

# Growth Is Discovery, Not Design — Why Firms Build Economies

Episode 25 | Growth is Good

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Transcript

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## Abstract

Economic growth isn’t an abstract macroeconomic phenomenon—it’s the arithmetic sum of value added by every firm in a country. This simple accounting fact forms the foundation of Ajay Shah’s firm-centric view of development, where understanding growth means understanding what makes companies more productive and what allows the best firms to capture more of the economy’s resources.

Shah explores the conditions that enable firms to emerge and flourish: protection from expropriation by both private actors and the state, deep integration with global markets that forces competitive excellence, creative destruction that allows weak firms to die while strong ones grow, and sophisticated financial systems that allocate capital efficiently. He argues that India’s growth challenges stem largely from failures in these areas—excessive regulatory interference, limited globalization, poor bankruptcy processes, and underdeveloped finance.

The conversation reveals how firm productivity varies enormously within countries, why most successful Indian companies should focus on management excellence and incremental R&D rather than Bell Labs-style research, and how the entrepreneurial process of building companies requires constant problem-solving against an unpredictable world that “throws demonetization at you” or “a war in Iran.”

## Supplementary Resources

- **The Nature of the Firm** by Ronald H. Coase (Journal Article) [1]
- **Why Forbid Insider Trading?** by Ajay Shah (Article) [7]
- **Gambling on Development** by Stefan Dercon (Book) [3]
- **In Service of the Republic** by Vijay Kelkar and Ajay Shah (Book) [5]

- **Exporting and Firm Performance: Evidence from India** by Apoorva Gupta, Ila Patnaik, and Ajay Shah (Journal Article) [4]
- **Graduating to Globalisation** by Dilek Demirbas, Ila Patnaik, and Ajay Shah (Journal Article) [2]
- **Graduating to Globalisation** by Ajay Shah and Amit Varma (Podcast) [10]
- **Insolvency and Bankruptcy Reforms in India** edited by Susan Thomas (Book) [12]
- **Going Bankrupt in India** by Ajay Shah and Amit Varma (Podcast) [11]
- **The Journey of Indian Finance** by Ajay Shah (Working Paper) [8]
- **The Beauty of Finance** by Ajay Shah and Amit Varma (Podcast) [9]
- **The Case for Sustained, Rapid, Inclusive-Enough Economic Growth** by Lant Pritchett (Synthesis Paper) [6]

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## The world will keep throwing stuff at you teaser

**Ajay Shah:** The universe will throw demonetization at you. The universe will throw a war in Iran at you. That is disrupting. All over nowhere. United States tariffs, uh, GST, the world will just keep throwing stuff at you.

**Ajay Shah:** Growth is a process of discovery, not design.

**Ajay Shah:** And the people will discover and I will always respect the people. I'm hoping that in twenty twenty-seven you will invite me back on your show for the third time and I want to put up one sentence there for the next show.

**Ajay Shah:** It's just that uh, India does not have an unusually high corruption rate. India does not have an unusually poor tax GDP rate. It would be good if we will all just back off and be less hysterical about it.

## Welcome back: Ajay Shah's second appearance

**Rahul Ahluwalia:** Okay, hi everyone. Very pleased to have Ajay Shah back with us. He's only the second person to ever come back on the show for the second time. Welcome, Ajay.

**Ajay Shah:** Thank you, Rahul. Always happy to be here.

**Rahul Ahluwalia:** Thank you so much for joining us. Okay, so let's dive right in. Last time we spoke a lot about what are the sources of uh, economic growth, where you see them, how did you connect to it. And then we spoke very specifically about industrial policy and I think uh, a lot of people found that very instructive and helpful.

**Rahul Ahluwalia:** And it's really by popular demand that I asked you back. I have comments on our videos that are saying, where is Ajay? We are missing Everything is Everything. So I think people are in mourning for that show, but well, we are doing our bit to try and get you back to the people.

**Rahul Ahluwalia:** Thank you. What do you want to talk about today?

**Ajay Shah:** Firms.

**Rahul Ahluwalia:** Excellent. Uh, so, I think we had a little bit of a discussion before this, right? That uh, and you have always been a very strong believer of firms being the unit of economic growth. Uh, first I request you to lay out why you think that, why you think firms are important, where does this belief in the centrality of firms come about and then I, I have a point of view on it that I want to discuss.

**Ajay Shah:** Sure.

**Ajay Shah:** Uh, let's start at GDP. Okay. So, uh, every uh, audience person for this show already knows that GDP and GDP growth is the whole enchilada. Yeah. Okay.

**Ajay Shah:** What is GDP? GDP is the sum of the value added of all the firms of the country. This is an arithmetic fact.

## GDP is just the sum of all firm value added

**Ajay Shah:** Okay? What we produce is what we consume because there is no net charity in the world crossing the national border. What we consume is what we produce. What do we produce? What we produce is the value added of all the firms of the country put together.

**Ajay Shah:** Let me just slip in the explanation of value added.

**Ajay Shah:** Okay? So if I am a retailing company and I buy vegetables costing ninety rupees and I sell them for a hundred rupees, my value added is ten. Yeah. So you don't count the top line of the company, you count the value added of the company. In this fashion, when we add up the value added of all the firms in the country, we will do no double counting.

**Rahul Ahluwalia:** Just to again, for clarity, obviously you understand this, but that ten rupee markup is not empty, right? It involves some kind of packaging, distribution, and that is why they are able to charge that additional ten rupees. That is what you call the value added.

**Ajay Shah:** The contribution of the firm. Exactly. Okay. So if I buy ball bearings and I sell engines, my contribution is I transformed a mere ball bearing into a wondrous engine. Yeah and that's my value added.

**Ajay Shah:** Yeah. Okay and that corresponds to payments we make. We pay workers, we pay entrepreneurs, we pay sources of capital, we pay rent. All those payments go into value added.

## Value added explained: from ball bearings to engines

**Ajay Shah:** Okay. So the fundamental analytical construct is that the GDP of a country is the sum of the value added of all the firms in the country. Now, in this, I want to count every single point of production of the country as a firm. It could be a single farmer. I could be just one individual tilling half acre of land.

**Ajay Shah:** For the present purpose, I'm a firm.

**Ajay Shah:** I could be one person tilling a thousand acres of land, I'm a firm. I could be a man selling fruit on the roadside, I'm a firm. Okay, so every productive unit of the entire country is a firm.

**Rahul Ahluwalia:** But that's a slightly, that's a slightly idiosyncratic definition of a firm, is it not? Um, you are defining firms to be all producers, which you typically say producer for. Firms are usually collections of producers.

**Ajay Shah:** But the simplest special case of a firm is a one man solo army. Yes. Okay, it's me, me, and myself. And I produce. And it is permissible to call that a firm.

**Ajay Shah:** But of course we're actually interested in more complex things and we'll come to that.

## Every productive unit — even one farmer — is a firm

**Rahul Ahluwalia:** Which is what, which is what the typical firm usually...

**Ajay Shah:** We'll come to that in a moment. But right now I'm on definitions. That the GDP of a country is the sum total of the value added of all the firms. Yeah. That's an accounting fact.

**Ajay Shah:** It's not a theory. Yes. It's just true. It is as true as can be. Yes.

**Ajay Shah:** And therefore GDP growth means the firms have to produce more. There's no other way around it.

**Ajay Shah:** So, this is my first unveiling of the centrality of firms to the concept of economic growth and GDP and GDP growth that to be making GDP, a country is organizing itself as a group of firms.

**Rahul Ahluwalia:** Technically true is the best kind of true.

**Ajay Shah:** Technically true. Yeah. Not just an opinion, not just a theory, the truth. That's true as can be. And then where does growth come from?

**Ajay Shah:** Because the firms start increasing their value added. That's the process of economic growth. Yeah. So this, this is just the basics of what is the centrality of firms. And so then we must start putting our heads away from grand macroeconomic abstractions like capital and savings and you know, all those things.

