

Sustainability and Green Business in Latin America during Globalization Waves

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Abstract

This working paper examines the impact of modern business enterprise on the natural environment of Latin America during the globalization waves between the nineteenth century and the present day. It argues that although global capitalism created much wealth for the region, this was at the cost of massive ecological destruction in Latin America. During the first global economy considerable wealth was created from the exploitation of natural resources for the land-owning elite in Latin America, at the cost of large-scale ecological destruction. During the Great Reversal in the mid-twentieth century, public policies aimed at “catching up” resulted in the co-proliferation of hydro-electric schemes and resulting co-creation of ecological damage by firms and governments. In the new global economy since 1980, renewed economic growth and consumerism resulted in mountains of waste in increasingly polluted mega-cities. Biodiversity and the natural environment have been challenged across the subcontinent. However there were interesting positives as these ecological horrors also created opportunities for a surprising cohort of green businesses across sectors ranging from beauty and health to eco-tourism. In the twenty first century both business and governments in the region needed to address sustainability issues far more seriously, before a point of no return was reached.

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This working paper examines the impact of business and the natural environment in Latin America between the first global economy and the present day. There are now good general studies of the region's environmental history (Brailovsky 2006; Miller 2007). However much less has been written about the specific role and impact of business. This working paper seeks to provide an overview of the available evidence, with the aim of serving as a catalyst for new research.

It has to be noted from the start that the subject of business history and the environment has not been given the scholarly attention it deserves. Yet three areas of research and debate have emerged. First, the original topic of interest was the drivers of the growth of regulation and other responses to industrial pollution since the nineteenth century (Rosen, 1995; Uekötter, 1999). Second, when, why and with what consequences some firms in polluting industries such as chemicals and electricals sought to become more sustainable has been explored (Hoffman, 1997; Jones and Lubinski, 2012; Bergquist and Söderholm, 2015; Kristina Bergquist & Lindmark, 2016; Berghoff & Rome, 2017). Finally, a new stream of research has focused on when and why some entrepreneurs established for-profit green businesses which were explicitly focused on achieving sustainability rather than just making polluting businesses less damaging. This phenomenon has been traced back to the nineteenth century with early businesses created in organic food and wind and solar energy (Jones, 2017a; Jones 2018; Bergquist 2017). Strikingly, most of this research has stayed concentrated on the developed economies of the United States

and Western Europe, although there has been some recent attention to the non-Western world. (Austin, 2017)

This working paper is organized chronologically. The first section looks at the role of business and environment in Latin America in the first global economy. It is focused especially on the negative environmental impact of the region's vast commodity export business. The second section examines at business and the environment during the Great Reversal. It looks specifically at the destructive impact of hydro-electricity. The third section looks at business and the environment during the second global economy. It uses waste management, the beauty industry, and eco-tourism as case studies. During these decades Latin America became the home of some of the world's most ecologically progressive firms.

Sustainability and Green Business in Latin America in the First Global Economy

In nineteenth century Europe and the United States, it was the pollution arising from the new manufacturing industries and rapid urbanization which spurred the so-called first wave of environmentalism, which saw the emergence of new regulations, and the creation of the world's first national parks aimed at conservation (Guha, 2002). The application of chemical fertilizers to agriculture spurred the first natural food entrepreneurs, concerned about the impact of chemicals on human health and soil fertility (Jones, 2017a). In contrast, Latin America experienced little capital-intensive industrialization, low urbanization and very low use of chemical fertilizers, so these environmental stresses were not encountered.

Nonetheless, the first global economy did have a negative impact on the region. Ecological stresses that had been underway since before the colonial period rapidly intensified in the colonial period, and grew exponentially in the first wave of globalization (Dean, 1995) In Brazil, the arrival of the Portuguese saw massive destruction and depopulation of the Atlantic

tropical forest, although much less at that time to the Amazon tropic forest. (Pádua, 2010) In the Spanish colonies, there was also considerable and long-term ecological damage from deforestation and the arrival of invasive species, and especially mining and resulting mercury pollution. (Robins, 2017) This damage was magnified by the growth of Latin America as a source of commodities and food for the developed world during the first global economy. Western firms were often leading actors in this process, although in Argentina (and elsewhere) powerful local business groups, such as Tornquist and Bunge, also flourished as exporters of commodities. Regions typically specialized on particular crops or commodities, creating monocultural agricultures which swept away traditional ecological systems, often alongside the indigenous peoples who had inhabited the lands (Miller, 2012).

