Smart Metropolis? Mexico City's Ongoing Transformation

María José Salcedo

Throughout history and the globe, cities have been the driving force of development, from commerce to culture. Currently, over 50 percent of the world's population lives in urban areas. At this rate, experts expect that the urban population will more than double by 2050, and nearly seven out of 10 people will live in cities.[1]

Therefore, because cities generate 80 percent of the global Gross Domestic Product (GDP), urbanization is a means for economic growth in developing countries.[2] Once viewed as shrinking, shattered, or overcrowded, cities can now be seen as crucial spaces of economic betterment for most of the world's poor as well as places where the environmental and social crises of our times are addressed.[3]

Smart cities are crucial for sustainable development. In 2015, all member countries of the UN adopted the 2030 Agenda for Sustainable Development comprising 17 Sustainable Development Goals (SDGs). It recognized that ending poverty requires the reduction of inequalities and economic growth, all while tackling climate change. The SDGs are a collective and urgent call for action by all developed and developing countries. Together with the 2030 UN Agenda, the Paris Climate Agreement was also adopted in 2015, marking a landmark for multilateralism and international policy.[4] The Paris Agreement is the first binding commitment to keep global temperature rise below two degrees Celsius, highlighting the need for achieving more sustainable mobility systems within

María José Salcedo is a leader in strategic partnerships and project management promoting inclusive growth. With a robust background in international cooperation, she holds a MA in Global Political Economy from the University of Kassel in Germany. She was recognized in 2023 among the "200 Most Important Women in Mexico" by Mujer Ejectuvia Media.

cities.[5] Many countries have committed to reducing their emissions within the agreement, but cities are the main actors that can contribute by becoming environmentally resilient, which in practice, translates into strategies that mitigate natural phenomena while greening urban areas. Green infrastructure, street arborization, and flood-friendly parks exemplify how public spaces can contribute to decreasing pollution and emissions while fostering a car-less city.

Within the SDGs, goal number 11 seeks to make cities and human settlements more inclusive, safe, resilient, and sustainable. Inequality can lead to unrest and insecurity while pollution degrades population health and reduces worker productivity, consequently harming the economy. In this regard, smart cities have the potential to enhance city development, enabling all citizens to live a decent quality of life, and form part of the city's productive dynamic, creating social stability and decreasing inequality.[6] Nevertheless, the speed and scale of urbanization challenge the housing system, current infrastructure, transport systems, waste management, and access to resources such as water. Eight out of the ten largest cities are found in developing countries, and their challenges are even more complex.[7] In Latin America, 81 percent of the population already lives in urban areas. The region has four of the world's largest megacities: Mexico City, São Paulo, Buenos Aires, and Rio de Janeiro.[8]

With over 22.3 million inhabitants, Mexico City is the sixth most populated city in the world,[9] and it was the first in Latin America to be recognized as an intercultural city by the Council of Europe for its efforts to prevent discrimination, guarantee diversity, and foster a positive interaction between diverse individuals and groups.[10]

Under this context, cities in developing countries are shaping their own definition of modernity. While the exchange of best practices with other cities in developed countries allows for cooperation and dialogue, cities, both in developing and developed countries, need to follow a user-centered approach when implementing new policies. For example, smart city development should vary based on local conditions and populations. Mexico City has, for decades, faced structural problems such as insecurity, crime, extortion, a precarious health system, and poor quality of public services like water treatment and waste collection.[11] Mexico's government, conscious of these issues, launched the Land Ordinance and Urban Development Plan in 2020, which will remain in effect for the next 20 years. The plan seeks to transform the capital into a more equitable, prosperous, dynamic, and innovative space with an efficient, transparent government through different initiatives such as an employment program to connect young graduates with the private sector, a program to strengthen female

and LGBTQ economic empowerment, a program to foster creative-cultural industries, and an electronic file system to enhance government digitization, among others.[12]

The discussion around cities is a matter of local politics. In this sense, cities located in emerging economies face additional challenges in achieving the SDGs when compared to cities in developed countries. In developing countries such as Mexico, most local politicians work within short-term electoral cycles. Hence, city leaders find it difficult to plan for long-term sustainable regenerative growth, social inclusion, and the provision of services. Administrative terms at the local level last between three to four years, with laws that do not allow for reelection. Additionally, cities need to cope with limited budgets, as informal markets form larger parts of their economies, shrinking the tax base.[13] These variables leave little space for significant transformation. In Mexico, this political reality partially explains the limited progress toward the implementation of smarter cities.

