

# THE PROFILE OF THE BRAZILIAN OVERINDEBTED INDIVIDUALS IN LIGHT OF THE ECONOMIC CRISIS: A COMPARATIVE ANALYSIS 2014-2016

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## Resumo

Over-indebtedness is a phenomenon observed nowadays in both developed and developing countries, such as Brazil. In 2014, after analyzing data from a national survey, Sampaio and Porto presented some characteristics of the profile of over-indebted individuals in Brazil based upon self-declaration. Their analysis found that most over-indebted individuals were women, with an average income of 1 to 2 minimum wages, aged between 25 and 44, and corresponding level of education to be complete high school. Data were also consistent with the international literature in the sense that isolated events such as unemployment, illness, marriage, birth of children and divorce, which often appear as being positively correlated with overindebtedness, were quoted in the survey, with emphasis in unemployment. This paper investigates the hypothesis that the profile of Brazilian over-indebted individuals may have changed due to the economic crisis. The alternative hypothesis is that the above characteristics have remained constant despite the deterioration of macroeconomic conditions. This analysis, if conclusive, may be relevant to the long-term planning of public policies to prevent and treat the phenomenon of overindebtedness. This work deepens the analysis of the over-indebted profile by testing the same hypothesis for the subgroup of individuals who claimed to be experiencing great difficulty in paying their debts (“heavy burden”), without, however, formally self-declaring to be overindebted.

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## 1 Introduction

Overindebtedness is a common phenomenon both in developed (such as the United States, England and France) and developing countries, which is the case of Brazil. Growing indebtedness of the Brazilian households relatively to the GDP is an indicative of this reality: Whereas, in 2005, the level of Brazilian household indebtedness was around 20% of the GDP, two decades later, in 2015, it had reached 66%.

In 2014, Sampaio and Porto (2014) assessed data from a national survey that aimed at tracing the indebtedness profile of Brazilian population and gathered information on the subgroup that had self-declared to be overindebted.<sup>1</sup> The paper provided data on gender, age, education, average income, as well as an analysis of isolated events such as unemployment, diseases, marriage, birth and divorce, which, according to the specialized literature, are usually positively correlated to overindebtedness.

This paper investigates the hypothesis that there might have been a change of the Brazilian overindebted profile due to the economic crisis the country faced from 2014 to 2016. The alternative hypothesis is that the characteristics cited above would have been kept constant despite the deterioration of country's macroeconomic conditions. This analysis, if conclusive, may be relevant for developing long-term public policies that aim at preventing and treating the phenomenon.

We also try to deepen the assessment of Brazilian overindebted profile by testing the same hypothesis for the subgroup of individuals who claimed to be experiencing

great difficulty in paying their debts ("heavy burden"), without, however, formally self-declaring to be over indebted.

To achieve the goal mentioned above, the paper is divided as follows. In the first part we resume initial considerations about the key characteristics of overindebtedness. Then, we briefly resume the main findings of the 2014 survey, so that they can be subsequently compared to the data obtained in 2016, which are described in the following section. Lastly, we present our conclusions.

## 2 The over-indebtedness concept<sup>2</sup>

In every overindebtedness study, the first obstacle faced is to precisely circumscribe the object in study. The European Union's report *Towards a common operational European definition of over-indebtedness* qualifies a household as overindebted if its members "are having difficulties meeting (or are falling behind with) their household commitments, whether these are related to servicing secured or unsecured borrowing or to payment of rent, utility or other household bills".<sup>3</sup>

In France, article L.330-1 of the Consumption Code states that "Overindebtedness of natural persons is characterized by the manifest impossibility of a well-intentioned debtor meeting either all of his personal debts due now and in the future". It is worth highlighting the fact that the definition requires (i) good faith and (ii) that the debts

<sup>2</sup> Since this paper propose to realize a comparison between the 2014 and 2016 surveys, sections 2 and 3, as well as the data obtained in 2014, retake considerations made in Porto and Sampaio, *ob. cit.*

<sup>3</sup> Observatoire De L'epargne Europeene (OEE), Centre For European Policy Studies (CEPS), Personal Finance Research Centre – University of Bristol (PFRC) (org) (2008). *Towards a common operational European definition of over-indebtedness*. Final report submitted to the European Commission's directorate-general for Employment, Social Affairs and Inclusion, Belgium, p. 7.

<sup>1</sup> PORTO, A.J.M; SAMPAIO, P.R.P (Oct 2015). Perfil do superendividado brasileiro: uma pesquisa empírica (pp. 435- 467). *Revista de Direito do Consumidor*. São Paulo: Revista dos Tribunais, ano 24, v. 101.

result from non-professional situations.<sup>4-5</sup> In the United Kingdom, one is overindebted if he is “unable, on a structural and ongoing basis, to pay short-term debts, taken out to meet needs considered to be essential, from their habitual income provided by work, financial investments or other usual sources, without recourse to loans to finance debts contracted previously”.<sup>6</sup>

The different definitions above mentioned, brought for illustrative purposes, allow us to extract some characteristics intrinsic to an overindebtedness situation.

Firstly, it is a phenomenon regarding natural persons; the institute does not cover legal entities that are in a situation of inability to pay the totality of their debts. Secondly, temporary insolvency is not enough to characterize overindebtedness, thus leading to the need of a detailed analysis of the assets, incomes and accrued liabilities of the individual: If debtor is able to pay his debts through any available mean (for example, through the sale of real estate or vehicles), he is not technically overindebted, even if he has some overdue and unpaid debts. Therefore, the expectation that the individual will not be able to meet his obligations in a reasonable future is key to this characterization. Moreover, some definitions require good faith in order to classify the individual as being over indebted – but this is actually not a descriptive, but rather a normative characteristic, meaning

that only individuals acting in good faith should benefit from protective legislation.