There were many examples. The banana plantations of the United Fruit Company and other US firms were notorious for damaging the soil: the firm would simply move to another region when the ecological damage was too great. A key problem was that the companies focused on single type of banana, the Gros Michel, which proved vulnerable the fungal infection known as Panama disease (Miller 2007, 129-33). Elsewhere market forces stimulated equally damaging developments. During the second half of the nineteenth century Cuba largely abandoned coffee production, in response to serious hurricanes, and focused heavily on sugarcane, which was less susceptible to high winds, even if destroyed, could be replanted and return to profitability in a single year. Compared to coffee, sugar consumed forests for space and for firewood, and depleted soils. (Perez 2001) There was a huge expansion of Cuba's sugar industry following the establishment of US military government over the island. This rapidly destroyed the forests in Camagüey in east-central Cuba. Much of the land cleared for sugar cane was unsuitable and an aggressive African shrub took over the land. (Funes, 2004)

Resources which had built up over millennia were rapidly depleted. A classic example was the Peruvian guano industry. From the 1840s, Europeans identified Peruvian guano as possessing high concentrations of nitrogen, making it the best accessible fertilizer. It was exploited under contract to the government by British and other merchants, who mined the product from coastal islands and promontories, and exported worldwide. Their application resulted in a huge rise in yields in the West, but by the 1870s, Peru had largely run out of guano. (Cushman, 2013). The Peruvian state responded by managing and protecting guano birds, often by killing predatory birds, and the recovering supplies were used to enhance national agriculture. However a boom in the fishmeal industry, used to feed the chickens and pigs that transformed Western diets after World War 11, depleted fishing stocks, caused bird populations and guano production to decline again (Cushman, 2013)

There were many other cases of ecological devastation caused by supplying global markets. In Venezuela, egrets were protected in 1917, but only after hunters had almost destroyed the population in order to harvest the breeding plumage, used for adorning women's hats. Most efforts at conservation were ineffective. From Argentina and Chile's Andean slopes, chinchilla pelts were exported to North America and Europe from the 1820s to manufacture fur clothing. By the last decade of the nineteenth century, exports averaged nearly half a million pelts per annum. A long fur coat required as many as 150 pelts. Chinchilla reproduction was limited by small litters, usually one set of twins, and populations crashed at the start of the twentieth century. In 1905, Argentina exported about 200,000 pelts. By 1909, exports had fallen to 28,000. Despite an international agreement in 1910 between Argentina, Chile, Bolivia, and Peru, which outlawed the trade, one species became extinct, and the two remaining, endangered. The demise of some native species was considered progress by some modernizing elites. In

Argentina, the native deer, the huemul, was driven to near extinction by overhunting and by the introduction of the larger, more aggressive European red deer. (Miller 2012)

Mining was hugely destructive of the natural environment as mountains were destroyed and landscapes scarred by new and powerful technologies. Occasionally, however, it stimulated interesting innovations. For example, solar energy was successfully employed by British engineers in the late nineteenth century to power water desalinization plants in Chile's Atacama Desert, the home of the country's vast nitrates industry. Later the Guggenheims, the large American mining company, made further investments in the technology in the Atacama desert (Arellano and Roca-Rosell, 2013; Arellano, 2015). The emergence of the new petroleum industry in early twentieth century Mexico and Venezuela caused extraordinary ecological devastation in both countries (Santiago, 2006).

As was the case elsewhere, there was little concern about ecological damage either in businesses or in governments. There were a handful of conservation efforts of the kind seen in Europe and the United States. Mexico was almost as early as the United States creating national parks. Mexico established Desierto de Leones as a forest preserve in 1876, and this became a national park in 1901. However while business, in the form of railroad companies seeking to expand their tourist markets, were important influences on the creation of the national park system in the United States (Jones 2017a), in Mexico governments drove their creation. By 1940 Mexico had 40 parks, all but two of which were designated in the 1930s by President Lázaro Cárdenas. Cardenas saw national parks as tools of the revolution, and attempted to incorporate within them the needs of farmers, ranchers, loggers, scientists, and the urban dweller, which explains why most were located near large cities in the central valleys. Mexico's interests focused on reclaiming already degraded landscapes, places of important cultural heritage, and

locations that were accessible to large sectors of the population which needed spaces for recreation. A significant figure in the Mexican conservationist movement was Miguel Angel de Quervedo, a French-trained hydraulic engineer who campaigned to protect Mexico's depleting forests and founded the Mexican Forestry Society in 1922. He was far more concerned to preserve the forests than peasants and the indigenous, who he blamed for deforestation. (Guha 2002)

In general, Mexico appears to have suffered great environmental damage during the first global economy. Business and government co-created ecological destruction. Particular damage was done by the draining of lakes and wetlands during the Porfirian export boom. The primary aim was the pursuit of fertile soils and irrigation water, but the draining of lakes was also motivated by the belief that they were health risks. The result was deforestation, flash flooding and enormous social costs because of the displacement of traditional peasant communities. (Tortolero, 2004). Mexico City's Grand Canal, completed by the British engineer Weetman Pearson, drained Lake Texcoco, which periodically flooded the city, but at enormous social and ecological cost. It speeded up the subsidence of the city, which sank by seven and a half meters over the course of the twentieth century (Miller 2007, 142-147).

