

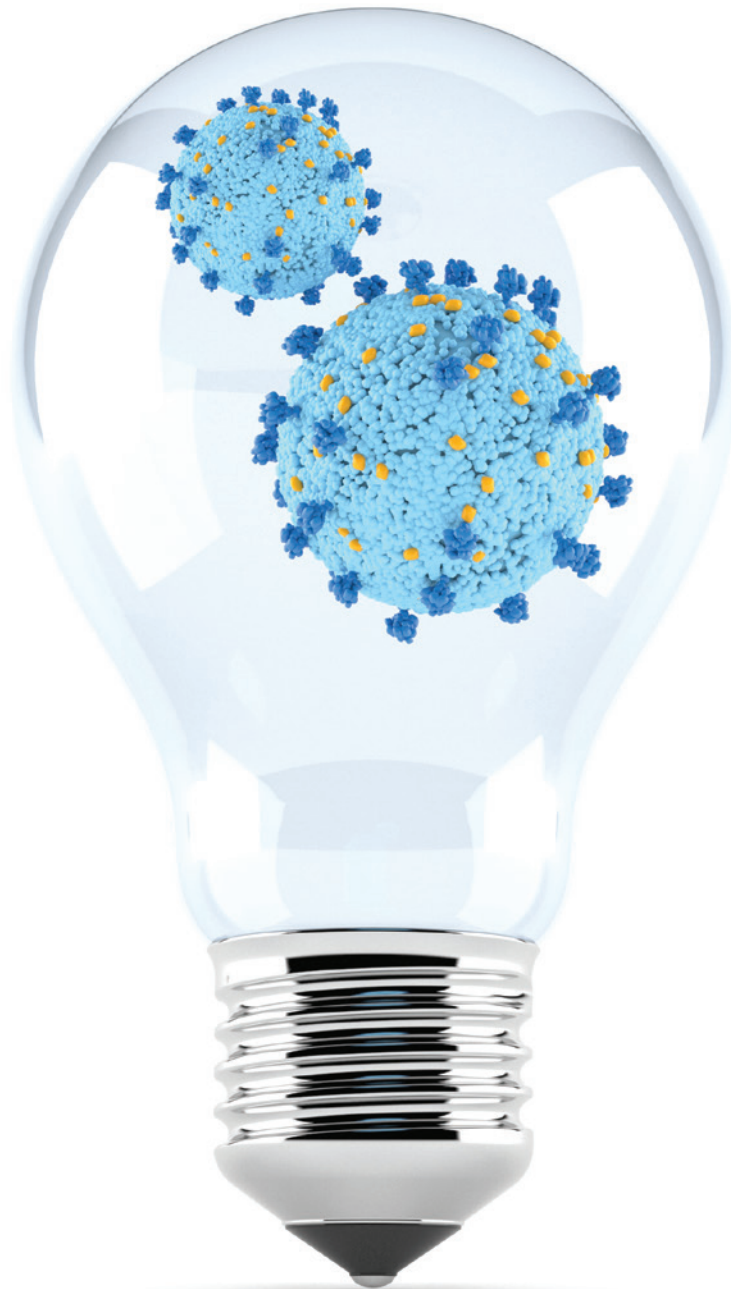


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THE LAUDER GLOBAL BUSINESS INSIGHT REPORT | 2021

# Innovation and Change During a Global Pandemic



THE LAUDER  
GLOBAL BUSINESS INSIGHT REPORT  
2021

# Innovation and Change During a Global Pandemic



The global coronavirus pandemic has left nothing unchanged. From the mundane activities of daily life to the lofty, long-term goals of governments, the outbreak has altered plans for everyone and everything in its path. The students at the Joseph H. Lauder Institute for Management & International Studies have not been immune to the disruption. For years, this report has been the result of months of work from students who immerse themselves in an intensive course in their program of concentration, then follow up with field study that takes them to various parts of the world. But the pandemic halted travel and pushed classes online. And the students, much like the nations and people they studied, learned to rise to the challenge.

Without the option of field study, the students conducted interviews via phone and video with experts and sources who described what they could not witness for themselves. Without a physical classroom, they used every digital tool available to collaborate on their articles, learning to work together in the new normal created by the disease. Their efforts reflect a microcosm that is being repeated in grand scale around the world. Across Latin America, entrepreneurs quickly realized that the seismic shift to online shopping during the pandemic presented unique opportunities to grow their businesses. In India, the economic devastation wrought by the pandemic is reshaping the automotive and public transportation industries in the world's second-most populous nation. The pandemic is also revealing the inequality gap in sharp relief, raising questions about how governments around the globe provide public education, invest in infrastructure and choose their economic priorities.

There are bright spots amid the COVID-19 death and despair. China's youth are leading the way in esports, which are proving to be the games of the future. Consumers are using their purchasing power to transform whole industries, including alcoholic beverages in Europe and Russia, fashion in sub-Saharan Africa and plant-based protein in the United States. And restless entrepreneurs are flourishing against the family-owned conglomerates of South Korea.

Nelson Mandela, a man who was well-acquainted with hardship and adversity, said, "It always seems impossible until it is done." The world will emerge from the grip of the pandemic, perhaps forever changed. In the meantime, innovation continues because the human spirit endures.

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## COVID-19's Impact on Transportation in India

*This article examines the economic forces that are shaping the automotive and mobility industries in India, which were hit hard by the coronavirus pandemic.*

The global coronavirus pandemic has had a devastating impact on India, resulting in more than 20 million confirmed infections and nearly 220,000 deaths by early May 2021. Ranked by the World Bank as the fifth-largest economy in the world at \$2.83 trillion GDP in 2019, India was optimistically projected to grow to \$5 trillion GDP by 2024. However, the World Bank noted that the economy was going through a pre-pandemic slowdown

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“Even before the pandemic, the mobility sector in India had been facing limited growth.”

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that is now exacerbated by more than a year of COVID-19. The financial implications have been so detrimental that, according to the Indian Ministry of Statistics, the country's growth in Q4 (Jan-Mar) 2020 plunged to an unexpectedly low level of 3.1%. In the following quarter, the economy shrunk by 24%, compared with the same quarter in the previous year.

Unemployment shot up from 6.7% in mid-March 2020 to 26% in April 2020, resulting in 140 million people losing their livelihood. Thousands of migrant workers had to head back to their hometowns in light of a complete economic standstill. *The Hindu* newspaper reported that the Indian economy was expected to lose over \$4.5 billion every day during the first 21 days of the lockdown, with less than a quarter of the country's economy being functional.

India is a manufacturing hub because of cheap labor costs and the availability of raw material. The automotive industry is the fourth-largest in the world and accounts for \$250 billion. From March 2020 to May 2020, major automotive companies including TATA Motors, Ashok Leyland and Mahinda had to shut down operations during four lockdowns. Supply chains were put under severe stress, and future projections were bleak.

Even before the pandemic, the mobility sector in India had been facing limited growth. Statista's data for 2018 to 2019 motor vehicle show that sales fell by approximately 14%, from an all-time high of 4.4 million units to 3.8 million the next year. According to a June 2020 McKinsey study,

multiple factors contributed to that drop, including lack of consumer liquidity and higher vehicle prices. These numbers further decreased at the onset of 2020, with sales of passenger vehicles and two-wheelers falling by 18%.

The COVID pandemic has exacerbated this matter significantly. The focus on social distancing and self-isolation has created a large dent in the shared mobility spaces, including public transport and newer modes such as digital ride-hailing. An assessment by the Organisation for Economic Co-operation and Development of the impact on the transportation sector revealed that the suburban rail ridership plummeted from 13 million daily passengers to almost none during the lockdown period, while bus transport traffic fell from 70 million to 4 million daily passengers. The business side of transport and mobility was not spared either, with the daily freight flow dropping by 33%, from 3 million tons prior to lockdown down to 2 million after. Similarly, consumer vehicle sales are projected to be drastically affected. According to the McKinsey study, vehicles sales are further expected to drop 20% to 30% in 2021, with the most precipitous drop in commercial vehicles and three-wheelers. A milder drop of 10% to 15% for two-wheelers is expected.

This shift in vehicle demand reflects a pandemic economy operating at a reduced pace. More consumers turned to e-commerce during the pandemic, engendering a modest uptick in the use of two-wheelers, which are the primary mode of delivery drivers in India. Services such as Swiggy, Zomato and Amazon have mitigated the loss in two-wheelers sales, but the numbers are still below pre-pandemic levels.

Despite the current difficulties the auto industry is facing, there is hope for a speedy recovery once the pandemic is under control. Sales are forecasted to return to pre-pandemic levels, but the demand for vehicles in India will remain significantly altered by pandemic factors. The main trend is the increased adoption of two-wheelers and three-wheelers, which is expected to continue. Electric vehicles (EV) are improving and becoming an increasing attractive alternative for consumers. The adoption of small and shared format e-Mobility is further encouraged by government policies such as The Faster Adoption and Manufacturing of Hybrid and EV (FAME) program, which includes \$1.4 billion in subsidies until 2022. In what

follows, we will deep dive on how ride-share and food delivery are impacting India's future of mobility.

## The Ups and Downs of Ride-sharing

While travel demand in India increased drastically over the past few decades — driven by an increase in wealth and population — Indian public transportation hasn't developed as quickly. The result is high levels of congestion, upwards of 150% more compared with other Asian countries. As such, technologists, operators and policymakers are coordinating efforts to push the mobility sector in India, particularly with ride-share and food delivery. COVID-19 has adversely impacted India's rideshare and food delivery industry, driving demand to an all-time bottom.

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“Despite the current difficulties the auto industry is facing, there is hope for a speedy recovery once the pandemic is under control.”

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Notably, the use of private vehicles is relatively high in Indian cities compared with other major cities across Asia, further aggravating congestion and pollution. Ride-share and food delivery are two ways through which the mobility sector in India is increasing vehicle utilization and ultimately increasing economic opportunities for businesses and drivers — and providing value for its customers. Ride-share vehicles have twice the utilization (measured by kilometers per vehicle per year) on average compared with private vehicles. Therefore, many transportation and mobility leaders see ride-share as a mechanism to feed public transport, especially if the pricing and incentive structures are created to encourage multimodal transport.

During lockdown, ride-share companies such as Uber and Ola experienced a sharp dip in bookings and usage — by almost 95% — as the government restricted nonessential movement. These firms were required to pivot quickly, particularly focusing on driver and rider safety and cost-cutting initiatives. In order to curb the spread of the virus and facilitate social distancing, Uber and Ola suspended

their shared ride services, which allow riders to split the fare with unknown co-passengers. This service often makes up 20% to 30% of the business in major markets, therefore impacting the sector significantly. Additionally, ride-share firms provided personal protective equipment (PPE) and cleaning supplies for drivers, and they launched new services to facilitate transportation for health care workers. Uber, for example, launched its UberMedic product, outfitting vehicles with roof-to-floor plastic sheeting and partnering with National Health Authority to provide free rides. To conserve cash, both companies laid off a total of 2,000 people. The ride-share industry has seen an uptick in demand as restrictions have loosened. According to Uber's Q2 2020 Investor Presentation, Auto, Moto, and Taxi products have recovered up to 80% faster than cars in key markets like India.

Food delivery is a key factor of the Indian mobility industry, fueling growth for small restaurants and provides earnings opportunities for couriers nationwide. Mobility players such as Ola have tangential businesses in the food delivery space (Ola Food), so the pandemic has impacted how the company is reinvesting into its own business. While major food delivery players nearly doubled gross bookings in the U.S. during lockdowns, the Indian market experienced severe negative impacts and declines of nearly 20% to 30%. This could be attributed to restaurants closing, a shift towards home-cooking and the exodus of migrant workers who work as food delivery drivers. As of September 2020, India's online food delivery industry had recovered 85% of its pre-pandemic sales, according to Zomato founder and CEO Deepinder Goyal.

## The Nascent Electric Vehicle Industry

2020 was an inflection point in electric vehicle adoption in India. The Auto Expo, held in February 2020, painted a promising picture of the critical role EVs will play in the future. Government support for EVs was clearly signaled by the rollout of the fifth iteration of Bharat Stage Emissions Standards, also known as BS-VI, to regulate the output of air pollutants from petrol and diesel vehicles, and auto players obliged.

The EV industry in India is nascent. However, the government has laid out ambitious plans for the next decade. While electrification of two- and four-wheelers

is around 1%, and that of three-wheelers (e.g., electrified rickshaws) is currently around 39%, the end goal is 80% electrification for both two- and three-wheelers, 30% for four-wheelers, and 45% for buses by 2030. Making India's mobility shared and electric will reduce energy consumption and carbon emissions by 64% and 37%, respectively, by 2030.

Since COVID-19 hit India, the auto industry, which was already struggling to keep up with BS-VI emission deadline, was hit by a significant blow when a 21-day lockdown was imposed in the country. Several market changes induced by the pandemic have had a negative impact on India's EV transition, including a disruption in the EV supply chain, the reduction of disposable income, and a decline in oil prices that makes gas-powered vehicles more attractive.

India is not a prime manufacturing hub for EV components. The EV supply chain is highly dependent on China at this time, as it is the largest component supplier to the global EV manufacturing ecosystem. However, the Indo-Chinese supply chain is facing headwinds due to two simultaneous levers, namely COVID-19-related disruptions and trade tensions. Disrupted supply chains are having a short-term negative impact on EV manufacturers around the world, but heightening trade tensions will heavily weigh on the medium- to long-term EV cost reduction roadmap and delay adoption. The recent spike in unemployment, in tandem with India being a cost-sensitive market, means consumers may not warm up to EVs until upfront costs are further reduced. Declining global crude oil prices combined with relatively limited financial incentives for EV purchases are negatively impacting EV adoption rate. A higher total cost of ownership for EVs will continue to keep the rate of transition low if oil prices do not rise in the near future.

## India's Infrastructure Problem

In addition to economic shocks the automotive industry is experiencing due to the pandemic, basic infrastructure is a key factor potentially constraining the future of mobility in India. Without suitable infrastructure, mobility initiatives such as autonomous vehicles could be threatened.

In some Indian cities, there are well-maintained roads and highways that would prove useful for autonomous vehicle implementation. Umesh Macwana, an operations expert formerly with TATA Motors and Wabco, cited this

specific fact and said that parts of Delhi, in particular, have the infrastructure necessary to support autonomous and electric vehicles. But outside of major urban centers, there are clear challenges and implications. To truly enable autonomous vehicular capability, there must be infrastructure both inside and outside of the vehicle. Autonomous vehicle developers in India must contend with extreme road conditions, including major potholes, animals, congestion and drivers who do not obey traffic signals.

The vehicle also must be connected. A requisite network has not yet been established throughout the country and will take substantial investment as a separate endeavor. An alternative exists: car-mobile links using cellphones and associated 5G networks. This potential connectivity patch, referred to as Cellular-Vehicle-2-Everything (C-V2X), is being promoted by Indian telecom operator Vodafone Idea and could offer a temporary solution to data connectivity issues.

Lastly, as Macwana pointed out, the Indian government is a slow-moving bureaucracy that is not quick to approve new technologies. However, there have been some positive developments in the past several years, including a commitment to invest in better infrastructure. In 2020, the government announced a record national

highway construction of 3,979 kilometers and identified infrastructure development as its major focus area through 2023. During this period, the government plans to allocate \$1.4 trillion in support of sustainable development. Through initiatives such as these and parallel development in connectivity, the Indian government hopes to enable the accommodation of autonomous and electric vehicles in order to usher in the future of mobility.

Despite the challenges India faces as one of the countries most affected by the pandemic, there remains an optimistic outlook for growth, development, and adoption of sustainable and affordable transportation options. Continued private and government investment in electric and autonomous vehicles, paired with the requisite associated infrastructure, will ensure a strong return for the automotive and related industries after the pandemic subsides.

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*This article was written by Sagar Chopra, Gaurav Gidwani, Mansukh Singh, Joseph Mourad and Jim Gianakopoulos, members of the Lauder Class of 2022.*

# The Pandemic's Effect on Sustainable Innovation in the EU

*Sustainability was top of mind when the Paris climate accord was signed in 2016. Then the coronavirus pandemic swept across the globe in 2020, leaving economic devastation in its wake. European leaders are trying to balance the need to fund the recovery with the need to fund solutions to pressing environmental problems.*

In March 2020, mere days before the scale and impact of the COVID-19 crisis became clear, Europe achieved its “man on the moon moment,” as European Union Commission president Ursula von der Leyen pointedly described it. After intense deliberation, the commission set forth what is commonly referred to as the EU Green Deal — a set of regulation changes and legislation to achieve net carbon-emission neutrality by 2050 across the bloc, including a cut of more than 50% in emissions until 2030 as well as environmental plans for key sectors. The plan's total cost of roughly €1trillion is in addition to the Multinational Financial Framework (MFF) that the EU adopted in 2017 and that initially was devoid of any significant elements related to sustainability.

that weather-related losses to the economy are already amounting to over \$210 billion globally per year, twice as high as a decade ago. According to the WorldRiskReport 2020, Europe in general is characterized by a “rather low exposure” to climate-related disasters. But three countries in the EU — the Netherlands, Greece and Romania — bear a high risk due to their topography and geographic location, making sustainable development a more imminent threat to the bloc as a whole.

The COVID-19 pandemic has become a crucial test for the EU's sustainability efforts. Will these efforts be subsumed by the worldwide economic crisis ignited by the pandemic, or will they be reinforced in line with von der Leyen's claim to “reconcile the economy with its planet”?

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“The COVID-19 pandemic has become a crucial test for the EU's sustainability efforts.”

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Although parts of the deal are vague in detail, this shift in strategy was applauded by many observers who noted that economic development had long been prioritized over sustainability. However, questions persist over the EU's level of commitment. Is the organization merely paying lip service to the Fridays for Future generation of environmental activists led by Greta Thunberg? Or is it trying to establish itself as the one global power that takes up the cause of sustainability after former President Donald Trump withdrew the United States from the Paris Agreement?

Climate change is taking a toll on the world economy. A 2020 study conducted by reinsurer Swiss Re estimates

## Two Views on Spending

Mindful of the new challenges posed by the pandemic, experts generally take two approaches to the issue of how funding should be allocated in the EU. The first view is one that is focused primarily on saving the overall economy rather than looking at sustainability. The second approach seeks to double down on sustainable funding initiatives.

The first view is centered around the idea that because of the sharp economic downturn that COVID-19 has caused in the EU, the Eurozone needs policies aimed at recovery. The EU Green Deal money should be used to tackle short-term economic needs rather than to be deployed towards environmental initiatives. In other words, it is more important to solve the economic issues than to solve sustainability issues at this point.

It is not without reason that people are worried about the economy. In January 2020, the World Bank predicted a 2.6% rise in GDP growth in Europe; by June 2020, it



revised that estimate to a decline of 4.7%. Overall, GDP in the EU declined by 14.5% in the second quarter of 2020. Germany and Spain saw its economies shrink by 11.7% and 22.1%, respectively, during the same period.

The German government's bailout of Lufthansa is an example of how many European governments are prioritizing the economy over sustainability. In May 2020, Lufthansa got a €9 billion rescue package from the government, which subsequently received a 20% shareholding in the airline. The rescue package laid out a plan for Lufthansa to get back on its feet and to repay the money by the end of 2023. While the plan clearly aims to make Lufthansa profitable again, it fails to account for what the expectations are on the sustainability front. In fact, airline bailouts in Europe have largely been focused on economic gains and lack any substantial "green strings" attached to them. Similar rescue packages for KLM and British Airways also have swept sustainability issues under the rug and rather focused on getting these airlines back to healthy pre-pandemic financial levels. There is, however, one example where sustainability has been in focus and aligned with the sustainability efforts set forth in the EU Green Deal. In June, the Swedish government, which owns 14.8% of Scandinavian Airlines, agreed to participate in a bailout of the airline on the condition that the company sets tougher emission standards and goals to meet the demands set out in the Paris Agreement.

The second and more prominent view among experts is that policies to address the challenges from the pandemic should have green strings attached. "The crisis made people insecure and worried about the future generations and the risks that they were exposed to," said Annette Windmeisser, desk officer at the German Federal Ministry for Economic Cooperation and Development. And Yair Re'em, an investor in sustainable breakthrough innovations, likened the climate crisis to a "pandemic on steroids."

The European Commission took the same stance in designing its largest-ever stimulus package, a €750 billion recovery plan dubbed Next Generation EU (NGEU). The money, which will be distributed to EU members in loans and grants, comes with green strings attached. A total of

25% of the funding is set aside for climate action. "The recovery plan turns the immense challenge we face into an opportunity, not only by supporting the recovery but also by investing in our future through the European Green Deal and digitalization," von der Leyen said in a statement.

EU members have not yet finalized their pandemic response plans that include the budget allocation from the NGEU. Each plan will be assessed at the European Commission level, including how they account for the European Green Deal objectives:

- Zero net emissions of greenhouse gases by 2050
- Economic growth decoupled from resource use
- No person and place left behind

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"The second and more prominent view among experts is that policies to address the challenges from the pandemic should have green strings attached."

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These agreements among nations, however, are nonbinding. Compliance with climate regulations will require accountability at the country level, but economies more reliant on coal such as Hungary or Poland, also those that require more financial assistance, have already declared to not be bound by the 2050 goal. There is talk of conditionality to access the NGEU, but so far there is no concrete decision on how it will be reinforced.

Part of the NGEU budget will also be dedicated to First of a Kind (FOK) projects that require high Research & Development investments to foster innovation beyond the more established and widely adopted technologies. Though advances look promising especially for photovoltaics, offshore wind, waves to energy and hydrogen technology, investors are very risk averse to these unproven technologies, possibly undermining the potential for new solutions.

## Germany's Green Energy Valley

Despite investors' aversion, real change seems to be happening within the current regulatory framework and funding. The best example of this change is the Energiewende, which is an ongoing energy transition started in 2010 by Germany, the European leader of sustainability. Germany's startup ecosystem is nicknamed "Green Energy Valley" due to its leading role in developing businesses that help to accelerate the transition towards a sustainable economy. According to research conducted by Borderstep Institute in 2020, 21% of all startups in Germany are already in a "green economy" and contribute actively to the country's sustainable future because their products make a significant contribution to environmental and climate protection.

Green startups are as profit- and growth-oriented as traditional startups, but they create another social and ecological impact through their activities. Thermonodo, founded in 2012, is a leading heating installer for family homes. It runs an online platform that advises homeowners on how to modernize their heating system. With 175 skilled workers all over Germany, it has already helped to modernize more than 15,000 heating systems. The company recently expanded its business by adding gas sales to its product portfolio, and it plans to become German's largest decentral energy supplier. Similarly, increasing energy efficiency is also the goal of another German startup, Coolar, which developed innovative water-based cooling systems for refrigerators. Coolar estimates that 60% of CO2 emissions and 75% of operating costs in Germany could be saved if households and businesses in Germany switched from conventional refrigerators to models like the ones they sell.

German innovations are not limited to energy efficiency systems, as SeedForward, an agricultural startup, proves. Due to the changing regulatory environment, farmers must reduce the use of fertilizers, pesticides and seed treatments in plant cultivation, putting at risk the stability of their earnings. SeedForward is developing new organic seed treatment products based on natural materials that boost both plants health and the soil ecosystem. Its latest product helps farmers to reduce the use of fertilizers without destabilizing their harvest.

## European Commission Helping the Green Startup Revolution

Even though the green startup industry is rising, the energy transformation task is enormous, and much more needs to be done to achieve the targets set in the Paris Agreement. Even before the pandemic, green startups struggled much more than conventional startups in securing financing for their growth: A total of 46% of German green startups, compared with 36% of non-green startups, said that raising capital is one of the most significant challenges. Interestingly, for two-thirds of German green startups, government funding is the most desired financing option, which shows how crucial the government is in leading the green innovation sector. Government support is becoming even more important now, as almost 75% of German startups were negatively affected by the COVID-19 crisis, according to the German Startups Association. To support startups during the COVID-19 crisis, the German government passed a €2 billion aid package in April 2020. However, the rescue package is not enough to accelerate the development of new green startups because the funding is not linked to the companies' performance, nor does the government distinguish between green and non-green innovations.

EIT Innoenergy, a sustainable accelerator established in 2010 and supported financially by the European Institution of Innovation, proves how the European Commission financing can be used to power the new generation of sustainable startups. With clear performance metrics that measure both financial performance and the sustainability outcome, vehicles like this help to effectively direct the European Commission money to support new solutions and products. Over the 10 years of its existence, Innoenergy supported more than 380 startups in Europe by investing €580 million, coming mainly from the European Commission. Its investment helped to power C-Green, a green energy pioneer that operates the world's first hydrothermal carbonization (HTC) facility to help eliminate biomass sludge in a sustainable and cost-efficient way. If the European Commission is committed to accelerate the transition towards a sustainable economy, part of its €750bn Next Generation EU (NGEU) funding should be directed into sustainable accelerators such as EIT Innoenergy.

There is much work to be done to solve the climate crisis. Funding for green initiatives should not be sacrificed during the coronavirus pandemic. While the economic devastation caused by the pandemic is urgent and must be addressed, the problems of climate change will only worsen if they are ignored. At least in Europe, it is clear

that the leaders realize this is the right time to accelerate the green change instead of slowing it.

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*This article was written by Alon Naor, Michal Lubas, Alice Lepique Juliano and Nicolay Nielsen, members of the Lauder Class of 2022.*

# The Unequal Effects of COVID-19 on Global Public Education

*The coronavirus pandemic has taken a toll on school systems around the world. This article samples how some countries are handling the problem, which threatens to expand an already wide inequality gap between rich and poor.*

COVID-19 has had a catastrophic effect on the world. Beyond affecting the health of millions of people, the coronavirus pandemic that began in early 2020 has created the largest disruptions to date in many industries. Particularly within the education system, COVID-19 has affected close to 1.6 billion learners in more than 190 countries across the globe. Closure of schools and other academic institutions has impacted around 94% of the world's student population, up to 99% in low- and lower-middle-income countries, according to studies done by the United Nations.

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“The pandemic will continue to accentuate the wide disparities that already exist in public education by decreasing access for many children around the world.”

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Though governments and schools have rushed to implement distance learning and ensure safe school reopening, there seems to be no way out from this educational crisis. The pandemic will continue to accentuate the wide disparities that already exist in public education by decreasing access for many children around the world. Learning losses will also have disruptive economic effects: The decrease in knowledge acquisition will inflict higher economic inequalities that can potentially trickle down across generations and erase decades of progress. The closures of schools also inhibit some parents from working, forcing them to spend time on child care and household tasks instead.

With parents facing difficult choices, school enrollment rates may decrease, and dropouts followed by child labor

and exploitation may rise. As the pandemic continues into a second year, nations should work to limit long-lasting negative effects, one of which has already been observed: a striking first-ever decline of the Human Development Index. Created by the United Nations Development Programme (UNDP), the index measures achievement in key areas of human development, including health, education and standard of living. The index was estimated to drop to -0.017 in 2020, an unprecedented decline since scoring began in 1990. In its report, the UNDP said the number reflects that “60% of children are not getting an education, leading to global levels not seen since the 1980s.”