**Rahul Ahluwalia:** Savings rates, investment rates, yeah, all of that.

## Think one firm at a time: micro foundations of macro

**Ajay Shah:** To think gritty, think one firm at a time. So the beautiful sentence I always push is that the macro journey of a country in a doubling of GDP is millions of firm journeys where the firms got better. And the firms need to increase their output. And it behoves all of us to take more interest in those firms. And then we are economists, so we should ask incentive-based questions.

**Rahul Ahluwalia:** It's so interesting, right? So you are almost basing yourself in the middle of micro and macro.

**Ajay Shah:** That the macro is a sum of micro. Yes. Fancy word micro foundations that by studying the micro by understanding one unit at a time, we get the insights that add up to the macro. But then this should take us to the word incentives. Okay.

**Ajay Shah:** Firms don't arise out of thin air. Firms are not uh, delivered by the Lord to us. We make the firms.

## Incentives: what conditions make firms emerge?

**Ajay Shah:** Purposive action by individuals and teams makes great firms. Right. So then you should be asking the incentives-based question Right. that what are the features and aspects of a society that are conducive to the emergence of good firms? Right.

**Ajay Shah:** And then that gets us the micro story of GDP growth.

**Rahul Ahluwalia:** Yes. So this is the most robust pathway to diagnosing and deciphering where growth comes from. Correct. Let me rephrase it in uh more everyday, right? A an entrepreneur or a startup that says that I'm, I want to make either a lot of money or I want to create a lot of jobs or I want to produce a better product or I see a labor of love that I want to put in is the person who then says, okay, I will invest my time, my capital, both human and uh otherwise and create a firm where I shall then produce something, right?

## What does an entrepreneur actually need?

**Rahul Ahluwalia:** And and the kind of society that enables this versus not is what you're saying.

**Ajay Shah:** It is not. And I want to emphasize something almost magical about entrepreneurship that it doesn't even have to be that I step onto the stage of history holding a lot of capital. It has to be the case that I step on to the stage of history with the energy, with the passion, with the creative problem solving because that entrepreneurship will then pull all the other pieces together.

## The magic of entrepreneurship: energy, not capital

**Ajay Shah:** I'll find the capital, I'll find the people, I'll find the machines, I'll find the technology, I'll find the suppliers, I'll find the buyer. The entrepreneur is what puts all that together and makes the magic of a firm happen.

**Rahul Ahluwalia:** Tell me a few stories that make it concrete because you're you're great at telling stories.

**Ajay Shah:** Um, Dhirubhai Ambani. Okay. Uh, it is the legend, the legend runs that he started life as a petrol pump attendant in the Middle East. Okay. And he dreamed and dreamed and he started building.

**Ajay Shah:** And he put together first a small cloth making operation. He built it to become a really big company.

## Story: Dhirubhai Ambani, petrol pump to Reliance

**Ajay Shah:** And then he just relentlessly went into the vertical integration that you go from artificial fabric to yarn, from yarn to petrochemicals, from petrochemicals to crude oil extraction, from crude oil extraction to uh, crude oil exploration. And over the span of his life and Mukesh Ambani's life built one of the great companies of the world. Right. And this is just mind stuff. I mean, many people have concerns and criticism about the means that he adopted and we need to legitimately worry about those things.

**Rahul Ahluwalia:** The facts are still the facts. These facts are still true.

## Narayan Murthy, Infosys, and the art of doubling

**Ajay Shah:** It is hard to not admire a person that put this together. Or consider Infosys. Okay, Narayan Murthy and a bunch of others, you know, had nothing. They had almost no capital to speak of. They had some technical skills and they had the creativity and the imagination saying, you know, in India we can actually export software services.

**Ajay Shah:** And they started building Infosys and they built it and they built it and uh a good thumb rule in this world is that every doubling of a firm requires a complete transformation of the way it works.

**Ajay Shah:** Okay. So what works for a hundred crore Infosys doesn't work at a two hundred crore Infosys. Right. Okay, and they just took it through doubling and doubling and doubling and doubling to two lakh crore and that is an incredible feat that every point in time the firm battled with incredible odds against very difficult circumstances and worked out its pathway to its own doubling.

**Ajay Shah:** In hindsight it all looks smooth, but if you were there at the moment, you would realize there were very big challenges. The Indian IT industry has gone through so many ups and downs and transformations and these people they stayed on top of it. Or consider the next generation of the software heroes of the country, people like Anand Deshpande Persistent Systems and Ravi Pandit KPIT. These are amazing people. These are amazing firms.

**Ajay Shah:** Yeah.

**Ajay Shah:** Like literally starting from nothing, they chipped away and they've built giant world class, world scale organizations working in India and it is important to credit management teams with waging all the human and internal battles to score each doubling. Doublings are not easy.

**Rahul Ahluwalia:** And I mean, let alone doublings, I think just sustaining where you are is incredibly difficult, right? And I think you're you're saying some really, really important stuff that I want to underline and then we can move on. One is that it is a constant, never-ending set of problems or challenges that the world throws at you that you have to keep solving. It's not that you take this ball, push it off the hill and then it rolls to uh, becoming a massive snowball or something of the sort.

## The 6% profit reality: the math of running a firm

**Ajay Shah:** Absolutely correct. So I feel that many people don't give enough credit for how hard it is to be a firm. As you said correctly, even standing still is hard because the world changes and others are competing with you. It's like, why do I have any right to make money? Why do I have a right to make a penny of economic profit?

**Ajay Shah:** Because if other people see my economic profit, they will compete. Yes.

**Ajay Shah:** And you are absolutely right that standing still, I am a hundred crore company, I generate a five crore profit after tax. So a lovely fact that all of us should know is that in the large Indian non-financial firms, the average profit after tax divided by revenue is six percent. That's it. You do all that huffing and puffing, you generate thousand crore of revenue and you get sixty crore as the profit after tax.

**Ajay Shah:** And as you correctly said, the good Lord does not promise that you'll get sixty crore next year. Next year is a war. It's a struggle, it's a fight and you know, the universe will throw demonetization at you. The universe will throw a war in Iran at you. There is United States tariffs, uh GST, the world will just keep throwing stuff at you.

**Ajay Shah:** And...

**Rahul Ahluwalia:** A new technology, a new competitor, right? Like changing preferences of consumers. It's a constant.

## Capitalism: dynamic and constantly contested

**Ajay Shah:** People who do not like capitalism may often overstate the sense of a feudal lord owning some land and getting money out of it for free. Correct. Okay, that is a description of a pre-capitalistic world. It is the deadness of that feudal world that uh, brilliant intellectuals like Karl Marx criticized. And they understood that in capitalism you found something different.

**Ajay Shah:** Capitalism was dynamic.

**Ajay Shah:** Capitalism was constantly contested. Every firm has to fight to earn that money. So there's a beautiful phrase in the world of business, which you know very well, which is what is your right to win? What is the economic source of your profit? Why do you have profit?

**Ajay Shah:** Because if you can't answer that question deeply, by God, next year the profit will be gone.

**Rahul Ahluwalia:** Absolutely, you have to think deeply about the sources of profit. And just you said, right? You said very correctly, there are people who have this negative view of capitalism. The very same people often have a very positive view of democracy. And I wonder if it helps to them to think about it this way that in democracy you choose your leaders by voting once every five years with a vote that is worthless to you.

## Every transaction is a vote

**Rahul Ahluwalia:** Under capitalism, every single transaction is a vote with the resources that you have earned with your hard-earned money. When you pay money to somebody and say, give me a product in return, that vote has to be cast every single time you want to sell to that person. That person can just choose to not pay you and very often does.

## **Firms are rated every single day — elections aren't**

**Ajay Shah:** And uh you know, uneasy lies the head that wears the crown. Well, when you win an election in India, you get five years. Okay. So you get to squander all your goodwill for five years. When you are a firm, every day your internal MIS shows you.

**Ajay Shah:** Am I selling stuff? Am I not selling stuff? Am I profitable? Am I not profitable? There's daily MIS, there's weekly MIS.

**Ajay Shah:** Then there is monthly profit statements. There's quarterly earnings that are reported to the market. And for listed companies, there's a daily stock price. So you are being rated every day. You're being evaluated every day.