Latin America received its own chapter in William Vogt's book *Road to Survival*, published in 1948, which presented a stark picture of the world's environmental stresses amidst growing populations. Vogt knew the subcontinent well as he had served as a high level official in a US Federal agency, the Division of Science and Education of the Office of the Coordinator in Inter-American Affairs (Jones, 2017a). The chapter was entitled "The Land on the Edge." It presented a bleak picture of ecological destruction in a region which had a harsh natural environment, large estates whose owners were motivated solely by profits, and governments

characterized by “corruption and incompetence,” which meant they were incapable of “responsible and intelligent management of natural resources.” He was particularly concerned about the destruction of forests for fuel which he saw as resulting in huge soil erosion problems. Waters, he observed, “freed of the leash imposed on them by the plant cover of the uplands, are ripping away the surface of the soil, carrying heavy loads of silt, flooding towns and cities, blocking navigation.” Although highly critical of local governments and poorly educated populations, Vogt strongly criticized “American lumbermen and American capital,” which he argued had played an “important and disgraceful role” in the “destruction of a continent.” In Latin America, Vogt noted, “there is neither organized public opinion nor sufficient technical knowledge to protect these basically poor countries against the despoilers

During the first global economy, then, Latin America’s natural environment was badly impacted by its role as a supplier of commodities and food to the West. Public Policy was largely oblivious to the damage being caused, although the case of Peru and guano was an exception. Both foreign and local businesses manifested evident ecological concerns. Latin America was simply seen as a region to exploit for the benefit of producers and consumers in the developed nations (Vogt 1948, chapter 7)

Sustainability and Green Business during the Great Reversal 1929-1979

The onset of the Great Depression after 1929 saw a reversal of the levels of integration seen in the global economy as tariffs, exchange controls and other policies dramatically reduced cross-border flows of trade, capital and migrants. This was bad for incomes, but might have had positive environmental consequences. However Great Reversal saw the focus on exporting commodities being replaced by strategies to promote national economic development. This drove a new set of sustainability challenges. Many countries on the subcontinent lacked fossil fuels,

although a handful – Mexico and Venezuela – did have large oil deposits. The response elsewhere was massive investments in dam construction, and the generation of electricity needed for electricity from hydropower. By 1900 a number of small hydro-electric power stations had already been established near large cities in Latin America. More dams followed during the interwar years, and there was a surge in dam building from the 1940s.

Brazil built the largest hydro-electricity capacity in Latin America. Both multinationals and governments were involved. In response to fuel shortages during World War 1, large multinational utilities including American & Foreign Power and the Canadian-owned Brazilian, Light and Traction Company began building hydro-electric facilities. However in 1937 a new Brazilian constitution prohibited companies with foreign shareholdings obtaining new hydro-electrical concessions. (Hausman, Hertner and Wilkins 2008, 211). As a result between the 1950s and 1970s most of the foreign electricity utilities withdrew from the country. However Brazilian Traction, renamed Brascan, remained active until 1979, when it sold the business to the government. (Hausman, Hertner and Wilkins, 2008, 248-250). By 2000 South America had over 900 large dams over 15 meters high, and 500 of them were in Brazil. As Miller has noted, most dams in Brazil - and indeed all of Latin America - were not built to meet demand for electricity, but to create demand. They were tools of development strategies (Miller, 2007, 160-1).

Hydro-electricity became hugely important in Latin American countries. In 2015 Brazil produced 9% of the world's hydro-electricity, in third place after China (28%) and Canada (10%). In that year hydro-electricity accounted for 62% of Brazil's electricity, 66 % of Colombia's, and 75% of Costa Rica's. Mexico and Chile were much less dependent on hydro – it accounted for 10% and 32% of national electricity relatively. In those two countries combustible

fuels (coal, gas and oil) accounted for 81% and 63% respectively of electricity generated. Wind and solar energy has remained unimportant until the present day with a handful of exceptions such as Costa Rica, which had 10% of its electricity generated by wind power by 2015. (United Nations Energy Statistics Yearbook)

The good news about the heavy reliance on hydroelectricity was that, after climate change was scientifically verified in the 1990s, Latin America did not rank as a major culprit. A ranking of the world's countries by 2014 per capita fossil fuel carbon dioxide emission rates ranked Qatar as number one and the United States at number 14. Famously "green" Sweden was ranked number 87. Chile was just a little higher than Sweden (85), while all other Latin American economies were more lowly ranked, including Mexico (98), Brazil (120), Peru (128), Colombia (138) and Costa Rica (143) (<http://cdiac.ess-dive.lbl.gov/trends/emis/overview.html>).