Redefining Smart Cities in Developing Countries

The Friedrich Naumann Foundation for Freedom promotes the concept of smart cities as spaces that can increase people's quality of life while simultaneously ensuring environmental regeneration.[14] This vision draws from the work experience of different municipalities in Mexico and Central America, as well as international best practices, gathered in two practical handbooks. In accordance with the UN SDGs, cities need to be seen as living spaces that are constantly evolving according to the changing needs of their citizens and their environment. To reduce inequality and create more inclusive cities, the redefinition of the smart city relies on the co-creation of urban spaces and coordination between citizens and city leaders.

In this regard, the term "smart" does not uniquely entail the use of digital technology, but rather the creative power of individuals to find solutions to urban challenges. The adjective "smart" refers to the integration of basic elements and keystones that can make life in a city not just more prosperous, but more importantly, unique. This is where access to services, support for creative industries, design of iconic architecture, and cultural activities play a major role. This new perspective on modernity has become even more relevant for cities in developing countries that need to urgently implement policies that enhance the quality of life of their citizens. Thus, a smart city can be evaluated by five key elements: 1) entrepreneurial culture; 2) urban mobility; 3) financial acces-

sibility; 4) environment resiliency; and 5) government transparency. These five principles correspond to the acronym "SMART:"[15]

S: Startup City
M: Mobile City
A: Accessible City
R: Resilient City
T: Transparent City

A Startup City for Economic Inclusion

A startup city becomes innovative when it develops the capacity to attract and retain talent—artists, athletes, entrepreneurs, investors—and generate better-paid positions, allowing for more labor mobility and social development. Moreover, startup cities have a business-friendly culture where the regulatory and administrative frameworks facilitate the creation and growth of local small and medium-sized companies. Thus, the city becomes an inclusive place where anyone can open and grow a business rapidly and transparently. This type of entrepreneurship ecosystem attracts investors, which also aids the local economy in reinventing itself at a faster rate. Startup cities enable greater competition and innovation among businesses, incentivizing companies to raise wages to attract and retain their talent, thus giving employees more options to develop their careers.

Mexico City has no central strategy to become a startup city. Until 2024, the city had a special fund program for entrepreneurs and micro, small, and medium-sized companies (SMEs) that provided microcredits, small loans without collateral for women entrepreneurs, trade of rural products, and cultural industry companies. Looking forward to the 2030 Agenda, the new administration of the city will foster the growth of SMEs through fiscal incentives for the local economy, incubators and spaces for entrepreneurs, the promotion of sustainable tourism, as well as economic zones focused on technology, advanced manufacturing, renewable energy, and industrial parks. This is a major step in reducing inequality. However, it is not clear if the strategy will rely on short-term initiatives.

Annually, the city receives about 31 percent of the country's foreign direct investment (FDI),[16] and has over 900 economic sectors, making it a dynamic hotspot.[17] The city's entrepreneurial ecosystem is the second largest in Latin America and 50th in the world according to StartupBlink.[18] There are five unicorns

(companies valued over one billion US$) established in Mexico City that reflect the availability of entrepreneur associations, accelerators, entrepreneurial hubs, and local investors.[19] Still, accessibility is not the same for all startups, since seven out of ten SMEs lack public and private institutional support. Most SMEs fail within their first three years of operation due to lack of liquidity and poor financial planning.[20] Moreover, in terms of Mexico City's talent pool, only 21.9 percent of the population has a bachelor's degree, 21 percent have finished high school, and 21.5 percent have completed middle school.[21]

