



# Mobility regulations and urban projects in Mexico City: An accessibility focus on territorial inequalities

Juan Carlos Finck Carrales

Department of People and Technology, Roskilde University, Roskilde, Denmark

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## ABSTRACT

Global Cities frequently concentrate their public budgets and private investments in their central, wealthy zones. This article outlines the inequitable distribution of the public budgets, private investments and mixed-use zoning among the municipalities of Mexico City with regard to the provision of accessibility. Global Cities' perspectives lack acknowledgement of elements of mobilities theory. This paper will discuss how mobility regulations and urban projects involve public space interventions and the shaping of citizens' (mobile) daily life activities and conditions. The phenomenon is illustrated through two cases: 1) The city's latest mobility regulations (2014 and 2015) related to its inhabitants' daily long-distance commuting and air pollution mitigation, and 2) the urban project called Cultural Corridor 'Chapultepec/Zona Rosa' (CCC) related to citizens' urban planning interventions, which was cancelled in 2015. In order to achieve equality between territories, governments should consider citizens' participation within urban projects and mobility regulations. Governments should also take account of interrelations between urban planning and mobility perspectives.

## 1. Introduction

This article contributes to the fields of Global Cities and urban planning by relating accessibility (as a social aspect within mobilities theory) to the planning of urban projects and mobility regulations. Making the use of the accessibility concept connected to the intersection between social class and spatial/territorial position, access inequalities to products, services and employment opportunities between territories of Mexico City are analysed. This study demonstrates that governments of Global Cities can favour accessibility within their territories by intervening in people's daily mobility praxes. Similarly, the use of the urban planning-mobility interrelation and the citizens' participation perspectives in policymaking is proposed in order to favour territorial equality. Furthermore, this entails acknowledging that both mobility regulations and urban projects involve public space interventions, shaping citizens' daily life activities.

This paper is divided in two parts, which the accessibility focus connects. The first relates to mobility policy and regulations, and the second to Global Cities and urban projects. The discussion and conclusions interweave both approaches in order to propose tools for policy and regulations planning intended to mitigate territorial inequalities.

Mexico City is part of the Metropolitan Area of the Mexican Valley (ZMVM in its Spanish acronym), which consists of 16 municipalities in

the city and 60 municipalities of two other states (SEDESOL, 2010). Those territories have a combined population of 20.8 million inhabitants (INEGI, 2017). Mexico City has 8.9 million inhabitants and a population density of 5,967 inhabitants per km<sup>2</sup> (INEGI, 2015).

According to the 2017 Origin-Destination Survey (EOD in its Spanish acronym) of Mexico City, people perform 17.4 million journeys from the ZMVM's zones, which are not part of Mexico City, to inside the city. Those journeys should be added to the 15.9 million journeys that people perform inside the municipalities of the city, which totals 32.4 million journeys. Furthermore, the inhabitants of Mexico City spend 48 min per journey on average on weekdays. In response, the government has expanded the public transportation network of the city over the last fifteen years or so with major construction (multimodal) projects, such as the Metro 12 Line, the 'Metrobús' (BRT) and the suburban train systems.

The city's transportation policies encourage long-distance journeys. This is a result of the city having undergone a territorial expansion and centralization during the last six decades (Ramírez Kuri, 2007; Gamboa de Buen and Revah Lacouture, 1990; Hiernaux Nicolás, 1999; Sedesol, 2010; Bruquetas Callejo and Moreno Fuentes, 2005; Duhau and Giglia, 2009). Nevertheless, the city is currently considered a global city, mainly due to its major economic and financial importance within Mexico (Beaverstock et al., 1999).

E-mail address: [jcfc@ruc.dk](mailto:jcfc@ruc.dk).

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For the last twenty years, Mexico City has begun implementing urban projects based on the specific land use zoning of its municipalities and the participation of the private sector to grow the city's economy. Those projects were part of a process of change within urban policies that entailed a different focus with regard to administrative management of the city for investment promotion, including legal frameworks for mobility (Koglin and Pettersson, 2017; Harvey, 1989). However, the public budgets and private investment directed at urban projects and infrastructure tend to benefit the central-wealthy zones, leaving the peripheral under-served (Martínez Flores, 2015).

Global Cities studies have involved different approaches related to how those cities should be managed and what kind of rules and public policies should be undertaken (Smith and Doel, 2011; Van der Waal, 2015; Rose, 2000). Furthermore, some researchers have considered and analysed elements related to growth and expansion of cities, where the urban aspect could relate to mobility (López-Lambas et al., 2013). For example, Sassen's (1991) and Smith's (2002) studies on Global Cities and new globalism respectively, explain and acknowledge the gentrification processes caused by the shift in capital control and internationalisation, based in cities. However, even though those studies emphasize the social and economic impacts by expansions of cities, they do not acknowledge and analyse explicitly the consequences for inhabitants' mobility within cities experiencing this phenomenon, which goes hand-in-hand with the planning of urban policies.

Sheller (2014; 2015) explains that people, whose governments have historically displaced them from their places, could fight to gain the 'right to the city' to diminish social inequalities. Those rights can be achieved through social demands centred on access to services, products and employment opportunities. It is thus important to take account of accessibility as a mobility aspect within Global Cities studies intended to analyse territorial inequalities.

This article explains the planning processes of urban projects and mobility regulations in Mexico City, resulting in territorial inequalities from two perspectives: 1) The latest Mobility Law of Mexico City and its regulation of the daily, long-distance commutes of the inhabitants are described and its aims for mitigating air pollution are outlined. 2) The conception of Mexico City as a global city is explored. In this connection, there is a description of the case of the cancelled 2015 Cultural Corridor 'Chapultepec/Zona Rosa' (CCC) as an urban project that involved citizens' participation as planning intervention. The cases are analysed with legal frameworks information and statistical data from official Mexican governmental and institutional sources. Conceptual elements related to accessibility and Global Cities are applied to the cases.

## 2. Mobility policies: Beyond transportation policies?

During the last three decades, some scholars have considered *mobility* as a 'total' social phenomenon (Urry, 2007; Kaufmann, 2002). This notion differs from the concept of *transportation*, which involves a technocratic totality, whose aim is directed towards achieving time-space efficiency (Jensen and Lannig, 2017). Mobility is broadly related to movements of persons, materials, information, etc. and systems of potentials to move, in which transportation is a tool for creating and facilitating it (Kaufmann and Canzler, 2008; Urry and Grieco, 2011).

