Productivity and Growth: Crash Course Economics #6

Crash Course: Economics
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Adriene: Hi, I'm Adriene Hill.

Mr. Clifford: And I'm Jacob Clifford. And welcome to Crash Course Economics.

Adriene: So far we talked about GDP and how the overall economy, but we haven't really talked about why some countries have a high GDP and others have low GDP. So, why are some countries rich, and others poor?

Let's investigate.

Mr. Clifford: Look, a clue! Productivity!

Adriene: Hmm...

[Intro]

Mr. Clifford: So, if we're gonna figure out why some countries are rich and some are poor, we have to first define what it means to be rich.

Economists measure economic output by looking at Gross Domestic Product or GDP. As you remember from the last video, GDP is the market value of all goods and services newly produced in a country in one year.

India's GDP is over six times larger than the GDP of Singapore, but that doesn't mean the average Indian is richer than the average Singaporean. That's because India has 240 times more people than Singapore.

So, economists look at something called GDP per capita, to determine how wealthy a country is. GDP per capita is the GDP of the country divided by its population. It represents output per person, and a country with a high GDP per capita is considered rich.

Of course, some of you may say being rich has nothing to do with GDP or money. It has to do with whether or not you're happy. Fine, money may not buy happiness, but it can prevent a lot of misery. The United Nations' Human Development Index, or HDI, measures life expectancy, literacy, education, quality of life, and it ranks countries according to their findings. The data shows the country that have a high GDP per capita have far less infant mortality, poverty and preventable diseases.

So, economists often used GDP per capita to measure a country's standard of living. Countries with the lowest standard of living are the ones that are conventionally considered poor. So, why are some countries poor?

Adriene: If you ask someone on the street, they might say the difference is due to lack of natural resources or inept governments, that is if the person doesn't subscribe to some antiquated racial or social Darwinist stereotypes -- but we should talk about those ideas. Well, let's skip the racial and social Darwinists stereotypes, but resources and leadership are interesting.

First, resources. Look at Singapore: third on GDP per capita and ninth on the Human Development Index. Or Switzerland, ninth in GDP per capita and third on the HDI. Singapore is a teeny tiny island, and Switzerland's main natural resources is cows. And cows are great! I love cows, love love, but they aren't really natural resources.

Zimbabwe, on the other hand, has tons of natural resources, like fertile soil, coal and rare minerals, but their economy? It's a wreck. It's a hundred and sixty first (161st) in GPD per capita and a hundred and fifty sixth (156th) on the HDI. Their incompetent and corrupt government keeps them poor.

For comparison sake, the GDP per capita in the US is 18 times higher than in Bangladesh, and we're not just trouncing Bangladesh. GDP per capita wise, we're also crushing the GDP numbers of our great-grandparents. Take that, Aloysius!

The GDP per capita in the US today is about 8 times higher than a hundred years ago. That's pretty impressive. Maybe the Thought Bubble can produce an explanation.

Mr. Clifford: Let's say John runs a bakery. Each worker to produce a dozen donuts per hour, and each donut sells for $1. If John wants to stay in business, he can't pay his workers more than $12 an hour.

Obviously, he needs to pay for the ingredients and the oven, but even if you wanted to be generous, he couldn't pay them $20 an hour. They just don't produce enough for us to cover the cost. But if John can find a way for each worker to produce four dozen donuts per hour, he can pay them $20 per hour. Simply put, the more that each worker can produce, the more money each can earn.

Economists argue that the main reason some countries are rich is because of their productivity. Their ability to produce more output, per worker, per hour. US workers, altogether, earn 18 times more per hour than Bangladeshi workers, because they're able to produce 18 times more output per hour. US workers today earn 8 times more per hour than US workers a hundred years ago, because they produce 8 times more output per hour. But not only is US producing more stuff, it's also producing higher value products, like Avengers movies and jet engines.