Brazilian jurisprudence highlights the same characteristics. According to Claudia Lima Marques, an overindebted individual is a natural person, consumer, layman and in good-faith, who is facing a situation of complete impossibility to pay all his current and future consumer debts (excluding debts with the Treasury, from crimes and alimony).<sup>7</sup> The 1973 Brazilian Code of Civil Procedures (CPC) has a legal definition of insolvency, which takes place “every time the debts exceed the value of debtor’s assets”.<sup>8</sup>

In short, overindebtedness is a phenomenon associated with the following characteristics: It (i) involves an individual (ii) that has contracted financial obligations and is (iii) unable to repay them, (iv) except by undermining his minimum living standards, (v) where this situation has a structural basis and is not merely conjunctural, that is, it is persistent in time; (vi) and the person is experiencing an illiquidity scenario, as he cannot pay his debts through the divestiture of assets or other revenue sources.

In summary, the following characteristics are usually related to an overindebtedness situation: (i) Individuals; (ii) in good faith; (iii) unable to pay nonprofessional expired and due debts; (iv) in a persistent (not conjunctural) structural scenario.

4 The fact that one person has become a debtor as a result of being the guarantor of an individual entrepreneur or business company does not set aside the overindebtedness characterization in accordance with the French Consumption Code. Available in: <<http://www.legifrance.gouv.fr/>>. Accessed in June 26, 2014.

5 For a comparative law analysis Brazil-France about credit consumer protection, see MARTINS DA COSTA, G. de F. (2002). *Superendividamento: a proteção do consumidor de crédito em direito comparado brasileiro e francês*. São Paulo: Revista dos Tribunais.

6 OEE, CEPS, PFRC (org.), *op. cit.*

7 MARQUES, C.L. (2006) Sugestões para uma lei sobre o tratamento do superendividamento de pessoas físicas em contratos de crédito ao consumo: proposições com base em pesquisa empírica de 100 casos no Rio Grande do Sul. In *Direitos do consumidor endividado: superendividamento e crédito*. São Paulo: Revista dos Tribunais, p. 3.

8 Despite the approval of a new Code of Civil Procedures (CPC) in 2015, the definition remains valid. In what refers specifically to insolvency, the new code has not revoked the old one, which remains in effect in this specific issue.

## 2.1 Situations positively correlated to overindebtedness

There is consensus in the literature that some events in the life of an individual are likely to contribute to overindebtedness. The report *A Model Law on Family Insolvency for Latin America and The Caribbean*, which proposes a model law to deal with the phenomenon, lists in its article 6 situations that are likely to be causes of the phenomenon:

- a) Job loss due to direct and/or indirect lay-off;
- b) Precarious or not registered employment;
- c) Temporary or permanent disability;
- d) Serious or chronic illness that results in excessively high expenses with treatment and/or medication;
- e) Separation, divorce or dissolution of stable union;
- f) Death of spouse or life partner;
- g) Occurrence of unforeseen expenses due to special circumstances.<sup>9</sup>

The *Drivers of Over-Indebtedness* report identifies three main factors that, because they are likely to trigger shocks in personal income, tend to lead individuals to overindebtedness' situations: Unemployment, divorce and illness.<sup>10</sup> Likewise, the *Over-indebtedness in Britain: A report to the Department of Trade and Industry* report relates some personal events to problems in the household budget.

9 CONSUMERS INTERNATIONAL - REGIONAL OFFICE FOR LATIN AMERICA AND THE CARIBBEAN (2011). *A Model Law on Family Insolvency for Latin America and The Caribbean*. p. 7. Available in: <<http://www.consumersinternational.org/media/880320/a%20model%20law%20on%20family%20insolvency%20for%20latin%20america%20and%20the%20caribbean.pdf>>. Accessed in April 29, 2015.

10 DISNEY, R.; BRIDGES, S.; GATHERGOOD, J. (2008). *Drivers of Over-indebtedness*. Report to the UK Department for Business, pp. 31 e 32. Available in: <<http://webarchive.nationalarchives.gov.uk/20090609003228/http://www.berr.gov.uk/files/file49248.pdf>>. Accessed in March 19, 2015.

According to this report, “the largest single cause of financial difficulties was still job loss”; however, “financial difficulties were also strongly associated with setting up home and having a family. The arrival of a new baby increased the risk of difficulties, as did relationship breakdown”<sup>11-12</sup>

In the same sense, besides excessive consumption, the *Consumer Overindebtedness and Consumer Law in the European Union* report identifies unemployment, illness and changes in the quantity of person living in a household as events associated with situations of overindebtedness.<sup>13</sup>

Among all the above-mentioned aspects, job loss emerges as the most highly associated to the inability to pay debts. As noted by the *Report on Legal Solutions to Debt Problems in Credit Societies*, written by the European Council, “There seems to be little doubt that especially unemployment and other disruptions in employment are the most common factors leading to overindebtedness. Big increases in debt problems are almost always related to economic downturns. Even in good times unemployment seems to be the most common factor behind over-indebtedness”<sup>14</sup>

### The report *Towards a common operational European definition of over-indebtedness*

11 KEMPSON, Elaine. *Over-indebtedness in Britain: A report to the Department of Trade and Industry*. Bristol: Personal Finance Research Centre, 2002 Available in: <[http://www.pfrc.bris.ac.uk/Reports/Overindebtedness\\_Britain.pdf](http://www.pfrc.bris.ac.uk/Reports/Overindebtedness_Britain.pdf)>. Accessed on May 06, 2015.

