Unchecked climate change presents a profound threat to economic growth and political stability, but despite widespread public concern, global emissions of greenhouse gases (GHGs) show no signs of declining. Indeed, current “business as usual” predictions imply that average global temperatures will rise by more than 4°C by 2100, with potentially catastrophic results (Wagner and Weitzman 2015).

Public debate about how to tackle this problem has largely focused on the adoption of some mix of pricing regimes. A large and lively literature has debated the relative merits of direct taxation versus some form of cap-and-trade regime (see for example Aldy and Stavins 2007), and currently there are nearly 60 such initiatives already in place or scheduled for implementation, covering around 20 percent of global GHG emissions (Henderson, Reinert, and Oseguera 2020). But global emissions have increased every year since the Kyoto Protocol, which committed developed countries to reducing their GHG emissions to 5 percent below their 1990 levels between 2008 and 2012, was signed. In 2015, at COP21 in Paris, 195 countries signed the Paris Accord, committing to reductions that, if executed, would hold warming in 2100 to about 3°C. But since then, only seven of the signatories have made plausible progress toward meeting their goals.

Here we argue that while putting in place an effective regime for pricing GHG emissions is more essential than ever, it is unlikely to be sufficient. Global warming needs to be limited to 1.5°C (2.5°F) above preindustrial levels in order to avoid potentially dangerous climate change.

Meeting this target requires cutting GHG emissions to zero by 2050—a rate that implies reducing emissions by about 10 percent a year for the next 30 years. This is almost certainly technologically feasible (Goodall 2020), but implementing a program that would achieve these goals would require sustained investments at the rate of roughly 3–4 percent of global GDP for many years and not only the complete restructuring of the power, transportation, construction, and agricultural sectors but also profound changes in consumer behavior. Reaching zero emissions, for example, requires that the world shift almost completely to an entirely plant-based diet.

A price on carbon is enormously important and would certainly act as an important spur to innovation and diffusion, but reworking the world’s energy sector, transportation system, and agricultural practices is going to be a massive undertaking even with appropriate public policy in place.

Fully greening the US power grid, for example, will require a host of systemic investments—from control systems to power lines to storage systems—and hundreds of regulatory approvals. Completely rethinking the world’s transportation systems, systems that incorporate more than a billion cars powered by the internal combustion engine, will similarly require a host of complementary innovations and close engagement with local and national authorities. Even when prices are aligned and consumers are receptive, technological development and diffusion takes time and is greatly assisted by the presence of firms willing to take the risks necessary to introduce new products and services. The cell phone was probably the most rapidly diffused technology ever launched, but ten years after its introduction it had yet to reach 10 percent of the population.

Even in the presence of a strong business case, introducing the systemic innovations required to decarbonize the world’s economy will be risky and difficult (Henderson and Clark 1990 and Gans 2016). The formal structure and
information processing of large, successful organizations come to reflect the structure of their environments. When innovation requires significant systemic change, established firms often have great difficulty understanding the ways in which the world is changing. Firms that have spent years learning to fine-tune existing processes and products often find it very difficult to act in new ways (Henderson 2020).

It is in this context that we hypothesize that actively encouraging firms to embrace an authentic social purpose might significantly accelerate the process of decarbonization and have a very significant effect on the problem of climate change. Following Henderson and Van den Steen (2015), we define corporate purpose as “a concrete goal or objective for the firm that reaches beyond profit maximization” and define such a purpose as authentic if the firm routinely makes costly investments in it at the expense of immediate profitability.

For example, in 2008, on his first day as Unilever’s CEO, Paul Polman announced that Unilever would no longer issue quarterly earnings guidance or reports. He urged shareholders to put their money elsewhere if they did not “buy into this long-term value creation model, which is equitable, which is shared, which is sustainable.” The share price fell roughly 6 percent, taking nearly €2/$2.2 billion off Unilever’s market capitalization.

Purpose-driven firms can afford to make these kinds of costly commitments because they often significantly increase productivity. Beyond the critical threshold at which people believe they have “enough,” relying on monetary incentives can be ineffective and even counterproductive (Henderson 2020, forthcoming). For example, the provision of monetary incentives decreases the motivational effect of setting ambitious climate targets (Ioannou, Li, and Serafeim 2016). Most human beings are driven by a deep need for some sense of meaning, the desire to be autonomous and competent at work, and the need to be in relationships with others (Pink 2011).

In authentically purpose-driven firms, the combination of a strong mission and the decision to treat employees with dignity and respect often creates ideal conditions for this kind of intrinsic motivation to flourish. Shared purpose both creates a sense that one’s work has meaning and a strong sense of identity, persuading people to go the extra mile in the service of the firm. Moreover, when employees are empowered to be their authentic selves at work, they are more likely to find work satisfying and interesting in itself, rather than approaching work as an instrument toward some other goal. This in turn leads to positive emotions like happiness and self-confidence, which in turn make it easier to build new skills, bounce back after difficult times, and be more resistant to challenges or threats. An enormous literature suggests that there is no reason to believe that responsible firms underperform their competitors (see for example Eccles, Ioannou, and Serafeim 2014), and more recent work using fine-grained employee-level data to measure purpose suggests that when the firm’s purpose is closely linked to its strategic goals, the presence of purpose in the workforce is positively correlated with profitability (Gartenberg, Pratt, and Serafeim 2019).

Authentically purpose-driven firms that have embraced making a difference in the face of climate change are ideally positioned to take the risks and spearhead the innovations that will be required to build a carbon-neutral economy.

