

# Why do economies take off... or disappear?

An economy's minimum viable scale: a guide for non-economists

On the paper *Minimum Viable Scale: Bellman Barriers and the Economics of Survival*

Javier Milei · Demian Reidel

Can an economy be too small to survive? Traditional theory says that scale does not matter and that every country converges and catches up with the others. It even grows faster at first, but becomes less productive as it gets bigger.

This paper shows the opposite. Scale allows resources to be used more effectively: as the economy grows, it becomes more productive. But there is a **minimum viable scale**, below which the economy collapses.

Why does economic theory make an assumption it knows is wrong? Because the mathematics is harder. It is that simple. In the paper, Milei and Reidel developed a new advanced mathematical tool to solve models with realistic assumptions. This document explains the ideas without the mathematics.

## 00 · THE HISTORY

### How the great takeoff began

For most of human history, almost all effort went into securing food, clothing and shelter. Generations passed, but the situation did not change. People survived in the same way. In other words, the production function did not improve.

Over the past two hundred years, productivity exploded. The break with the past is so clear that this pattern is called the hockey stick.

What happened then to bring about such a drastic change? The Industrial Revolution.

#### Annual output per person



**Fig. 1.** 2021 international dollars, to compare purchasing power. Source: Our World in Data. Early estimates are scarce; the line connects the available data.

Adam Smith explains it through the real example of a pin factory. In 1776, he described how ten workers, divided among eighteen operations, could make some **48,000 pins a day**.

Working separately, none could have made even twenty pins; perhaps not even one. Through specialization, each worker performed just one task, but far more efficiently. That small change in how goods were made changed human history.

At Davos in January 2026, Milei returned to that story. He called artificial intelligence “the twenty-first-century version of the pin factory” and said that the Ministry of Deregulation is known as “the Ministry of Increasing Returns”.

He also presented an earlier version of this paper as the theoretical foundations of his government. That version was titled “When Regulations Kill Growth”.

Milei argued that traditional economics assumes decreasing returns to scale, contrary to reality, simply because the models are harder to solve.

This criticism already appeared in *Capitalism, Socialism and the Neoclassical Trap* (2024): Milei challenges the idea that a mathematical simplification should end up dictating how the economy must be organized.

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**“That is, killing increasing returns and, with them, economic growth.”**

Javier Milei, on the effect of regulation. World Economic Forum, Davos, January 2026.

## When producing more costs less

If a workshop buys more machines but keeps the same workforce, each machine may add less output than the previous one. There are not enough workers to make use of them. That is why capital has diminishing returns.

But that is not a problem of scale: by expanding its workforce and equipment together, a factory can divide tasks more effectively and use specialized tools. With twice the resources, it produces more than twice as much: there are **increasing returns to scale**.

This is reality. But reality complicates the calculations. Traditional mathematical tools do not work in this case. So economic theory decided to sweep this inconvenience under the rug and do something disgraceful: adopt a false assumption to solve the problem. **It decided to look for the keys under the streetlight, knowing they were not there.**

## 02 · THE TRAP

### The model against reality

In a model of perfect competition, each firm is too small to influence the price. With increasing returns, concentrating production in a few firms improves efficiency. But traditional economic models treat this as a market failure. Milei challenges the judgment that this concentration is a failure when it is precisely what makes greater economic growth possible.

Milei calls this way of thinking a trap: a firm is regulated until it loses the advantage that made it prosper. **An improvement in productivity ends up being treated as a disease.**

## Comparing every future

Anyone who invests gives up consumption today and must decide whether future consumption makes it worthwhile.

Machines and facilities make up capital. They wear out and must be replaced. The time available for work is limited. Milei and Reidel compare different plans for work, consumption and investment when there are increasing returns.

### Expanding equipment and labor together

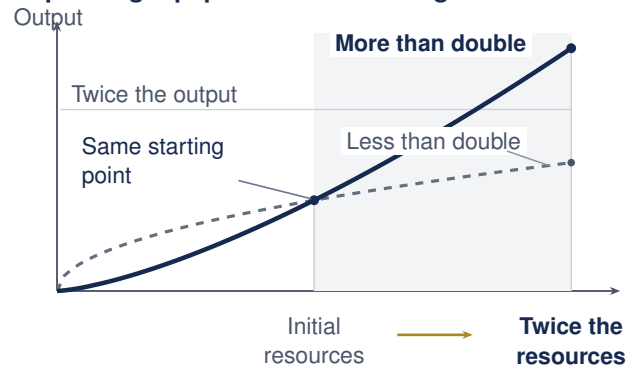


**Fig. 2.** When resources double, output more than doubles with increasing returns and less than doubles with decreasing returns. Illustrative curves, not estimated values.

