

## Rationally Speaking #236: Alex Tabarrok on “Why are the prices so d\*mn high?”

**Julia:** Welcome to Rationally Speaking, the podcast where we explore the borderlands between reason and nonsense. I'm your host, Julia Galef, and my guest today is Alex Tabarrok. Alex is an economist at George Mason University and a blogger at Marginal Revolution. His latest book is Why Are the Prices So Damn High? It's co-authored with Eric Helland and available for free on the Mercatus Center website. And it's about, specifically, why are the prices so damn high in healthcare and education?

As you may have noticed, while the prices of many consumer goods have been plummeting, like electronics and toys, the price of services like a hospital visit or a college education have gone up by a lot, about 200% just in the last two decades. And that's in real dollars. That's adjusting for inflation. And they've been climbing pretty steadily since the middle of last century.

So this is the big mystery. Why are the prices so damn high? And getting damn higher?

Alex, great to have you on the show, finally.

**Alex:** It's fantastic to be here.

**Julia:** I've been quoting you for years, colloquially and in talks. Do you want to guess which of your many excellent lines I quote the most often?

**Alex:** I'd be delighted for you to tell me.

**Julia:** It's "A bet is a tax on bullshit."

**Alex:** Yes, yes, that was a good one.

**Julia:** That's a great one. Yes, yeah, I've borrowed lots of cred with that line.

So Alex, to start, maybe you could say a little bit more about those price trends that I mentioned. How long have healthcare

and education been getting more expensive? And also, how surprising are those trends? Just a priori, how surprised should we be that these services are getting more expensive over time?

Alex: Right, so I think that is one of the most distinguishing factors of these trends, is that they've existed for as long as we can find data on these things. So in the book, we start about 1950s. So we have 65 years of data. And you can see the price of home appliances has fallen by a factor of more than four, while as you said, the price of higher education, lower education, healthcare, they've gone up by a factor of three or four. They're not the only things, as we'll talk about later.

Other services have also gone up in price. And it is important and interesting that this continues to happen year after year after year. This is sort of a slow, steady increase in price over time. It's not as if you see in one year some law changes and there's a big jump in price, and it then continues. This appears to be a more non-secular increase.

As I said, we have data going back to-

Julia: And by secular... our listeners probably won't all know what that means. What does secular mean in this context?

Alex: Yeah, so secular in this context just means a long-run trend, basically. Yeah, I should just have said that.

Julia: Long-run. Not totally obvious from context.

Alex: Yeah, no, exactly. We have data since 1950, but in fact, you can go back and look in the 1960s and the 1970s, and people back then are complaining, "Healthcare has gone up so much in price! How can we continue to afford this?"

Julia: Ah, my sweet summer child.

Alex: Yeah, all of the problems that you hear today, people were saying in the 1970s about healthcare. And even at the same time or even earlier, people were saying, "Education has increased a tremendous amount since 1900. It's 1950 now, and education

has gone up. What's going on? What's wrong? There must be something terrible about these sectors."

These are very, very long-run trends.

Julia: I think to me, what feels surprising about it a priori is just that I have this pattern in my head that stuff gets cheaper over time, because we find ways to innovate and make it cheaper. And so it's weird and perplexing when stuff gets more expensive instead.

Alex: Yeah, that's a very common intuition and I think is a very natural intuition to think that progress means prices should fall.

And so you look at clothing, and shoes, and telecommunications, and home appliances, and you say, "Ah, that's capitalism working. That's the way things should be!" And you look at higher education, and lower education, and healthcare, professional services, and you say, "Oh, something's wrong. There's something. Is it unions? Is it regulation? Is it government? What is going on in these sectors?"

And part of what the book, or the booklet, is about, is actually to challenge this common wisdom and to say, "Actually, all real prices cannot fall. What we are hoping to see cannot in fact happen. Over time, you must see some prices rise. And that is due to what is called the Baumol effect, what we call the Baumol effect.

Julia: Yes, right. Yeah, I was going to tease that answer, but you got to it before I did.

So in one of your blog posts about the book, you said that when you were first approaching this question, you kind of assumed that the answer to, "Why are the prices so damn high?" would be this multi-pronged answer, that it would be various factors that people have pointed to over the years.