Even before the pandemic, the world was already facing challenges to ensure education as a basic human right. In fact, the U.N. has described worldwide progress in reaching its Sustainable Development Goal No. 4 – inclusive and equitable quality education – as being “too slow.” Now, these inequalities are exacerbated by COVID-19 because the ability to respond to school closures differs dramatically and in strong correlation with a nation's level of development. Low-income countries inevitably experience more difficulties in limiting the negative impact of the pandemic on education, compared with wealthier states. A study by UNESCO shows that, as of July 2020, around 1.7 billion learners had been affected in low- and lower-middle-income countries, as opposed to 700 million learners in upper-middle-income and high-income countries. However, it has also been observed that developed countries are facing similar struggles on this front. The United States, for one, has yet to find a solution for the COVID-induced educational crisis.

## Public Education in the U.S.

Prior to COVID-19, the U.S. exhibited educational inequalities across states and districts mainly due to the

decades-old housing policies that made equal access to high-quality education challenging. Public schools are typically funded by property taxes, so poorer areas with low property values do not have sufficient budgets for their educational institutions. The lack of funding translates into a lack of books and supplies, lower teacher salaries, fewer extracurricular activities, weaker curriculums and overall lower quality education.

The COVID-19 outbreak only made things worse. The fragmented nature of the educational system in America became prominent specifically because schools' responses to COVID-19 were different across districts. Schools in affluent districts, for example, were able to provide students with computers for virtual instruction, while schools in poor areas struggled to provide the tools for remote learning. A *Los Angeles Times* survey assessing 45 school districts across Southern California found that, on average, only 50% of students in poor districts had computers when many campuses shut down, compared with more than 90% of students in most of the affluent districts. Additionally, Leah L. Gillion, a postdoctoral fellow in the education policy division at the University of Pennsylvania, noted that low-income areas have suffered from the lack of internet access and limited government support to get Wi-Fi. Students living in those neighborhoods had to use smartphones and find internet hotspots to attend classes, a situation that lays bare the disparity with other more privileged districts.

In an effort to mitigate the effects of COVID-19 on education, some districts have tried to ease grading policies or remove failing grades to protect students. Attendance requirements have been enforced in certain districts, with faculty actively tracking students' online engagement. While certain areas looked at ways to ensure a safe return to in-person classes by setting up plexiglass dividers or providing free testing, others preferred to remain virtual.

These fragmented, decentralized measures have not been successful in stemming the surge in educational inequality in the U.S. The U.S. needs to address these inefficiencies through a more centralized model. Following the lead of some African countries that developed strategies at a national level could prove to be a better way to go.

## A More Centralized Response in Tanzania, Kenya and Rwanda

With a legacy of national and centralized education systems, African countries have been navigating through the pandemic by staying true to their centralized approach.

As an example, in Kenya, because some students were taking classes online while others could not, the government initially decided to cancel the academic year for all and make students repeat it. Kenyan Secretary of Education George Magoha said that the decision to scrap the academic year was made not just to protect teachers and students from the pandemic, but mainly to address glaring issues of inequality that arose when school was suspended in March 2020. Although this decision acknowledges the digital divide in Kenya, it does not necessarily translate into the best measure for the state. In fact, Mutheu Kasanga, chairwoman of the Kenya Private Schools Association described this measure as a failure for the country and said that the government should have prioritized internet connectivity to remote areas instead. Fortunately, the government recognized the cost of its decision and allowed schools to re-open after a few months, imposing strict new health guidelines including building sterilization, temperature checks and masks. Here again, the response was national and centralized.

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“Low-income countries inevitably experience more difficulties in limiting the negative impact of the pandemic on education, compared with wealthier states.”

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Tanzania exhibited a technology rush at the start of the pandemic, with governments and stakeholders exploring and investing in technology solutions that could be offered after school closures. Edutainment platforms (e.g. Ubongo), e-learning platforms with digital content and virtual teachers (e.g. TESEA, Mtabe), as well as technology equipment for schools (Avanti Communication's iKnowledge project) are making Tanzania an innovative

player in the ed-tech space. The platforms have been pushing hard to reach as many children as possible without leaving anyone behind, particularly in rural areas where schools were provided with internet and the necessary equipment. Though some challenges exist, Tanzania has made strides in improving the learning environment and reaching more children to minimize educational discrepancies resulting from the pandemic.

Rwanda recognized that bridging the technology gap to allow all students access to virtual learning might take some time, so it decided to use the tools it already had. The government has been promoting learning through the country's most popular and accessible medium — radio. This technology reaches 99% of the population, and lessons are aired twice a day on Radio Rwanda, in partnership with UNICEF. Two lessons a day might not seem like much, but the Rwanda Education Board is actively searching for new media partners in order to increase airtime. Sign language classes will soon be aired on television to accommodate students with disabilities. Though there remain many gaps to fill, especially as long as COVID-19 continues to be a threat, this worldwide educational crisis has spurred innovation and change that will hopefully outlast the pandemic.

## Inequality Still on the Rise

Even though these African countries seem to be responding to the pandemic in a comparatively more centralized manner, quickly adapting to the challenges as they rise, it is not to say that they have mastered it. According to UNESCO, the literacy rate of sub-Saharan Africa was 65% in 2017. Although this number highlights the progress that has been made in the previous decades — the comparative figure for 1984 is 49% — it is still a far cry from the 99% rate recorded in the U.S., and the gap is bound to increase over the next few years as a direct consequence of the pandemic.

The main issue for African students still lies elsewhere. Indeed, these countries have already been facing low schooling rates due to economic difficulties. Low wages and few opportunities often mean that children have to work instead of going to school. Many families depend on this additional revenue to get by. With global economic crises often impacting low-income regions much more

strongly and with slower recovery rates observed, millions of already struggling families will have an even harder time making ends meet. As a direct consequence, millions of children will be unable to return to school once the pandemic is over and schools reopen. Data from UNICEF and the International Monetary Fund predict that countries that already had a large portion of unschooled children before COVID-19 will also be the most economically impacted by the crisis: mainly sub-Saharan countries (Nigeria, Ghana, Malawi, Tanzania, Mozambique) and South East Asian countries (Bangladesh, India, Pakistan). These same nations will most likely see the greatest rise in children dropping out of school to enter the labor market.

## Conclusion

The negative effects of the pandemic on educational systems are striking for developed and developing nations alike, and governments and institutions around the world are acknowledging the growing disparities by tapping into new or unused resources and making efforts to alleviate these effects. Some countries have reopened their schools and colleges after “flattening the curve” in the rate of disease transmission. Even though some governments had to close schools again due to a resurgence of the virus, they are learning from the experience and adopting better strategies. According to a survey on “National Education Responses to COVID-19 School Closures” conducted by UNESCO, UNICEF and the World Bank, several countries are slowly adopting a hybrid model of education delivery where a reduced number of students can return safely to their institutions on a part-time basis. Others are planning to reduce the size of classrooms, recruit more teachers and extend school hours to make up for educational losses. Additionally, UNESCO, U.N., the World Bank, the U.N. World Food Programme and UNCHR have published a “Framework for Reopening Schools” to guide countries through this process. A new campaign called Save Our Future powered by the LEGO foundation and guided by multiple international organizations is also providing support to fight against the global learning crisis and reduce inequalities stemming from it.

The U.N.'s policy brief on “Education During COVID-19 and Beyond” suggests that as policymakers start to reimagine the post-pandemic public education system, there are three priorities to ensure that the “new normal”

does not exacerbate the existing inequalities from before and during the pandemic. To accelerate positive change and move towards a more equitable education system, governments and their development partners should focus on these priorities: catch up on learning losses; bring children at risk of dropping out back to schools; and focus on the social and emotional welfare of all individuals involved, especially children, teachers and staff.

Though it may be hard to see the end right now, if all education stakeholders work to make positive changes and advocate for this future with an inclusive and equitable public education system, children will undoubtedly have much brighter futures full of hopes and dreams.

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*This article was written by Lilian Daou, Thibault Terrien and Khaing Zin Thet, members of the Lauder Class of 2022.*

# The Impact of COVID-19 on Infrastructure Investments in Latin America

*Every nation needs critical infrastructure to keep advancing, but the coronavirus pandemic has put that progress in question for some Latin American markets and highlighted the need for private investment. Here are how some nations in the region are responding to the crisis.*

When the World Health Organization declared Latin America as the global epicenter of the COVID-19 pandemic in June 2020, it became clear that the immediate effects on health and the residual effects on the economy and society would be significant. The International Monetary Fund projected a dismal 2020 economic decline of 9.4% for the region, starkly below the pre-COVID projection of 1.8% growth. Many countries implemented stringent and extended lockdown periods, causing significant personal income and wealth losses, unemployment and lifestyle changes for large parts of the population. The bleak economic outlook, coupled with changes in social norms and expectations, will undoubtedly affect existing and planned investments for the region, particularly in infrastructure.

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“Internet infrastructure is arguably the biggest area for investment in Latin America.”

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The question becomes which infrastructure projects will be abandoned or stalled as certain needs become more apparent and others become less relevant or deprioritized. As economic growth and tax revenue declines, governments face a funding challenge as they try to balance maintaining their schedule and support for investments with the expense of combatting the pandemic and providing immediate financial relief for citizens. As in the past, private capital will likely be called upon to fill this funding gap.

## Chile Reaffirms Focus on Clean Energy

Like many parts of the world, Latin America has been relying heavily on fossil fuels. The energy produced

from fossil fuels such as coal, oil and natural gas is nonrenewable and generates pollution and other climate risks. But the COVID-19 pandemic is hinting at potential investment opportunities in the region’s clean energy sector. According to the International Renewable Energy Agency (IRENA), Latin America produced approximately a quarter of its primary energy from renewables before the pandemic. As the pandemic brings attention to the region’s public health matters, developing clean energy infrastructure is again being discussed as one of the top growth areas.

Chile presents massive potential opportunities in renewables. The country is already known to be clean energy friendly. Led by the Santiago Stock Exchange, Chilean institutional investors have been highly encouraged to consider the guidelines published by the Task Force on Climate-related Financial Disclosures (TCFD), which were created to make transparent private companies’ reporting on climate risk exposures. Chile stays committed to its decarbonization plan and will continue to expand its power capacity mix from 47% of renewable energy to greater than 70% by 2030. The current plan is to build more than 90% of new power generation capacity with renewables, mostly with solar photovoltaics (PV) and wind power. There are several solar PV and wind power projects already underway. The country’s ultimate goal is to deactivate all of its coal-fired power plants by 2040 and become carbon neutral by 2050.

In order for Chile to accomplish the plan, it is crucial that it secures private capital from foreign investors. It is imperative for government to create an environment where foreign investors feel confident enough to deploy their capital. Chile has demonstrated even during the pandemic that it can provide an active market for the foreign investors; its renewable energy sector saw \$5.5 billion worth of mergers and acquisitions, and project



finance transactions in the first half of 2020. That amount is approximately three times larger than in the same period in 2019. As Chile continues to move forward with its energy transition and decarbonization plan, the firm commitment to clean energy and renewables can provide investors with stable investment opportunities with clear visibility of the market.

## The Increasing Need for Digital Infrastructure

Aside from clean energy, there is massive investment potential in expanding digital infrastructure. Technological advances, in addition to growing social demands and environmental concerns, will drive dramatic changes and investments in digital infrastructure services in the coming years. The future of digital infrastructure includes both modernizing existing internet connections through 5G and digitizing other infrastructure assets.

Internet infrastructure is arguably the biggest area for investment in Latin America. According to a 2019 study by GSMA, a telecom trade organization, internet connectivity in Latin America has grown by an average annual rate of 14% and is on track to reach 1.3 billion connections by 2025. Mobile services are also growing and expected to contribute \$300 billion to the economy by 2023 – if the necessary investments in 5G continue. Victor Valverde, principal of infrastructure investing at the Toronto-based CPP Investment Board said, “digital infrastructure is where there are opportunities, if anything, as Chile is trying to develop and broaden its internet connections.”

The biggest potential for digitizing infrastructure through internet connectivity is in the electricity markets, which are moving away from single-supply offerings to one where consumers can generate their own electricity. With consumers generating their own electricity through renewable technologies, and then measuring and exchanging it on a digital market, a large number of producers would enter the market. This would lower prices for electricity, which would coincide with dropping prices for the required technology as it scales.

A second use case of digitizing infrastructure is the optimization of distribution. Utility companies can use tools like machine learning to optimize their distribution and reduce maintenance and investment costs. This would

occur through extremely quick response mechanisms to consumer demands. Services including electricity, water and public transportation would be consumed and produced only as needed. With greater efficiency, perhaps power disruptions could be avoided, quality water could be guaranteed, and commuting would be more comfortable, safer and less time-consuming.

## Transportation Investments Are Key

Transitioning to clean energy and digitization goals had particular relevance for governments pre-pandemic with regards to one specific area: transportation. Home to some of the most traffic-clogged cities in the world (according to the INRIX 2018 Global Traffic Scorecard), and with drivers in Bogotá, Mexico City, São Paulo and Rio de Janeiro losing up to five days a year sitting in traffic, several large Latin American cities have recently prioritized improving their public transportation systems, making this a rare policy bright spot in the region.

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“Governments in Latin America would do well to protect their investments in public transportation infrastructure.”

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The Chilean capital of Santiago is a success story. The city of almost 6 million people has a metro system powered 60% by renewable energy, two driverless metro lines and the largest fleet of electric buses outside China. Santiago looks to continue increasing its reliance on renewable energy and automated driving technology for future investments, and Chile has continued to invest almost USD\$2 billion in its rail infrastructure even during the pandemic. For its part, Mexico City, with a population of 20 million people, is also pressing forward with committed investments, including a MXN\$4 billion project to develop an elevated electric trolleybus in one of the city’s most densely populated neighborhoods, and the addition of 69 kilometers of bike lanes to complete a *ciclovia* network of over 330 kilometers.

However, one of the greatest challenges that governments in Latin America will have to confront is adapting

their existing investment in transit infrastructure to a post-COVID world, with a public wary of crowded transportation networks. Will the pandemic reverse the gains made in creating a more extensive, inclusive and environmentally sound public transport network? Initial reports are decidedly gloomy; A World Bank study estimated that 60% to 90% of Latin American commuters avoided public transport when lockdown measures began in February 2020 over concerns about contracting the virus. Even as Mexico City reopened and reported a 250% increase in usage of some bike paths, the government-run EcoBici bike-sharing program reported a 62% percent drop in monthly riders in August 2020, down from a high of almost 700,000 in February 2020.

Governments in Latin America would do well to protect their investments in public transportation infrastructure. Providing stimulus for public investments and courting private investment would all be great starts because the status quo is unsustainable.

## **Investors Will Be Cautious**

Private capital will be needed to bridge the funding gap for infrastructure in Latin America, but foreign investors typically shy away from putting money in unstable or lagging economies. Some of Latin America's emerging markets will be particularly vulnerable to this dilemma in the financial aftermath of the pandemic. Argentina, for example, has recently dealt with extreme volatility and could struggle to attract foreign private capital in the near term. Even with the \$65 billion debt restructuring that was completed in September 2020, the country will continue to face questions about the prospects for economic improvement as a result of the current political situation, the foreign exchange environment and COVID-19.

In addition to the debt crisis, the December 2019 election of President Alberto Fernandez also spelled trouble for investors in Argentina's infrastructure sector. Former President Mauricio Macri, a conservative, enacted a series of reforms that made the energy sector attractive to foreign investors, including increasing revenues and eliminating foreign exchange mismatch. But the election of left-leaning Fernandez, coupled with a weak economy further diminished by COVID, has led to a reversal of most of Macri's investor-friendly reforms. This means that large private investors such as Gramercy Capital and GenCorp Capital, which hold roughly \$200 million of debt in Argentine power generator Stoneway, according to a Bloomberg report, will likely see the value of their investment diminish substantially.

The initial effects of the pandemic on infrastructure investment appear to be varied across the type of infrastructure and countries in Latin America. The pandemic has highlighted the existing need for certain infrastructure such as digital technology, potentially speeding up the focus on its implementation. Simultaneously, it has called into question the demand and return on investment for other classes, such as mass transit. Certain governments have demonstrated the ability to maintain commitment to pre-COVID investment initiatives, as in the case of Chile in the green-energy sector and Mexico in the transportation sector. In Chile, private sector investment support has remained strong despite the pandemic, but the economic conditions to support private capital in other countries and infrastructure classes currently appear suboptimal.

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*This article was written by Matt Berland, Clark Brown, Shane Han, Ian Hosang and Patrick Prommel, members of the Lauder Class of 2022.*



# In a League of its Own: China Takes the Lead in Esports

*Esports is enjoying a meteoric rise in China, where the government has cautiously embraced its potential. This article explains the risks and rewards of this wildly popular form of gaming.*

Pudong Football Stadium in Shanghai erupts with applause as Chinese pop star Lexie Liu performs for the opening ceremony. In spite of the coronavirus pandemic, an audience of 6,000 has gathered with 3.8 million more viewing from their homes as the two finalist teams step into the arena. Stakes are high – the players are fighting for fame, riches and national pride. Despite the resemblance to a traditional sporting tournament, these players will not be kicking a ball or running across a field. This is the League of Legends Worlds 2020 Finals, where the two competing teams will instead face off in the popular video game title, with the winners emerging as 2020 World Champions.

Market intelligence firm Newzoo defines electronic sports, known as esports, as “competitive gaming at a professional level and in an organized format (a tournament or league) with a specific goal (i.e., winning a champion title or prize money) and a clear distinction between players and teams that are competing against each other.” As viewership of traditional sports stagnates globally, esports has seen double-digit annual viewership growth since 2016 and is expected to continue growing in coming years. Newzoo

estimated that in 2020, global esports revenue would grow 15.7% to \$1.1 billion and the total esports audience would grow 11.7% to 495 million people.

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“Esports, as a new phenomenon, has proven its staying power through its financial and cultural strength.”

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China is currently the world’s largest esports market in terms of revenue and number of players, and with this comes opportunities for players, companies and governments. According to a former professional gamer in China, Chinese society is beginning to accept the idea that there are ways for young Chinese nationals to gain success in their careers beyond purely focusing on their studies. As such, more teenagers are pursuing professional gaming. Meanwhile, the rapid development of the industry has also been galvanized by China’s biggest technology companies, including Tencent, Alibaba and Bytedance. The Chinese government has also become a supporter

after recognizing the industry's potential as a source of innovation, economic growth and even national pride. In 2019, the Chinese government officially recognized jobs within esports, a decision that is helping society view the pursuit more favorably.

China's esports scene has shown impressive growth and potential. Looking forward, what will the future hold for the players, companies and governments that make up the ecosystem?

## Players: A Grueling, Short-lived Path to the Top

For esports players who seek professional careers in China, the rewards are obvious: the glory of representing China on an international stage, high salaries and the chance to do what they love for a living. But in a country with over 690 million game enthusiasts and a \$40 billion gaming industry, according to a 2020 Newzoo report, how do players "make it pro?"

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"China's esports scene has shown impressive growth and potential."

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For most players, the first step to becoming professionals is to prove their skills in the game. To explore the perspective of the professional player, we interviewed Karry (not his real name), a Chinese student studying at a U.S. college, who was once considered among the elite players at League of Legends. He said, "Most games have a ranking system, [which means] the game develops a system which measures what level you are at...I got to Challenger rank, which means I am placed Top 300 in China." Soon after reaching Challenger rank, Karry accepted an offer to join a newly formed pro esports team owned by a top gaming company.

For those aiming to join established esports teams, though, the road is tougher. According to the CNN article, "China's Young Gamers are Going Pro for Million-dollar Paydays," hundreds of teenagers applied for admission to one of China's top esports teams, Royal Never Give Up (RNG). Of those accepted, "...out of the 100 people we enrolled in our teenage training center, almost zero can pass," said Bi Lianli, RNG's general manager.

Not only are spots on pro teams limited, but the length of professional careers is very short. Most top players begin considering pro careers around the beginning of high school. "When [players] start off at 15 years old, [they] will have longer careers and will be able to accomplish more, and the talent level is usually higher," Karry said. Starting in high school helps because player skills noticeably decline around age 19-20. The average career of a pro is two to three years, which means pro players expend more energy to maximize their careers during this short window. Some factors that contribute to the brutal nature of the pro player's life are nonstop practice, grueling schedules and mental pressure.

A viable esports career is further complicated by a Chinese law that only allows players under 16 to join youth leagues, an equivalent to baseball's minor leagues. Only after players reach legal adulthood can they play in the highest level esports leagues, known as S-tier leagues.

When Karry started his career, he was fortunate to be sponsored by a reputable company and to receive a monthly ¥5,000 (roughly \$740) salary. This salary was enough for a comfortable life in China, but only because he lived at a gaming house and had low living expenses. Unfortunately, these conditions are not always the industry norm. The cost of running an esports team is high. In Karry's case, his salary payment was delayed by months. While he had financial support from his parents, the uncertainty of payment proved troublesome for players from less affluent backgrounds. Karry said he even had to loan money to some of his teammates through that period. Moreover, pro players lack power to seek recompense. They often sign very limiting contracts and are aware that if they break the contract, they may not find another one of these rare opportunities.

As teams work to create a hospitable environment, players embark on a regimented schedule. For teams with championship aspirations, like Bi's RNG, they play up to 15 hours a day, starting from 1 p.m. and ending at 4 a.m. These popular teams also ask players to take on responsibility of building their brand through video game streaming or public appearances.

Due to the physically and mentally draining nature of the career, most pros retire after age 20. For successful pros who reach S-tier leagues, they can use their connections,

large fanbase and experience to find opportunities within esports franchises, gaming productions or streaming. Less successful pros often become “smurfs,” players who illegally help regular video users rise in rank within the game, also known as “account boosting.” Karry explained the attractiveness of this path: “If you start playing this game for eight hours a day at age 15, it’s all you’ll be good at [after retirement].” He notes players are young enough to pivot, but the road is not clear. At the same time, Chinese society “is starting to see esports as a way to find success.”

## **Livestreaming and the Esports Ecosystem: Financial Opportunities**

Over the past decade, rapid advancement in China’s mobile internet development has contributed to extraordinary growth in mobile gaming. As the country’s mobile internet penetration rate is expected to continue growing due to the proliferation of mobile devices, expansion of 4G coverage, introduction of 5G service, growth in per-capita income and continued urbanization, the Chinese esports industry is expected to grow vis-à-vis game livestreaming platforms. Douyu and Huya, for example, are two of China’s most prominent game streaming companies, commanding over 60% market share, according to a January 2020 article from Wowza, a media streaming marketing firm. These platforms offer convenient and immersive ways for users to watch skillful play and esports competition content, while socializing with other enthusiasts in real time.

To understand more about the companies’ perspective and how they may monetize livestreaming and player-user engagement, we interviewed an employee from NetEase, a premiere esports and gaming organization in China. The employee, who asked for anonymity, shared that livestreaming offers a convenient monetization and brand management platform for esports players. When players stream, their fans purchase virtual gifts from within the platforms while simultaneously engaging with real-time interactive features, such as bullet chatting with players and other fans. According to an October 2019 article by Richard Dai from *TechNode*, over 85% of streaming revenue can be attributed to these gifts. Given the massive fan base with high engagement and propensity to spend on such entertainment formats, it is possible for esports players to stream for many hours a day and turn streaming into a full-time job. Gaming companies have acknowledged

the key role these influences play and often turn to these streamers to promote new, meaningful features like champion releases.

In turn, the gaming platform companies earn revenue primarily from revenue-sharing the sale of virtual gifts as well as advertisements, so their business performance is affected by their ability to increase user engagement through offering content, gift options and advertisements. Livestreaming platforms also acquire media rights and contact licenses to showcase professional esports tournaments, and this strategy has been actively pursued by many platforms in order to grow revenue share. According to *Esports Observer*, in 2019, Bilibili was reported to have paid ¥800 million (roughly \$115 million) for the rights to stream three consecutive League of Legends Worlds tournaments. Meanwhile, *TechNode* reported that Huya and Douyu paid 10% and 24% of their revenue to these streamers, also known as content creators, respectively.

The platform’s brand value and ability to attract a wide range of viewers are the most important factors that players consider in deciding which platform to stream on. As such, companies aggressively pursue marketing strategies to attract, acquire and retain viewers, as well as increase streamers’ reliance on their platforms. In addition to word-of-mouth advertising from existing users, companies promote their brand by sponsoring leading esports teams and organizing proprietary esports tournaments. They also often promote their brand and platform through a mix of online viral marketing, offline promotional events, search engine optimization, advertisements on gaming-related apps and websites, and through cooperation with third-party smartphone manufacturers.

As the NetEase employee explained, the eventual goal for these companies is to make esports become a cultural phenomenon like the Super Bowl. “Even if you don’t understand [American] football, you’ll still watch the Super Bowl.”

## **Government: A Driving and Diminishing Force in Esports**

The esports industry has benefited from the avid support of local municipalities, but the Chinese government has reservations about video games and their contribution

to societal ills. China first recognized the potential of competitive esports as early as November 2003, when the General Administration of Sports of China listed it as the 99th formally competitive sport. By 2008, esports had moved up to 78th place and will officially be a competitive event at the 19th Asian Games in Hangzhou 2022. Recognizing the vast economic potential, several municipal governments are encouraging the growth of the industry with special funding, programs and tax breaks. The city of Hainan, in Sanya province, has embraced esports by setting up a \$145 million development fund, putting aside \$14 million for esports event subsidies, attracting talent with a “Thousand Talents” plan and simplifying the approval process for esports events. Moreover, Hangzhou, Shanghai, Chongqing, Xian and Haikou are all competing to be the next esports hub.

As esports gains momentum in China, it is also becoming a viable career opportunity for talented players. China’s Ministry of Human Resources and Social Security (CMHRSS) announced on January 25, 2019, that two new professions, “esports professional” and “esports operator,” would be recognized within the esports industry. Esports operators organize tournaments or provide esports content, while esports professionals are those who play in professional tournaments and events or train with professional players. Illustrating how nascent and misunderstood this profession is by officials, “account boosting” is described as a main function of esports professionals, yet “account boosting,” the act of one player boosting the rank of another player for monetary compensation, is banned by most publishers and tournament organizers.

While local municipalities are embracing esports as an economic growth engine, the Chinese government feels a moral responsibility to protect children from gaming addiction, immoral content and poor health. From March 2018 to December 2018, the government froze all new licenses for games until a newly formed Online Games Ethic Committee emerged as the oversight body for all video games. This committee reviews gaming content and denies licenses based on objectionable content like violence, gambling, pornography and historical inaccuracies. Additionally, new regulations came out in November 2019 that directly control the actions of young gamers. Users under 18 are banned from playing games

between 10 p.m. and 8 a.m., cannot play more than 90 minutes on weekdays or three hours on weekends, and can only spend up to \$28 or \$57 a month, depending on age, on purchases within video games. These aggressive moves by the Chinese government may seem like government overreach to Western societies, but it is within the prerogative of the Chinese government.

China has a complicated history with video games. In 2000, the government banned gaming consoles, citing fears of development and mental health impacts on young gamers. As a result of the ban, PC gaming dominated China’s gaming industry for more than a decade. The ban was lifted 15 years later, and the Chinese government became a supporter of esports after recognizing the industry’s potential as a source of innovation, economic growth and even national pride. Chinese universities have responded by adding esports management curriculum and majors. For the government, gaming provides opportunities for economic growth and safe recreation, but can quickly become a social ill.

## **Esports: An Industry to Watch**

As the popularity of esports continues in China, steps need to be taken by stakeholders to ensure sustainable growth and minimize negative externalities. On the talent side, opportunities, like business training and professional sports leagues governed by strong charters, will need to be created for aspiring pros who forsake traditional educational paths and spend their teenage years training for a short but potentially lucrative career. Companies will break into this market to find ways to monetize and capture the attention of large fanbases, create pleasurable viewing experiences and professionalize the industry. Finally, the government will continue to play a large role in shaping development of the field and protecting the population from negative effects, like gaming addiction and health consequences. Esports, as a new phenomenon, has proven its staying power through its financial and cultural strength. Those interested in predicting the future of gaming, marketing and entertainment would do well to pay attention to this rising scene.