The country's close location to the United States has been key for its economic development. In Mexico City, the maturity of the private entrepreneurial ecosystem as well as specific regulations such as the Fintech Law make it a hotspot for entrepreneurs in Central and South America who often have to prove that their business model is scalable in Mexico in order to receive investment. Along with Colombia, Chile, and Brazil, Mexico is one of the leading countries in startups in the region.[22] Nevertheless, international experiences from cities that have become major hubs for startups, such as Berlin, show that if Mexico City wishes to become a startup city, it must define regulatory frameworks to promote entrepreneurship and foster spaces where technology-based companies, but also social and environmental impact ventures can improve the supply of services and compete in the market. Finding better ways to build incentives for a more formal economy and attract more investment to boost the labor market beyond the manufacturing sector could allow for developing cities to strengthen their support for entrepreneurs. SMEs around the world need more than funding programs to thrive. An ecosystem that provides knowledge in financial planning, innovation, and digitalization could better serve entrepreneurs.[23]

In the case of Mexico City, urban planners followed the U.S. car-centric model instead of a human-centered approach.

Moving Towards a Mobile City

As transportation mobility becomes a key determinant of public safety and quality of life, understanding the dynamics within metropolitan areas is crucial. Moreover, enhancing transport systems contributes immensely to the realization of the UN 2030 Agenda by decreasing greenhouse emissions. Cities without a sustainable mobility strategy tend to depend on urban sprawl models that prioritize automobiles. In the case of Mexico City, urban planners followed the

U.S. car-centric model instead of a human-centered approach. This led to a high degree of sprawl and segregated service, commercial, and residential areas. The model reinforces cultural values from the popular concept of the "American Dream," such as owning a private car and a single-family home with large living spaces as a status symbol.[24]

The way and ease with which people move around cities daily represents one of the most important aspects of city life. A smart mobile city is one with intelligent plans and strategies that minimize commute time and the costs of daily commuting, wasted energy, and the negative effects of emissions generated by those commutes. It also prioritizes collective transportation alternatives such as metro systems and high-speed trains. However, for public transportation systems to work, they need to not only be cheaper but also faster and safer, especially for women. A user-centered and gender-based approach to mobility could benefit vulnerable groups. Men and women have different mobility patterns and experience different risks when using public transport. Data consistently shows that the barriers affecting people's mobility—accessibility, availability, affordability, acceptability, safety, and security—disproportionally affect women.[25] For instance, lack of adequate transport often translates into girls missing school, women limiting themselves to job opportunities closer to home, unemployment, and the inability to access health or childcare services. Addressing gender gaps in and through transport makes a crucial contribution to the UN SDGs in reducing inequalities.[26]

Mobility plays a key part in city design. Pedestrian-friendly, high-density, and mixed-used design leads to more compact, walkable cities with revitalized neighborhoods. The progress regarding mobility in Mexico City has been extraordinary considering the size of the urban area and population density. Few cities in Latin America have 12 subway lines or an integrated mobility system. In Mexico City, there are around six million users of the subway, metro bus, trolley bus, light rail, and last-mile mobility systems.[27] The city has also bet on micro-mobility through an integrated mobility card that allows travel between all modes of transportation within the city, including bicycles in the more than 316 kilometers of bike lanes.[28] Public transport has also aimed to foster gender inclusivity by designating safe spaces for women. Furthermore, the city has transformed streets into pedestrian-only zones with wide sidewalks and green infrastructure. Additionally, a popup bike circuit program that temporarily converts car-only avenues into bicycle-friendly areas during the weekends seeks to incentivize the use of non-motorized vehicles.[29]

The successful development of the city's integrated mobility program re-

ceived support from the C40 Cities Finance Facility (CFF). According to the CFF, Mexico City's mobility program has the potential to pave the way for other cities in Latin America to shift their buses to low or zero emission technologies. Thus, Mexico City could lead the way in pioneering new, creative approaches to reducing air pollution and transport emissions, leading to more productivity and thus, economic development.[30] By stimulating sectors like renewable green construction and sustainable transportation, developing cities can create job opportunities. Furthermore, sustainable buildings and transport systems reduce resource demand, producing cost savings and increasing productivity.[31] Notwithstanding, the structural problems of planning, managing, and financing infrastructure persist in Mexico City. The subway is almost 50 years old and frequently faces a series of damages. In 2021, only 9 percent of the metro's total budget was allocated for maintenance and repairs. That same year, a major metro line collapse caused by lack of maintenance led to the death of 27 people.[32]