**Ajay Shah:** It is brutal, it's a rough life. So, I feel that people need to give enough credit for the sheer intellectual challenge and the ulcers and the effort that it takes to build and sustain large firms that generate profit again and again and again. And on top of that manage to grow.

**Rahul Ahluwalia:** Completely agree. Okay, so we have the technically true part of why firms are so critical. We have the what is a firm itself? How does it come to be? How does it sustain itself?

**Rahul Ahluwalia:** How does it grow? Why do you extend such a central role to firms when you talk about economic growth and what economic growth is?

## **Productivity dispersion: not all firms are equal**

**Ajay Shah:** Okay. So, let's start first at the trivial fact, you want double the GDP, you got to get double the value added from all the firms. But now let's put that under examination. A remarkable fact of every country is that there is actually a huge dispersion of firm productivity. Some firms are extremely productive, some firms are not.

**Ajay Shah:** What do we mean by productivity? For right now let's just stick to an intuitive measure. It is value added per employee.

**Ajay Shah:** Okay? So I have a thousand employees, how much value added am I making out of them? That is the test of a firm. And a good global world class firm would make a very high number for value added per worker and a bad firm would make a bad value for value added per worker.

**Rahul Ahluwalia:** What's the highest revenue per worker? Is it Google?

**Ajay Shah:** Don't have it.

**Rahul Ahluwalia:** It is one of these probably, right? One of...

**Ajay Shah:** Yeah, it would be Google. One of the top tech guys.

**Rahul Ahluwalia:** Yeah, it would be ChatGPT, Google, all of these.

**Ajay Shah:** Anthropic or something. Yeah on revenue. Yeah highest value added per worker.

**Rahul Ahluwalia:** So okay. So productivity dispersion.

**Ajay Shah:** There's a very high productivity dispersion. And that is where the Infosys of India or the HDFC bank of India is very different from the mom and pop. Okay. So there is a mom and pop running a shop. There is a mom and pop running one field uh doing some farming or there is a variety of small business, there's a mom and pop selling vegetables.

**Ajay Shah:** Yes. Okay. Those generate extremely low value added.

**Rahul Ahluwalia:** I can give you the average value add of those. Um, in India the casual employee uh turns around around ten thousand self-employed person turns around ten thousand per month. So you have one point two lakhs per a year.

## India's casual worker earns 1.2 lakh a year

**Ajay Shah:** Okay. Per person. So the game of getting GDP growth lies in two ways of thinking about it. One is, can the more productive firms, can the most productive firms become bigger so that they control more of the labor and more of the capital of the country? Okay.

**Ajay Shah:** So can we switch employees from less productive firms to high productive firms? Okay. Then hey presto, we've got more GDP out of thin air. Okay.

## Two ways to grow GDP: reallocation and improvement

**Ajay Shah:** So that is an internal reallocation problem of the country that what are the conditions under which capital moves from less good firms to better firms. The second question is, can the best firms become better? Okay. Because we should never become arrogant. Okay.

**Ajay Shah:** We are India, we are a very poor country. Our per capita GDP is about a tenth of that of the United States. We are far far behind. Okay. So for all the watchers of this show who are in a fancy pants corporate job working for one of the great firms of India.

**Ajay Shah:** Okay, I would like to wag my finger at you and say that you guys ain't good enough. That good firms in India have a very long journey to go before they become productive like the great firms of the world. There's a long journey to cross. So think of it as two parallel stories. That think that there is a frontier in India.

**Ajay Shah:** Think of the five thousand best firms of India. They are the Indian frontier for better or for worse, that's where we are.

**Ajay Shah:** For those five thousand firms, question one, how do those five thousand firms become better? Okay, what would it take to make those firms better? Lord knows there's plenty that can be done. Okay, you have known many firms deeply, you have lived in consulting and you will appreciate that there is all kinds of first order errors and failures and fallacies in the way supposedly good firms of India are organized. That good firms of India are far from finished.

**Ajay Shah:** There's a lot waiting to be done to make them better.

**Ajay Shah:** And then the second puzzle is how do we get labor that is outside those five thousand firms to get sucked into these best five thousand firms? So how do we grow the size of this five thousand? There's nothing fixed about the number five thousand, I'm just giving you an illustration.

**Rahul Ahluwalia:** Yeah, so I mean, let me paraphrase in another way. Starting with your second point, which is how do we get the person who is making one point two lakhs per year is their productivity outside into the firm which again, I'm just spitballing a number is probably ten, twenty times as much, right? Infosys is probably generating ten lakhs of value added per employee minimum, probably much more.

**Rahul Ahluwalia:** Um, and that itself in in some way you can see how that would grow our GDP ten times, right? Like if you could just get that many more people. Um, and the first one is how do you even get these to do more? Let me put you a different question, right? And and economists and I've never understood why we use the term intensive margin, extensive margin etcetera.

**Rahul Ahluwalia:** But so what you're talking about is a little bit of how do we get the current firms to grow?

**Rahul Ahluwalia:** Is there also a role for how do we get new firms that are much bigger, much better than the firms that we have today?

**Ajay Shah:** Absolutely. Okay. So first of all, I'm just making up a number five thousand. There's nothing hard and fast. Sure.

**Ajay Shah:** But it would be absolutely good if either those five thousand got better, bigger or if brand new firms emerged who had productivity that was at the leading edge in that class of five thousand. So either way is perfectly good and acceptable. And in fact, the emergence of new firms is an important path to competitive dynamics. It keeps the old incumbents honest. So we'll come to that kind of dynamics in a moment.

## Why did firms even emerge? A brief history

**Rahul Ahluwalia:** And how much uh, is the history of the firm and important one for people to think about or know about, right? Like firms came about because they were more efficient ways of organizing production. Somebody cooperating with a few other people in a firm structure could do much more and they outcompeted the guilds, they outcompeted individual people, they outcompeted clans that were working together, family structures, etcetera.

**Rahul Ahluwalia:** How how how do you think about that? What what would you want people to know about all of that stuff?

**Ajay Shah:** So it's a fully important uh story to think about. Uh back in the industrial revolution, firms emerged because the amount of capital needed to do big complex things ran beyond the capital accessible to one family or to one extended family. Okay, so this began even before the industrial revolution with the project of sending ships to India. Right. Okay, so the game was you had to outfit a ship, hire a crew.

## Ships to India, the industrial revolution, and Coase

**Rahul Ahluwalia:** So build a ship, outfit it with supplies, hire a crew and ship it off to India.

**Ajay Shah:** The probability of it...

**Rahul Ahluwalia:** With products. I think the most expensive thing was yeah.

**Ajay Shah:** You had to buy things to sell to India so that you could buy pepper. Okay, a full twenty-five percent of the ships never came back. Okay, so just imagine you're rolling the dice with a seventy-five percent chance my ship will come in. See the old English phrase. My ship will come in and I'll be very rich.

**Ajay Shah:** But with a twenty-five percent chance, I'm wiped out. And those were scary sums of money.

**Ajay Shah:** So the emergence of modern concepts of debt, of limited liability shareholding, right? and shareholding. All these emerged under the commercial pressure that how do you do these large projects? Okay, and this was sixteenth century, but immediately after that came the Industrial Revolution. Once again, in the Industrial Revolution, there was there was a very peculiar centralizing tendency in the early stages of the Industrial Revolution pre-electricity because the way factories were organized, you would have a coal fired boiler at the middle of the factory which would do all the energy generation and then that mechanical energy would be transmitted to its periphery.

**Ajay Shah:** And so you needed a really big boiler because the big bigger boilers were more efficient and you had to build one factory with many, many machines. Once again, the amounts of capital that had to go into this modern enterprise were way beyond any one factory. Right. Now that doesn't have to be true forever and for all always. Particularly in the digital world, we have come back to the ownership of the means of production in the hands of mere proles like you and me.

**Ajay Shah:** Okay, so now potentially, you can get back to far more loose contracting across the boundary of the firm. The great economist Ronald Coase worked on precisely this. Transaction cost theory. That where is the optimal boundary of the firm? When is it optimal for you and me to start a firm and paint a boundary around ourselves?