The construction of dams themselves was highly damaging to the environment. Tens of thousands of people, typically indigenous peoples, were displaced from their traditional homes. The dams modified the region's landscapes on a vast scale. They involved massive displacement of communities. In Brazil, the Itaipu and Sobradinho dams displaced 50,000 and 70,000 people respectively (Miller, 2007, 161). Often there was significant deforestation. This caused the destruction of the ecosystem and releasing carbon dioxide into the atmosphere. In some cases forests the size of small European countries were submerged. As reservoirs flooded land, there was decomposition of organic matter, and more methane and carbon dioxide emissions. As dams were developed, river ecosystems were fragmented, leading to an accumulation of sediments upstream and preventing vegetation downstream from being replenished. Despite initial plans to incorporate locks and recreational features, most dams ended up producing only electricity at the expense of fisheries, farms, and forests. In the Amazon, dams

sometimes even altered local concepts of time and season. Farmers, who relied on the region's annual flooding not only to fertilize their fields but to indicate the time to plant, were confused by rivers that began to run clear and with little deviation in volume. In lowland regions, new reservoirs sometimes bred mosquito populations so large as to make their shorelines uninhabitable. (Miller, 2012, 157-166)

The decades of the Great Reversal witnessed a further deterioration of the natural environment of Latin America. Hydro-electricity dams and giant cattle farms had very negative impacts. While this was an era of fledgling new, if still small, green start-ups in Europe and the United States, in industries ranging from food to renewable energy (2017a), there appeared to be few equivalents in Latin America.

Sustainability and Green Business in the New Global Economy

During the new global economy which began in 1979, Latin American environmental fundamentals deteriorated sharply alongside fast economic development and fast urbanization. There was mounting environmental pollution, deforestation, and declining biodiversity. It was in this period that the Amazon rainforest experienced dramatic reduction in the forest cover. (Pádua, 2010, 131). Indeed, between 2000 and 2010 Brazil accounted for over 50 cent of total world forest destruction. (Luna and Klein, 2014, 252).

Yet there was also a new awareness of environmental issues. Many Latin American countries established environmental protection ministries, which were often based on the Environmental Protection Agency created in the United States in 1970. (McNeill and Engelke, 2014, 198) A new Chilean constitution in 1980 included a clause that Chilean nationals had “the right to live in an unpolluted environment.” It was Brazil, however, which took a lead. The first ecological association in Latin America was founded in 1971 in Brazil. In 1985, after the fall of

the military government, a Ministry of the environment and Urban Development was founded. (Luna and Klein, 2014, 248-252). The United Nations Conference on Environment and Development, was held in Rio de Janeiro in 1992, and this event encouraged greater interaction between environmentalists in Brazil and elsewhere. (Hochstetler and Keck, 2007). There were examples of advanced urban, ecological planning. An example was the southern Brazilian city of Curitiba, which from the 1970s invested in use of water resources, creation of parks, and a vibrant public transport system. (Schwartz, 2004; McNeill and Engelke, 2014, 125).

There were considerable variations between countries. In Chile, Orihuela, (2014) has shown how a new generation of bureaucrats after 1990 introduced tighter environmental controls over the long-established Chuquicamata smelter, which had contributed to the growing pollution of the capital city of Santiago. In contrast, the Peruvian government sold the highly polluting La Oroya smelter to the US multinational Doe Run Company in 1997, and then proceeded to exercise little control over it. Doe Run was pursued for multiple environmental violations in the United States. In 2007 an American NGO identified La Oroya as one of the ten most polluted places on earth. (Blacksmith, 2007). Meanwhile a massive wave of Chinese multinational investment in commodities across the region was accompanied by further extensive environmental damage. (Peters, 2012).

In a number of countries green companies were created which became some of the most sustainable in the world. These included Brazil's Natura and, on a much smaller scale, many eco-tourism companies, especially but not only in Costa Rica. At the other end of the spectrum, some Brazilian lumber companies engaged in illegal logging which increasingly devastated the biodiversity of the Amazon. (Greenpeace Brazil, 2015). So-called "eco-trafficking" grew as a multi-billion dollar business run by transnational organized crime networks that spread

corruption, violence and environmental destruction. (Bargent, 2014) In some industries, the region was a distinct laggard. Although Chile may have had the world's leading organic wine company, Emiliana Vineyards, only 3% of total acreage was organic in 2014, compared to 8% in France. (Karlsson, 2014; Jones 2018).

Urbanization and Waste

Among the greatest drivers of environmental problems was fast urbanization. While 7% of Latin Americans lived in towns in 1910, the urban share had risen 57% by 1970 (McNeil, 2000). By 1975 Mexico City, with a population of 10.7 million, was one of the world's three mega-cities together with Tokyo (27 million) and New York/Newark (15.7 million). Latin American cities teemed with squatters. By 1990 there were a reported nine million Mexico City, and three million in São Paulo. (McNeill and Engelke, 2014, 115). By 2016 Latin America had four of the world's largest mega-cities: in fifth place Sao Paulo (21.3) million), in seventh place Mexico City (21.1 million), in 13th place Buenos Aires (15 million), and in twentieth place Rio de Janeiro (13 million) .(United Nations, 2016)