Accessible Cities and Inequality

Smart cities can only be developed if there is an allocated public budget which allows for a long-term implementation strategy. Certainly, without efficient taxation, and sufficient autonomy for cities, government revenue alone will be insufficient to implement urban projects. Taxation patterns around the world today reveal large differences between countries, especially developed and developing countries. Developed countries today collect a much larger share of their national output in taxes than developing countries, which rely heavily on tariffs and consumption taxes.[33] Political factors, such as the extent of institutionalized constraints on the decision-making powers of policymakers, help shape the level and evolution of the fiscal capacity of countries. Hence, holding income per capita constant, countries with strong institutional frameworks collect higher tax revenues than do countries with weak executive power.[34] Revenue collection is crucial for developing countries to create accessible cities with high-quality, financially sustainable services.

The IESE Business School and World Economic Forum have recognized London, New York, Paris, Tokyo, and Oslo as the top smart and sustainable cities for the past nine years.[35] All of these cities are located in countries that collect over 27 percent of their GDP in tax revenue.[36] In emerging economies, however, public education, health services, as well as social security, require stronger government revenue to be efficient and universally accessible. Other services such as housing, water, electricity, and waste management become

negatively impacted under excessive regulatory or anti-competitive schemes and bureaucratized administrations. Therefore, fostering public-private alliances could prove more efficient in providing services than relying only on the public sector. In developing cities, high-level legal and financial reforms that favor metropolitan management and planning would also be relevant to enhance the link between urbanization and economic development. Extensive urban, economic, and fiscal reforms, alongside a multilevel governance structure that empowers metropolitan areas as productive forces, could foster development and enhance accessibility.[37]

In Mexico City, nearly six out of every ten inhabitants suffer from multidimensional poverty (households deprived along three dimensions—monetary poverty, education, and basic infrastructure services). The current economic structure has not reduced informality levels. In Mexico, 39 percent of the population has no access to social security, 45.6 percent live in precarious housing, 34.9 percent face water sanitation problems, and 50.5 percent live in income poverty.[38] With better revenue collection, the city government could invest in better programs to foster startups and provide quality public services such as parks, health services, water treatment, or waste management.

To become a smart city, Mexico City must address the key issue of service inequality. Mexico City places 16th on the list of metropolitan cities ranked by cost of living, more expensive than Milan, Munich, or Washington D.C.[39] The strengthening of the Mexican peso and high interest and investment rates have contributed to this phenomenon by making the city less affordable for foreigners. However, the repercussions of inflation have been felt by foreigners and natives of Mexico City alike. In a more robust economic environment, an increasingly expensive city could drive better quality job creation, attract highly skilled professionals, or generate better-paying job opportunities. Nevertheless, the city is full of contrasts and inequality, which is best seen in its limited accessibility to public services and its environmental resilience.

Environmentally Resilient City

In developing countries like Mexico, most cities have failed to protect nearby bodies of water from devastating floods. According to the World Bank, 23 percent of the world's population is directly exposed to floods, 89 percent of which live in low- and middle-income countries.[40] From 1985 to 2015, as the world's settlements grew by 85 percent, urbanization happened much more rapidly in high-hazard flood zones.[41] Exposure to all types of flooding is increasing and,

as the 2024 Rio Grande do Sul floods in southern Brazil and the 2023 Otis hurricane in Mexico have shown, vulnerability to coastal flooding is growing at an even faster pace.[42] Ironically, another main concern for megacities is water scarcity: as economies industrialize and populations urbanize, water supply and sanitation systems need to expand to meet demand. According to the 2024 UN World Water Development Report, 80 percent of jobs in lowest-income countries rely on water.[43] When a resource as vital as water is scarce, polluted, or difficult to access, conflict can follow.

