

Concentration of Income in the Service Sharing Economy: Service Platform Cases in Mexico

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Abstract: The objective of this paper is to propose an economic approach to analyse the concentration of income through platform firms, the marketplace linking users (customer/client) and providers within production through app developers and devices owners.

It is important to identify the actors that put the assets into play by looking mainly at: 1) at transaction costs, 2) the externalities (network effects), and 3) the effects on the concentration-distribution of incomes.

A selection of 19-service platform firms in Mexico in transportation and crowdfunding are analysed considering their fees, market share and income. The study revealed that these variables allow them to earn large profits when an oligopoly is developed. Then the question of counterbalances through competition arises, but the main concern is about the need (or not) for regulation during this phase of SES production.

Key words: platform firms; concentration of income; uberization; sharing economy; Mexico

JEL codes: L2, L5, L8

1. Introduction

Platform firms providing online services enable people to share underused assets such as cars, accommodation, bicycles, household appliances and other items with others willing to pay to use them. The result is known as “collaborative consumption”, the “collaborative economy”, and “peer economy”, “access economy or sharing economy (Economist, 2013).

This new way of producing services through the platform represents a fundamental shift in organizational market structures made possible by advances in information and communications technology (ICT).

Sharing economy systems work by exploiting slack hidden capacity in privately owned assets, changing the way of management in three main aspects 1) orchestration of assets and resources, 2) external interaction and 3) focusing on the ecosystem value (Table 1).

A controversial aspect of the literature is about the conditions for constructing the “uberization” model. One view is that uberization could occur everywhere and another that the conditions are difficult to reproduce. These are high and regulated prices; monopolistic markets; huge numbers of daily users; and lack of viable alternatives (Table 2).

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Table 1 Technology Management in Platform Firms

	From	To
1	resource control (equipment, real estate and intangible assets like intellectual property)	orchestration of assets and resources coming from the community (rooms, cars, ideas and information), that is the network of producers and consumers is the main asset.
2	internal production: traditional firms organize their labor and resources to create value from materials sourcing to sales and service.	external interaction platform firms create value by facilitating interactions between external producers and consumers.
3	a focus on customer value on individual customers of products and services-	a focus on ecosystem value . the PF dealing with the total value of an expanding ecosystem in a circular, iterative, feedback-driven process.

Based on Van Alstyne, Parker, & Choudary, 2016.

Table 2 Uberization Everywhere or in Few Service Sectors

Everywhere	Few sectors
<ol style="list-style-type: none"> 1. Housing, renting or purchasing a property. 2. Automotive Re-Selling, buying a used 3. Mobile Wireless, could come into a P2P service. 4. Financial Services, can use a P2P marketplace. 5. Personalized Tasks, some people have a second income performing freelancing services. <p>“SMBs” can hire with great flexibility and “on demand” through digital marketplaces. Services like “Contently” for writing, “Rev” for transcription, and “SuperTasker” for editing are examples of such P2P marketplaces.</p>	<p>high and regulated prices; monopolistic markets; huge numbers of daily users; lack of viable alternatives.</p>
Source: Thrasyvoulou, 2015	Source: Tullman, 2016

2. Methodology

An analysis of the capital flow in the Service Platform Firms shows that the following components and agents are put into play:

1) The internet operators, 2) The Platform infrastructure which controls the service, 3) The providers of the service through the App, 4) The producers and consumers who enter into a relationship organized by the Platform, 5) The production inputs, and 6) Other ancillary Apps (GPS, Electronic payment, etc.) (Figure 1).

