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Alphachatterbox: Brad DeLong on Hamiltonian economics

**[Cardiff Garcia]** Hey everyone, welcome to Alphachatterbox, the long form business economics and tech podcast of the Financial Times.

I'm Cardiff Garcia, and our guest today is Brad DeLong, an economist and economic historian at the University of California Berkeley. He also writes a popular blog, and he's the co-author, along with Steven Cohen, of a new book called *Concrete Economics: The Hamilton Approach to Economic Growth and Policy*, and that is the topic of this edition of Alphachatterbox.

Brad DeLong, welcome back.

**[Brad DeLong]** Yes, yes. Thank you very much. Very glad to be here, wherever here is, in some metaphysical kind of sense.

**[Cardiff Garcia]** The metaphysical audio space. I'm excited to talk about this book. It seems to me that this book is mostly an effort to overturn some of the misguided but conventional wisdom about the foundational economic principles of the United States, but also of other economies that have experienced rapid growth in the past.

So why don't we start by looking at the subtitle: the Hamilton Approach to Economic Growth and Policy. Why don't you lay out for us the competing economic approaches of Thomas Jefferson and Alexander Hamilton, the two main characters in the first part of your book, and then we'll go from there.

**[Brad DeLong]** Well let's start with Jefferson. Let's start with Jefferson the ideologue, Jefferson the agrarian, Jefferson the person who above else was scared of corrupt imperial monarchical authoritarian autocratic London.

Jefferson was a very smart guy, was a very forward looking guy. Jefferson also tended to believe his teachers, and his teachers had taught him a particular version of ancient history – call it the republican virtue tradition, right, that once upon a time there had been a Roman republic, and it was virtuous because it was composed of small farmers who ploughed their own land, and lived simply and ate porridge and loved freedom and would rebel against kings or foreigners or anyone else who tried to take control of their lives.

And as long as the basis of Rome was the small farmer, who really didn't want to be in government, say Cincinnatus – if you named Cincinnatus to be dictator to command the armies of Rome, he would come, and he would command the armies of Rome in their wars against their foes because he loved the republic. But as soon as he possibly could he would abandon Rome itself and go back to his farm and go back to his plough.

That's what he really wanted to do. And indeed, there's no doubt that this had a huge influence on America in the generation of the founding.

We have a city called Cincinnati, for heaven's sake. We had a Society of the Cincinnati, made up of George Washington's army officers during the Revolutionary War.

Against this, against this belief that the only way to have a virtuous republic in which people were free was to have small holding farmers dominate, against this, in Jeffersonians' imaginations, was imperial Rome or imperial London. The Rome that had conquered the Mediterranean Basin, in the process acquired millions of slaves, handed out those slaves to the politically powerful oligarchs of Rome who then got their enormous estates on which they lived lives of luxury.

As they lived lives of luxury they lost their concern with the republic, they lost their republican virtue, they lost their ability to stand up to foreigners and to would-be kings. And the whole system comes crashing down with the wars of the first Century BC, and then with the ascent of first Julius Caesar and then the Emperor Augustus who stabilises the situation, who keeps Rome powerful, who keeps Rome rich -- but who makes Rome not free.

That was how Jefferson was taught Roman history had gone, and Jefferson's teachers said that's what's happening to imperial Britain in his day, in the late $18^{th}$ Century. That's what's going on in London now, as trade grows and commerce grows and manufacturing grows and corruption grows and aristocracy grows, and the wealth of the elite grows.

And the remnants of political freedom that still remain are, Jefferson and company thought, about to be stomped into oblivion. That's why Jefferson and company made the America Revolution, in response to insults and exactions from the British mother country that were quite small relative to the size of the American economy of the day, or indeed that were quite small relative to the taxes that other people had to pay in other countries.

But they thought it was a matter of life and death to get out from under this growing imperial structure.

And then no sooner do they win independence but Jefferson turns around, looks at New York, Philadelphia, looks at Hamilton, and says *by heaven's sake, they're trying to do the same thing to us here. If Hamilton has his way, Philadelphia and New York will be the new London, and we'll have done the revolution for absolutely nothing.*

So that's Jefferson. He has a very simple vision of how the world works. It reassures him. It allows him to think that he understands things, and can to some degree be in control of them.

And it leads to very strong conclusions.

Like the conclusion that the British mercantile system, the idea that America should simply produce primary products and ship them to Britain, while London handled all the commerce, all the banking, all the manufacturing -- that that was actually a very good thing for America, because it kept America free.

That to grab for a share of the manufacturing, the commercial, the banking business, would be to make America richer, but at the process of endangering its liberty. That the growth of finance, and especially the growth of banks, were an enormous danger. That the growth of manufacturing, that urban workers who weren't out on the farm breathing healthy air, working largely for themselves, but were instead concentrated in cities working for masters -- that that was a great danger as well.

With that set of principles as his lodestone, Jefferson knew exactly what to do in response to every single political question that came up, which is to exalt the yeoman farmer, and make sure that people who might challenge the dominance of yeoman farmers over American politics, and indeed in the American economy, should be discouraged and stomped as fast as possible.

That's why Jefferson was so opposed to Hamilton's assumption of the debt, to Hamilton's national bank, to Hamilton's encouragement of manufactures, to Hamilton's plans for an army large enough to defend the United States from a Britain coming down from Canada…

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**[Cardiff Garcia]** Brad, can you flesh each of those out a little bit? When you say Hamilton's assumption of the debt, you mean the central government assuming the debts of the states.

**[Brad DeLong]** The central government saying that all of these states paid to fight the Revolutionary War for the country as a whole, and incurred large debts as a result of it.