**Ajay Shah:** Right. When is it optimal for you and me to be arms length contracts that we'll write a contract, we'll do complex coordination by contract.

**Ajay Shah:** Um, in passing, I will notice that for us to write complex contracts, they need to be correctly and swiftly enforceable in court. Otherwise the whole thing breaks.

**Rahul Ahluwalia:** It's part of the whole incentive structure of the firm.

**Ajay Shah:** So as long as India doesn't have a meaningful legal system, it's a strong incentive to inefficiently form firms because then we want culture and connection and you know, we want an emotional glue to overcome the things that the lack of courts can't. But it's a very fair and legitimate question that ultimately great market economies are born of a collaborative DNA. Sometimes we might like to paint a boundary and call it a firm.

**Ajay Shah:** Sometimes we might do arms length things running across the firm and it's a perfectly legitimate thing. The real game is to do complex collaborative high value added production in a way that's efficient and firms may or may not be the optimal...

**Rahul Ahluwalia:** It's a short hand for it, right? And again, I think this is that last sentence that you just said is at the heart of it, right? Um you want to improve productivity. Very often productivity happens with increasing complexity, increasing scales and your ability to evolve structures that allow you to do complex things at scale is what is productivity growth, is what is growth.

## Shell companies, legal engineering, and piece-rate production

**Ajay Shah:** And private people will always cleverly rethink these uh frontiers. So, uh, would you rather be a limited liability partnership or would you rather be a limited liability company? is a fair and legitimate question. So, you know, government people in India hate shell companies. People are creating shell companies for a reason.

**Ajay Shah:** So, uh, think of a complex flow diagram where there is a contract and this cash will come here.

**Ajay Shah:** And many of those things will look like shell companies. It's the birthright of private people to create these organizational structures because they think it's optimal. Here's a story from uh manufacturing of old. Okay, I know for sure this was prevalent in Japan uh pre-Second World War and I have seen bits of this myself as a child in Bombay and five years ago in Ahmedabad myself. Here's the model of production.

**Ajay Shah:** Okay, I'm a family which inside the family there will be multiple persons who produce. Okay, a large company gives me a machine. That machine is installed inside my house. Inside my house that machine runs. How many hours a day the machine runs is up to me.

**Ajay Shah:** I get paid a piece rate. Okay. So I'm paid per ball bearing. The machine makes ball bearings. Who in my family operates that machine when is up to me?

**Ajay Shah:** So the management and the operations of the machine is left to me. So the machines are not aggregated on a factory shop floor, whatever. It's a way of production. It's it's a decision of private uh players to choose that look, is it better we'll just keep this machine in your house and you and your family members from time to time whenever you feel like do some labor supply and produce into that machine and we'll pay you on a piece rate.

**Ajay Shah:** So I'm not managing you. I'm not interested in how many hours you work. In similar fashion, Amazon Mechanical Turk and there are many other such business models are making it possible for people at home, particularly women to do labor supply in a flexible way at hours of their choice. I think it's absolutely brilliant. So we should not have the fixity of an office or a factory as the site of production.

**Ajay Shah:** These kinds of arms length contracts can be absolutely brilliant and people will innovate to find the best ways to combine men and machines and women and machines and make high value added production happen.

## **Are shell companies just herapheri?**

**Rahul Ahluwalia:** So, quick question on the whole shell companies thing. I think the primary concern or the primary at least ostensible reason that people put up for uh saying that shell companies are bad is because they say there is some herapheri going on, right? So what is your way to say that look, it's not just about herapheri, there is value to be gained from allowing complex structures to exist. Can you give people a way to think about that?

**Ajay Shah:** It is a perfectly legitimate part of business organization that we will construct a complex business and we will have complex financial arrangements where certain cash flows will go in certain ways. Okay. A simplest example would be like securitization that we've made a pool of a thousand home loans. Right. And the first chunk of cash that comes into this will go off into one shell company, special purpose vehicle something which will pay off its investors, then subordinate cash flow will go somewhere else.

**Rahul Ahluwalia:** For that limits liability, it it makes clear who's...

**Ajay Shah:** These are all ways for...

## **State legibility vs firm productivity: they're incompatible**

**Rahul Ahluwalia:** Yeah. So...

**Ajay Shah:** Legal engineering is like mechanical engineering. Yeah. A person who criticizes complex legal engineering is tantamount to criticizing complex mechanical engineering and I would say to a government person, who are you? If private people have chosen a complex legal arrangement, it is their birthright. Okay?

**Ajay Shah:** And when individuals and uh business relationships choose to form companies, there are many complex issues of how we share cash, who will give what debt to who, who will control what company.

**Ajay Shah:** All these can be written as contracts, but then you'll try to go to courts in India to enforce them. They can be turned into self-enforcing agreements by turning them into a group of shell companies. That this cash will go from here to here. Once this cash reaches there, I will have no say, you will have all the control. All those complex things...

**Rahul Ahluwalia:** It's a managerial...

**Ajay Shah:** So it's actually managerial, entrepreneurial set of choices of how equity, debt, management, power will be arranged to conduct a certain business. And it is not fair and correct for government officials to wag a finger and say no, we will not allow this that you must keep your firms simple and legible. What is the pursuit by the state for state legibility is in general incompatible with the pursuit by the people for high productivity firms.

**Ajay Shah:** And when there is a tension between the two, the latter must always triumph.

## When states change rules mid-game

**Rahul Ahluwalia:** And especially when you try to tinker too much, right? So and again...

**Rahul Ahluwalia:** You spoke earlier about the incentive system within which firms set up and operate. And the ideal thing of course is for the state to set up a permissive and stable system. Then the companies will do the engineering etcetera that you like.

**Rahul Ahluwalia:** In India, I think and you you're the one who's been pointing this out so much, is that um the state sets up a system which is not permissive to start with. It observes firms doing certain things that look like it look like complex herapheri to the state. And then they're like no, we don't like what you're doing with our rules, we are going to change the rules on you. And you've written a lot about why this is such a problem. Tell us more.

## Growth is discovery, not design

**Ajay Shah:** It is not easy to be a high productivity firm. It is not easy to be a high productivity country. Only the private sector knows how to explore the landscape and search for good solutions. So the beautiful phrase of this field is that growth is a process of discovery, not design.

**Ajay Shah:** And the people will discover, and I will always respect the people. The people will explore, the people will try stuff, the people will make mistakes. The people have the cultural capacity to absorb mistakes, that mistakes will be made, some people will change their mind, some people will go bankrupt. That's all healthy, that's all normal.

**Ajay Shah:** State structures in contrast are the opposite where some person who does not have skin in the game will try to write down a central plan, will try to write down a design, and say this is how thou shalt work.

**Ajay Shah:** And it is excessively restrictive because it takes away the negotiation and contracting flexibility from the people. And further, how does the civil servant know? Who is the civil servant to have the correct answers? Who is the civil servant to come down from the mount and to hand down the commandments to the people that this is how you will work?

**Ajay Shah:** Civil servants don't know. And actually nobody knows. I mean you and I don't know.

**Rahul Ahluwalia:** And even worse, uh, who is the civil servant now to come down the next Sunday and hand down a different set of command or modify the original commandments that they had put down? And then that really throws a spanner at the game, right? Like bad rules are one thing, bad rules that change on you after the game has started are a whole different thing altogether.

**Ajay Shah:** And again, you're you write on this and I'm I'm hoping that in 2027 you will invite me back on your show for the third time and I want to put up one sentence there for our the next show.

## India's tax-GDP ratio: time to be less hysterical

**Rahul Ahluwalia:** It's done.

**Ajay Shah:** Which is that uh, India does not have an unusually high corruption rate. India does not have an unusually poor tax GDP rate. It would be good if we will all just back off and be less hysterical about it.

**Ajay Shah:** So a far more comfortable approach that look, we will give a fair amount of flexibility. Some people will cheat on their taxes. Right? Some people will engage in evasive behavior. It is far better to have high GDP growth.

