# INCENTIVES FOR LITIGATION IN LABOR COURTS: LITIGATION AS A 'WIN-WIN' GAME

Luciana L. Yeung
LucianaY@insper.edu.br
Insper (São Paulo, Brazil)

## ABSTRACT

The literature of economic analysis of litigation identifies several variables that affect the incentives for litigation, such as the parties' personal characteristics, market variables (price and quality of lawyers' services), judicial values and outcomes, and so on. More specifically, theory shows that parties evaluate the costs and benefits for litigation. Therefore, higher winning rates for one side may lower the incentives for the other side to litigate. However, we show that it is possible that, despite consistently losing cases at courts, certain litigants may still find it profitable to litigate. That may be explained by very low opportunity costs of litigation faced by one side. On the contrary, for these litigants, trying a cooperative settlement may be more costly than losing the case judicially. We argue that Brazilian Labor Courts constitute one clear example of such a situation. First, we derive an analytical model that describes such phenomenon; in sequence, we use empirical data derived from text mining techniques on approximately 130,000 labor suits to show evidence of the predictions of our analytical model.

## 1. Introduction: Over Litigation as a Fact in Brazilian Labor Courts

Litigation rates in Brazil are high by any account. According to a report published by Clements Worldwide, an international insurance company, Brazil is among the most litigious countries in the world, ranking top-2 in the number of lawyers per capita, lagging only behind the United States. Rasmeyer and Rasmusen (2013) are more precise. They measured the number of suits filed per 100,000 people in several developed countries and found, respectively: 5,806 for the USA, 3,681 for England, 1,768 for Japan – among others. By its turn, Wollschlager (1998) indicates that in Europe the most litigious country is Germany, with 12,300 cases, followed by Sweden, with 11,120; If the numbers for those countries are somehow still valid, Brazil certainly has surpassed them all, placing itself undoubtedly as number 1. The Brazilian National Council of Justice (CNJ) publishes, every year, the annual statistics of the Judiciary Power: the "Justiça em Números" reports. According to the 2017 report, based on the 2016 statistics, on December 31, there were 79.7 million cases pending for decision in Brazilian courts, despite judges having decided 29.4 million cases in that same year. Population in 2016 was 207.7 million people. These numbers amount to 0.52 cases per capita, 52,530 cases for every 100,000 people, or more than 4 times the numbers in Germany, as indicated under Wollschlager's research. According to "Justiça em Números", there were 12,906 new cases in the Brazilian Judiciary for every 100,000 people in 2016. We stopped the data analysis in 2017 on purpose, since in that same year, there was a significant reform in labor laws. That reform caused a significant downward shift in the number of cases brought to courts. More about this ahead.

Labor courts, in special, do not lag behind the average situation in the country. On the contrary, evidence suggests that this is a highly conflictive branch of law in Brazil. Castelar Pinheiro *et al* (2000), one of the first pieces of economic and empirical analysis of the Brazilian Judiciary, carried out a survey covering approximately 600 companies, of all sizes and types of activities. Executives from these companies answered questions related to their relationship with the judicial power. Table 1 summarizes the number of cases these companies had faced in courts in a period of 10 years before the survey:

**Table 1: Number of Lawsuits Faced in Courts (n = 600 companies)**

| Matter of Dispute | As plaintiff | As defendant | Total |
|---|---|---|---|
| Labor | 1,904 | 105,753 | 107,657 |
| Tributary | 8,394 | 3,027 | 11,421 |
| Commercial | 11,071 | 3,096 | 14,167 |
| Intellectual Property | 199 | 23 | 222 |
| Consumer's Rights | 37 | 920 | 957 |
| Environmental | 12 | 68 | 80 |

Source: Castelar Pinheiro et al (2000)

Table 1 suggests that, in comparison to other fields of law, the number of labor cases at courts is staggering. The second most litigious area was commercial law and it comprises roughly 13% of the total number of labor cases.

Official numbers from "Justiça em Números" also offers clear evidence in this sense: in 2016, there were 1,721 new cases in labor courts for every 100,000 people, or a total of 4.3 million new cases. With regards to pending cases, labor courts comprised 5.4 million, placed top-3 (6.8% of total), behind only to state courts and federal courts. An important remark is that these two branches deal with a multiplicity of issues: state courts are the destination of all cases related to civil, commercial, family, and tort law, and federal courts deal with all constitutionally related conflicts. As a specialized branch of the Judiciary, labor courts have far more cases than those of the Electoral Justice, which in 2016 received only 972,000 new cases. Military courts received even less, 3,581.

Why is this so? Are these cases moved by rational motivations? The objectives of this paper are mainly three. First, we provide a detailed diagnosis of the situation in labor courts with regards to litigation rates, and with regards to the frequency of judicial decisions for these cases. We use text mining techniques to extract approximately 130,000 cases, which were decided by a first-degree labor court in Brazil. As we will see, the selection hypothesis of Priest and Klein (1982) is not observed here. If so, why there is still so much litigation? Wouldn't the losing party, by anticipating his/her chances of losing the case, have incentives for cooperative settlement? Our second objective is to derive an analytical model to show the litigation costs and benefits for both parties – plaintiffs (in our case, employees) and defendants (employers). We will demonstrate that, under certain circumstances (which are observed in the Brazilian labor disputes context), litigation

may represent a win-win game for both parties. Finally, we provide evidence that the conditions for a win-win game actually prevail in labor courts.