These mega-cities consumed energy on a massive scale. As they largely lacked quality public transport, and countries such as Brazil made explicit decisions to invest in roads rather than railroads during the 1950s, a growing number of automobiles generated greenhouse gases and air pollution. Winter inversions and mountain valley locations kept foul air trapped in cities such as Mexico and Santiago (Miller 2007, 179). Skyscrapers with glass facades consumed huge amounts of energy because of heat loss. Latin American cities, including Caracas, San Pedro Sula, Acapulca, and Fortaleza, also regularly topped lists of the world's most violent cities. The region also had cities with bad air pollution, like Coyhaique in Chile, Lima in Peru, La Paz in Bolivia, and Santa Gertrudes in Brazil, but none of them reached the highest ranks of the world's

most polluted cities. In 2018, according to the World Health Organization, fifteen of the world's most polluted cities were in India, and the remainder elsewhere in Asia and the Middle East. Latin American deaths from air pollution were way below those of Asia and Africa. (World Economic Forum, 2018)

Big urban populations generated mountains of waste. While in poor rural communities waste was generally recycled. In urban communities, it was thrown out. This caused massive ecological issues, and when simply dumped, resulted in big emissions of greenhouse gases. This was a problem faced by all industrial and urban societies, but in some developed countries over time policies were adopted which mandated recycling and less damaging forms of disposal. By 2012 Japan, 70% of household waste was turned into energy, most of the remainder was recycled, and only 1% put in landfills. The Latin American situation was very different. Overwhelmingly, waste was put into dumps or slightly less ecologically damaging landfills. Mexico had the highest recycling rate in Latin America, and it amounted to 3% of total waste disposal. (Hoorweg and Bhada-Tata, 2012, Annex L)

Latin American countries came to feature vast dump sites, such as La Chureca in Nicaragua, and the enormous 927 acres landfill Bordo Poniente in Mexico City, eventually closed down in 2012. In the same year the equally huge Jardim Gramacho in Rio de Janeiro was closed. These dumps were massive generators of greenhouse gases, becoming significant contributors to global warming.

Yet these dumps also provided jobs for tens of thousands of scavengers. This was a bottom of the pyramid occupation on the margins of society. This marginal status was reflected in the fact there were different names for scavengers in each country: for example, catadores in Brazil, guajeros in Guatemala, and cartoneros in Argentina. The work and lives of the scavengers

was hard and unpleasant, but their ecological impact was not necessarily negative. Brazilian catadores were estimated to recover about 90% of the post-consumer materials recycled by industry in that country in the 2000s. (Medina 2007).

The waste pickers also increasingly formed large formal organizations. The first membership based organizations of waste pickets in Latin America founded in 1962 in Medellin, Colombia. In 1980 the first such organization was founded in Ecuador in Cochabamba. In Brazil during the 1980s Catholic NGOs began organizing waste pickers in the main cities of the south and southeast. The first attempts to integrate waste picker co-operatives into municipal solid waste management also occurred in Brazil in Porto Alegre and Sao Paulo in Brazil, and then in Belo Horizonte in 1993 and Santo Andre in 1997. The 2000s saw the creation of the Brazilian national movement of waste pickers. By that decade a regional organization had been formed. The Latin American and Caribbean Network of Recyclers, Red LACRE, was a representative and integrative organization of the national movements of waste pickers of the continent, made up of delegates from 17 countries. (Chen 2015)

The Consumer Society and Beauty

The growing amount of waste reflected the fact that rising incomes during the new global economy, combined with income inequality, permitted a rapid growth of discretionary consumer spending. As in the developed West, consumerism contributed to growing environmental problems through wasteful packaging and other means.

The beauty industry provides an important example. Before the 1950s, perhaps before the 1980s, Latin American consumers spent little on beauty products, as few had the income for such discretionary spending. This changed greatly during the new global economy. Brazil had grown to be the fourth biggest market for beauty products in the world in 2017, after the United

States, China and Japan. Mexico was ranked seventh and Argentina sixteenth. Brazilian spending on beauty products was \$148 on an average for each Brazilian, the highest amount in Latin America. That of Argentina and Chile is just a few dollars less. Although individual Americans and Europeans spent more, Latin Americans stood out among emerging markets as spenders on beauty. Thais, South Africans and Russians spent well under half the amount of Argentines, Brazilians and Chileans. Chinese spent three-quarters less. Indians spent less than one percent than people do in these three Latin American countries. In addition Brazil, Mexico, Colombia and Argentina regularly featured in the top ten countries for cosmetic plastic surgery, alongside the United States and South Korea. Brazil, which offered a tax reduction for such surgery, was a world leader in breast implants and liposuction. Latin Americans are associated with developing a range of beauty enhancements, from the “Brazilian wax” to "jeans Colombianos." (Jones, 2017b)

Latin American beauty culture was the product of capitalist enterprise. From the interwar years Western multinationals built markets and created consumer desires. (Jones, 2010) Colgate-Palmolive which pioneered the radionovela concept in interwar Cuba, and pioneered the telenovela in 1958, when Televisa’s Canal 4 showed the Colgate-Palmolive- sponsored *Senda prohibida*.) Over time, as the beauty business became established, it also acquired a life of its own. Beauty salons and institutes flourished. The beauty industry became a means out of poverty for many women. Beauty pageants became big business. As television came to the sub-continent, they attracted good audiences, and television companies invested in promoting them. The growth of Venezuela’s large beauty industry has been ascribed to the growth of the Cisneros business group, the owner of the Venevision channel from the 1980s. (Jones, 2017b)