When a resource as vital as water is scarce, polluted, or difficult to access, conflict can follow.

More recently, cities are focusing on designing and constructing linear parks and intelligent stormwater harvesting to counter different natural phenomena while contributing to the cultural, scenic, and recreational richness of the city.[44] The average green area per inhabitant in Mexico City is 7.54 square meter which is below the World Health Organization's recommended minimum of nine square meters.[45] However, the biggest problems facing natural protected areas are land-use modifications due to irregular human settlements, clandestine solid and construction waste dumping, contamination from toxic chemical discharge, and dumping of liquids into rivers.[46] Waste management has remained an unresolved problem for decades: in 2021, the National Institute for Geography and Statistics reported that Mexico City was responsible for 14 percent of the waste generated in the whole country.[47]

The overall challenge in terms of accessibility and resilience remains in maintaining the availability of quality green areas for the entire population while transforming them into multipurpose recreational spaces that conserve biodiversity, filter rainwater, and prevent flooding. Public spaces are one of the most important elements offered by a city because, in addition to their environmental benefits, they spatially structure the urban area as a place for social exchanges where diverse cultural manifestations interact. On the contrary, abandonment of public spaces contributes to the loss of social cohesion, and in developing countries, leaves more space for crime. According to the National Survey on Security Perception (ENVIPE), in 2021, 77.5 percent of citizens experienced insecurity in the streets and 56 percent in parks or recreational centers.[48] This situation reinforces the need to recuperate public green space and not abandon it. In accordance with the 11th UN SDG regarding inclusive cities, local governments should invest in public green spaces where positive

interaction between citizens can occur and environmental resilience can be developed. Green spaces not only contribute to better living standards, a better environment, and emissions reduction, but they can also foster sustainable investment opportunities and economic activities. The transition to green cities can attract businesses and talent, spurring innovation and economic growth.[49]

A Transparent City Against Corruption

Another area of focus for cities in developing countries is increased governmental transparency. Smart cities implement best practices to decrease corruption and bureaucracy while enhancing citizen participation through approaches like co-governance, in which participatory models and technologies empower citizens in decision-making, the management of public resources, and access to information. Transparent cities are places where citizens have access to tools that allow them to participate in real-time decisions on the management of their taxes and communicate the priorities of their neighborhoods. Cities striving for transparency in emerging economies already encourage participatory budgets, better mechanisms for the financial sustainability of public infrastructure, greater competition, and public-private alternatives for the provision of public services.[50]

Mexico does not have a national e-government strategy. Nevertheless, in 2019, Mexico City created its first agency for public innovation to foster administrative simplification of government certification processes. Within five years of operation, the agency managed to reduce government procedures from 2,100 to 530. Now, procedures including birth certificates, renewal of driver registration cards, and driver's licenses can be carried out digitally through a mobile application. Digital procedures for properties, such as licenses, registration, and land registry, will be available in 2024.[51] Moreover, the city implemented universal Wi-Fi with a system of more than 31,000 free Wi-Fi access points. Although these are major steps towards a more transparent city, the operations of Mexico City's mobile application are still too opaque. Despite the efforts of journalists, it is still unclear how user data is stored, raising privacy concerns for the app's five million users. Nonetheless, digital technologies are driving transformative change. A digital transparent government could promote economic development by accumulating more public capital through digital procedures and enhance business productivity and output through digital government services.

Cities of the Future in the Developing World

The UN 2030 Agenda and SDGs form a powerful international framework that allows countries around the world to reduce inequality and tackle climate change. In practice, cities in both developing and developed countries are the most relevant actors that can contribute to the accomplishment of the SDGs. Local municipalities, city mayors, civil society organizations, local businesses, and industry associations, together with citizens, can influence how cities transform to become smart spaces that increase the quality of life of individuals.