Cresswell (2010) explains that 'mobility involves a fragile entanglement of physical movement, representations, and practices' (Cresswell, 2010:18). The author suggests that transport researchers should consider mobility as a historical process, by taking account of those three mobility aspects at a human level. Furthermore, the forms and aspects of mobilities are political, meaning 'they are implicated in the production of power and relations of domination' (*ibidem*: 20). The politics of mobility are productive and are produced by social relations, since different social groups in society access mobility in different ways. Policymakers shape the ways that people and goods move, by framing the regulation of mobility. Therefore, historically and based on Cresswell's understanding, transport and mobility policy and regulations are

prone to reflect subjects, knowledge, representations, discourse and practices of mobility.

Public policies stem from focused legal frameworks that shape the governmental public agenda (Mény and Thoenig, 1992). Nowadays, governments mostly implement transportation in order to reach people's speed potentials and thereby fulfil their everyday life productivity. Those policies materialize into systems of transportation in cities that respond to people's mobility requirements, reflecting daily commuting (Kaufmann and Canzler, 2008). Transportation is therefore usually intended to model choices of travel distances and transport modes and destinations (Urry and Grieco, 2011). This allows the collection of multisource human travel data to determine transport patterns via mathematical analysis (cost-efficiency and origin-destination considerations) (Chen et al., 2020; Xu et al., 2021).

Within policies making, contradictions can occur between transportation policies and mobility policies, since governments might confuse and misunderstand both concepts. Transportation materializes mobile potentials through construction of infrastructure and by moving and interconnecting people from one place to another under specific systems and technological determinisms. On the other hand, mobility is more complex, since it involves considering additional social aspects such as sociability, experience, affection, senses, embodiment, etc. related to patterns, relationships and forms of movements, where transportation is a tool for accomplishing the physical journeys (Urry, 2007; Jensen and Lannig, 2017).

The 'dilemma' within designing mobility and transportation policies (Schwanen 2018; Kębłowski and Bassens 2018) rests on acknowledging the extent to which a region or city needs those systems, and whether sustainable technology and/or social factors should determine such policies (Thaller et al., 2021). These systems can be exclusionary depending on their size, routes, costs, spatial position, etc. in relation to the social groups that have access to and benefit from those systems. Thus, transportation and mobility systems, and the distribution of these between social groups, could be a determinant factor for controlling and fixing people's proximity to products, services and employment opportunities (Martínez Flores, 2015). Social aspects, however, could determine those accessibility needs beyond people's efficiency-based rational choices. Policy-makers can use social aspects as tools when planning their mobility policies in order to develop society by providing different social groups with accessibility.

Furthermore, as described in López-Lambas et al. (2013), in some European cities, sustainable transport plans tend to merge and align urban planning, mobility, social consciousness and environmental protections entrenched in equity and sustainability. The authors argue that when planning and strategies for transport and space are not integrated, urban areas become unsustainable. In the case of Mexico City, its fixed transport and mobility policies involve social inequalities via access opportunities distributed among social groups placed in specific, fragmented territories with different land use zoning (Martínez Flores, 2015). In other words, the government has decided when, why, how and what people move in the city through policies and regulations under politics of mobility (Cresswell, 2010) based on transportation efficiency that are not aligned with urban projects and planning.

### 2.1. Accessibility conception within mobility and transport studies

In this article, the accessibility conception is centred on Martínez Flores' (2015) work, as this acknowledges social and technical aspects for cities' transport policies. Therefore, this paper does not work with conceptions of accessibility related to factors such, as gender (Hamilton and Jenkins, 2000; Sager, 2006; Blumenberg, 2004), age (Pyer and Tucker, 2014; Storey and Brannen, 2000) or disability (Pyer and Tucker, 2014; Lucas, 2004; Knowles, 2006; Casas, 2007). On the other hand, this study works with the accessibility concept related to the intersection between social class (Blumenberg, 2004) and spatial/territorial position (Preston and Rajé, 2007; Farrington and Farrington, 2005; Geurs and

van Wee, 2004), addressing the specific politics and policies of mobility (Cresswell, 2010; Handy and Niemeier, 1997) in Mexico City.

Accessibility is a social aspect of mobility and derives from the concept of motility. Kaufmann (2002; ) defines *motility* as people's potential to move based on access to their social, cultural, spatial, economic, political, and individual conditions as multiple possibilities. One of Kaufmann's main motility elements is access as the available choice of personal options and conditions. For example, the spatial conditions of a commute are a key for choosing a certain means of transportation during a journey, because it provides several potential opportunities for mobility (Vannini, 2009; Sheller, 2015).

For Martínez Flores (2015), *accessibility* is the capacity to obtain opportunities, facilities and resources to facilitate the realization of different daily life activities, achieved mainly through mobility, by increasing people's mobile potentials of proximity (*contiguity* in Kaufmann's [2002] terms). Thus, according to Martínez Flores, accessibility decreases the social and individual time, and monetary, psychological and physical costs that arise from the journeys.

The accessibility that any person can obtain depends on their socio-economic and spatial positions and it is based on the social, cultural, economic and political development of territories (Urry and Grieco, 2011). People's accessibility depends on those conditions as potentials of opportunities, facilities and resources (Vannini, 2009; Cass et al., 2005; Kaufmann, 2002). Thus, accessibility relates to social exclusion to the extent that less accessibility involves less people connected to jobs, services and facilities (Preston and Rajé, 2007).

From this perspective, certain social inequalities can partly derive from mobility systems in terms of access (Urry, 2007). This means that lack of accessibility involves, simultaneously, a lack of mobility, connectivity and transportation per se. Martínez Flores (2015) states that accessibility depends on governmental interpretations and actions about mobility and transportation decision-making.

According to Martínez Flores, accessibility can reduce the time spent on journeys by changing the origin–destination criteria, improving their quality. This focus is primarily technical. Nevertheless, the author concludes that accessibility encompasses mobility and transportation approaches towards sustainable and efficient use of time, territory and income by questioning, as Cresswell (2010) partly suggests, how and why people move in modern cities.

In summary, transportation and commonly misinterpreted mobility policies tend to stress the importance of building infrastructure for vehicles and mass public transport, by increasing their volume and consequently increasing the number of daily (usually long-distance) journeys. Additionally, that process involves more use of energy, time, money and public space (including waste, such as pollution). This is why the accessibility concept is crucial for policymaking with respect to city planning.

