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FINANCIALIZATION OF THE PHARMACEUTICAL INDUSTRY

AND ITS IMPACT ON URBAN PERIPHERIES IN THE METROPOLITAN AREA OF THE VALLEY OF MEXICO¹

FINANCIARIZACIÓN DE LA INDUSTRIA FARMACÉUTICA Y SU REPERCUSIÓN EN LAS
PERIFERIAS URBANAS EN LA ZONA METROPOLITANA DEL VALLE DE MÉXICO

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El proceso de financiarización se encuentra presente en el ramo de la salud, de manera particular, en lo que se refiere a las grandes empresas farmacéuticas. Para el caso de México, se aprecia una expansión de las farmacias con consultorio derivado de los flujos de capital, pero, además, de la ausencia de un sistema de salud público de calidad. En el presente trabajo se analiza cómo los procesos contemporáneos de financiarización de empresas farmacéuticas han permitido la expansión del esquema de farmacias con consultorio y, en cierto grado, la “sustitución” de servicios de salud gestionados por autoridades públicas en las periferias urbanas de la Zona Metropolitana del Valle de México. Con base en información de Farmacias Benavides y Farmacias Guadalajara, emitida por la Bolsa Mexicana de Valores, sobre diversos indicadores sobre salud y farmacias en México, así como mediante la aplicación de entrevistas semiestructuradas a residentes de la periferia metropolitana, se argumenta que el crecimiento exponencial de las farmacias en las últimas dos décadas está articulado a la política de expansión y construcción de vivienda social. Estos proyectos de vivienda, en gran medida debido a los débiles controles regulatorios, no desarrollan una infraestructura sanitaria adecuada tanto en términos cualitativos como cuantitativos, favoreciendo así la apertura de instrumentos financieros que ha permitido que grandes empresas farmacéuticas se expandan en las últimas décadas.

Palabras clave: farmacias, urbanización, política de la salud, condiciones de vida, planificación urbana.

The process of financialization is present in the health sector, particularly in the case of large pharmaceutical companies. In the case of Mexico, there has been an expansion of pharmacies with medical offices as a result of capital flows, but also due to the absence of a quality public health system. This paper analyzes how the contemporary processes of pharmaceutical company financialization have allowed the expansion of the medical office-based pharmacy scheme and, to a certain extent, the “substitution” of health services managed by public authorities in the urban peripheries of the Metropolitan Zone of the Valley of Mexico. Based on information from Farmacias Benavides and Farmacias Guadalajara, issued by the Mexican Stock Exchange, on several indicators on health and pharmacies in Mexico, as well as semi-structured interviews with residents of the metropolitan periphery, it is argued that the exponential growth of pharmacies in the last two decades is linked to the policy of expansion and construction of social housing. These housing projects, largely due to weak regulatory controls, do not develop an adequate health infrastructure both in qualitative and quantitative terms, thus favoring the opening of financial instruments that have allowed large pharmaceutical companies to expand in recent decades.

Keywords: pharmacies, urbanization, health policy, living conditions, urban planning

I. INTRODUCTION

Critical urban studies have been emphatic in stating that neoliberal economic policies have not just transformed the real-estate market, but their scope has extended towards diverse spaces of social life. For the case of Mexico, this situation has been included in social studies, specifically those focused on complications within health service provision (López & Jarillo, 2017; Salgado & Guerra, 2014; Rabell, 2014; López & López, 2015).

As a result, different medium and large cities in Mexico have grown in recent decades through the formal housing market. However, this expansion of the urban periphery of the Valley of Mexico Metropolitan Zone (ZMVM in Spanish), has not been accompanied by the building of urban equipment and infrastructure (Céline, 2013; Montejano, Caudillo & Cervantes, 2018; Salinas & Pardo, 2020), and, in particular, by suitable health facilities (Cárdenas, 2014). Instead, a basic health attention model of pharmacies with doctor's offices has spread, administered by large private corporations, some of them with operations throughout Latin America. These are premises that originally only sold medication, that have since attached small doctor's offices, which generally attend medical emergencies that do not require specialized referrals to medical centers.