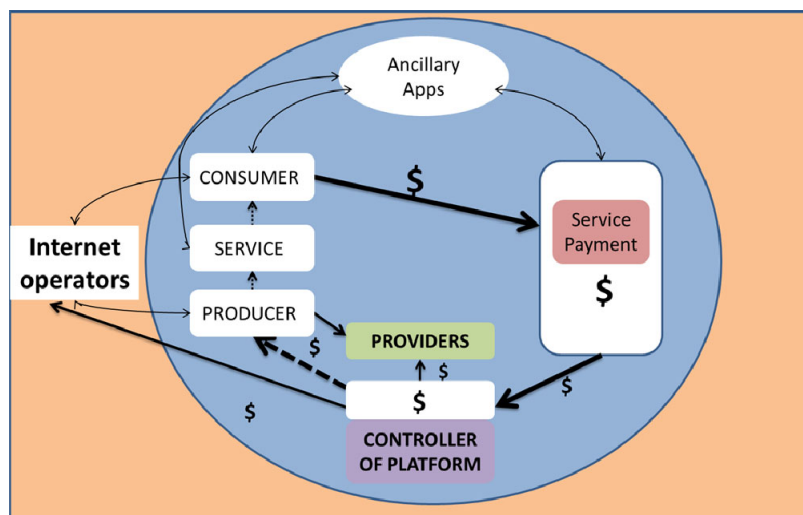


Figure 1 Service Platform Firms. Ecosystems of Value and Resources Flows

Source: Author elaboration based on Van Alstyne, Parker, & Choudary, 2016

It is argued (hypothesis) that the consolidated platform firms evolve from 1) from an initial phase with a relative satisfactory distribution of benefits between participants, 2) to a second phase achieving a critical mass, and 3) due to the network effect become an oligopoly.

The network effect is “the driving force behind the internet economy”. It corresponds to the demand-side economies of scale. Therefore, those firms that attract more platform participants — clients as asset owners and operators can offer better service quality, thus having an offer-side economies of scale and scope, and this attracts more participants, so generating a virtuous circle which ends in monopolies (Van Alstyne, Parker, & Choudary, 2016, p. 57).

However this is not always the case as in the initial phase, entrepreneurs have to deal with “the tension between giving away information — to let people know what they have to offer — and charging for it to recover their costs” (Shapiro & Varian, Information Rules, 1999). Though as the firm reached a flow of consumers (the demand of the clients), it begins a second phase of net income for the PF. At the end, a third oligopoly phase could occur if the PF reached more than 50% of the market, so it has the power to charge not only marginal costs but large fixed fees, which allows it to accelerate the accumulation of income.

To look at this evolution, 19 PF in Mexico providing Taxi and financing industry services are identified according to their stage of development, the market share and their participation in total income (Tables 3 and 4).

The Gini coefficient is used In order to estimate first, the market distribution and second, the income concentration within platform firms. The template provides you with various style elements to present your thoughts in a structured way, such as headings, lists, etc. (Table 1: List of pre-defined styles). A normal paragraph of text always has the style “Paragraph”.

3. Results

The responses to interviews carried out with 19 Platform Firms, PF, 5 in personnel transportation and the others, 14, in the crowdfunding industry. For transportation the main agents are the cabs and the taxi clients that are interconnected by the Platform Firm. In the case of crowdfunding there are people, projects or firms which are needing financing resources and on the other hand investors.

The attributes used to test the PF are: 1) Kind of Business model, 2) The assets, 3) Transaction costs 4) Service Quality 5) The internal regulation, 6) The Market context, Labor porosity, and 7) the distribution of income and external regulation.

3.1 Business Model

In the Transportation industries there are 5 PF on the same Business model charging different fees (Table 4).

While in the crowdfunding industry there are also different business models: Financing on charging interests, Equity, Reward and Donation. Most of the PF support entrepreneurship (PF 2, 4, 6, 10, 11, 12, 13 14). There are general Platform firms (PF 1, 7); oriented to real estate projects (PF 5,8); one financing based on factoring (PF 9); and one teaching crowdfunding (PF 3) (Tables 5).

Therefore the model allows for a large distribution of benefits which are discovered and put it into play through a web application, with the objective to be used in a large scale. The capital is obtained from “idle social capacity”, as it is based on non-used assets, or by investing in buying a car on credit. This means that the assets are put in as capital by the owners (car-Ubers, funds). The social impact is important for SME as it is opening a new way for funding projects (initial phase, see hypothesis). So fund raising for non-profit projects is now

growing as an alternative to start-ups and entrepreneurs around the world who found it difficult to raise venture capital from financial institutions (BID Fondo Multilateral de Inversiones, 2013).

The TCs are decreasing with the use of the platform for the producer and for the client. But when the demand for services is going up, the platform uses dynamic prices which are charged to the client, thus shifting the extra money to the producer and the platform. As the drivers have no information of the trip prior to the service, they have no opportunity to look for other more profitable trips.

