PAWNSHOPS: ARE THEY REALLY A SOLUTION FOR THE VULNERABLE POPULATION?

Arturo GARCÍA SANTILLÁN
UCC Business School
Universidad Cristóbal Colón
arturogarciasantillan@yahoo.com.mx
Jesica J. RAMOS HERNÁNDEZ
UCC Business School
Universidad Cristóbal Colón
jes.jrh@gmail.com
Sara HERNÁNDEZ-GONZÁLEZ
UCC Business School
Universidad Cristóbal Colón
mind_drkfvr@live.com.mx
Patricia RIVERA-SANTIAGO
UCC Business School
Universidad Cristóbal Colón
patriciarivera_s@hotmail.com

Abstract
Credit plays a significant role in the country's economy, as much as the financial system, but what happens when a large part of the population has difficulties to access credit? Because of the former, the main aim of this essay is to analyze the viability of access to a credit modality through a pawnshop versus the alternative of a bank loan. For that, calculations of overdue amortizations were made. The results allow us to say that despite being more easily accessible for vulnerable population, the option of a pawn broking credit incurs in higher costs compared to a bank loan.

Key words: *Pawnshops, credit, interest rate, loan,*

JEL Classification: *G210*

I. INTRODUCTION

In Mexico more than 90% of adults are responsible for some aspect of home finances management, whether it is paying bills, deciding how to expend the money or planning the budget (Reddy, Bruhn et al., 2012). However, for most Mexicans, budget planning and expenses tracing are vague and irregular processes since financial education is still a non-priority subject for the most vulnerable sectors. Similarly, according to statistics from the Bank of Mexico, approximately 70% of Mexicans report planning how to expend the income, only 41% does it regularly and barely a third always adjusts to budget, so that when exceeding the budget they must appeal to financial instrument, most of the time informal, given the excessive requirements of the formal financial entities. Being so, people earning low incomes are the ones who use more the informal forms of savings and credit (group savings pool, pawnshop loans, family loans) to save money in anticipation of an emergency situation and to cover income fluctuations as well as to buy food and other first-need items.

Because of the former, far from knowing that there is a problem from lack of financial education and lack of savings in Mexican society, there is a big problem that emerges from the question: what are the costs included in the fixed payments offered by pawnshops to settle the account or to restore the possession of the assets? And compared to a bank loan scheme the question would be: what is the best credit option between a bank loan and a pawnshop?

For the low-income sector of the population who do not have a fixed salary it is difficult to acquire bank loans because they do not cover the necessary credit requirements. As an alternative, there is the pledge loan that works by giving a loan over a percentage of the value of the asset given in warranty, this is called pawn. The reason of pawning an asset is to give the owner a strong incentive to pay and the moneylender, the means to cover the implicit costs from the non-fulfillment risks as well as the costs related with the possibility of selling the pawned item. Therefore, the intention is to analyze and evaluate the additional costs involved in this loan option easily attained for vulnerable sectors under the premise that this generates a more elevated cost compared

to the formal credits, being the main factors that explain the demand for informal financing a low financial culture, the speed of some financial needs and the impossibility of many informal credit users to be candidates for a formal credit (Varghese, 2005).

In the present document, first there is a brief context about the scene in Mexico regarding pawnshop loans and the reasons why the vulnerable sector resorts to them. Also, there is the theoretical basis of the amortizations in which the hypothesis financial comparison is based. The subsequent sections present a comparison of amortization charts of a pawnshop credit versus a multiple banking credit as well as the results of it. Meanwhile in the final part there is a conclusion of the above mentioned analysis.

