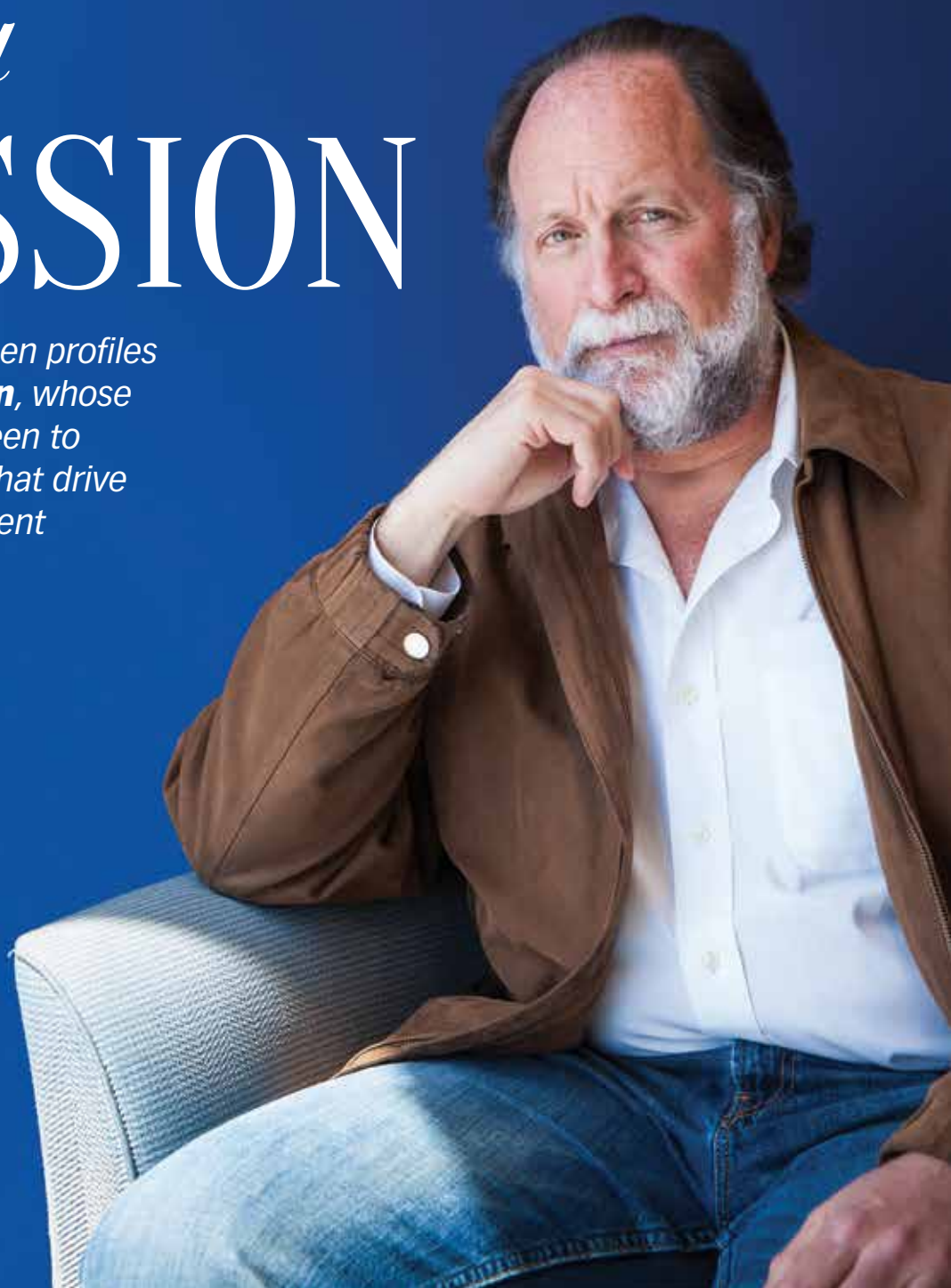
ICONOCLAST *with a* MISSION

Camilla Lund Andersen profiles ***Ricardo Hausmann****, whose lifelong quest has been to uncover the forces that drive economic development*



In nearly 40 years of navigating government, academia, and international financial institutions, Ricardo Hausmann has been on a quest to discover what makes some countries succeed and others fail. He likes to think of development as a game of Scrabble. "The process of development is really the process of accumulating letters and figuring new words that can be put together. And that's the arrow of development," he explains, sitting in his sun-filled office at Harvard's Kennedy School of Government.

This passion for uncovering the forces that drive development, he says, runs through the multitude of experiences that have shaped his professional life. "I never thought that I had different careers. I thought that I was playing the same game from different positions."

Overcoming binding constraints

Hausmann has been director of Harvard's Center for International Development (CID) since 2005 and professor of the practice of economic development since 2000. He has used his time at Harvard to refine his thinking on economic growth and binding constraints—the one or two biggest hurdles to growth a country faces. He works directly with governments around the world to help them identify sources of new growth.