## 2.2. Regulations in Mexico city that have resulted in long-distance commuting on a daily basis

Mexico City's current mobility regulations reflect politics of mobility based on transportation efficiency (Congreso de la Ciudad de México, 2014; 2015). Thus, these regulations do not consider the accessibility aspect of mobility, thereby risking favouring inequalities among social groups in different territories.

In July 2014, the City Congress launched the Mobility Law of Mexico City. The law outlines a series of points that define the mobility policies of the city, emphasizing the following aspects: 1) a large number of concessions for public mass transportation, which encourages long-distance journeys, 2) pedestrians are considered as a vulnerable group in relation to the rest of the modes of transportation, and finally, 3) the law conceives mobility as a socially inclusive right through interconnectivity among different modes of transport.

The implementation of the Law entailed only slight adjustments to the former Law of Transportation and Roads and its regulations, which

the new Mobility Law replaced. The City Congress made the new regulations without reinforcing aspects that could create multi-centralities and proximity to products, services and employment opportunities in the city (Martínez Flores, 2015). The regulations do not have objectives intended to facilitate daily journeys that could be shorter than the current ones.

In the Law, the concept of mobility is a term for seemingly implementing and justifying policies of transportation, focusing the attention on technical aspects. These are interpreted as the calculation and scenarios-creation of associated costs and energy supply, modelling of the demand and CO<sub>2</sub> emissions, simulation of flows, optimization of vehicular infrastructure, and evaluation and maximization of development of vehicles (Chen et al., 2020; Xu et al., 2021, Hennig et al., 2020). The concept of mobility mentioned in the new law does not seem to seek to recover the active character of people as mobile entities that could identify themselves through travel experiences with its social, cultural, and affective dimensions (Banister, 2008; Sheller and Urry, 2006; Vannini, 2009; Kaufmann, 2002). Furthermore, the law appears to fail to include the accessibility aspect of the mobility concept (Urry and Grieco, 2011), thus promoting long-distance journeys (especially commuting from the periphery to the centre).

On 17 August 2015, the city government published the Road Regulations of Mexico City. The regulations include the following: 1) It provides tools to the city's traffic police to increase the number of speeding tickets issued in order to reduce the speed of private cars, 2) it includes specifications about praxes of pedestrians and drivers while traveling in order to promote good traffic behaviour, and, 3) it addresses parking issues for vehicles and proper use of roads.

In the same year, in order to illustrate an aspect of the regulations, the city government acquired 11,100 new road cameras and 156 new traffic radars. Consequently, from 2012 to 2015, traffic tickets increased by 64.8 percent (SSP-DF, 2015). It was not until 2019 that the new central city government decided to use the road cameras to punish traffic offenders with community work instead of tickets. However, until now, the bureaucratic process regarding driving licenses in the city only requires people to pay for obtaining their licenses once they turn 18 years old, but does not require that they pass a driving test first (SEM-OVI, 2019a).

## 2.3. Air pollution mitigation in Mexico City: A contradictory aim within the mobility regulations?

In the case of Mexico City, the government focuses on mobility policies that diminish pollution emissions from motorized vehicles. In 2012, there were 2,498,719 motorized vehicles in Mexico City, and 31,000,000 tons of CO<sub>2</sub> were emitted in total (SEDEMA-DF, 2014; SEDEMA-DF, 2012). In 2014, 24,551,216 tons of CO<sub>2</sub> were emitted, meaning a decrease of 20.8 percent in two years (C40, 2014). Since 2006, the city has reduced CO<sub>2</sub> by 2.2 million tons, mainly due to the *Metrobús* (Bus Rapid Transit) public service, which has cut 122,000 tons per year (METROBÚS, 2015). Furthermore, public transportation represents only 8 percent of total means, provides 66 percent of total journeys and accounts for 52 percent of CO<sub>2</sub> emissions (SEDEMA-DF, 2012; C40, 2014).

In addition, due to environmental contingency in Mexico City, since April 2016, several changes and over-implementation of the *Hoy No Circula* (no ride today) programme introduced in 1989 ensued. This bans private cars from traveling in the city on some weekdays depending of their licence plate. The *'Hoy No Circula'* has been one of the main public transportation programmes implemented in order to diminish air pollution, even though 23.64 percent of the city's CO<sub>2</sub> emissions came from private cars by 2016 (SEDEMA, 2016).

In Mexico City, long-distance commuting has involved an increase in private and social costs. For example, in a survey from 2010 by IBM (IBM, 2012) with private drivers in Mexico City, 56 percent of the respondents thought that road traffic had affected their jobs and studies.

43 percent thought that road traffic affected their health because of stress and pollution. Daily traveling also entails breathing pollution, hearing motor noises and making several interconnected transfers within complex mass transport systems (Martínez Flores, 2015).

Moreover, in Mexico City, travel using emissions-free modes of transport, such as bicycles, is far from being a common activity. By 2017, 25 bicycle lanes were built in Mexico City, but the majority were placed in central municipalities (ECOBICI, 2017). The current government plans to build an extra 85.6 km of new infrastructure for bicycles from 2018 to 2024 (35.2 km in two eastern municipalities) (SEMOVI, 2019b). Nonetheless, people currently perform only 2.2 percent of their total weekly city travel by bicycle. The majority of the inhabitants of Mexico City depend on mass public transport and private motorized vehicles, which represent 50.9 percent and 22.3 percent of the total journeys in the city, respectively (EOD, 2017).

In summary, the mobility concept included in the latest Mobility Law of Mexico City and its regulations, seems to be replacing the former transportation concept by merely using it within governmental planning as a sort of 'brand'. The mobility regulations therefore do not incorporate the theoretical meaning of mobility and its aims by not including and addressing social aspects and not stressing the accessibility aspect of mobility. This appears to involve that people's long-distance commuting, pertaining to the daily use of public and private transportation and, in turn, affecting people's health.

### 3. Perspectives of global cities

Global Cities are cities in which high concentrations of capital occur. Technologies of innovation and specialized services control and reflect the capital through global firms providing financial services (Lee, 2015; Harvey, 1989). Sassen (1991; 2005) states that those characteristics of cities started to be visible in the 1980s and were based on the reorganization of the financial industry, causing regulations for a global network of production. Harvey (1989) describes a process of urban governance going from managerialism in the 1960s to entrepreneurship in the 1970s and 1980s directed towards economic development. A core element of that idea involved additional aspects of production, privatization and deregulation (Koglin and Pettersson, 2017).