And in the end, after looking at it in depth, you came to the conclusion that it's basically almost all the Baumol effect. So the

subtitle of the book is, "Health, education and the Baumol effect."

Can you walk us through a simple example of how the Baumol effect works?

Alex: Sure. So let me give you the kind of classic example, which probably a number of your listeners have heard. But I think it's still useful to think about. And that is the famous string quartet. So you take the string quartet in 1826. It takes four people 40 minutes to produce the piece. Now, we move all the way to 2019. It still takes four people 40 minutes to produce the piece.

So there's been zero increase in productivity over that 180 years or so. Zero increases-

Julia: Well, they might be better.

Alex: What's that?

Julia: They might be better musicians, which could count towards productivity.

Alex: They might be, but they don't have to be, right? So it's certainly possible that they're not. They might be, but there's no special reason to think that they are better players. So we've had... by assumption, let's say there's zero increase in productivity, or not a very big increase in productivity, in any case.

Now, at the same time, lots of other industries have increased in productivity. So if we go back to 1826, the average wage is \$1 an hour, because those workers, they can't do very much. They're not very productive. The average wage in 2019 is more like \$25 an hour.

So in 1826, we're saying the opportunity cost of those four workers to produce this piece, it's basically \$4. In 2019, for the same four workers, it's \$100. So what we've seen is that zero increase in productivity, but the wages have gone up by a factor of 25 --

Julia: Meaning the wages they could be getting if they left music and went to work in another sector have gone up.

Alex: Or to put it another way, the wages you have to pay them to get them to move from the other sector, right?

Julia: Right, yes.

Alex: So wages have gone up by a factor of 25. Productivity hasn't gone up at all. So it must be that prices have gone up by a factor of 25. And that's the essence of the Baumol effect. If you have a situation where productivity is relatively stagnant... doesn't have to be zero. It just has to be less than in other industries... then prices in that industry must rise. Because your resource inputs, the inputs into that industry, have to be paid their opportunity cost. They have to be paid what they could earn elsewhere in the economy.

So if productivity is increasing elsewhere in the economy, that means that's pushing wages up and pushing input costs up. And if productivity isn't going up, prices must rise.

Julia: And then does that mean also that there are going to be fewer musicians? Like, assuming people aren't willing to just... pay increasing amounts indefinitely for the same concerts.... Then probably they're going to be --

Alex: Possibly. So in the case of concerts, probably it does. And of course, we do have reasonable substitutes. They're not perfect substitutes. But of course, recorded music has been the big advance in this area. And it's a reasonable substitute. It's not a perfect substitute, because people are still willing to pay a lot more for a live performance than they are for an MP3.

So it depends whether we see shifts away from the good which has increased in relative price. Depends upon tastes and upon substitutes.

Now, in the case of education and healthcare, it just... it happens that actually, what we see is people purchase more of these goods over time, even as the relative price has increased.

Julia: Is that surprising?

Alex: I don't think it's that surprising. You know, you have diminishing returns to kind of manufactured goods. You can only have a house which is so big, and cars... how many cars can you really want? So healthcare in particular. In a way, it's the ultimate good. Because if you can live... the richer you are, the more valuable it is to live an additional year. So we have two effects in the case of healthcare.

One is, other goods have diminishing marginal utility. But healthcare actually has increasing marginal utility, because if you have lots of other goods, that is you're living a really good life, then the opportunity to live an extra year is even more valuable. So the more stuff you have, the more valuable it is to live a little bit extra.

So I think it's not surprising that demand for healthcare has gone up. And maybe education too. There's a good consumption part of education, and it's also useful to earn higher wages. So I don't think it's too surprising.

Julia: And just to back up and make sure it's clear how the Baumol effect applies to healthcare and education: so, healthcare and education haven't gotten that much more productive in the last few decades, but other sectors that employ skilled labor have gotten more productive, like I guess software engineering. And so they're paying more, and so the healthcare and education sectors have to in turn raise wages in order to keep attracting employees, and prevent everyone from fleeing to software engineering and other high-paying sectors. Is that correct?

Alex: Exactly. And so, take the case of education. I think it's very plausible that productivity in education has not gone up very much at all. I mean, we think about what a teacher was doing in 1950. Standing before a classroom of 30 people and talking. And maybe the teacher used chalk, and today's teacher uses PowerPoint. That's just not a big increase in productivity. So I think in education, it's very clear.

