



## About the Authors

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## I. Innovation and the Mexican Economy

In 1968 the economist Albert O. Hirschman published his influential paper "The Private Sector and Innovation in Mexico" in the *Journal of Economic Perspectives*. In this paper, Hirschman argued that the Mexican economy was heavily dependent on government intervention and that this was hindering innovation and economic growth. He proposed that the private sector should be encouraged to invest in research and development, and that the government should provide a supportive regulatory environment. This paper was a key contribution to the understanding of the Mexican economy and the role of the private sector in innovation.



between stylized, stolid Spanish and Aztec art and monuments and the highly innovative, whimsical, adventuresome poetry of Sor Juana Inez de la Cruz (and we also suggest, Mexican folk art).

The problem lies on the demand side—business models based on adoption of externally developed innovation have not required local innovation and well-meaning government policies have disincentivized progress at home. The problem lies also on the supply side—an education system that rewards rote learning and isolates academic from business endeavors has stymied innovation. While there are important signs of change among businesses, educational institutions, and regional innovation ecosystems, they are faint and fragile. In the coming decades Mexico must access its creative potential to build on and accelerate what has been accomplished, and to develop new approaches for socially beneficial innovation.

### ***Why Innovation is Important.***

In his classic 1996 *Harvard Business Review* article [“What is Strategy.”](#) Michael Porter described competitive strategy thus, “[it] is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value.” If a firm is to achieve a competitive advantage that is sustainable over the long term, it must do things its competitors cannot do. Operational effectiveness is not strategy. Porter wrote, “Operational effectiveness . . . Means performing similar activities *better* than rivals perform them . . . In contrast, strategic positioning means performing *different* activities from rivals’ or performing similar activities in *different* ways.” The Mexican maquiladora companies discovered in the early 2000’s that operational efficiency was insufficient as China was able to provide the same products to global value chains at lower cost and with comparable quality. They did not have a sustainable strategic position. The operations that survived the China shock, such as the

Delphi Automotive Plant in Ciudad Juarez, had developed an R&D capability that enabled them to establish a sustainable competitive position.

Porter argued that true strategy depends on performing unique activities that competitors find difficult to replicate. These unique activities can come from (1) meeting the needs of customers better than their rivals, (2) meeting the needs of a particular set of customers better, or (3) having unique access to specific customers. Today, nearshoring threatens to repeat the mistakes made by maquiladoras of the past by propping up the belief that competing on operational effectiveness and a geopolitically determined privileged access to the US market will create a sustainable long term competitive advantage. Mexico needs to learn from its early 2000's to













*Mexico and the "Economies of the Future."*

Mexico, like other Latin American countries with economies based heavily on resources and

3.

## Figure 1. The Economies of the Future





The results are more mixed when it comes to the labor impacts of efficiency improvements.

testing, and recyclability. In the aerospace sector Mexico's National Science and Technology Council (Conacyt) established a collaborative National Center for Aeronautics Technologies to support the growing aerospace sector in Mexico. Product improvement R&D leverages Mexico's abundant engineering talent to create important clusters in key sectors as suppliers to top tier

## Three Typologies of Innovation

A.O. Hirschman, Clayton Christensen, and Daron Acemoglu and Simon Johnson, have all developed typologies of innovation. They are not mutually exclusive; rather, they provide different and potentially mutually reinforcing perspectives on an important issue facing Latin America (as well as other regions).

### 1. **U L W L Q J L Q W K H O D W H b V + L U V F K**

Late industrializing nations that adopted the “import substitution” strategy (as did many in Latin America), could adapt externally developed technologies and jumpstart their economies by benefitting from global, technological advances. The problem was that this strategy did not develop the innovation capacity that first movers developed through a process of training, experimentation, and failure. Hirschman foresaw the problem that bedevils innovation in Latin America today. Firms participate in technologically complex global value chains, but invest little in fundamental R&D. This strategy has resulted in substantial benefits, but unlike the case in Korea, Taiwan, and other nations, it has increased dependency on foreign direct investment and failed to foster a capacity to develop high value-added businesses.