And that it's not fair either that the creditors of the states, who bought the bonds, in large part as a result, as an exercise of patriotic duty during the Revolutionary War, should suffer by not having their bonds repaid. And not fair that those who bought the bonds from the original purchasers, when the original purchasers found themselves strapped for cash, who were also in a way aiding the republic, should not get paid.

And not fair that the taxpayers of those states that stood up and actually did their duty during the revolution should have to pay taxes to repay the debt that had redoubted to everyone's benefit, when the taxpayers of states that had welshed, or had not taken out debts at all, did not.

For Hamilton, it was a burden sharing, it was a fair burden sharing principle, coupled with the fact that if the Federal Government demonstrated that it would take on the debts that had been incurred for the country, even if there was no fundamental legal principle saying that it had to, that there was nothing you could do better to reassure investors in the United States and elsewhere that the United States was a serious country that took its obligations profoundly seriously, and that it would be a good place to invest, because it was a place where the government and the country stood by their promises, both explicit and implicit.

**[Cardiff Garcia]** It also, as you detail in the book, incentivised the holders of that debt to have an interest in the economic outcomes of the country as a whole.

**[Brad DeLong]** Yes, yes. That if you think that the upper class of New York is kind of wondering whether it might not be better to be subjects of the Hanoverian dynasty in London than in this American democratic uncertain uneasy political scrum, if the rich of New York have a lot of their wealth in US government debt, that is the first thing that the British government is going to repudiate.

If the king comes back, that's a way of making New York's largely Tory elite into the most aggressively solid advocates of American independence possible.

**[Cardiff Garcia]** Okay. And Hamilton's favouritism towards manufacturing, his belief that we should have high tariffs to protect the infant manufacturing industry in the US, can you take us through his argument for why that was a good idea in the early years of the Republic?

**[Brad DeLong]** Well, his idea was simply that it seemed to work, right? That if you looked around at the world, you found that it was not the case that all virtue came from the countryside, from the yeoman farmers of the countryside, even leaving Monticello and other large scale slave plantations to one side.

That all virtue did not come from the countryside, and furthermore that there was an enormous amount of value created by the manufacturing and the commercial operations that he saw in London, that he saw growing in Manchester, that he saw elsewhere.

It's simply that if you want to have a good country, you want to have a prosperous country, and if you want to have a prosperous country, people have to be making stuff in a productive way.

People have to be making the stuff that is valuable, and so he looked around and he looked at what are people doing in the world, not just in the United States, that seems to be very valuable. And quite probably more valuable than growing corn and raising pigs on their own farms.

And Hamilton came up with the idea that rich countries, that productive countries all seemed to have a substantial manufacturing sector.

Secondarily that powerful countries were countries that needed to be able to make their own industrial age weapons, that you needed to have iron foundries if you were going to actually make any guns, and you needed guns.

And that as a result you should look around and say, *is there a way to encourage Americans to enter these particular lines of business that appear to be very profitable*, and to do so in such a way that they'll succeed. That government money spent on encouraging manufacturing, on encouraging banking and commerce will actually pay off, instead of being poured down some rat hole where it goes to the friends of the politically powerful and then is embezzled away.

And Hamilton's conclusion was yes, that there were strategic interventions the government could make that would definitely very much pass the benefit/cost test.

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**[Cardiff Garcia]** Okay. I think that's a great set up to start discussing all that's happened in the time since. One the one hand you have the philosophy of Thomas Jefferson that I think is often associated with the more free-market ideology, with the free-trade principles associated with Adam Smith. On the other hand you have Alexander Hamilton, who is pursing a more – I guess you could call it interventionist policy, one of industrial policy, higher tariffs, higher manufacturing.

Interestingly, and what was forgotten for a very long time, is that Hamilton's approach is what prevailed, well into the 19$^{th}$ Century, and for some time even after that. So why don't we talk about the events of the 19$^{th}$ Century, what happened roughly in the time between the establishment of the First National Bank, and Hamilton's sort of approach to the economy winning out, and why it's relevant still today.

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**[Brad DeLong]** So by 1816, certainly, you have the party of Hamilton, the Federalist Party, essentially gone from the American scene. You have the Jeffersonian party, the Democratic Republicans, in near complete ascendancy, with in fact uncontested presidential elections up until Andrew Jackson shows up in the late 1820s to try to contest power. But even though the clients and the intellectual descendants, and in fact the elders of, Jeffersonianism are in control*, the policies they're following are Hamiltonian policies*.

The Bank remains, at least until Andrew Jackson comes in, internal improvements to knit the country together, expensive internal improvements as a single economic entity, stay in and are expanded. The support to manufacturing continues, both through the Federal Government's tuning of its defence purchases in order to encourage invention and high tech development, and through the tariff – which greatly taxes southern planters in order to benefit northern manufactures, and which was the secession, the potential secession flashpoint of the 1820s and the 1830s.

That long before the Civil War the state of South Carolina was threatening to secede, or at least to nullify the operations of federal laws it did not like within its borders.

The Jeffersonian politicians, who had been raised on small government principles, disagreed, and disagreed quite strongly. Even where Jeffersonian politicians do follow some pieces of the Jeffersonian platform – Andrew Jackson hated the Second National Bank, and in fact extirpated it – they are very Hamiltonian in others.

Andrew Jackson was very much in favour of having federal law control everywhere, and in favour of keeping taxes if not quite as high as John Quincy Adams, his predecessor, had liked, still of keeping tariffs quite high and keeping internal improvements going – so much so that I believe he threatened to hang his own Vice President on the White House lawn if said Vice President continued in his treasonous advocacy of South Carolina's right to nullify federal laws within its boundaries.

And this process rolled forward, one in which the pragmatic realities of power, and the desire for a richer and stronger and more developed country, pushed the United States into the developmental state policies that Hamilton pioneered, those of support for manufacturing, support for invention and innovation, support for the development of communities of engineering practice and excellence. Discouragement of elite consumption, especially of elite consumption of luxuries from abroad.