The accelerated growth of pharmacies with doctor's offices has been possible thanks to the financialization of the economy. This process is understood as the ever more important role of financial instruments, markets, players, and institutions in the running of domestic and international economies, and their impact on different scales, both in the production of the urban space and in daily life (Epstein, 2015; Aalbers, 2019). In this context, the financialization of the pharmaceutical industry represents a process of subordination of the companies' strategies to the accumulation of financial capital, mediated by the financial markets and guided by the ideology of value for the shareholder (Orhangazi, 2008), at the expense of the universal right to healthcare.

Some works in this regard focus on analyzing the global innovation networks of pharmaceutical consortiums (Rikap, 2019) and, in particular, in the innovation and development process of pharmaceutical products linked to speculation on the capital markets (Andersson, Gleadle, Haslam & Tsitsianis, 2010; Baranes, 2017). However, beyond analyzing the innovation process, the speculation of the capital market or the players involved, this work aims at contributing to the discussion on the injection of capital for the expansion of the pharmaceutical industry which, apart from the innovation and production of pharmaceuticals, enters into health service provision.

In light of the arguments outlined, the hypothesis is put forward that financialization, driven by the opening up of trade and the circulation of capital on different scales, has brought great amounts of capital from transnational companies into the pharmaceutical industry, leading to the expansion of pharmacies with doctor's offices, whose success lays in the reduction of the State's role in public healthcare. This situation has had an impact on the structure of the urban space, closely accompanying the recent urban sprawl into the peripheries of ZMVM.

As a result, the goal of this article is to analyze how contemporary financialization processes within the pharmaceutical industry have allowed the expansion of pharmacies with doctor's offices system and, to a certain extent, the "substitution" of health services managed by public authorities in the ZMVM periphery. Thus, it is argued, that this exponential growth of the last two decades, articulated to the social housing construction and expansion policy, one which has been mainly due to the weak regulatory controls, does not develop a suitable health infrastructure, either in qualitative or quantitative terms.

II. THEORETICAL FRAMEWORK

In recent discussions on this issue, a first analytical level suggests that "financialization means an ever more important role of financial motivations, financial markets, financial players, and financial institutions in the operation of domestic and international economies" (Epstein, 2005, p. 3). This first level has a perspective that, starting from the political economy, places its attention on the dynamics of global circulation and production of value, emphasizing the operation of the securities and capital market. At a second analytical level, related to the dynamics of financialization, in terms of the unequal circulation of capital with the perspective of the production of urban space, Aalbers (2019) mentions that the existence of financialization necessarily occurs because of the particular ways in which this, on diverse scales, penetrates urban life and converts it into an asset that can be traded on the financial markets. The latter is very important to understand the financialization of the pharmaceutical industry, on one hand, starting from the financial processes that have allowed pharmacies with a doctor's office to expand and, on the other, on its repercussions on the production of the peripheries of ZMVM and, in this way, on the practices of the habitat.

The expansion of pharmacies and the structuring of a financialized market of pharmacies in Mexico, falls within the sustained reduction of state investment in social security provision (Díaz-Portillo et al., 2015; López & Aguilar,

2020). In this process, it is essential to place mediations or opportunities that leading economic entities have driven on focusing their investment in this sector in particular. In this way, the insufficient capacity of the health system and the growth of medium and large cities over recent decades, has been the context and opportunity to insert pharmacies within urban periphery spaces, where the already limited presence of public health institutions⁴ has been supplanted by pharmacies with doctor's offices, which form the only option to attend low income population sectors (Galindo y Suárez, 2018), as will be seen later on in this article.

In recent specialized literature, some authors (Klinge, Fernández & Aalbers, 2020) confirm that the pharmaceutical sector is greatly dominated by large corporations known as "Big Pharma", which have changed the profitability strategy from one with a model focused on increasing production capacity, to one focused on the production of intangible assets (reflected in patents, copyrights, and a commercial base). These actions of Big Pharma are ever more similar to those of private capital funds which, obliged to generate revenues for their shareholders, find transactions in the stock markets as one of the quickest (riskiest) resources, to maintain their market share. This point opens up a space for articulation among the large pharmaceutical companies and the transnational conglomerates dedicated to the sale – and sometimes to the manufacturing – of pharmaceuticals.