**Ajay Shah:** You know, the purpose of the Indian state should be GDP growth, not revenues. So holding a tax GDP ratio constant, if we'll get a doubling of GDP, we'll get a doubling of the coffers of the government. Right?

**Ajay Shah:** Rather than fighting to double the tax GDP ratio, it is wise and optimal and efficient for the people to evolve a state structure which is more relaxed and more philosophical about what the people do and leave the people free.

**Ajay Shah:** And the people will grow the GDP. And that there will be more evasion and that's okay. But we should not obsess that this is a bad country, sab chor hai, I will bind down everything. I will go raid the people, I will torment the people. The floggings will continue until morale is improved.

**Rahul Ahluwalia:** [laughter]

**Ajay Shah:** Could you use that as a title for next year's show? The floggings will continue until morale improves.

**Rahul Ahluwalia:** [laughter]

## The cost of trying to eliminate all type-2 error

**Rahul Ahluwalia:** And there are like, there are two or three really key things that have led to our system becoming this way. And and you're completely right, if we were to just accept that there will be more type two error and that's okay, we would do much better overall instead of trying to just micromanage the and I think one of the problems that I always consider this is the failure of our investigative and judicial structure to punish the actual bad guys, right?

**Rahul Ahluwalia:** So if uh any set of rules gets put in place, some people abuse it, nothing happens to them. But this immediate reaction enters the system that says, like you said, log chor hain, corrupt ho rahe hain, let us make the rules watertight. Where there is no such thing as a watertight rule.

## The SEBI insider trading absurdity

**Ajay Shah:** So here's an example. I happen to be on the board of directors of a company, of a listed company. And I'm amazed to report to you that Mother SEBI has created the entire IT infrastructure whereby they find out the names of all the board of directors. Then there is a period of days before a board meeting where my trading privileges on my depository accounts are shut off for the said company.

**Ajay Shah:** And then I get an email to that effect, and then after that period ends, I get an email saying now your trading privileges for this company are restored. And this whole thing has been done to prevent me from even by mistake engaging in insider trading. This just strikes me like a lopsided expenditure of time and effort.

**Ajay Shah:** Okay? So first of all, insider trading is a minor league offense. It does very little damage to society. Second of all, it is trivial to look up and statement and find out did the guy violate a rule, and then find out what was the ill-gotten benefit and make a fine of three times the ill-gotten benefit. This is the trivialist of all crimes.

**Ajay Shah:** An entire administrative bureaucracy and technical structure has been created to prevent me from even crossing a red line.

**Rahul Ahluwalia:** Yeah. And and the crazy thing is they apply this entire additional burden on 100% of directors to prevent the possibility of 0.5% of directors doing something mildly wrong.

**Ajay Shah:** And it's not even a crime that's difficult to enforce against because it's just a matter of looking at the statements that there was a board meeting, prior to that did you trade? Did you make an unseemly profit? We can measure how much that profit was, multiply by three. Sir, that's your fine. Khalaas.

**Ajay Shah:** And also, I will always evangelize, insider trading is not a serious problem. Okay? It's not a significant offense. It does not derail the structures of capitalism. It's a minor thing.

## Is insider trading actually a serious crime?

**Rahul Ahluwalia:** Yeah, I mean I agree, but like since you've said it for the second time, I do want to ask you, the classic reason to say insider trading shouldn't happen is because people fear that it'll be difficult to have market making because then the uninformed person will hesitate to enter a market. What's the reason why you think it's not serious?

**Ajay Shah:** Um, in thinking about the securities markets, I classify all bad behavior into two categories: those that bring the price closer to the correct value versus those that take a price away from the correct value.

## Insider trading brings prices closer to the truth

**Ajay Shah:** The beauty of insider trading is that it reveals better information, it improves the information content of the price, it creates a public good.

**Rahul Ahluwalia:** Yes.

**Ajay Shah:** Of a more accurate price that will shape the resource allocation better. Against all these positives, we have this problem that third parties may feel averse to trading in the stock of a company.

**Rahul Ahluwalia:** Which is hypothetical anyway. I'm not actually even sure.

**Ajay Shah:** And further, if you and I were a company and we wished to overcome that problem, we have every voluntary incentive to create the systems and the institutions and sell to the speculators of the world, saying dude, come participate in my stock because I'm showing you we have set up good systems by which we will not do insider trading.

**Rahul Ahluwalia:** The interesting thing is that uh prediction markets, which are a relatively new thing, but which is basically a stock markets for questions that are not stock traded, there people very often make this argument, right? That it's great if insiders trade on a prediction market question because it makes private information public. It's an insider who knows something is either wrong or something is right with the company, and they are taking actions on that. The public can follow that trade.

## Prediction markets and the value of private information

**Ajay Shah:** So you're creating a public good, it's free information. So financial markets create a great public good of liquidity and market efficiency. And by being prissy about social justice, you're not making things better.

**Rahul Ahluwalia:** Fair. Okay, so I think we've covered the technical stuff, the what are firms stuff, why are firms so important stuff. And I think um this's super important, all of these things. What have been typically the kind of uh systems and institutions that have encouraged firms and where are we going wrong? I mean part of it we've discussed, but still if you, and you do such a wonderful job of just categorizing your thoughts cleanly, if you can just do that for us.

## What actually creates conditions for great firms?

**Ajay Shah:** Sure. So first, let me put it up at a strategic level, then we'll get into components. At the strategic level, we should be asking the question that a good country is one that creates conditions where people feel that it is worth their while to put in their energy, their passion, their time, their money, their children, their effort to build great firms. Okay? That's it.

**Ajay Shah:** So that's the conceptual picture that firms are not easy.

**Ajay Shah:** Firms don't spring up out of thin air. Firms come up because humans put their energy and their passion to build great firms. Okay? So just like we spoke earlier about how hard it is to even hold a firm in place that year after year, if you have a money machine that generates thousand crore of revenue and sixty crore of PAT and you keep on doing it year after year, you are really putting in emotional energy.

**Rahul Ahluwalia:** It's like the red queen phenomenon, no? You have to red run as fast as you can just to stay in place.

## Leadership must commit to the madness of building

**Ajay Shah:** Running to stand still. So that is itself an exercise of energy and passion. And then to grow the thing is even harder. Magic. It's nothing short of magic.

**Ajay Shah:** So at a simple high level basis, uh the top leadership teams of firms may be two people, maybe 200 people. Those leadership teams have to feel the opportunity and the incentive to commit.

**Ajay Shah:** It's just the word is commitment. You've got to commit to the madness, to the focus, to the effort, the emotional energy. As I say, bring your money, bring your children, bring your energy, bring your time, bring your passion, bring your stomach ulcers to the journey of building great firms. Okay?

**Ajay Shah:** And a society that creates those conditions will get good firms as a consequence. Whereas if a society threatens these persons with expropriation or creates external incentives that distort their pathway to building good firms, then the society will not get good firms. Okay? So this is the core that we've got to go into the heads of the people building firms and wonder what are their incentives? Because people respond to incentives.

**Ajay Shah:** It's not that a person is somehow wired. So, you know, if you if you think that the Gujaratis will just build firms and you take it for granted, then you're missing an incentives-based explanation. Anybody will build firms if they have good incentives. And so we should be going upstream and thinking, what are those incentives? Okay?

**Ajay Shah:** And once we open that box, we come up to the following list of elements that I feel we should think of. Okay, so the first is the threat of expropriation.

**Ajay Shah:** That if people are threatened that a local gunda will come and extort from you, or a local civil servant will come extort from you, if a local politician will come extort from you, if a CBI raid will appear and then you will be extorted by criminal lawyers and you know, all hell will break loose in your life because you were expropriated by the state or by local gundas, then that is a damper and it will limit your optimism and your confidence in being able to build firms.

**Rahul Ahluwalia:** Yeah. I I don't want to interrupt your flow, but like it's just, and it's not just you. That signal spreads fast, right? So like, I was in Bombay uh last week and I met a few people. Every single person I met was talking about this CEO of a payment bank that has been arrested last week.