In healthcare, it's less clear, because there have certainly been improvements in quality in what a doctor does, or the knowledge which a doctor uses. But still-

Julia: And in outcomes, right? That's just the intermediate metric, but outcomes like life expectancy, or --

Alex: Exactly. Exactly. So again, that's another reason why we might spend more on healthcare, is that quality has gone up. But I think also, when I go to the doctor, the doctor still spends a lot of time doing diagnostics, talking with me. Even they still use the stethoscope, right? There's still a lot of detective work of kind of figuring out what the symptoms are. What could this be?

It's not at all obvious that productivity has increased in that portion. So I think there's a plausible case... not for sure, but there's a plausible case that also in healthcare, productivity has not increased as much as in other sectors of the economy.

Julia: Right. A nice kind of intuitive thought experiment that the blogger Scott Alexander at Slate Star Codex posed... so Scott wrote an excellent series of posts on rising costs and the Baumol effect, over the last two years. And in one of them, to kind of pump your intuition to accept the idea that education was getting more costly and not really all that more valuable, was imagining: If you had the choice would you rather have paid for a college education today, like a modern college education, or would you rather have a college education equivalent to the one that your parents had, and then get, I forget what it was, \$7,000 a year or \$8,000 a year or something, for four years? Which of those two deals seems better to you?

And for most people, it's like, oh yeah, I would much rather have the, whatever \$42,000 and the college education equivalent to my parents', that seems better. But we don't really have that option now.

Alex: Exactly. Now let me go back for a minute to why this is kind of a deep point -- because this does imply that if there are differential increases in productivity across industries, then

some prices must increase, and why is this? It's because fundamentally all prices are relative prices. What a price tells you is the opportunity cost of something. We're used to thinking about prices as a measure of affordability, so if you compare prices at Safeway versus Wegmans and you find at Safeway, the price of bread is cheaper, therefore bread is cheaper, more affordable at Safeway. That's fine when you're thinking cross-sectionally. But when you're thinking over long periods of time, price does not correlate with affordability, and that's because prices are opportunity costs.

So the reason why education has become more expensive is that to buy a little bit more education we now must give up more cars, and more software, and more video games, and why must we give up more of these things? Because we've become more productive at producing those things.

So it's the very fact that we've become productive, that's the opportunity cost. It's the opportunity cost of the education and healthcare which have gone up, and so that's what's driving the higher price. It's not that this is making education less affordable. And indeed more people are buying more education overtime, not less.

Julia: I think that people would say: "Well, if the economy was healthy in some sense then I could still get the same quality education that my parents got, but just cheaper. And now in today's world I have the option to pay more for a more luxury product in education, and I can do that if I want -- but if the world is actually getting better, if we're getting more productive, I should be able to buy the same product that my parents had access to."

And the fact is that it seems, at least, to people that they can't do that. That in order to have options on the job market, they have to spend a lot more than their parents did, for the same degree of options. Does that not seem right?

Alex: I don't think so. At least that is mixing several different issues such as distribution, inequality ... But before we get into that let's go back, for example, to the string quartet. So people can

still afford to go here, the string quartet, it's just that you have to give up a lot more other goods to do that, and that's because we've become more productive at producing these other goods.

Here's another way of thinking about why, even in a perfectly fantastic working economy, a healthy economy, some prices must rise -- it's because prices are opportunity costs. And all opportunity costs cannot fall. Sort of by definition, all opportunity costs cannot fall. So we have to see, so long as there's some differential productivity, it has to be the case that some prices rise.

Now, this can still mean, relative to incomes, people are better off. And so I think that's where the distributional aspect comes in, is that this is true on average. But if your salaries are not keeping up, then it can feel like these things are becoming increasingly unaffordable. But for the economy as a whole that is not the case.

Julia: Okay, so I had a question for you that might help, as a side effect, might help me understand this point that we've been discussing: Something that I'm confused about with the Baumol effect is, how does it predict which sectors are going to see a wage increase?

So in the example of the musicians and one other industry, like, I don't know, carpenters or something, it's sort of easy to understand people moving from ... Or being tempted to move from music to carpentry, if carpentry has become much more productive, and so wages go up in music.