So going back to our bakery example, it's like a worker from a hundred years ago be able to produce six plain donuts per hour, while workers today is able to produce 60 salted caramel designer cupcakes per hour.

Adriene: Thanks, Thought Bubble. Before we go further, we need to point out the limitations of this bakery example. It's true, productivity is key. A country that is more productive can create more stuff and can generate higher incomes, but in real life, it doesn't always look like that.

For example, in the US, the GDP per capita has been steadily increasing for decades, but median family incomes haven't changed much at all. This gets to issues of income inequality, and we're gonna devote an entire episode to it.

Limitations aside, low productivity remains a fundamental reason why some countries are poor. Higher productivity not only helps explain why we have more money to buy stuff, but also why we have more stuff to buy. And speaking of stuff to buy, because it is socially unacceptable somehow for me to appear in the same clothes over and over, I need 40 blouses to make this series. That is a lot of blouses. That strains resources, pollutes the planet, and at high levels like 40 is completely unsustainable. Don't worry though, some of these are from thrift stores.

So what about people in poor countries? What do they need? Well, they need food, clothing and housing, they need clean water and plumbing and sewers, they need hospitals and medicine, but all those things have to be produced, so a country that produces more of these things with fewer resources is gonna be wealthier and healthier, and perhaps even happier than a country that can't. But making a million cell phones isn't very impressive if your country has a hundred million people, so we need to look at how much stuff we produce per person. That's GDP Per Capita.

Mr. Clifford: So if everything all boils down to productivity, what makes some countries more productive than others? Well, let's go back and look at the main ingredients that we need to produce things, what economists call the factors of production.

First, you need land, which includes all natural resources, and then you need workers which is labor, and then you need capital which includes machines and factories and infrastructure, things you need to produce other things. One special type of capital is the workers' education, knowledge and skills required to produce things. Economists call this human capital. So school's not just about torturing you, except for PE, it's about helping your human capital.

The quantity and quality of these resources is the first step to being more productive, but perhaps even more important is how you use them. Increasing the amount of capital has a cost, but finding new ways to organize production is virtually free. Economists call the organizational effectiveness "technology." Think of it as the good ideas about how to combine labor and capital that you already have.

US workers produce so much more than Bangladeshi workers because the US has more factories, robots, and computers. But more capital only gets you so far; it increases your production capacity but it also eats up some of that production capacity. You have to develop more factories and workers and machines to make more capital, and then replace them when they wear out. Technology on the other hand takes the same amount of resources and organizes them in a way to produce more output.

Adriene: Here's an example. Twenty-five years ago, you could find computers in just about every workplace in the US, but productivity growth in the US was flat. Then, starting in about 1995, US productivity boomed, led by computer technology. SO what changed?

In the late 80's and early 90's, most workplace computers were individual units, plugged into nothing but an electric outlet. They were useful for writing and printing documents, or acting as overgrown calculators, and playing Oregon Trail, but that was about it. When the World Wide Web came along everything changed.

It turns out that computers are far more useful when they can talk to each other. The computer at the store could talk to the computer at the warehouse which could talk to the computer at the factory. That means I can get a new blouse from the other side of the world pretty much immediately. Connectivity equals productivity. Productivity in the US boomed for the next 10 years, and wages jumped as a result.

200 years ago, productivity in the US wasn't that great, but it grew a little bit every year. Compounding that over decades and centuries gives us the huge gap between the US standard of living and that of many developing countries. The good news is that in recent decades, many developing countries, like China, South Korea, Mexico and Ghana have dramatically improved their capital in technology and have seen their living standards rise.

So if you want a single, one-word answer as to why some countries are more successful than others, here it is: Productivity. So if you look at the big picture--

Mr. Clifford: And by "big picture," we mean both globally and historically--

Adriene: increasing productivity has resulted in increased standards of living for much of humanity over the last hundred years, and it's hard to argue that this is a bad thing.

Mr. Clifford: Thanks for watching, we'll see you next week.

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