Different theoretical approaches to Global Cities (Smith and Doel, 2011) do not dismiss the idea that those types of cities are guided by and based on neoliberal-globalized economic notions of wealth concentration (Smith, 2002; Koglin and Pettersson, 2017; Harvey, 1989). Wealth concentration entails centralization of cities that leads to a specific management control of productivity from land use establishments (Harvey, 1989). In that regard, Sassen (1991) explains that 'spatial differentiation based on social and economic characteristics is a basic trait of cities, often expressed by changes in land use' (Sassen, 1991: 251). This means that by first providing territories with a specific use in a city, society and the economy could consequently be distributed in specific ways. The land use zoning involves different productive activities that could entail housing proximity to employment opportunities and proper services, depending on their geographical positions. Thus, in theory, the greater the amount of mixed-use zoning land, the greater the capacity for production.

Martínez Flores (2015) describes a thesis that departs from that logic and argues that such a process could increase people's quality of life. He calls that idea *urban entropy*, within a focus on the accessibility of cities. He states that non-mono-functional use zoning of land in every territory of a city provides people with accessibility. However, the great number of daily (usually long-distance) journeys (Gobierno de la Ciudad de México et al., 2011) causes an increase in people's invested time, money, public space use, etc.

The expense of the city during that process is what Martínez Flores calls urban entropy, and he explains that 'within a given system, as entropy increase so does internal disorder, and consequently there is less available useful energy.' [my translation] (Martínez Flores, 2015: 28).

The term of 'energy' waste in this context entails mainly air pollution and increasing travellers' stress. It is therefore necessary to take account of how dispersed or concentrated the housing, services, products and workplaces are from one another. The aim of that process is to interpret and measure the 'energy' and the expenses of time, money and public space of a city related to people's physical mobility. Thus, the more dispersion of those elements within the city, the more formation of urban entropy as disorder and waste creation. The centralization aspect of Global Cities therefore could prevent and limit the improvement of people's quality of life by fostering urban entropy, especially for those living in the peripheries.

Within the Global Cities paradigm, there is a tendency to interpret urban development as mainly directed at facilitating economic growth and competitiveness, which leads to accumulation of capital and production through investment (Sassen, 2005; King, 1990; Curtis, 2016). In that regard, the 'image' that a city presents to the rest of the world is the basis for attracting investment (Harvey, 1989). That notion includes the importance of having a city whose urban space is able to reflect order, stability and security in economic and political ways (Greater Paris Investment Agency, 2014; Qamhaieh and Chakravarty, 2017).

King (1990) explains that the expansion of global management and financial services that local governments welcome and attract through capital lawlessness and loss of control, leads to an urban restructuring (Harvey, 1989). Furthermore, the historical and cultural connections of a city to other worldwide Global Cities can reinforce that attraction. The private sector is thus interested in urban projects, apparently, due to the magnitude of return on capital obtained from these ventures. The process of investment attraction involves spatial regulations to motivate competitiveness within the city, by including approaches of economic policy under schemes of privatization (Koglin and Pettersson, 2017). However, Hiernaux Nicolás (1999) argues that the openness of markets could involve 'destruction' of a local economy, if a city is not prepared for the 'invasion' of foreign products. This could also involve more centralization within a city as a 'defence mechanism'. This economic process also leads to gradual deindustrialization and expansion of cities.

Curtis (2016) stresses the influence of the neoliberal project inside cities for creating 'novel space', which could reflect the productivity of cities and impress the international system. The transformation of the public space through urban projects is therefore determinant for materializing the economic power and stability of cities under this global paradigm. In this understanding, the management of Global Cities reflects their aims through urban policies, specifically for generating integral urban strategies among public and private sectors (Smith 2002; Koglin and Pettersson, 2017).

According to Curtis, the elements of management are the hybrid 'public-private' partnerships, which are constantly seeking innovative ideas and technologies (Harvey, 1989). Governmental institutions could turn into public agencies (although acting as 'semi-private') that manage and attract investment for urban development. The government thereby goes from an executive regulating to one that additionally promotes investment and competitiveness through the 'auction' of the public space of the city (supply-and-demand mechanisms) (Hiernaux Nicolás, 1999; King, 1990; Smith, 2002; Koglin and Pettersson, 2017; Harvey, 1989). As a result, the local government constantly interacts with clients, investors and other governmental bodies (national and international). Nevertheless, the constant seeking for urban projects in a city leads to a spatial restructuring, which usually has repercussions on the use of public space, and could result in the expropriation of private space.

Sassen (1991) explains that those practices make people migrate to other zones of the city or even to other cities. After the implementation of those urban projects, the property prices in the location tend to increase and, consequently, prices of products and services as well. The remaining people, who end up inhabiting revitalized urban zones, usually belong to the highest social classes, since they can afford to live there. In other words, those urban processes involve *gentrification*

(Moulaert et al., 2003; Van der Waal, 2015; Sheller, 2015; Vannini, 2009; Smith, 2002).

Paton (2014) states that gentrification involves a 'rent-gap', describing the difference in land value and its regeneration potentials (Clark, 1994). This relates to the lifestyles of specific groups, divided into social classes. Therefore, gentrification processes reproduce the polarization of social classes within a city. Urban projects that would result in gentrification, usually benefit the social groups belonging to the upper socioeconomic classes. This consequently leads to a potential disparity of benefits between different social groups in the city, which according to Smith (2002), relates to the expansion of the city and people's daily commuting via capitalist production. At the end, as Koglin and Pettersson (2017) conclude in their analysis of planning changes, the outcome of the whole process could be that, for example, implementation of urban projects involves private benefits instead of social.

In summary, governmental practices of Global Cities directed at implementing urban policies (that materialize into urban projects) are mainly based on three factors. First, the mono-functional land use zoning role of territories within people's daily-based mobility, related to the creation of urban entropy, which reflects the centralization of the city. Second, the 'image' of the city projected to the rest of the world for attracting investment, strengthened by openness of markets and lawlessness of capital control. Finally, the public-private partnerships managed by public urban agencies, which promote and restructure the public and private spaces of a city, causing gentrification processes. Combined, these factors polarize the social classes of Global Cities and therefore concentrate the accessibility to products, services and employment opportunities in cities for the social groups that belong to the higher socioeconomic classes.

### 3.1. Mexico city as a prominent and promising Global city

The progressive expansion of Mexico City started in the 1940s, when the industrialization of its centre intensified. That process accelerated from the 1970s onwards (Ramírez Kuri, 2007). The expansion of the city involved a process of physical separation within its municipalities and their neighbourhoods that created physical borders, dividing the city into social classes (Gamboa de Buen and Revah Lacouture, 1990).