But if you're talking about the whole economy, where some sectors are becoming more productive and others aren't really, or not as much, what is the overall effect that we should expect to see, under the Baumol effect? Is it, all sectors have wage increases? Or all sectors with skilled labor have wage increases? Does it have anything to say about which sectors we should expect to have more wage increases than others?

Alex: Right. So in the book we're particularly focused on what we think has been driving the Baumol effect in the last 50 years or

so, and that is the increase in the price of skilled labor. So we know that particularly in the United States but lots of other places as well, the return to skill, the return to education, has been going up. So that means that if you have an industry which uses lots of skilled labor but also does not have productivity increases, those are the industries which are going to be a particularly hard hit.

Now, maybe your question is also getting at this deeper point which is why do some industries have low productivity and other industries have high productivity?

Julia: Well, that is a separate question I'm also interested in. So if you feel you have something to say about that, please do.

Alex: Okay, so ... I mean, I think that's a really complicated, deep question, there's definitely something about services which seems to be resistant. Let me tell one story which I think is kind of fun and interesting, this is what I call the tale of two berries:

In the 1930s you had strawberries, of course, and you also had huckleberries. In fact, the huckleberries go back to the pilgrims and the natives, they consumed a lot of huckleberries, they were very popular. And even in the 1930s there was quite a bit of consumption and production of huckleberries.

And strawberries and the huckleberries were about the same price. However, it turns out that huckleberries, for peculiar genetic reasons, they're very difficult to cultivate. They don't domesticate very easily. You only find them in the wild. This in fact is why Huckleberry Finn is called Huckleberry because he's hard to domesticate, he's wild-

Julia: I didn't realize that. It sounds like it's a cute name. It didn't occur to me that it meant 'wild thing.'

Alex: Yeah, he's a wild thing, hard to civilize. And so since the 1930s what we've seen is a tremendous increase in strawberry production. Strawberries, they domesticate really easily, and so we've seen an increase in productivity in strawberry production

of at least 40 times or so. In huckleberry production, people still have to go to the wild to pick them.

So what is the result? Well, the result is these things used to be priced about the same, but today you can get two pounds of strawberries for \$4.50 and two pounds of huckleberries will cost you \$100. Literally you can find that on the internet.

So what has happened is you'd had a 25 times increase in the relative price, or 20 times increase in the relative price of huckleberries. And the fundamental reason is that productivity in huckleberry production has not gone up.

And this is why I also think that some of the solutions, which some of my libertarian colleagues -- I'm a libertarian, I consider myself a libertarian -- but some of the solutions which my libertarian colleagues have offered to some of the problems of healthcare and education and so forth, I don't think they really work.

For example, my colleague Bryan Caplan, says, well, we need more immigration. And I'm all for more immigration. And it is true if we had a lot more low skilled laborers come in, yes, they could pick huckleberries. The wages of those unskilled laborers would be low, so you could get more huckleberries.

But that might drive the price to \$85 instead of \$100 for two pounds. Until you solve the fundamental productivity problem - - these are just orders of magnitude. The immigration solution is an order of magnitude off what you really need.

Julia: Right. So I guess it makes sense to me why we wouldn't see large productivity gains in education, at least until we've solved the societal problem of making online education work. I don't know if that will involve figuring out a signaling solution, or figuring out ... I don't know. Whatever. For the moment, I can see why we can't have huge gains in productivity in education.

But it seems like we should be able to have bigger gains in productivity in medical care, because there's more opportunity for innovating on the actual technology there, as opposed to just

... Like the concert, it just takes this many people to teach those many people, or perform for this many people. And that's just the hard limit we're bumping up against. So maybe, if that's correct, maybe a guideline for which sectors are going to fall behind in terms of productivity gains are the ones where most of the service that's being provided is just the face-to-face contact of human and human.

Alex: Right. Exactly. So I think when you can capitalize, turn some service into a capital version of that service, then you can indeed expect productivity improvements. And I think we've seen some evidence for that, like laser eye surgery for example. Laser eye surgery has come down in price.