Meanwhile, Rikap (2019) analyzes the technological competence in the transnational innovation networks of Big Pharma, especially, Roche, Novartis, and Pfizer, who outsource innovation at different stages to diverse institutions, to obtain higher profits. Andersson and his colleagues (2010) analyze the pharmaceutical industry as a business model that uses different speculative capital market instruments. Meanwhile, Baranes (2017) establishes that the financialization of the pharmaceutical industry maintains a growing importance of the profits via financial channels and the accumulation of intangible assets that generate profit to serve as the basis for the capitalization.

In the same vein as the work of Baranes, this article seeks to link this injection of assets behind the capitalization, with the expansion of the pharmacies in the periphery of ZMVM. At a time where the provision of health services and the sale of pharmaceutical products is progressively losing its connection with the purpose of reproduction of life -namely health as a right-, ground is paved so that

investment funds, with holdings in different goods and services production sectors, broadens their field and scale of thinking. Thus, in an economy marked by a trend towards globalization, and, likewise, towards anchoring in fragmented urban spaces, the investment funds that have "Big Pharma" holdings, are also interested in broadening their portfolios to segments that guarantee high profitability rates. This is why they operate in global value chains where the financialized logic penetrates, in terms of a dialectic of equalization and differentiation (Smith, 2020), both in the sale of pharmaceuticals, and in the production of urban sprawl that has limited access to healthcare services.

To achieve this articulation, it was necessary that the state apparatus took on as a political goal, the imperative of reducing their role in the provision of health, urban, and housing services. Consensus on facing a slimmed-down State is achieved, both by means of the recommendations of multilateral financial entities, and by the path taken to increase the political lobbying of economic conglomerates that fight for regulatory frameworks favorable to their interests.

III. METHODOLOGY

To revise the expansion dynamics of pharmacies with doctor's offices, the National Health and Nutrition Survey (ENSANUT, in Spanish) was used first. This was developed by the National Public Health Institute (INSP, in Spanish) in 2012 and 2018 with the goal of understanding their evolution in the national public healthcare system. Second, the public information of Farmacias Benavides and Farmacias Guadalajara (Corporativo Fragua), contained in the bulletins of the Mexican Stock Market (BMV, in Spanish) was consulted with, to see the makeup of the financialization mechanisms of this sector. These two cases were chosen, as they are an essential element of the analysis of financialization processes: namely that the companies take part in the capital market via issuing and placing shares (Sanfelici, 2016). This does not mean that these are the only pharmacies to have entered this business model, as Farmacias Similares, part of Grupo Por un País Mejor, even though it is not listed on the BMV exchange is, according to information from America-Retail, the company with the highest number of pharmacies with doctor's offices in the country. Finally, interviews were made to inhabitants from the housing complexes of Santa

⁴ According to the Health Secretariat, the number of physicians per 1,000 inhabitants in Zumpango and Huehuetoca is 1.2 and 1.0 respectively, below that of the State of Mexico (2.1) and the Republic (2.4), and all-in-all, below the average indicated by the OECD (3.5). With regard to the availability of beds per 1,000 inhabitants, the figures for the State of Mexico (1.0) are also below the federal average (1.4), and that stated by OECD (4.7).