12 KEMPSON, ob. cit., p.5.

13 “[...] it is essential that overindebtedness is seen as a social process. The main reasons for overindebtedness can be conceptualized in many ways; unemployment, business failures, personal problems, such as illness and divorces, or excessive consumption.”. REIFNER, U.; KIESILAINEN, J.; HULS, N.; SPRINGENEER, H. (2003). *Consumer Overindebtedness and Consumer Law in the European Union*. Hamburg: IFF, p.15.

14 NIEMI-KIESILÄINEN, J.; HENRIKSON, A. (2005). *Report on Legal Solutions to Debt Problems in Credit Societies*. Strasbourg: Bureau of the European committee on legal co-operation, p. 8.

delivered by the European Commission points in the same direction: “*Perhaps not surprisingly given the link with income, not being employed has been found to be associated with an increased likelihood of over-indebtedness in some countries, such as the UK, Belgium and former East Germany*”.<sup>15</sup> When the report analyzed data from the Eurobarometer’s survey on financial conditions, it verified that 25.6% of the unemployed were in economic distress, what represented the highest percentage compared to other groups, such as students, retired individuals, domestic workers, self-employed and employed individuals.<sup>16</sup>

In short, the excerpts above allow us to state that some factors often contribute to overindebtedness’ situations. They are usually misfortunes, that is, supervening and unanticipated phenomena (unpredictable to the average individual) at the moment debts were contracted – such as unemployment, divorce, illness, death in the family and others unexpected expenditures in the household. Among these unforeseen events, job loss is the most commonly associated to the emergence of an overindebtedness situation, because it is directly related to the individual’s economic condition.

With that in mind, one of the main purposes of the empirical surveys performed in 2014 and 2016 was to verify if overindebted Brazilian individuals had also experienced

situations like those observed in the international experience, as well as to assess some characteristics of this group.

### 3 Database and Descriptive Statistics

The databases used to produce the information provided in this paper were prepared by the Brazilian Institute of Public Opinion and Statistics (*Instituto Brasileiro de Opinião Pública e Estatística - IBOPE*), both in March 2014 and in March 2016. Thus, it was possible to avoid the risk that different outcomes could be due to seasonal changes. The samples were composed of 2002 households in each year, in order to be a representative sample of the Brazilian population. IBOPE only interviewed individuals that confirmed being the ones responsible for household financial decisions.

Households were selected by IBOPE so that they could have a nationwide representation. For this purpose, the survey used the three-stage conglomerate method for sample definition. According to this method, at the first stage, municipalities are probabilistically chosen by using the Size Proportional Probability (PPS) method, which takes voters as the basis for such selection. In the second stage, the survey selects the conglomerates, by means of sectors divided by income and by the systematic PPS method, wherein the population measure is the quantity of people aged 16 years or older that resides on the location. In the third stage, a fixed number of inhabitants is selected according to certain variables and data from the Census 2010 and PNAD 2012.<sup>17</sup>

<sup>15</sup> The report makes it very clear that there is no consensus over the existence of a direct relation between unemployment – on a permanent basis as opposed to job loss – and financial distress, once others factors besides the absence of work can also be part of the explanation. Observatoire De L’epargne Europeene (OEE), Centre For European Policy Studies (CEPS), Personal Finance Research Centre – University Of Bristol (PFRC) (org). *Towards a common operational European definition of over-indebtedness*, 2008, p. 17.

<sup>16</sup> The Eurobarometer is a series of surveys applied in the 28-member countries of the European Union about diverse topics, such as social conditions, health, culture, economy, safety and the environment. Information obtained in: <<http://www.eui.eu/Research/Library/ResearchGuides/Economics/Statistics/DataPortal/Eurobarometer.aspx>>. Accessed in March 20, 2015.

<sup>17</sup> The decennial census and annual PNAD are surveys produced by the Brazilian Geographic and Statistics Institute (IBGE), a federal governmental research institution.

In 2014, the sample average age was of 42 years, where 56% were married and 27% were single. Regarding race, 42% declared themselves to be brown, 41% white, 13% black and 0.8% indigenous. 52% of the sample were women. Regarding the degree of education, 35% of the sample had completed high school, 20% knew how to read and 19% had completed elementary education.

In the 2014 sample, 5% of the individuals declared to have married within the last 12 months and 8% had experienced a divorce. In 13% households, the head of the family had lost its job, whereas in other 8% of the cases another family member had lost his job. With regard to disease, birth and widowhood, respectively 19%, 13% and 2% of the interviewed individuals mentioned to have experienced those events. In addition to that, 3% and 0.9% of the sample mentioned to have opened or closed a business.

In 2016, the sample average age was also 42 years, where 55% were married and 27% were single. Regarding race, 47% declared themselves to be brown, 33% white, 14% black and 4% yellow/indigenous. Additionally, 53% of the sample were women. Regarding the degree of education, 34% of the sample had completed high school, 17% had higher education, 21% had completed primary education and 7% had no formal education.

In the 2016 sample, 6% of the individuals declared to have gotten married in the last 12 months, 9% had experienced a divorce, 19% had suffered the loss of their jobs, and another 17% the loss of job of another family member. With regard to disease, widowhood and birth, respectively 26%, 1% and 16% of the individuals mentioned to have experienced such events. In addition to

that, 5% and 2% of the sample said to have opened or closed a business.

These figures allow us to conclude that both sample profiles are very alike, which gives us confidence that, when we compare the results of the surveys performed in 2014 and in 2016, we are dealing with similar populations and, hence, the way the samples were built would not be a relevant explanation for possible different outcomes between them.

#### 4 The 2014 survey

In the following topics we resume information regarding the 2014 survey results, so that we can later compare them with the 2016 outcomes.