And I think one reason -- there are perhaps multiple reasons, but one reason for that is because it's almost all the laser. The physician actually only spends like five minutes with you, and it's just a laser and software and zap, zap, zap, zap, zap. And you have this surgery done really by robot. So if we can do more of that, yeah.

Julia: Okay. A related question: something the economist Noah Smith pointed out just the other day in his column, is that wages for people with advanced degrees -- I assume that would be a good proxy for skilled labor -- wages for people with advanced degrees haven't risen nearly as fast as cost of healthcare and education.

Which seems like it undermines the Baumol effect story. Because the story you're telling, I think, is wages have gone up in other sectors, so average wages have risen. just among skilled labor. And as a result, in response, healthcare and education and other not-productive sectors have to raise their wages in order to compete with these other increasingly productive sectors that are going to attract all the skilled labor away from them.

But then, doesn't it seem perverse that wages would go up even *more* in healthcare and education? if what they're doing is just responding to increased wages in other sectors?

Alex: So I think there's a few things going on. First, it's very clear that the price of skilled labor, wages for skilled laborers, have gone up a lot, and that's a general feature of the US economy. In addition, in healthcare and in education in particular, we've just also bought a lot more inputs. Which I count as part of the Baumol effect, because this is completely consistent with the Baumol effect, and that is: we have more than doubled the number of physicians per capita, we have more than doubled the number of teachers per capita --

Julia: Oh, that's interesting, because that didn't seem like part of the Baumol effect to me. Why --

Alex: Yeah, yeah, so ... I mean, here's an interesting point is that suppose you think that the reason why prices have gone up in the sectors of the economy is some inefficiency story. It could be government, it could be regulation, it could be monopoly power, patents, any kind of story, bloat, administrative costs, any kind of inefficiency story.

If you have any inefficiency story, then consistent with what you were saying before, the only rational response is to consume less of that good. So demand curves slope down.

And so if you have some real cost-driven explanations, some inefficiency-driven explanation for why these costs are going up, the only rational response is to consume less of those, less goods. So to explain why people are actually consuming more education, more healthcare, you need some ad hoc additional theory.

So you could say, well, the cost of education has gone up, but we're a more credentialistic society. So that's why we're consuming more, even though it's less efficiently provided. Or you could say the cost of healthcare has gone up but we're consuming more because it's a positional good, or something like that.

Julia: Sorry if I misunderstood, but the thing that I was pouncing on there was: you mentioned that we were increasing certain inputs like -- we haven't actually talked about this yet, but I was

going to bring up the fact that student to teacher ratios have shrunk a lot over the decades. So back in 1950 or so it was like 27 students per teacher and now it's about 16, or I guess in 2015 it was about 16. That's a big difference, from 27 to 16 students per teacher.

So that was the type of thing that I thought was *not* an example of the Baumol effect. That's not wages going up for teachers because we're trying to compete with other sectors. That's us as a society deciding, "Oh, smaller class sizes are going to help our children learn and so we're going to try to reduce class sizes," or something.

Alex: Right, it is and it isn't. It isn't in the following sense... if you have any of the inefficiency stories, you should consume less. With the Baumol story, because the increase in price is driven by the fact that we're becoming more productive, every increase in price also comes with more income, greater resources.

So it's not at all inconsistent with the Baumol story that with higher relative prices you consume more of these goods. It fits the Baumol story quite neatly. With one theory you can explain both why the price is going up, and why you might consume more of these goods.

It's not necessary in the Baumol story that you consume more of these goods, if tastes were such that you didn't really care about the goods very much. So, people consume far fewer domestic servants than they used to, house cleaners, drivers, things of that nature. and I think that's because the prices have gone up so much for these services, and the substitutes are actually so good that people have shifted away from them. You have a washing machine instead of a washing man. You have a car instead of a car and a driver.

So it's possible that you consume less, but it's also completely consistent with the Baumol story that you consume more of these goods. And that is not true of other theories.

Julia: So, let me see if I understand. Let's assume you're correct when you say that it's almost all Baumol effect, that almost all of the

rise in prices in healthcare and education is due to the Baumol effect.

I had assumed that that would mean that the increase in prices that we see in education and healthcare would be basically identical to, or almost identical, to the increase in salaries in that field. That that's what it would mean for the rise in prices to be “almost all due to the Baumol effect.”