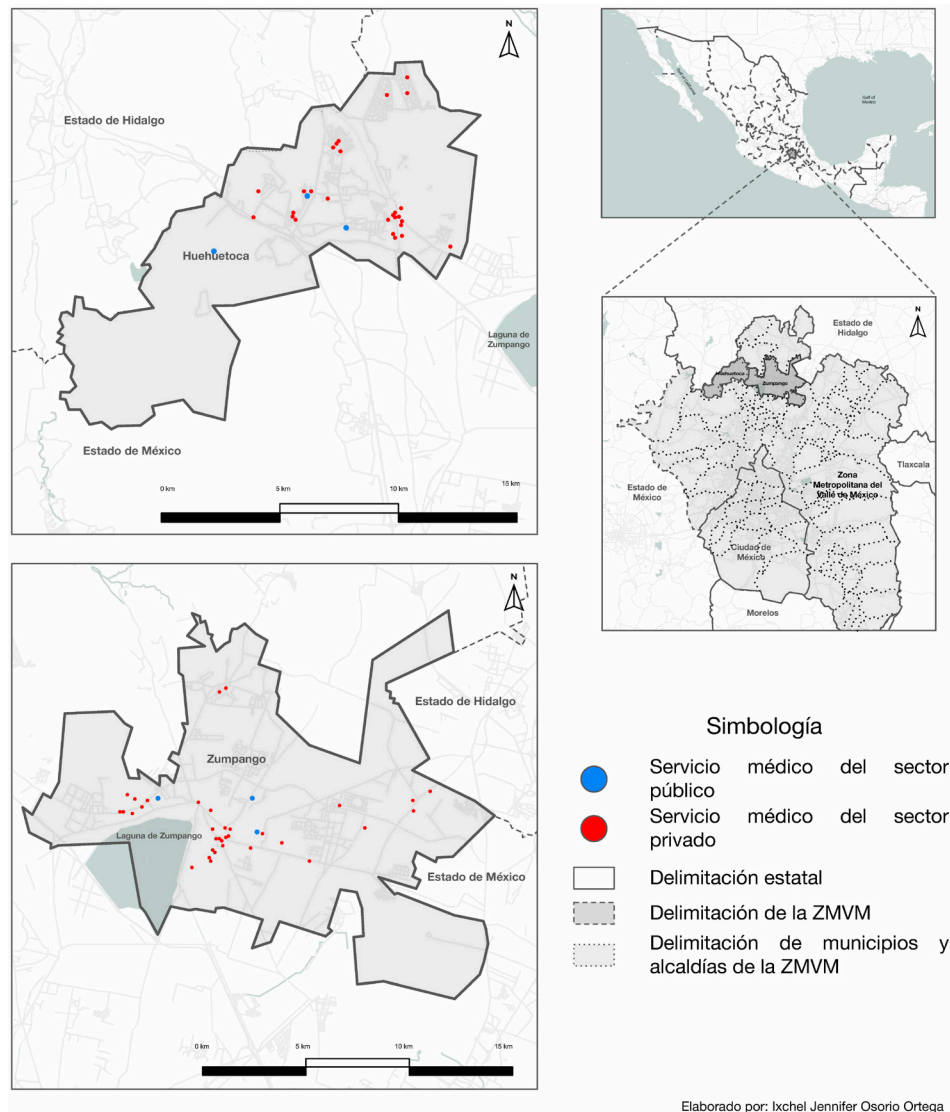


Figure 1. Distribution of public and private health services in the municipalities of Huehuetoca and Zumpango. Source: Prepared by Ixchel Jennifer Osorio Ortega with information from the National Economic Units Statistical Directory (DENUE, in Spanish), developed by the National Institute of Statistics and Geography (INEGI, 2021)

Teresa in Huehuetoca and Paseos de San Juan in Zumpango, both in the ZMVM periphery (Figure 1), as an example of places where inhabitants consider pharmacies with doctor's offices are their only close option.

IV. RESULTS

According to the Federal Commission for the Protection against Health Risks (COFEPRIS, in Spanish) for 2015, out of

the 28,000 pharmacies registered in the country, 13,000 (46%) operate under the pharmacies with doctor's office model, and from these, around 65% are in the ZMVM (COFEPRIS, 2015). Even though the pharmacies with doctor's offices do not offer specialized services, they become a quick resource to handle uncertainty, and because of this according to De Alba (2020), the vulnerability conditions of the patients are reproduced, since the goal of the pharmacies with doctor's offices is increasing the number of medical prescriptions that are sold in those facilities.

