Research shows the behaviour of business leaders could be directly linked to their experiences in childhood

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Tsunami Hits Minamisoma. Credit: Warren Antiola via flickr

What makes a great leader? Effectiveness? Experience? Volcanoes? It might seem unlikely, but new research from a team of academics, including Raghavendra Rau, Sir Evelyn de Rothschild Professor of Finance at Cambridge Judge Business School, suggests that experiencing a natural disaster at first hand during your early childhood can have a profound impact on your strategic and tactical decisions in later life.

The team studied the impact of natural disasters on leading CEOs and, remarkably, found that those who experienced a number of moderate disasters actually had a greater appetite for risk-taking than those who had experienced none (unsurprisingly, those who experienced the most extreme natural disasters were most risk averse). It also found that they were more likely to take on more risk in response to a threat to the business.

But how do you work out who has experienced disaster – and what the impact might be? Rau and his colleagues, Gennaro Bernile and Vineet Bhagwat, came up with an ingenious solution. They constructed a database of county-level natural disasters affecting the US between 1910 and 2010, including earthquakes, volcanic eruptions, tsunamis, hurricanes, tornadoes, severe storms, floods, landslides and wildfires. They then used this data to work out the extent to which the 1,711 CEOs in the survey were likely to have been affected by these disasters between the ages of five and 15, based on the location and year of the CEO's birth and the state in which they received their social security numbers (usually allocated during teenage years). The team included controls for the average disaster fatality risk and non-disaster geographic characteristics, such as economic conditions, crime rates and the quality of education.

The CEOs, who were all US-born and who served in S&P 1500 firms between 1992 and 2012, were then grouped into three categories: those exposed to extremely negative effects of natural disasters during their formative years; those who experienced only "medium" effects of such disasters; and those who were not exposed to disasters at all. They then examined the effect of CEO risk preferences on financial leverage, cash holdings, stock volatility, acquisitiveness and the CEO's own compensation structure.

And the results were striking. Firms run by CEOs from the "medium" group showed a 3% higher leverage ratio than firms run by CEOs who experienced no fatal disasters; and 4.4% higher than firms led by CEOs who had experienced the most extreme negative effects of disasters.

Firms managed by these risk-loving, medium-exposure CEOs also held 0.9% less cash as a percentage of book assets than those not exposed to disaster, while those led by CEOs exposed to extremely negative effects of disaster held 0.7% more cash. Medium-exposure leaders also experienced 0.8% higher stock volatility compared to companies led by CEOs with extreme exposure or those who had not experienced disasters.

Medium-exposure CEOs were also 3% more likely to announce a corporate acquisition while at the helm. The results were strengthened if a CEO was particularly dominant – if they were also chairman or president of the board of directors. And finally, medium-exposure CEOs were also more likely to accept firm-specific risk within their compensation packages.

The team also examined what happened if a CEO was faced with disaster during their tenure. They found that only CEOs in the medium group were likely to make significant changes to corporate policies in the aftermath, reducing use of leverage and increasing cash holdings during the three years following a disaster. Those companies also tended to experience less stock volatility during the same period.

"This would appear to suggest that because these CEOs have been desensitised to risk they may underestimate the probability or costs of a disaster," says Professor Rau.

He puts these findings into the context of research elsewhere which suggests that exposure to natural disasters can affect financial decision making in both individuals and companies. He believes this work adds to a growing body of evidence challenging the assumption in classical finance theory that managers don't matter as much as the financial constraints within which companies operate.

He is also intrigued by findings in medical research that both supports the idea that experiencing adversity can have long-term effects on individuals, and suggests that a known biological phenomenon could drive these effects. This is co-option, in which the experience of adverse circumstances or trauma causes physiological alterations of brain development and function.

Professor Rau also highlights the fact that this research does not simply show how past experiences can affect future behaviour, but also that the way they do so is complex and non-linear. "In addition to shedding light on the causes of heterogeneous CEO behaviours, we hope our work will also help individuals in other walks of life to consider how their own backgrounds could influence their behaviour," he says. "Our results may have implications for the growing body of work examining the effects of investors' previous life experiences on investment strategy and portfolio allocation." Or in other words, it pays to know about a leader's experience, effectiveness and exposure to volcanoes.

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