II. LITERATURE REVIEW

According to a report from the Institute of Business in the Global Context, payroll bank accounts of Mexican workers are a payment method that has been growing throughout the years; however, only 14% of Mexicans who are part of the economically active population have a payroll bank account. Given the large size of the informal economy, it can be said that most Mexicans receive their income in cash. Likewise, near half of the economically active population in Mexico are employed without a formal contract, from which approximately a third of said population works in the informal sector (Mazzotta and Chakravorti, 2014). In this context it can be said that the lack of financial capacity of a large portion of the Mexican population, that subsequently will be called "vulnerable sector", to access a formal credit and the high need of resorting to a credit to finance their expenses and debts, causes the need to understand informal credits and the costs involved in them, which can be easier and faster attained; in this case the credits offered by pawnshops. To understand the subject of study and place the variables in their theoretic and empiric reality, the following is analyzed and discussed:

Regarding the variable pawnshop credits, we can point out that pawns, basically from the second half of the eighties have transformed the country, which in few years went from being a practically closed economy to being one of the most open to commerce and offshore investment. Currently, it is amazing to see daily different kinds of promotions, payment plans, options and alternatives offered by pawnshops to lend money, as well as the facilities provided for its access.

Thereby, this kind of financial institutions will be defined for starters. The pawnshops, where an item is left as warranty, are usually preferred by the public since the formalities are quicker than the ones from the banking sector and therefore, they are more comfortable and functional (Raccanello, 2013).

Generally, controls that are carried out are related to a verification of the borrower´s identity and the ascertainment of the licit origin of the pawned item. Also, loans are short-term and the borrower, by the end of each period (usually monthly) has three options as stipulated by the contract: renew the loan by paying the accrued interests (countersign the pledge), recover the item by paying the corresponding debt (capital and interests) or not paying and therefore lose the item´s ownership. When a pledged good is auctioned or sold to the public, the pawnshop is bound to deliver the excess to the borrower; meaning the difference resulting from the sale price and the sum of all costs.

However, according to Mortera (2012), the Federal Consumer's Office (PROFECO-Procuraduría Federal del Consumidor for its acronyms in Spanish) made a study by visiting several pawnshops, asking about their contracts, interest rates and the Annual Total Cost (CAT-Costo annual total for its acronym in Spanish) of their loans and the results show that:

- Only 76% showed their standard contract
- All of them show their monthly interest rate
- 88% report the percentage CAT (none correctly)
- 28% of the employees explained that they cannot show the Annual Total Cost (CAT)
- 30% of the employees said they did not know how to calculate the CAT.
- The most common CAT was 269% and it corresponds to a monthly interest rate of 11.5%, while the CAT of bank and/or government institutions is 99% which corresponds to a monthly interest rate of 6%.

Most of the pawnshops charge interest for the number of days that the loan is used, while the institutions and the intermediaries of formal credits charge monthly. So that, in this particular case, consumers should evaluate the option that is more convenient for them according to the terms and installments they require. Pawnshops may have higher interest rates but if the credit is needed for a few days, it can be a better option, compared to a formal credit by an institution or bank that charges the total monthly amount. According to the low or null financial knowledge of the country, population is susceptible to this kind of credits usually pays high interest rates because of how convenient and approachable it is to get a loan from a pawnshop, instead of seeking

for the best economic conditions for their loans. It is estimated that only 10% of consumers choose their credits based on the interest rate, which implies that the total cost of financing may exceed the benefits gotten by the user without him having knowledge of this (Beade, 2009).

It is also important to highlight that private pawnshops are not regulated by the Stock and Bank National Institute (CNBV-Comisión Nacional Bancaria y de Valores for its acronym in Spanish) which can have both positive and negative implications. On the one hand, it causes some distrust in the users and speculations regarding the alleged tendency of selling stolen property; on the other hand, given the taxes that pawnshops in the private sector must pay, they justify themselves under said argument to increase their service cost to the users (Campero and Kaiser, 2013).

Also, several studies in different countries have revealed that the informal credit market has characteristics that differ a little from the conventional loans. Credits are offered by private individuals based on verbal agreements with little or no collateral risks, which makes this short-term option attractive because of its immediate availability even though on the long-term there are high risks for users.

The credit market is usually much segmented and defined for a market where the pawnbroker has preliminary information about who are the possible credit users since most credit relations are personal and it takes time to create them. Interest rates of informal credits are different and vary according to the geographic place, the source of the funds and the characteristics of the loan. Generally, offered interest rates are higher than the average interest rates of the banks and with a significant dispersion, apparently presenting arbitration opportunities. The imposition of rationed credits limits the access to the loans for all credit applicants, meaning that the maximum amount received by the pawnbroker credit user is limited (Marin and Rubio, 2001).