Information	Company			
	Farmacias Guadalajara		Farmacias Benavides	
Year of Foundation	1943		1971	
City of Origin	Guadalajara, Jalisco		Monterrey, Nuevo León	
Year of First Listing (BMV)	1997		1993	
Expansion	Year	Branches	Year	Branches
	1997	73	1993	371
	2005	416	2005	529
	2012	1000	2014	1023
	2019*	2043	2019*	1174

Table 1. General information about pharmacies Source: Preparation by the Authors with information from the Mexican Stock Exchange (Martínez, 2019).

The deregulation scenario of the health sector and the privatization dynamics have allowed companies, listed on the Mexican Stock Exchange, to expand, changing from solely being sellers of pharmaceuticals to ones partaking in the manufacturing-distribution business, and the provision of basic medical attention services (pharmacies with doctor's offices), as is the case of Farmacias Guadalajara and Farmacias Benavides. As a result of their listing on the Mexican Stock Exchange (BMV), and subsequent placing of 20% of their capital, Farmacias Guadalajara opened 343 new Super-pharmacies, rising from 73 in October 1997 to 416 in 2005, from being present in 19 cities to being in 110, which covered the 17 States of the Mexican Republic⁵. Meanwhile, Farmacias Benavides, which upon listing on the BMV with 24% of its capital, entered the pharmacy with doctor's offices segment in 2012 and ended that year with 772 pharmacies in operation, before reaching 1045 in 2015. In five years, they saw a significant expansion of 26%⁶. It is important to note that, as a result of an internationalization process in 2014, the latter's shareholding was transferred to the transnational Walgreens Alliance Boots (listed on the Dow Jones Index on the New York Stock Exchange since 2018), owner of pharmaceutical laboratories, and operator of 21,000 pharmacies around the world.

The financialization process that pharmacies with doctor's offices have followed, like that of Farmacias Guadalajara, Farmacias Benavides, Farmacias YZA, Farmacon, Farmacias Modernas (the last three owned by Grupo Fomento Económico Mexicano

S.A.B. de C.V., known as Grupo Femsá, the main bottling plant of Coca-Cola in Latin America) and Farmacias Similares S.A. de C.V. (that, although not on the Stock Exchange, controlled 10.9% of pharmaceutical sales by 2019), has allowed them to spread in recent decades, taking advantage of urban expansion with insufficient public sector health facilities, and managing to convert this primary health attention model into an alternative for an important part of the population.

In 2010, the Agreement that provided the guidelines for the sale and dispensing of antibiotics came into force (Official Gazette of the Federation, 2010)⁷, and according to COFEPRIS data (2015), in the 2010-2015 period, an increase of 340% was seen in the number of pharmacies with doctor's offices, rising from 4,370 in 2010 to 15,000 in 2014. This increase is recorded in the ENSANUT, which indicates that: in 2006, the private sector attended 37.6% of all outpatient curative services (doctor's offices), while the public sector covered 61.4%. By 2012, two years after the Agreement came into force, the private sector had increased its share by 1.3%, reaching 38.9% versus 61.1% of the public sector. That year, ENSANUT provides broken down data of attention in private doctor's offices and indicates that, from all attending offices, 58.5% are independent doctor's offices and 41.5% pharmacies with doctor's offices.

In the same way, ENSANUT shows an increase from 38.9% in 2012 to 43.2% in 2018 in the number of people attended in private doctor's offices. However, in the broken down data from

⁵ Information obtained from the website of the Mexican Stock Exchange.

⁶ Information obtained from the website of the Mexican Stock Exchange.

⁷ Legal instrument that benefitted the growth of the pharmacies with doctor's offices, as in the framework of the health measures adopted in Mexico to face the AH1N1 pandemic in 2010, the sale of antibiotics without medical prescription was banned, which activated the generalized installation of doctor's offices, not just attached to pharmacies, but also managed by them (Osorio, 2019).