In the first place, a commitment to common purpose greatly increases both employee effort and strategic alignment across employees (Van den Stein 2005). In the second place, purpose-driven firms are likely to select for employees who have prosocial preferences and share the firm’s values. In combination, these choices are likely to create unusually high levels of trust and a preference for cooperation within the organization.

Taken together, these capabilities allow purpose-driven firms to generate the high levels of clarity—and credibility—that enable organizations to build the kinds of strong, flexible relational contracts that enable firms to tackle the risks and manage the organizational ambiguity that are central to successful innovation (Gibbons and Henderson 2013; Helper and Henderson 2014).

For example, in the early 2000s Iberdrola and Enel—both firms that made early, public commitments to “doing the right thing” with regard to climate change—broke with the other major European utilities companies by committing to making significant investments in renewable energy, despite the fact that at the time renewables were significantly more expensive than traditional fossil-fuel-fired plants. At the time many of their competitors were openly
questioning whether climate change was caused by humans and actively lobbying against climate regulation. Ten years later, a major change in European utilities regulation in support of renewable energy took nearly half a trillion euros from the valuations of the top 20 European utilities firms, while Iberdrola and Enel emerged with significantly stronger financials. In the same decade, General Electric (GE) paid $14 billion for Alstom, a maker of the gas turbines used in gas-fired powered plants, and $30 billion for Baker Hughes, an oil and gas services company. Sales of gas turbines subsequently fell by more than 50 percent, and GE’s power business came under enormous pressure. GE sold Baker Hughes at a two-thirds discount and took a $23 billion write-down for its power segment, costing the company tens of billions in market capitalization.

Tesla entered the automobile industry in 2003 and quickly became quite successful. Tesla’s purpose-driven commitment to realizing a future in which electric vehicles replace traditional internal combustion vehicles has drastically changed industry dynamics. Tesla is now the most valuable automobile company in US history with a market capitalization very close to the combined value of GM and Ford, and global automakers are reportedly planning to spend $300 billion on electric vehicle technology over the next five to ten years.

Purpose-driven firms are much more likely to drive the kind of transformative innovation that is essential if we are to tackle climate change. They are also ideally positioned to lead the cooperative efforts that are also crucial to making progress. In agriculture, for example, widespread concern that climate change threatens the supply of key commodities such as palm oil, fish, and cocoa, coupled with the fear that being seen as contributing to climate change will increasingly become a public relations liability, has led some of the largest firms in the industry to begin the move to sustainable farming and fishing practices (Henderson 2020).

Since in many cases these practices are expensive—deforestation-free palm oil, for example, is significantly more expensive than conventional palm oil—these firms have pioneered the development of public/private partnerships across both industries and regions. For example, in response to NGO accusations that they were contributing to deforestation, McDonald’s spearheaded industry-wide efforts to preserve the Amazon rainforest, and Unilever helped find the Roundtable on Sustainable Palm Oil.

In cities across the United States, firms are partnering with each other and with local regulators to put in place policies designed to reduce GHG emissions. Our experience has been that the leaders of these coalitions are often deeply committed to a purpose beyond profits, and that this commitment has helped to persuade potential partners—and local NGOs and state actors—to explore the potential for cooperation. We know that at the individual level building long-term cooperation is much easier for prosocial actors. A similar dynamic appears to be playing out at the firm and industry level.

Our hypothesis—if correct—has significant implications for our understanding of corporate governance and the role of business in society. Within the Anglo-American business community, talk of “purpose” is currently fashionable. In January 2018, for example, Larry Fink, the CEO of BlackRock, the world’s largest financial asset manager, sent a letter to the CEOs of all the firms in which BlackRock held a stake that said, in part, “To prosper over time, every company must not only deliver financial performance, but also show how it makes a positive contribution to society.”

Eighteen months later, the Business Roundtable—an organization composed of the CEOs of many of the largest and most powerful American companies—released a statement redefining the purpose of the corporation as “to promote an economy that serves all Americans.”

Both statements were widely attacked as either simple reputation management or opening the door to a betrayal of management’s responsibilities to its shareholders. But we believe it may be more useful to interpret these kinds of statements as flowing from the increasing recognition that there are significant economic returns to being purpose driven in combination with the

recognition that climate change threatens the health of the entire economy.

What would it mean to take purpose seriously as a potential solution to the challenge of decarbonization? First and foremost, it would require developing new measures of performance. If investors are to be comfortable with the idea of firms pursuing goals beyond immediate profit maximization, it is crucial that they have access to measures of nonfinancial performance—like progress against GHG reduction goals—that are material, comparable, and audit-able. Much progress on this front has been made in the past decade through a mix of voluntary reporting standards, stock exchange reporting guidelines, and governmental regulations such as the European Union Nonfinancial Reporting Directive. These kinds of metrics are also critical to the maintenance of the kinds of voluntary cooperative arrangements that we outlined above. Cooperation can only be maintained if free riders can be easily identified.

Second, it requires embracing the idea that in some circumstances it may be both individually and collectively rational for firms to commit to a purpose beyond profit maximization even if such a commitment is costly in the short term.

In summary, we believe that it is a mistake to focus only on carbon pricing as a solution to climate change. We will not contain global warming without a global regulatory regime for GHG pricing. But such a regime is probably a necessary rather than sufficient condition. It will also be vital to encourage firms to make the organizational investments that can support the accelerated rates of innovation and cooperation that are vital to transition our economies toward pathways to meet the goal of limiting the temperature increase to 1.5°C.

REFERENCES