This paper is organized as follows: in section 2, we briefly discuss the literature on economic analysis of litigation. Our paper tries to contribute to the existing literature by providing a model that complements previous discussions. Differently to what have been posed before, we argue that, under certain circumstances, it might be beneficial for *both sides* to avoid settlement and move forward with litigation. Section 3 is our empirical section, which will motivate our research. Text mining results show that decision rates at Brazilian labor courts are far from the 50-50 prediction by Priest and Klein (1984): apparently, employers seem to be constant and big losers in labor courts. In Section 4 we derive an analytical model to demonstrate that even losing most of the cases, it is still rational and beneficial for employers to keep on with lawsuits and avoid settlement with employees. In Section 5, we go back to the empirical exercise to bring statistics and evidence to corroborate our theoretical model, so to confirm the existence of a win-win game in Brazilian labor courts. In section 6 we conclude the paper by linking the empirical motivations of the beginning of the paper, the analytical model and the evidence found in our text mining exercise.

## 2. Theories on Incentives for Litigation.

According to Miller (1994), "of all fields in which economic analysis has contributed to our understanding of legal rules and institutions, few have been as fruitful as that of civil procedure" (p.303). In general terms, literature of this field tries to identify incentives that generate more or less litigation, as opposed to more or less cooperative settlement. These incentives may be of various nature, origins and possibility of control or manipulation by public policies. The amount of damage under dispute, litigants' and defendants' personal characteristics, market variables such as price and quality of lawyers' services, judicial values and outcomes, etc. are all important determinants of litigation, and have all been scrutinized by authors in the literature of economic analysis of litigation.

Priest & Klein (1984) modeled the economic incentives for litigation. In their model, the expected costs of favorable or unfavorable decisions to the parties, their information with regards to the final judicial outcome (which could contain errors), the explicit costs of litigation and of private cooperative settlement are determinants to the decision of litigating or not. The main conclusion of their model, materialized under the *selection hypothesis*, is that, "where gains or losses from litigation are equal to the parties, the individual maximizing decisions of the parties will create a strong bias toward a rate of success for plaintiffs at trial or appellants at appeal of 50 percent regardless of the substantive standard of law. Thus, plaintiff victories will tend toward 50 percent…" (p. 5).

Cooter and Rubinfeld (1989) also used an analytical model to show the economic incentives for litigation, under rational choice assumptions. In their model, increasing litigation costs ($c_{tp}$, $c_{td}$) reduce the cost of agreement ($c_{sp}$, $c_{sd}$), which, in turn increases litigation pessimism. Thus, there would be more incentives for cooperative agreement. On the other hand, increasing the values of condemnation leads to ambiguous results: it increases the parties' incentives for litigation, but also increases litigation costs (since it raises the necessary effort) and risks. This would reduce the frequency of lawsuits.

These authors observed a lack of empirical studies on the decision-making process of litigation. That was probably aggravated at the time by the lack of computational tools for analyzing large amounts of litigation-related data, which nowadays are becoming more sophisticated by the methods of text mining and machine learning.

## 3. Empirical Analysis, Part I: Motivation – Using Text Mining to Look at Brazilian Labor Courts Big Data

> *"Big data is like teenage sex: everyone talks about it, nobody really knows how to do it, everyone thinks everyone else is doing it, so everyone claims they are doing it…"*
>
> *(Dan Ariely – from a Facebook meme)*

We derive the motivations of our paper from an empirical exercise. More precisely, we draw data on Brazilian labor lawsuits, so to have a preliminary check on the evidence. We do that by means of text mining techniques, in order to get a representative sample of cases from a particular period of time.

### 3.1 Empirical Strategies

First, we employ a few methodologies from natural language processing (NLP) for the empirical exercise. In fact, as it would be more accurately described, we use computational algorithms to do *text mining* in the open-access, public archives of Brazilian labor courts. We retrieve a very big sample of judicial decisions ("*big data*"), considering previous works on the subject, and further extract information from the texts mainly using regular expressions, so to retrieve the information that really matters to us.

There is not an objective definition of what consists *big data*. Although it is related to large volumes of information, there is no "x" number of gigabytes (or terabytes, etc.) that define the threshold from which it can be considered big data. Information Technology has been developing at such exponential speed that what would be considered "big" today would soon be considered "small" and be replaced by ever increasingly larger volume. Thus, some data scientists argue that what characterizes a big data system is that it is a set of information of significant complexity, which cannot be analyzed with the use of traditional technologies such as spreadsheets. The use of the big data allows us to draw conclusions and observe trends that are not easily captioned by means of conventional methods. Its major purpose and differential is to be able to find patterns in data that would otherwise remain hidden. This is especially true to legal texts, since they usually require the manual reading of the decisions or other texts used as data points.