The beauty industry was the opposite of sustainable in multiple ways. Typically brands are sold in expensive packaging, which was later disregarded. The industry encouraged an emphasis on female appearance and body shape, emphasizing ideals which most women found hard to match. The U.S. and European firms which created the Latin American industry celebrated White beauty, which aligned well with the deep-seated racism throughout the region. As the industry grew, it remained profoundly White, reinforcing rather than challenging ethnic norms. (Jones, 2017b)

However, and perhaps surprisingly, a number of the locally owned cosmetics firms developed an early and persistent commitment to sustainability, health and societal concerns. This development is aligned with some recent research which has suggested that some firms in emerging markets pursued wide-ranging strategies focused in the social and environmental responsibility of business (Austin, Dávila, and Jones, 2017). An early example was in Colombia. Labfarve laboratories was founded in 1971 by Jorge Piñeros Corpas, a prominent Colombian doctor and scientist, who initially sought to make more affordable medicines for the poorer sections of society using plants and traditional practices, sourcing ingredients from the peoples of the Amazon. The company soon diversified into cosmetics and has made multiple innovations, including developing a natural Botox from an extract of the acmella plant. The wider Corpas Group came to include a hospital and a medical school and annual revenues reached \$7 million in 2010s (Interview with Gustavo Urrea, March 4 2010)

It was in Brazil, however, that a cluster of local beauty companies formed with health and sustainability concerns. Examples included O Boticário, founded in 1977 by Bolivian-born Miguel Kringsner, which built a big business with 4,000 franchised shops in Brazil targeting the

upper-middle segments of the market through eco-friendly products. In 1990, the firm established a non-profit organization to preserve the natural environment. (Jones, 2017b)

Social and environmental responsibility was a principal concern of what became the largest Latin American beauty company. Natura originated in 1969 by Antonio Luiz da Cunha Seabra as a small laboratory and cosmetics store in the city of São Paulo. Guilherme Leal and Pedro Passos later joined the business. The company adopted a direct selling model in 1974, forming an unusual three-man leadership. Seabra became increasingly convinced that the fragmented world needed to discover a new way of thinking, based on a holistic view of life and the idea of “trying to share in a proper way” (Jones, 2010).

Natura’s direct selling business was a beneficiary of Brazil’s so-called “lost decade” of the 1980s, as many retailers collapsed, while Natura was able to recruit thousands of female sales representatives who needed a source of income. By 2005, when the firm went public with an IPO, it had revenues of \$1.5 billion and employed 480,000 sales consultants throughout the country. By then Natura has been ranked as the fifth most valuable brand amongst all Brazilian public companies. By 2018 it had 1.6 billion consultants in Brazil.

Seabra and his colleagues were at the forefront of expanding corporate commitment to social and environmental responsibility. Between 1992 and 2001 Natura had a partnership with the Matilde Maria Cremm public school in Sao Paulo which became the basis for multiple other partnerships with the public sector. Natura became the first company in Brazil to adopt the 2001 Global Reporting Initiative. It has been carbon neutral since 2007.

Both marketing and sourcing strategies were targeted at achieving sustainability. In contrast to the perceived stereotypes of Brazilian body-worshipping, Natura criticized exploitative advertising and exaggerated promises. Seabra described the use of manipulative

advertising in the cosmetics industry as a “cultural crime.” In 1992 the company launched the concept of “The Truly Beautiful Woman” which asserted that beauty was not a matter of age but of self-esteem. In 2000 Natura launched the Ekos brand, made from Brazilian biodiversity products in a sustainable way. In 2007 Natura became a founding member of the non-profit Union for Ethical Bio-Trade. Leal was personally prominent in the Brazilian section of the World Wildlife Fund, and even stood as the Partido Verde (Green Party) vice-presidential candidate in Marina Silva’s unsuccessful campaign in 2010. The Partido Verde had been founded in 1986, and in 2010 came third place in the presidential election with 20 per cent of the national vote. (Luna and Klein, 2010, 250)

Natura’s willingness to walk the talk was evident in the international strategies of the firm. It avoided markets like Russia where environmental sensibilities were low. It also avoided markets such as China, which was rapidly growing as the world’s second largest beauty market, and for which Natura’s brands and pricing appeared a perfect fit. However China also mandated animal testing which Natura strongly opposed. This led the firm to walk away from acquiring a prominent Australian natural brand, Jurlique, which met all the firm’s requirements for ethical and sustainable business, except that it made large sales in China (Jones, 2012). Instead Natura opted to acquire another Australian natural beauty brand and retailer, Aesop, which among other things had a strong position on avoiding animal testing. In 2017 Natura also acquired the historic British natural beauty retailer The Body Shop, which had not flourished since L’Oréal had acquired it in 2006, and which never sold in China.