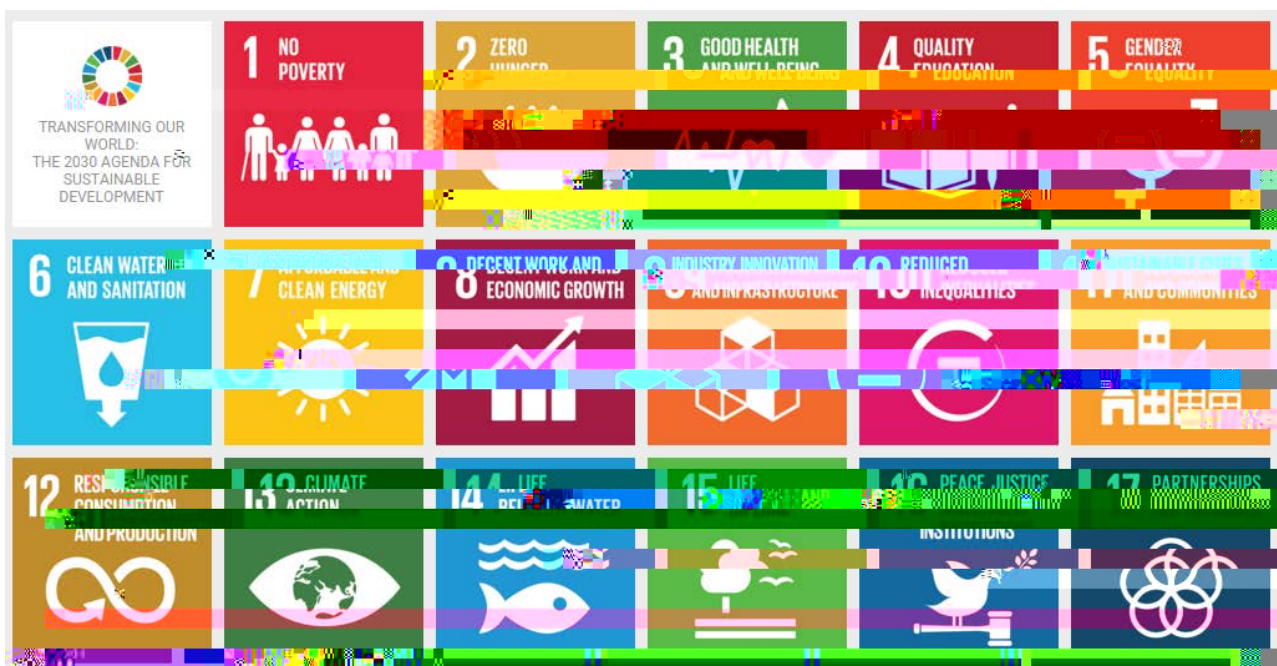
### 2.





climate change mitigation and adaptation, and biodiversity—encompassed by the UN Sustainable Development Goals (SDGs) represent critical unmet needs for Latin American (and global) society. The market is doing a demonstrably poor job of addressing these needs, but it is under increasing pressure to address them. With its enormous ethnic, biological, and cultural diversity, as well as its artistic heritage, Mexico is strongly positioned to serve as a laboratory where businesses of the future that meet needs defined by the UN SDGs can be visualized, tested, and deployed.

### [The Sustainable Development Goals](#)



The 2015 Sustainable Development Goals set 17 goals to be achieved by 2030 (Agenda 2030). They cover environmental and social topics that together would provide the conditions to “meet the needs of the present without compromising the ability of future generations to meet their needs,” as stated in the 1987 UN report, *Our Common Future*. Some are highly specific while others describe capabilities to meet those goals. They will require concerted action by government, business, multinational organizations, and society, and at the local, regional, and global levels. The UN has published yearly reports on meeting the goals. Each has been more pessimistic than the one before. The 2023 Report stated, “But halfway to 2030, that promise is in peril. The Sustainable Development Goals are disappearing in the rear-view mirror, as is the hope and rights of current and future generations. A fundamental shift is needed in commitment, solidarity, financing, and action to put the world on a better path. And it is needed now.” The UN Secretary General summarized the [2023 report](#) as follows:

“Unless we act now, the 2030 Agenda will become an epitaph for a world that might have been.”

## II. Addressing Mexico's Innovation Challenge

*When you **really** do not know what's coming next, there*







In the figure below we highlight two sets of actors whose role we interpret differently from conventional stakeholder theory: stakeholders without voice and owners and directors.

**Figure 2**







vision and less vulnerability to (and concern about) takeovers by short-term focused activist investors.<sup>18</sup>

In making decisions concerning the purpose of firms, owners and boards will need to balance three competing objectives as shown in Figure 3. Whether to focus on:

1. The short term or the long term? Whether to concentrate on short-term returns or to make investments in R&D that will enable the firm to compete for future opportunities.
2. The interests of shareholders or those of a broader set of societal stakeholders? Whether to address social issues such as climate change, deforestation, and inequality as opportunities or to focus solely on market issues that concern existing customers.
3. Long-

the fundamental purpose of the corporation, why it exists. Once they have made their choices, owners and boards must hire management committed to the defined purpose; they must ensure its implementation and protect management from activir3dP3.7(h)-5.7( r)-4n/Crom



scenarios to foster creative thinking, and leadership training. We have failed frequently, and cannot claim to have all the answers, but we have learned and improved.

Below, we distill the characteristics of successful, innovative, sustainability-driven firms; the absence of these characteristics has often been a predictor of failure.