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*This article was written by Aimee Xu, Keegan Ng, Nicole Linderman and Wai Cheng, members of the Lauder Class of 2022.*

# The Duopoly of Luxury Fashion in Africa

*High fashion isn't just for wealthy Westerners. The luxury market is booming across Africa, where an expanding middle class is clamoring for high-quality goods from both up-and-coming local designers and legacy firms. This article looks at how African nations are finally getting their fashion due.*

From concept to market, luxury fashion has been slowly changing as the industry broadens its scope and more global players look beyond the usual suspects of Paris, New York, London and Milan. Instagram has abolished borders, and countless designers from places like Nigeria, Ghana and Senegal are finding a global audience. E-commerce enables a global market and cross-border exposure like never before. African luxury brands can share their unique work without having to wait for an editorial in a magazine or a contract from international buyers. Similarly, in the last decade, foreign luxury brands in Africa have surged significantly as a result of an emerging middle class, the expanding market and the dynamic social media ecosystem. This paper will analyze the existing duopoly in luxury fashion on the continent between the sophisticated brands founded by Africans in Africa and the classic, Western brands premiering at New York Fashion Week.

## Luxury Made in Africa

### New founders and new consumers

In the last decade, there has been a rapid expansion of the fashion industry in Africa largely due to innovative designers, engaged retailers and conscious consumers. Many founders of African luxury brands are young Africans who may have studied abroad or who are part of the diaspora. They tend to have an exposure to Western luxury and are inspired to develop a contemporary version of their own. Other times, the founders are simply passionate locals seeking to preserve ancient artisanal techniques.

Consumer preferences have also shifted towards a slower fashion. They now pay less attention to the trendiness or low price of an item; rather, they want an emotional connection to the product, an ethical manufacturing process and brand authenticity. Moreover, shoppers from abroad have been influenced by the “Buy Black” movement, which emerged alongside #BlackLivesMatter and encourages shoppers to purchase from Black-owned businesses.

Kike Ojewale is an attorney from Nigeria focusing on international property law. She ran a fashion blog back in 2009 and since then has been very immersed in the Nigerian fashion ecosystem. Not only does she collaborate with brands and designers, but she also purchases from them often. Some of her favorite luxury labels in Nigeria are Klan, Deola Segoe and Lanre da Silva. These brands are on the higher end with prices typically starting at \$500.

“I’m very proud to be African, and I think we have some of the most brilliant minds in the world,” Ojewale said. “It’s always amazing to see what Africans are able to create. It always makes me so proud. So, why would I not further showcase this awesomeness.”

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“Africa is not a single market. A continent of 55 countries, Africa’s fashion markets are not uniform; each has its own identity, language, culture, technique and style.”

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Even European brands have not been immune to this shift in consumer preferences. In 2016, Hermes launched two exclusive silk “carré” scarves in collaboration with creators from Zimbabwe and South Africa. The scarves had a price starting at \$288. Likewise, in 2017, Yves Saint Laurent opened a museum in Marrakech, Morocco, housing 5,000 clothing items and 15,000 haute couture accessories.

### The power of technology

Much of the surge in consumption (luxury and otherwise) can be attributed to technology. Online retailing has become a fundamental part of commerce on the continent, thereby facilitating logistics for African entrepreneurs. Jumia is an e-commerce website that enables people to

buy and sell products throughout all of Africa. If a new African luxury brand does not have sufficient resources to develop its own shipment and business operations, it has Jumia as an option. Blockchain has also been critical by improving infrastructures for digital payments and data security, resulting in more frequent transactions.

Industrie Africa is another platform that complements the online shopping experience with a space for African luxury creators and non-Africans to build community. Nisha Kanabar, the Tanzanian-born founder, said Industrie Africa “is a Pan-African platform that caters to a global market. [The] first iteration launched in 2018...[and] gave any visitor and fashion industry member [an intuitive] way to navigate the African fashion space. [It allowed for] a digital experience that felt intimate, easy, [and] that really fit into their vernacular.”

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“In the last decade, there has been a rapid expansion of the fashion industry in Africa largely due to innovative designers, engaged retailers and conscious consumers.”

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In the last several years, Industrie Africa has evolved with its audience. Because consumers were the most active on the website, the platform has been transformed into a space of kinship and content. Kanabar also believes that the concept of luxury, especially in Africa, has shifted to storytelling through a craft, namely through the reinterpretation of artisanal techniques or simply by putting forward one’s personal identity and influences. “True luxury brands, on and off the continent, are the ones that speak from a space of innovation and care provenance,” said Kanabar, who attended the Parsons School of Design and has professional experience at key fashion houses including Yves Saint Laurent and Stella McCartney.

#### **A dynamic social media ecosystem**

Social media has accelerated the rate at which information travels the world and has ultimately removed any informational borders that once existed. Today, social media marketing is an essential part of any business.

Luxury brands are expected to have a curated social media presence not only to showcase their products and services, but also to engage directly with followers and customers.

Akosua Afriyi-Kumi is the founder of a.a.k.s, a Ghanaian brand that sells handcrafted bags and accessories made from raffia. She studied art and design in the United Kingdom but was encouraged to return home to Ghana by her parents. In 2015, after traveling across Ghana and sampling products, Afriyi-Kumi launched her brand on Instagram and Pinterest. Four months later, Anthropologie, the American clothing retailer, contacted her for a partnership as they were drawn by her social media content. “Everything was very raw. I couldn’t believe it,” she said. “I was so shocked that Anthropologie could follow my brand where I probably had just 100 followers. They were seeing my work.”

Afriyi-Kumi addressed the tangible impact of social media in retail, especially for smaller, artisanal brands. Because of the ease of connectivity, consumers and businesses are actively searching for new brands to purchase from and collaborate with, respectively. In May 2020, Instagram launched the Shops feature, allowing buyers to seamlessly compare prices and make purchases without leaving the app. Afriyi-Kumi is one of the innumerable retailers actively managing a business profile on the platform.

Social media has also created a space where celebrities and influencers can put forth brands that they enjoy or choose to work with. From being a committed brand ambassador to simply reposting an item on their timeline or story, influencers can significantly inflate the number of browsers and consequently buyers.

In 2020, Beyonce curated the musical film and visual album *Black is King*. In this project, she included many African designers who were able to directly showcase their craft through one of the most powerful artists of the millennium. When asked about her thoughts on Beyonce’s work, Afriyi-Kumi said, “I think it’s such a fantastic thing to feature so many African brands. It was so exciting...She’s using her influence to do good and to promote African products [and] African businesses. She’s really playing a big role. But of course, it could have been a lot earlier.”

Despite the positive sentiment felt by many, Beyonce was also criticized for romanticizing Africa, cultural appropriation and cultural syncretism.



Throughout the last two decades, the concept of Made in Africa has evolved from plain attire and accessories to intricate and pricey luxe items. Although many African brands still have a lot of work to be done, especially with operations, the impact of African brands in the worldwide luxury fashion industry remains very promising.

## Foreign Luxury Brands in Africa

According to Euromonitor International, Western luxury retail sales on the continent are rising 5.6% a year and in 2019 reached \$5.2 billion. This is the second-fastest growth rate globally, trailing only the Middle East. As African wealth rises, luxury goods makers may target store openings beyond Morocco and South Africa, which currently account for 86% of Africa's directly operated luxury stores. Overall, the luxury markets in Africa are expected to grow by 30% over the next five years.

While the world often tends to perceive Africa as a single frontier, it's paramount to emphasize and appreciate each country independently — as one would any other market. Africa is not a single market. A continent of 55 countries, Africa's fashion markets are not uniform; each has its own identity, language, culture, technique and style. The individuality of fashion in each African country must be protected. Customers in these expectedly similar markets show fundamentally different characteristics. For example, while a Ghanaian luxury consumer may crave discretion, the Nigerian consumer may be more overt in her display of wealth. Meanwhile, the Ivorian may have less penchant for foreign brands, preferring local designers who can bridge the gap between African roots and contemporary needs. These nuances, influenced by history, highlight the importance of diversity within the African context and contradicts the celebrity-endorsement approach that global brands have adopted in targeting African customers.

Dakar, Lagos, Zanzibar and South Africa have their own fashion weeks, a time when designers unveil their latest collections to buyers, media and the public. South African Fashion Week has become increasingly high profile, while Swahili Fashion Week in Zanzibar has seen fast growth and coverage since its inception in 2008, with a creative networking and talent platform for the best designers across East and Central Africa, in particular Tanzania and her neighbors. These shows are giving designers the exposure that they deserve and the opportunity to meet many of

the most iconic and important figures from the worldwide fashion industry, opening up vast windows of opportunity.

## Challenges and Opportunities

As mentioned previously, sub-Saharan Africa was dismissed by the luxury industry for decades, but it has since attracted the attention of international heavyweights. Hugo Boss, Ermenegildo Zegna and Estée Lauder are among the companies that have established retail outlets in Nigeria's big cities, and others are following suit with the help of local partners. Meanwhile, South Africa and Kenya, long-established shopping hubs for wealthy Western tourists, have seen a boom in retail and mall developments that is prompting investment by the world's largest brands.

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“With new entrants and incumbent banks competing to offer better and more innovative services, conditions for consumers are likely to improve.”

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In an interview, Mario Lazzaroni, regional manager of sub-Saharan Africa for the Estée Lauder Companies, laid out some challenges that brands face when entering African markets. “First, they have to deal with the government, including regulations, duty taxes, bureaucracy and even corruption. They also must deal with both physical and digital infrastructure challenges,” he said.

Another challenge is building brand awareness, which key to a profitable investment. Some brands achieve this through a well-known local partner, as detailed by Alessandro Patti, Cartier's director for Central Africa. He believes big brands should assess demand for luxury goods and build awareness through reputable local businesses that customers trust. Cartier entered the Nigerian market in 2014 through a partnership with Polo Group, the Nigerian luxury retailer, instead of opening stand-alone stores.

## The Emerging Middle Class

There are a number of solid triggers explaining the growth of the luxury market in Africa through the consumer lens: a changing demographic profile with an expanding middle class, and a youthful population with an appetite for luxury goods, and a growing desire for status through

the purchase of luxury goods. Economic and sociopolitical progress, accompanied by rapid urbanization, has led to the expansion of the middle class. This section of the society – a midway between the rich and the poor – is blooming with aspirations and increasingly seeking out relatively affordable high-end goods.

Lazzaroni said that Estée Lauder’s target customers are the emerging middle class, the established middle class and the affluent African consumer who’s probably extremely well-traveled and brand savvy. In 2008, MAC Cosmetics (one of the most renowned brands in the Estée Lauder Companies portfolio) opened a store in Paris’ Strasbourg St. Denis, a neighborhood with West African beauty supply stores frequented by immigrants and away from more traditional upscale precincts. “Wealthy visitors soon spread the word, and the brand garnered a cult status back home before the company had even set foot in the francophone African market,” Lazzaroni said. The rise in purchasing power of the global traveler – particularly from sub-Saharan Africa – triggered the company’s push into new territories.

## Looking Ahead

African motifs and designs have consistently been a part of fashion trends. However, they were always inspired, but never developed by and alongside, actual African designers. It’s quite refreshing to see the luxury fashion landscape, unchanged for so many years, finally becoming more welcoming. That said, the continent still needs more sustainable growth so that the core of the luxury market is not driven by just the West and the super-rich.

In order to gain a comprehensive perspective, the luxury fashion sector in Africa must be analyzed twofold: the up-and-coming brands founded in Africa by Africans, and the recognized foreign brands with a new market on the continent. As this is a relatively young duopoly, it still has a great future ahead. With the needed amplification and development, it will be interesting to see key luxury Made in Africa brands play an important role in the global luxury sector.

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*This article was written by Tiffany Monthe-Siewe and Camila Rachmanis, members of the Lauder Class of 2022.*

# The Rise of the Plant-based Protein Industry

*Plant-based proteins are having a moment. Driven by health, environmental and dietary concerns, consumers across the globe are taking interest in these alternative meats as companies work to deliver tastier and more economical products.*

The sales of plant-based meat in the United States grew nearly 40% between 2017 and 2019, according to industry figures. This growth has also led to an increase in funding. The nonprofit Good Food Institute reported that more than \$850 million flowed to alternative protein companies in the first half of 2020, an increase of 14% compared with the funding these companies attracted in all of 2019. With brands such as Beyond Meat and Impossible Foods gaining household recognition, and more of today's youth choosing to eat plant-based for personal or environmental reasons, it is clear the market for alternative meat is rapidly expanding around the world. Financial services firm UBS expects the global plant-based protein or alternative meat market to grow at 28% CAGR, from \$4.6 billion in 2018 to \$85 billion in 2030. While these figures pale in comparison with the animal meat market and value chain that is currently worth \$1.2 trillion, there is a clear upward trend in the demand and popularity of "fake" meat.

COVID-19 has also helped to accelerate the growth of the industry. During the early months of the pandemic, there was a reduction in meat supply when many slaughterhouses closed because workers became sick with the virus. Combined with panic purchasing by worried shoppers, it was common to see empty shelves in grocery stores. This forced many consumers to make replacement decisions, including choosing plant-based meats. U.S. sales of plant-based meats increased 35% in a four-week period from April 2020 to May 2020, compared with the same four-week period in January. In contrast, sales of animal meat rose 28% during that time. American consumers also turned more to plant-based proteins during the pandemic as media coverage focused on problems in the meat industry, including unsanitary livestock and slaughterhouse conditions. This was also pertinent in China, where there have been ample issues with wet markets and other points of sale for animal meat.

The current coronavirus pandemic, as well as the H1N1 (swine flu) pandemic of 2009, started when viruses spread from animals to humans, according to the U.S. Centers for Disease Control and Prevention. Amy Cheng, who works in international strategy and launches for Impossible Foods, said these diseases have brought awareness to Chinese consumers about food safety and hygiene, and increased the attractiveness of plant-based protein.

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“Cost remains a major barrier in this industry. The different markets vary in terms of price sensitivity.”

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However, it remains to be seen whether COVID-19 will turn out to be a watershed moment for the industry. In this article, we will explore the trajectory of the industry and describe the opportunities that lie ahead.

## **Plant-Based Meat Consumption in the West and China**

Consumer adoption of plant-based proteins has continued to increase over the years, particularly in the U.S., Europe and Asia. Pandemic aside, what explains this growing consumption? In the U.S., one reason is the sweeping interest in health and wellness. A March 2020 Lightspeed/Mintel survey found that over half of respondents cited health-related reasons for consuming plant-based proteins. The commonly anticipated reasons of environmental consciousness and animal welfare were cited by only 16% and 13% of respondents, respectively.

Interestingly, over 40% of respondents cited taste and desire to add variety to their diets as motivations for eating plant-based proteins. Though meat substitutes have existed for generations serving those who have religious,

dietary or personal restrictions regarding meat, newer products such as Beyond Meat and Impossible Foods have achieved a taste and texture more like the real thing. This explains the brands' quick infiltration into grocery stores and the menus of fast-food restaurants across the country, and even the globe.

Health reasons are also driving the increasing consumption of such products in China. To be clear, traditional meat consumption is still going up in China. Meat was not available broadly to the Chinese population until the 1980s, and the burgeoning middle class is spending more income on animal protein. However, in 2016, the Ministry of Health halved its official guidelines for the recommended daily intake of meat, and as the newer generations in China shift away from the memories of starvation that battered their parents and grandparents, there is an increasing recognition that too much food, fat and meat may not be a good thing.

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“Going forward, the industry will need to cater products to specific markets in a culturally appropriate manner.”

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Increased consumption of plant-based meat in China is also a trend pushed along by influencers, and many companies are betting that “trend-loving Chinese consumers will take to plant-based protein like their U.S. counterparts,” according to a November 2019 Reuters article. CGTN Global Business conducted a survey on social media platform Weibo to gauge consumer perception about “mock meat.” Over half of the respondents said they would try meat substitutes, while about one-third said they wouldn't. Most of those surveyed said they would have a bite out of curiosity, but price remains their biggest concern. Still, plant-based proteins have found their way into the largest fast-food chains in the Middle Kingdom. Starbucks announced the rollout of a plant-based food and beverage menu across China, launching products from Beyond Meat, Oatly and Omnipork, and KFC announced their trials of plant-based chicken nuggets in selected Chinese cities.

## A Competitive Landscape

In the last five years, the majority of growth has come from upstart companies that focus on plant-based foods. However, many Fortune 500 food companies, including firms specializing in snacks and beverages, identify plant-based alternatives as a top strategy. Fund managers at the Unovis, Big Idea Ventures and Lever VC (three of the top venture capital firms in the alternative space) said that there is likely still a lot of room for innovation before significant consolidation takes place.

The most common exit for startups in the food industry has been acquisition at IPO stage (Impossible Foods is an outlier). While traditional food companies such as General Mills and Cargill have some advantages in launching their own plant-based meat products, both Unovis and Lever VC managers believe that in most cases, these larger companies will seek acquisitions. Unilever, for example, acquired Vegetarian Butcher, and WhiteWave Foods has been acquired by Danone. According to the Lever VC manager, diversified companies that have invested in their own plant-based products have not been as successful as focused startups because of lower product quality and weak consumer response. These companies, however, might create an investment arm (Tyson, Cargill) to invest alongside VCs in this space. In addition, large companies may develop their own sub-brands.

In China, the competitive landscape includes popular plant-based protein companies from the West as well as established local meat companies and newer upstarts. Though Impossible Foods and Beyond Meat have aspirations in the Chinese market, two established meat companies, Jinzi Ham and MYS Group, are getting in on the game from a Mainland perspective. Newer upstarts also include Zhenmeat, Starfield and Hong Kong-based Green Monday, the brand behind OmniPork. Long-time firms in the arena include Whole Perfect Food. Compared with their American counterparts, these local players are focusing on local dishes such as dumplings, mooncakes and meatballs instead of burgers, and pork instead of beef. It is interesting to note the major pork inflation over the last years as a function of African Swine Flu could serve to increase the price attractiveness of plant-based pork.

## An Industry Ripe With Opportunity

Nearly all the firms we interviewed concurred that taste and texture are the most important factors for consumers in choosing plant-based meat alternatives. Price, awareness convenience are also important factors. Distribution can be a challenge to overcome for early-stage startups. Longer term, quality and price are important factors in success, along with marketing, brand positioning and go-to-market strategy according to the managers at Unovis, Lever VC and Big Idea Ventures.

Despite the reported health and environmental benefits of plant-based foods, people will not consume the products if they don't deliver on taste and satisfaction. Andrew Ive of Big Idea Ventures said the only way plant-based proteins become a revolution is if the companies that are bringing these products are able to deliver tasty products that people want to consume regularly, which requires creativity and entrepreneurialism. He said these companies also need to effectively partner with forward-thinking large food companies that are good at sourcing, producing and distributing products through multiple channels (grocery, schools, hospitals, etc).

Cost remains a major barrier in this industry. The different markets vary in terms of price sensitivity. While consumers in North America are willing to pay a price premium for innovative products, consumers in Europe are less willing to do so. In some markets, such as Germany, consumers are very price sensitive, so cost reduction is necessary. According to Brent Taylor, co-founder at Perennial and former co-founder of Beyond Meat, there is also a recognition that companies will need to lower prices for Chinese consumers who are more price sensitive and less motivated to pay a premium for sustainability. Because the scale of plant-based food production is still small compared to the traditional food industry, plant-based companies cannot yet manufacture to achieve the same efficiency of scale. The farming of current go-to ingredients — soy, pea protein and wheat — also must increase with demand. The price of these raw ingredients likely will increase, too, and companies will need to incorporate other new ingredients such as chickpeas and legumes to balance price. Ive said he believes this will allow plant-based proteins to achieve the same price as traditional meat.

Players in the space increasingly recognize that government regulation is especially relevant for the industry.

Governments across the world have been attracting or funneling investments into the alternative protein space. In July, the Ministry of Agriculture of China announced it will begin foreign direct investment (FDI) into the sector and has made a number of positive statements recently that bodes well for the industry. In Europe, several countries are providing subsidies and grants to the industry. In the U.S., the National Science Foundation awarded a \$3.5 million grant to a team at the University of California-Davis for cultivated meat research. In Singapore, the government has been very active in supporting the sector to help the country attain a food self-sufficiency goal of 30%. In turn, many Singaporean funds have been investing heavily in this space, the Lever VC manager said. Generally, governments are focused on environmentalism, e.g., China's carbon neutrality by 2060 and Europe's New Green Deal. Even if consumers lack interest, eventually companies will have to shift towards greener practices to comply with regulations. Agricultural production is the second-largest industry contributor to greenhouse gases, a fact that works in favor of the plant-based protein industry.

## More Innovation is Needed

While there is consensus that recent upticks in demand are providing tailwinds for plant-based proteins, they do not necessarily amount to a major turning point. There is still much room for innovation in plant-based proteins in order to cater to customer demand, and the pace of innovation is what will drive further industry growth. Going forward, the industry will need to cater products to specific markets in a culturally appropriate manner. Producers need to put alternative protein in a form that people want to consume. According to Big Idea Ventures and Unovis, this includes producing plant-based versions of the most consumed animal products such as burgers and chicken nuggets in the United States, and pork in China. For example, a company called Karana is trying to produce "pork" from jackfruit. Burger, sausage and minced meats are most common products at the moment because filet is very difficult to achieve. This is where the cultivated food sector can come in. Firms such as Redefine, which uses 3D technology to make alternative meat, and BlueNalu, which cultures seafood, are exploring new ways of creating food.

There are also significant opportunities in nondairy cheese, substitute eggs and beeless honey. The VC funds see a major challenge being the ability to scale effectively, and this is where more investment and innovation is needed.

It's important to remember that just a decade ago, the plant-based category was mainly limited to tofu and was mostly consumed by vegetarians and vegans in the U.S. and China. In the past few years, there has been a significant shift due to the creativity and entrepreneurialism in the space. Products have been

reimagined and potentially replaced by plant-based alternatives, yet many white spaces still remain. With only two main brands in the plant-based burger category but hundreds of brands in other food categories like soda, oversaturation is not yet an issue. There are hundreds of products that can be reimagined and replaced, making this a very exciting space indeed.

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*This article was written by Nanthini Kumararajan, Daniel Miao, Linh Nguyen and Emily R. Zhang, members of the Lauder Class of 2022.*

# The Future of the World's Factory

*Multinational companies are drawn to China because of the country's deep labor pool and mass manufacturing capabilities, yet many are leaving or setting up a second shop somewhere else. This article explains the reasons behind this dichotomy.*

In 2013, Power7 Tech, a family-owned contract manufacturer selling consumer electronics globally to well-known brands such as Walmart, moved its main production facility in China from the coastal city of Shenzhen inland to Dongguan. After operating for almost two decades in Shenzhen, Power7 Tech was able to save more than 20% on labor and property costs by relocating, and was still able to access some essential ports within China. Four years later in 2017, the company invested in an additional manufacturing facility in northern Vietnam, which enabled Power7 Tech to avoid the 25% tariff increase from the United States' 2018 punitive tariffs imposed on imported Chinese goods. The decision also allowed the company to take advantage of the region's comparatively lower labor costs and hedge against rising tensions and uncertainty from the China-U.S. trade war.

This is a personal family story of one of our authors, but it shouldn't be a surprising one. Companies' efforts to diversify out of China, a country that has become known as the "world's factory" due to its low labor costs and sheer scale of global exports, have been well-documented and occurring for over a decade. This trend only seemed to accelerate during the COVID-19 pandemic. In August 2020, Foxconn Technology Group, the Taiwanese multinational that is Apple's primary supplier and the largest provider of electronics manufacturing services in the world, also shared its plan to diversify manufacturing capacity away from China and focus on adding factories in India, Southeast Asia and the Americas.

At the same time, this migration is not representative of the entire picture. Tesla opened its new Shanghai Giga factory in 2019, which is scheduled to deliver 250,000 Model 3 and Model Y cars per year starting in January 2021. This begs a fundamental question: Why do some companies shift their supply chain partially or entirely out of China while others stay? What are the fundamental forces at play?

## Key Reasons Firms are Leaving China

One of the most commonly cited reasons that firms are leaving China is the increasing costs of wages and salaries. Over the last 10 years, a blue-collar Chinese factory worker's salary has increased fivefold, driven by competitive wages and rising standards of living. However, labor displacement and worker availability in China's manufacturing hotbeds in coastal cities have also had a significant impact. According to our interview with multinational supply chain expert Daniel Krassenstein, global supply chain director at Procon Pacific and associate professor at UCLA Extension, many Chinese domestic migrant workers have opted to return to hometowns that are emerging as new manufacturing markets with lower costs of living. At the same time, factory labor work is

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"The new generation of young adults who remain in coastal cities are less likely to be willing to work under the same harsh conditions of the older generation."

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becoming less desirable for domestic migrant workers in the coastal provinces, who are able to find other opportunities in competitive job markets that are adjusting to China's rising living standards. The new generation of young adults who remain in coastal cities are less likely to be willing to work under the same harsh conditions of the older generation. These factors together have created an environment of perpetually rising labor costs.

In addition, the costs of compliance requirements and certifications have increased. As China seeks to move further along in the global product value chain, to improve

the standard of living for its citizens and to substantially reduce its carbon footprint, the country has increased government enforcement on environmental, social and corporate governance (ESG) standards and related taxes and penalties. Thousands of plants were ordered shut down, many permanently, until various environmentally compliant technologies, such as exhaust fans and smoke scrubbers, were installed. Surviving companies are also required to invest in quality infrastructure and process improvements, which require high capital costs and increased operating costs. Domestic social welfare taxes have further driven up the labor costs.

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“China’s growing middle class, increasing disposable incomes and rapid urbanization have created a massive market for multinational companies.”

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Finally, punitive tariffs and the tense economic and political relationship between the U.S. and China during the trade war have also caused many companies to diversify their supply chains and make contingency plans to hedge against uncertainty. These factors are in addition to China’s own strategic mandate, “Made in China 2025”, a national plan championed by Prime Minister Li Keqiang in 2015 to upgrade China’s manufacturing sector and transform from a cheap, low-tech goods factory into a source of high-tech, high value products and services. As a result, lower-end companies were further driven out of China.

To this end, several other countries have begun to serve as manufacturing alternatives to China, specifically in the regions of Southeast and South Asia. Vietnam, Thailand, Malaysia, Indonesia, Bangladesh and India have surfaced as the markets with the most significant manufacturing capacity to replace goods that leave China. Each country’s ability to replace Chinese manufacturing is differentiated by various factors: quality of infrastructure, the skill level and worker productivity, volume and cost of labor, standards compliance, and the cost of communication and operational reliability. Firms take these factors into

consideration when deciding where and what kind of facility to open.

## Key Reasons Firms are Staying in China

If factors that are pushing manufacturers out of China are so strong, why are companies such as Tesla making new investments in China? Ultimately, the reality is much more nuanced, as China has developed new strategic advantages that are difficult to replace in the short run. China’s infrastructure, manufacturing clusters, labor skillfulness and market centrality are appealing enough for certain companies to stay – or not leave entirely. It depends on a company’s specific business model and goals.