According to Díaz (2011), the pawnbroker risk hypothesis states that pawnbrokers do not get a return (ex ante) for their money that is higher to their cost of opportunity. According to this hypothesis, in informal credit markets there is a high risk that the borrowers do not pay the interests nor return the credits. This means that there are two kinds of risks: first there is the risk of involuntary non-payment caused by unemployment, inability to pay, sickness or death, since the borrower may not have enough money when the loan expires; the second is the voluntary or strategic non-payment, where the borrower can get the money and leave or refuse to return it.

This way, there are two probabilities regarding payment (p): that the borrower returns the borrowed money and contrary, (1-p) that he does not return it, by considering that a representative pawnbroker in a competitive market borrows an amount (L) with an interest rate (i) in an informal competitive market and (r) the cost of opportunity for the funds of each pawnbroker, given that only an a proportion of the loan p is returned.

The expected benefit for the pawnbroker is, according to Debraj (2002):

$$p\,(l+i)L - (l+r)L$$

In conditions of balance, the null benefit condition implies that this value must be zero.

$$p\,(l+i)L - (l+r)L = 0$$

Clearing i from the equation, the interest rate of the informal market, it becomes:

$$i = \frac{l+r}{p} - 1$$

Therefore, the interest rate of the informal market is directly related to the interest rate of the bank credit and indirectly with the payment probability. In this manner, it can be said that when p=1, there is no risk of non-payment; while $i=r$, the rate of the informal sector is the same as the formal sector. However, in the case that (p) (r), the informal interest is higher to cover the non-payment risk.

The fear of non-payment also leads to ask for a warranty, whenever possible, as is the case of pawnshops, but nevertheless the free payment scheme is presented, which has resulted to be an option required by users lately; it can be described as a new method of payment that adapts to the client´s possibilities, who can decide when and how much to pay and is offered by the National Mount of Piety (Nacional Monte de Piedad in spanish) with the following attributes:

Interest rate*:
Daily rate: 0.15%
Monthly rate: 4.5%
Yearly rate: 54%
Costs**:
Total Daily Cost: 0.1%
Total Monthly Cost: 4.2%
Total Yearly Cost: 63.3%

*All chattel operations will cause 16% of I.V.A. (Value-added tax) and it will be charged when conducting them.

** Average CAT without I.V.A. for informational and comparison purposes. This was calculated in

accordance with the information circular 21/2009 of the Bank of Mexico.

Term contract: 5 natural months

In jewelry, the term is up to 20 months to settle the loan, making three endorsements. Also, the minimum term is fifteen days.

In this manner, in order to begin with the financial analysis, it is relevant to understand the theoretical basis of the hypothetical case starting point, the amortizations, which are used in finances and commerce to calculate the gradual payment of a debt, since it is known that in financial activity it is common for people to look for funding or credit, whether this is for capitalization or to acquire goods or assets (García-Santillán, 2010).

According to said concept, the mathematical model to build an "Amortization Fund" is presented; pointing out that it could be the other way, meaning that there is an obligation in the short and long term, so that one must start by gradually saving until the desired amount is gathered with its respective return. Here is when the form of "Amortization Fund" is necessarily present.

To calculate the amount to be obtained in time "n" with a rate "i", it is necessary to know the amount of the periodic payments, for which the formula of ordinary (or overdue) annuity amount must be used if the deposits are made by the end of the month or if the deposits are made at the beginning of the month, the anticipated annuity amount. The expression i/m is used in case we need to calculate the rate that will be capitalized (compounded), this is when a nominal (yearly) rate is 12% and the compounding is monthly, then one must take (12/12).