##### 4.1 The 2014 Macroeconomic Context

2014 has been regarded as the beginning of the huge economic crisis Brazil has been facing. Throughout 2014, it was possible to detect a technical recession, and forecasts became increasingly pessimistic. The real GDP (Gross Domestic Product) growth rate ended being only 0.2% and the IPCA (Broad National Consumer Price Index) inflation rate increased by the third consecutive year, reaching 6.41% in 12 months. The only “relief” came from the unemployment rate, which at that time was just 4.8%.

However, the 2014 survey would not have been able to catch this macroeconomic adverse scenario, as the interviews were conducted in March, hence, in the very beginning of the year. Just on the opposite side, if we consider the 14 months that immediately preceded the 2014 survey, reality was quite different. In the end of 2012,

the real GDP growth rate was 2%, the IPCA had reached 5.84% (thus, below the above-target inflation), and the unemployment rate had dropped by the sixth subsequent year, reaching 5.5%. In other words, by that time, the Brazilian economy was not presenting evidence of unbalance.

Hence, individuals responding to the 2014 survey were exposed to a very different scenario than the respondents of the 2016 survey.

#### 4.2 The profile of the over-indebted individuals in 2014 (self-declaration)

In this section we present information about the overindebted Brazilian profile using the self-declaration criteria. From the sample of 2002 individuals, we segregated the ones that responded affirmatively to the question: Do you consider yourself to be overindebted?

It was observed that, of the 2002 interviewed households in 2014, a total of 147 answered positively to the question about whether they were overindebted or not, which means, 7.34% of the initial sample, what seems to be consistent with international surveys, such as the one performed in the United Kingdom. According to the *Consumer credit and consumers in vulnerable circumstances* report, the percentage of overindebted individuals in the United Kingdom was of 6% of the population, when taking into account objective factors to the analysis.<sup>18-19</sup>

These 147 individuals had the following characteristics: Dominance of the female

<sup>18</sup> FINANCIAL CONDUCT AUTHORITY (FCA), *Consumer credit and consumers in vulnerable circumstances*, 2014. Available in: <<http://www.fca.org.uk/static/documents/research-papers/consumer-credit-customers-vulnerable-circumstances.pdf>>. Accessed in March 04, 2015.

<sup>19</sup> The margin of error for the survey is two percentage points.

gender, which corresponded to 56% of the interviewed individuals. The age groups where the phenomenon was more frequently were the ones between 25-34 and 35-44 years, therefore, indicating dominance of the economically active and young population age groups: Only 6 individuals older than 65, corresponding to 4% of the sample, reported to be experiencing an overindebtedness situation. Most of overindebted individuals had monthly income between 1 and 2 minimum wages, followed by the ones with monthly income between 2 and 3 minimum wages. Most part of the overindebted population, according to the survey, was composed of individuals with complete high school, corresponding to 35% of the total.

The 2014 survey also tried to check whether the Brazilian reality was consistent with the international experience, in the sense that there would be a positive correlation between misfortunes and overindebtedness. Hereupon, the survey unveiled that, out of the 147 individuals that declared themselves to be overindebted, 89 had suffered some misfortune in the last 24 months, which represented 60% of the total amount of overindebted people. On the other hand, 58 had not experienced any isolated event that could explain falling into overindebtedness, which also represents an expressive data, in the sense that around 40% of overindebted individuals would not have an extrinsic event other than his own volitional process of debt contraction to explain his current situation. In the table below, we list the isolated events of personal importance the interviewed mentioned to have experienced in the 24 months preceding the survey performed in 2014:<sup>20</sup>

<sup>20</sup> Total sum of events is greater than 147 events because some individuals reported to have faced more than one situation during the questioned temporal gap.

**Table 01: Events of individual relevance**

Events	Number of Individuals
Job loss	36
Job loss of another family member	19
Family disease	30
Birth	29
Divorce	25
Marriage	14
Opened a business	8
Closed a business	3

In 2014, 14 out of the 147 overindebted individuals declared themselves to be unemployed. It is important to highlight that, for the research purpose, to be unemployed is different from having lost a job in the last 24 months. Table 01 above mentioned that 36 individuals said to have lost their jobs in the recent past – what represents 24.5% of the over indebted individuals – whereas only 9.5% admitted being unemployed.<sup>21</sup>

Of the 147 individuals that declared themselves to be overindebted, 30 mentioned to have experienced health issues in the family. This quantity stands for 20.4% of the sample, leading *disease* to be the second most common cause reported for overindebtedness, just behind job loss.

Still in line with the international experience, events related to the family nucleus formation, growth or dismantling also appeared as situations positively correlated to overindebtedness. Of the 147 individuals, 29 said that their families expanded in the preceding 24 months (probably associated with child birth or with other persons that, for any reason, have become dependent on that family nucleus), which corresponds to

<sup>21</sup> A possible explanation of that percentage difference may be in the way the questions were formulated. In the eighth question of the questionnaire, it was asked for the individual to complete the following phrase "Currently, you are [...]". That topic was not about, specifically, the loss of job in a recent past. It is possible that the individuals have interpreted the alternative 04 – "unemployed" – as the one consistent with a lasting unemployment situation – in contrast to the loss of job in a recent past. Moreover, the job may have been lost, but the person may have been able to find a replacement.

19.72% of those who declared themselves to be overindebted. Divorce, in turn, was reported in 2014 as a major cause of overindebtedness, corresponding to 17% of the sample, albeit marriage appeared in 14 occasions, that is, in 9.5% of the cases.

In 2014, we noted that, in respect to overdue debt, of the universe of 147 individuals, only 76 declared to have arrears, which stands for 51.7% of the total. These data deserve attention as it appears to be inconsistent with reality, in so far as almost half of the individuals that have declared themselves to be overindebted would not have, on the other hand, declared the existence of matured unpaid installments.