Since joining the World Trade Organization in 2001, China’s logistics infrastructure has improved tremendously. The Chinese government realized that weak infrastructure was a major hindrance for foreign businesses and investments, and it responded by making infrastructure a strategic imperative in its 11th Five-Year Plan between 2006 and 2010, investing heavily in new rails, highways, roads, airports and seaports. These state-sponsored projects provided upfront investment and significantly improved the speed of shipping. New inland seaports further unlocked the potential of China’s hinterland. After the e-commerce boom in 2010, led by conglomerates like Alibaba and JD.com, there has been a new wave of private investments into third-party logistics service providers, which has enabled multinational companies to outsource their warehousing, distribution and freight transportation, and increase their operational efficiency.

The presence of manufacturing clusters – or the interconnected system of related businesses in a centralized location – also gives multinational companies another strong reason to continue betting on China. To understand manufacturing clusters, it is perhaps easiest to think about the example of California’s Silicon Valley, where a startup does not need to venture far from Palo Alto to find investors, labs, vendors and talent. Analogously, producing a finished product can easily require dozens or even hundreds of parts; if a manufacturer can find all parts, upstream suppliers and tech partners within a small radius, there is no need to leave this comfort zone. In China, there are about 100



established clusters of varying sizes and specialties. For example, Wenzhou is famous for being a one-stop shop for eyewear and footwear, and Shiling accounts for 70% of the U.S. and EU's bag and suitcase production. Multinational companies are often attracted to the cost implications of joining one of these intra-firm networks, where it is easy to scout many credible, vetted business partners within a close proximity at once.

Multinational companies also find themselves reliant on Chinese laborers despite rising costs, due to their higher skill levels compared to their counterparts in more developing countries. According to the 2017 Global Human Capital Report from the World Economic Forum, Chinese labor received the highest ranking in "know-how" (i.e., breadth and depth of specialized skills used at work) compared with its competitors in South and Southeast Asia. Of China's total employed population of 776 million people, more than 165 million people are considered skilled laborers, a number that is higher than the entire population of Vietnam, which has already experienced a skilled labor shortage. Without a large skilled labor force, companies may face more defective products, slower completion times and reduced unit productivity. Additionally, China's continuously improving labor standards are meeting the needs of companies that are looking closely at higher corporate responsibility standards and choosing manufacturers who meet them. Minimum wage standards are being strictly reinforced, safety-related accidents are counting towards local officials' KPIs (key performance indicators) and sweatshop-type factory environments are rare, so companies focusing on responsible supply chain management are finding more opportunities in China than ever before.

China's position as a world factory has been further solidified by China's own enormous consumer market. According to data from the World Bank, the country has become the world's second-largest market by household consumption and expenditure, and it continues to experience strong and resilient growth. China's growing middle class, increasing disposable incomes and rapid urbanization have created a massive market for multinational companies. While multinational companies may have previously manufactured in China only for its

attractive production costs, now they must also consider the many benefits of staying close to their customers. This "made in China for China" type of proximity allows for shorter lead time, easier fulfillment and localization, and shorter and cheaper shipping, all of which provide tangible value to companies' operations.

Manufacturing within China also allows for a tighter control of the customer experience. If there are product defects or upgrades, the informational distance between customers, the brand and the supplier is smaller, and the supplier may even acquire firsthand knowledge proactively from the market and inform the brand. An important exception to this rule happens when a multinational company is focused on premium products – because typical Chinese customers still view products made in developed countries such as the U.S., Japan or Germany as superior to local products – in which case the company may want to intentionally produce overseas to capitalize on customer confidence. Nevertheless, this perception of low quality has been slowly changing as technology and quality control steadily improves in China.

## Conclusion

We have seen there is not one clear-cut answer to our earlier question: Why do some companies stay and expand their manufacturing practices in China while others leave? Rather, the answer is highly dependent on the nature of a company's products. If a company's products are low cost, inexpensive and fairly easy to produce, it makes more sense to shift capacity to a lower-cost country to avoid China's rising labor and compliance costs. If a company's products have high value, high quality standards and require a massive coordination effort, then China remains the most popular choice. Labor costs, while still important, are not the only determinant to the Teslas and Apples of the world, as they also need to consider speed and predictability of fulfillment, ease of assembly and quality of the labor force. Big consumer product companies are also increasingly viewing China as a market in its own right, and there are strong reasons to manufacture in China and maintain proximity to a significant customer base. Because supply chain optimization is essentially a balancing act, many multinational companies recently have adopted China Plus One strategy, which refers to China remaining

as the main manufacturing site for a company while part of the supply chain is moved to another country to diversify.

In the case of Power7 Tech, although the company has diversified to expand its facility into Vietnam, it continues to heavily invest resources into its factory in China through R&D and automation capabilities so that performance can continue to improve. Over the last decade, Power7 Tech has seen a 10% to 15% growth year over year in China, although that growth is expected to decline slightly during the COVID-19 pandemic. Power7 Tech continues to explore opportunities both within China and outside of China, not only in Vietnam but also in other markets in order to diversify in different regions. Vietnam also faces changing geopolitical and business contexts. For instance,

the U.S. Trade Representative initiated two investigations into Vietnam in October 2020 over currency valuation and illegally harvested timber, which may result in additional punitive duties on the market. As we look at the trends across different firms amid the U.S.-China trade war and COVID-19 shutdowns, we may see multinational companies start to build contingencies in favor of a China Plus One strategy, or even a China Plus N strategy (manufacturing in China and more than one other country), in order to diversify.

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*This article was written by Vicky Yu Chen, Christina Wang and Helen Chen, members of the Lauder Class of 2022.*

# Modern Vodka: Has Russia Missed Its Shot?

*Vodka is a colorless spirit with a very colorful past. This article outlines the history of the beverage once strongly associated with Russia but now appropriated by other countries that are producing popular, competitive brands.*

Vodka. Long before the term was associated with shots, night clubs or James Bond, it was considered by many around the world to be synonymous with Russia. There was a time when a superior level of authenticity and legitimacy accompanied the purchase of Russian-produced vodka. However, over the last 50 years, trends in the spirits industry have shifted dramatically, opening the door for new European and American entrants into the vodka industry. While these international players have nimbly adjusted to ever-changing customer preferences, keeping up by closely following consumption and purchasing trends, Russian producers have largely held strong to tradition, showing a reluctance to chase global demand through innovation or modernization.

But is this unwillingness to evolve to blame for the dilution of vodka's Russian identity? Or had the cards been dealt long before as a result of failed production legislation in the European Union during the mid-2000s? Or does the blame date back further, to the late 19th century, when a Russian chemist first coined the term *vodka*, having derived it from the Russian word for water, *voda*, rather than something distinctly regional to Russia? After all, it is culturally accepted – and legally enforced – that tequila is from Mexico, bourbon is from Kentucky and Champagne is unquestionably from France.

Several factors have allowed the liquor to cleave from its Eastern European roots and become a truly global citizen of the spirits world. The evolution of the industry and the onset of modern trends such as premiumization, new ingredients and modern distilling techniques have all played a large role in this shift. But the resistance of Russian brands to embrace these changes begs the question: Has vodka been emancipated from its original national identity? Or will this ageless spirit always be considered quintessentially Russian?

## War and Vodka

By the end of the 13th century, vodka had been ingeniously reformulated from household disinfectant to dizzying elixir, enjoyed by many all over Eastern Europe. Although Poles and Russians will argue in perpetuity over which country claims the true title as the birthplace of vodka, Russia is often credited with both the naming and modern formulation of the spirit.

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“What started off as a uniquely Eastern European drink soon turned into a global branding race.”

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The so-called “grain wine” continued to rise in popularity, reaching critical consumption in Russia by the 17th century and becoming a crucial commodity to both Russian consumers and producers alike. Initially distilled by local tavern owners, the odorless drink had humble beginnings as a low-quality beverage and was often consumed with honey or herbs to mask the acetous flavor. The name vodka didn't even exist until the mid-19th century, when Czar Alexander III hired celebrated Russian chemist Dmitri Mendeleev to improve the clear spirit's formula. Luckily for grain cocktail drinkers everywhere, one of Mendeleev's improvements involved neutralizing the bitter taste as well as fixing the alcohol content at 40%. It was also at this time that Mendeleev, likely inspired by its clear, odorless quality or possibly the ubiquitousness with which it was consumed throughout the country, named the spirit *vodka* – a diminutive form of the Russian word for water. This ultimately set the scene for a series of future conflicts, known as the Vodka Wars, to narrow the definition of vodka.

The Vodka Wars escalated following the introduction of brands outside of the Vodka Belt, a designation given to countries in Northeastern Europe into Scandinavia. In the mid-2000s, countries within the belt came together to argue through a European Commission proposal that only vodka made from traditional ingredients – potato, cereal and molasses sugar beet – should claim to be vodka. Unfortunately for the traditionalist soldiers of the Vodka Belt countries, the EC did not rule in their favor. While the commission proposed what it considered a truce – that vodka distilled from anything other than the classic sources must distinctly state this fact on the bottle – it signified a resounding defeat for Russia and other Eastern European producers in the so-called Vodka Wars.

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“Even without formal legal protections on the name, it still seems plausible for vodka to maintain cognitive ties to its homeland.”

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Due to a combination of the Soviet Union’s dominance and portrayal of vodka in Western media, vodka had become strongly associated with Russians. However, when the European Commission’s compromise ultimately allowed other countries and regions outside of Eastern Europe to name their spirits vodka, Russia took a hit in terms of remaining the biggest player associated with the drink. Today, international brands are regarded as the highest-quality vodka producers. As brands around the world produce both flavored and tasteless vodka and give the spirit life through celebrity endorsements and product placements, Russia continues to lose its grip on claims to this national symbol.

### **Premiumization: Vodka Gets A Makeover**

Vodka has always been a staple in Eastern European culture. For much of vodka’s history, its affiliation had a Slavic hue – an ode to the region’s harsh winters, tough conditions and, at times, mysterious perception. While there are fierce arguments as to where vodka truly originated – still a hotly debated topic between Russian

and Polish enthusiasts – there is little doubt the spirit originated in Eastern Europe. The Vodka Belt countries all have local, historical ties to the beverage. The drink started becoming more prevalent in Western Europe and the U.S. when the former Soviet-controlled Eastern bloc would barter bottles of Stolichnaya for Pepsi or other goods with the United States. As a result, vodka slowly but surely began making its way around the globe.

What started off as a uniquely Eastern European drink soon turned into a global branding race. In the 1980s, everything changed when Absolut, a Swedish vodka label, launched a marketing campaign targeted at the *bourgeois* – the creative, the wealthy and the fashionable. Despite the fact that Stolichnaya is credited with being the first vodka brand to “premiumize” by pricing its bottles toward the upper echelon of Russian society, Absolut ignited the premium vodka trend in the U.S. when it supplied New York’s famous Studio 54 nightclub in the early 1980s. Marketed towards young, successful, rising creatives, the Absolut brand caught the eye of famed artist Andy Warhol, who agreed to produce various print advertisements for the brand. What started out as a humble staple of national pastimes for many Eastern Europeans soon became an icon of fashion, art and opulent lifestyles for Westerners, taking the idea of premiumization to an entirely new glamorous level.

Starting with Absolut in the 1980s and carrying through the 1990s, the premiumization of vodka continued to spread. Other European brands such as Belvedere, Ketel One and Grey Goose began to take similar branding approaches. Grey Goose had a particularly large effect on vodka’s image, including how much consumers were willing to pay for it. The French supplier effectively made vodka a luxury item, leveraging the ever-powerful country-of-origin effect to convey quality, prestige and status through its French roots. Toby Whitmoyer, global marketing officer at Bacardi and former brand director at Ketel One, noted, “From a Western European [or] North American perspective, vodka being Russian ended in the 1990s.”

The premiumization race reached its pinnacle with the launch of Ciroc in 2003. Similar to Grey Goose, Ciroc is also a vodka distilled from grapes and produced in France. The company was launched by famous American music

executive Sean John “P.Diddy” Combs, who capitalized on his music industry connections by launching Ciroc in exclusive nightclubs. Ciroc was endorsed by artists, models, rappers and actresses both formally in TV and print advertising as well as informally behind red velvet ropes in top nightlife locales in Los Angeles, Las Vegas, New York and Miami. By the end of the 2000s, vodka as a general spirit category touted an image affiliated with glitzy nightclubs, attractive celebrities and a flashy lifestyle.

## Disrupting Tradition

The premiumization trend seemed largely to pass by Russia and its neighbors, at least in part because of historical context. Arkadiy Kofman, who owns a Moldovan vodka distillery that distributes domestically and abroad, explained that vodka was a nationalized, standardized product in the Soviet Union. It was simple and cheap, and people were used to it. There was never justification for vodka being expensive, and producers mostly stuck to essentialist representations of classic vodka that appealed to consumers’ respect for tradition. Experimenting with unorthodox distilling techniques, new ingredients and flavor add-ins was considered risky at best and offensive at worst.

However, that is not the case in the United States, Kofman’s most important market, where consumers can buy vodka distilled from surplus baked goods or from carbon sequestered from the air, meaning they can now combat climate change while purchasing liquor. For their part, innovative U.K. producers are distilling vodka from surplus beer, milk and quinoa. These stories and new flavors help differentiate an undifferentiated product and drive at least some consumption.

Russia’s vodka producers, partially in response to conservative domestic consumers, have been more hesitant to innovate in this direction. But the world is now convinced that good vodka doesn’t have to be Russian. In fact, most of the internationally known brands – Absolut, Svedka, Grey Goose, and SKYY – are not. And while Russian label Smirnoff has continued to enjoy high sales volumes in the U.S. in the non-premium segment, its numbers have been declining yearly, with other domestic and European labels chipping away at the gap.

Ivan Dicoi, an avid vodka drinker who was born and raised in Moldova, explained that Moldovan and Ukrainian

vodka distilleries used to base their branding around Russian images or nomenclature in order to borrow from that sense of prestige. He noted that this strategy is no longer necessary because European brands are considered classier than those from Russia. “It feels nice to drink a vodka like Finlandia [that] even the Europeans are drinking,” Dicoi said.

Bryce Goodwin, global vice president of product marketing & innovation and former senior brand manager at Grey Goose, said the spirits industry is trending towards craftsmanship. He quoted Tito’s as an example of a grassroots label that is enjoying success in part due to its appeal to authenticity, using words like “original,” “craft” and “handmade” in marketing materials. Although Russia can still tap into its perception as the originator of vodka, it seems not to have capitalized on the desire for original, craft production straight from the homeland.

## Will A Russian Legacy Endure?

Can vodka’s Russian heritage ever be truly separated from the drink itself? When considering the current landscape of the global vodka industry and the departure from its Russian roots, one has to wonder whether it simply represents a cyclical market trend or whether it signifies a more permanent shift away from being quintessentially Russian. Has Russian vodka already had its day in the sun, or will there one day be a revival, bringing Russian-produced brands back into the purview of consumer preferences around the world? The core question underlying all of these considerations is: Has vodka lost its national identity?

According to Bacardi’s Whitmoyer, the answer is yes. But if vodka is no longer Russian, how is it that tequila remains steadfastly Mexican and Champagne remains ostentatiously French? The key difference might be a result of successful efforts by those governments to vehemently protect the names of these national products. If Russia had been able to successfully lay claim to the name “vodka,” it is very likely that the connotation to the former Soviet Union would still remain extremely strong today, even as consumer trends evolve. Unfortunately, it would not be easy for any one country, or even region, to claim a word like vodka, whose derivative *voda* translates to “water” in at least 10 languages. The advantage enjoyed by both

tequila and Champagne is that their names come directly from the regions in which they are produced. Tequila shares a name with the small town in the Mexican state of Jalisco where the blue agave-spirit was first produced, while the Champagne region of France, just east of Paris, is famously known for its sparkling wine of the same name.

Even without formal legal protections on the name, it still seems plausible for vodka to maintain cognitive ties to its homeland. Despite the rise of European and American branded vodka, some spirit companies are still betting on Russian associations to market their brands. For example, U.S.-based lifestyle brand This Life Forever Co. recently introduced a vodka label on the shelves of Pennsylvania liquor stores. The name of the product is *Mishka*, the Russian diminutive for “teddy bear.” The label features the black-and-white face of a stoic bear, an animal emblematic of Russia. Of course, the bottle also includes “Product of USA” at the bottom of the label.

For decades, the vodka industry has seen the rise of players from all over the world, many of them opting for more cosmopolitan, modern or European rather than

Russian branding. With no governance over the use of the name vodka or even the type of distilled ingredients that can bear the title, Russian and Eastern European producers alike have lost their claim to the colorless spirit in the eyes of consumers. Paired with the hesitation of Russian vodka brands to innovate or follow trends, it would seem that the once respected prestige of a Russian vodka is a thing of the past. But labels like *Mishka* appear to be counting on the continued recognition of what it means to produce Russian-inspired vodka. This might suggest that a heritage and tradition of Russia will always follow vodka, no matter where innovation and modernization take the industry. Whether the magnitude of this Russian legacy hits like a straight shot or like the subtle aftertaste of a shaken cocktail depends on the marketing decisions not only of existing players in the industry, but also those of future incumbents looking to stir things up.

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*This article was written by Dylan Margolin, Michael Ravitsky, Daisy Rincon and Caroline Dickey, members of the Lauder Class of 2022.*

# Tesla in China

*Tesla and China have a mutually beneficial relationship, one that has enabled the automaker to dominate the country's electric vehicle market with a targeted manufacturing and sales strategy. Yet with plenty of competitors nipping at its heels, Tesla's future success in China is anything but given.*

2020 was a historic year for Tesla. It became the world's most valuable auto company by market capitalization, and it joined the S&P 500. The meteoric rise of Tesla stock made CEO Elon Musk the world's second-wealthiest man. He generated headlines when he defied lockdown orders to keep his California factory open during the global coronavirus pandemic, while analysts and investors speculated whether the company's stock could push even higher. Despite all the headlines and attention, Tesla escaped becoming a pawn in the U.S.-China trade war. Even as the trade war intensified and dragged social media platform TikTok and others into the storm, Tesla remained unscathed. Indeed, Cui Tiankai, China's ambassador to the U.S. praised the American giant, using his Twitter account to tout Tesla's doubling of Q2 revenue in China and its massive new factory in Shanghai. How did Tesla come to occupy such a privileged position between America and China and protected by both? And why does the arc of Tesla's story in China matter?

The battleground for battery electric vehicles (BEV) has moved from the U.S. and Europe to East Asia. This is true of primary suppliers (e.g., battery, electronics), startup funding, design centers and vehicle sales. In China, all major global original equipment manufacturers (OEMs) and numerous homegrown brands have plans to build EV manufacturing facilities, with total committed capital in the tens of billions of dollars. The story of Tesla in East Asia is reflective of the region's interest in new electric vehicles (EV) as a whole. Today, Tesla is Goliath. Will it be able to retain its position in China or will it fall before the advance of native competitors such as NIO?

## EV Trends in China

The global electric vehicle market has exploded over the last decade, stimulated by supportive policies and technological advancements. Within the past five years, EV rollouts have accelerated due to a continuing shift from direct subsidies to regulatory policies such as zero-

emission vehicle mandates and aggressive fuel economy standards that have influenced the long-term strategic direction of automakers and consumers to transition to EVs. At the center of this soaring demand, China accounted for half of global EV sales in 2019, and experts anticipate that the Chinese EV market will be four times greater than that of the U.S. between 2025 and 2030, according to a report from Morgan Stanley. Gene Munster and David Stokman from Loup Ventures, a venture capital firm investing in frontier tech companies, said China needs Tesla in order to create the Silicon Valley of autonomous vehicles and expand globally from there.

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“For decades, China has taken a protectionist, prescriptive approach to overseeing its auto industry.”

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While the onset of COVID-19 pandemic was expected to heavily impact the growth trajectory of EVs in China in 2020, the Chinese government has shown its commitment to cutting down pollution from petrol or diesel cars through granting hefty subsidies for electric vehicles and expanding its nationwide network of charging points, one of the biggest challenges to encouraging the adoption of EVs. With the pandemic fueling fears of public transportation, EV sales in China hit an all-time high in September 2020.

California-based Tesla captured popular attention for EVs based on its sleek designs and superior battery performance, and national policy from Beijing encouraged the launch of several rivals in China. As a result, Tesla now is just one player in a heavily fragmented market that includes over 100 local Chinese EV competitors, most notably the “fab four” of NIO, Xpeng, Li Auto and WM Motor. However, the smaller Chinese EV manufacturers

face a monumental challenge. Going into the EV business is expensive, and many are burdened with high debt, which increases their reliance on government subsidies that are scheduled to sunset over the next three years. Experts from Fitch Solutions believe the sector is entering a period of rapid consolidation as many EV companies fail and market share accrues to high cash-generating EV companies and deep-pocketed legacy OEMs. As the dust settles on the clear winners in the battle among Chinese EV producers, how Tesla positions itself and responds to the victors, backed by a protectionist government, will determine the next chapter of Tesla's growth story.

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“The EV turf wars have just commenced, and the most important battleground is proving to be China.”

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## Government Involvement in the EV Industry

The key driver behind the development of China's EV market has been government action and regulation. For decades, China has taken a protectionist, prescriptive approach to overseeing its auto industry. Starting in 2009, priorities for the industry outlined in the country's Five-Year Plans included a focus on EVs and battery technology. In practice, this has translated into government targets for EVs as well as opening the market to foreign companies and limiting the growth of fossil-fuel vehicles by banning new factories that make them. The government has set a target for EVs to represent 25% of all car sales by 2025. In April 2018, the government opened up the country's automotive sector by lifting the requirement to use a local joint venture to access the Chinese market. The policy allows foreign ownership of EVs in 2018, heavy-duty and commercial vehicles in 2020, and passenger vehicles in 2022. Soon after the announcement, Musk publicized his intention to build a Tesla “Gigafactory” in Shanghai. The aggressive target and the ban of fossil-fuel vehicle factories are indicative of China's positioning on EVs and the government's role in shaping the auto industry. In effect, China has taken drastic steps to align its auto industry with the future of EVs.

Traditionally, China has adjusted subsidies and imposed

quotas to encourage or inhibit industry development. In 2019, China set a quota whereby at least 10% of total company sales had to come from EVs in 2019. However, in the same year, the government decided to cut subsidies and planned to fully phase them out by the end of 2020 to force the exit of weaker, unprofitable players. But faced with the pandemic-related decline in EV sales in 2020, the government intervened and extended subsidies until 2022 for vehicles that met a minimum range (300 km on a single charge) and cost constraints (under USD\$42,300).

The Chinese government is involved with EVs in both the industry and the company level. The relationship with Tesla is a case in point. To build its Shanghai gigafactory, Tesla received favorable tax breaks and a RMB¥9 billion loan with good terms from Chinese lenders, and the company's local customers qualified for a 10% tax exemption on their purchase. It is possible that the government will turn away from Tesla in the long term in favor of domestic automakers. But in the near term, China has embraced Tesla with opportunities to access its market, and Tesla has benefited from this privileged relationship. After the tax exemption, Tesla's Model 3 sedan costed less than the base price of a BMW 3-series, giving the American company an advantage over other foreign competitors in the China market.

## EV Competitive Dynamics in China

### Financial Performance and Strategic Vision

In 2020, investors and analysts finally put faith in the vision that Musk has for the company, and the stock price rose over 500%. That stock price reflected a market cap larger than Volkswagen, Toyota, Ford, GM, Fiat, Honda and Nissan combined. In November 2020, Tesla was determined to meet the criteria for inclusion in the S&P 500, one of the most tracked indices in the world. Many global public electric vehicle companies have also seen their stocks rise as part of the meteoric “Tesla halo effect.” Tesla has one foot solidly on the gas in growth, but it has also made strides in profitability, setting a record fifth straight quarter of profitability.

The strategic vision for the company is primarily set by its enigmatic CEO. Musk views Tesla as a key element of a broader sustainability effort, which also includes home battery power storage and solar panels. His intense focus



on engineering and transforming the world through Tesla is underscored by such unorthodox actions as spending next to nothing on traditional advertising and releasing all of Tesla's patents in 2019 to help the world fight climate change. When discussing the amicable relationship between Chinese authorities and Musk, a member of the Tesla strategy team reasoned that the mutual respect may be due to an alignment in interests: Both Musk and the ruling Chinese politburo orient towards heavy investing in long-term growth opportunities, a commitment to the development of new technologies in battery powered vehicles, power generation and storage, and an appreciation for engineering and manufacturing.

### **Consumer Preferences**

Tesla has a top-tier brand in China. Interestingly, employees at NIO and Tesla observed that consumers typically compare Tesla to other premium, foreign gas-powered brands such as BMW and Mercedes-Benz rather than other EV brands. Today's Chinese consumer prefers foreign brands over local brands due to perceived quality differences. Many experts note this perception is not dissimilar from the reputation the Japanese auto industry developed for quality vehicles in the 1980s, a characterization that has proven difficult for Detroit automakers to shake. While foreign luxury brands have capitalized on this preference by pricing vehicles at the top range in any of their global markets, Tesla has introduced cars at relatively reasonable price tags. Because of Tesla's interest in driving prices down for consumers, foreign premium brands such as BMW, Mercedes and Audi stand the most to lose in China, where they have maximized profits in the last decade due to consumers' willingness to pay up for foreign vehicles.

The benefit of a lower price tag is higher sales volume. An auto industry analyst at JP Morgan noted that, starting in 2021, Tesla's "Model 3 could outsell the BMW 3 series, Mercedes C-Class and Audi A4, all of which sell between \$100,000 and \$150,000 in China." Many experts believe that consumers' mindset will begin to change in the near term, as homegrown Chinese auto manufacturers shift to focusing on reliability, safety and quality. Tesla's relentless focus on driving down production costs will serve it well in the Chinese auto market and enable it to reach more price-

sensitive consumers. Market experts note that a reduction in battery costs and scale of operations will lead to cost reductions.

### **Manufacturing and infrastructure**

Going against the traditional path of forming a joint venture to gain traction in the Chinese market, Tesla is the first fully foreign-owned automaker in China, a sign that Beijing is looking up to open its car market. Tesla built its gigafactory with enough capacity to build at least 5,000 cars per week, giving it direct access to the world's biggest EV market while taking advantage of government subsidies and avoiding import tariffs that are imposed on cars made in the U.S. Musk announced in 2020 that Tesla will expand its gigafactory, further taking advantage of its lower production costs (estimated at 20% to 30% lower than that of the U.S.).

While Tesla impressed with ramping up operations in Shanghai, it has started deviating from its legacy of insourcing all design and components, with only about 30% of the made-in-China Model 3 locally made. With no publicly available plans for local battery cell production, Tesla still plans to use cells sourced from LG Chem and CATL for its vehicles made in China to further lower costs. Credit Suisse notes that "this reflects a shift in philosophy, as Tesla is arguably narrowing its focus items (emphasis on brand, design, software), and in some ways is moving away from insourcing, favoring ease of production/achieving scale."

Tesla has taken its roadmap for success in the U.S. and has aggressively built a vast network of charging stations across China. Over the last five years, Tesla has deployed over 2,500 supercharger stalls in over 150 cities in China and announced plans to complete 4,000 superchargers in 2020. For comparison, as of March 2020, Tesla operates 900 supercharger stations in the U.S. The supercharger network is a strategic focus for Musk, who has said that new service centers and charger stations are the best ways for Tesla to increase demand.