In 1999, rankers considered Mexico City as a 'beta' level city on the Global Cities scale (Beaverstock et al., 1999). By then, the city was a centre of foreign capital attraction, since it had the best operating conditions with regard to communications and access to banking systems and state institutions in Mexico (Hiernaux Nicolás, 1999). However, in 2014, Mexico City was no longer on the top twenty-five list of cities in the world with the most investment (Greater Paris Investment Agency, 2014) due to the increasing political instability and the high level of violence in Mexico, signalling uncertainty for foreign investors.

In 2012, the city's productivity level within the whole country represented 17 percent of the Mexican Gross Domestic Product (GDP) (INEGI, 2012). Therefore, the city government opted to continue promoting it as an optimal place to invest. The central government, which took over administration of the city that same year, decided to make the name of the city into a brand by calling it 'CDMX', an acronym of *Ciudad de México* (Mexico City) (Harvey, 1989). Furthermore, in 2013, in order to attract investment, the government created the Urban Management Agency (AGU in its Spanish acronym). The agency is intended to be the intergovernmental coordinating body of public policies that implements benefits in urban public services and encourages input from sources such as the public, social and private sectors (Gaceta Oficial del DF, 2013). The AGU also allows implementation of mechanisms of promotion, investment, and innovation in the public space. By creating the agency, the government intended to enhance urban development, changing the spatial conditions of the city through private investment (Moulaert et al., 2003).

The government has been designing public policies under pressure from competing interest groups, seeking to undertake restructuring

initiatives and constant change in global, national and local economic priorities (Harvey, 1989). The current urban policies of the city have therefore been directed at identifying market opportunities that could generate competition between companies (Lee, 2015; Sassen, 1991). That characteristic makes policy-makers focus on the investment directed at the city based on wealth maximization, which is not necessarily connected to budgets and investment distribution in the city (Koglin and Pettersson, 2017).

Mexico City's urban policy-making tends to be 'vertical'. The city's policies are planned and designed by political and economic groups with the greatest amount of power, such as local legislators, ministers and governors, together with investors, managers of private companies and the public urban agencies that provide 'advice' (AGU, 2015; PROCDMX, 2015; Koglin and Pettersson, 2017). As a result, it is usually left to 'the highest bidder' to decide what should happen inside the public space of the city, and considerations of social impacts tend to merely form part of a shallow diagnosis of urban projects (Moulaert et al., 2003; Harvey, 1989). Governmental decisions could depend on the points of view and interests of a few political and business groups, disregarding other social groups, such as NGOs and neighbours' organizations (Koglin and Pettersson, 2017).

Over the last eighteen years, the government has implemented most of the city's urban policies in the central and western zones. In 2010, approximately 87 percent of people below the poverty line (approximately 30 percent of the total population) were inhabitants of eastern municipalities (Coneval, 2010). In comparison, in 2014, approximately 25 percent of the completed governmental works for public services and spatial improvement took place in central municipalities. However, a mere 7 percent of public works were finished in eastern zones (own calculation made with data from AGU, 2015). Inequitable redistribution of the public budgets has sought to guide productive investment toward only the most productive and wealthy zones (Bret, 2009). Consequently, central and western municipalities had the highest percentage of the GDP of the city (Benito Juárez with 28, Cuajimalpa de Morelos with 25 and Miguel Hidalgo with 21), whereas peripheral municipalities had the lowest percentage of GDP (Iztapalapa with 10, Tláhuac with 10 and Milpa Alta with 8) (Gobierno del Distrito Federal, 2009).

In 2008, central and western municipalities (three out of sixteen) of Mexico City concentrated 44 percent of the total employment opportunities (INEGI, 2008). Land use zoning of peripheral territories mainly consists of housing (mono-functional). This explains the lack of private investment in them. In general, there is little mixed-use zoning in the majority of the city's peripheral municipalities (Información Geoespacial, 2010). Eastern municipalities cannot handle providing offices and housing estates for mixed-used zoning management, seemingly because their local programmes for urban development do not prioritize these.

Furthermore, peripheral zones often receive the lowest public budgets from the City Congress every year among all the municipalities, because these have a low formal productive rate (PDDU-Tláhuac, 2008). The government distributes the public budgets in an apparent vicious circle: the less productive municipalities, where workers pay less taxes, receive less of the public budget. At the same time, the municipalities depend on investment favoured only by specific land use zoning that allows productive activities. Hence, the more productive municipalities are those that have more mix-used zoning.

The executive central city government defines the budget distribution for every municipality through Municipal Urban Development Programmes (Asamblea Legislativa del Distrito Federal, 2010). As a consequence, by 2019, 33 percent of all the Mexican companies with foreign investment in their social capital were located in three central municipalities of Mexico City (Miguel Hidalgo with 13 percent, Cuauhtémoc with 11 percent, and Benito Juárez with 9 percent). Finally, in the same year, 66 percent of all the foreign companies in the Mexican national registry of foreign investment were also located in five central municipalities of Mexico City (Miguel Hidalgo with 29 percent,

Cuauhtémoc with 17 percent, Benito Juárez with 9 percent, Álvaro Obregón with 6 percent, and Cuajimalpa de Morelos with 3 percent) (Secretaría de Economía (SE), 2019a; Secretaría de Economía (SE), 2019b).

Overall, Mexico City is currently under a Global Cities paradigm because its government is interested in attracting investment through the centralization of its territories by employing land use zoning disparities between municipalities. For that purpose, the government is interested in promoting the public and private spaces of the city as buyable and profitable by projecting a positive 'image' about them to the rest of the world. Those governmental decisions have exacerbated the socioeconomic differences between the inhabitants of the city by limiting the mix-used zoning in the peripheral municipalities, thereby benefiting the central zones. The individual public budget of the municipalities reflects that phenomenon. Inhabitants of peripheral municipalities therefore lack proximity to products, services and employment opportunities. Moreover, this forces the majority of those inhabitants to work or study in the central municipalities and, consequently, to make long-distance journeys on a daily basis.

### 3.2. The case of the cultural Corridor 'Chapultepec/Zona Rosa' (CCC) as an example of a failed urban project in Mexico city

A single urban project in a city can have multiple impacts on different social groups and on its environment (Koglin and Pettersson, 2017). In Mexico City, some urban projects have benefited inhabitants, mainly by increasing the real estate values of their zones and, consequently, expanding employment opportunities (AGU, 2015; PROCDMX, 2015; Harvey, 1989). However, not all urban projects in the city have been successful, such as the so-called Cultural Corridor 'Chapultepec/Zona Rosa' (CCC).

