How the hidden clock inside tax policy can force businesses to invest

By limiting tax loss carryforwards, policymakers can force quick investment in loss-making firms.

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What do two earthquakes in Italy have to do with your company’s future investment

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decisions?

Possibly nothing — yet. But new research into different taxation schemes, and how firms leverage them to invest now or at a later date, has important takeaways for tax policymakers that could shift how Europeans do business.

Martin Jacob of IESE Business School and Lisa Hillmann of WHU–Otto Beisheim School of Management looked into tax carryforwards on net operating losses, a common practice in many countries, in a paper published in the *Journal of Accounting and Economics*.

How do tax carryforwards work?

Many smaller companies make a profit some years and a loss in others. On years when they make a profit, they pay taxes. But when a year ends in the red, firms in many countries can keep those losses and "carry them forward," or apply them to the next year's profits, therefore reducing their tax burden the following year.

Say a firm loses €50,000 one year and has profits of €70,000 the next. Under tax carryforward schemes, they would apply their losses forward and only pay tax on €20,000.

Some countries and regions allow firms to carry losses forward indefinitely, while others set a time limit of perhaps five or 10 years. Jacob and Hillmann looked at how a limit, or no limit, affected firms' decisions to ramp up investments.

How does tax regulation affect business investment decisions?

Two earthquakes in Italy provided a unique case study on how businesses behave under different tax rules.

In Europe, different countries have different limitations on carrying losses forward on tax returns. Some countries, including Austria, Belgium, Denmark and Sweden, have no limitations, meaning a loss can be carried forward indefinitely and recouped on tax returns in five, 10 or even 20 years.

Meanwhile, countries such as Bulgaria and Greece have five-year limits, meaning companies must use their credits or lose them. Other countries fall somewhere in the middle. Some even changed their rules on limits during the course of the study — including Italy, which switched from limited to unlimited carryforwards.

This meant Jacob and Hillmann could consider two similar situations in the same national

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context, with only this change in law as a key difference, and see how companies reacted. They looked at firms' investment behavior in the aftermath of two earthquakes, the first in L'Aquila in 2009, when tax carryforwards were limited to five years, and the second in 2012 in Emilia-Romagna, when they were unlimited. Both earthquakes were similar in magnitude; caused €10B and €13B in damages, respectively; and resulted in significant losses for nearby firms.

In L'Aquila, firms that suffered large losses due to the earthquake risked losing the ability to offset those losses if they didn't return to profitability quickly. They therefore had an incentive to invest sooner and generate profits within the five-year window. And they did. Affected firms close to the epicenter in L'Aquila increased investments by about 1.3% of total assets, a statistically significant increase compared with control firms farther away.

In Emilia-Romagna, where there was no tax-based incentive to accelerate investment, firms could wait until they felt the time was right before investing further, confident that they could offset their losses then. There was no significant increase in investment there.

Is there a downside to limiting tax carryforwards?

Imposing limits on tax carryforwards provoked more investment — in loss-making firms. These companies want to generate profits quickly enough to use the tax break before it expires.

"Investments are, at least in part, irreversible," Jacob says. "They create sunk costs that can't be recovered. Timing investment is important because if you invest now, you may not be able to do so again later. For the loss-making firms, limiting how long they can use their tax credits is a nudge to take that step now."

It's important to note that in contrast with loss-making firms, profitable firms are less likely to invest when carryforwards are limited, meaning policymakers may face a tradeoff: nudge loss-making firms to invest or prioritize those with steady growth and profits.

For managers, it's important to take the possibilities offered by tax carryforwards into account — and to remember that sometimes they come with a ticking clock.

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