Nevertheless, this statement reflects an issue found in similar researches carried out in other countries.<sup>22</sup> In a research done by Disney, Bridges e Gathergood, they concluded that a "surprisingly large" fraction of individuals declared to be in distress compared to a relative absence of evidence that they would have debts or financial obligations in arrears. Additionally, the survey also revealed that individuals with two or more overdue installments do not necessarily declare themselves to be in financial distress. Those findings imply the need of some caution when using the interview method to trace the profile of overindebted individual. Although it is undoubtedly a valid method and perhaps the one that catches the phenomenon more accurately, it is not fully exempt of some criticism.

<sup>22</sup> In the *Over-indebtedness in Britain* report, which analyzed the overindebtedness through an empirical approach using surveys about financial condition in 1647 households, it was verified that 7% of the studied households were in arrears with household bills, 4% were not with their credit obligations paid and 2% were overdue in both. KEMPSON, E. *Over-indebtedness in Britain: A report to the Department of Trade and Industry*, p.27. However, Disney, Bridges e Gathergood analyzed some apparent inconsistencies between those numbers and other findings of that survey. Despite those low percentage of people that admitted having arrears, *Over-indebtedness in Britain* found out that 18% of the families reported to be in financial distress.



### 4.3 Profile of individuals who declared that paying their debts have become a “heavy burden” in

It is important to emphasize that, instead of directly asking individuals whether they consider themselves to be overindebted, international research such as those mentioned in the previous sections usually pose questions in a slightly different way. Rather than inquiring individuals whether they are or know someone that would be “overindebted” - which would imply a technical notion of the phenomenon by the respondents - questionnaires often ask people whether their debts have become a personal heavy burden.

In the 2014 survey, for a person to be considered overindebted under such concept, she should have responded, among different options provided, the following to be the best sentence defining her current status: *“I have installments and it is very difficult to manage these installments within my budget”*. When using this parameter, 533 of the 2002 interviewed individuals would be overindebted, which represents 26.62% of the sample, that is, almost four times higher than that observed in the questions that expressly used the terminology “overindebtedness” and “overindebted”. The average age in this sample is of 40 years and 55% are women. Regarding education level, the majority, 34% of the sample, have completed high school, followed by 21% with elementary education.

Regarding race, the great majority, corresponding to 45% of the sample, self-declared themselves as brown, followed by white with 33% and black with 22% of the sample. When we analyze the marital status, 62% of the sample is composed of married

and 23% of single people.

The age groups in which the phenomenon was most frequent are those between 25-34 years, denoting a dominance of the event in the age groups of economically active and young population. Only 41 individuals over 65 years old, corresponding to 7% of the sample, reported to be experiencing a situation of overindebtedness. Most of these individuals have a monthly income between 1 and 2 minimum wages (41% of the sample), followed by the group of up to 1 minimum wage (32% of the sample).

**Table 02: Individuals and Events (Heavy Burden sample)**

Events	Number of Individuals
Job loss	121
Job loss of another family member	69
Family disease	108
Birth	90
Divorce	57
Marriage	39
Opened a business	26
Closed a business	9

With regard to debts in arrears, out of 533 individuals, 194 reported having overdue benefits, which corresponds to 36.4% of the total. Hence, a portion much higher than the one caught by the self-report method.

## 5 The survey conducted in 2016

### 5.1 Context of economic crisis worsening

Brazil has been facing a deep economic crisis since 2014, with recession and rising

unemployment. There is grounded suspicious that the period between 2014 and 2016 will end up being considered as the worst economic crisis ever faced by the country.

According to IPCA, inflation reached 6.28% in 2016 and was of 10.67% in 2015. According to the Brazilian Central Bank (Focus Bulletin), the GDP dropped 3.6% in 2016. In 2015, GDP had already dropped 4.06%. Besides, the official interest rate (SELIC) ended 2016 in 13.75%, which, despite a little fall, is still outrageously high.

Given this scenario, the first hypothesis to be tested is whether, when comparing the years 2014 and 2016, there would have been a percentage increase of individuals who declared themselves to be overindebted.

Data collected in 2014 reflected the economic reality of that time and, to some extent, in the 24 months that preceded it, in which there was still some optimism regarding the economy, and low unemployment rates. On the other hand, the situation experienced in 2016 was completely different, so it is relevant to assess whether there were any changes in the overindebted profiles described in the preceding section.

## 5.2 The profile of the over-indebted individuals in 2016 (self-declaration)

The survey conducted in 2016 basically kept the same questionnaire used in 2014, with only a few additions to the questions. The research technique used was the same, having also interviewed 2002 households defined using the same PPS methodology.

The first outcome of this new survey is that, in this sample, only 109 individuals declared themselves to be overindebted, which

represents 5.4% of the 2002 interviewees.

This data shows a slight fall in the number of people that declared themselves to be overindebted when compared to the 2014 results, when 147 individuals declared themselves overindebted, representing 7.3% of the total sample. It is important to note, however, that although there has been a slight percentage reduction from 2014 to 2016, this is within the margin of error of the survey, which is 2%. Hence, under this perspective, the percentage of overindebted over the total population would have remained unchanged.

This is a first relevant fact, since it would be an expected outcome that the economic crisis, which worsened over such period, would have significantly increased the amount of overindebtedness in the country, given the combination of economic retraction, increasing unemployment and increasing interest rates charged by the banks. However, this expectation was not confirmed.