**Rahul Ahluwalia:** Every single one of them brought it up, completely independently.

## Pillar 1: Safety from expropriation

**Ajay Shah:** I absolutely agree. I was an employee in the Ministry of Finance and Jaswant Singh said to the team, I was not present but I heard this second-hand, that income tax raids are an uncivilized thing. So on his watch, he put an end to all income tax raids. He said income tax should be civil, that you will send a letter asking for a statement from a person, you will not raid them. Okay?

**Ajay Shah:** And every single firm in India heard that story, and that is how you create confidence that, okay, I'll build my business and you know, we will have less complexities with the government. I won't be woken up with a pre-dawn raid by the government. So simple counts of how many income tax raids, how many SEBI orders, these shape the way in which you see the state as going after the people building businesses. And this is the first thing to think of. That is threats of expropriation.

**Ajay Shah:** Okay, we would like to believe that the legal system acts as a check and balance against executive overreach. All too often in India, the law fraternity is united in participating in the expropriation and that's a very unpleasant state of affairs. So that is pillar one, that protection from expropriation. This does take us towards political settlement type issues.

**Ajay Shah:** Okay? Successful countries find an easygoing bargain between the elites. So the state, the political elite, the business elite, the intellectual elite, the cultural elite should all be on easygoing, comfortable terms with each other. The essence of populism is that there is a resentment and a hostility towards the business and the intellectual and the cultural elites, and the state comes after them. And that shatters the willingness of the best people in the country to commit, to invest, to put in effort.

- Ajay Shah:** Okay, maybe they'll just lie low. They'll be, they will take more vacations. Maybe they'll take their money out of the country, whatever, but they're not going to build India. So if you see a great collapse of investment in India from 2011 onwards, that has something to do with this kind of phenomenon. You will recall that's one of the essential messages of in service of the Republic that there are too many levers of arbitrary state power, whether it is industrial policy or central planning or regulation or agencies.
- Ajay Shah:** All these are hitting at the firms. And then the firm just thinks that I am trying my hardest to try to build a business, but these lightning bolts come from above and they disrupt me and then the risk reward trade-off gets spoiled. I'll invest in a few projects which have a very high ex-ante rate of return. For a normal rate of return, it's not worth it because one of these lightning bolts will trip it up.
- Ajay Shah:** Okay, so this is the first most basic pillar. So if we in India have to start thinking about problems, the most foundational problem is can we step back from this level of fear that is emanating from the Indian state? Can we reduce industrial policy? Can we reduce regulatory micromanagement? Can we reduce the central planning?
- Ajay Shah:** Can we reduce the fear of the agencies? Can we reduce the difficulties of rule of law?
- Ajay Shah:** Can we improve the courts? Can we improve recourse so that when things go bad? And all this is then ultimately part of the political settlement that the Indian elite has to find a easygoing, peaceful relationship because as long as we are at war, then we will not get back to that bountiful investment. Okay? So that is pillar one.
- Ajay Shah:** Okay, pillar two lies in globalization. The most powerful engine to make better firms is internationalization. Okay?
- Ajay Shah:** What we need is an open approach to the whole world, that we should be freely bringing in foreign workers to work in India. Foreign companies should be freely operating in India. Foreign capital should freely come into India. Foreign goods should be freely imported to into India. There should be no restrictions against Indian goods going out of India.
- Ajay Shah:** Oh, goods and services. Freely import foreign goods and services, freely export goods and services, just freely, deeply intermingle into the world economy.

**Ajay Shah:** Why is this a good idea? First, because competition with foreign goods coming in will force the firms to either shut down or get better. Okay? It's very simple. Either you become bloody good or you exit.

**Ajay Shah:** In many, many, many industries, the wise and optimal thing that should happen in India is Indian firms should exit those industries. You have no business competing in that space. Exit. Okay? And then think of the things that you would do that you're going to be really, really good at.

**Rahul Ahluwalia:** And you would be doing much more of that, right? Than what you're doing today.

## Pillar 2: Globalization – the most powerful engine

**Ajay Shah:** And if you have free access to foreign workers, foreign capital, foreign raw materials, foreign markets, foreign goods and services, then you will be more competitive when fighting in foreign markets. Okay? So free access on the input side of labor, capital, raw materials, foreign services, improves your competitiveness to make in India at a lower cost and then you are more competitive in foreign.

**Rahul Ahluwalia:** So for markets. Exactly.

**Ajay Shah:** The whole thing is a beautiful mix. The challenge of operating in foreign markets will force innovation and technological modernization here in India. We will do management in better ways. We will learn how to do firms in better ways.

## Why competing abroad is the best meritocracy

**Rahul Ahluwalia:** And one very important, I completely hear you and one of the things that I'll point out in addition to the things you've already mentioned is that when you have to compete in a foreign market, you can only use your productivity to do it. You can only use your product to do it. The only thing that will help you sell there is how good is your product and how cheap is your product. And when you are forced to do that, then you innovate. And we'll come back to that in a few minutes because I have a question that I want to ask you on innovation.

**Ajay Shah:** But just right there, uh I want to finish your sentence. When you are operating in Nigeria, you are likely to be politically weak. So you can't go pound the corridors, meet a joint secretary, get a favor from the government. So I'm just completing your sentence that competing in foreign markets is the best kind of meritocracy that you can't lobby your way. It's not your friend who's a politician who gets you disproportionate market access.

**Ajay Shah:** You just have to win fair and square.

**Rahul Ahluwalia:** Exactly.

**Ajay Shah:** The only way to win is to become good.

**Rahul Ahluwalia:** Exactly.

**Ajay Shah:** Also as Anne Krueger, Jagdish Bhagwati, T.N. Srinivasan taught us, that the coalition of Indian firms will lobby the Indian state to solve productivity problems at home so that they are able to compete. So exporting is a very healthy thing because it channels the energies of people towards productivity, not towards zero sum game that I want to dominate the Indian market by screwing my rivals by lobbying with the government.

## Why don't Indian firms invest in R&D?

**Rahul Ahluwalia:** Yeah. Okay, so since we've discussed this so much, I'll I'll I wanted to discuss this later but I'll discuss this now. In some ways, is this not the answer to the puzzle of why do Indian firms not invest in R&D? Because, I mean, my answer to it always has been exactly what you just said. They don't need to invest in R&D, they invest in regulatory capture because that gives them the returns.

**Rahul Ahluwalia:** They would invest in R&D if there were at scale global markets where they could compete and win, and then they would be forced to invest. So...

**Ajay Shah:** So I have important thoughts and feelings on this. I feel it's a little more complicated than that. Let's go step by step. I would like to put up a house with three rooms. Okay, so in the first room, frankly, it's a bit of a labor arbitrage.

**Ajay Shah:** I'm building an Indian business, I'm globally competitive, but I'm doing labor arbitrage. Here, I need to do technology adoption. So I need to wander the trade fairs of the world, find the right equipment and buy the right equipment. I'm not really doing R&D, meaning yeah, you need to be very smart to be able to understand rival machines, to be able to make calculations of the economic viability of alternative machines.

## The 3 rooms of R&D in India

**Ajay Shah:** You need to be technically sophisticated, but you're just adopting other people's technology, you're not building new. For example, I would say by and large Indian garments is that space. Indian textiles is that space. You're not really innovating, okay? It's a labor intensive business and pretty much everybody knows what are the good machines and you want to constantly work the trade-offs of a cheap Chinese machine versus there's a complex European machine which has superior productivity and superior characteristics, but I have a cost of capital problem.

**Ajay Shah:** Can I do capital raising abroad? How do I beat the capital controls? You know, so it comes down to the capital controls question. If I can get cheap global capital, I can get great European machines. If I am stuck with expensive Indian capital behind the wall of capital controls, then I will take cheap Chinese machines which will doom me to a certain kind of competitive landscape.

**Ajay Shah:** Okay? So this is room one of the house where a good firm in India is technically sophisticated, but frankly is not doing R&D.