"I was extremely bothered by the fact that most people have an enormous amount of trouble finding business models that work," he explains. "The history of most of the countries I know was very much tied up by one industry they had stumbled into that transformed the place—whether it was coffee, or cocoa, or oil, or tourism."

To tease out what was driving these choices, Hausmann developed the methodology of growth diagnostics with fellow economists and Harvard colleagues Dani Rodrik and Andrés Velasco in 2005. The main idea is that each country may be bumping up against its own unique constraints that must be interpreted and addressed. "The growth diagnostics approach that he was a part of pioneering was a great mix of practical policy tool and artistry," says Lant Pritchett, professor of the practice of international development at the Kennedy School and a friend and colleague.

The work on growth was the outcome of a dialogue that had started many years ago, in Venezuela. "The first time I met Ricardo was in some conference on foreign debt in Caracas back in the 1980s," Rodrik recounts. "He took me for a long walk on the streets of Caracas and never stopped talking—about economics, institutions, development, what we were all getting wrong. I remember thinking, what is this guy talking about? It took me a while to figure out that he was really onto something. Over the years, he never stopped bending my ear—and I have greatly benefited from it. He is unique in the profession in combining a policymaker's pragmatic touch with a scholar's pursuit of the big ideas. I count bringing him to the Kennedy School as one of my greatest achievements."

Indeed, the methodology of growth diagnostics exemplifies Hausmann's general approach to economics: always reaching beyond theory to test how the economics stacks up against reality. "Ricardo's continued engagement in the hurly-burly of real economies and policymaking is not a distraction, but rather a source of new and deep insights about economics," says Pritchett, adding: "Ricardo has a knack for following the facts about economies even where dogma, of left and right, would lead astray."

Never afraid to reach across disciplines for new methodologies with which to analyze problems, Hausmann has little patience for orthodoxy and lack of intellectual curiosity. "I think that good economics is driven by an attempt to understand, to own the problem," he says. "Too often, academic economics is the development of hammers in search of nails."

Hausmann's career has been about crossing boundaries and experimenting with different approaches in search of answers to hard questions. "He uses the tools of macroeconomics, microeconomics, econometrics, finance, sociology, history, philosophy, psychology, physics, and even fractal geometry. He combines those different disciplines, synthesizes them in a very elegant way, and creates his unique analytical frameworks," says Duygu Güven, a former student and research fellow who worked with Hausmann at the CID and is now with the Turkish Treasury.

Making a difference

The source of Hausmann's search for answers can be traced to Venezuela, where his parents, both Holocaust survivors, settled after leaving Germany and Belgium. They made a living producing leather purses, but when the garment industry left Venezuela in the 1990s for cheaper destinations, the question became: "If we are going to sell the garment business, what do we do now? We only know garments."

His parents' dilemma led Hausmann to reflect on the role played by human capital in development.

PHOTO: PORTER GIFFORD PHOTOGRAPHY

"I worked on this idea that the process of development really was a process of having a population that has mastered increasingly more diverse productive capabilities that can then be regrouped and reorganized," he says. Exploring the role of human capital in development became the driving force in his academic career.

Hausmann's first degree was a BSc in engineering and applied physics from Cornell University. But he abandoned physics and engineering for the social sciences. "Studying electrons in Venezuela was not as compelling as studying the economy of Venezuela, because electrons are the same everywhere in the world and the economy is not," he says.

After earning an MA and PhD in economics, also from Cornell, Hausmann returned to Venezuela to teach economics. In 1984, he began advising various government ministries, and in 1992 Hausmann was appointed minister of coordination and planning and also served as a member of the board of the Central Bank of Venezuela. In 1994, he left for Washington, DC, to become the first chief economist at the Inter-American Development Bank.

Original sin and dark matter

During his six years as chief economist, Hausmann continued to reflect on Venezuela's experience—shared by many other countries in Latin America. Why did the economy suffer from chronic volatility? Working with Michael Gavin, Ernesto Talvi, and Roberto Perotti, he explored why fiscal policy always seemed to be procyclical: instead of stabilizing the economic cycle, fiscal policy deepened contractions and fueled booms. The work on fiscal procyclicality led Hausmann and his colleagues to conclude that some countries have procyclical policies because their ability to borrow is also procyclical: they have market access in good times but not in bad.

Hausmann and Barry Eichengreen coined the term "original sin" to describe a situation in which a country is unable to borrow abroad in its own currency, only in a foreign one, such as the dollar. If a country suffering from original sin accumulates foreign debt, as developing economies do to spur development and growth, it will have a currency mismatch on its balance sheet so that if its currency loses value its debt becomes more expensive to service, often leading to defaults.