That what imports you import ought to be directed at building up your industrial and technological capabilities, and your infant industries need to be provided with protection against those industries elsewhere that actually have a comparative advantage, until they can develop a comparative advantage of their own.

And why is this a good policy? Why did Hamiltonian development strategy succeed?

Well, first of all, sometimes they didn't.

Argentina is the extraordinary – not the typical case, but is the polar case of a country that tried to follow a semi-Hamiltonian, *we're going to move out of our specialisation in exporting beef, leather, hides and grain, and into manufacturing and become rich*, and finding that it's absolutely catastrophic. Because the firms to which Argentina directs its subsidies are those which are mostly characterised by the fact that their executives are married to the niece of the Vice Minister of Finance, rather than that encouraging them will lead to the development of some kind of community of engineering excellence.

Say Brazil's attempt to jump-start its ability to make computers in the 1960s and 1970s was another total disaster, because what Brazil found itself trying to do was trying to compete with building hardware as good as IBM's. And it could never get there. And in the process of trying to build hardware and prohibiting the import of IBM computers into Brazil, what it actually did was it robbed an entire generation of Brazilian programmers of the ability to learn how to actually do their jobs.

And so by the end of the process, Brazil's computer directed industrial policy had created a computer hardware industry in Brazil that had one tenth the productivity of America's hardware industry, and had managed to destroy Brazil's software computer programmer population completely.

**[Cardiff Garcia]** Brad, stay with me in the 19th Century for a second, though. We're definitely going to bring it forward in a bit. I should note that in addition to the high tariffs and to the emphasis on manufacturing in the US, that wasn't taking place everywhere. You note, and you have a quote, you call the "economies of temperate European settlement", Australia and Canada chief among them, these are economies that emphasise only the comparative advantages that only existed at the turn of the 19th Century, and consequently they did not have the kind of development that the United States did.

**[Brad DeLong]** No, but they were quite rich, right? Canada was always a nice place to live. New Zealand too. Australia's a very nice place to live, for most of the 19th Century, if you accept the two to one male to female ratio that it developed because of Britain's use of it as a dumping ground for convicts. But eventually natural increase saw the Australian sex ratio normalised, and Australia turned out to be a wonderful place for raising sheep, at least before the drought of the 1890s.

And Australia became the sheep raising OPEC of the late 19th Century, plausibly the richest place in the world for 20 years or so. But they didn't develop the communities of engineering practice, they didn't develop the patterns of investment and of large scale manufacturing firms that the United States did

And so when the technologies of the second industrial revolution arrived, the United States with its cotton and wide market, and its rich natural resources, and its communities of engineering excellence, was able to leap ahead – and in fact greatly surpass Britain in manufacturing productivity pretty much everywhere.

So that the 20th Century became an American century, rather than a second British century, in large part because of the bets Hamilton had induced the United States to make on not simply following comparative advantage.

**[Cardiff Garcia]** Yes, a long lag in between payoffs is always something that comes up in your book. It didn't just apply to Hamilton's policies leading to the 20th Century being the American century, you also get into it later with the policies of Eisenhower in the 50s, leading to a big payoff in the digital age.

But I think that's a great place to start talking about the turn of the 20th Century, and what happened under Teddy Roosevelt. You say that pragmatic experimentalism is what has worked for the US in the past, and this includes shifting course sometimes.

So we saw by the time that Teddy gets put in office that there had been a strong concentration in a small number of firms, and that applied across a few industries. He got in there and he started shaking things up. Talk about the importance of what he did, and how it represented a change in course.

**[Brad DeLong]** Yes, the Hamilton playbook is a wonderful playbook for a follower country that can manage to pursue it competently rather than corruptly.

You don't just have the United States, you have Germany in the late 19th Century following the Hamiltonian playbook. And if I can look forward to the 20th Century for a sheer second, it's what Japan does, it's what Korea and Taiwan do. It's what western Europe south of the channel did in the 30 years after World War II. It's what China is doing now with great success.

But it's not the ultimate, it's not the only, it's not the best development strategy, especially after you've ceased to be a follower country. After you've become a leader country, then all of a sudden issues of distribution come to the fore. You are no longer so interested in having simply more produced without worrying about who's getting the lion's share of it.

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**[Cardiff Garcia]** Brad, for our listeners, when you say a follower and a leader country, you mean a leader country is a country that is at the edge of the technological frontier, [while] a follower country is one that's trying to catch up to them.

**[Brad DeLong]** Yes, well, a leader country is one that has the industrial structure and productivity levels that pretty much everyone is heading to and wants to head to as fast as possible. A follower country is following along in their footsteps.

And so the problems for a potential leader country, for one that becomes part of what I think we're now supposed to call the Global North, are different than those of the rapid development of cultures of engineering practice that you know can be built, and that you know exist, and you know are highly productive, because you can look abroad at other countries and see them.

The problems of a leader country are problems of distribution, are problems of building capital, both human and physical, and are problems of figuring out what the best industries of the future are going to be.

And so starting, I guess, after the Civil War, as the United States is now a leader country, as the pragmatic problems the economy faces change, the pragmatic economic policy response changes as well.

They are the problems of *how do you manage to knit the country together as a single economic entity to take advantage of economies of scale*. And the answer is to throw money at railroads, in a highly corrupt but very effective way: to get a dense network of railroads built across the country, after which the problem is you've now enriched these railroad barons. And they have substantial monopoly power.

Well, the pragmatic response is all of a sudden to forget that they are simply exercising the property rights that you gave them, and instead to establish an anti-trust policy. To break up monopolies that you yourself have created in rails, and also to adopt rate regulation. To establish an inter-state commerce commission so that the small farmer trying to bargain with a monopolistic railroad has the government on their side to some degree.