On 18 August 2015, the executive city government announced the project, without any previous notification of its citizens. According to a study conducted by the Technological Institute of Superior Studies of Monterrey (Tecnológico de Monterrey, 2015), the CCC project was planned to be built in Cuauhtémoc central municipality and was meant to involve an intervention in 116,000 m<sup>2</sup> of public space, with a value of almost MXN 1 billion (EUR 46 million).

The Social Investment and Infrastructure Development Agency of Mexico City (ProCDMX) promoted the CCC project. The government created the ProCDMX agency in 2007, whose function is to create strategic alliances between entrepreneurs, scholars and society in order to enhance value, land use and the heritage of Mexico City. The ProCDMX is a body for financial and economic development, mainly managing private investment in the city. One of the main objectives of the institution is to design urban development projects by making use of public consultations (PROCDMX, 2015), which failed to happen in the case of the CCC.

The project plan granted 40 years of concessions to private companies, with a 'useful life' of 30 years. Less than 5 percent of the project uses were designated for cultural activities, and the plan was to have 585 private shops. The CCC planning included two floor levels surrounded by trees and shrubs, both with shops and 'cultural' amenities. The plan also described a low floor level with a pedestrian path and lanes for cars and bikes.

Due to the complexity of the project, a comprehensive planning phase was promised. However, the Urban Development General Programme of Mexico City at that time did not mention the CCC and there was no competition to appoint the private company that would build the project. Those two aspects are legally required conditions and must be fulfilled prior to starting urban projects in the city. In any event, with the project, the city would in return receive 5.12 percent of the project's total income. The main arguments used by the central government for implementing the CCC project with private funding was that the public exchequer of the city would not bear the cost of the project. Instead, the project would be self-sustainable and would create more than 7,000

jobs.

When construction on the CCC project was about to start, many Mexican urban experts had publicly opposed it through the 'Otro Chapultepec Posible' ('Other Possible Chapultepec') (2015) open web portal, arguing that the project should have been designed with a pedestrian level and human scale perspective, among other things. Possible social costs related to territorial accessibility resulting from the project could have been enormous, since it could have resulted in vehicular traffic increasing, environmental impacts, obstruction of sunlight, etc. The project could also have constituted a spatial barrier between some of the social classes in the city, because its design would have separated some wealthy and underserved neighbourhoods with physical barrier structures. In summary, the Mexican experts conceived the project as a commercial centre intended for tourists and wealthy local people, since its shops and restaurants were going to be luxurious.

After the experts' critiques of the CCC project and a social media campaign against its construction, the Electoral Institute of Mexico City (IEDF in its Spanish acronym) organized and implemented a public consultation about the CCC approval on 11 September 2015. The project was going to impact the inhabitants of the Juárez, Condesa and Roma neighbourhoods directly, and these residents could therefore vote in favour or against the construction of the CCC. After the voting, according to journalists who got some neighbours' testimonies, the consultation results were fixed by the government in favour of the project (Proceso, 2015). The neighbours and some Mexican NGOs decided to pressure the government with the aim of dismissing the consultation results and called instead for a new one that could have better order and transparency. As a result, on 3 December 2015, the IEDF organized and held a debate that was streamed on public TV and uploaded to YouTube, where 4 representatives in favour of the project and 4 against it, discussed for 45 min regarding its possible advantages and disadvantages. The debate included the participation of the head of ProCDMX and spokespeople from the three neighbourhoods.

Afterwards, on 6 December 2015, another public consultation on the construction of the CCC took place, since the inhabitants of Cuauhtémoc municipality had lodged a formal complaint against the project. In the second voting, the public consultation results were more than 60 percent against the construction of the CCC (Instituto Electoral del Distrito Federal (IEDF), 2017). According to the current Citizen Participation Law of Mexico City (2010), public consultations do not force the central government to abide by their results. Nevertheless, after the public consultation in December, the mayor of Mexico City publicly announced the cancellation of the CCC project. The city government was open to proposals for another project for the same zone, but next time, civil groups, the inhabitants of the neighbourhoods and experts would be included in the planning and design process (Gaceta Oficial del DF, 2015).

The case of the CCC project reflects a relevant idea within Global Cities' management related to territorial accessibility. In this case, the neighbours that would be affected by the project restricting their access to services and products, felt obligated to take action due to the risks of negative outcomes resulting from it. The neighbours had the support of urban experts, lawyers, NGOs and the media in an organized way, until the neighbours themselves could participate in the decision process for the project. *Citizens' participation* entails the involvement and influence of society in public management, acknowledged as a mutual necessity by the government and the citizens in order to achieve collective agreements. That practice can also entail a feeling of responsibility about a certain issue and a feeling of ownership (Langton, 1978; Gilbreath and Zakharchenko, 2002). This idea aligns well with the collaborative planning process, which Koglin and Pettersson (2017) explain. In this approach, planning is seen as a form of consensus in decision-making, based on different actors' collaborations, and it differs from so called neoliberal planning, which is market-driven.

Thus, the CCC case in Mexico City opened a new window of opportunities regarding the territorial accessibility of Mexico City, led by

citizens' participation in public affairs. However, it is important to consider that the citizens that could intervene in the decision of the CCC belonged to a central municipality of the city. They have the privilege of being visible to the government. That aspect brings up the hypothesis that those neighbours received help from other social groups due to political interests that affected the government, where internal and external frictions could probably have caused the cancellation of the CCC, regardless of the results of the consultation.

#### 4. Discussion: Tools for facilitating territorial equality in Global Cities

##### 4.1. Citizens' participation perspective

As discussed, one of the main aims of Global Cities is to boost their economy by attracting private investment and implementing public budgets for urban projects. Generally, the projects aim to create spaces where a constant and stable production can exist. However, this does not necessarily benefit the majority of the city's inhabitants, because most of the income and benefits could end up in the hands of private investors, a few central zones with privileged inhabitants, and groups of local government agencies (Harvey, 1989; Fig. 1). The logic of Global Cities can be reshaped through governmental action to achieve socially equitable and democratic development, progressing from neoliberal planning to collaborative planning (Koglin and Pettersson, 2017).