Table 3 Transportation and Crowdfunding: Attributes of the Platform Firms

	Transportation: Platform Firms			Crowdfunding: Platform Firms		
	Producers	Clients	PF= Taxi	Investors	Clients	PF
• Business model		demand for transportation by individuals	Platform + complementors		Projects, firms, social groups,	Platform + complementors
• Assets	The owners of the cars put the capital assets			Many investors put the capital	Management of capital and resources to develop a product	Crowdfunding: charging a commission; or with 2 banking sides paying interest x to investors and charging interest Y to lending to clients.
• Transaction cost, TC	driver have no information of the trip prior to the service : The risk for capital is distributed amongst many investors	better in time		The risk of capital is distributed into many capitals	Less cost of raising capital	Equity: Reward: Donation
switching costs and lock-in	low	low		low	low	
• Quality	better cars	Better, Cheaper		small investments per investor.	alternative niche funding	
• Internal Regulation			Governance is done mainly by PF: network externalities			Depending on the PF niche : network externalities
CONTEXT						
Market:	Large Cities		Critical Mass	Alternative financing and diversity of niche funding		variety of niches
• Labor Porosity	Offer increased by			capital porosity: A lot of diversified investors	Niche funding demands	
• Distribution	Distribution of Income change with phase.		Monopoly behavior	Distribution of Risk change with phase.		Competitive behavior
• External Regulation	Underpaid (depreciation), transferred to client and PF		Counterbalance of Oligopoly	Crowdfunding is affected by the external regulation		Protectionism against alternative funding

Source: Author elaboration

Table 4 Transportation Platform Firms in Mexico, 2016

Firm	Business model	Assests	Total Income	Fees and charges	Stage of the platform *	Number of registre d cars
Uber	Uber is a location-based app that provides hiring an on-demand private driver.	Assets are the private cars register in the platform. The risks are diminished trough some rules to be register either as a driver or as a pasanger	195580648	25% of the cost of the ride.	3	39000
Cabify	Private transport service operated on a platform	The capital is provided by private car drivers who takes charge of operating and depretiation costs.	64190571.8	20% of the cost ride	2	16000
Avant (Mexican Uber)	Private transport model, connects drivers and passengers.	The capital is provided by private car drivers who takes charge of operating and depretiation costs	511578.947	10% of the cost ride	1	900
Easy Taxi	Private transport model, connects drivers and passengers.	The capital is provided by private car drivers who assume operating and depreciation costs.	30283455.2	15% credit card ; 20% cash	2	10065
Yaxi	Private transport model, connects drivers and passengers.	The capital is povidrer by the private driver cars who takes charge of operating and depretiation costs	27229235.4	15% credit card ; 20% cash	1	12340
Total			317795490			78305

Source: Author's elaboration

3.1.1 Transaction Cost, TC

An advantage of crowdfunding is the low level of risk in capital outlay as it is distributed between many investors, thus making it less costly to raise capital.

“The suppliers of products and services via sharing platforms often do not have to comply with many laws as their traditional competitors have to. That enables individual suppliers to avoid potentially significant costs for

compliance and to offer their supplies at lower prices.” (Vitković, August 3, 2016)

3.1.2 Quality

The platform rules for the service producer allow for better quality of the physical conditions of the cars. The means of payment for the service, which is charged to a card, is easy and better for the client but not for the drivers as they only get their share of the income at the end of the week.

The service product is provided in a competitive way using specialized data and information from the customers and producers to increase quality and to lower prices.

For the crowdfunding PF, the quality is a function of the investment firms’ selection of projects and the choice and involvement of the investors made by the platform algorithm as well as the stage evolution of the firm. The above scheme is applied to the analysis of selected 19 Platform Firms, PF cases pertaining to transportation (5) and crowdfunding (14). Of the transport companies 1 is an oligopoly, 2 are consolidated and 2 a new entrants. Meanwhile, half of the crowdfunding firms are in the initial phase which means a lower degree of maturity compared with the transporting firms operating in Mexico.

3.1.3 Labor and Capital Porosity

In Mexico’s large cities there are many economically active people without a full time job (porosity of labor time). Thus, there are people that can work in a PF with flexible timetables and they have the required skills (particularly for Uber): drivers with their own car or without one such as students, retired workers, part-time workers, or the unemployed.