2018, a reduction of consultations in pharmacies with doctor's offices is seen compared to those in independent doctor's offices, falling from 41.5% to 39.5%. This 2% reduction can be attributed to ENSANUT's sample model, as the reports of the companies running pharmacies with doctor's offices, show a sustained increase in the number of business units that came into operation between 2012-2018.

Now, considering this, there is an indicator contained in the ENSANUT that supports the increased participation of the pharmacies with doctor's offices. This is the percentage of prescriptions issued there. In 2012, pharmacies with doctor's offices reported 74.6% compared to a range of between 60-67% in public services, while in 2018, pharmacies with doctor's offices reported 81% of the prescriptions given for a range between 53-77% in public services. As can be seen, the pharmacies gained around 6% in prescriptions, leading to a corresponding increase in the total sales percentage, and although in the public case some services prescribed up to 77%, the lower limit fell considerably (6%), which demonstrates a deterioration in the provision of this service.

This expansion of the pharmacies with doctor's office segment is seen, not just in the increase of their market share, but also in the behavior of the shares of Farmacias Guadalajara and Benavides in the BMV. According to the former's annual reports, Farmacias Guadalajara has seen a 34.3% rise in their share price, from US\$8.85 in 2011 to US\$13.48 in 2021. This is why, in the 2018-2019 period, there has been a rise of around 2% in the number of branches, from 1,875 to 2,043. The performance of Farmacias Benavides, although it has remained constant compared to Farmacias Guadalajara (US\$0.63 per share in 2011, and US\$0.65 in 2021), it is noteworthy that it has not seen major falls over these 10 years. The number of branches in the latter did drop from 1,203 in 2018 to 1,174 in 2019, although the sales volume in this period increased by 2.7%. This was the result, on one hand, of a strong sales cost reduction program (Martínez, 2019), and on the other, by a greater integration to the global pharmaceutical manufacturing and distribution chains of the headquarters (Walgreens Alliance Boots).

V. DISCUSSION

The exponential growth of pharmacies -with or without doctor's office-, that accompanies city expansion, is closely tied to the diversification of major domestic and international capital portfolios that have targeted the health system as an opportunity for appreciation through the financialization process. In this way, the colonization process by finance of the different dimensions of social life

is seen both in the structuring of financial instruments, and in the issuing and placement of shares on the Mexican Stock Exchange by companies dedicated to the sale and manufacturing of pharmaceutical products.

In this way, and inasmuch as the financialization represents a deeply spatial phenomenon (French, Leyshon & Wainwright, 2011), the expansion of pharmaceutical companies' actions, can be seen in the framework of the search by financialized spatial-temporal solutions for the trends of the capitalism crisis. Alongside this, the scales and/or players like the State, the company-corporation, and the effects in daily life, stand out. However, in the relationships among said players, the production of space is the transversal axis of articulation.

State policies have built close ties between the growth of pharmacies with doctor's offices in spaces with recent urban expansion, starting from cheap dwellings with an absence of infrastructure, amenities and basic services. In Mexico, just like in different countries across Latin America, a housing production service based on granting subsidies to cover demand was installed, where the mass-scale production of cheap dwellings in urban peripheries and the fostering of private property has been privileged, a process that has generated serious social, economic, and spatial consequences (Graizbord & Acuña, 2007; Isunza, 2010a; Isunza, 2010b; Monkkonen, 2012; Monroy, 2015; Salinas, 2016).

The clear failures in federal government healthcare, have led state and local authorities to publicly argue that pharmacies with doctor's offices are a suitable mechanism to cover health demands. Under this scenario, the companies running the pharmacies with doctor's offices, owned by investment funds with interests in across Latin America, become an essential link in the chain of the neoliberal policies of healthcare commercialization.

In the municipalities where the interviews were held (Huehuetoca and Zumpango), there tend to be poor opinions about the State healthcare service: it is precisely there where the pharmacies gain sense. For example, on being asked about the medical services in her municipality, a woman living in a housing complex says:

They are also deficient, we have nothing but pharmacies with a doctor, but these are not enough. Here people have died because they don't get seen by the doctor on time, because they can't be taken elsewhere, or because they can't get there quickly enough. They call an ambulance and it is very hard for them to get here, so yes, we have seen deaths. (Woman – 50 years old. Resident in the housing complex, Zumpango, State of Mexico).