In order to benefit people's access, governments should focus on the creation of multi-centralities in a city, and not on promoting its centralization. The government of Mexico City should seek

public-private investment in urban projects, but not only in its wealthiest neighbourhoods (Table 2). Those projects could have a far greater social impact in the city by bolstering the economies of the eastern, southern and northern zones. For that purpose, based on Martínez Flores (2015) accessibility study and as Tool 1 for facilitating territorial equality, the City Congress must start providing those zones with a larger mixed-use zoning. This aspect can increase employment opportunities close to peripheral inhabitants' homes and, consequently, make the majority of daily long-distance commuting unnecessary (Table 1).

Furthermore, many urban projects that governments of Mexico City have promoted have had a lack of balance between social groups with respect to benefits and negative impacts (Table 2). In the example of the case of the CCC project, its diagnosis and objectives indirectly cancelled

**Table 1**

Summarization of main data of Mexico City in connection with demography and transportation.

Population number	8.9 million
Population density	5,967 inhabitants per km <sup>2</sup>
Daily number of journeys inside the city	15.9 million
Inhabitants' average time spent traveling on a weekday	48 min
Private vehicles as a percentage of total means of transport	50.9 percent
Trips in private vehicles as a percentage of total transport trips	22.3 percent
CO <sub>2</sub> emissions from private cars as a percentage of total CO <sub>2</sub> emissions from transport	23.64 percent

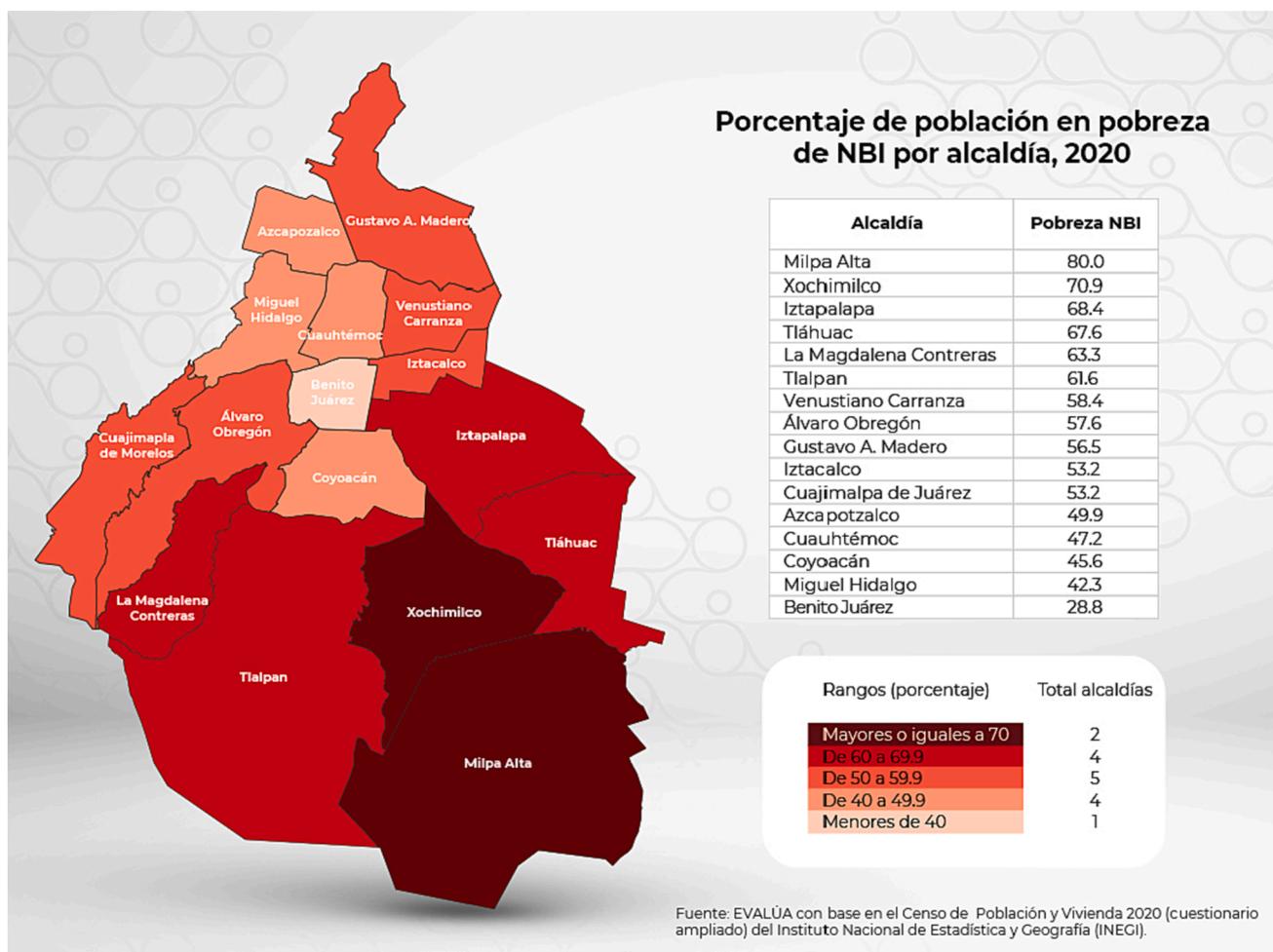


Fig. 1. Map of Mexico City showing territorial inequalities based on poverty percentage among its municipalities (the darker, the poorer) EVALÚA-CDMX, 2020.

**Table 2**  
Summary of main data of Mexico City in connection with territorial inequalities.

People below the poverty line in eastern municipalities as a percentage of the city's total population	30 percent
Government works for public services and spatial improvement in eastern zones as a percentage of the city's total	7 percent
Municipality with the highest GDP rate	Benito Juárez with 28
Municipality with the lowest GDP rate	Milpa Alta with 8

social benefits (Table 4; Fig. 2). The inhabitants of the zone and some civil organizations took part in several protests against that project. The citizens' intervention caused the government to call for a public consultation (Table 3).

After the public consultation concerning the CCC approval, the government decided to cancel the CCC and to possibly launch a new project, this time with the participation of civil organizations and neighbours, although this has not yet happened. Nevertheless, this example signifies a major step towards urban projects addressed to the inhabitants of Mexico City. The CCC case could bring about a new social phase, beyond the Global Cities, incorporating citizens into the future planning of urban projects in order to prevent access inequalities between social groups, because the project implementation would have created physical and social barriers (Table 4).