To know the amount of the periodic payments, the following formula for the present value of payment due must be used: (Rp) $NPV = R_{P1} \left[\frac{1-(1+i/m)^{-n}}{i/m} \right]$

To know the value of Rp the value of the debt goes over dividing the resultant factor of $\left[\frac{1-(1+i/m)^{-n}}{i/m} \right]$ so that the expression is now: $R_{P1} = \frac{NPV}{\left[\frac{1-(1+i/m)^{-n}}{i/m} \right]}$

III. DEVELOPMENT AND HYPOTHETICAL CASE

With the intention of being able to identify the real financial cost of a pawn broking credit attained at a pawnshop, the following postulation is presented:

A person needs a $20,000.00 loan, for which he requests information to acquire a loan in a bank (Banamex) and in a pawnshop (Nacional Monte de Piedad) that has two payment systems for loans.

Then the following 3 scenarios are presented:

 a) Bank loan

Banamex bank offers the $20,000.00 loan paying a yearly rate of 17% plus I.V.A. to be paid in 12 months. Although, bank policies state that an opening commission of $232.00 must be paid, therefore when substituting in the formula, the capital will be $20,232.00

First, we calculate Rp1 with the future value formula… $R_{P1} = \frac{FV}{\left[\frac{1-(1+i/m)^{n}-1}{i/m} \right]}$

Substituting the data we get:

$$R_{P1} = \frac{\$20,232.00}{\left[\frac{1-(1+(.17/12))^{12}-1}{.17/12} \right]} = \frac{\$20,232.00}{\left[\frac{1-(1+.0141666)^{12}-1}{.0141666} \right]} = \frac{\$20,232.00}{\left[\frac{.1838907}{.0141666} \right]} = \frac{\$20,232.00}{12.9805811} = \$1,558.63$$

We get $1,558.63 that will be the payment to the capital.

After, we calculate with the net present value formula…

Substituting it is gotten

$$R_{P1} = \frac{FV}{\left[\frac{1-(1+i/m)^{n}-1}{i/m} \right]}$$

$$R_{P1} = \frac{\$20,232.00}{\left[\frac{1-(1+(.17/12))^{-12}-1}{.17/12} \right]} = \frac{\$20,232.00}{\left[\frac{1-(1+.0141666)^{-12}-1}{.0141666} \right]} = \frac{\$20,232.00}{\left[\frac{.1553281}{.0141666} \right]} = \frac{\$20,232.00}{10.964392} = \$1,845.24$$

With this we get that the fixed monthly payments will be of $1,845.24 from which $286.61 is interest, which we got from the following: $1,845.24-$1558.63=$286.61

Also, we should remember that the bank will charge I.V.A. for the interests, then 287+16% of IVA = 287*.16= $45.92 therefore, $1,845.24+ $45.92= $1,891.16 Being this the total monthly amount to pay. If we

subtract $20,232.00- $1,558.63 which was the first payment to capital, we obtain that the capital balance of the following month will be $18,673.00

So that we have to recalculate the payment using the same formula, being:

$$R_{P1} = \frac{FV}{\left[\frac{1-(1+i/m)^{n}-1}{i/m}\right]}$$

$$R_{P1} = \frac{\$18,673.00}{\left[\frac{1+(.17/12))^{11}-1}{.17/12}\right]} = \frac{\$18,673.00}{\left[\frac{(1+.0141666)^{11}-1}{.0141666}\right]} = \frac{\$18,673.00}{\left[\frac{1.1673533-1}{.0141666}\right]} = \frac{\$18,673.00}{\left[\frac{.1673533}{.0141666}\right]} = \frac{\$18,673.00}{11.8132939} = \$1,580.67$$

Now it is $1,580.67 the payment to the capital in the next month.

Then, this process is repeated until we reach the end of the chart and the total payment of the debt. In chart we can see the rest of the payments that must be paid.