With regard to the occurrence of isolated events as making situations of overindebtedness more likely, we have that, in 2016, individuals cited the following situations:

**Table 03: Individuals and Events of Personal Importance (self-declared)**

Events	Number of Individuals
Job loss	22
Job loss of another family member	26
Family disease	22
Birth	23
Divorce	13
Marriage	9
Opened a business	8
Closed a business	3

With regard to gender, from the universe of 109 events, we observe a dominance of the masculine gender, responsible for 57% of the events, although, within the 2002 individuals' sample, female presence was greater. This suggests that men would tend to be more overindebted than women.

The age groups in which the phenomenon was most frequent are those between 35-40 years, denoting a dominance of overindebtedness within the age groups of economically active and young population. Only 8 individuals aged over 65, corresponding to 7.3% of the sample, reported to be experiencing a situation of overindebtedness. Most of the overindebted individuals have monthly income between 1 and 2 minimum wages, followed by the range between 2 and 3 minimum wages.

According to the survey conducted in 2016, a larger share of overindebted population is composed of individuals that have completed high school, corresponding to 38% of the total.

In addition, 92 individuals, who correspond to 84.4% of individuals who declared themselves to be over-indebted, said they have overdue installments. This result seems to be more consistent with reality, since, when an individual states that she is overindebted, she is expected to have outstanding debts.

### **5.3 Profile of individuals who declared that paying their debts have become a "heavy burden" in 2016**

If we adopt the "heavy burden" perspective to investigate the phenomenon of overindebtedness, we have a universe of affirmative respondents of 757 people, or

37.8% of the sample. This figure is much higher than the one observed in 2014, which was of only 533 people, or 26.6% of the sample. This data seems to confirm the hypothesis that moments of economic crisis exacerbate situations of overindebtedness. It is also consistent with the literature that mentions that individuals tend to lie or omit situations of overindebtedness when demanded directly, being more reliable in their answers when the inquiry is limited to situations such as having late payments or facing difficulties in paying their debts.

Thus, the way in which the question is formulated can have a consequence on the result obtained as to the increase of overindebtedness due to the economic crisis or not.

Regarding the profile of individuals who declared that their debts constitute a heavy burden, as for gender, from the universe of 757 events, we observe a dominance of females, responsible for 52% of the events. In this sample, there is no clear gender dominance anymore, as the percentage followed the division observed in the 2002 set of individuals.

The age groups in which the phenomenon was most frequent were those between 25-34 years, denoting a dominance of the event in the age groups of the economically active and young population. Only 53 individuals over 65 years, corresponding to 7% of the sample, reported to be experiencing a situation of overindebtedness. Most of these overindebted individuals had monthly income between 2 and 3 minimum wages, followed by the range of 1 and 2 minimum wages.

The largest share of the over indebted population is composed of individuals that

has complete high education, corresponding to 38% of the total.

With regard to the occurrence of misfortunes as themes capable of explaining situations of overindebtedness, we have that, in 2016, the individuals cited the following situations, as shown in Table 4:

**Table 04: Individuals and Events of Heavy Burden**

Events	Number of individuals
Job loss	184
Job loss of another family member	161
Family disease	201
Birth	149
Divorce	76
Marriage	56
Opened a business	44
Closed a business	28

With regard to debts in arrears, out of the 757 individuals, 437 reported overdue installments, which correspond to 57.9% of the total. This amount is much lower than the one reported in the previous sentence. One possible explanation, besides people lying for moral purposes, is that a person stating that coping with debts is a heavy burden in her life does not necessarily mean that she is overindebted or has unpaid matured installments.

## 6 Comparative analysis between 2014 and 2016

In the previous sections, we have presented the results of the surveys carried out in 2014 and 2016. In the following topics, we will make considerations about similarities and differences found, with the purpose of verifying if there was a change in the profile of the Brazilian overindebted people during

that term. Firstly, we analyze the data under the perspective of self-declaration and, subsequently, the group that has stated that they are facing difficulties in paying their debts.

### 6.1 Self-declaration

When comparing the 2014 and the 2016 overindebted profiles following the direct self-declaration method, the only difference in the profile of the interviewees, and yet not very significant, was in relation to gender. In 2014, the majority of the respondents who declared themselves over indebted were women, with 55%. In 2016, 57% of the individuals were men.

In 2014, the average age of individuals was 37 years old and, in 2016, 40. Regarding educational background, the two databases also remain similar; in both the majority of individuals have completed high school (with 43.5% in 2014 and 38.5% in 2016).

In 2014, 58.5% of individuals who declared themselves overindebted were married. In 2016, this percentage reduced to 54.1%. Hence, there was no significant variation, as the difference between both percentages fall within the 2% survey's margin of error.

It is not possible to affirm whether there was a change in the gender of the respondents of this sub-sample, since there was a change in the options of answers to that question. In 2016, the indigenous option was included, which did not exist in the 2014 questionnaire.

From the data above, we may conclude that the economic crisis did not change the predominant characteristics of overindebted individuals' profile.

### 6.2 The "heavy burden" approach

In 2014 and 2016, the average age of the individuals was 40 and 39 years old, respectively. Regarding educational background, the two databases also remained similar; in both the majority of individuals have completed high school (34% in 2014 and 38% in 2016).

In 2014, 62% of individuals who reported having difficulty honoring their debts were married. In 2016, this number changed to 59%, which allows us to affirm that there was no change in the profile, since both percentages are within the margin of error.

In 2014, the majority of respondents who reported having difficulty in paying their debts were women, with 55%. In 2016, this number decreases to 52% of individuals, also within the margin of error.

As mentioned in the previous section, it is not possible to state if there was a change in the race of the interviewees.

Hence, when taken the “heavy burden” approach, the same conclusion of the preceding section follows: the economic crisis did not change the predominant characteristics of overindebted individuals’ profile.

## 7 Joint assessment of 2014 and 2016 samples

In this section, we present the results of a joint analysis of the 2014 and 2016 samples, totalizing 4004 events, to obtain the average effect of possible explanatory variables of overindebtedness.