Also, it is possible to find partial resources on a small scale (porosity of capital) that can be raised by the Crowdfunding Firms. This phenomenon has developed worldwide in recent years, responding primarily to 1) (Formal) Financial market instability due to the financial crisis since 2008. 2) Innovation related with the new use of internet; and 3) lack of specific regulation in these forms of economic activity (Observatorio Economía Digital, 2014).

3.2 Regulation

3.2.1 Internal/Regulation

In transport, the PFs compete with the existing conventional taxi services which are quite highly regulated and require a taxi permit which are difficult to obtain and demand fulfilling a number of formalities. Thus, the PF have imposed a governance with rules for the registration of drivers and private cars that, with lower transaction costs, offer transportation services to registered customers. “Instead of adhering to a precise and rigorous code that spells out the rights of customers and the obligations of service providers ... platform operators rely on the widely distributed knowledge of participants in a service, hoping that the market will eventually punish those who misbehave” (Morozov, June 2015). The lower levels of regulation of Platform operation is favorable to achieving a “network effect”, that is higher sales, and consequently lowering the average cost of doing business, allowing them to increase quality which permits more price cuts — a virtuous feedback loop that produces oligopolies. This positive impact is in the third phase (see hypothesis) so after the PF reached a “critical mass”, the network effects of operating a service that becomes more valuable as more people join it. The PF is disrupting many economic activities with technology “to circumvent unnecessary bureaucracy and legislation” (Glance, 2015).

Dealing with crowd-funding, “Mexico will soon enact an updated securities regulatory regime to embrace internet finance” (Crowdfundinsider, 2016).

3.2.2 External/Regulation

There is still no clear way to regulate the PF in order to orient the competition between the traditional

incumbent firms with the PF. The external regulation comes “instead of adhering to a precise and rigorous code that spells out the rights of customers and the obligations of service providers ... platform operators rely on the widely distributed knowledge of participants in a service, hoping that the market will eventually punish those who misbehave” (Morozov, June 2015).

Two criteria are considered: 1) The stage of the evolution of the industry and the relative participation in the market of both the incumbent firms and the PF. 2) The nature of the industry market.

Those two aspects explain how much distribution of income and social benefits take place versus concentration of income due to the oligopoly behavior of profits which are mainly accumulated by the platform controller firm (based on the economic network effect).

The transportation firms show a Gini index concentration of 39% in relation to income. This is part of the concentration of the Market (27%) and the income per car (22%) (Figure 2).

The platform crowdfunding firms are complementary niche type charging different costs, from 1% up to 18% (Table 5). However, in the crowdfunding there is a 30% of concentration of income of the PF (Income multiply by the commission fees) (Figure 3).