**Ajay Shah:** Okay. Room two of the house. Uh I feel one of the most glorious stories of India is the two-wheeler journey of the last thirty years where uh firms like Hero, Honda and Bajaj uh inherited technology from abroad that they first understood Kawasaki and Honda thoroughly. Then they understood that those designs have basic problems in India, that a good motorcycle built for Japanese roads is not a good motorcycle built for Indian roads.

**Ajay Shah:** And also the level of ruggedization required to be successful in the Indian market was different. So they built R&D in order to chase the Indian user and they built good products at scale because India is a very large market. They built novel products that were suited to Indian conditions at scale. And because they were producing at scale, they were globally competitive. And then they faced competition against Chinese two-wheelers in markets ranging from the Philippines to Africa, to Europe, to America.

**Ajay Shah:** And they did extremely well. So it is one of the greatest triumphs of the Indian economy that in the business of two-wheelers, the good Indian companies really succeeded by global standards by injecting a modest amount of R&D. It was not path-breaking R&D. It was a modest amount of R&D where they were genuinely looking at users and solving a novel problem that the Japanese had not solved, which is the combination of ruggedization. You needed fewer breakdowns per thousand kilometers, and also dealing with bad Indian roads.

**Ajay Shah:** So they solved these problems and that gave them a global market. As an aside, they are not comparably strong in the EV world. Right. Because the Chinese two-wheelers in the EV world are just like way ahead of where the Indian firms are. So competitive advantage is always temporary.

**Ajay Shah:** It doesn't mean... You have to keep running. You have to keep running. You're not going to get this forever. Okay.

**Ajay Shah:** And then case three comes, true novel cutting edge R&D in the style of Bell Labs where some corporation is putting up a complex R&D center and frankly is writing papers in global journals and is getting United States patents.

## India's two-wheeler global success – and its limits

**Ajay Shah:** I can't think of too many industries in India where you might like to do that. Maybe Dr. Reddy's will do that. Maybe InMobi will do that. There are some pockets and some firms in some industries where you would do that.

**Ajay Shah:** But I would consider that the exception rather than the norm. Given the state of the Indian economy, given the per capita GDP of India, it seems to me that the vast amount of firm activity needs to be in room one and room two. Room one is zero R&D. It is management.

**Rahul Ahluwalia:** Your technology is your management.

**Ajay Shah:** Even...

**Rahul Ahluwalia:** Even process improvement is R&D though.

**Ajay Shah:** So I'm I'm good with that. It's just that our vision of a Bell Labs, okay? So you are thinking, I'm never advocating the idea that firms can get away with being dumb. I think of management as research. Management is complex.

**Ajay Shah:** Like how do we invent a new kind of firm? How do we change processes? How do we reimagine how something will be done? I have enormous respect for those things. They involve creativity, they involve problem solving.

**Ajay Shah:** It's just not the hard science. It's not the STEM kind of R&D where there are men and women in white frocks sitting in a lab.

**Rahul Ahluwalia:** I completely agree with you. We shouldn't be doing that kind of R&D in the first place.

**Ajay Shah:** Not not at our scale.

**Rahul Ahluwalia:** Yeah.

**Ajay Shah:** So maybe Dr. Reddy's needs that. Maybe InMobi needs that. Maybe there are, you know, 100 good companies in India who genuinely have an R&D center in the sense of Bell Labs. But by and large for twenty-five years, I would consider that to be an exception.

**Ajay Shah:** For the next twenty-five years, I feel the bulk of the Indian story is in room one and room two. In room one, you're saying, look, I'm holding the lowest labor cost in the whole world. You once said something remarkable to me in a car ride, that what's remarkable about India is how little we export.

**Ajay Shah:** Here you are being given the bounty of some of the world's lowest wage rates. Why are you not exporting more? Okay? And so that's the puzzle that we've got the people, many many other things are going wrong. There are some horrible disabilities of operating in the Indian environment.

**Ajay Shah:** There are explicit fiscal problems. Arvind Modi and I have recently written a paper about the blockage of GST, which is just a completely anti-export thing that is being done by the Indian state.

**Ajay Shah:** These failures of the Indian state are harming the ability of Indian firms to mobilize labor and capital and play on a global scale. That's room one. And then room two, modest, small R&D where you are deeply responsive to customers and you're solving small incremental problems compared to world standards.

**Rahul Ahluwalia:** And so is your take that one and two just don't require that much R&D spend?

## Rooms 1 and 2 don't need large R&D spend

**Ajay Shah:** Yeah, they don't require large R&D spend. They require modest R&D spend. So, I have actually studied the data for R&D spend of the companies of India and you know, in in the drugs field, you do some amount of R&D. Some other companies do some R&D. Most Indian firms don't do R&D.

**Ajay Shah:** And it has not been a showstopper. If you look at the firms who got dramatic value added growth of the last ten years, what R&D does Infosys do? But as Indians, we are thrilled.

**Ajay Shah:** Okay? They built a great company. They've created lakhs of happy middle class families out of their labors. What could be more wonderful than that? So I'm not fixated on R&D.

**Ajay Shah:** I am fixated on productivity that we want to get a modern sector, we want to grow the modern sector, we want to create productivity growth, we want to create GDP growth.

**Rahul Ahluwalia:** Fair enough. Okay, so then back to the conditions.

**Ajay Shah:** So I'd said element one, safety. Yes. Okay, rule of law, protection from expropriation, which is partly about rules, procedures, check and balance. Jaswant Singh saying no income tax rates, but it ultimately goes back to a political settlement. Jaswant Singh, Vajpayee reflected a political settlement in India where there was an easy comfort in the Indian elite where the state was not out to put the knife into the rest of the Indian elite.

**Ajay Shah:** Element two I said globalization, the most powerful instrument for making a country better is globalization.

## Pillar 3: Creative destruction and the IBC

- Ajay Shah:** We must have a relentlessly pro-globalization focus. Get more foreign workers in India, get more foreign capital in India, get more foreign companies operating in India.
- Rahul Ahluwalia:** It's so interesting, even the very beginning of the firm happened because of globalization.
- Ajay Shah:** Yeah. As you said, East India Company brought complexity to India. Okay. Then the next piece that we have to think about is the competitive dynamics. Okay?
- Ajay Shah:** And how do you create conditions where there is ample energy in the birth and death of firms? Okay? And this takes me to a sentence you said earlier today that how immutable is the productivity of a firm? Okay? I want to tell you my own journey.
- Ajay Shah:** Uh I moved back to India in 1993 and I was full of disrespect for the dinosaurs occupying the Indian landscape. These were the people who had grown from 1953 to 1993 by lobbying New Delhi. Okay? They had met officials. So government engagement was their thing.
- Ajay Shah:** Okay? They were actively doing government engagement and they managed the government relationship and that's how they survived and succeeded and prospered. Okay? I hope it makes some people in this room squirm when you think about the amount of effort that firms today put in on government engagement.
- Ajay Shah:** Okay. So I thought that these firms don't actually have the genius and the DNA of how to be complex firms, and I thought that many of them would die. And it is true, thousands and thousands and thousands of Indian firms died when the great trade liberalization took place. So we got a great trade liberalization in India from 1991 to 2007 and thousands and thousands and thousands of Indian firms went bankrupt. Okay, great.
- Ajay Shah:** But what is amazing is that many of the older firms actually did extremely well. Okay? So Tata Motors today is a very sound global steel company. Tata Motors today is a very sound global motors company and so on. So you can teach an old dog new tricks and we should not be so gloomy that firm transformation is impossible.
- Ajay Shah:** Okay? It is possible to take a very hidebound, old style firm and actually carry it forward into the modern age.

**Ajay Shah:** But back to the theme of creative destruction, what a good country should have is an active process of firm birth and firm death. So when firms get into trouble, the firms will try to go to the government and get protection. And a healthy society is one where the government gives no help and the firm goes bankrupt on its own steam or it reinvents itself. Okay? So firm death is normal and healthy.

**Ajay Shah:** Uh as you know, I was part of the team that worked on the insolvency and bankruptcy code.

**Ajay Shah:** A good country has a swift, frictionless bankruptcy process. Okay? Do a good burial, do a good cremation. Okay? Quickly, the firm ceases to exist, its stuff gets bought out.