### **Peering into the Future**

The EV industry has reached a slow boil over the prior years and exploded in 2020. Several countries and jurisdictions have set ambitious 10- and 15-year

sales targets to transition to non-petroleum powered vehicles. The EV turf wars have just commenced, and the most important battleground is proving to be China. Foreign and domestic players have announced plans to raise and deploy hundreds of billions of dollars into EV manufacturing in China. Tesla has quickly gained market share dominance in the space, but several Chinese competitors are in fast pursuit. Many Chinese EV public companies have seen their share price skyrocket in 2020, none more so than NIO (over +1,350%). NIO looks to challenge Tesla as a high-end luxury EV car, with fresh, futuristic interior design and performance. It is interesting to note that NIO's business model and strategy are very different from Tesla's. For instance, NIO outsources the manufacturing of its vehicles and the development of its algorithms and autonomous driving technology. NIO is

also a pioneer in the "battery-as-a-service" model, whereby the company reduces the price of a car in exchange for a subscription for battery swapping services.

Will Tesla continue to gain and defend its first-mover advantage? Will China sour on foreign-owned enterprises operating within its borders and become more protectionist in favor of Chinese brands? As the EV industry matures, which companies will survive, which will go extinct, and which will be the ones to further disrupt the market? No one knows exactly what the future will hold for the dynamic EV industry. But, in this case, the journey is as important as the destination.

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*This article was written by Yailett Fernandez, Cory McOmber and Joe Shan, members of the Lauder Class of 2022.*

# A Different Pour: How Consumers Are Changing the Wine Industry

*Wine is one of the oldest beverages in the world, but its industry isn't immune to disruption. This article looks at how winemakers are adapting to younger consumers who are abandoning traditional table wines for better-priced products that offer variety and sustainability.*

Irish poet Oscar Wilde once famously said, "I can resist everything except temptation." But over the last 10 years, Western Europeans have increasingly resisted the temptation of their erstwhile favorite beverage: wine. There's no denying that wine is in decline in Western Europe. Driven by wellness trends and an aging population, wine consumption declined by 5% from 2010 to 2017 in the region where it all started, according to a report from Rabobank, an agribusiness financial services firm. However, the European wine industry is evolving to address changing consumer preferences both at home and in the United States. Four key trends have started to emerge: 1) new categories such as sparkling wine 2) new packaging formats including cans and boxes 3) increased awareness of sustainability and 4) healthy living.

## Sparkling wine: Revitalizing the Category

Wine has long been a serious affair in Western Europe, where Italy, France and Spain account for nearly 60% of production among the top 10 wine-producing countries, according to Statista data. The traditions associated with producing, naming, serving, pairing and drinking it are sacrosanct and handed down over generations until they are second nature. These rules teach that each wine serves a very specific purpose: Who would want to be the only one at the dinner table who doesn't know that white is for starters and fish, while red is for mains and meats? Or that sparkling wine (Champagne only, thank you very much) is saved for special occasions only? As a result, white and red wines have ruled the industry for decades.

Until now, that is. Even as overall wine consumption has decreased, sparkling wines of all kinds have seen increased sales in most Western European countries. What explains the new popularity of this beverage? First, there is a general trend driven by millennial and female consumers

towards sweeter and lower-alcohol beverages. Clocking in at ~11% alcohol by volume and with 15 grams per liter of residual sugar, prosecco fits the bill. An added bonus: This sugar level grants it the nomenclature "extra dry," helping convince label-conscious consumers that they're drinking a serious beverage, all while being sweeter than a Brut Champagne. Second, the extremely successful marketing campaign by Campari Group created a perfect solution to these changing taste preferences with Aperol and Campari spritzes topped with fizz. The aperitivo hour has reemerged and taken off in a big way, driving an increase in demand for the perfect bubbles to round off the drink. Finally, the younger generation is more price conscious, looking for a wallet-friendly prosecco rather than a fine champagne.

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"Having a stance on sustainability is no longer optional."

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Producers have more than risen to this challenge, with prosecco production increasing almost tenfold in as many years. Sparkling wine sales have grown enough to partially offset the major decline in still white wine sales. All that glitters is not gold, however, at least in the world of sparkling wine. The COVID-19 pandemic has vastly reduced the number of large gatherings that call for celebratory sparkling wine toasts, as well as aperitivo hours with friends. Sparkling wine producers should ready themselves for a slow and gradual recovery of the sector, which presents some opportunities. For example, Germany hasn't been as hard hit by COVID-19 as Italy and Spain. The latter two countries should increase exports of prosecco and cava to the north by marketing them as fun, feel-good drinks.

## The Explosion of Alternative Packaging

The glass wine bottle dates back to the 1600s. In wine markets such as France, Spain and Italy, the glass bottle has remained largely unchanged and is viewed as sacred by traditional producers. Nonetheless, the longstanding norms of wine bottling have been upended in recent years with a surge in alternative packaging such as boxes and cans.

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“It is evident that the global wine industry is no longer just looking to European tradition as it has in the past.”

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Boxed wine is often synonymous with budget, low-quality products in the U.S., but this is not the case in the Nordic markets. According to a study by wine broker Ciatti Europe, as of 2018 boxed wines represented over 50% of the Swedish and Norwegian markets, as well as over 30% of the Finnish and Danish markets. These countries' consumers have for decades recognized several benefits of boxed wine. Unlike bottles that last one to two days, boxed wine lasts for up to a month, is more convenient to transport and creates a smaller carbon footprint than glass bottles. Although glass bottles still dominate the wine market today, the boxed wine trend has accelerated in the U.S. and Western Europe in recent years. In March 2020, soon after the onset of coronavirus pandemic, Nielsen data shows that U.S. boxed wine sales surged by 50% over 2019, about double the rate of overall wine sales. This is perhaps due to the convenience of large, three-liter boxes during a time when consumers are seeking to limit trips to grocery and alcohol stores. Experts suggest that this trend is here to stay, as Americans come to value the convenience and sustainability of this packaging alternative.

Just as Scandinavia popularized boxed wine, the U.S. is the epicenter of the burgeoning canned wine market. According to Wine Spectator, U.S. canned wine sales have exploded from around \$2 million in 2012 to over \$180 million in 2020. While especially popular among

millennials, this format has proven compelling to all demographics; the small serving size is both convenient and invites customers to experiment with new wines in a smaller quantity. The recent U.S. surge in this category has begun to reverberate across Europe. The U.K. saw a 125% increase in canned wine sales last year, according to data from Packaging Europe, with emerging startups such as The Uncommon and Pinot Pinot offering high quality canned wines with sleek marketing. Germany has similarly seen a spike in canned wine sales, with producers such as Peter Mertes launching four canned wine varieties. As with boxed wines, it appears that coronavirus has accelerated the adoption of canned wines in both the U.S. and Europe, and this format of wine consumption likely will continue to prosper in the coming years.

## Red or White, Sustainability is Murky

Having a stance on sustainability is no longer optional. In wine, the goal of sustainability has become ingrained in the entire supply chain, from the vine to the bottle to consumer perception. The movement towards “natural” or “biodynamic” wines is a more recent global trend that originated from France and then spread throughout Europe and to the U.S. With the spread, the definition of sustainability began to blur with varying definitions and regulations. Terms such as “organic” or “biodynamic” garnered different meanings across markets, making the concept confusing and vague for both producers and consumers.

The natural wine movement originated in the Loire Valley region of France in the 1980s with a few producers choosing to move away from traditional winemaking techniques, rejecting chemical agriculture and focusing on the natural fruit and juiciness of the grape. Winemaking in France has historically been strict and traditional. The government certification of AOC, or appellation d'origine contrôlée, allows the producers of wine, cheese, butter and other agricultural items to signal quality and distinct characteristics of their product. Natural wine producers rejected the practices imposed by the AOC system and were willing to be classified as only a vin de France or a “natural” or “biodynamic” wine. Consumers started to try these wines and found the flavor and emphasis on techniques that preserved the land and the environment compelling.

These natural wines started to make their way outside of the country in the early 2000s, first to the rest of Europe and then to wine shops in the U.S. At the same time, consumers were starting to demand greater sustainability and transparency in the origin of products. According to the IWSR Drinks Market Analysis, sustainability has become a necessity for brands, especially for younger consumers who want to reduce their carbon footprints. In Europe, the consumption of organic wine grew at a 15.3% CAGR from 2012 to 2017 and is expected to continue to grow in Europe and now in the U.S. Producers across regions are responding to this consumer trend. Both Taco Lucassen, sales director over wine and spirits at Constellation Brands, and Marc Torrago, regional export director at Torres, noted that their companies are investing in organic wine to capture the consumer who cares about sustainability and environment impact.

Though there is a strong interest from both consumers and producers in wine sustainability, there is confusion about what exactly this means. The sustainability labels — biodynamic, natural and organic — have different meanings but are used so interchangeably that the distinctions have blurred. Because the natural wine movement started as a rejection of the formal processes for producing wine in France, the terms were not standardized, creating an uncertainty within the industry and an opportunity for certifying bodies, such as Demeter in the U.S., to brand these terms without clear education for the consumer.

### **Is Wine the New Health Drink?**

In an effort to get healthy, many people are eschewing junk food, tobacco and other indulgences in favor of lower-calorie diets, wholesome living and overall wellness. Alcohol has not been spared from the list of guilty pleasures. For example, some health enthusiasts

are engaging in “dry January” — a month of no alcohol — as a way to set the stage for an auspicious year. Data shows that wine is increasingly subjected to broader health standards, both inside and outside of Europe. It is not out of the realm of possibility that in the near future, wine labels will showcase “light,” “diet” or other signals of healthfulness. Outside of wine, this trend toward health-conscious drinking is evident in beer, too, where 20% of Heineken revenue is from the brand’s nonalcoholic brew, according to Lucassen. And the hard seltzer craze is making its way over from the U.S. to the U.K., presumably driven by a desire to imbibe with fewer calories.

Some lines of Constellation-owned Kim Crawford wine, including a Sauvignon blanc with 12.5% alcohol content, targets women ages 25 to 45. This hits the sweet spot for the typical millennial who is health-conscious but also likes to indulge. According to the Torres company, 26 is generally the age when wine drinkers begin to develop more knowledge about wine products.

### **The Future of Wine Consumption**

It is evident that the global wine industry is no longer just looking to European tradition as it has in the past. Customers have demanded that the wine industry change: They want more unique wine varieties, innovative packaging, and products that suit their healthy and sustainable lifestyles. As customer tastes and preferences continue to evolve, continued disruption is to be expected in the wine industry, along with an ever-increasing flow of ideas and innovation.

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*This article was written by Serene Darwish, Rukmini Mahurkar, Kristen Meredith and Melissa Tovin, members of the Lauder Class of 2022.*



## Digital Health in Latin America: Opportunities and Challenges for Telemedicine

*Like many nations around the world, Latin American countries are figuring out the challenge of providing health care across an uneven terrain of income, infrastructure and regulation. This article explores how the adoption of digital tools is helping that effort.*

With the rise of digital health innovations and their forced adoption as a result of the COVID-19 pandemic, it has never been a more relevant time to examine the digital health sector in Latin America. While there are certainly distinct regional differences, most Latin American countries provide some degree of universal health coverage to their citizens at a relatively low cost. However, due to financial instability, inequality and infrastructure challenges, there are insufficient resources to provide adequate coverage

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“The health care system’s deep fragmentation can serve to exacerbate existing inequality.”

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to everyone. Many Latin American public health systems are both underfunded and overwhelmed, often lacking the resources to care for their high volume of patients. According to the London School of Economics and Political Science, the majority of countries in Latin America spend

considerably less than 6% of their GDP on health care, with only Costa Rica and Uruguay exceeding this target. Brazil, Mexico and Peru stand out for the largest fiscal deficit in their health care systems, at \$70.6 billion, \$63.8 billion and \$12.4 billion, respectively. Digital health care has the potential to fill these gaps while improving access to health care in the region.

### Progress in Digital Health Care

Digital innovations and technologies are being adopted all across the region, as evident from the dramatic rise in investments into this space. Distrito, a Brazilian accelerator, noted that health tech investments in Latin America have increased 37% since 2019 to total \$52 million. According to the Association for Private Capital Investment in Latin America (LAVCA), health tech was the second-fastest growing tech sector in the region in 2019, with a 250% increase in deals compared with 2016. Significant mega rounds include Dr. Consulta’s \$50 million Series C round in 2017, giving this network of health clinics in Brazil the ability to offer affordable, high-quality

health care. With an investment environment already favorable to digital health, COVID-19 accelerated the region's adoption of many new technologies. While the pandemic has exacerbated the region's developmental challenges and increased inequality, it has also created the perfect opportunity for digital health solutions to proliferate. Telemedicine has allowed doctors to reach previously underserved populations, such as those in rural areas or those in prison, as noted by the Latin American Federation of the Pharmaceutical Industry (FIFARMA). Other digital health solutions are seeing similar COVID-19 tailwinds, such as digital record keeping, health-related wearables and health tech apps. Beep Saude is the perfect example of a startup in Brazil whose growth has accelerated since the start of the global pandemic. Beep specializes in providing home vaccination and lab testing services, enabling patients to receive care from the comfort of their homes.

## Challenges in Latin America

Latin America is certainly not a monolith, so it is helpful to examine digital health in specific geographic contexts. Brazil and Argentina are two perfect case studies, due to their well-developed health care sectors and the existence of many digital health startups. With one of the world's largest universal healthcare systems, Brazil has achieved many positive public health goals including an over 50% decrease in infant mortality, as noted by a McKinsey white paper from 2011. Nevertheless, there exists a large gap in the type and quality of treatment between public and private institutions. Juan Carlos Villa Larroudet, president of Omint S.A., a leading private HMO with a strong presence in both Brazil and Argentina, said the gap is another example of Brazilian society's deep social inequality. Henrique Mandetta, Brazil's former health minister who served during the pandemic, noted that one of the country's biggest challenges is its lack of specialized doctors in every geographic region. Due to this problem, many primary care physicians are hesitant to take responsibility for their patients' care without first consulting with experts. The result is an endless chain of referrals, often pushing patients to specialized doctors who live hundreds of miles away. This is no small feat, as there are many obstacles challenging digital health adoption: lack of internet penetration, lack of patient trust

in telemedicine and opposition from medical professionals. Mandetta suggests lack of clear regulations are the main obstacle because telemedicine already existed in Brazil pre-pandemic. It would not be uncommon for MRI scans taken in Teresina to be sent to Sao Paulo for interpretation, for example, although differences in medical licensing and local regulations make this process unnecessarily complicated. While he notes that Brazil's *Conselho Federal de Medicina*, the country's federal board of medicine, had tried regulating the sector in 2019, the government only began to seriously regulate the sector in response to the COVID-19 pandemic. In response, Mandetta himself issued a provisional measure to allow for telemedicine during the pandemic, introducing light government regulation for digital solutions. Although the regulation is temporary for now, Mandetta thinks it is the first step in a positive direction for Brazil's digital health sector.

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“Telemedicine has allowed doctors to reach previously underserved populations, such as those in rural areas or those in prison.”

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Argentina's complex health care system makes it another interesting case study for examining digital health in the region. In his study titled “Health Care Organization and Delivery in Argentina,” researcher Gabriel Novick noted that 13% of Argentina's population is insured through private HMOs, 48% relies on *obras sociales* linked to social security funds, and 39% accesses primary care and treatments through the public health care system. Novick acknowledged that major cities provide excellent medical facilities and services, but more rural hospitals lack basic medical supplies and equipment. The health care system's deep fragmentation can serve to exacerbate existing inequality. Other challenges include poverty and social instability, suggested by the Pan American Health Organization as main contributing factors preventing low-income individuals from accessing high-quality care. While Argentina would certainly benefit from more accelerated adoption of digital health solutions, Villa Larroudet thinks the public's conservative mindset has been a roadblock. In

the past, decisions to see a doctor might have been based on whether the gravity of the health issue surpassed the effort needed to schedule an appointment. Today, notes Villa Larroudet, many young and healthy individuals prefer to access medical care in the easiest way possible, which has made telemedicine more popular for certain segments of society. Telemedicine ensures that many previously unscheduled consultations take place, and it drastically reduces wait times that have long plagued Argentina's hospitals, yet it has not become fully accepted by the public. While the COVID-19 pandemic has forced society to accept telemedicine in place of in-person visits, Villa Larroudet points out that comprehensive regulations do not yet exist. Only time will tell whether telemedicine will be permanently accepted by society and properly regulated by the government.

### **Connectivity improving health care access**

The future of the digital health sector in Latin America could take many different directions, and its success relies on the region overcoming certain challenges. According to marketing research firm Global Health Intelligence, connectivity improvements will help to close the gap in access to health care. This would be especially helpful for more rural areas in Brazil's Amazonas region and Argentina's northern provinces. Mandetta highlights improvements in electronic medical records and data sharing as main focus areas for the sector. With electronic medical records, every person would have unified health records even if they were treated by different providers, including private hospitals and outpatient facilities. He notes that there is a huge opportunity for using health-related data to carry out clinical trials or experimental treatments, as it could help identify which drugs, treatments and tests are most effective for different conditions. Darryn Pollock's *Forbes* piece on blockchain echoes these sentiments, noting that blockchain has the potential to safeguard health care data in Brazil. It would prevent the loss of information, decrease inefficiencies

in billing and allow for a greater flow of information. Another exciting innovation is wearables, which allow doctors and patients to track key health indicators. Eduardo Kupper, head of Bradesco's Venture Capital arm in Brazil, is particularly excited about wearables. With their more widespread use and adoption, indicators can be used to predict future conditions and allow for medical interventions to take place before they occur, he said.

### **Moving forward**

While Latin America faces many challenges, the future of its digital health sector looks bright. Although many Latin American countries are plagued by financial instability, inequality and infrastructure challenges, their health care systems serve to benefit from digital solutions. With a vibrant digital health startup and investment ecosystem, and the forced adoption of digital health solutions during the COVID-19 pandemic, an improvement in health care access might be the pandemic's only silver lining. When asked about telemedicine's potential to reduce health care costs, Mandetta and Villa Larroudet agree that it will not generate any savings for payers; they argue that telemedicine works as a complement to in-person medical visits and not as a substitute. However, industry experts in both Brazil and Argentina are optimistic about the future of health care and believe digital health solutions play an important role. Eduardo Kupper said, "Health tech companies have the advantage of moving faster than traditional players in the health care space. Also, health care data is becoming one of the most valuable assets for insurers, providers and patients." Although it has yet to be seen whether the region's regulatory systems will be able to keep up with new technologies and innovations, there are many reasons to remain optimistic.

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# Latin America's Hypergrowth Startups

*This article assesses the entrepreneurial ecosystem across Latin America, where investors are taking a keen interest in startups that are leveraging technology to disrupt markets.*

In 2012, Brazilian ride-hailing startup 99, formerly known as 99 Taxi, assessed a market of promising competitors. As Latin America's (LatAm) ride-sharing market attained exponential growth, local entrants and giants including Uber stormed the region. By 2014, 99 was reaching 1 million rides per month, attracting foreign investors' attention. Notably, Chinese technology conglomerate Didi Chuxing invested in 99 at a \$1 billion valuation, crowning 99 as Brazil's first unicorn. Since then, a wave of foreign investment has accompanied Latin America's first hypergrowth startup, vindicating the pioneers in LatAm's venture capital market. Eric Acher, founding partner of Monashees, an early investor in the region, said, "We always thought that there was a very strong entrepreneurial energy in Latin America...entrepreneurship of improvisation and necessity. Channeling that energy into entrepreneurship of choice with the help of venture capital would give founders a chance to build world-class companies."

Indeed, Latin America's tech ecosystem was limited the early 2000s. However, two prominent companies from Argentina helped pioneer the scene – e-commerce platform Mercado Libre, which is considered the eBay of LatAm, and Despegar, an online travel agency. Within two decades, the region's tech ecosystem made tremendous strides and produced some of the world's leading unicorns, such as Rappi, Nubank and Kavak. The emergence of these companies raises the question: What are the main factors responsible for LatAm's hypergrowth startups? To answer this, we examine three key drivers: digitalization, selective technology adoption and founder networking effects.

## Digitalization

The rapid digitalization of key industries in Latin America, such as financial services, commerce and health care, is spurring innovation and contributing to the growth and success of several companies that aim to solve some of the region's most pressing challenges.

Early entrants, including Mercado Libre, leveraged the transition from analog to digital technologies to disrupt the e-commerce space in 1999. "Mercado Libre was riding a wave of growth of internet users, which were growing at a rate of 50% to 60% per year," recalled Francisco Ceballos, former Mercado Libre manager for Mexico and Colombia.

This burgeoning market fueled by digital transformation empowered companies to redefine the delivery of products and services and to include broader segments of the population that had been excluded. According to a study conducted by the Organisation for Economic Co-operation and Development (OECD), "the growing connectivity due to smartphones [in Latin America] has enabled many digital platforms and the delivery of services through these platforms." Moreover, "the e-commerce sector reached \$54 billion in 2018, up from \$29.8 billion in 2015 across the region," signaling that there is a growing appetite for innovative solutions in the delivery of goods and services.

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"Latin America has skipped expensive investments in outdated infrastructure and has developed solutions uniquely primed for growth in the region."

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Digitalization also generates growth opportunities beyond direct-to-consumer sales. Colombia's first technology unicorn, Rappi, capitalizes on data beyond its core business as an on-demand delivery provider. Rappi averages more than 10 million active users monthly, generating myriad data points that are invaluable to ascertain shopping trends and consumer behaviors. Although their current

value proposition is centered around delivering goods to consumers, Rappi and others are positioning themselves to keep their growth momentum by using this data.

Despite tech's exponential growth, as of 2017, 52% of the world's population still do not have access to the internet, according to the United Nations. Therefore, the opportunity to continue growing as more users enter the digital arena remains.

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“In a less mature market, such as Latin America, companies might be strangled by regulation even before they get a chance to expand and grow.”

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### Selective Technology Adoption

Another driver behind the increase in hypergrowth companies has been the ability to “leapfrog” emerging technologies and identify solutions that work in the Latin American context. As a result, Latin America has skipped expensive investments in outdated infrastructure and has developed solutions uniquely primed for growth in the region. For example, in many emerging markets like Latin America, the adoption of traditional landline phone services was bypassed by many initial users who directly entered the market for mobile phone services instead. Today, approximately 70% of Latin America now has a mobile phone subscription, and this penetration is expected to grow at a compounded annual rate of more than 6%. Similarly, millions of consumers skipped the expensive investment in desktops and laptops and are increasingly using the most advanced and low-cost technologies available via mobile applications and cloud-based service. Leapfrogging of technology has allowed consumers in Latin America to increase digital literacy and rapidly adopt new-age web services.

Rappi, for example, took advantage of the proliferation of smartphones to build one of the world's most innovative delivery services. As Caroline Merin, chief operating officer of Rappi, put it, “Innovation comes out of a necessity. There is very much a service culture in Latin

America...[until Rappi] there was just no really powerful technology platform connecting those businesses with those customers.” Now, with the purchase of a mobile phone and prepaid plan, nearly any person in the region can easily purchase any product imaginable. Furthermore, with the adoption of Rappi's digital platform, consumers in Latin America can begin earning supplemental income. As Merin explains it, “unfortunately there is a huge income inequality in Latin America, and that means that there are a lot of people who need an income-earning opportunity.” Rappi provides that opportunity, custom-built for the Latin American context and only possible due to the dramatic leap in technological adoption across Latin America.

### Building a Founder Network

Success begets success. Nothing highlights this idea more than the example of the “PayPal mafia,” a term that refers to a group of former PayPal employees and founders who went on to develop additional technology companies, including Tesla, Inc., LinkedIn, Palantir Technologies, SpaceX, Square, Slide, YouTube and Yelp. What they learned from the early stages of PayPal largely contributed to their success in Silicon Valley.

Unlike their U.S. counterparts, Latin America entrepreneurs have not, until recently, had the benefit of learning at major tech companies. However, Mercado Libre and Despegar are considered some of the first major success stories of the region's boom. MercadoLibre Inc., now valued at about \$72 billion, created a model that served as a guide for newer startups. As Caroline Merin said, “We [Rappi] had the example of Mercado Libre before we started.”

Pablo Navarro, a founder and partner at Marathon Lab, a VC fund based out of Colombia, elucidated the importance of learning. He laid out the crucial role of successful early ventures that he referred to as “tech universities,” with the “graduates” they produce being their early employees. Not unlike the PayPal mafia, one could look to Mercado Libre, and more recently Rappi, as the beginnings of these “institutions,” he said.

Frubana, a venture Navarro was a seed investor in, has seen great success with their B2B platform of agricultural products and packed goods for restaurants and small retailers in LatAm. The founder and CEO was an early

employee of Rappi and part of the up-and-coming “Rappi mafia,” to borrow the term. The connections, experience and DNA of these runaway success unicorns mean that alumni of these institutions will exit with robust experience, access to mentors and a trove of talent they can pull from when starting their own companies. Even though Rappi is one of the youngest unicorns in the region, it has already created the most alumni companies. It is not surprising that VC funds across the region have invested in Frubana since these new startups come with highly creative, prepared and experienced entrepreneurs.

## Challenges ahead

Although the outlook seems promising, there are still challenges ahead for startups in the region, mainly access to capital, threats posed by regulation and the complexities of operating in multiple countries.

While there have been more VC companies that look towards the region, it’s still difficult for startups to obtain the funding necessary to sustain their operations, expand and hire top talent. “Funding is always a huge challenge. You never stop fundraising!” said Mauricio Cordero, CEO and co-founder at Bankaya, one of the first digital banks in Mexico. “Rappi has the funding to match salaries being paid in San Francisco,” which solves their problem of accessing human capital. But not all startups can afford to be in that position, especially in their early stages.

Regulations also threaten to restrict both the startup scene and companies’ abilities to expand. In general, the entire startup ecosystem faces this challenge, as seen by Uber’s struggles with local and federal governments in recent years all around the world. According to researchers at the University of California-Hastings, a well-established company might have more leverage and capital to negotiate and even disrupt the existing models of regulation. In a less mature market, such as Latin America,

companies might be strangled by regulation even before they get a chance to expand and grow. In some cities, scooter companies disappeared overnight, and as a few successful companies earn more revenue, countries might feel inclined to raise taxes, which could become a barrier to entry for other startups.

Lastly, although the countries within the region share multiple cultural and language similarities, they are separate and unique. While the region does have great potential with its market size and many users, each country represents a new hurdle to clear, making expansion a more challenging and slower endeavor. Moving from one state to another within the U.S. can be considerably less troublesome than moving across Latin America. Visas, work permits and relationships with local authorities all need to be started from scratch.

## Conclusion

VC funding in Latin America more than doubled from 2018 to 2019, reaching a record \$4.6 billion, according to a report from the Latin America Private Equity and Venture Capital Association. With that kind of investor interest, it is safe to assume that the startup momentum in Latin America is here to stay. Driven by rapid advancement in technology purpose-built for the regional context, shared culture and language, and a growing community of successful local entrepreneurs, the region’s tech ecosystem is quickly catching up to its northern neighbor in Silicon Valley. Although challenges remain, it is clear that venture capitalists and entrepreneurs worldwide are betting that the next generation of Latin American entrepreneurs will continue to find creative and valuable solutions.