And that if the salary increase was only a substantial but still a fraction of the total increase in prices, then there must be something else going on besides the Baumol effect. Because it's not ... The causality is not flowing through salaries.

Is that not what you're saying?

Alex: So I will admit to maybe a little bit of hyperbole that it's “all the Baumol effect,” but it's-

Julia: I wasn't try to catch you out there or anything. I thought that was what you were saying.

Alex: No, no, no, no, no, it's a fair question. When I say it's all Baumol effect what I have in mind is that if you want to explain these really long-run trends -- like why has education been increasing in price for the last 65 years, at least, and probably the last 100 years -- then I think basically it's all Baumol effect.

Every industry has got its own foibles and its got its own ups and downs. And in healthcare I tweeted that every theory about why healthcare is screwed up is true. Because healthcare is screwed up in every possibly way.

So I definitely think it's true we could lower prices in healthcare if we did a bunch of things. But I think what would happen is you would lower the prices, which would be great -- but until you solve the fundamental productivity problem, you would still continue to see this long-run increase in relative price over time.

So I think of the Baumol effect as rising sea levels. It's what dominates in the long-run.

Julia: I see. Okay.

Alex: So that's kind of what I think is going on. And part of the Baumol effect, and maybe I'm a little bit ... I include as part of the Baumol effect the idea that we are purchasing more of these goods even as their prices go up. Because I think the Baumol effect can explain both of those things very easily. So I include both the price increase and the quantity increase.

Julia: Okay. Okay, so here's another comparison that might help me understand what's being classified as the Baumol effect and what isn't:

As I understand it there has not been nearly as much of a rise in prices in healthcare and education in other countries that have experienced productivity growth over the decades, like Germany or Japan or France. And it seems like the Baumol effect logic should apply to them as well. So why doesn't it?

Alex: Yeah, I don't think that's true.

Julia: Which part?

Alex: The first part. The premise.

Julia: That there hasn't been nearly as much of a rise in prices?

Alex: Yeah.

Julia: Oh, okay --

Alex: So, what is certainly true is that other countries spend less on healthcare as a share of GDP than does the United States. The United States appears to be very expensive. If you look over time, however, in every country, expenditures are going up over time on healthcare. Everywhere you look, expenditures are going up.

Julia: By similar amounts, though?

Alex: Yeah, yeah.

Julia: I mean relative to productivity growth in each country.

Alex: So, that's a good question. I haven't done all of the corrections for relative productivity growth, so I don't want to say, but-

Julia: Do you happen to know off the top of your head if any of France, Germany and Japan have roughly similar productivity growth to the US in the last 20 years? Because if so, then we can just eyeball the...

Alex: Yeah. I mean, every industrialized country has roughly similar productivity growth, because they're growing at the technological frontier, and that is diffused around the world among industrial countries.

Julia: Oh right, that makes sense.

Alex: The poorer countries are catching up, so they have higher measured productivity growth. But among the industrial countries who are at the technological frontier, it's ideas, and those ideas spread pretty rapidly.

In fact -- this is an aside, but it is kind of interesting actually, how coordinated productivity growth among the developed countries is. And so you can actually see, the U.S. has a jump in productivity growth, and a little while later Australia will have a jump in productivity growth, as these ideas often spread from the leader to other developed countries.

Julia: So your sense is that Germany, Japan, France are seeing these kind of 200% increases in, in price and healthcare and education?

Alex: Yeah, exactly. They're certainly spending less than we are, but wherever you go in the world, or pretty much wherever you go in the world, people will be complaining about the rising cost of healthcare.

Julia: I mentioned Scott Alexander a few minutes ago, and he wrote a review of your book, I guess a month ago or so. And it was a positive review, but he had this core disagreement with you that was really interesting. It wasn't a disagreement over how to explain the economic facts. It was a disagreement over what the facts actually are.

And Scott's conclusion was that wages for teachers, professors, physicians have not actually gone up very much in the last few decades. Which is kind of the crux of the Baumol effect explanation. I don't know if you've had a chance to look at his graphs or his data, but do you understand why you're reaching different conclusions about the trendline?

Alex: Yeah, so he had some good critiques for sure. But on the data question, I thought it was very peculiar. He had some graphs, but he actually doesn't even know where they come from. So he couldn't sort of identify the source.

