comes to "the Mission Economy," if the Restorationists were to put the question to the citizenry, the answer the citizen ought to give, according to Henrekson, Sandström, and Stenkula, would be: We do not choose to accept it.

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