The smart city concept showcased in this article seeks to reflect the flexible nature of cities as living entities that are constantly changing and adapting to people's needs. A city is smart only if its citizens find it smart to live in it. In this way, the SMART terminology allows cities in developing countries to adapt their sustainable development and inequality reduction strategies more deliberately. Cities in developing nations face enormous challenges in becoming smarter and more sustainable according to developed countries' standard definitions of modernity and innovation. While technology is needed to boost productivity and add value to procedures leading to economic growth, in cities facing inequality and poverty, creative ways to promote inclusivity are also needed. The cities of the future in developing countries need to be designed by and for citizens through collaborative processes. There are already different initiatives that support this framework, such as the handbook from the Friedrich Naumann Foundation, which outlines best practices that local governments can implement.

The case of Mexico City shows that transformation towards a smart city is an ongoing process with many challenges. It would be difficult to define Mexico City as a smart city, since the city needs to continue focusing on the structural problems that affect the day-to-day lives of its inhabitants: access to services, public safety, health care, public education, clean water sources, waste management, and environmental resiliency. In these important areas, inequality persists. To become a city of the future where no one is left behind, Mexico's capital will need to accelerate its accessible, resilient city strategy. Yet, the city has progressed in many ways that could provide a path for other cities to learn from. The leaders who have managed the world's sixth most populated city have made significant advances in terms of gender mobility, promotion of bicycle lanes, last-mile transportation, and electric public transport. The city has also undergone a digital transformation and over five million citizens can streamline procedures and services, filing complaints and documents electronically.

Perhaps one of the starting points for many cities in developing countries relies on increasing their tax base. They must find better ways to build incentives for a more formal economy and attract more investment to boost the

labor market. Finally, the COVID-19 pandemic exposed how digitalization and technology allow for greater efficiency, transparency, and quality of life, but to achieve this, cities in developing countries will need to invest in technological infrastructure. More importantly, cities will have to complement their digital strategy with the creation of public spaces and green areas that can regenerate the social fabric and foster positive interaction. Green urban areas have the potential to transform cities from insecure spaces to cities with better living standards that attract businesses and talent. As with its integrated mobility program, despite its many challenges, Mexico City has the potential to pave the way for other cities in developing countries to transform into a smart city. The challenge still remains in building an accessible, environmentally resilient city for all. WA