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*This article was written by Zachary Hubbard, Juliana Escobar, Ike Okonkwo, Isabella Espinel and Juan Fernandez, members of the Lauder Class of 2022.*

# South Korea's Startup History

*South Korea's economy has long been dominated by family-owned conglomerates, but those businesses are making room for startups and venture capital. Founders and funders are gaining ground in one of Asia's most sophisticated consumer markets.*

The post-war period of rapid economic growth known as “Miracle on the Han” transformed South Korea from one of the world's most destitute nations to solidly middle class within 50 years. Under President Park Chung-hee, South Korea began to fully embrace a developmental state model that prioritized import substitution and export orientation that led to the rise of globally competitive chaebols, or family-owned conglomerates, such as Samsung and Hyundai. However, with economic growth stagnating to a 10-year low of 2% in 2019 and rising income inequality, the ability of the chaebol-oriented model to continue to drive economic growth in Korea has increasingly come under question. In response, the Korean state has pivoted to fostering a startup ecosystem by opening government-operated accelerators, infusing venture capital with government funds and nudging chaebol firms to advise and invest in startups. Venture investment in South Korea hit an all-time high of ₩4.28 trillion (\$3.87 trillion) in 2019, up 25% from the previous year, according to a report from online news site BusinessKorea.

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“The biggest barrier that prevents e-commerce startups from scaling is increasing customer acquisition costs.”

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This government initiative has faced headwinds due to a tech-adverse investment culture that grew in the aftermath of the early 2000s dot-com bubble and subsequent burst. However, the success of recent unicorns in the South Korean startup scene such as Coupang, an online retailer

and marketplace, and Baedal Minjok, a food delivery app, demonstrates strong prospects for a burgeoning ecosystem. Historically, foreign investors have passed over South Korea for China and India in their desire to penetrate Asia's fastest-growing consumer markets. However, Altos Ventures, an early-stage venture capitalist that has been investing in Korea for the past 15 years, has had a variant view that South Korea will grow into the world's third-largest e-commerce market, behind China and the United States, within the next three years.

In September 2020, we had the opportunity to interview Han Kim, co-founder of Altos Ventures, and Richard Song, partner at Altos and former chief financial officer at Coupang. Their experience in investing in South Korea has allowed them to bear witness to the evolution of the country's entrepreneurship scene and the tech market. Han Kim noted Korea's economy, demographics and use of technology has created a fertile environment for e-commerce startups to foster.

## Fertile Ground for E-commerce

The biggest barrier that prevents e-commerce startups from scaling is increasing customer acquisition costs. While the initial customer base is easy to acquire, it becomes much more expensive to capture additional customers. However, Korea's extremely high online and smartphone penetration rates, and its ethnic homogeneity have allowed easier customer acquisition through word-of-mouth marketing. A second barrier is high logistics costs due to lack of route density. It's much more difficult to make the economics work when drop-off locations are spread throughout a region. While South Korea has a population just over 50 million, the population of its largest 10 cities is similar to that of the United States, which is six times more populated. Because of this high urban population density, a Coupang delivery person can drop

off an entire truckload of online shopping packages to one apartment complex, Kim and Song said. This density in combination with the country's high per-capita gross national product (GNP) of around \$43,000 is why foreign investors often undersize the South Korean market. From purely a population analysis, Korea is smaller than many markets, but because of its extremely high density, the true addressable market is among the highest in the world. Kim and Song noted that while Korea's offline retail is difficult to generalize, certain verticals such as food delivery may be among the largest markets in the world. These factors have provided a uniquely fertile environment for founders to start e-commerce businesses.

## Changing Korean Founders

Korea has a short history of high technological entrepreneurialism. Silicon Valley's startup ecosystem kickstarted in the early 1970s as venture capital funds formed to provide funding to newly minted semiconductor firms, and then exploded after the successful IPO of Apple in 1980. But Korea's ventures ecosystem only started in the late 1990s. Although there was vibrant growth, the crash of the technology bubble in the early 2000s resulted in sudden aversion to all things technology in Korea. Away from the spotlight, some Korean ventures grew and evolved into large businesses such as Naver, the dominant web portal and search engine, and Kakao, the leading messaging platform.

Kim and Song said they have observed a growing trend recently of experienced developers and product managers leaving the safety of Naver and Kakao to start their own companies, similar to how Paypal and Uber have birthed a diaspora of startup founders. Having been well-trained in business operations and development, these founders have raised the quality bar of Korean startups.

Historically, money for the Korean venture capital industry was provided by American and multinational investors. This funding dynamic advantaged founders who had a strong command of English and graduates from American MBA programs, as investors were more comfortable backing founders who "looked" like them. However, in recent years, the venture capital industry has become increasingly funded through domestic

investors, and VCs have become more discerning. Kim and Song said that, based on their experience, the best founders are those who have the best local connections, a strong understanding of how the local market functions, and an insatiable drive to learn and compete. They gave the example of Bom Kim, the CEO of Coupang, which Altos invested in early. Bom was a Harvard MBA and had to learn a lot about the intricacies of the local Korean market, which he did through voracious learning, they said.

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"Because there are increasing numbers of startups on stronger footing and a healthy ecosystem, the risk of joining one is reduced."

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With the success of startups like Kakao, Baemin and Coupang – and the multimillionaires those companies created – there has been a shift in the public perception towards startups. Even senior employees at leading consulting firms, banks and chaebols are moving to startups, something that would have been unthinkable just a few years ago. This is a strong tailwind for the long-term prospects of the Korean startup ecosystem because the best educated and talented are willing to take risks. Additionally, it leads to a positive feedback loop. Because there are increasing numbers of startups on stronger footing and a healthy ecosystem, the risk of joining one is reduced. If it doesn't work out, you can move on to another one.

However, there is still a strong risk-averse attitude in Korean society due to the historically high youth unemployment rates and a graying outlook on the economy. Even students at the top domestic university study for public administration roles because they are willing to endure relatively low salaries in favor of job security. A decreasing risk-taking attitude among the segment most able to bear it seems negative for the industry, but Altos thinks differently. Kim and Song said everyone isn't meant to be a founder or work at a startup. In fact, they argue that most people are not qualified to be founders because they don't have the right capabilities

nor the mental fortitude, so having a greater volume of entrepreneurs will not help the ecosystem. Rather it's more important to have a few extremely great entrepreneurs. Based on their viewpoint, the trend is positive: the top 1% of the labor force is shifting to startups.

## What is the Chaebol Response?

Another tailwind that has boosted the startup ecosystem is that startups have been able to beat the chaebol in certain industries. South Korean chaebols have support from the government and banks, so it seems inevitable that they would dominate startups. But technology startups have shown that being small, nimble and finding niches is more important than brute financial power. Startups such as Coupang are able to move faster and with less bureaucracy compared with large competitors like E-Mart, a chaebol-run chain of hypermarkets. Although chaebols have plenty of capital to pursue different initiatives, fast and nimble startups are able to more effectively develop ideas and be first movers in any new space. Chaebols have been hiring and forming funds, but they have had limited success due to the short two- to three-year terms that top executives serve, compared with the longer 10- to 20-year startup horizons. The incentive structure at the chaebols makes it difficult to prioritize the needs of a startup effort, and senior executives continue to build upon the organization's traditional businesses.

The involvement of chaebols in the startup economy is limited due to lower risk tolerance for a potential failing business and cultures that do not foster an entrepreneurial spirit. "Founders who want to disrupt an industry have to question everything," Song said. The culture in place at chaebols does not allow for this sort of questioning and does not foster an environment conducive to growing a startup.

## Investment Outlook for VCs

Although the VC and startup scene in Korea has been growing, there is always room for improvement. Kim commented on the lack of competition among VCs and the amount of government regulation in the industry. "In the U.S. or China, people with an idea meet with investors and raise funding to go after an opportunity," he said. "In Korea, government mandates where the money should be going. It is planning by the central authority rather than a group of independent people who see a vision for opportunity."

Ultimately, Korea needs more investors in the market to compete and looser government regulations that allow investors to put their money in ideas and founders they see as promising. More investors and money with the freedom to invest without stringent government guidelines will allow for more growth VCs in Korea in years to come.

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*This article was written by Mark Choi, Ranny Choi and Sunghoon Kim, members of the Lauder Class of 2022.*

# Limitations to Financing in Africa: A Two-tiered Perspective

*Starting a new business venture in Africa is fraught with obstacles, but perhaps none is larger than access to capital. This article explains the hurdles for both venture capital and private equity, and the promises that await those investors willing to take the risks.*

In recent years, economic, technological and research developments have been evolving rapidly across Africa. As the world further globalizes and capital becomes more accessible, Nigeria, Kenya, Egypt, South Africa and Rwanda are expected to continue their surging growth. But, unlike many other startup ecosystems privileged by stable macroeconomics and established institutions, many African nations are under-resourced to support entrepreneurs, startups and tech hubs. Several noticeable factors seem to hinder equitable support and allocation of resources such as venture capital. Here, we look to decouple the capital market by highlighting the current limitations and potential market opportunities for venture capital and private equity investment.

## Venture Capital

### Limitations

Venture capital funding has increased steadily on the African continent for the past five years. Total funding was only \$277 million in 2014 and grew to \$2.02 billion by 2019, according to a report by capital market firm Partech Partners. Even though that growth paints a pleasant and optimistic picture, there are still many funding gaps. The majority of funding only went to five countries: Nigeria, Kenya, Egypt, South Africa and Rwanda. Nigeria and Kenya alone took more than half of the \$2.02 billion. Very little funding goes to French-speaking countries in sub-Saharan Africa. The top five Francophone countries that received venture capital funding in 2019 were Senegal, DR Congo, Cameroon, Niger and Cote d' Ivoire, but together they only received \$29 million. This is less than 1.5% of the funding shared by Nigeria and Kenya. The lack of funding going to the Francophone countries ensures that entrepreneurs in these markets are not getting adequate financial backing, especially at the early stage, to be able to scale their startups.

Many factors can be attributed to the minimal venture capital funding in Francophone Africa. One idea is that the funding disparity stems from the barriers to entry into well-established industries. Startups face difficulty when trying to disrupt an established industry, so funds may be reluctant to provide money out of fear that they will not get it money back. Another thought is that the dearth has to do with the lack of French-speaking partners at most venture capital funds focused on Africa and inadequate understanding of the size of the market. More than 430 million people live in Francophone Africa, a number that eclipses the population size of Nigeria, Kenya and Egypt combined – roughly 347 million. Perhaps founders should not focus on just individual Francophone countries but an aggregate to justify a large enough total market for investment.

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“Many women who are creating venture-scale businesses are not successfully getting through the pitching process to obtain the first equity check, which is critical for growth.”

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Another venture capital funding gap is the lack of funding for female-founded startups. Female-founded startups raised \$264 million, which is only about 13% of the \$2.02 billion total raised in 2019 in Africa. The low amount can be attributed to several factors. One is that there is a narrow pipeline of female founders. Even though most African women may be the main breadwinners and very entrepreneurial, they are not viewed as the head of the household and discouraged from pursuing their ambitions. As a result, many women are not pursuing entrepreneurship

at scale and creating venture backable startups. Additionally, many women who are creating venture-scale businesses are not successfully getting through the pitching process to obtain the first equity check, which is critical for growth. Perhaps this obstacle can be attributed to the extremely low number of female partners at venture capital funds. Because there are not many female partners, many female-founded startups are overlooked.

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“From sourcing a company to exiting a deal, the African market provides obstacles that make the traditional private equity model a challenge.”

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### **Opportunities**

Even with structural and macroeconomic barriers facing venture capital across Africa – both in funding for female entrepreneurs and Francophone Africans – there has been a noticeable shift toward a more supportive environment. Many initiatives exist nowadays to enlarge the entrepreneurial pipeline for women in Africa, including both formal and informal networking events, pitch days for female entrepreneurs, and groups that help women build their business acumen and knowledge. In Nigeria, organizations such as SheLeads Africa (SLA) concentrate on inspiring women across different countries and industries through community resources and events. With access to coaching programs and digital communities, the programs aim to unlock the female professionals’ potential. There has also been a shift within startups towards intrapreneurial mentorship to train the next generation of female entrepreneurs. In Senegal, Dictaf Corporation offers guidance to young female professionals working within the agribusiness sector; yet, the trend is still in-company and specialized, leaving huge potential for further investment into human capital and business innovation.

Besides formal channels, successful African women often lend their support to ensure diversity and representation in African business and innovation. Kofoworola Agbaje, an investment associate at Quona Capital, said she believes that the most beneficial way to encourage female and

diverse business representation is to create, maintain and nourish African female talent. Agbaje frequently offers her time to expand the funnel and support women locally and nationally, hosting office hours for women founders to refine their pitches as well as hosting entrepreneurship workshops. AJ Okereke from Golden Palm Investments said some investment firms are trying to mitigate the problem by adjusting their rubric when evaluating businesses led by female founders. This further acknowledges the issue of representation, but it also offers a hopeful outlook for addressing it long term.

### **Improved Resource Allocation**

Another prominent and promising shift to the African startup ecosystem is the move toward more representation of pan-African startups, not only those founded and operating in Nigeria, Ghana, Ethiopia, Egypt and South Africa. There is a significant lack of capital and operational resources across Francophone Africa as a result of market size, monetary policy and political uncertainty. Yet several resources exist to support growth in this region, notably L’Afrique Excellence, a business accelerator program launched by the World Bank Group in 2017. The program’s stated mission is to match promising entrepreneurs with mentors and resources. The firm focuses on digital brand or tech startups that have products currently available on the market and that are looking to expand and begin scaling.

### **Increased Capital Flow and Idea Generation**

Currently, most of the capital flows from overseas to expats or more privileged founders within the regions. However, what excites Agbaje is the future of African-owned and operated enterprises moving from seed to IPO locally. This would allow not only the creation of jobs and resources for the community, but also the support and financing that could be used to buttress future entrepreneurs and secondary startups and ideas. This is precisely how some early employees at Facebook, Microsoft and Paypal became successful entrepreneurs or investors with their earnings through their respective company’s IPO. Think Steve Chen and YouTube or Dustin Moskovitz and Asana. By working in startups that move through the financing pipeline, these future entrepreneurs also grow and learn by witnessing innovation throughout their tenure, which helps integrate them into the ecosystem.



As large venture capital firms such as Sequoia raise funds focused on regions such as China or India, or an industry such as technology, it seems only a matter of time until a new African-focused fund will be raised and injected into the promising generations of entrepreneurs on the continent.

## Private Equity

### Limitations

The traditional private equity model relies on transparent markets, strong financial institutions, professional service providers and liquid public markets for exits. Shaunt Kalloghlian, partner at Solon Capital, a West African focused private equity and venture capital fund, walked through the challenges at each step of the deal process. From sourcing a company to exiting a deal, the African market provides obstacles that make the traditional private equity model a challenge, he said.

#### Step 1: Screen for Opportunities and Control for Risk

The first step is finding a good company to obtain a controlling interest. In Africa, this is difficult. Often, African companies are privately owned and operating in opaque markets in informal economies. Finding great companies means being on the ground – looking, talking and establishing relationships. Even potentially good targets may have financials that are not governed and audited to a level expected by lenders and institutional investors. On a macro level, Africa has yet to meet investors' expectations to assess its indigenous country risk. Private equity investors usually pass on deals when experts cannot reveal the risks and ways to mitigate them. After decades of mismanagement, many governments reformed financial systems and economies to open their market to foreign investors. This makes the next step, structuring the deal, a challenge.

#### Step 2: Structure the Deal

Typically, private equity acquisitions are financed by cash from the firm and institutional investors (pension funds, endowments and insurance companies), as well as loans from commercial banks. Due to a variety of risks associated with operating in emerging and frontier markets, leveraging the acquisition from debt can be prohibitively

expensive. Furthermore, private equity firms typically raise capital from limited partner capital in dollars or euros, and these limited partners expect their funds to deliver returns in these currencies. Should a private equity fund invest in a company that operates in a foreign currency, it is taking the risk of potential currency devaluation.

#### Step 3: Optimize and Operating the Purchase

Once acquired, private equity firms then need to optimize the business to unlock the hidden value predicted in the investment thesis. Often, private equity firms will rely on management, accounting, legal and tech consultants to perform the operational and corporate restructuring required to unlock this value. In West Africa, professional services are either nonexistent or only operate in the more established African markets, such as Nigeria. Once operating, firms are then confronted with the typical challenges associated with emerging and frontier markets, such as political instability, currency issues, and getting cash in and out of the country.

To understand a local perspective and to build the right go-to-market strategy is essential for companies. In Africa, with more than 50 countries and a diversity of language and culture, there is no one right strategy that brings success to the company. While assessing market needs, companies often need to change the strategy to find the right product-market fit.

#### Step 4: Exit

If the firm is able to make it through steps 1 through 3, it is now confronted with the final step where it obtains all its value – the exit. Traditionally, private equity firms seek to exit their investments within five to seven years by either bringing a company to an IPO or selling it to a financial or strategic buyer. With most emerging markets investments, it is difficult to gain the requisite scale and investor interest to list on a public exchange, such as the London Stock Exchange (LSE) or Johannesburg Stock Exchange (JSE). Therefore, most are left with finding a financial or strategic buyer. At this step, there are the same obstacles as in Step 1: Few buyers are willing to make the acquisition given the relatively little financial governance in West Africa to conduct their due diligence.

This has been a simple overview of the challenges of private equity in Africa, but it covers key obstacles that need to be overcome to improve private investor appetite. For these reasons, Africa-focused funds have relied on developmental financial institutions (DFIs), whose objectives and timelines are more congenial to emerging and frontier market investing. DFI capital is typically at a lower cost with a higher risk tolerance and a lower return expectation.

### Opportunities

Similar to venture capital – even with structural, geopolitical and macroeconomic barriers facing private equity across Africa – private equity investors find it difficult to ignore the opportunity afforded by Africa's growing population and technological advancements. The coronavirus pandemic that began in 2020 accelerated the digital transformation of traditional sectors.

Two of the most disruptive B2C (business to consumer) sectors are health care and education. Both industries have long been dominated by traditional public players and had little advance in their business models in decades. But with improved technology and risk capital from institutional investors, Africa's traditional operations have been experiencing rapid innovations. For example, Helium, a Nigerian startup that offers remote health care services, has been successfully expanding its business by taking hospitals, clinics and other health facilities online. The startup raised \$10 million from investors including China's tech giant Tencent and Y-Combinator, a Silicon Valley-based accelerator. Technology has created a new market for investors by delivering the service directly to consumers with the power of technology.

B2B (business to business) sectors like agriculture, logistics and financial services are also experiencing the digital transformation. Despite the growth of dense urban areas, agriculture still plays a significant role in many African economies. According to the U.S. Agency for International

Development, about 75% of Kenyans earn all or part of their income from this sector, and agriculture accounts for 33% of the nation's gross domestic product. Twiga Foods, a mobile-based supply chain platform, has raised \$30 million from Goldman Sachs and International Finance Corporation, successfully expanding its network of 17,000 farmers and 8,000 vendors. Helios Investment Partners, the leading private equity firm focusing on Africa, has invested in Crown Agents Bank, a provider of foreign exchange and cross-border payments service, and the firm has fueled the bank's digital transformation of FX conversion and payment process. This automation has made the process efficient and thus affordable for customers in emerging markets.

### Conclusion

Private investment is most needed in African markets, which are also least likely to receive the funds from investors. With risks related to institutional voids, coordination failure, local currency and high debt costs, investors expect lower returns on investment. While Africa has been the largest recipient of foreign grants, many private investors passed on deals with the high risks hidden in the region. By leveraging the concessional capital provided by DFI and grant providers, private equity firms will be able to take the appropriate risks and risk-adjusted returns.

As capital continues to flow across borders more freely, thanks to increased globalization and interest in tapping into under-developed regions, it seems likely that financing across the continent will see a shift in the coming years. Yet it remains to be seen whether these investments will last or whether opportunities for diversification, in terms of demographics, regions and industry, will be developed to ensure adequate representation across African markets as a whole.

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*This article was written by Saphir Esmail, Zachary Hickey, Peter Hucal and Satoshi Ozawa, members of the Lauder Class of 2022.*

# How the COVID-19 Pandemic Catapulted Delivery Apps in Latin America

*Across Latin America, delivery app platforms took advantage of the huge opportunity created by the pandemic to onboard new restaurants trying to survive lockdowns and new customers hungry for safe delivery of their favorite dishes.*

To Ariel Burschtin and Alvaro Garcia, two 21-year-olds studying systems engineering in Montevideo, Uruguay, the “Entrepreneurial Attitude” class did not have the most interesting assignments. Nonetheless, they put forward their best efforts to take a crack at their newest one: come up with a business idea and plan it in less than 10 minutes. The team members, all of them Uruguayan nationals, could only think of *chivitos*: a lamb sandwich popular in those latitudes, usually spiced and served with various sauces, cheeses and vegetables. From this desire for a sandwich came the idea for an app that would change the face of food delivery.

In 2007, the way to order a *chivitos* was by phone, and the experience was terrible. An employee would keep the caller on for endless minutes while asking numerous questions about dressings for the order. At the end of the exchange, the restaurant would almost certainly send over a different sandwich than the one ordered. Burschtin’s and Garcia’s idea for the assignment was simple: people don’t want to order their food over the phone, and people just want to get their order right. Not too much to ask. Maybe they could design some kind of website where clients would just order the *chivitos* exactly as they wanted them, and the restaurant could send them over by referencing the precise order that was hard-coded on the site.

The idea received funding, and PedidosYa was officially live by 2009. Many startups followed after PedidosYa’s initial success, and the food delivery industry became the source of several of the most thriving and disruptive companies in Latin America. The COVID-19 pandemic, however, disrupted the disruptors by accelerating trends, increasing digital adoption and changing the relationships with stakeholders. In the same way that the class assignment spurred Burschtin and Garcia to action, delivery service apps have been spurred by the pandemic to leverage their technology and agile network to confront an unprecedented situation and emerge triumphant.

## The Pre-pandemic App Ecosystem

When PedidosYa was founded, the competitive and technological landscape was fundamentally different. The iPhone was only on its second generation, and 27% of South Americans had internet access. Compare that to today, when the iPhone is past its 10th generation, 72% of South Americans have internet access, and Latin American food delivery startups are in a ferocious battle for market share. PedidosYa was acquired in 2014 by Delivery Hero, a Berlin-based company that was on a global acquisition spree to establish international market share. The company also acquired ClickDelivery, a Colombian startup, and has continued acquiring new companies to enter new markets. The success of the delivery startups together with the foreign investment capital that they attracted inspired

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“The pandemic dramatically changed how restaurants were used to operating, so only the ones that adapted their business model were able to survive.”

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a rush of competitors, including Rappi – a Medellin-based application founded in 2015 by three Colombian entrepreneurs that would grow to become the country’s second unicorn in 2018. As Rappi and PedidosYa continued to grow, foreign competitors attempted to enter the space, including the Spanish Glovo and American UberEats. However, razor-thin margins and brutal competition created an intense competitive landscape that promoted consolidation. In 2019, Glovo abandoned its operations in Chile and Brazil due to the strength of their direct competitors, Rappi, Cornershop, iFood and UberEats. In 2020, Glovo followed up this retreat by selling all of their

Latin American operations in eight countries to Delivery Hero for €230 million, with an additional €60 million performance earn-out potential.

Amid the ongoing battle for market dominance, these startups were handed an opportunity and a challenge when COVID-19 upended normal restaurant and grocery operations. Sales among these companies had been doubling year over year before the pandemic, and there was potential to grow even faster as citizens were encouraged not to leave their homes during lockdowns.

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“Overall, the industry grew exponentially through the pandemic. That growth is slowing down as restrictions lift, although it is not receding.”

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### Early Stages of the Pandemic

When COVID-19 arrived in Latin America on Feb. 26, 2020, with the first confirmed case in Brazil, news of the virus and the corresponding societal repercussions in Asia and Europe had been shared in the media for months. However, there was still not enough information to guide government policy in response. Each Latin American country adopted different measures at different times and kept changing these restrictions throughout the months that followed.

This was an uncertain context for everyone, but it especially affected delivery services. Some countries, such as Peru, banned delivery drivers while others, such as Colombia, allowed these services to function freely. Other countries, such as Argentina, excluded these services from the essentials category at the beginning of the pandemic, but then allowed them to operate after recognizing the value the service provided. Despite having permission to continue operating, delivery apps were still unsure on how to best protect their couriers. Furthermore, many restaurants remained closed during the first weeks of the pandemic because they did not think it was safe to operate or because they were not allowed to do so, leading to a general decrease in supply and demand of food delivery.

Argentina was one of the most affected markets during the pandemic. Quarantine started on March 20th and required complete isolation of the population, keeping only supermarkets, health centers and pharmacies opened with strict restrictions of social distance. Restaurants were only open for delivery. The pandemic dramatically changed how restaurants were used to operating, so only the ones that adapted their business model were able to survive. In an interview, Fernando Bosio, director of operations and logistics for PedidosYa in Argentina, highlighted how food delivery became the core of the restaurant business during the pandemic, compared with about 15% of sales before. A huge wave of restaurants started using the delivery services platform as a way to ensure the continuity of their businesses. As part of an inclusive and flexible strategy, PedidosYa offered a lower fee for small restaurants to join. Moreover, as food delivery became their core channel for sales, restaurants became more engaged and experienced in using the app, so their average delivery time decreased from 30 to 24 minutes. Bosio said restaurants that used PedidosYa were able to increase total sales after an initial decline in the first month of the lockdown.

A regional product manager of Rappi said her company also started receiving new requests from restaurants looking to survive during quarantine. Improving service and delivery times were a priority, and the company worked with new partners to help them meet those goals, she said.

### User Adoption Rates Soar

Consumer trends for food delivery services changed vastly as a result of local quarantine restrictions. While quarantine mandates were harsh and abrupt in some Latin American countries, including Argentina, Colombia, Peru and El Salvador, they were more lenient in other countries, such as Mexico and Brazil. Nonetheless, demand grew at a similar rate in most countries, even if at different times during the year. According to the Rappi and PedidosYa managers, orders increased from two to three times on average, compared with pre-pandemic rates. When asked about the impact on orders right after quarantine, both managers recognized that there was a brief stagnant period caused by the uncertainty of new restrictions, but that their respective companies were quick to adapt to the changing circumstances. Although the growth trend could be seen on all delivery services, both companies

also recognized a particular spike in demand for grocery deliveries. Overall, the industry grew exponentially through the pandemic. That growth is slowing down as restrictions lift, although it is not receding.

The growth of the food delivery service industry did not come without sacrifices. In pre-pandemic times, users primarily demanded convenience and efficiency. But efficiency became a second-tier priority when the pandemic hit and supply shortages ensued. According to Rappi's product manager, many customers were less pressed for time because they were isolating at home, and they were increasingly willing to order for next-day — as opposed to immediate — delivery. As the restrictive effects of the pandemic continue to dwindle and supply continues to improve, efficiency is already becoming a top priority for consumers once again.

The pandemic also fueled modernization among users. Rappi's product manager shared that the pandemic accelerated the adoption curve of customers. As a result, they rapidly gained users who, under normal conditions, may have taken longer to adopt their services, such as older customers. The Rappi product manager said her firm is invested in retaining those new customers by providing quality service, and they remain confident that persistent sales are indicative of the sustainability of this accelerated growth.

## Gig Work Remains Precarious

The spike in the delivery demand was met with aggressive hiring of couriers, Bosio said. Local governments throughout Latin America declared delivery services as essential, so there was effectively no impediment for any app to keep hiring new workers. During the first days of the lockdown, it was not uncommon to see the otherwise deserted streets in Buenos Aires or Santiago populated only by the flashy orange bike riders from Rappi or the peppy yellow carriers from Glovo.