Moreover, it is important to highlight that the majority of the inhabitants who were involved in the cancellation of the CCC, belonged to higher-class neighbourhoods or at least to central municipalities,

**Table 3**  
Timeline of the CCC project.

Announcement of the project	August 18, 2015
First public consultation	September 11, 2015
Public debate about the project	December 3, 2015
Second public consultation	December 6, 2015
Cancellation of the project	December 9, 2015

**Table 4**  
Summary of main data for Cultural Corridor 'Chapultepec/Zona Rosa'.

Public space intervention	116,000 m <sup>2</sup>
Value of the public space	EUR 46 million
Percentage of uses directed at cultural activities	Less than 5 percent
Number of private shops	585
Number of jobs expected to be created	More than 7,000
Percentage of votes against the project in the second public consultation	More than 60 percent

meaning that they had access to important tools and skills that allowed them to gain the attention of the government. Those skills were high levels of education, wide social networks, contacts in the media and money for legal advice, etc. The level of attention that the government of Mexico City gives to citizens usually depends on their socioeconomic status or/and geographical location. For that reason, any further research on citizens' participation within Global Cities could incorporate concepts related to this issue (Larsen and Morrow, 2009).



**Fig. 2.** Design images for the CCC. Source: Parque Creativo Cultural Chapultepec. FR-EE (2015) in Tecnológico de Monterrey (2015).

The important aspects to reflect on in this case are the possibilities of facilitating and promoting citizens' participation in planning processes. Citizens' participation can be, as Tool 2 for facilitating territorial equality, a governmental instrument for encouraging more equitable distribution of public budgets and private investment reflected in urban projects focused on accessibility, regardless of whether the residents involved belong to central or peripheral municipalities. Citizen participation can also prevent power frictions and political interests directed at central zones from defining the urban agenda of the city.

#### 4.2. Urban Planning-mobility interrelation perspective

Within Global Cities studies, as discussed, there is an important relation between their mobility regulations and their urban planning. As described in the case of Mexico City, mobility regulations relate closely to urban policies (which involve urban projects), because both involve public space interventions and the shaping of citizens' daily life activities and conditions. Mobility projects are therefore urban projects as well (Table 1; Table 2).

Nevertheless, the current Mobility Law of Mexico City and its regulations (which reflect its current politics of mobility) still do not formally splice together urban and mobility policies. Governments seem to base mobility regulations on improving and encouraging long-distance daily journeys through increasing mass transport concessions on offer and on decreasing the air pollution in the city (Table 1).

Paradoxically, those policies appear to involve a contradiction between the mobility aims of diminishing air pollution and the long-distance journeys, in that the regulations try to diminish air pollution but do not promote productive activities and services in southern municipalities (that at the same time are the ones from which people travel the longest distances), which would require mixed-use zoning (Table 2).

This phenomenon occurs because the current mobility regulations and the urban planning municipal programmes do not facilitate the possible distribution of employment opportunities, public services, and public and private investment between different zones of the city. Consequently, no decrease in people's time invested in traveling, and in the stress that this involves, is achieved.

If these policies remain as they are, then wealth, development and inhabitants' high quality of life will continue to be concentrated only in the central and western municipalities (Fig. 1). Therefore, the government should reform the regulations of the city, incorporating the proposed *urban planning-mobility* interrelation perspective as a different discourse and practice within the politics of mobility, beyond the Global Cities/market-driven one and transportation efficiency (Cresswell, 2010). This perspective involves taking into account the land use zoning, together with the planning of public and private transport and their infrastructure (López-Lambas et al., 2013).

That standpoint could result in the creation of productive activities in the outskirts of the city, taking place close to people's homes, encouraging shorter journeys on a daily basis. This could also bring about the use of environment-friendly modes of transport, such as cycling and walking. People could increase their time for family, social and leisure activities by taking shorter journeys on a daily basis (urban entropy diminishing).

Construction of mass transport infrastructure is important in the city, since it involves private investment, employment opportunities and generally faster movement. However, as discussed, long-distance commuting should be limited, since it tends to generate negative externalities, adversely affecting people's health (Table 1). Furthermore, transport planning should incorporate social aspects, such as travellers' affectivity, embodiment, experience, etc., and especially the accessibility aspect of mobility in order to increase people's mobile potentials of proximity (Martínez Flores, 2015).

In order to achieve those aims, as Tool 3 for facilitating territorial equality, the government should incorporate the urban planning-mobility perspective in urban and legal frameworks on mobility in

Mexico City. That perspective could even involve the government merging the Ministry of Urban Development and the Ministry of Mobility into one single ministry.

In summary, larger mixed-use zoning, citizens' participation in planning, and the incorporation of the urban planning-mobility perspective in urban and mobility policy and regulations are the proposed tools stemming from this study for facilitating territorial equality in the city.

## 5. Conclusions

After carrying out the analysis and discussion of this research, the following points indicate the lessons learned:

1) This study demonstrates that the governments of Mexico City have focused its urban projects and mobility regulations on the approach of Global Cities. This paradigm has resulted in preventing equal spatial redistribution of the public budgets and private investment within the city. The government of Mexico City, however, has been slowly opening democratic spaces in which citizens can improve urban projects and, possibly, mobility regulations by participating in the planning processes.

2) As a conceptual nuance, the urban planning-mobility interrelation is the acknowledgement of that both, mobility regulations and urban projects involve public space interventions and the shaping of citizens' daily life activities and conditions. This interrelation and citizens' participation in planning can help policy makers to encourage the redistribution of the public budgets and private investment (territorial equality) through people's accessibility to products, employment opportunities and services.

3) Accessibility can be achieved by intervening in people's daily mobility praxes guided, in the first instance, by mixed-use zoning of municipalities. This also entails the intersection of social (elements of mobilities theory) and technical (such as, urban entropy) aspects within the application of the accessibility concept in research for the future planning of territorial equality-based mobility regulations and urban projects of Global Cities.

4) On the other hand, a limitation of this study is the lack of availability of qualitative data that could illustrate elements of mobilities theory in a better way. In connection with that, further research in this case study should include qualitative data such as, affective experience and behaviour of transport users in order to create a more fruitful analysis when applying the theory.

5) Finally, this study attests the effects and challenges of Mexico City as a Global City wherein reaching territorial equality involves a complex transitional process of acknowledgment, merging and intersection between politics of mobility, citizens' participation, and urban planning. This understanding can be useful for studying other Mexican Global Cities, such as Guadalajara and Monterrey, as well as for other cities in the Global South.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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