Notes

1. "Urban Development," World Bank, https://www.worldbank.org/en/topic/urbandevelopment/overview.
2. Ibid.
3. Brian P. Mcgrath and Grahame Shane, "Introduction: Metropolis, Megalopolis and Metacity," i*The SAGE Handbook of Architectural Theory,* ed. C. Greig Crysler et al. (Los Angeles: Sage, 2012).
4. United Nations, "The Sustainable Development Goals," https://sdgs.un.org/goals.
5. Patrick Ruess, "Emerging Urban Mobility," Fraunhofer IAO & Friedrich Naumann Foundation Press Release, December 5, 2023*,* https://www.iao.fraunhofer.de/en/press-and-media/latest-news/the-future-of-urban-mobility-in-emerging-economies.html.
6. United Nations, "The Sustainable Development Goals: Goal 11," , https://www.un.org/sustainabledevelopment/cities/.
7. United Nations, "World Economic Situation and Prospects 2014," https://www.un.org/en/development/desa/policy/wesp/wesp_current/2014wesp_country_classification.pdf.
8. UN Habitat, "World Cities Report 2022: Envisaging the Future of Cities,"*,* 2022, https://unhabitat.org/sites/default/files/2022/06/wcr_2022.pdf.
9. "The largest cities worldwide 2023," Statistisches Bundesamt, https://www.destatis.de/EN/Themes/Countries-Regions/International-Statistics/Data-Topic/Population-Labour-Social-Issues/DemographyMigration/UrbanPopulation.html.
10. Leticia Calderón, "La Ciudad Intercultural," *Sin Fronteras IAP,* 2019*,* https://sinfronteras.Worg.mx/wp-content/uploads/2019/11/La-Ciudad-Intercultural-Panorama-general-sobre-el-proyecto-de-hospitalidad-en-la-Ciudad-de-México-OK-9oct19.pdf
11. Emily Green, "Mexico City's long-running water problems are getting even worse," *NPR,* March 8, 2024, https://www.npr.org/2024/03/08/1234928040/mexico-city-water-problems.
12. "Proyecto del Plan General de Desarrollo de la Ciudad de México 2020 – 2040," *Gobierno de la Ciudad de Mexico and Instituto de Planeació*n Democrática y Prospectiva, https://www.sacmex.cdmx.gob.mx/storage/app/media/convocatorias/2022/PLAN_GENERAL_DESARROLLO_CDMX.pdf.
13. Franziska Ohnsorge and Shu Yu, *The Long Shadow of Informality: Challenges and Policies* (Washington, DC: World Bank*,* 2022).
14. Marco Martinez, "Manual de Mejores Prácticas Ciudades Inteligentes," Fundacion Friedrich Naumann*,* https://www.freiheit.org/es/central-america/manual-de-ciudades-inteligentes.
15. Ibid.
16. León Ramírez, Siboney Flores, and Frasua Esquerra, "Sobre Economía, sueldos y programas: dichos falsos en el debate de la CDMX," *Animal Político*, March 18, 2024, https://animalpolitico.com/verificacion-de-hechos/fact-checking/debate-cdmx-dichos-falsos.
17. "Índice de Competitividad Urbana 2023," *Instituto Mexicano Para La Competitividad,* https://api.imco.org.mx/release/latest/vendor/imco/indices-api/documentos/Competitividad/%C3%8Dndice%20de%20Competitividad%20Urbana/2023-11-29_0900%20%C3%8Dndice%20de%20Competitividad%20Urbana%202023/Documentos%20de%20resultados/2023%20%20Documento.pdf.
18. "The epicentre of entrepreneurship Mexico City´s booming startup and fintech scene," *BBVA,* February 17, 2022, https://www.bbvaspark.com/contenido/en/news/the-epicentre-of-entrepreneurship-mexico-citys-booming-startup-and-fintech-scene/.
19. Ibid.
20. José Alberto Molina, "¿Fracaso o éxito? Las empresas se juegan la existencia en sus primeros 3 años de vida," https://www.eleconomista.com.mx/el-empresario/Fracaso-o-exito-Las-empresas-se-juegan-la-existencia-en-sus-primeros-3-anos-de-vida-20230803-0003.html.
21. Ibid.

22. "Índice de Polìticas para PyMEs: América Latina y el Caribe 2024: Hacia una recuperación inclusiva, resiliente y sostenible," *OECD*, July 4, 2024, https://www.oecd-ilibrary.org/development/indice-de-politicas-para-pymes-america-latina-y-el-caribe-2024_807e9eaf-es.

23. José Alberto Molina, "¿Fracaso o éxito? Las empresas se juegan la existencia en sus primeros 3 años de vida," https://www.eleconomista.com.mx/el-empresario/Fracaso-o-exito-Las-empresas-se-juegan-la-existencia-en-sus-primeros-3-anos-de-vida-20230803-0003.html.

24. Ruess, "Emerging Urban Mobility."

25. "Closing Gender Gaps in Transport", *World Bank,* March 7, 2024, https://www.worldbank.org/en/topic/transport/brief/closing-gender-gaps-in-transport.

26. Ibid.

27. "Presenta Martí Batres nuevo Módulo "Movilidad Integrada" de la App CDMX que dará certidumbre a usuarios y reducirá tiempos de traslado," Jefatura de Gobierno, October 15, 2023, https://jefaturadegobierno.cdmx.gob.mx/comunicacion/nota/presenta-marti-batres-nuevo-modulo-movilidad-integrada-de-la-app-cdmx-que-dara-certidumbre-usuarios-y-reducira-tiempos-de-traslado.

28. Darinka Rodriguez, "El futuro de las ciudades en México avanza a dos ruedas por 2.700 kilómetros de ciclovías," *El País*, August 17, 2022, https://elpais.com/america-futura/2022-08-18/el-futuro-de-las-ciudades-en-mexico-avanza-a-dos-ruedas-por-2700-kilometros-de-ciclovias.html.