I'm pulling from the census. And I don't think there's any debate in the economics literature that wages for highly skilled workers, high educated workers have gone up a lot. That's a fact among economists and people who study this issue, that there's been an increasing return to skill, and the wages of skilled workers are way up. The wages of unskilled workers are pretty flat, but the wages of skilled workers are way up.

Julia: So the only part of the disagreement over data that I can remember with any confidence, is over the salaries of teachers. And there both of you are looking at the -- I guess it was the census, it's the NCES agency of the government. And from what I could tell, Scott was looking at the salaries or the average wage for teachers, and you were looking at the expenditures per teacher.

And the expenditures, they're higher and they increase more over the years. It just naively would seem to me that salaries are more directly getting at what we care about. Was there a reason you chose to use expenditures instead of salaries?

Alex: Well, I think we have to look at all types of compensation and particularly-

Julia: Is that the difference between expenditures and salaries, that they include benefits?

Alex: Yeah. So the expenditures includes, what does it cost to get a teacher into the classroom? So it includes health care, it includes pensions, all of that.

Julia: But it doesn't include administrative or support staff or anything like that?

Alex: It doesn't include administrative or support staff. It does include... it's not as pure a measure as I would like. It does include a few things like text books. Though they're a small share and they can't be growing very much.

The two trends actually correlate pretty highly, and both actually show big increases in payments to teachers from the 1950s to the 1980s, and then it does kind of level off from the 1980s onward.

At the same time, so long as they're getting higher payments relative to productivity growth, we would expect that to drive increases in costs. And we are hiring more teachers and more teachers' aides, as well. We're trying to substitute away.

And it's not just teachers. I mean it is true, we focus in the book on the obvious – teachers, physicians, nurses -- but administrators, they have to be pretty skilled as well. And so labor costs in general are just a high fraction of any industry, and these industries have particularly high labor costs. And so if you include everybody, I think again this becomes even more plausible.

Julia: I'm now realizing that I think I would predict that a lot of the disagreement between you and Scott comes down to: I'm guessing that he assumed, the way I had originally assumed, that for the Baumol effect to be the predominant theory explaining the rising prices it would have to only work through

salaries. Whereas you're counting other things as the Baumol effect, that I hadn't realized, and maybe Scott didn't realize it as well.

So the rise in teacher compensation doesn't have to be as dramatic as I would have assumed in order to count as evidence. Anyway, I feel like I understand the disagreement better. That's cool.

Alex: I was just going to say there's another interesting aspect of the Baumol effect, and that is if you just focus on education and healthcare, then kind of a natural response is, "Well, this is government. Government definitely has a lot of impact in both."

Julia: Right I was going to ask about that.

Alex: What I like about the Baumol effect is that it explains what's going on in many different industries. And perhaps this is a defect of mine as an economist, but I like a simple theory that explains many things. The Ricardian vice, right?

Julia: You and Robin, both.

Alex: Exactly. Exactly. Well, thank you for that.

So here's another example. If you look at professional services -- which is like law, accounting and architecture, things of that nature -- they have gone up in price just as much as healthcare. And there's no big government regulation of accounting or architecture. There's no big government purchases of these things.

Now, of course it is true that all of these things are regulated, because everything in our society is regulated. But you have to look cross-sectionally -- does more regulation explain, does it correlate with, higher prices? And the answer is just no.

Julia: A minute ago it sounded like you were talking about government subsidizing the cost of health care and education. Are you counting that as regulation? Or is regulation a separate thing that you're talking about now?

Alex: I think there's different problems with all of these stories. The regulation story I think does not fit law, accounting, architecture, professional services. Nor does the subsidy story. These areas are not particularly subsidized.

Here's another area which does not fit the subsidy story, and that is expenditures on pet care, on vets, have also gone up just as much, if not by more, than on human health care. And we don't have big subsidies.

And also there's very little third-party payers, is another thing which people blame. There's very little insurance. And in fact, for pet care, I think the causality is going the other way -- in that it's the high price of pet care which is actually increasing the demand for pet insurance, rather than going the other way.

Julia: But this feels very shocking, to me. If what we're seeing is in fact that that these industries in which the government is heavily subsidizing it, and the people who are making the purchasing decisions about what health care to get, are not mainly the ones footing the bill... If that *isn't* causing prices to go up a lot, then isn't that a shocking result?