Table 1. Amortization chart

Month	Capital Balance	Payment to capital	Interest payment	Fixed monthly payment	IVA payment *Interests	Monthly payment **Total
1	$20,232.00	$1,558.63	$286.61	$1,845.24	$45.86	$1,891.10
2	$18,673.37	$1,580.68	$264.56	$1,845.24	$42.33	$1,887.57
3	$17,092.69	$1,603.11	$242.13	$1,845.24	$38.74	$1,883.98
4	$15,489.58	$1,625.82	$219.42	$1,845.24	$35.11	$1,880.35
5	$13,863.75	$1,648.86	$196.38	$1,845.24	$31.42	$1,876.66
6	$12,214.90	$1,672.21	$173.03	$1,845.24	$27.68	$1,872.92
7	$10,542.68	$1,695.90	$149.34	$1,845.24	$23.89	$1,869.13
8	$8,846.78	$1,719.93	$125.31	$1,845.24	$20.05	$1,865.29
9	$7,126.85	$1,744.30	$100.94	$1,845.24	$16.15	$1,861.39
10	$5,382.56	$1,769.01	$76.23	$1,845.24	$12.20	$1,857.44
11	$3,613.55	$1,794.07	$51.17	$1,845.24	$8.19	$1,853.43
12	$1,819.48	$1,819.48	$25.76	$1,845.24	$4.12	$1,849.36
Total	0.00	$20,232.00	$1,910.88	$22,142.88	$305.74	$22,448.62

Source: own

If we compare it to a chart made with the bank web page simulator (Banamex.com.mx) we get:

Table 2. Amortization chart

Month	Capital Balance	Payment to Capital	Interest payment	Fixed monthly payment	IVA payment by interest	Total Monthly Payment
1	$20,230.00	$1,559.00	$287.00	$1,845.00	$46.00	$1,891.00
2	$18,673.00	$1,581.00	$265.00	$1,845.00	$42.00	$1,888.00
3	$17,093.00	$1,603.00	$242.00	$1,845.00	$39.00	$1,884.00
4	$15,490.00	$1,626.00	$219.00	$1,845.00	$35.00	$1,880.00
5	$13,864.00	$1,649.00	$196.00	$1,845.00	$31.00	$1,877.00
6	$12,215.00	$1,672.00	$173.00	$1,845.00	$28.00	$1,873.00
7	$10,543.00	$1,696.00	$149.00	$1,845.00	$24.00	$1,869.00
8	$8,847.00	$1,720.00	$125.00	$1,845.00	$20.00	$1,865.00
9	$7,127.00	$1,744.00	$101.00	$1,845.00	$16.00	$1,861.00
10	$5,383.00	$1,769.00	$76.00	$1,845.00	$12.00	$1,857.00
11	$3,614.00	$1,794.00	$51.00	$1,845.00	$8.00	$1,853.00
12	$1,819.00	$1,819.00	$26.00	$1,845.00	$4.00	$1,849.00
Total		$20,232.00	$1,910.00	$22,140.00	$305.00	$22,447.00

Source: own

The bank simulator rounds out the numbers but we were able to ascertain approximately that our data are correct.

b) Pawnshop loan
(Method of payment: classic pawn)

The pawnshop charges a 36% yearly rate for 5 months. If the 5 months have gone by and the debt is not paid in full, the pawnshop offers the opportunity to make an endorsement, which only consists in presenting to the fare box with the pawn ticket, pay the interests generated for the 5 months and with that, settle a new date in 5 more months. This can only be made 3 times or the item will be lost and taken out for sale.

Thinking that it would be impossible to pay the total amount of the debt in 5 months and take the pawned item, for comparison purposes we will calculate the debt for 12 months, same as the former case, taking into account that after 5 months the endorsement will be made.

In this manner, using the same formula as the former scenario, we get that:

$R_{P1} = \dfrac{NPV}{\left[\dfrac{1-(1+i/m)^{-n}}{i/m}\right]}$ Substituting the data we get that:

$$R_{P1} = \dfrac{\$20{,}000.00}{\left[\dfrac{1+(.36/12))^{-12}-1}{.36/12}\right]} = \dfrac{\$20{,}000.00}{\left[\dfrac{(1+0.03)^{-12}-1}{.03}\right]} = \dfrac{\$20{,}000.00}{\left[\dfrac{1-.7013798}{.03}\right]} = \dfrac{\$20{,}000.00}{\dfrac{.2986201}{.03}} = \dfrac{\$20{,}000.00}{9.9540039} = \$2{,}009.24$$

Meaning that the monthly payments must be $2,009.24
Making an amortization chart, the payments are as follows:

Table 3. Amortization chart

Month	Monthly payment	Payment to Capital	Interests payment	Outstanding balance	Payment to liquidate
				$20,000.00	$20,000.00
1	$2,009.24	$1,409.24	$600.00	$18,590.76	$20,600.00
2	$2,009.24	$1,451.52	$557.72	$17,139.24	$19,148.48
3	$2,009.24	$1,495.06	$514.18	$15,644.18	$17,653.42
4	$2,009.24	$1,539.91	$469.33	$14,104.27	$16,113.51
5	$2,009.24	$1,586.11	$423.13	$12,518.15	$14,527.39
6	$2,009.24	$1,633.70	$375.54	$10,884.46	$12,893.70
7	$2,009.24	$1,682.71	$326.53	$9,201.75	$11,210.99
8	$2,009.24	$1,733.19	$276.05	$7,468.56	$9,477.80
9	$2,009.24	$1,785.18	$224.06	$5,683.38	$7,692.62
10	$2,009.24	$1,838.74	$170.50	$3,844.64	$5,853.88
11	$2,009.24	$1,893.90	$115.34	$1,950.74	$3,959.98
12	$2,009.24	$1,950.72	$58.52	$0.02	$2,009.26
Total	$24,110.88	$19,999.98	$4,110.90		$0.02

Source: own

Based on the information attained by the amortizations calculation, it is possible to say that indisputably to the fact that it is practically easier to access a pawnshop credit compared to a bank credit, informal credit has an excessive additional cost, in this case, 209% more expensive, because as shown in the charts, while in the bank credit a total amount of $1,910.88 are paid for interests, in the credit from the Nacional Monte de Piedad $4,110.90 must be paid for interests, both options within a year and for an amount of $20,000.00

This is added to the fact that in daily life, users who access these credits need them for a period longer than one year, which has a direct impact over the total amount that must be paid for interests; under this premise it is not hard to explain why most users end up losing their items left as warranty.

IV. CONCLUSION

Nowadays, credit is seen as a risk and a problem, even though the credit sector also contributes to the growth, development and employment of society. The big question is about knowing how to properly use credits and how to access them, especially when there is a vulnerable sector of the population that cannot attain a formal credit through banking institutions.

As an alternative for such needs there are also other financial entities, such as pawnshops, that are able to cover the demand for said population sector and which, complementarily with other social factors, are a great opportunity that has taken advantage in the credit market. Although pawnshops can be seen as good or bad according to the situation, the reality is, as it was proven with the hypothetical case, that they offer an easy access to credit while charging excessive interest rates, information that is rarely shown and understood by users, preventing the applicants to take proper choices, for which it can be said that they are not an entirely ethical business.

However, and without trying to justify their way of operating, it should be admitted that really it is not entirely the fault of this entities considering that multiple banking does not have the capacity nor offers the reach

necessary to cover the needs and demands of the Mexican population in its whole, besides the fact that users do not have a minimal financial education or knowledge. Thus, offering loans to people who do not know how a credit works has an implicit risk for loaners, risk that is covered with the high interest rate they charge.

In this way, once the factors that contribute to the frequent use of pawnshops, one of the most attractive business lately, were previously analyzed, it can be stated that it was not the pretense of this work to label pawnshops as good or bad for society. On the contrary, it has been sought to offer readers a general and founded perspective regarding the costs that an informal credit can have and thus, have the tools to evaluate and choose the more convenient option according to their needs, given their financial capacity. Also it is relevant to say that a great number of factors mentioned above do not entirely depend on the population, such as lack of financial capacity to access a formal credit, lack of formal employment or actual demographic factors.