The absence of quality medical services nearby can be seen. Location is also a factor that plays a key role. The income factor is also greatly in play in the healthcare decision:

Just imagine, if you go to be seen in Cuautitlán (a town 10 km away), (...) go figure, if you have an emergency, where do you go? And if you have one? And if you don't? Now, for example, with a pregnant lady, who do you run to? Where do they go? Do you have the money to pay 9-10 thousand pesos to give birth, and is there a father, and if there isn't? I mean, if you get sick, there's no ER here, do you look for a doctor? There are none, not even private ones. (Woman – 42 years old, resident in the housing complex in Huehuetoca, State of Mexico).

In this way, Big Pharma investment, based on State policies that have encouraged the growth of pharmacies and the expansion of the periphery via cheap housing, has filled the space left by the State with its absence from the health sector. This is linked to localization, transportation and low income conditions, weaving a context of social precarity that is auspicious for the expansion of pharmacies with doctor's offices in the metropolitan periphery.

These elements are key for the discussion about the repercussions in urban peripheries of the financialization of the pharmaceutical industry, an issue which is actually one of the contributions of this article. Just as was reviewed in the theory section, the different projects refer to aspects like technological competence and the development of capital market financial instruments -to mention a few-, from where they derive their monopoly position. However, the empirical work allowed seeing, beyond these considerations, the role of capital accumulation, articulated with Big Pharma, in the expansion of pharmacies with doctor's offices, in a Latin American context marked by a deficient health coverage as a result of the expansion of neoliberal policies.

VI. CONCLUSIONS

The financialization process has gained importance in recent times in urban studies, particularly those addressing the issue of housing. Now, this process has been linked to diverse economic sectors, including health services, in a context where commercialization plays a key role in the definition of a basic service as a logic of the reproduction of capital.

The financialization of the pharmaceutical industry has permitted the expansion of the pharmacy with doctor's office system. In fact, through the historic revision on the situation of Farmacias Guadalajara and Benavides, it has been possible to demonstrate that their listing on the Mexican Stock Market gave them a greater injection of capital, allowing them to open more

branches. At the same time, this expansion led to them entering health services in a context of a deficient healthcare coverage by the public sector (Mejía, 2021).

Combined with this, the exponential growth seen in the last two decades, related to the social housing construction and expansion policy which, in a great extent is, the result of weak regulatory controls, does not develop a suitable health infrastructure either in qualitative or quantitative terms, which is why pharmacies with doctor's offices have positioned themselves as the option turned to most by low income population sectors. Likewise, the importance of the regional conditions stands out, which as "effects of place" (Bourdieu, 1999), operate as structural conditioning factors in the spread of pharmacies.

The theory and empirical discussion generated in recent years regarding financialization of the pharmaceutical industry (Big Pharma), fundamentally refers to capital accumulation mechanisms and their impact on developing countries. In addition, different works discuss the accumulation of intangible assets -patents and copyrights- and technological competence in transnational innovation networks, as a business model that uses speculative instruments in the capital markets. Meanwhile, the contribution of the work is given by the exploration of connections, often ignored in these works, within the expansion of pharmacies, promoted by the financing structure of pharmaceutical production and circulation, and the provision of low complexity health services – pharmacies with doctor's offices model -, which show, as has been discussed, that the transnational pharmaceutical industry does not just seek pharmaceutical production but rather progressively entering basic health systems, taking advantage of the reduction and, in some cases, absence of public health systems.

Finally, it is important to mention how, starting from the mobility of capital in the financialization process, it is Big Pharma who are taking a role in the different cities around the world, obtaining profits from dominating pharmaceutical distribution, as well as from the health services. This has been proved by two of the most important pharmacies in Mexico, Farmacias Benavides and Farmacias Guadalajara.

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