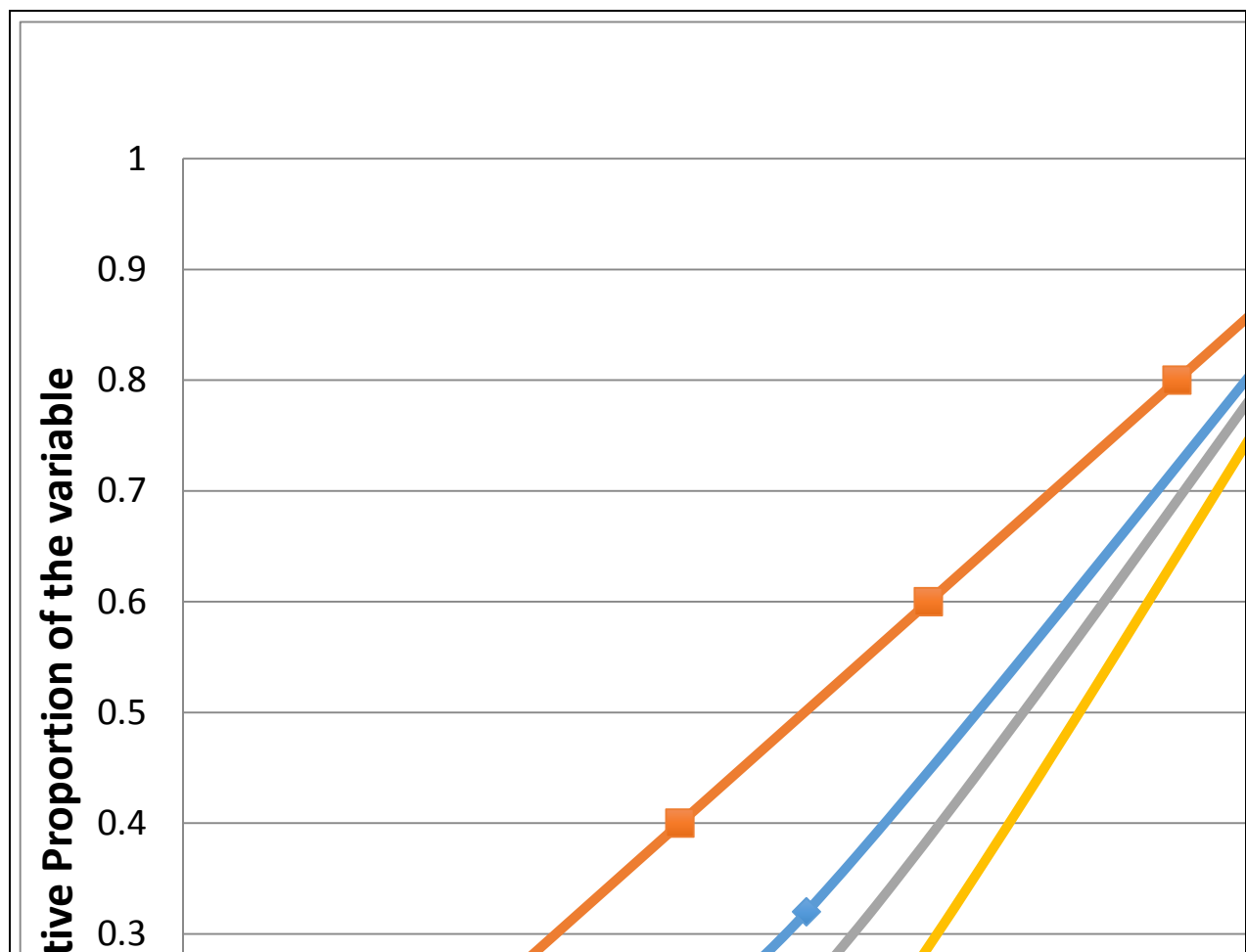


Figure 2 Transportation: Concentration of Income of PFs

Source: Author elaboration based on Table 4

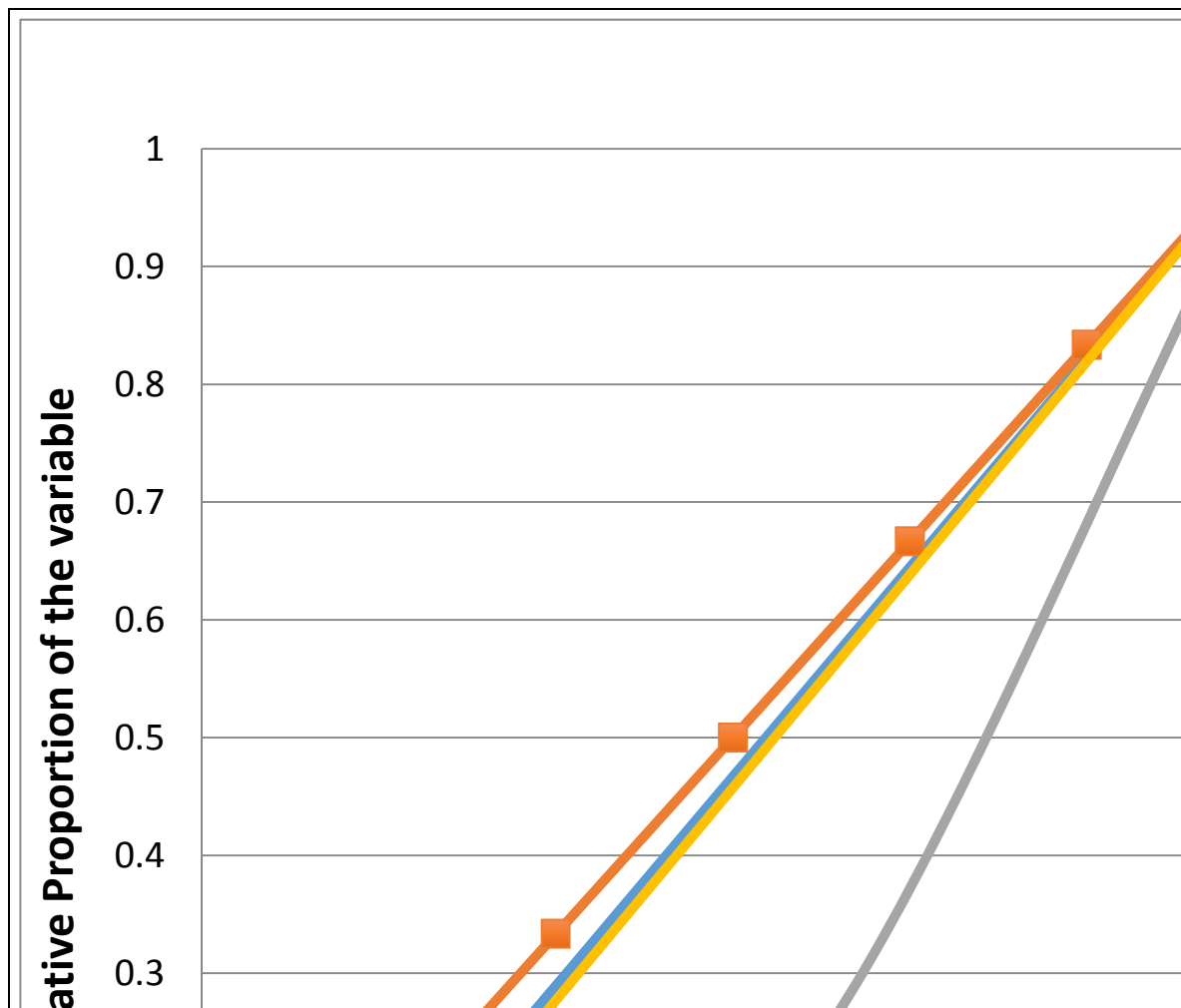


Figure 3 Crowdfunding: Concentration of Income of PF

Note: The Gini coefficients for Financial Volume, Market share campaigns and PF Income is base on Table 5c.

Source: Author elaboration

“It is overall argued that the sharing economy changes the way of doing business for good, providing an alternative to the traditional markets and a better utilization of unused assets, what calls for an effective and carefully tailored regulatory framework.” (Vitković, August 3, 2016). However the regulation is depending on the nature of industry, as this paper show.

3.3 Discussion

The sharing economy is conceptualized as exploiting slack capacity in privately owned assets. This masks hidden business outside the current regulatory framework, which becomes an additional source of revenue for the PFs based on the network effect. Therefore, there is a technology source, which become an additional gap between companies as drivers of income inequality (Bloom, 2017). In this context and in view of the growing participation of PFs in certain consumer industries it is pertinent to study the PFs as income concentrators mainly in the oligopoly phase.

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Table 5a Mexico Crowdfunding Platform Firms, 2016