There's a belief that you should democratise the ownership of property, so instead of selling off the land not given away to the railroads to the highest bidder, the Republicans under Lincoln and his successors developed the Homestead Act – a very Jeffersonian tack for a party in the late 19th Century. That maybe Jefferson was wrong in saying that yeoman farmers are the only potential source of virtue, but still creating a society in which lots of people have lots of forms of property, and lots of potential independence, is a very good policy if you're worrying about distribution now, rather than just about growing production.

Hence the way that the prairies were settled.

And then for those of us who aren't going to live on the prairies, well, we have land grant universities. Up until Clark Kerr left the chancellorship, presidency of the University of California in the 1970s, when he was, as he said, fired with enthusiasm, just as he had originally taken the job two decades before, when he had been fired with enthusiasm to take it in a different sense, up until the end of Clark Kerr's tenure, the idea in California and throughout the United States was that the government should provide you with as much education as you could stand and as you could benefit from *for free*, as far as tuition was concerned.

That we wanted people to build their human capital. We thought that yes, if they build their human capital they'll get richer, but they will also be a benefit to their fellow citizens, and we also want there to be powerful and easy roads to upward mobility, as opposed to smart but poor people having to graduate from college with current debt loads in the six figures, which they cannot discharge no matter how bankrupt they happen to be in the moment.

And a second course correction does indeed come with Teddy Roosevelt, who is very worried about the uses to which wealth is being put.

So we get not only the denunciations of malefactors of great wealth, and Teddy Roosevelt's aggressive pursuit of the anti-trust case that breaks up the largest corporation in America, the Standard Oil company.
We also get the establishment of America's national parks, we're at the beginning of environmentalism, and very powerful good government movements in the cities, to try to greatly upgrade the quality of local government that Americans are getting.

And this is even before the crisis of the Great Depression casts the whole system into doubt, and makes people think maybe the market economy with private property has had its day.

And in response, it's Teddy Roosevelt's cousin Franklin who winds up, almost by accident, in the President's seat in 1933 – that, had the politics of the 1920s gone somewhat differently, suspicion is maybe Franklin Roosevelt would have been President in 1928, and we'd now regard him as Herbert Hoover: as the person who fumbled the Depression.

But when Franklin came in in 1933 he saw that what Hoover had tried to do had by and large failed – that Hoover, after all, had focused on restoring business confidence, had adopted what Tim Geithner will probably not forgive me for calling a Geitheresque view of the economy, basically that the bankers and the businessmen have the rest of us by the plums. And only if the bankers and businessmen are confident in the future will there be the flows of money through finance and the spending by business on building capacity needed to support full employment.

And that that is the only way you can effectively get out of a depression, to somehow restore business confidence, which requires not running huge deficits, that businessmen fear won't be repaid, or will be repaid only by taxing them, requires not throwing businessmen and bankers in jail, it requires saying that prosperity is around the corner and the fundamentals of the economy are sound in such a way as to get you mercilessly mocked.

That was what Hoover wanted to do, and Hoover was not…

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**[Cardiff Garcia]** Brad, before we talk about FDR, I just want to quickly interrupt the discussion of history to ask I guess what you might call a more philosophical question.

How do I phrase this? One of the points in the book is that the traditional framework of thinking of how government steers the economy, or doesn't steer it, or how government is involved in the economy or is not involved, is wrong – because government can't help but play a role in shaping the economy. Even the decision not to regulate, not to investment, not to sponsor ideas, and not to partner with companies is itself an active choice.

I guess I just want to ask if that is your fundamental view of the government's proper role in the economy, and if that's what is guiding your own understanding of US economic history.

**[Brad DeLong]** Well, I think the way that Laura Tyson and Bob Reich like to put it to their freshmen is that government can interfere with markets, but government also creates markets, and government also has to complement and correct markets.

That for a start, the property rights that you need for market exchange don't come from nowhere. They are things that are strongly established by the government. Without the government you don't have property, or you don't have property that's other than the ability of the strongest to take what they like.

And even when you do have governments, we find ourselves devoting an awful lot of attention and energy to making sure that the government is strong enough to actually enforce the property rights it collects, or it generates. And then you get into contract law, right, that every market economy requires a very strong fundamental underpinning of property and contract which doesn't simply emerge on its own out of humans' natural sociability.

People may be naturally social to some extent, but your confidence that what's yours is yours, and your confidence that your counterparties are actually going to deliver is something – that collapses very rapidly and almost completely unless you have a government there to back up property and contract with people in long black robes who control your destiny, with judges.

And then beyond that, weights and measures. The idea that the government has to take a lot of aggressive steps to make sure that contracts actually mean what they mean, that the weights that people are using on their balances in the marketplace are actually real one-ounce and one-pound weights. That the stuff that is being sold as milk is actually milk, rather than half milk combined with half water and a little chalk added into it.

When Milton Friedman wrote his *Free to Choose*, he has a long song and dance about how people say that the fact of the Great Depression came proves that the market economy is not perfect. Actually, Milton Friedman says that's wrong. It's simply that the government has an obligation not only to provide property rights and contract laws, but also to provide the proper macro-economic policy that produces a stable framework of full employment in which people can operate.

And a government that fails to do that is as much falling down on its job as one that fails to enforce contracts or to enforce property rights.

That in Milton Friedman's view, a market economy requires not just property law and contract rights, but it also requires a monetary policy that preserves full employment. And it requires an intellectual property system on top of the normal property system, creating these special strange rights to very intangible things that govern people's behaviour, that is properly tuned in order to properly reward invention and innovation.