### 7.1 Causality study

In the previous topics, we have presented the profiles of overindebted individuals, and

it was possible to verify the predominance of certain events that could help explaining why an individual becomes overindebted. In that sense, the research question would be: “What events lead to overindebtedness?”

The equation below allows us to reveal the events that generate overindebtedness:

$$Y_{is} = \beta_0 + \beta_1 X_{is} + \beta_2 Z_{is} + \varepsilon_{is}. \quad (\text{Eq. 1})$$

In which  $Y_{is}$  is an overindebtedness dummy variable (according to the two different definitions we use) of agent  $i$  in state  $s$ .

The variable  $X_{is}$  comprises a set of possible events (marriage, widowhood, birth, divorce, loss of job of the head of the family, loss of job of another member, opening and closing a business) experienced by agent  $i$  in state  $s$ . The variable  $Z_{is}$  also includes a set of control variables, such as age, color, ethnicity, gender and educational background of the agents. The variable  $\varepsilon_{is}$  is the error.

## 7.2 Results

The results of the estimation of Eq. (1) are reported in Table 05. Column (1) shows the results when we use the self-declaration of the respondent – *yes, I am overindebted* – as a dependent variable. In this case, only the variables marriage, divorce, and closing a business appear to be events that positively affect the probability of being overindebted. It is interesting to note that, contrary to what was expected, unemployment and disease do not appear as significant variables. The variable birth appears as a significant variable, however, with only 10% significance.

Column (2) reports the results when using

the fact that the respondent is experiencing difficulties to pay his bills (the “heavy burden” approach) as dependent variable. When this variable is used as a proxy for overindebtedness, the results are aligned with the international literature, in that the job loss by either the householder or another family member increases the probability of the individual being overindebted. In this context, the variable “closing a business” also appears significantly as a possible generator of overindebtedness, however, with a level of significance of only 10%.

**Table 05**

Impact of Events on Probability of being Over-Indebted		
	2014-2016	
	Self Declared (1)	Heavy Burden (2)
Marriage	.05*** (0.01)	-.00 (0.03)
Divorce	.05*** (0.01)	.02 (0.02)
Job loss	.01 (0.01)	.11*** (0.02)
Job loss of another family member	.01 (0.01)	.05** (0.02)
Family disease	.01 (0.00)	.02 (0.01)
Widowhood	.00 (0.02)	.02 (0.05)
Birth	.02* (0.01)	.02 (0.02)
Opened a business	.02 (0.01)	.01 (0.03)
Closed a business	.07** (0.03)	.11* (0.05)
Controls:		
Age	Yes	Yes
Ethnicity	Yes	Yes
Color	Yes	Yes
Gender	Yes	Yes
Education	Yes	Yes
Year	Yes	Yes

N: 4004

Standart deviation in parenthesis. (\*\*\*) p&lt;0.01 \*\*p&lt;0.05, \* p&lt;0.1).

The results of this research show that even when we control for several variables, the probability of a person being overindebted increases by 10% when the head of the family loses his job, and by 5% when another member loses his job.

Additionally, according to Table 06 below, it is possible to note that the highest percentage of people who stated that they are experiencing difficulties to pay their bills are individuals with income up to 12 minimum wages, according to the stratification below:

**Table 06**

Percentage of people reported difficulty to pay bills (by salary range)	
Up to 1 minimum wage	0.50
More than 1 to 2 minimum wages	0.48
More than 2 to 3 minimum wages	0.53
More than 3 to 4 minimum wages	0.41
More than 4 to 6 minimum wages	0.51
More than 6 to 8 minimum wages	0.40
More than 2 to 12 minimum wages	0.44
More than 12 to 16 minimum wages	0.26
More than 16 to 20 minimum wages	0.10
More than 20 minimum wages	0.17

Individually considered, the average monthly income group of 2 to 3 minimum wages presents more than half (53%) of individuals with difficulties in honoring their debts. However, perhaps the most revealing fact is that only with an average income above 12 minimum wages it is possible to observe a significant reduction in the percentage of individuals reporting that they are experiencing difficulties in paying their debts.

## 8 Some policy guidance and issues for further research

Overindebtedness has become increasingly important worldwide. In Brazil, it was no different. The growth of a mass of indebted individuals has been very large in recent years.

From the surveys which results are presented in this paper, it was possible to trace the Brazilian overindebted profile. Regardless of the chosen perspective - self-declaration or heavy burden - an individual aged between 37 and 40 years, married and that has completed high school is more likely to be overindebted. It is also possible to conclude that some events are more likely to lead to a situation of overindebtedness, regardless of age, gender, educational background, etc.

Once the profile of individuals with the highest probability of being overindebted is outlined, it seems reasonable to draw more attention to this group when formulating policies to prevent and treat overindebtedness.

A first question to address could be inquiring what to do when an individual asks for a bank loan.

A possible answer, based on the profile of individuals with higher probability of becoming overindebted, would be requiring financial institutions to take some additional precautions regarding this subgroup. One could be to increase bureaucracy for the target public. That is, to make it more difficult for these individuals to take credit.

We do not disregard the fact that it is in the best interest of financial institutions that individuals take credit. In principle, it would also be (or should be) in their best interest to reduce the proportion of credit borrowers'

individuals who are most likely to default.

It is about time Brazilian financial regulators start discussing whether it would be a virtuous measure the passing of regulation to make financial institutions more accountable for money lending, especially to more vulnerable individual groups. Another instrument could be to have more publicity on the risks of too much borrowing – giving people more information on the risks related to getting credit.