Crowd-funding firm	Firm	Business model	The platform intermediation (algorithm, system, technology)	Who contributes the capital and takes the	Fees and charges % of capital	Stage of the platform
1	Kubo Financiero	Crowdfunding and peer to peer (P2P) Lending	The firm's platform connects people who need a loan with people looking for investment opportunities. The platform ordered the investments projects according to risk/profitability, so that the investor can make a diversify portfolio, and the entrepreneur to obtain financing	Investor: The risk is shared between the investor and the firm.	6.50%	2
2	Fondeadora (Fusioned with Kickstarter)	Crowdfunding for community social entrepreneurs projects through business simulators, mentors	Methodology that evaluates and organizes the creative projects according to their feasibility with a deadline and an investor rewards system	Investor: Capital risk is low as the decision to invest is informed. The reward for the amount invested is known in advance	2.45%	3
3	Mi Cochinito	Teaching crowdfunding providing mentoring sensitization, campaigns to social entrepreneurs with their	Integration of social initiatives with interested entrepreneurs in the field, validation of the social impact of the project and promotion in social networks	Investor: Capital risk is low as the decision to invest is informed. The reward for the amount invested is known in advance	8.50%	1
4	Play Business	Financing for entrepreneurs	Platform linking investors with entrepreneurs with a project, how much money he needs, the percentage he is willing to pay and the time it will take to develop it. The investors make the first payment (deposit)			3
5	Briq Fund	Briq is an intermediary in the financing of real estate projects.	By means of algorithms the platform calculates the yields. Investors can monitor the progress of each project of the portfolio which are selected and analyzed by an investment committee.	Investors and real estate developers		1
6	Pitch Bull Funding	An auction is organized for funders, bringing together SMEs and Entrepreneurs who need financing for expansion projects.	It is a platform linking financial people (persons or financial firms) and credit applicants for expansion projects (SMEs and Entrepreneurs). A risk analysis is done. An auction is presented to the funders, those with the lowest rate is the one chosen by the system.	Investors and real estate developers	1%	1
7	Prestadero, community as aurum	Loans and credit through a platform	The platform analyzes the applications of the people who need credit, later this information is presented to the investors who decide whether to grant the credit or not. A loan can be financed by several investors. The allocation of interest rates to lenders depends on the level of default risk and the term for which it is requested.	Personal loans with rates from 8.90% per annum	The investor is charged 1% for each payment received	1
8	Expansive	Demand investments and loans to be offer to projects of real estate sector	It allows the collective funding of investors and real estate developers. The projects are registered on the platform. A financial, legal, technical and market evaluation is carried out. If the requirements are meet the investors can find in the platform information about the developer and the characteristic as of the project.	Investors and real estate developers payment to investor is made once the sale of real estate development is completed.	18% yield	1
9	FINV	Factoring, the investors can select the purchase of invoices to SMEs issued by companies qualified as AA	It is a platform that allows the purchase of SMEs invoices from AAA companies. The platform registers SMEs and raises the invoices that need to be financed. Investors decide which bills to fund. Risk analysis is performed using algorithms.	Investors	% commission for transaction	2

Source : Author's elaboration.

Table 5b Mexico Crowdfunding PFs, 2013

Num.	Platform Firm	Launching in Mexico	Clients Lending	Successful campaigns funded	Platform fees	Target market	Stage of the platform	Origin	Total financial volume (USD)	Platform Income
10	Fondeadora.mx	June 2011	Reward	121	6.50%	Entrepreneurship/Artists	1	Mexico	\$800,000.00	\$52,000.00
11	Crowdfunder.mx	November 2011	Equity	805	5.00%	Entrepreneurship	3	Mexico/EE.UU.	\$4,100,000.00	\$205,000.00
12	Idea.me	February 2011	Reward	57	10.00%	Entrepreneurship/Non-profit	1	Argentina	\$300,000.00	\$30,000.00
13	Kiva.org	October 2006	Crowdlending	22,000	0.00%	Entrepreneurship	3	EE. UU.	\$10,500,000.00	\$ -
14	Prestadero.com	June 2012	Crowdlending	204	4.00%	Entrepreneurship	2	Mexico	\$840,000.00	\$33,600.00
1	Kubo Financiero	November 2012	Crowdlending	640	4.31%	Entrepreneurship	2	Mexico	\$1,100,000.00	\$ 47,410.00
Total				23827					\$17,640,000.00	\$17,640,000.00

Source: Elaboration based on data from (BID Fondo Multilateral de Inversiones, 2013).

4. Conclusions

The generation of Platform firms related to the sharing economy shows that there is a direct initiation related with increasing the use of hitherto unused assets. There is a second phase in which the PF can assure its survival based on reaching a critical mass for the services demanded.

From there on, what began as a sharing economy turns in a third phase into a real business as is the case of transportation Platform Firms. Then there is a positive network effect, as the number of service producers (cars-drivers) is growing along with the demand from clients. Therefore, the PF (Uber) as the internal controller behaves as an oligopoly in the way it accumulates income. It shows a 39% Gini coefficient of concentration calculated for the PFs selected (Figure 2). However, this is also a result of PFs' rules aimed at providing better quality services at a lower cost to clients compared with the traditional taxi services. Both these gaps mainly originate in the additional taxes and permissions costs that the traditional services have to assume.

The case of crowdfunding shows that it is continuing within the sharing economy, based on the funds from people and attending niches not well served by the incumbent funding firms.

The question of regulation is important both for the platform firms which reduce oligopoly behavior as well as for incumbent firms in order to get a better quality and less fees of their services.

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