And by the time you've agreed that government has to do property, contract, conduct successful macro-economic policy in order to provide full employment with price stability, and also provide proper incentives for technological innovation, well, you're all of a sudden very far away from something that you would call a minimal state, from something that you'd call laissez-faire.

That the idea that the state should basically be a nightwatchman, to simply keep people from stealing your stuff while you sleep – that's so very far away from even Milton Friedman's conception of the government that I think if you take a pragmatic look at what's going on, you say that laissez-faire can't be a defensible position at all.

Even Friedman comes out with huge numbers of substantive exceptions, based on the fact that he's decided this is the set of stuff that's pragmatically beneficial, rather than that the government is best that governs least. The government that governs least is Somalia.

**[Cardiff Garcia]** I actually want to fast forward a little bit through FDR, certainly not because…

**[Brad DeLong]** Oh, and I have this very nice rant about how FDR wasn't an ideologue at all. How he basically tried everything.

**[Cardiff Garcia]** That took up a considerable part of the book, and it is very important. You also make the very interesting point that FDR was maybe the one example in the book of a President or government that wasn't trying to introduce new industries, rather it was just trying to get the economy to start working again, which distinguishes it as well.

It's actually just because I'm a bit mindful of time, but if you want to give us a quick spiel on why FDR was not at all an ideologue, but rather a pragmatist, go for it.

**[Brad DeLong]** We now regard FDR as the founder of modern American liberalism, and the New Deal policies as the epitome of American liberalism, that Bernie Sanders, when he says he's a Socialist, then goes, comma, by that I mean a New Deal liberal.

And it's those policies, as the core of liberalism, but they didn't start out that way. They are the core of modern American liberalism because by and large they worked in the 1930s and 1940s, and when Franklin Delano Roosevelt tried them he tried them not because he was in the business of trying policies that were liberal, or even because those policies were thought of as exceptionally liberal back then.

He tried absolutely everything.

He tried getting businesses in an industry together to set prices and quantities, with the National Industrial Recovery Administration. He tried, with a very aggressive anti-trust policy late in his term, to break up industry cartels and introduce competition.

He tried budget balancing in 1936 and '37 to restore business confidence. He tried deficit spending in '33 and '34 to get the economy moving again.

He tried boosting farm prices directly by having the government buy up stuff. He tried abandoning the gold standard.

He tried negotiating with foreign countries to set a particular parity for the dollar.

He tried mass relief, simply writing cheques to people who were without jobs. He tried government work programmes.
He tried paying people only if they showed up to the Works Progress Administration or the Civilian Conservation Corp.

He tried boosting existing businesses, he tried starting hybrid government private business enterprises like the Tennessee Valley Authority, to do tasks the private sector didn't seem to have started.

If it was an idea, and if someone had it, and if someone could get past the secretaries into his office, Roosevelt was willing to try it. And then he reinforced what seemed to be working, and ruthlessly pruned what seemed to be not.

And at the end of all, you had a country that did not recover from the Great Depression incredibly rapidly, but also one that wasn't a laggard, and had a set of policies that seemed to work.

The country that recovered best from the Great Depression, in terms of employment and production, was of course Nazi Germany, where Adolf Hitler was in the business of *let me put people back to work and build up as big a military as fast as possible*. And so simply loaded up both the fiscal and monetary policy expansionist tools and used them massively and aggressively, in order to get Germany working again, and get Germany prepared for World War Two. And it is to the world's sorrow that those policies worked as well as they did.

The New Deal did okay, it didn't do great, but it landed the United States with kind of an institutional configuration that worked quite well.

And then after the New Deal, after Truman, Eisenhower comes in as the Republican Party's last chance and great white hope, a relatively conservative guy from the Kansas prairie, someone who successfully managed a very large organisation of very vain competing people with different power bases during World War Two, as the Commander of the European Field of Operations (the most perfect job for a future president except possibly having been a large state governor, you can imagine).

And [Eisenhower] took a look around, he believed in small government and free enterprise. He also believed much more strongly in what worked, right, and took a look at the Great Depression era and what had followed and said *these New Deal programmes work; I'm going to make them somewhat more conservative, I'm going to make them significantly more efficient, I'm going to boost them by making the important investments that America, I think, needs to make*.

Coming into power at the height of the Cold War he very much wanted a strong military and he wanted a technologically advanced military which meant doubling and tripling down on government support of high technology.

Having tried to drive across the country for the army in the middle of the 1920s he very much thought we needed a superhighway system for the post-rail transportation age, and invested a fortune in that as well.

And he believed, along with so many other people, that having individuals have a stake in the country was an important thing. It was well past the time when you could hand out farmland to people, no-one really wanted a farm, the educational system was there, the Land Grant University System was there and was rapidly growing, universal high school was coming. What he could offer to people was the opportunity to buy a house.

The idea that Americans should not live in apartment buildings they didn't own but in houses that they did, in suburbs where they could commute to their jobs by the Interstate highway system, was one that Eisenhower pushed quite strongly, and his administration pushed quite strongly.

And it created what some people would call the premature and other people would call the mistaken suburbanisation of America but it was a configuration that Americans liked very, very much, at least until the two child per household millennials showed up.

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**[Cardiff Garcia]** Let's talk about that a little more because I think this is a good example, or rather you just mentioned a couple of examples of policies under Eisenhower, one of which had I think unalloyed benefits for the country – so the policy of pursuing higher tech, the involvement of universities, later on the digitisation of the economy; you can draw kind of a straight line between policies that began under Eisenhower to all these great benefits.

Suburbanisation has maybe a little bit more of a mixed record. It might be true that at the time Americans liked it but we know now that there are so many benefits of living in density, city life. At the time, also, the suburbanisation led to quite a bit of urban decay because so many people fled the cities, they tended to be upper class and upper middle class people who could newly afford to buy homes, and it left the cities in fairly bad shape at the time.