In 2014 Natura became the largest (by then it had sales of \$2.6 billion), and first publicly traded company in the world to obtain B Corp certification, designed to encourage the highest standards of environmental and social stewardship and transparency in business.

Eco-tourism

During the new global economy Latin America also developed a large international tourism industry. Weather and geography enabled the creation of multiple types of tourism. There was cheap mass tourism in Cancun and Rio de Janeiro, scientific tourism in the Galapagos Islands, and cultural and heritage tourism at Machu Picchu and other sites in Peru, and elsewhere. Frequently, as in the case of Machu Picchu, a World Heritage Site, accelerating tourist arrivals resulted in declining sustainability, both ecological and social.(Johnston and Rivas, 2013) There was also, however, a strong growth of eco-tourism. Costa Rica grew as the world's leading eco-tourism destination by the 2000s.

The conventional beach tourism industry which grew from the 1960s in Costa Rica was mostly created by local entrepreneurs for the local and other Central American middle classes. It soon attracted growing numbers from North America also because of the convenient location. Overall tourist arrivals increased from 155,000 in 1970 to 1.1 million in 2000. The country's tourism ministry provided incentives and tax breaks after 1985 and encouraged foreign investment for luxury tourist resorts. Costa Rica also received substantial aid from the World Bank, the IMF, and the US agency USAID, some of it explicitly to attract such foreign investment. Large US and European hotel chains invested in the country during the 1990s, mostly in large resort and vacation home developments along the coast. (Jones and Spadafora, 2017)

Mega resorts and beach tourism was a recipe for ecological destruction, but a distinctive feature of the Costa Rican tourism boom was that it came to include a significant ecological

interests. By the late 1990s, a survey suggested that the average foreign tourist spent approximately two-thirds of his or her time in Costa Rica in protected areas or traveling to them.

There was no simple resource endowment explanation for the growth of Costa Rica in eco-tourism. This small country, the size of Denmark, had attractive rainforests and considerable biodiversity: it was said to have 850 bird species, 6000 kinds of flowering plants, and 35,000 species of insects. However neighboring countries in Central America (and elsewhere) had even more bio-diversity and natural wonders. Honduras had extensive beaches located on its Atlantic coast, which included the unique Bay Islands with world class coral reefs. Guatemala had both vast biodiversity and the Peten region which contained uniquely impressive Mayan heritage.

Costa Rica's growth as an ecotourism hub rested on a co-creation by multiple actors, including business. The country had a longstanding and well-functioning democracy, and abolished its army in 1948 after a brief civil war. By the 1970s it had invested substantially in health care systems and education, achieving the highest literacy rate in Latin America. The country became an oasis of peace and stability at a time when Central America was otherwise overrun by guerrilla conflicts, government-supported death squads, and ruthless gangs. If such stability was a draw for tourists, whether green or not, the country was also open to foreigners who wanted to buy businesses. There were no restrictions on foreign people or corporations buying property, providing the potential to act as a host economy for expatriate, especially American, investors and entrepreneurs. (Jones and Spadafora, 2017)

These institutional factors favored all types of tourism, but some specific factors helped ecotourism. Foundational work was performed by non-profit scientific organizations, which both emphasized the country's multiplicity of microclimates, its rainforests, cloud forests, and coastal wildlife areas, and also brought the first groups of visitors from abroad, especially from the

United States. Scientists at the University of Costa Rica and various US-Costa Rican institutions such as the Tropical Science Center, and the Organization for Tropical Studies promoted biodiversity studies, conservation, and the creation of private forest reserves. Researchers from abroad visited these establishments and promoted them by word of mouth; by 1976, such “science tourism” generated an estimated \$1 million in revenues. They also inspired Costa Ricans, led by Mario Boza, to advocate for a national park system, which was established in 1969, funded by the national government and international philanthropic support. No lodges or guided tours, and few visitors’ centers or trails, were made available anywhere by the park service itself. (Jones and Spadafora, 2017)

The parks became a significant draw for private tour companies, making it worth investing to operate tours. Both expatriate and local Costa Rican entrepreneurs were active in developing such businesses. They were motivated by a love of nature and/or ecological views: given that the market was unproven and difficult at the beginning, this was not an activity likely to attract people hungry for large profits. The pioneering entrepreneurs shared the view that for-profits businesses could help sustainability rather than disrupt it. (Jones and Spadafora, 2017)

A pioneering tour company was Horizontes Nature Tours, founded in 1984 by Tamara Budowski and Margarita Forero, both then aged twenty-four. Budowski was the daughter of a prominent forest biologist whose work frequently took the family abroad for research in the wild. Both Budowski and Forero broke with family expectations in order to work in the travel business. They met at a college which offered a new degree program in tourism, Budowski later studied marketing in Miami, where she was alerted to the problems of mass tourism development. In Costa Rica, they struggled to get a conservation-oriented travel company started. Lacking capital, they initially only secured an outbound-only license. They finally broke

through by making an alliance with Sergio Miranda, a family friend of Forero who was beginning to develop the Marengo private reserve near Corcovado National Park, and who also owned a hotel. This arrangement, and Miranda's financial resources, allowed Budowski and Forero to bring eco-tourist into the country, first by offering nature tours of the national parks to the wholesale travel trade, primarily in the United States, in 1986. (Jones and Spadafora, 2017)