V.   REFERENCES

1. Beade, R. (2009). Casas de empeño: contar con efectivo tiene su precio. Brújula de compra de Profeco. Retrieved from: http://www.profeco.gob.mx/encuesta/brujula/bruj_2009/bol108_casas_empeno.asp, accessed July 4, 2016.
2. Campero, A., Kaiser, K. (2013) Access to Credit: Awareness and Use of Formal and Informal Credit Institutions. Banco de México-Working Papers, N° 2013-07. Retrieved from: http://www.banxico.org.mx/publicaciones-y-discursos/publicaciones/documentos-de-investigacion/banxico/%7BD126CDDE-93CC-942B-2A59-90A5A1AE09B9%7D.pdf, , accessed July 10, 2016.
3. Debraj, R. (2002). Economía del desarrollo. Barcelona: Antoni Bosch Editor.
4. Díaz Valencia, G. A. (2011). Las imperfecciones del mercado de créditos, la restricción crediticia y los créditos alternativos. Revista CIFE, 17(12), 103 - 133.
5. García-Santillán, A. (2010). Administración Financiera I. Universidad de Málaga, ISBN-13: 978-84-16036-61-5. Registro en la Biblioteca Nacional de España No. 201460144
6. García-Santillán, A. (2014) Matemáticas Financieras para la toma de decisión. Universidad de Málaga ISBN-13: 978-84-16036-61-5. Registro en la Biblioteca Nacional de España N° 2014/60144.
7. García-Santillán, A., Moreno-García, E., Ortiz-Rivera, L., Lanza-Vilorio, F., & Lira-Martínez, A. (2016). Acquisition of personal assets through a set of installments due versus deferred installments: What is the best option?. Bulletin of Mathematics and Statistics Research, 4(1), 124-131
8. Marín, J.; Rubio, G.; (2001). Economía Financiera. Barcelona: Antoni Bosch Editor S.A
9. Mazzotta, B., & Chakravorti, B. (2014). The cost of cash in Mexico. Part three in a series on the cost of cash around the world. The Institute for Business in the Global Context. Retrieved from: http://fletcher.tufts.edu/~/media/Fletcher/Microsites/Cost%20of%20Cash/CCMEX-final-web.pdf, accessed July 13, 2016.
10. Mejía, M., Barrera, A.; Ríos, M., & Piedra, C. (2014). Monitoreo de la estrategia de una casa de empeño utilizando una herramienta de inteligencia de negocios. Research in Computing Science, 77, 143–151
11. Mortera, E.; (2012) The Golden Age for Pawnshops - Current Social Factors that Drive their Success in the Mexican Market. School of Doctoral Studies (European Union) Journal. Article 3 p 177-186
12. Nacional Monte de Piedad (2016). Portal interactivo para calcular los pagos. Retrieved from: https://www.montepiedad.com.mx/portal/?page=Document/doc_view_section.asp&id_document=424&id_category=11, accessed July 7, 2016.
13. Ordorica, M., & François, J. (2012). Los grandes problemas de México. Colegio de México. Retrieved from: http://www.colmex.mx/gpm/images/PDF/III_ECONOMIA.pdf, accessed July 6, 2016.
14. Raccanello, K. (2013). Fuentes Informales de Financiamiento. In Un acercamiento a la eficiencia del microfinanciamiento en México (573-601). Puebla: Universidad de las Américas
15. Reddy, R., Bruhn, M., & Tan, C. (2012) Capacidades financieras en México: resultados de la encuesta nacional sobre comportamientos, actitudes y conocimientos financieros. World Bank, Washington D.C. Retrieved from: http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/11/19/000333037_20131119125836/Rendered/PDF/821340Revised00Box379874B00SPANISH0.pdf, accessed July 8, 2016.
16. Riley, J. (1987). Credit Rationing a Further Remark. The American Economic Review, 77(1), 224-227.
17. Ruiz, C. (2010). From Pawn Shops to Banks: The Impact of Formal Credit on Informal Households. UCLA. Retrieved from: http://siteresources.worldbank.org/INTFR/Resources/ClaudiaRuiz.pdf, accessed July 12, 2016.
18. Varghese, A. (2005). Bank-moneylender linkage as an alternative to bank competition in rural credit markets. Oxford Economic Paper, 57(2), 315-335.
19. Williamson, S. (1987). Costly Monitoring, Loan Contracts, and Equilibrium Credit Rationing. Quarterly Journal of Economics. 102 (1): 135-145 doi:10.2307/1884684
20. Zywicki, T.; (2010). Consumer use and government regulation of title pledge lending. Mercatus Center. Retrieved from: http://www.luc.edu/law/activities/publications/clr_vol22_issue4/pdfs/zywicki_title.pdf, accessed July 11, 2016.