A second issue refers to what to do in relation to people who have already contracted loans they are unable to pay. In relation to loans already contracted, it could be possible to think about a system of greater vigilance by financial institutions over their clients to enhance the quality of risk assessment.

A regulatory response could include the passing of legislation to make filing for bankruptcy more attractive to debtors, which could include an expedite judicial proceeding to provide individuals with a fresh start.<sup>23</sup>

## 9 Conclusion

This paper analyzed data on overindebtedness from a database extracted from a national survey that aimed at outlining the Brazilian population debt profile. Two surveys were carried out (in 2014 and in 2016), which allows comparability between the two historical moments.

We have presented data regarding the worsening of the country's macroeconomic indicators within this period, evidencing

<sup>23</sup> Suggestions for changes in the current system of individual civil insolvency in Brazil can be found in SAMPAIO, P.; NOGUEIRA, R.; BORGES, G. (2018). Superendividamento e insolvência civil no Brasil: oportunidades de reforma do marco regulatório. *Revista de Direito do Consumidor*, year 27, No. 118, July-August, pp. 294-329.

recession and unemployment rate growth, which shows deterioration in the population's living conditions.

The reported surveys allow us to conclude that, when assessing the group of individuals that self-declared being overindebted, there was no significant percentage change 2014 and 2016: There would have been a small reduction, within the margin of error of the research. Therefore, the economic crisis would not have led to a significant growth of overindebtedness, contrary to the intuition according to which, the worse the macroeconomic conditions, the worse the individuals' indebtedness scenario.<sup>24</sup>

However, when comparing the data between 2014 and 2016 focusing the group of individuals who reported difficulties in paying their debts, the result was an increase of more than 10 percentage points, from 26% to 37%. If in 2014 only 51.7% of self-declared overindebted individuals confessed having overdue and unpaid debts, in 2016 this percentage increased significantly, reaching 84.4%. Likewise, with respect to the subgroup of those who stated that paying bills had become a "heavy burden", if in 2014 only 36.4% reported having installments in arrears, that percentage rose to 57.9% in the sample of 2016.

Therefore, these data seem to confirm the hypothesis of a deepening of the overindebtedness phenomenon as a consequence of the economic crisis.

Regarding isolated events, we observe that,

<sup>24</sup> This data, which does not point to a large variation in the amount of overindebted individuals since 2014, seems to be consistent with the research made by the National Consumers' Confederation (*Confederação Nacional do Comércio - CNC*), Consumer Indebtedness and Delinquency Profile (*Perfil de Endividamento e Inadimplência do Consumidor - PEIC*), which, when disclosing the data of 2015, estimated the number of families with overdue benefits and unable to pay them at 7.7%, a percentage slightly higher than the one observed in 2014, which was 6.3%. Available in: [http://www.cnc.org.br/sites/default/files/arquivos/perfil\\_de\\_endividamento\\_das\\_familias\\_brasileiras\\_em\\_2015.pdf](http://www.cnc.org.br/sites/default/files/arquivos/perfil_de_endividamento_das_familias_brasileiras_em_2015.pdf). Accessed in September 2016.

in both the 2014 and 2016 surveys, events such as unemployment and disease in the family appear as the most relevant isolated events leading to over-indebtedness among individuals who self-declared being overindebted. It is interesting to note that events such as opening or closing a business do not show much force as a correlative variable to overindebtedness.

However, when we conducted the causality study, controlling these factors by several characteristics, the job loss variable did not prove significant to explain overindebtedness, when we consider the group of individuals that self-declared being overindebted. On the other hand, when assessing the impact of unemployment from the perspective of "heavy burden" we noticed that, as expected, unemployment proves significant to explain overindebtedness.

Regarding the socioeconomic profile, there was an interesting inversion: in the 2014 self-declared group, the largest share was of women (55%), whereas, in 2016, men were predominant, with 57%. In the sample that adopted the heavy burden perspective, there was no such inversion. In 2014, the majority of respondents were women, with 55%. In 2016, this percentage was of 52%.

A relevant outcome from the survey is that it evidences the high complexity of the overindebtedness phenomenon, especially regarding researches that adopt survey questionnaire as research method. As seen, there were variations in the results depending on how the sample is extracted from the universe of individuals that answered the survey, whether through a direct question about overindebtedness, or through indirect inquiries.

Data is consistent with the hypothesis



that there has been a worsening of the overindebtedness situation in the last two years, when the heavy burden approach is considered.<sup>25</sup> However, when the direct self-declared group is considered, data remained constant between 2014 and 2016.

Review of regulation regarding prevention and treatment of overindebtedness could change the incentives regarding lending and borrowing, therefore, reducing the likelihood that an increasing part of the population falling under this group. Instruments to do so include deepening the screening of people before they get a loan, making financial institutions more accountable in case of careless lending, and reforming the civil insolvency judicial proceeding to include, among other measures, the possibility of a fresh start.

<sup>25</sup> This conclusion seems to be consistent with the results obtained by the CNC's PEIC for 2015: "In 2015, the level of Brazilian families' indebtedness decreased. A number of factors unfavorable to consumption, among which the more modest growth of credit supply, the increase in consumer inflation and in the purchasing power of wages, and the slowdown in the labor market, with a reduction in employment and workers' income, may explain the reduction in the number of indebted households. (...) Despite the reduction in the level of indebtedness, there was an increase in the average number of families with debts or overdue bills. Even having reached the lowest level of the historical series in February 2015, the number of those with overdue bills increased throughout the year, following the deterioration in employment and income indicators, as well as the increase in inflation and the increase in credit prices. The perspective of paying debts and overdue bills also worsened, and more families declared they would continue to default in relation to the previous year. The worsening in the default indicators was more significant for families with income up to ten minimum wages" *Ob. cit.*, p. 6.

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