Alex: I don't think so. The subsidy is tricky. And again, remember what we're trying to explain is this 65 year long run trend. And I just don't think subsidy really does that. And here's the way of thinking about it: It is true that a subsidy will drive up prices in the short run. But a subsidy is really just like an increase in income. And over time, every industry is subject to increases in income. So why have purchases of Coca-Cola increased? Well, our income goes up and we buy more soft drinks. But we don't say, "Oh, because income has gone up, therefore prices must rise."

Instead, we think that the ordinary aspect of markets is that technology and productivity compensate, or sometimes more than compensate, for the increase in income. So yeah, it's true. A subsidy is going to drive things up in the short run, but in most industries we expect that to be more than compensated by improvements in productivity.

Julia: Well, I guess the subsidy is somewhat different from the mismatch between who's deciding and who's paying. Where the latter seems more distortionary to me.

Alex: Oh, it's definitely distortionary. And, as I said, every theory about why healthcare is screwed up is true, and we should do something about it. And, yes, we could save many billions of dollars if these goods were allocated more rationally.

Julia: You just think there's going to be a large remaining effect, even if we completely rationalized the healthcare industry.

Alex: Exactly. I think until we find a way to improve the productivity of high-skill labor and maybe artificial intelligence and robots, that's our best chance to do this. But until that happens, I think this long run secular, if I may use that word again, increase in price is going to continue.

Julia: Got It. All right, well I guess that's a good place to stop. I have so many more questions for you, but before I let you go, Alex, I wanted to ask you to nominate a book or more than one book if you like, that had a significant influence on your life. Whether that was on your choice of career or your worldview or something like that. Anything come to mind?

Alex: Well, I feel that I need to burnish my libertarian credentials.

Julia: After denying the significance of regulation. Yeah, I was wondering if you're going to get kicked out of all the parties, the hot libertarian parties.

Alex: So I'm going to say Atlas Shrugged by Ayn Rand.

Julia: Nice, how old were you when you read it?

Alex: I'm sure you can guess I was a teenager. No big surprise there. That's when the book I think really has the opportunity to be formative. You're kind of a rebel and you want to be your own man and think for yourself, and strike out on your own, on new paths, and create things. And so for all of these reasons, Atlas Shrugged definitely changed my worldview.

Julia: And have you returned to it once, or more than once, over the years and notice that you feel differently about it? Or does it still hold the same effect on you as it did on your teenaged self?

Alex: I think I've read it twice, maybe, I don't know. I haven't read it in many, many years. So I'm not one of these people who read it again every few years. I have no big... Maybe I should go back and read it again.

Julia: I think it's so interesting to go back and reread these things that were either so influential, or that we loved when we were younger, and see how our reaction changes.

For me, one of those benchmark works of fiction is *Rent*, the musical, which I absolutely loved when I was 13. Memorized the soundtrack, stalked the actors online, loved *Rent*. And I revisited it several times, every five to 10 years, and noticed that my interpretation of it is very different. And obviously *Rent* stays the same, but I'm changing.

Alex: Yeah, that could be. One of the things which got me into Atlas Shrugged actually was Rush. The Canadian rock stars.

Julia: No way. You were clearly a very popular teenager.

Alex: I still listen to *Moving Pictures*. I still think it's one of the greatest albums ever. So maybe that's a sign that I'm not progressing.

Julia: I have been to maybe only two concerts in my life, maybe three concerts in my life, but Rush was one of them. So I'm teasing from a place of love.

All right. Alex, thank you so much for coming on the show. It's been a pleasure. I will link to, well certainly your book, *Why Are the Prices So Damn High* on the Mercatus Center website. Also to *Marginal Revolution*, although I assume most if not all of our audience is already familiar with *Marginal Revolution*.

And I guess I'll probably pick a few of your blog posts discussing the book, along with maybe some of Scott's and Brian's, so

people can kind of get a feel for the conversation that's been happening over the last two years about this topic.

Alex: Great. Thanks Julia.

Julia: All right, well this concludes another episode of Rationally Speaking. Join us next time for more explorations on the borderlands between reason and nonsense.