Soaring demand for workers, however, was also met with an increasing supply as rising unemployment and migration flows throughout Latin America multiplied the availability of gig workers around the continent. The region's average unemployment rate was 8.1% by the end of 2019 and was expected to rise to over 12% during the

pandemic, according to a report from the International Labor Organization. Additionally, the continuing flow of immigrants coming from Venezuela to all Latin American countries in search of a better life is creating even more competition for jobs. Between 2016 and 2019, more than 4.6 million people left Venezuela because of deteriorating economic conditions, according to the United Nations High Commissioner for Refugees.

In this context, it's no surprise that delivery workers have even less bargaining power with their employers. A study released in September 2020 by the Oxford Internet Institute's Fairwork Foundation program found that online platforms have a long way to go in terms of guaranteeing workers' rights. The study pointed out that, at least in Europe, where most of the holding companies of the Latin American apps operate, few platforms were compensating workers for pandemic-related loss of income, and couriers' income had fallen despite the increase in working hours.

The debate around the legal standing of gig workers as independent has been a heated one even before the pandemic. Most platforms are pushing what Dara Khosrowshahi, CEO of Uber, called the "third way," where workers can still be classified as independent and self-employed, but can earn some benefits such as an hourly wage or a sick leave. Bosio said his platform and others were quick to provide sanitation equipment to all their workers. PedidosYa also provided paid sick leave for employees who contracted COVID-19.

Likewise, Rappi's management was also satisfied with the quick response they gave to applicants who were desperately looking for a new job after losing theirs in the pandemic. They have a sizable workforce that is not directly employed by them, so the process to register them and make them go through the onboarding process was a significant challenge. Moreover, Rappi said it was able to rapidly adapt the onboarding process to the new government's health requirements to provide with the necessary equipment to keep workers safe.

## The Future of Food Delivery

COVID-19 has disrupted modern society on a scale that most living people have never witnessed or imagined before. People, governments and businesses have had

to adapt to new dynamics and constant changes. The pandemic has proven to be an accelerator of the trends and challenges faced by delivery apps. The companies have shown they are up for the challenge, even while uncertainties lie ahead.

According to research from Morgan Stanley, demand for delivery has advanced two to three years due to COVID-19 and is expected to continue growing until 2024, although at a slower rate. The delivery app industry has been responding astonishingly fast to this peak in demand, showing incredible agility to adapt to new circumstances. They quickly onboarded new carriers and partnered with new restaurants to ensure they met the demand.

The pandemic has encouraged new customers to try delivery apps and strengthened the loyalty of those who were already users. In fact, a survey conducted by software company Dragontail Systems just a few months into the pandemic revealed that only 11% of consumers

said they would stop ordering delivery and start going to restaurants when the situation normalizes. While that survey measured the responses of American customers, it can be generalized to Latin American consumers in similar markets. It's also consistent with what delivery app executives are seeing: Customers who became accustomed to delivery during the pandemic indicate they will continue using the services going forward, even if the frequency decreases.

With the pandemic ongoing, the future is still uncertain and the world is still far from returning to normal. Even so, delivery apps' remarkable ability to adapt has positioned them well to continue being successful as they embrace transformation from the pandemic and incorporate it into their future operations.

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# Current Challenges and the Future of E-commerce in Africa

*Business is booming across a number African countries, and online companies want a stake in the markets. But the growth of e-commerce depends on whether companies can surmount specific obstacles. This article outlines the challenges and how one particular firm, Jumia, is working to overcome them.*

The number of internet users in Africa surpassed 400 million in 2018, according to a report from the World Bank Group, and connectivity continues to expand rapidly across the continent. Although less than 1% of all African retail happens online, e-commerce has evolved significantly over the last decade and is expected to show an annual growth rate of 16% over the next five years. E-commerce not only provides small businesses with cheaper and safer ways to grow, it also allows mature companies to efficiently access a larger pool of customers. New businesses can leverage e-commerce to test their products before investing in fixed costs associated with physical retail. Business owners are not restricted by geography in reaching new markets, and consumers reap the benefits of e-commerce by gaining access to products that are diverse in selection and of high quality. Residents in non-urban locations also benefit because they no longer need to travel to cities to purchase certain goods.

Despite these advantages, e-commerce businesses in Africa are encountering major challenges that jeopardize growth. This article will highlight the three major obstacles that e-commerce players in Africa are facing – (1) logistics, (2) financial payments, and (3) trust – and will leverage insights from Jumia, the e-commerce pioneer in Africa, to understand how some of these challenges are being addressed.

These Africa-specific challenges have caused many e-commerce players to exit markets. For instance, Jumia, the first African startup to hit \$1 billion valuation, has scaled back growth over the last year and shut down operations in Cameroon and Tanzania, leaving the retailer to operate in only seven countries. The COVID-19 pandemic has shed light on the fragility of the e-commerce

business model in Africa, and uncertainty lingers on whether new habits will persist post pandemic.

## Challenge 1: Logistics

Consumers in Africa's major cities continue to experience numerous challenges in the logistics of e-commerce. For one, these cities often lack an address system that makes deliveries efficient. Medora Brown, a consultant at Dalberg Kenya in Nairobi, shared a personal experience that illustrated the delivery challenge for e-commerce in Africa. Waiting for a meal one night, she spent hours on the phone with an UberEats driver, directing him to her exact location because of the lack of familiarity in using GPS apps. Drivers often choose to turn their data off because of the expense, so they rely on their memory rather than on live streams of their locations.

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“In Africa, less than 1% of retail consumption comes from e-commerce, whereas in other developing markets like China, 25% of retail purchases are via e-commerce.”

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Navigating the technology isn't the only issue. Home addresses are not formal, so it can be difficult for consumers to explain where they live. Many families live in homes that do not have a paved road near the entrance. Jumia, along with other e-commerce players, quickly realized that one main solution was to rely on and partner

with local neighborhood experts who are familiar with every alley, tree and corner of the urban and rural areas that they serve. Oftentimes, because of the bad road and traffic conditions, only motorbikes are suitable for delivery.

Online shoppers in Africa are no different than their counterparts around the world in wanting to know when their packages will be delivered. However, as a result of logistical challenges, it is often difficult for even the biggest e-commerce platforms like Jumia to accurately predict delivery dates and times. In many situations, when the initial estimate is inaccurate, customers end up receiving the package at inconvenient dates or times.

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“By setting up their own payment platforms, e-commerce companies in Africa are training customer habits towards online payment.”

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## Challenge 2: Payment

The second challenge for e-commerce in Africa is the payment infrastructure. Only a small portion of the population has access to formal banking services, let alone credit cards that are the preferred online payment solution in many countries around the world. According to Susan Chen, Jumia’s former chief operating officer and chief growth officer in Nigeria, 70% to 80% of online purchases are still settled in cash. By contrast, mobile payments are widely implemented only in a few African countries, including Kenya, Uganda and Ghana.

Toukam Ngoufanke, senior managing consultant of business development at Mastercard, said that African banks tend to invest less in the personal banking business because it offers thin margins in return. As a result, personal banking costs are passed on to customers through high fees and interest rates. Through corporate banking and urban retail banking, financial institutions can easily reach their targets, and the majority of Africans remain unbanked. In many African countries, personal banking channels are yet to mature, and retail banks in rural locations often need to invest heavily upfront to establish local networks and gain access to clients.

As mobile payments would significantly boost the efficiency of transactions and merchandise volumes for e-commerce, activating an enormous unbanked population would be a key step for e-commerce companies in Africa. One way to resolve the issue of banking is to develop in-house financial solutions. By setting up their own payment platforms, e-commerce companies in Africa are training customer habits towards online payment. Later, we will explore how Jumia navigates the process of activating the unbanked population.

Another solution that has been on the horizon is the partnership with third-party payment providers. Many African telecom operators have been exploring solutions to growing the continent’s mobile payment systems despite underdeveloped infrastructure. M-Pesa is a Kenya-based mobile money provider that was incubated by a local mobile operator in 2006 and now facilitates payment and money transfers for 41.5 million people in seven countries. With a clear understanding of Africa’s realities, the company leveraged its telecom partnership and began with text message-based money transfers before quickly booming into a multi-service platform that provides micro loans, payroll services, ledger keeping, utility payment and daily mobile payment. Clearly, the case of M-Pesa has painted a promising picture for Africa, where telecom operators could “leapfrog” to mobile payment in regions with low income and limited infrastructure investments. The partnership between e-commerce companies and these payment providers have become a new solution to bypass complex account sign-up procedures under traditional banking and activate the unbanked population.

## Challenge 3: Consumer Behavior

The last main challenge inhibiting the growth of e-commerce in Africa is the society’s underlying consumption behaviors. Most Africans still do not trust online shopping sites as these consumers are used to shopping in person in department stores, malls, markets, and the like. The lack of trust stems from concerns related to product quality, online data and delivery.

To start, consumers do not feel comfortable purchasing an item without seeing it in person. In West African countries like Nigeria, commercial strips were only built in 2000,



and commerce has always been informal. In terms of doing business, people are used to informal methods such as paying with cash at the end of a week or identifying potential business customers through second- or third-party connections. Pardon Makumbe, co-founder and managing partner of CRE Venture Capital, shared insights around the difficulty for consumers to part with their money through online shopping, knowing that the product will be delivered in the future.

In addition to the fact that many Africans do not have credit cards, for those with the ability to pay online, there also exists structural vulnerability in data privacy. Consumers are cautious about sharing their personal information with unknown sources, and empirical studies have shown that credit card fraud is a massive concern for South African users. In Africa, less than 1% of retail consumption comes from e-commerce, whereas in other developing markets like China, 25% of retail purchases are via e-commerce. Across the continent, Africans have not yet become accustomed to purchasing goods and services online.

The inherent infrastructure issues across Africa that often lead to delays in delivery or wrong address deliveries break the trust for consumers. In some markets like Kenya, for items above USD\$20, consumers are required to show identification in order to receive the product. This helps mitigate wrong deliveries while also reassuring consumers that there are more protocols for an expensive product. Additionally, many e-commerce websites are investing in providing customer testimonials, payment transparency and secure website verification proofs in order to gain the trust of potential consumers.

## Case Study: Jumia

### Overcoming Challenges

According to Susan Chen, Jumia has worked to address the logistical challenges described above. The company has developed a centralized platform where it tracks each package through the delivery process, from order submission to warehouse distribution to the last-mile execution. Delivery workers are also able to use the platform to contact the customer at the delivery point, ensuring uninterrupted tracking. This investment has built trust with customers as Jumia improves its ability

to make good on promises and provide consumers with transparency. It is this infrastructure that has allowed Jumia to benefit from the impacts of the COVID-19 pandemic.

Given its volume of e-commerce in Africa, Jumia has set up its own payment application, Jumia Financial. This platform will link closely to Jumia's shopping app and allow customers to directly deposit funds and facilitate payment. To further incentivize customers, Jumia also offers a stimulus for those who pay in advance. Chen said that for the items paid in advance, the packages have a 97% or higher chance to be delivered on time, compared with 70% for those who pay in cash. Jumia hopes the differential encourages customers to trust online payment and the system, from which they could bid the first step of creating an online payment ecosystem. By incentivizing shifts in consumer behaviors and developing ready-made financial solutions, Jumia is not only at the forefront of activating the unbanked population, but also at transitioning its existing users onto the financial services platform.

To combat the issue around trust, Jumia has offered payment on delivery to attract more consumers and encourage them to make the first purchase. However, this method has its own obstacles, too. Payment on delivery has a higher return rate and places risk on the deliverer as he or she will have to carry large amounts of cash if the consumer chooses to purchase the product on the spot. To encourage more users to shop online, Jumia has also introduced a new service called Jumia Mall. This curated platform allows customers to easily identify the official distributors of leading brands on the site and provides customers the needed transparency.

### Impact of COVID-19 and the Future

While the COVID-19 crisis has fueled top-line growth for African e-commerce players, it has also exposed their weaknesses and the need to make their business models more resilient. As more households were compelled to shop online, companies like Jumia have been profiting on a platform that was well-positioned for social distancing and lockdown environments. According to the company, during the first quarter of 2020, as COVID-19 began to disrupt normality across African countries, Jumia saw a 51% jump in the number of users, resulting in a total of 6.4 million users. The pandemic has been an opportunity

for Jumia to acquire news clients. It has also been noted that during the pandemic, users have been ordering less expensive goods. The number of orders increased by 28%, while merchandise value grew by only 11%. That shift in purchasing behavior was in line with projections that Jumia established shortly before the lockdowns.

In the same way that Amazon made the book its Trojan horse, Jumia made cellphones its main point of entry to African households. However, the big question that remains is whether players like Jumia will be able to retain the newly acquired customers that resulted from the lockdown restrictions once retail shops reopen.

During the early months of the pandemic, Jumia saw stronger growth in countries such as Morocco and Tunisia, while sales declined in countries such as Nigeria and South Africa, where operations were required to pause for weeks because of government restrictions. This experience reinforces the fact that even large e-commerce players like Jumia are still at the mercy of local regulations and operators. The fact that Jumia has been able to weather the unexpected storm demonstrates that the management team understands the local context and can steer the boat during turbulent situations.

## Conclusion

As the continent with the youngest population, Africa is a place for future growth in the e-commerce sector. Players like Jumia will continue to reap the benefits of further digital penetration. Regional players have already made great strides in dealing with challenges associated with infrastructure, payments and consumer behavior. These efforts have well-positioned them to look at the current COVID-19 environment as an opportunity rather than obstacle. The ability to adapt quickly and pivot to new strategies has allowed companies like Jumia to be nimble in tackling issues around the expansion of product offering and the creation of proprietary financial arms. Nonetheless, there are many unaddressed challenges on the horizon such as barriers to internet access, limited talent pools, and potential governmental bureaucratic oversight. The African e-commerce story still has a lot of room to develop, and regional players have shown that they have the capacity to deal with challenges. The key to success in this space is a company's ability to adapt to the local market conditions as it navigates through dynamic markets.

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## The Clash Between Norway's Climate Goals and Economy

*Norway is taking concrete steps to curb climate change, yet its economy is deeply enmeshed in oil and gas exportation. This article explores the conflict between Norway's commitment to the environment and its robust economy.*

Norway has historically been dependent on natural resources, from fishing and timber to oil and gas. It has built a reputation for maritime activities such as shipping; however, its economy depends heavily on exports of oil. Norway wants to be a leader in going green and combating climate change, signing the Paris Agreement in December 2015. This reveals an inherent tension: It will be difficult for Norway to balance its oil-dependent economy with a reduction in greenhouse gases.

Norway is taking big steps on climate. As part of the Kyoto Protocol's second commitment period (2013-2020), Norway committed to lower average greenhouse gas (GHG) emissions by 16% below its 1990 level. Under the 2010 Copenhagen Pledge, Norway promised to reduce emissions by 40% below the 1990 level by 2020.

More recently, Norway's updated national determined contributions (NDCs), which are its national emission targets, represent a progression beyond its previous submission in accordance with the Paris Agreement. Based

on this updated NDC, Norway will reduce emissions by 50% before 2030, a much more aggressive target compared with its previous 2030 target. Norway will implement its NDC jointly with the European Union and Iceland. As part of this agreement, Norway has committed to zero emissions from its land sector in 2030 in accordance with EU regulations.

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“While Norway has made much progress in reducing carbon emissions, it still has a long way to go.”

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However, according to Climate Action Tracker (CAT), Norway's rating on its NDCs is “insufficient” to limit warming to less than 2 degrees Celsius, let alone below the Paris Agreement's 1.5 C limit. While Norway has made

much progress in reducing carbon emissions, it still has a long way to go.

## Norway's Historical Oil Dependence

The first Norwegian oil discovery was made in 1967 in Ekofisk, with production from this field beginning in 1971. Since then, oil has played a major role in the Norwegian economy. Currently, Norway exports the majority of its oil because most of the country mainly uses hydropower for generation. Natural gas and crude oil accounted for roughly 60% of Norway's exports in 2018, and the oil industry contributes roughly 17% of the national gross domestic product. But the country's oil fields are depleting. If Norway wants to keep this industry's benefit to its economy, it will need to expand oil exploration, which likely means drilling in less accessible areas.

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“The Norwegian fishing sector is strong, but it alone will not be able to support the Norwegian economy in a transition away from oil.”

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Beyond the oil and gas sector, Norway also has a strong fishing industry that exported 2.7 million metric tons of seafood across Europe and the world in 2019. While fishing is the second-largest export at almost 10% in 2018, it pales in comparison to oil and natural gas exports. Tourism makes up roughly 5% of Norwegian GDP and provides for an additional estimated 7% of the jobs.

The Norwegian fishing sector is strong, but it alone will not be able to support the Norwegian economy in a transition away from oil. This was acknowledged by the Norwegian government at the 2016 signature ceremony for the Paris Agreement. Vidar Helgesen, Norway's former minister for climate and environment, said, “The petroleum industry has been the engine of our economy for decades. This is already about to change, but the change will gather pace as we embark on the transformation to the low-emissions society. We need to build green competitiveness through attracting green investment, spurring green innovation and introducing green technologies. Better economic

growth means a better climate transformation means opportunities not only challenges.”

Norway, like most countries in the world, has been adversely impacted by the COVID-19 pandemic. In April 2020, about 84% of Norwegian companies stated that they had experienced lower demand and cancellations, according to Statista. In addition, 19% percent of surveyed Norwegian companies stated that they were at risk of bankruptcy. However, Norway is much better positioned to overcome the ongoing economic crisis than almost any other country in the world, with the largest sovereign wealth fund and one of the highest GDPs per capita.

The Norwegian sovereign wealth fund is worth an estimated \$1.1 trillion, and the government in 2019 committed to selling \$8 billion invested in fossil fuel stocks. After the sale, the fund will still be heavily invested in fossil fuels, but in companies with some level of diversification beyond oil. In addition, the cap on investments in the renewable energy sector will be raised, showing signs of a pivot away from total dependence on oil.

## The Opening of the Arctic Circle

Add to these economic and climate factors a third dimension: geopolitical competition in the Arctic Circle. As climate change progresses, Norway will face additional challenges in the Arctic. As the polar icecap melts away, new trade routes and security challenges are being revealed. The principal powers involved will be the United States and Russia. The opening of the North Atlantic and Arctic offers new shipping lanes for Russian submarines to access the United Kingdom and other northern European nations.

Both Russia and the United States are investing in preparations for an unlocked Arctic. In 2014, Russia created a new military department responsible for the Arctic region and has begun to build a fleet of icebreaking vessels with antisubmarine warfare capabilities. Russian submarine operations have also drawn increased concern from NATO countries, in particular near the GIUK (Greenland, Iceland, United Kingdom) gap in the North Atlantic. The United States is responding in kind, increasing intelligence-gathering air patrols off the coast

of Siberia and building a fleet of icebreakers for “national and economic security missions.” The stage is being set for a potential flashpoint if the opening of the Arctic is not carefully managed by both Russia and the United States.

As a founding member of NATO on the doorstep of the Arctic, Norway finds itself in the middle of these developments. It has been a staunch ally of the United States since NATO’s inception, playing a stabilizing role in the North Atlantic, and cannot be accused of shirking its share of the security burden, maintaining high percentages of defense spending relative to GDP. While staying close to Washington, Norway is seeking to upgrade its deterrent capabilities against Russia, undertaking enhancements to all branches of its armed forces. A major component of these enhancements is renovation of its submarine fleet, targeting operational status by 2030. It also recently signed a Memorandum of Understanding with Boeing to purchase five P-8 Poseidon maritime surveillance planes to enhance its intelligence-gathering capabilities.

The opening of the Arctic also presents energy opportunities, with a 2008 U.S. Geological Survey estimating that the Arctic holds 30% of the world’s remaining natural gas and 18% of remaining oil reserves. With a more robust ice cap previously in place, accessing these resources had been prohibitively expensive. Though oil prices are still historically low, a rebound from the extreme lows of the 2010s has made resource exploration more economically viable. This is top of mind for all players in the Arctic, who view the area not just as an arena for strategic competition, but as a region whose energy potential remains largely untapped.

Norway is not sitting on the sidelines. The Scandinavian country announced in August 2020 its intent to open nine new Arctic oilfields. The proposed drilling locations are far north of analysts’ expectations, raising alarm both inside the country and out. In response, organizations including World Wildlife Fund, Friends of the Earth Norway, Greenpeace, and Nature & Youth sent an open letter to the Norwegian government, citing a history of granting oil concessions in areas where the Norwegian environment ministry had advised against resource exploration. A major concern of environmental activists is a potential oil spill. Safely extracting oil is technologically difficult in the harsh

environment, and any spill extremely tricky to clean up. A recent incident in Russia provides a relevant example. In June 2020, a Russian storage tank filled with diesel fuel failed after thawing permafrost sank the tank’s foundation. The resultant spill was the second-largest in Russia’s history, with cleanup projected to take five to 10 years and approximately \$1.5 billion.

As well as facing opposition from climate activists, Norway’s planned drilling may also draw consternation from Russia as Norway pushes the envelope northwards in what is technically allowed under the Svalbard Treaty, a 100-year-old treaty that governs sovereignty over the Svalbard archipelago. Over the past several years, Russia has been making upgrades to its military capabilities on the nearby Franz Josef Land Archipelago. Though Russia is a signatory to the Svalbard Treaty, Norwegian defense analysts fear that Norway’s proposed drilling sites may be viewed by the Russians as aggressive and serve to provoke them. Against the backdrop of simultaneous U.S. investments in expanding its Arctic capabilities, any uncalibrated actions by Norway run the risk of escalating tensions.

Indeed, Russia has a strategic interest in the Svalbard islands, even maintaining a former Soviet settlement, Barentsburg, on its shores. Barentsburg is still run by Trust Artikugol (Arctic Coal, translated from Russian), a state-subsidized coal enterprise that first settled in 1931. Though previously devoted to coal mining, the town’s economy has attempted a pivot to tourism, constructing a pier in the harbor that can accommodate European cruise ships. Needless to say, the coronavirus pandemic has not been kind to Barentsburg’s tourism aspirations. Though the fate of Barentsburg will hardly determine Russia’s strategic posture in the Arctic, Norway’s assertive resource exploration could leave Russia feeling vulnerable.

## Oslo’s Challenge

Norway’s predicament is threefold: Can Oslo maintain acceptable economic growth while reducing oil dependence? Can it do so well enough to meet its stated climate goals? Can it do so while managing the opportunities and challenges presented by the opening of the Arctic? These are the questions that vex policymakers in the Storting. There are some signs for optimism in

the private sector. Norway is a leader in the share of the electric cars on its streets. It is actively divesting from companies with a high carbon emission footprint. Still, Norway remains the 15th-largest exporter of crude oil. An economy structured around oil for over 50 years seems unlikely to be unwound within 10. While Norway's

politicians may tell their constituents that they can both experience robust growth and reach their stated climate goals, neutral observers should remain skeptical.

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*This article was written by Tom O'Duden, Kristiani Miller and Besmir Dishnica, members of the Lauder Class of 2022.*

# Can West Africa Achieve Economic Independence from France?

*A number of West African nations have been pushing back for decades against the CFA franc, the form of currency imposed by their former colonizer, France. But efforts to gain monetary independence have run into roadblocks. This article takes a look at the long-term economic impact of the currency and how the system may change.*

What topic brought together 10 musicians hailing from seven countries and speaking four different languages to collaborate on a music video? If you thought the answer was the CFA franc, you'd be right. The song "7 minutes Contre le CFA" is just one of the many ways in which youth of the Franco-African world are coming together to voice their displeasure with the current financial system represented by this currency. At first glance, it may seem odd to think that monetary policy, a realm usually reserved for economists and academics, would be the subject of everything from political protests to an international musical collaboration. However, that is exactly what is occurring with the contentious debate around the West African CFA franc – the currency used by the eight nations of Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. The CFA franc was born out of the aftermath of the colonial French era, meant to continue the tie between the European power and its former subjects. In recent years, the CFA franc has been mired in controversy from not only an economic but also a social-historical perspective. There have been vigorous debates on whether the currency's impact on African economies is beneficial and whether the currency represents a colonial era that the region should move beyond. A decades-long process to transition to a new currency and monetary system to give more sovereignty to these West African nations has stalled, igniting further debate and disagreement on the path forward for the region.

## Foreign Policy and the Creation of the CFA Franc

The current quagmire has its origins in the aftermath of World War II. As part of the "new world order," the United States and its European allies established a global system of monetary management that was codified in

the 1944 Bretton Woods Agreement. Upon ratifying this agreement, France created the CFA franc (then called the franc of the French Colonies of Africa) on the stated objective of reducing the impact of the French currency's devaluation on its African colonies. The CFA would maintain a fixed exchange rate versus the French franc (and later the euro), according to the rate set by France. To guarantee convertibility of the CFA franc into French currency, African nations would be required to deposit

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"There is a perception that the CFA franc allows these countries to be disproportionately influenced by France in a manner that too closely reflects the old colonial power structure."

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50% of their foreign reserves with the French treasury. While this currency system was offered by French officials as an act of generosity to its colonies, its continuation after the independence of African nations is seen by some as a neocolonialist monetary system that France uses to maintain control of its former colonies. In the media and during summits, politicians and experts often openly criticize the strings imposed by France. Beninese President Patrice Talon said in a 2019 interview with Radio France Internationale that, "Psychologically, with regards to the vision of sovereignty and managing your own money, it's not good that this model continues." Chadian President Idriss Déby and renowned Senegalese economist Ndongo Samba Sylla also have argued that the CFA franc is a colonial relic that should be extinguished.

The economic controversy surrounding the CFA franc stems from two main issues: the fixed exchange rate and the foreign reserve deposit requirement. Both problems result in West African nations not having full control over their monetary policy decisions. A fixed rate regime in which the CFA is tied to a much stronger currency (currently the euro) that can only be revalued by France means that the traditional mechanism of currency devaluation to spur economic growth is not possible. The lack of control over a large portion of foreign reserves also reduces a central banks' ability to enact policy and allows France to generate returns off African nations' deposits. The inability to be fully autonomous from France is also igniting anti-colonialist sentiments that reject the ties this system creates between France and West Africa. There is a perception that the CFA franc allows these countries to be disproportionately influenced by France in a manner that too closely reflects the old colonial power structure.

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“Fiscal independence is core to international development, and many African leaders are cognizant that the French CFA is curtailing economic viability.”

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## Solutions and Roadblocks

The scrutiny over this anachronistic currency has resulted in a movement towards a truly independent currency known as the eco, shortened from the Economic Community of West African States (ECOWAS). The goal of a common West African currency was originally conceived in December 2000 in conjunction with the launch of the West African Monetary Zone (WAMZ), which did not include countries using the CFA franc (The Gambia, Ghana, Guinea-Conakry, Liberia and Sierra Leone were member countries). However, it was soon expanded to include the rest of the ECOWAS region. With the integration of the wider West Africa region, the idea of the new currency was that it would be used in both the countries currently using the CFA as well as major English-speaking countries Ghana and Nigeria. However, the progress towards this

currency has hit a roadblock. Recently, France and Côte D'Ivoire agreed upon a modification that would maintain the currency peg but remove the deposit requirement. This move was negatively received by many other West African countries including Nigeria and Ghana, which both stated they would not join this new currency. While it seems like the reality of complete monetary independence is still yet to be achieved, the question remains: What would be the potential impact of this dream?

## The Benefits of Monetary Control

In a floating exchange rate regime, weakness in a country's economy would result in a weaker currency. This, in turn, would make goods and services produced in that country cheaper for foreigners. However, in the case of West African nations using the CFA franc, this mechanism for boosting export-oriented industries is not possible. Given the currency's link to the euro, the changes in value of the CFA franc follow the strength of the European Union – a more developed economy with different policy priorities. For example, the European Central Bank's inflation target rate is 2%, in line with other developed economies but well below the inflation of many fast-growing emerging markets. Specifically, in West African nations more reliant on commodities, a more dovish central banking policy could lead to rapid growth in exports.