Horizontes initially focused on group business from the United States and Canada by creating tours for conservation and educational organizations. Such groups made up about 75% of their business in 1992, at which time the firm had expanded to employ 28 full-time staff, a majority of them women. It donated to numerous local causes, including the national zoo, as well as scientific and conservation organizations, and offered a free training course to forty guides working for other companies to improve their biological and ecological knowledge. Budowski publicly asserted that environmental sensitivity and protecting nature from overdevelopment were also good business. She was also firmly committed to the view that private business and non-profit scientific organizations were the key to building the industry, largely in the face of indifference from the government. (Jones and Spadafora, 2017)

If tour companies like Horizontes were important in getting ecotourists to the country, the creators of lodges and other forms of accommodation gave them somewhere to stay. Private nature reserves were by now the main attraction. Serendipity played a large role in the emergence of the first lodges. An early example was the Savegre Mountain Lodge. This originated in 1954 when brothers Efraín and Federico Chacón, who worked on a coffee plantation, got lost and ended up finding a beautiful location in the mountains. They returned with their families and created a farm. Access was only possible on foot or horseback, and they supported themselves through agriculture and selling cheese off the farm. Tourism started thanks

to Efraín introducing a few trout into the river, and it became a fishing destination. In 1971 the first cabins were built for visitors. (Jones and Spadafora, 2017)

It was at that time that the area was visited by two orchid-hunting Harvard botanists, who happened to remark in print on the large population of birds known as resplendent quetzals. These scientists and others, Efraín Chacón later recalled, “told [him] about how important it was to keep the environment and also [he] saw some people’s interest in nature.” The quetzals proved a huge attraction. In 1982 faculty and students from Southern Nazarene University in Oklahoma began visiting the area. Eight years later they created a field station to enable longer visits. In time, ecotourism reshaped the family’s business. In the mid-1980s they shut down their cattle farming. (Jones and Spadafora, 2017)

The Costa Rican ecotourism industry came to benefit from strong clustering, as the entire country grew as a green brand. This lowered entry barriers for new ventures, which could focus on establishing the credibility of their own firms; the argument and the infrastructure were by now in place to support tourism. By 2000 sixteen airlines had service to San Jose airport. Tourism became Costa Rica’s principal source of foreign exchange in 1993, surpassing bananas. The category was estimated to employ ten percent of Costa Ricans in 2000, many in rural areas. A virtuous circle of investment, ecological education, and sound environmental policies drove the recovery of Costa Rica’s forests, which had been restored to cover more than 40% of the country’s land area by 2002.

Trade-offs, however, were also apparent. Even the most environmentally sensitive international tourists arrived chiefly by fossil-fuel-burning jets. And even so-called “soft” nature tourists seek comfortable accommodations. Many who traveled to Costa Rica because it had become fashionable and had little interest in nature beyond beaches. These new types of

consumer created opportunities for boutique hotels and luxury eco-lodges, but as the expansion of the Internet in the 1990s opened up new travel booking options, the challenge for such businesses was to remain committed to sustainability. Although ego-tourists were often quite affluent, they more often as not used internet comparison shopping sites, which focused primarily on price. During the early 2000s, Tamara Budowski took the real lack of interest of the new eco-tourists, the building of more and more golf courses, the polluting practices of cruise ships and the commercialized killing of sharks and other animals in Costa Rica as a sign that, “despite all the efforts,” ecotourism “wasn’t working.” She continued to run her business until 2008, but found herself troubled by it and retired to seek new horizons in esoteric religion and the global eco-village movement. (Jones and Spadafora, 2017)

Conclusions

Modern capitalism since the nineteenth century has created much wealth, but at the cost of massive ecological destruction, which has been particularly severe in Latin America. During the first global economy considerable wealth was created from the exploitation of natural resources for (primarily) the land-owning elite in Latin America, at the cost of large-scale destruction of the natural environment. During the Great Reversal, strategies to “catch up” resulted, among other things, in the proliferation of hydro-electric schemes which caused further environmental damage co-created by both governments and business. In the new global economy, renewed economic growth and consumerism has resulted in mountains of waste in increasingly polluted cities. Biodiversity and the natural environment have been challenged across the subcontinent. However there were some interesting positives as these ecological horrors also created opportunities for a cohort of green businesses across sectors ranging from beauty and health to eco-tourism.

It was never going to be easy to protect the natural environment in a sub-continent which has been characterized since the nineteenth century by fragile and often corrupt governments, high levels of poverty and inequality, macro-economic instability, and closely-held business groups heavily invested in preserving family wealth. It was evident in the twenty first century that both business and governments needed to address sustainability issues far more seriously, before a point of no return was reached.

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