

The modern study of economics is only about 250 years old...yes, just about the age of the United States of America! That's because a Scottish man named Adam Smith is considered by many to be "the father of economics," and his best-known work was published in the year 1776, the year of America's founding! But wait a minute. Let's correctly begin by acknowledging that the actual living out of economics has been around since...well, the beginnings of humanity! OK, still, the formal study of economics is relatively new.

What really ramped up complex economic activity was with what's called the Industrial Revolution era that began right around Smith's time. And that ramping up of complex activity has been, if anything, wildly accelerating in our era! Today, we're going to do two things: talk about one of the most well-known economic realities in economics and then talk about how it's vitally different now than, say, 25 years ago!

Anyone who took a solid, basic economics course in the last fifty years studied what's called the *factors of production*, a foundational idea to a modern economy. So here's a basic working definition of factors of production: *resources or inputs used in processes to produce goods and services*. Sound a bit familiar? We talked a bit about factors of production previously, now we're turning the prism to glean even more.

Now, during much of the latter part of the 20th century, classic economists generally taught that there are three factors of production—*land, labor, and capital*. In fact, if you ask most leaders who studied business, that little list of three items is one of the few things that they can specifically remember from college—that the factors of production are land, labor, and capital. That means you need natural resources, like land, plus labor, plus capital, which includes both money itself and the factories and machinery that money can buy. So, during the Industrial Revolution and also the evolving agrarian economy, that formulation worked pretty well. Here's a couple of linked examples. In the 1800s, the John Deere company would use land and labor and capital to build agricultural equipment to help farmers. Then, the farmers would use the land and labor and that John Deere agricultural equipment to produce crops. Now that's two stages linked together to efficiently bring food to the tables of consumers.

This thinking is rooted in classical economics, you know, like the Adam-Smith-type of folks. But we do have to say that, decades after Adam Smith, Karl Marx forwarded the general idea that the only contribution of worth is labor. Of course, that Marxist-Socialist ideology is not designed for high productivity and low costs for consumers—it's designed to stoke fires of class warfare that somehow labor is the *only* factor of production that really matters and that anything different is exploitation of people. Trying to apply this bad political ideology is exactly why the standard of living for citizens in Marxist, Communist, and Socialist economies is so low, especially for the very workers that socialism is supposedly exalting!

But, for decades, the classic standard of economics for factors of production in countries with a high standard of living for its populace was land, labor, and capital. As time went on and things were invented, the "land" category was broadened to "natural resources" as economists wanted to recognize the reality of other inputs like oil and gas, energy, and other similar of natural resources.

In more recent years, for many classic economists, that basic list was expanded to include *entrepreneurship*. You see, that land and that labor and that capital just doesn't happen like a spontaneous combustion of oily rags into a fire, just on its own. No, instead, there has to be a driving force, creating synergy and attracting the capital resources, assembling the labor and natural resources necessary to make a modern organization work. Of course, the Socialists and the Progressives hate that whole idea—remember the Socialist idea that if a bunch of labor just kind of congregates for 30 hours per week, then great things will just happen? That's failed a whole lot of times around the world. And recall that Communist bureaucrats in the Soviet Union dutifully prepared the famous, always-failing five-year plans for the vast lands of Russia and Ukraine and the labor working on all that land? Of course, that Socialist ideology failed for *many decades*. The reality is that a risk-taking, persevering spark along with reward structures are necessary for the true thriving of an economy over the long-term.

So, if you go to many basic business textbooks in the current era, textbooks based on the classic economics that actually help build widespread prosperity, you will often find these four factors of production: land, labor, capital, and entrepreneurship. But personally, when I speak to executives and university students, I add two additional factors of production. Let's take a look at the first one and explore why it's added.

The fifth classic factor of production is *technology*. Here's why. Just like land, labor, and capital need a persevering *entrepreneurship* embedded in the mix, *land, labor, and capital* need to mix in 21st century *technology* to thrive. Think about this list of companies that have risen so highly in employee prosperity, customer loyalty, and stockholder wealth in the first twenty years of the 21st century: Apple, Microsoft, Amazon, Facebook, Google. Yes, each of these companies significantly drove innovative technology into their companies' factors of production. Not convinced? Let me list them again. Apple, Microsoft, Amazon, Facebook, Google. Then let's list their predecessors in the early 2000s in serving customers: Nokia phones, Smith-Corona typewriters, Sears retail stores, and local newspapers in hundreds of cities with advertising.

Now we have to ask ourselves. Were Nokia, Smith-Corona, Sears, and your city newspaper effectively mixing land, labor, capital, and entrepreneurship? Well, maybe it seemed like that was so at the time—until innovative technology inexorably, aggressively pushed them aside! Wow, you say, are you kidding? My company is supposed to be another Apple or Microsoft or Amazon?? Well, no, but is your enterprise effectively scoping out and adopting the best technological inputs? You see, you don't have to be the actual innovator or inventor, but in the 21st century, the enterprise that *doesn't* constantly pursue the effective adoption of the most effective, emerging technology is the enterprise that will inevitably drift into failure.

And that brings us to the very essential sixth factor of production for the 21st century and beyond—*knowledge*. Hey, you say, "*knowledge*, well that's obvious!" OK, then, why isn't knowledge on the list of factors of production? Well, you might say, knowledge is implied to be there—otherwise, how will the enterprise effectively blend land, labor, capital, entrepreneurship, and technology? Exactly true. But the problem is, I've seen countless people think that someone being a CEO automatically makes that CEO an effective knowledge worker, a leader who, by virtue of holding high office, successfully mixes land, labor, capital, entrepreneurship, and technology. You mean, like Nokia? Like Smith-Corona? Like Sears? All this is why I tell everyone that *we all* must be morphing constantly to be the best knowledge workers we can!

You see, both *technology* and *knowledge* are increasing so rapidly nowadays that enterprises and even whole industries are being severely stressed, even all the way to being threatened as to their very existence. You know, like many newspapers that have gone out of business the last several decades.

So, let's look at the list of six factors of production relevant to these first several decades of the 21st century: *land, labor, capital, entrepreneurship, technology, and knowledge*. But notice this last, crucial point—these factors are definitely not all equal in importance! Centuries ago, land and labor were dominant in the economics of agriculture, and technology was little to no factor at all—even all the way to motivating farm families to have a dozen children to inexpensively labor on the family's land.

But nowadays, the essential mix for many enterprises *centers first* on three integrated factors: knowledge, its effective application of technology, and an evergreen-style of entrepreneurship. Why these three? Because the majority of modern enterprises simply can't be great, enduring stewards of the land, labor and capital *without* cutting-edge knowledge, effective use of technology, and an entrepreneurial mindset!

Now let's specifically talk about you! Unless you own your own small business or can substantially impact the enterprise as an executive, you may feel confined, restricted, and frustrated about your enterprise's deficiencies here. Don't despair! You can work to apply these in your sphere of influence, ultimately winning the day. And if not that, you are preparing for your next position, the one that God has been directing you to all along. So, how's your *personal* development in *knowledge, technology, and entrepreneurial mindset*? For sure, those are the *personal* factors of production that will yield great fruit!