An economy could have enough capital to produce, yet face so many regulatory obstacles that producing nothing would be optimal. That is how reality works.

To study this problem, Milei and Reidel developed a new mathematical tool: Bellman barriers. The method combines ideas from physics and finance to solve the model with increasing returns.

**Milei and Reidel did not look for the keys under the streetlight. They brought a flashlight and looked where the keys had been lost. And they found them.**

### When is it worth continuing to produce?

The paper studies the real case. To decide whether it is worth maintaining production, two questions must be kept separate.

- **Is there enough to replace equipment?** Output must be sufficient to cover capital depreciation. If it cannot even do that, the economy is below the physical extinction threshold. Machines wear out, and output is not even enough to buy replacement parts.
- **Is investment worthwhile?** Output must also be enough not only to replace capital, but to compensate for postponed consumption. If it barely covers spare parts and a couple of sweets, it does not pay either. In that case, investing is not worthwhile. When the government taxes or regulates too much, it can make a potentially viable economy unprofitable. If taxes leave you with just a couple of sweets, you close the factory.

#### Available equipment changes the future Physical floor

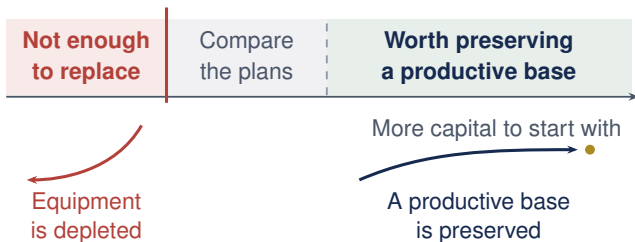


**Fig. 3.** Below the physical floor, equipment is depleted. Above it, the consumption and labor of different plans must be compared. Diagram without a numerical scale.

### Machines do not work on their own

A machine deteriorates even if it sits idle all day. Maintaining it requires production and setting aside enough for replacement parts. Without enough labor, having accumulated a great deal of equipment is not sufficient.

For Milei, learning a trade and working are habits that society should encourage. The fewer people are willing to work, the poorer society becomes.

On the other hand, at full employment, adding machines contributes ever less output but requires ever more replacement parts. That is why the model has a maximum sustainable capital stock as well as a minimum. Less labor raises the minimum and lowers the maximum: the pincers close in.

As population and capital grow, production becomes more efficient and society becomes richer.

### The cost of the final obstacle

A distortionary tax or a costly administrative procedure consumes productive resources. The model represents that loss as a wedge between the effort of producing and what remains available to use. The less that remains, the harder it is to replace equipment.

1. **The floor rises.** With less output available, more capital is needed to cover replacement. Some scales that were viable before are no longer viable.
2. **A small loss can be decisive.** Near the minimum, there is little room to cover replacement. An additional burden can push the economy across the threshold and cause it to collapse.
3. **There is a critical burden.** If the loss is large enough, no initial amount of capital can sustain production over the long run.

Once that critical burden is exceeded, production does not disappear overnight. Equipment is lost because it can no longer be replaced.

**The cost of the final obstacle includes the output forgone tomorrow.** The loss falls on those who would have worked with that equipment and those who would have bought its products.

## THE TRAP

the book's diagnosis

- The model leaves out the benefits of organizing and expanding production.
- A firm uses those benefits, produces at lower cost and grows.
- The concentration that may result is interpreted as a market failure.
- The proposed remedy is to regulate the firm until it fits the model.

## THE WAY OUT

what the paper does

- It incorporates the gains from scale into production.
- It compares the cost of investing with what that investment yields later.
- It distinguishes replacing equipment, compensating for waiting and choosing the best plan.
- It shows how a burden can prevent production from being sustained.

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***“The omnipotence of the state, regulations, destroy property rights and that kills increasing returns and, therefore, growth is lower.”***

Javier Milei, presenting the earlier version of this paper at Davos, January 2026.

**The conclusion.** Milei is removing obstacles for those who work and invest. This will make Argentina more productive and speed up its growth. That is how Argentina will be great again.

***“Politicians must stop bothering those who are making a better world.”***

Javier Milei, World Economic Forum, Davos, January 2026.

Based on: J. Milei and D. Reidel, *Minimum Viable Scale: Bellman Barriers and the Economics of Survival* (2026).

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