As with any discussion about trade, exports only represent half of the equation. The fixed rate regime also has a significant impact on imports. With a euro-pegged currency, European goods are relatively cheaper for CFA franc users, which encourages imports from Europe. This means that even though there is high capacity for raw material extraction in West African nations, the relative inexpensiveness of imports discourages the development of domestic industries to process this material into higher-end goods with better margins. For example, while Côte D'Ivoire is one of the largest producers of cashew nuts, the nuts are often processed offshore, and the resulting processed cashews fetch a significantly higher price point than the raw cashews.

## Intraregional Trade and Convertibility

The 20th century was marked by the independence of all African nations that had been colonized. Despite their



efforts to be free, many of them remained economically dependent from the former colonizers. West African countries formed ECOWAS in 1975 to promote economic integration. It is considered one of the pillars of the African Economic Community. The group also plays a political role as it often intervenes in times of instability in any of its 15-member territories. As with many other trade blocs, ECOWAS aims at integration activities from multiple domains, such as industry, telecommunications, agriculture, energy and transport. Efforts to harmonize macroeconomic policies have paid up, and trade within the region accounts for a considerable portion of the members' economies.

Fuel extractive industries represent three-quarters of the region's exports, followed by cocoa (5%), and precious stones (3%). Cotton, edible fruit, rubber, plastics, wood and fish represent approximately 1% each. North America is the main importer, accounting for 40% of ECOWAS exports. European nations represent 28%. Within the trade group, Nigeria provides 77% of regional exports, Côte D'Ivoire 10%, Ghana 4%, and Senegal 2%. Mali, Benin, Burkina Faso, Guinea, Niger and Togo carry between 1% and 2% of it.

Although trade of goods is present, trade in services is hampered by regulatory constraints. Fiscal pressure, the prevalence of the informal sector and lack of access to funding mechanisms undermine competitiveness. Despite the accomplishments of ECOWAS to integrate their members' economies, intraregional trade between these countries and non-members does not meet its full potential. CFA is the name of two distinct currencies in Africa: the West African CFA (XOF) and the Central African CFA (XAF). The latter is used by Cameroon, Chad, Equatorial New Guinea, Central African Republic, Republic of the Congo and Gabon. Both currencies have a fixed exchange rate to the euro, which deeply impacts regional market dynamics. However, these two currencies are not interchangeable, which partially hampers local trades.

## Investing in Africa's Future

As West African nations work to remove their required foreign reserves from French control, African leaders have agreed to vest the reserves in Senegal at the Central Bank of West African States (BCEAO). While this move

undoubtedly has political and financial ramifications for France, there are numerous benefits for the former French colonies to improve their economic resilience and reduce economic adjustments. Recall in 1994, when France devalued the currency from 50 CFA francs per French franc to 100 CFA francs per French franc, effectively reducing the price for West Africa's raw materials. France safeguarded its own currency and created a favorable trading environment with the former colonies, while simultaneously making African exports prices globally competitive. Unfortunately, because the macroeconomic policy was not prudent, ordinary citizens experienced unmanageable price controls, inflation and loss of purchasing power for survival.

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“Gaining monetary sovereignty will allow West African nations to better control convertibility for global currency and in the long run will improve real exchange rates.”

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Fiscal independence is core to international development, and many African leaders are cognizant that the CFA franc is curtailing economic viability. In 2017, the International Monetary Fund (IMF) published a list of the 10 richest countries in Africa based on GDP, and none carried the CFA currency. This ranking illustrates the relevance of this much-debated topic of monetary neo-colonization. On one side of the argument, President Talon highlights the benefit of a fixed rate if the CFA countries must borrow euros and plan to repay the debt in 10 years. Indeed, having the CFA currency pegged to the euro does provide economic stability and export growth relative to other single currencies in West Africa. The 2015 Nigerian naira currency crisis, for example, left many industries in turmoil. But a devalued currency is advantageous for investors and can encourage domestic productions that reduce imports. Still, increased autonomy in monetary decision-making does not automatically accompany development; fiscal policy, competitiveness in the public and private sectors, and efficiencies in the local and regional banking ecosystems also play a major role within macroeconomic development.

Gaining monetary sovereignty will allow West African nations to better control convertibility for global currency and in the long run will improve real exchange rates. Characteristics of a stable shared currency are indicative of the movement of labor and the flow of capital to build economic growth and stabilize inconsistencies among West African countries. This requires short- and long-term objectives to ensure currency viability and shared economic prosperity surrounding the trade environment to facilitate positive macroeconomics conditions. One emerging resource that is facilitating regional growth is pan-African banks that are driving private-sector investments, an approach known as “Africapitalism.” Patrice Backer, chief investment officer at AFIG Funds and a Wharton alum, said that “the expansion of pan-African Banks (PABs) is an essential role in spearheading financial innovation and inclusion by providing more competition for loans, and this gives rise to economies of scale within banking.” Within this rapid expansion of local banks is the implication of tightened financial regulations that have pushed Western banks out of the region. These banks leverage modern technology, such as mobile banking apps, to harness the local economy, enable cross-border transactions and effectively carry the name of bigger banking institutions to attract foreign business and investors. This is certainly a step in the right direction for regional integration and will support the infrastructure of a shared currency. Additionally, some countries are rethinking the concept of monetary integration if France will be involved in the transition. Moving forward, it is important to consider the necessary financial ecosystems that must exist for West African nations to facilitate growth at the macroeconomic level for a diverse group of nations.

## The Coronavirus Pandemic’s Toll

With the 2020 coronavirus pandemic and the resulting economic crash, West African leaders may not be looking to undertake a massive realignment of longstanding policy. The crisis induced by COVID-19 is one of the biggest economic shocks for Africa’s financial systems given the disruption from traditional operating schemes. During a December 2019 visit to Africa, French President Emmanuel Macron said his country would drop the CFA franc in an effort to improve relations with its former colonies. He described colonialism as “a grave mistake and a fault of the republic,” according to a CNN report. But the ensuing pandemic clearly derailed any progress toward that goal. Backer said that during the pandemic, there has been limited focus around currency consideration. However, with the movement against the CFA remaining strong both in West Africa and France, it is worth reinforcing the added benefits that monetary sovereignty could provide to the region. This will require a multi-step approach to ensure regional stability in the banking sector and continuous flow of labor and capital to facilitate economic viability. Furthermore, there are varying sentiments among West African leadership related to the role of France within this monetary endeavor. If France removes the 50% foreign reserve colonial-era monetary requirement for the former French colonies, will the Central Bank of West African States and local Pan-African banks take the lead to ensure fiscal responsibility? In the wake of a populist mindset that threatens to slow global trade, countries will need to look to any competitive advantage they can find to make their products more enticing for foreign markets. If that is the case, a break from the old CFA could prove to be the shot in the arm for these economies looking to recover from the COVID-19 fallout.

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*This article was written by Andrew Lee, Azline Nelson and Felipe Milla Santos, members of the Lauder Class of 2022.*

# The Evolution of China's Belt and Road Initiative in Africa

*China's ambitious plan to build a trade corridor connecting Asia, Africa and Europe is requiring tremendous capital investment, much of it in the form of loans to African nations struggling under the debt burden. But China is learning as it goes, modifying its approach to become a more collaborative finance partner.*

Some experts fear China may one day become the owner of Kenya's Lamu Port and surrounding towns for 99 years, through similar maneuvering that handed China temporary ownership of Sri Lanka's Hambantota Port. As part of a loan repayment scheme Kenya negotiated with China, China is holding Lamu Port and the surrounding towns as collateral in the case that the Kenyan government defaults on paying back the billions of dollars it has borrowed from China. Lamu Port is East Africa's largest port and a lynchpin of the region's economy. Relinquishing ownership of this port not only has major implications for the economy of East Africa, but also brings up questions of whether African nations will be able to maintain sovereignty while benefiting from increasing Chinese Belt and Road Initiative investment on the continent.

First announced in 2013 by Chinese President Xi Jinping, the Belt and Road Initiative (BRI) is the Chinese government's ambitious plan to expand its economic and political influence around the world by funding and developing trade corridors spanning Asia, Africa and Europe – a modern version of the ancient Silk Road. While Chinese investment in infrastructure and other development projects may benefit countries lacking sufficient capital to fund these initiatives independently, China has been reproached for subjugating countries in “debt-trap diplomacy” through a predatory loan scheme. Through analogs such as seizing Sri Lanka's Hambantota Port, the Belt and Road Initiative is portrayed as intentionally fostering economic dependence on China, fueling China's potential military expansion and regional dominance.

In response to international scrutiny and the negative economic performance of earlier BRI projects in Africa,

China has begun to modify its approach to investing by overhauling its financing efforts in Africa. Specifically, China has started to renegotiate debt terms to accommodate debtors' circumstances, collaborate with international institutions and other governments to diversify funding and share knowledge, and increase the rigor of its investment criteria to prioritize projects with higher likelihoods of positive financial returns. In doing so, China aims to cultivate a lending relationship with African countries that reshapes its role from a pariah to a partner. This model has direct implications for the fate of Kenya's Lamu Port and other Belt and Road Initiative projects.

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“China aims to cultivate a lending relationship with African countries that reshapes its role from a pariah to a partner.”

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## Accommodation Over Annexation

Ever since 2017, after China took an equity interest in Sri Lanka's Hambantota Port, many governments, rating agencies and newspapers have warned of China requesting national assets as collateral for loans. While there has been a lot of speculation, the lack of transparency surrounding these projects make these allegations hard to prove or deny. However, if one looks at China's recent investments in Africa, a picture emerges of China as a more lenient lender than many assume.

According to the Johns Hopkins China-Africa Research Initiative (CARI), between 2000 and 2019, China has

restructured or refinanced \$15 billion worth of Africa's external debt, related to 26 different loans. This does not include the additional \$3.4 billion in African debt they wrote off during the same time period.

Moreover, CARI found no instances of asset seizures, nor lawsuits or calls for international arbitration that would indicate conflict. Analysts at global think tank Rhodium Group arrived at a similar conclusion — not only are asset seizures rare across BRI projects, but debt renegotiations are far more common and often favor the borrowing nation.

One primary example of this has been the Djibouti-Addis Ababa railway line, connecting Ethiopia's capital with Djibouti's coast. As reported by CARI, the project launched commercial operations in 2018 at a final cost of \$4.5 billion, \$3 billion of which was financed by China's Export-Import Bank (Exim Bank). It has since suffered from operational and revenue shortfalls.

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“China's investments often focus on commercial gain without targeting economic growth in recipient countries.”

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In the face of balance-of-payment issues, Ethiopia and Djibouti went back to China to renegotiate. Exim Bank agreed to extend Ethiopia's loan from 10 to 30 years, and to extend Djibouti's loan by 10 years, with a lower interest rate and an extra five-year grace period. According to the *Financial Times*, Sinosure, the state-owned insurer that underwrote the project, later had to write off \$1 billion in losses related to the project. While this example raises questions about China's and Africa's ability to sustain long-term debt, it also shows China's willingness to accommodate its debtors.

### **Diversification of Project Finance**

China has received international backlash over its steep investment in developing countries. Central to this critique is the notion that Chinese-led investments burden developing countries with excessive debt, making timely repayment virtually impossible. In fact, former

U.S. Secretary of State Mike Pompeo characterized China's lending practices as “predatory,” in part due to the perception that many state-owned Chinese companies are the sole investors in projects that benefit Chinese contractors and financiers instead of the local countries they are investing in. This was the case in Sri Lanka, where China seized ownership of Hambantota Port after the Sri Lankan government failed to repay the state-owned China Merchants Port Holdings Co. Ltd.

To alleviate the debt burden endemic in many of the earlier loans authorized by Chinese companies, President Xi Jinping made a formal commitment during the Second Belt and Road Forum in 2019 to include international institutions and foreign governments in co-funding Belt and Road projects. In addition to increasing multilateral collaborations, China aims to improve debt and risk control by adopting a market-based approach to financing BRI projects, increasing funding from commercial funds and the private sector.

By diversifying the financing of these projects, China aims to improve the efficacy of Belt and Road projects in Africa. Financing countries will be able to leverage knowledge from partner governments and institutions such as the World Bank and the International Monetary Fund to assess potential investments and make better financing decisions. In addition, joint investments may reduce the debt burden and promote longer-term sustainable development through deal terms that critically consider a country's debt capacity and spread the risk across multiple stakeholders. In combination, these efforts will allow for deal terms that acknowledge the local conditions of African countries while bringing more sources of capital to meet their financing needs.

### **A Move Towards Multilateral Collaboration**

China benefits from diversifying financing. While the quantity of African debt held by China is increasing, China lacks clarity as to the true size of the debt because loans come from a variety of private and public lenders within China. However, former managing director of the IMF Christine Lagarde said in May 2019 that China was increasing transparency in their debt terms, according to an article in the *Financial Times*. This transparency enables China to conduct better internal due diligence on their

own debt risk, while also allowing the global community to hold China accountable.

More transparency also means other nations may become more willing to partner with China. China has a relatively short history of investing in Africa and benefits from the expertise of countries with longer track records of conducting due diligence, anticipating market need and repayment risk, and developing projects that are well-received by local populations.

China's financing frequently does not meet the internationally recognized definition of Official Development Assistance (ODA). According to AidData (Chinese Global Official Finance Dataset), less than 40% of China's investments in Africa from 2000 to 2014 were ODA-like. China's investments often focus on commercial gain without targeting economic growth in recipient countries. While China's approach has been welcomed by African nations that balk at ODA terms, investing nations and development banks critique China for its failure to promote economic development in recipient countries.

China has acted to change this public image during the global COVID-19 pandemic. In April, G20 nations rolled out the Debt Service Suspension Initiative (DSSI) to freeze loan repayments by low-income countries until the end of 2020. China, ravaged early on by COVID-19, is actively negotiating terms with recipient countries that sign onto DSSI. As reported in August 2020 by Camilla Hodgson of the *Financial Times*, "China's talks marks the country's first participation in a coordinated, multilateral debt relief initiative." This act of good faith and global leadership marks another evolution in China's lending practices and could signal the beginning of continued international collaboration in structuring, delaying and forgiving debt.

While delaying debt during a slowing economy poses a financial burden on China, the opportunity-cost of maintaining friendly relationships with resource-rich countries such as Angola could be high, and helping low-income countries recover now could have substantial future payout. Along with growing financing collaborations with other investing nations, China is demonstrating greater willingness to collaborate with the global community in defining terms for repayment of African debt.

## China's Growing Pains in Africa

As the number of unpaid loans continue to stack up, China's growing pains have necessitated rethinking their approach to lending new debt to countries across Africa. The case of Botswana provides an interesting example. While not an official BRI country, Botswana was granted an \$825 million loan from the Industrial and Commercial Bank of China (ICBC) to build Morupule B, a hydropower dam that would supply electricity to much of the country. A Chinese company won the bid to construct the hydropower plant, but because of massive cost overruns, faulty construction and numerous other problems, the Botswana government was unable to keep the plant operational. The China Machinery Engineering Corporation offered to buy the plant and take over its operation; however, the Botswana government ultimately decided to keep it after they could not agree on a price.

Perhaps as a conciliatory measure, China has canceled \$6.9 million of debt in Botswana. However, this experience with the Morupule B plant seems to have made Botswana more cautious in accepting Chinese loans: When offered a \$293,000 grant and a loan to rehabilitate the Nata-Maun road earlier this year, the Botswana government ultimately rejected the offer.

The Standard Gauge Railway (SGR) from Nairobi to the port of Mombasa — Kenya's most expensive infrastructure project since its independence — offers another interesting example. The project was financed by a \$4.5 billion loan from China's Exim Bank and was completed by a Chinese contractor. In 2019, after the railway was completed, documents stating that the Mombasa Port was used as collateral for the loan were leaked from the office of Kenya's auditor general, causing a huge uproar across the country and renewed criticism that China was engaging in debt-trap diplomacy.

Although the Chinese government denied any intention of ever taking over the Mombasa Port, this incident, along with the failed hydropower project in Botswana, shows that China is still experiencing growing pains as it adapts its approach to fit the needs of different African countries. McKinsey associate Virginia Zhang, who served as project manager for the Hong Kong Nicaragua Canal Development

Group (HKND Group), said she thinks constructive criticism is helping China modify its strategy. “At the end of the day, I feel like China is trying to export what worked in China,” she said. When what worked in China doesn’t work in other nations, widespread pressure helps the Chinese government adapt and refine its approach.

## Conclusion

The prolonged economic slump that has come in the wake of the COVID-19 global pandemic will no doubt have implications for current and future Chinese investment across the African continent. However, the changes that China has been making in its approach to the Belt and Road Initiative point to a future of continued adaptation. Although many deeply indebted countries may be unable to repay China in the coming years, asset seizure seems less likely than debt renegotiation and even debt forgiveness for certain types of loans. As investors across the world slow down or pause lending, it also seems likely that China will continue to look for ways to collaborate

with international and multinational organizations, while also vetting projects more rigorously to check for potential profitability and political expediency.

Ultimately, looking back at the way China has changed its approach in Africa over time shows that the country reacts and adapts to international criticism, financial realities in the host country, and political and diplomatic pressure. While countries across the world may still be justified to fear debt-trap diplomacy from China’s current and future infrastructure development projects, the story of the Lamu Port isn’t the only ending for Belt and Road projects. As host countries work to recover from the economic crisis caused by the current pandemic, understanding China’s change in approach will help them strategically leverage funding from China and other international sources to address the key infrastructure needs in their countries.

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*This article was written by Jing Chai, Alec Mackenzie, Allison Rose and Breanne White, members of the Lauder Class of 2022.*

# The Price of Protest: A Case Study of Chile and Colombia

*Both Colombia and Chile have been roiled in recent years by grassroots protests from citizens demanding foundational changes in government policy. This article examines the reasons behind the protests and the disruptive effect on business and the economy.*

People worldwide have become accustomed to blaming the COVID-19 pandemic for interrupted plans. But for many individuals in Chile and Colombia, protests were to blame for instability and canceled plans long before coronavirus became a household name. As one Chilean described it, “Last year it was like someone had left gasoline spread all over and someone dropped a match... everything was a mess, the city was on fire.” Her weekend trip to the capital city of Santiago was delayed when protests shut down the city and canceled flights. Echoing this, a Colombian interviewee described the mayor of Bogota asking residents to stay inside during violent clashes between protesters and police.

The protests across Latin America in 2019, which were fueled by longstanding public discontent, are often referred to collectively as the Latin American Spring. While on the surface these mass demonstrations appear to have much in common, a closer examination of their onset in Chile and Colombia reveals the myriad paths that led to the unrest, as well as economic and business impacts.

According to figures from the World Bank, both Colombia and Chile have seen annual GDP growth since 2000 (Colombia at 6%, Chile at 7%) that has outpaced the global average of 5%. Underlying this growth, however, is increasing institutional corruption and inequality as measured across numerous indicators including income, education and health care. The “Chile Awakening” movement reflects tension that has built in the 30 years since Augusto Pinochet’s dictatorship, exploding over a relatively minor metro fare price hike and leading to demands for changes to the country’s neoliberal constitution. Meanwhile, the Colombian *cacerolazo* protests of 2019 to 2020 represent a reaction to widespread violence and corruption, not a singular event, and have not resulted in the same targeted demands from protesters.

Social and political unrest in both countries have had different economic effects on different businesses, depending on factors such as business size and foreign affiliation. This comparative study shows that the mass disruption caused by the protests has had a disproportionately negative impact on small businesses in Colombia and Chile, potentially compounding the inequality that sparked such unrest in the first place.

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“Big business has often been a target for protests, while smaller enterprises have been affected in different, often less direct, ways.”

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## Corruption Ignites Colombian Protests

The first wave of Colombia’s most recent protests began in November 2019. After months of simmering discontent about rumored pension cuts, citizens began organizing a nationwide strike. During this time, students were also protesting corruption in the education system, while violence against indigenous groups and social leaders was rising. The convergence of these factors, fueled by the energy of other protests in the region, prompted months of protests in Colombia.

Undergirding these factors is the polarizing nature of President Ivan Duque, a protégé of former President Alvaro Uribe. Those who oppose Duque’s leadership feel he favors the elite and acts as a mouthpiece for former President Uribe, whose administration was marked by corruption, support of *paramilitares* and human rights abuses. Consequently, those who were frustrated with the labor reforms, education, corruption and police brutality

had a common enemy in Duque, whose policies galvanized them to take to the streets. An article in *Time* noted that protesters in Colombia are not “fighting for a single issue,” rather Colombians are criticizing the government’s “lack of action in addressing major concerns” ranging from “security, corruption and economic inequality.”

“Everything boiled down to corruption,” said José Tangerife, an activist who works as the data and metrics lead at the United Way in Colombia. “There is an inherent distrust in the institutions and government, and that distrust led to anger, which led to the protests.” Tangerife draws many parallels between the *cacerolazo* protests in Colombia and Black Lives Matter protests in the United States during the summer of 2020. “Colombia is extremely divided between the right- and left-wing governments. And right now, the extreme right is in power, leaving the left supporters with a sense of injustice.” Police brutality once again took center stage in protests after an 18-year-old male protester, Dilan Cruz, was killed by an officer during the national strike in late November 2019.

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The protests gained momentum as left-wing supporters grew enraged by the police’s violent response and the government’s inaction. However, the amalgamation of discontent made it difficult to discern the specific demands of protesters. Tangerife offered his take, delineating three types of reform needed to end public unrest: police reform, education reform and reform in the justice system. To achieve these, Colombia must elect a political leader that can unify the fragmented country.

“Every four years, we alternate between extreme candidates in the political parties. We need a leader who can unite us,” he said. In evaluating the effectiveness of the protests, Tangerife commented that while they garner attention from the government, certain activities associated with protesting, such as vandalism and police brutality, do more harm than good to businesses and

society. When asked what can be done to effect the change protesters want to see in Colombia, he answered, “The most important thing our nation can do is vote for the right leader.”

## Chile’s ‘Awakening’ to Change

Chile’s most recent protests began October 14, 2019, primarily in response to a 30-peso rise in public transport fares, leading to coordinated fare evasion driven in large part by student organizations. “It’s an important amount of money for people living with minimum wage,” said Andrea Alvarado-Urbina, a sociology professor at the University of Pennsylvania. This civil unrest quickly escalated and expanded focus to include the rising cost of living, income inequality, dissatisfaction with privatized pensions and corruption driven by neoliberal policies.

Chile’s neoliberal economic policy has been broadly unchanged since introduction in 1990 under President Pinochet; these economic policies are perceived to contribute to Chile’s vast income inequality and do not account for basic rights like education or health. Voicing their disagreement, protesters held posters reading, “It’s not 30 pesos, it’s 30 years.” Chile’s economy has placed a heavy burden on its citizens, and income inequality has soared to a Gini coefficient of 0.46 in 2019, according to the Organisation for Economic Co-operation and Development. Only Costa Rica and South Africa rank worse. “There are many ways to conceptualize inequality,” said economist Nicolas Grau, a professor at the University of Chile in Santiago. In Chile, Grau explained, the most prescient form is the “inequality of uncertainty.” Between 80% and 90% of Chileans lead uncertain lives, whether regarding health care, pensions and income levels, employment, education or their ability to repay debt.

Chile’s increased access to education came at a high price, enabled only by personal access to credit now proving tough to pay. Chile’s privatized pension system (one of the world’s few) demonstrates an additional failure to meet workers’ needs. According to a report in the *Los Angeles Times*, Pinochet’s 1981 pension reform promised pensions would offer 70% of a worker’s final wages, but today the figure is 38%. As NPR correspondent Philip Reeves explained, Chileans have realized that “relying heavily on the private sector to provide services hasn’t worked.”



The impetus for the protests might have been the increase in the metro fare, but the demands quickly expanded to calls for the president to resign and for political leaders to rewrite the constitution. “Many of the reasons reform is not possible is because of the policies listed in the constitution,” Alvarado-Urbina explains.

The constitution has undergone revision before, but the current one was penned during the Pinochet era. In response to these demands, Congress and the Senate agreed to hold a plebiscite, or referendum, for political forces to decide whether the constitution should be revised. On October 25, 2020, Chileans voted 78% in favor of rewriting the constitution using a convention of 155 elected people. A new constitution is scheduled for referendum in 2022.

Despite this win, social unrest remains active in Chile. Alvarado-Urbina said the government must improve the quality and availability of public services, and allow greater political participation by citizens if the country is to quell the unrest.

## The Business Impact Differs

Colombia and Chile share commonalities that have resulted in a surge of social unrest: both are led by neoliberal parties, both have privatized many components of the public sector, and both suffer from pervasive inequality. While inequality is the theme of the Chilean protests, Colombian protesters call for political accountability. For example, a new constitution in Chile could remove barriers to socioeconomic opportunity; Colombians, alternatively, want government, justice and education systems to be held accountable and free of corruption.

As protests across Colombia and Chile have differed in approach and purpose, so have the impacts on large and small businesses. Big business has often been a target for protests, while smaller enterprises have been affected in different, often less direct, ways. “Small businesses are left behind,” said Tangerife, noting that these businesses have little police protection. The cost to rebuild, coupled with revenue loss from pandemic, has left many small businesses struggling to survive.

Unlike in Colombia, the vandalization and burning of buildings in Chile were mostly limited to specific corporate and state buildings, rather than random destruction, which has left small businesses largely untouched. Targets of destruction included cellphone companies, banks, large drug-store chains (subject of antitrust and collusion investigations), pension funds administration buildings, and a Walmart-owned supermarket chain, which includes brands Lider, Lider Express, SuperBodega aCuenta and Central Mayorista. Lider, in fact, has been a common target in Chilean protests. Reuters reported that 128 of roughly 400 stores had been looted, with 35 set on fire, 18 of which were destroyed.

## An Uncertain Future

It is difficult to say whether protester demands in Chile and Colombia will be met in the near term and how businesses will be impacted in the interim. Based on data from a McKinsey report on the region, Latin America’s middle class has been waning, and further income inequality paired with the economic impact of protesting does not bode well for citizens’ futures. According to a report in *The Guardian*, a recent surveillance scandal involving the U.S.-backed Colombian military spying on journalists demonstrated that the desire for accountability and transparency in the government is far from realized.

These factors indicate that protests will continue, and so will the adverse impact on businesses, particularly smaller businesses. Nicolas Grau noted that while many Chilean protests are not overtly anti-business, there are secondary effects to consider. For instance, the effects of closing down the economy for a month due to fears over looting were most heavily borne by smaller businesses that could not afford and were not provided with police protection. This exacerbates the gaps between rich and poor that the movement seeks to close. In Colombia, random looting and burning hurt small businesses even more starkly, as protesters sought to make a strong statement about their values. The impact of the COVID-19 pandemic on both politics and the economy cannot be separated from these issues and continues to be unknown and unprecedented.

While the larger players are likely to survive these uncertain times, the outcome is less clear for smaller

players and the middle class hoping for a better future. The sequence of crises faced by small businesses in Chile and Colombia may show a glimpse of what is to come: the continued need for protest to defend regular citizens from systems that are perpetually unequal and inadequate.

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*This article was written by Annie Heinrich, Meagan Murphy and Natasha Vaz, members of the Lauder Class of 2022.*





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