**Ajay Shah:** Okay, maybe the firm gets bought as a going concern, maybe its factories get bought out, maybe the competitors will hire away its people, whatever. You just want to finish with the process and move on. And a good country is one where bankruptcy happens quickly. And there is no protection, there is no indulgence. The financial system does not...

**Ajay Shah:** throw lifeline after lifeline to keep sinking firms aloft. We should be comfortable. Yeah, okay? So as a good Hindu, I will always say that you need creation and preservation and destruction. That a country that does not do destruction is missing something fundamental in the great trinity of existence.

**Rahul Ahluwalia:** It's so important, right? And it's not just this this idea that creative destruction requires destruction, and it goes beyond just the firms, jobs, technologies, things that become obsolete, that are not productive, that are replaced by others. As society, we need to accept this and we need to encourage it. It's a destruction is a...

## **Firm death is normal, healthy, and necessary**

**Ajay Shah:** It's a great churning. And in any healthy society, there should always be a great churning. By demanding stability, we are doomed to poverty. Yeah, okay? We've got to just understand and accept that the world will keep on changing.

**Ajay Shah:** On your lifespan, on my lifespan, we have reinvented ourselves many, many times, you know? We've not had a fixed conception of who we are. And that's the way it should be. That's a normal healthy way to live.

**Rahul Ahluwalia:** Yeah. And this religious allusion is a beautiful one and I'm going to keep it in mind and try and use it more. Okay, and what's your fourth?

**Ajay Shah:** Yeah. Uh, my fourth and last idea is finance. Okay? Finance is central to the story of firms. Finance is the brain of the economy.

**Ajay Shah:** Finance does the allocation. So in a good society, I I want to spell out one very interesting little piece.

**Ajay Shah:** In a good society, whatever is the profit after tax that is made in each firm should be very largely paid out to shareholders. Okay? So give the money of the shareholders back to them. And every time a firm wants to invest, it should have to face the market test of the financial system.

## **Pillar 4: Finance as the brain of the economy**

**Ajay Shah:** You should have to go to investment bankers and persuade them that I want to do a bond issue or I want to do an equity issue. That's a healthy way to approach the problem of investment. And the financial system should be constantly allocating the capital, that who gets the capital. Also, the financial system rewards the right people with a good valuation.

**Ajay Shah:** So when you are a good business, you've got high growth prospects, finance will reward you with a high P/E ratio, and they will make you very, very rich. You will create the currency of your own shares that can be used for acquisitions or for primary issuance. So, finance is a core engine of allocating, of looking at alternative industries, looking at alternative firms, and choosing.

**Rahul Ahluwalia:** It's pumping the blood where it needs to be.

**Ajay Shah:** Yeah. And uh, you remember when you and I spoke about industrial policy, I said that the right place to do industrial policy is called a financial system. That if you think EVs are such a great bet, well, the PE of an EV company should be a hundred. Okay? Or if it isn't a great bet, the PE of an EV company should be ten.

**Ajay Shah:** Okay, that's the job of a financial speculator.

**Ajay Shah:** Or if you believe that no, while the PE ratio of uh, EV companies is ten, I'm sure they have a great prospect. By all means, go buy these shares. You will make a ton of money. So finance is that open, competitive system where many, many clever people are looking at the firms, looking at the industries, looking at technologies and making industrial policy decisions.

**Ajay Shah:** They do industrial policy better than any bureaucrat can.

**Rahul Ahluwalia:** Because they're doing it with skin in the game.

**Ajay Shah:** And they're doing it with skin in the game. And also, it's an approach which permits many answers. You don't have to have only one answer. You don't have to have one national champion. Okay, maybe Anthropic is good, maybe Google is good.

**Ajay Shah:** Who's to say?

**Rahul Ahluwalia:** And you don't need any expropriation either.

**Ajay Shah:** And there's no expropriation, there's no taxation going in.

**Rahul Ahluwalia:** The way industrial policy you need to. Yeah.

## Summary: the 4 pillars – and what India must build

**Ajay Shah:** And I think and that's one thing that industrial policy, it gets the signals so mixed up. It doesn't allow the financial system to do its job either, right? Because you're taking from the successful firms because those are the only ones you can tax, and you have to pay it to the loss making firms.

**Ajay Shah:** And just think how messy it is for a normal business person in the real sector or a normal participant in the financial sector to start second guessing the government. So when the government says uh, solar energy good, now suddenly private finance will start chasing solar energy. Private businesses will start putting more solar energy. This is all a complete distortion. And you don't want that contamination of the minds.

**Ajay Shah:** The market economy should be a thinking, energetic combination of clever people and a clever financial system at all times. So if I may just summarize, what creates conditions for the emergence of high productivity, high capability firms? The first and foremost is the political settlement and safety from expropriation, safety from private gangsters, safety from the state.

**Ajay Shah:** The second is globalization. The third is creative destruction, the entry and exit of firms, and the fourth is finance. Our job as a country is to build these four pieces, and then after that, the brilliant people of the country will build good firms and will give us the GDP growth.

**Rahul Ahluwalia:** No better way to end this episode. Thank you so much.

## Closing

**Ajay Shah:** Thanks. Give me a calendar entry for next year.

**Rahul Ahluwalia:** You have all the calendar entries you want. The people ask and the people shall receive. [music begins]

## References

- [1] Ronald H. Coase. The Nature of the Firm. *Economica*, 4(16):386–405, 1937. doi:10.1111/j.1468-0335.1937.tb00002.x.
- [2] Dilek Demirbas, Ila Patnaik, and Ajay Shah. Graduating to Globalisation: A Study of Southern Multinationals. *Indian Growth and Development Review*, 6(2):242–259, 2013. doi:10.1108/IGDR-12-2012-0050.
- [3] Stefan Dercon. *Gambling on Development: Why Some Countries Win and Others Lose*. Hurst and Company, 2022.
- [4] Apoorva Gupta, Ila Patnaik, and Ajay Shah. Exporting and Firm Performance: Evidence from India. *Indian Growth and Development Review*, 12(1):83–104, 2019. doi:10.1108/IGDR-04-2018-0036.
- [5] Vijay Kelkar and Ajay Shah. *In Service of the Republic: The Art and Science of Economic Policy*. Penguin Allen Lane, 2019.
- [6] Lant Pritchett. The Case for Sustained, Rapid, Inclusive-Enough Economic Growth as a Focus of Development. Synthesis paper prepared for the Growth Summit, Washington DC, 2024. URL: <https://lantpritchett.org/the-case-for-sustained-rapid-inclusive-enough-economic-growth-as-a-focus-of-development/>.
- [7] Ajay Shah. Why Forbid Insider Trading? Online article, 1998. URL: <https://www.mayin.org/ajayshah/MEDIA/1998/insider.html>.
- [8] Ajay Shah. The Journey of Indian Finance. Working Paper 25, xKDR Forum, 2023. URL: <https://www.xkdr.org/paper/the-journey-of-indian-finance>.
- [9] Ajay Shah and Amit Varma. The Beauty of Finance. Episode 21, Everything is Everything, XKDR Forum, 2023. URL: <https://www.xkdr.org/viewpoints/the-beauty-of-finance-episode-21-everything-is-everything>.
- [10] Ajay Shah and Amit Varma. Graduating to Globalisation. Episode 48, Everything is Everything, XKDR Forum, 2024. URL: <https://www.xkdr.org/viewpoints/graduating-to-globalisation-episode-48-everything-is-everything>.
- [11] Ajay Shah and Amit Varma. Going Bankrupt in India. Episode 80, Everything is Everything, XKDR Forum, 2025. URL: <https://www.xkdr.org/viewpoints/going-bankrupt-in-india-episode-80-everything-is-everything>.
- [12] Susan Thomas, editor. *Insolvency and Bankruptcy Reforms in India*. India Studies in Business and Economics. Springer, 2022. doi:10.1007/978-981-16-0854-4.