29. Elia Castillo Jiménez and Georgina Zerega, "Las Propuestas de los candidatos al Gobierno de Ciudad de México ponen el foco en seguridad y economía," *El País*, March 17, 2024, https://elpais.com/mexico/elecciones-mexicanas/2024-03-17/las-propuestas-de-los-candidatos-al-gobierno-de-ciudad-de-mexico-ponen-el-foco-en-seguridad-y-economia.html.

30. "Zero emission buses for cleaner air and economic development," C40CFF, https://c40cff.org/projects/mexico-city-mobility

31. "Why Future Cities Must be Green Cities: The Imperative of Urban Sustainability," Green Building Council Nigeria, June 11, 2023, https://futurecities.ng/2023/06/11/why-future-cities-must-be-green-cities-the-imperative-of-urban-sustainability/#:~:text=Moreover%2C%20the%20transition%20to%20Green,weather%20events%20and%20rising%20temperatures.

32. Omar Díaz, "Metro 9% del presupuesto fue a mantenimiento," *El Universal*, January 16, 2023, https://www.eluniversal.com.mx/metropoli/metro-9-del-presupuesto-fue-mantenimiento/.

33. Esteban Ortiz-Ospina and Max Roser, "Taxation," Our World in Data, March 2023, https://ourworldindata.org/taxation.

34. Ibid.

35. Charlotte Edmond, "These are Some of the World's Top Smart and Sustainable Cities," *World Economic Forum,* 2024, https://www.weforum.org/agenda/2024/03/top-cities-smart-technology-sustainability/.

36. Esteban Ortiz-Ospina and Max Roser, "Taxation," Our World in Data, March 2023, https://ourworldindata.org/taxation.

37. Alejandra Trejo, "The broken link between Urbanisation and economic development, and the need for metropolitan reforms in Mexico," Regional Studies Association Blog, https://www.regionalstudies.org/news/the-broken-link-between-urbanisation-and-economic-development-and-the-need-for-metropolitan-reforms-in-mexico/.

38. "Proyecto del Plan General de Desarrollo de la Ciudad de México 2020 – 2040," *Gobierno de la Ciudad de Mexico and Instituto de Planeaci*ón Democrática y Prospectiva, https://www.sacmex.cdmx.gob.mx/storage/app/media/convocatorias/2022/PLAN_GENERAL_DESARROLLO_CDMX.pdf.

39. Jorge Vaquero Simancas, "Mexico City is more expensive than Milan (but only for wealthy foreigners)," *El Pais*, https://english.elpais.com/economy-and-business/2024-01-18/mexico-city-is-more-expensive-than-milan-but-only-for-wealthy-foreigners.html.

40. Jun Rentschler, "Flood Risk Already Affects 1.81 billion people. Climate Change and

Unplanned Urbanization Could Worsen Exposure," *World Bank Blog,* https://blogs.worldbank.org/en/climatechange/flood-risk-already-affects-181-billion-people-climate-change-and-unplanned.

41. Ibid.

42. Laura Paddison, "Why countries are choosing to build new cities in places at high risk of worsening floods," *CNN*, October 4, 2023.

43. UNESCO, *The United Nations World Water Development Report 2024: Water for prosperity and peace*, (24 July 2024), https://unesdoc.unesco.org/ark:/48223/pf0000388948.

44. Martinez, "Manual de Mejores Prácticas Ciudades Inteligentes."

45. "Proyecto del Plan General de Desarrollo de la Ciudad de México 2020 – 2040.".

46. Ibid.

47. Ibid.

48. "Encuesta Nacional de Victimización y Percepción sobre seguridad pública," *INEGI,* 2021, https://www.inegi.org.mx/contenidos/programas/envipe/2021/doc/envipe2021_presentacion_nacional.pdf.

49. "Why Future cities Must be Green Cities.".

50. Martinez, "Manual de Mejores Prácticas Ciudades Inteligentes."

51. Israel Zamarrón, "Con fábrica de software propia la CDMX ha ahorrado 2,200 mdp en digitalización de trámites," *Forbes México*, August 3, 2023, https://www.forbes.com.mx/con-fabrica-de-software-propia-la-cdmx-ha-ahorrado-2200-mdp-en-digitalizacion-de-tramites/.