Hausmann's theory of original sin was contested by economists Carmen Reinhart and Kenneth Rogoff. Rather than attributing debt problems to currency mismatches, they argued that emerging market economies suffer from "debt intolerance," that is, the inability to handle levels of debt that advanced economies normally can manage with ease. That explains why some countries become serial defaulters, they said.

His background in physics inspired him to come up with the catchy term "dark matter" to solve a puzzle in international financial statistics: how can the United States, the world's largest debtor, earn more on its foreign assets than it pays in interest on its debt? In a 2005 paper—"US and Global Imbalances: Can Dark Matter Prevent a Big Bang?"—Hausmann and Federico Sturzenegger (now president of the Central Bank of Argentina) used "dark matter" to describe invisible assets, such as foreign direct investment and other exported know-how, that generated enough income to offset the interest the United States was paying foreign creditors. In physics, dark matter can be observed only by the gravitational pull it exerts. In international financial statistics, its existence can be deduced only by the income it generates.

As with original sin, the dark matter hypothesis sparked a vigorous debate that continues to this day.

From Washington to Boston

During his tenure at the Inter-American Development Bank, Hausmann was also involved in defining the so-called Washington Consensus—10 economic policy prescriptions that became the standard reform package for economies in crisis, but which have since been widely criticized. Hausmann attended the seminar where economist John Williamson first described the Washington Consensus and contributed a chapter on Latin America to Williamson's book. "In some sense, the Washington Consensus was a Latin American consensus about a very peculiar Latin American set of disequilibria," he explains.

As time passed, however, Hausmann became increasingly skeptical about whether these policies were delivering the outcomes economic theory predicted. There was some positive correlation, in the sense that countries that implemented reforms performed somewhat better than those that didn't. But in the late 1990s, financial crises in Asia and Russia spread to Latin America, resulting in a growth setback from 1998 to 2002.

"That forced me to rethink. Maybe there was more to growth than I had originally thought," he says. "We were stumbling into other things

that were preventing progress that had not made it into our thinking. And that coincided with me moving to Harvard."

This renewed quest for answers led Hausmann to the concept of "economic complexity," first proposed in a July 2007 article in *Science*. Many economists view complexity as his most important contribution to the field of development economics, says Chris Papageorgiou of the IMF's Research Department.

On his website, Hausmann says: "The secret to producing complicated things is not having smarter people: it is having many people who each come to the table with different and complementary knowhow. Richer societies have more collective knowhow and use it to make a greater variety of more complex products." Poor countries, he says, are able to make a "few simple products."

Putting Harvard's formidable resources to work, and using a multidisciplinary approach that drew on his background in physics, economics, and public policy as well as his expertise in networks and computer science, Hausmann set out to map how societies embed productive knowledge. This research resulted in *The Atlas of Economic Complexity—Mapping Paths to Prosperity*, published in 2011, which attempts to measure the amount of productive knowledge in each country.

That was just the beginning. Today, much of the work of the CID's Growth Lab centers on mapping those intricate networks of knowledge. The Growth Lab has grown from a staff of two research fellows in 2011 to 40 in 2017. The team includes mathematicians, physicists, economists, programmers and IT specialists, staff specialized in advanced visualization, and communications professionals who help maintain and develop the various Atlas websites.

This body of work is now widely used to analyze economies and inform policy advice. Many countries also work directly with the CID—including the governments of Albania, Mexico, Panama, and Sri Lanka.

It is perhaps the ultimate irony that Venezuela, the homeland of the development guru, is suffering its worst economic downturn in decades, coupled with hyperinflation.

Hausmann is blunt in describing the state of his country. "There are no excuses for Venezuela's catastrophic decline. It is the consequence of the adoption of policies that have been known by the world, by everybody forever, as leading nowhere. Whether it's multiple exchange rates, lack of fiscal discipline, expropriation, uncertainty over property rights, a lax monetary policy, price controls, we know that these things devastate a society."

Because of his outspoken criticism, the government said he is no longer welcome in Venezuela. This has not deterred Hausmann from continuing to weigh in on his country's affairs and building a research agenda that focuses on putting Venezuela on a path of recovery.

> "Ricardo has a knack for following the facts about economies even where dogma, of left and right, would lead astray."

The performing gene

Hausmann's magic in the research environment of the CID appears to carry over to the classroom. At heart, like all good teachers, he is a performer. At first glance, his three children seem to have chosen very different paths from their father. One is a museum curator, another is a playwright, and the third is a comedian. But all four have something in common: a talent for performing.

Sebastian Bustos, a PhD student and CID research fellow, describes how Hausmann's students gave him the ultimate accolade due a performer: applause. "Towards the end of the semester where everything starts closing down, and you start making sense of all the things that we have dis-cussed during the semester, usually the classes end with every student clapping, and they are so, so happy."

Where will he go next? wonders Papageorgiou: "What makes Ricardo special in the profession is that people are excited to see what he and his team at CID will come up with next." FD

CAMILLA LUND ANDERSEN is editor-in-chief of *Finance & Development*.