How should we think about the sort of inevitability of some mistakes being made when we're discussing industrial policy, or whatever other name you want to give to it, versus the fact that in many cases, maybe in most cases, they'll be outweighed by the benefits?

**[Brad DeLong]** Well, tell me about it. As you know right now I'm here in Kansas City, which was the place where residential segregation was invented by JC Nicholls early in the 20th century.

The very first neighbourhoods that had restrictive racial covenants on them were, I think, pioneered here.

My former student, Treven Logan, at Ohio State University has a wonderful series of economic history papers about how in the 19th century lots of Americans had lots of neighbours of different race, and how this changed in the 20th century – first with restricted covenants on new developments, then with red-lining, definite colour lines within metropolitan areas, even for existing development, for the existing housing stock. You know, Troost Boulevard in Kansas City runs north to south throughout the city, it was, starting in the early 20th century, supposed to be white to the west of Troost, black to the east.

This is in some sense ground zero for white flight. And moreover white flight was actually significantly worse, I think, in Kansas City because the flight was not just out of the city itself, out from contact with potential urban problems of crime, and not just out from the city's tax jurisdiction, but the flight was primarily to another state, across the state line into Kansas. That the rich parts – Kansas City, Kansas itself is quite poor, Wyandott County in Kansas is a relatively poor county for Kansas City – but Overland Park and Johnson City in Kansas, it's the rich guys in greater Kansas City, most of the poor guys are over here on the Missouri side.

Yes, I mean there are going to be big mistakes made, there are going to be interests that aren't taken into account when you try to pursue economic policy pragmatically. But if you're doing it pragmatically, you're at least looking at the situation as opposed to knowing before you even take a look at the situation that yeoman farmers are good, or that central planning is good, or that let's say immigrants are almost certainly a bad thing, or that the divine right of kings leads to the best outcomes, or that those who have Y chromosomes which indicate their ancestors were ex-Vikings that came over from Normandy after 1066 are better at ruling than people whose Y chromosomes indicate that their male ancestors came over from Saxony in the sixth century.

Any of these high ideological beliefs that the world is very simple, from laissez-faire to any of the others, are ones that Steve and I think guarantee that you will have a much greater mistake proportion than if you're willing to look at the evidence and to plan pragmatically.

00:48:23

**[Cardiff Garcia]** And I guess the pragmatic approach, assuming it is sustained, also allows you to adjust quickly if you catch a mistake early.

**[Brad DeLong]** Or to adjust more quickly, yes.

**[Cardiff Garcia]** More quickly, yeah. Okay, let's talk about something that worked a little bit better. You chronicle in your book the extent to which the Defence Department, for instance, not only seeded a lot of the innovations that led to what we now consider Silicon Valley and the high-tech market. But it was also for a time the biggest customer, in other words it was sort of sponsoring these ideas from both sides; can you just take us through some of the big ones and their influence on the development of high-tech industry?

**[Brad DeLong]** Indeed, that when the IBM president Thomas Watson said he thought there was a use for maybe five computers in the world, he was not being a stupid man. That computers were very good at doing lots of calculations one after the other, but when did you ever want to do huge numbers of calculations one after the other on a very large scale?

Maybe you wanted a computer for then the Department of Health, Education, and Welfare to put in its social security administration, to keep track of all the people who were receiving social security. You have a punch card, or several punch cards, for each person, you feed them into the card reader, they come out, it's a way of keeping track of what benefits you owe people and what contributions they've made.

Similarly, insurance companies might want to use a computer. The Defence Department wants to use a computer for calculating where its shells and missiles are going to go. And you definitely need a computer if you're going to be building atomic bombs because testing an atomic bomb is a rather destructive exercise.

In fact back in the 1940s, when people say that Richard Feynman, while working for the Manhattan Project, was the boss of 50 computers, what they mean is he ran a section in which he had 50 women working for him who did his additions and multiplications for him on mechanical adding machines, and then produced the paper tape results which were then aggregated.

Those were tasks that needed to be done but needed to be done in only a very few places in the economy in the late 1940s. But the Defence Department is out there, the Defence Department is looking for missions. The Eisenhower era government is feeding it with enormous amounts of money. Defence spending had gone down after World War Two from its peak of 40 per cent of GDP down to two per cent of GDP, and it looked like it was going to sit at two per cent of GDP until the Korean War came along.

And after the Korean War it was all of a sudden up to ten per cent of GDP, because we needed a navy to control the seas against the Soviets, we needed an air force to not just guard ourselves against Soviet bombers but to deliver our own A bombs to Moscow if it proved to be needed, and we needed an army large enough so that we would be fighting the Soviet Union somewhere in West Germany near the Fulda Gap rather than fighting the Soviet Union on Long Island, or even worse, in New Jersey, let alone Ohio.

Those things are expensive, that's ten per cent of GDP. And so the air force especially was looking for missions – and one obvious mission would be maybe we can use computers to control our air defence so we can send our fighters to intercept their bombers a lot more quickly and a lot more effectively than happened back in the Battle of Britain, when you had radar signals coming up, and people in underground bunkers pushing little wooden blocks over a map of England and the Channel and the North Sea showing the Nazi bombers approaching.

So the Sage Air Defence system, which never produced a single usable line of software running on any piece of hardware – we spent more on the Sage Air Defence System than we did on the entire Manhattan Project. And it was in one sense the ultimate government Defence Department boondoggle. But on the other hand it trained a whole generation of computer programmers at a time when very little else was useful that computer programmers could exercise their skills on.

And by the time the 1960s rolled around we not only...the fact that Sage had almost worked provided say American Airlines with the idea that maybe they should do a computer-driven reservations system for their air travel, which I think was the next big Manhattan Project scale computer programming project.