1. *Purpose-driven leadership.* There has been a clear and pervasive sense of corporate “purpose” or its equivalent (the use of the term “purpose” is relatively recent). In the best cases the firm’s purpose stemmed from the commitment of the firm’s owners or board. It has gone beyond a pro-forma environmental policy or statement to become a constant and abiding presence across all the firm’s activities. This finding is consistent with what Canals argues. Where firms were successful, the most senior level of the organization, preferably the board, imbued a sense of purpose and a message that went beyond their direct reports, and diffused through the whole organization. This has applied both at the plant level and at the corporate level.

This sense of purpose-driven leadership has been much rarer among publicly listed companies. Among publicly listed companies, leadership has come from a highly committed owners and boards (for example at Natura, Danone, or Interface) or CEO (classically, P

encouraged us to work with line staff because, “ they know a lot” and “ their opinions matter,” were likely to succeed. In the best cases, teams developed creative solutions



diversity of opportunity, business competitiveness, and social and environmental sustainability.

*Regional Business Clusters*

In *The Competitive Advantage of Nations*

innovation, developing and attracting talents. The presence of venture capitalists and banks has also been critical to the development of clusters.

Clusters provide additional benefits beyond those that Porter identified. Experience has shown that entrepreneurs benefit from associations with their peers. They develop networks with other entrepreneurs, receive peer support and advice as they face new issues and challenges, and are introduced to sources of financing. Additionally, there exists what might be called the “Silicon Valley café effect”—two entrepreneurs meet at their daughters’ soccer match. They agree to meet for a coffee. As they meet, they identify a new business opportunity combining their talents, and form a third business to pursue their shared opportunity. We have witnessed this phenomenon in classes in Mexican business schools, as well as at entrepreneurship workshops for low-income entrepreneurs in which entrepreneurs have worked together to identify business opportunities and discover mutual interests in developing a new business. Regional clusters can also facilitate bottom-up regional governance that accounts for local needs and capabilities.

#### *Clusters for Regional Collaboration*

Elinor Ostrom won the 2009 Nobel prize in economics for her work on “polycentric governance” to protect what she called “common pool resources” (resources such as environmental amenities that are available to all but can be diminished by overuse or misuse). In her 1990 book [\*Governing the Commons: The Evolution of Institutions of Collective Action\*](#), she and her colleagues studied cases in which communities of users of “common pool resources” have evolved mechanisms to protect these resources through trust building









possible and to set guardrails within which firms compete fairly. The role of government is to





and anthropogenic pollutants). Surface water supplies will become increasingly volatile, varying between droughts and floods in all regions. Congestion and urban pollution in Mexico's major cities are critical. Violence and the absence of economic opportunity have contributed to urban migration. Lacking adequate housing, squatters will continue to invade aquifer recharge zones in major cities. One of the solutions must be to revive sustainable rural communities through local agriculture.

In the past Mexico has been a leader, introducing innovative infrastructure solutions. In 2013 Mexico City's Metrobus and pedestrian and bicycle infrastructure won the Sustainable Transport Award.<sup>29</sup> The Metrobus also won the 2009 Harvard Kennedy School's [Environmental Award](#) as, "an outstanding public-private partnership project that enhances environmental quality through the use of novel and creative approaches." Transitioning towards more sustainable community water, building, and transportation infrastructure, however, will pose numerous challenges that will require innovative thinking and demand major investments. There is no reason why, as before, Mexico cannot be a global leader in the development and adaptation of innovative solutions to the needs of sustainable communities and infrastructure. In a project for Mexico City's Attorney General for the Environment and Land Use Planning (Procuraduría Ambiental y de Ordenamiento Territorial, PAOT) we interviewed brilliant city planners, architects, and policy thinkers in academia, non-governmental organizations, municipal organizations, and private companies. The ideas are there; what are missing are the resources and will to implement them.

Equally important is the "soft" human infrastructure based on education and relationships. The image of a "lone genius" innovator is attractive, but often innovation is a social process

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<sup>29</sup> The [Sustainable Transport Award](#) is awarded annually by the Institute for Transportation Development and Policy to ". . . a city that has implemented innovative sustainable transportation projects in the preceding year. These strategies improve mobility for all residents, reduce transportation greenhouse gas emissions and air pollution, and improve safety and access for cyclists and pedestrians . . ."











and sustainable society with an ability to compete and prosper in a rapidly changing global economy.

A national conversation that includes the voice of marginalized peoples and regions as well as of those who have the resources and capabilities to drive change must be at the core of Mexico's post-2023 economic strategy. This conversation must address the fundamental challenges of inequality and environmental degradation embodied in the Sustainable Development Goals. It must recognize the importance of confronting an unfamiliar situation in which no single idea or set of ideas will be demonstrably correct. Creative ideas must be put forward and tested empirically. There is no magic bullet. Some ideas will work; others will not. Failure must be seen as a learning opportunity, not penalized. Innovations in technology, business models and public policy must benefit all; not just one or another party, region, or sector. No single group has the skills, knowledge, and resources to address this challenge. But collaboration between groups can create a resilient future for all.