And as that moved on the computer programmers began finding more and more things to do, especially after IBM developed its System 360.

And we were off and running. We were off and running on a trajectory that has brought us now to a place in which our information technologies are extraordinarily unbelievable relative to what anyone would have imagined, even in the post-World War Two days when Tom Watson of IBM is saying that maybe the world will need five computers.

Elsewhere we have high-tech but we have high-tech without the information technology; it's something that from the perspective even of 60 years ago has come out of left field completely. We wanted our flying cars, we have the ability to compose messages in 140 characters and broadcast to the world, and so insult a great many people we have never heard of, but we have many more things along with that as well and it has caused our society to take a generation, to take a shift in a direction no-one envisioned. And that certainly Eisenhower and company did not envision when the Defence Department started Sage.

00:55:08

**[Cardiff Garcia]** Okay, we've got time for one last topic. It is the topic of the closing chapters of your book, and that is the rise of high finance in the...

**[Brad DeLong]** What went wrong?

**[Cardiff Garcia]** Let me set this up for you for a second. Because in the 1970s, as you note, there was de-regulatory fervour in several different sectors of the economy. And in some of those sectors it was totally warranted, right, I think transportation might be the most prominent example. In finance, though, you argue that the de-regulation was driven more by ideology than by pragmatism. Why don't you start by telling us how we know that and then telling us what happened?

00:55:47

**[Brad DeLong]** Well let me back up, right, to the 1970s.

The 1970s have stagflation, which means what we then thought of as chronic unemployment bouncing around between five and ten per cent in the United States, which was annoying.

In Britain you may remember, you probably don't remember, in 1979 Margaret Thatcher running for Prime Minister on the slogan "Labour isn't working", because the numbers of unemployed people in Britain has just crossed a million, never mind that Thatcher was going to push it to three million after she got into office, says there is no alternative, she is not for turning.

But high unemployment, very slow wage growth, rampant inflation reaching at the United States a peak of 14 per cent a year. Clearly the Eisenhower/Roosevelt post-World War Two social democratic model had broken down and we needed new policies.

And what should those new policies be? Well there had always been an alternative government in exile, right, the kind of technocracy over the water, in a sense, that held that we'd gone too far and that really the New Deal had been a mistake, the economy needed a lot more laissez-faire.

And in the 1970s that appeared more plausible, especially after successes at energy and trucking and airplane travel de-regulation seemed to create a great deal of increased economic efficiency and a great deal of more and happier consumers.

When you de-controlled oil prices and so shocks to the oil market no longer created gas lines. When you de-regulated air travel so that all of a sudden there were scrappy airlines showing up, promising you not a catered lunch on a tray but instead just a bag of peanuts but a plane that would take off and land quickly. When you had not the railroads protected from competition via the trucking industry by a requirement that trucks charge a fortune for truck delivery, which led among other things to a very good lifestyle by the members of the Teamsters Union who drove the trucks, and also by the Mafia Dons who got their hands on its pension fund. (The de-regulation of trucking at the Interstate Commerce Commission seemed also to be a big win.)

And then the recession of 1980 comes in, Reagan wins the election in 1981, Thatcher wins it in 1979. There is the belief that it is time for a laissez-faire turn.

And so over the next generation we do a whole bunch of things.

One of them is the United States insists there has to be a role for private insurance in health care. And so since 1980 the United States' healthcare expenditures, which were pretty close to those of other countries back in those 1980 days when healthcare was only six per cent of GDP – in the United States it's now 18 per cent of GDP and six per cent of that is in administration, and as a guy I ran into at the coffee shop was saying, he goes to the doctor and there's one doctor but there are six secretaries fighting with the insurance companies, and on the insurance company side there are six administrators fighting with the secretaries as well – all because in health insurance you make your most money by figuring out how to craft an insurance policy that's unattractive for sick people to buy but attractive for healthy people to buy.

There's a huge chunk of GDP, $700 billion a year, Princeton Professor Uwe Reinhardt says, wasted in kind of excess health insurance administrative costs in the United States. So we bet on healthcare administration.

We also bet that our top 0.01 per cent, which were receiving one per cent of national income in 1979, that what they really need is they need massively lower tax rates. And now we're paying our top 0.01 per cent four per cent of GDP instead of one per cent of GDP for the managerial services they provide the rest of us. Are we getting better decisions out of this? I doubt it.

But matching those two, and equal to them, is the enormous growth of finance, the fact that back in the 1960s we had about three per cent of GDP in financial assets, and in total the rest of the economy paid finance one per cent a year to manage those assets, and now we have four years' worth of GDP in financial assets, and we pay two and a quarter per cent of asset value each year to finance. Much less in commissions, much more in the trading profits of finance, and so nine per cent of GDP goes to finance in America today.

Yet finance is really an intermediate service provided to the rest of us. It helps us make sure we pay our bills on time and smooth out our spending so that we aren't embarrassed by bouncing cheques. It helps businesses choose which CEOs to have and which directions to pursue and provides mechanisms for getting rid of executives who aren't doing their jobs. It helps allocate capital across different sectors so we can invest in places where profits are high.

And it's supposed to provide for risk bearing so that people can undertake enterprises that are individually risky without having to pay absolute fortunes for capital, and also to create a situation in which society's risks as a whole are spread out over the economy as a whole, so that an unfortunate crisis, like say the investment of an extra $500 billion that you shouldn't in building houses in the desert between Los Angeles and Albuquerque, a fundamental investment of $500 billion that goes wrong, doesn't cause great economic distress throughout the country as a whole.

And you look at our financial system, now eating nine per cent of GDP for performing the societal tasks its predecessor just needed three per cent of GDP to perform, and you say *are the rest of us getting anything for this,* and the answer really has to be no.

In fact something like the 2008 to 2010 crash, in which a mis-invesment of $500 billion, $500 billion in a 15 trillion economy, that's a mis-investment of three per cent of GDP. That's a big thing, but that shouldn't take down the entire world economy. It's only three per cent of GDP for one year. It's less than half of one per cent of all the financial assets in the world. Only if you have modern finance and the ability of derivatives to concentrate risk and a financial superstructure that creates enormous incentives to concentrate risks in places where if something goes wrong you can walk away, but if something goes right you make an absolute fortune, could possibly have created a system that was as vulnerable as our economy was in 2008 and 2009.

So somehow, starting in 1980 [sic – I think Brad meant the 1950s], America's bets on what sectors should the government provide support for, what are the real industries of the future, broadly went right. Since 1980, with the exception of Silicon Valley, they've broadly gone wrong.

**[Cardiff Garcia]** Okay, my final question is this. I certainly don't want to pretend that nobody was warning early on that de-regulation...

**[Brad DeLong]** I wasn't.

**[Cardiff Garcia]** So some people were warning early on that de-regulating finance might be dangerous. Paul Volcker was one of them, Hyman Minsky was another. But I can understand why at the time emphasising the rise of finance must have been seductive – especially going on through the 1990s and the 2000s, when there was more globalisation, finance did seem like a comparative advantage for the US, and all of these entrepreneurial ideas must have seemed really appealing.

And of course now we know that a lot of these innovations in the financial sector ended up concealing and adding to, rather than mitigating, the build-up of risk in the system. But we missed it at the time.

And so my final question is this. I really like this idea in the book of using an experimental and pragmatic approach versus one that's ideological, but at any given moment, something that is ideological seems pragmatic to an ideologue. I guess I want to ask how should we defend against this? What should be the considerations that we look at when trying to decide whether an idea is driven by pragmatic versus ideological considerations?

**[Brad DeLong]** Well, you look back in time and you look across countries to start with. That if you have a long record looking back in time and a large willingness to look across countries at how institutions are working elsewhere, that helps protect you.

The other thing I think is you definitely need to watch out for what Paul Krugman calls now-more-than-everism, right, that if your response to the crisis of the day is to say well*, now more than ever it's important for us to undertake the policies I was recommending five years ago*, you're almost surely dealing with an ideologue rather than someone who's pragmatic, rather than someone who is willing to mark their beliefs to market.

Look, the financial de-regulation back in the 1990s, at the Treasury I was part of a team that thought derivatives were actually an intriguing thing to try, because we looked at financial markets that we seemed to see were outsized risk premiums. That financial markets were having a very hard time mobilising risk bearing capacity, and so people trying to undertake risky investments had to pay an exaggerated premium in order to borrow money. And derivatives promised to allow you to slice and dice the set of risks in a sophisticated way so that if you could find someone who was willing to take a particular set of risks, or who definitely wanted to avoid a particular set of risks, you could create a security that they would like, and so increase the numbers of people from whom you could draw risk bearing capacity.

Analogously, the idea that we should get rid of Glass-Steagall and allow investment banks to become corporations – well, the view was that things like Morgan Stanley and JP Morga, and Goldman Sachs, they seemed to have a lock on the investment banking business because they understood the SEC, and they seemed to be earning greatly outsized commissions on not just initial public offerings but on the offerings of seasoned companies that really shouldn't have to pay a fortune to investment banks to issue a bond issue. And the feeling was they were a cosy, cooperative oligopoly. And if only you let Bank of America, Chase, Citibank, and Travellers Insurance into the investment banking business, they had deep enough pockets that they could fund groups of investment bankers to actually take the guys on.

And so the coming of the corporate four meant the elimination of Glass-Steagall; the lowering of those barriers to entry were supposed to create a smaller, leaner, lower profit investment banking industry that would provide less of a tax and a lower cost of capital to American industry.

Now all of those bets went totally, completely, 100 per cent wrong. The corporate form, deep pockets, no Glass-Steagall, large amounts of compensation paid out immediately to investment bankers, who you feel you have to bid away from their competitors because they have a hot hands system of finance that we developed with very low commissions, seems to have created a world in which, for complicated behavioural economics reasons, people are willing to pay much more in price pressure as they trade to have their money managed implicitly by Wall Street than they were back when commissions were high.

And it managed to create systemic risks of a magnitude that would have astonished even Hyman Minsky, that it went largely and catastrophically wrong. But the distressing thing is say that the opposition to common sense reforms like Dodd Frank goes so strong and so deep, and that lots of people who are only in business now because the government was there to backstop them in 2008, are still saying the thing we most need is the de-regulation of finance and the return to a laissez-faire financial system.

01:10:00

**[Cardiff Garcia]** Okay, well this has been a great chat, a sweeping view of US economic history. To our listeners, if you want to learn more about all these ideas and see them fleshed out a bit the book is called *Concrete Economics: The Hamilton Approach to Economic Growth and Policy* by Stephen Cohen and BRAD DELONG. Brad has been our guest on Alphachatterbox. Brad, thanks for being here.

**[Brad DeLong]** Thank you very much, it's been a great pleasure.

**[Cardiff Garcia]** Thanks again for listening. Send us an email, tell us what you thought, at alphachatterbox@ft.com. Or you can give us a call and leave a message at 917-551-5012.

Don't forget to leave a review and rate the show on iTunes, it helps other people find us, or you can Tweet me directly, @cardiffgarcia, you can go to FT Alphaville for the show notes and the transcript of my chat with Brad. Thanks as always to the amazing Aimee Keane for producing and editing the show, and thanks to our listeners one last time. We'll see you again here for another episode of Alphachatterbox within the next couple of weeks.