Perhaps more important than having access to big data systems is to be able to "read" it, to understand – by computational methods – what that large amount of information is telling us (without having to physically read them all, what would perhaps, require one lifetime – or more).

Thus, *text mining* techniques are crucial, and what truly make difference when someone has access to big data systems. In order for a computer or machine to be able to "mine", or to read the text we want, one must "teach" it how to do it. Thus, another crucial step in the process is to conduct *machine learning* techniques – perhaps one of the trickiest in the usage of big data systems.

For this paper, we first accessed and downloaded close to 400,000 documents with decisions issued by labor courts**.** With that big volume of judicial decisions, we conducted *machine learning* and the computers did the "mining" of documents which truly interested us. In terms of machine learning, we used *cosine similarity* to compare, cluster and analyze the phenomenon of *forum shopping*. To extract information from the texts, we used regular expressions.

We basically ran through a five-step procedure: First, we indexed all texts with a set of keywords (elements of our research interest). Then, from each case in our dataset, we extracted some basic information, such as ID number, the judge's name, etc. Third, we analyzed the text structure of all decisions, with regards to the case summary, legal foundations and final decision by the judge. Next, and if possible, we evaluate the outcomes, for the plaintiff, against the plaintiff or the dismissal of the case. Then, finally, we extracted some smart reports from the data.

With this done, it was possible to have a better understanding of the contents of the cases and the heterogeneous profile of each judge and geographical location. Therefore, it is possible to statistically and econometrically find trends from the big data set and some abnormalities.

The extraction of information from legal texts using regular expressions is possible largely because lawyers and judges are required to use some expressions, sometimes by the law, in order to act through their texts. For example, when celebrating a marriage, the minister must speak certain words in a certain order. If not, then the celebration is not considered valid before the law.

There is, likewise, a canonical form of deciding an outcome in a legal dispute. There are some small variations, but they are sufficiently small so that the extraction through regular expressions is possible.

With regards to the topics under discussion in a labor dispute, we found that these cases are decided by the judges in parts. Each part of the text discusses an aspect of the case, like chapters in a book. The title of these "chapters" reveal what are the demands formulated in the case.

## 3.2 Preliminary Findings

To collect the data, we downloaded all cases brought to entry-level labor courts of the 2nd Regional Labor Court (TRT-2), the one covering the metropolitan area of São Paulo (the largest city in Brazil). TRT is also the largest labor court in the country. Since Brazilian courts are in the process of going digital, and since the policy by the National Council of Justice is to make cases as accessible to the wide audience as possible, it is reasonable to believe that cases accessed by this current research represent a very large proportion of the true population.

We limited our search to those cases judged from January 2001 to July 2017. The first exercise brought 386,995 documents from the TRT-2. However, from this all, only 129,720 were directly related to adjudications over labor conflicts. These included sentences, judgments on appeals, grievances, etc.

General Results:

A characteristic of our sample is that it comprises only cases brought by employees to courts, we excluded all those cases which were initiated by employers against an employee (in any case, those cases were much fewer in number). With that in mind, our preliminary results are:

**Table 2: Overall Winning Rates**

|  | Percentage of total |
|---|---|
| Decisions fully or partially favoring the employee | 88.55% |
| Decisions fully favoring the employer (firm) | 11.45% |

Source: Author's own calculation.

Contrary to what is predicted by theories on economic analysis of litigation, results from 1st degree courts are highly unbalanced against employers, in favor of employees. What are the reasons for such imbalanced numbers? Are employers being rational by insisting on litigation? Why we do not see more settlement under such circumstances? We were then drawn to the derivation of an analytical model that explains such an apparent puzzle.

## 4. An Analytical Model for Labor Litigation

Following the literature on economic analysis of litigation (or civil procedure), which was briefly reviewed above, we argue that there are costs and benefits associated with potential litigation. Frequently, these costs and benefits are not deterministic but expected, since the litigation process is usually lengthy and has uncertain results. On the other hand, there are also costs and benefits

associated with cooperative agreements and settlement, in this case, more certain and deterministic. The reason is clear: agreement is usually a one-shot or much shorter process. A rational agent – either a plaintiff or a defendant, an employer or an employee – measures the costs and benefits of pursuing a judicial litigation *vis a vis* the costs and benefits of engaging in a settlement.

In this section, we develop an analytical model in which we define the exact costs and benefits faced by employers and employees in Brazil. We evaluate the variables affecting the incentives for litigation and those affecting incentives for consensual agreement/settlement. With that in mind, we evaluate the conditions under which both parties may push the litigation process further, and on the contrary, under which conditions it is more likely that they will engage in private agreement.

4.1 Employees' and Employers' Incentives.

It does not matter who filed the lawsuit at court, or whether the employer or the employee is the plaintiff (or the defendant); both parties have expected benefits and expected costs associated with continuing the litigation and with trying to settle down. We consider only those cases in which the employer owes the employee certain amount of money (either as benefits unpaid, or damages incurred). The value to be paid will be stipulated either judicially or by means of an agreement.

At the employee's side, variables which affect his/her decision about the labor conflict are:

Employee's Benefits:
- ✓ **VS:** Value of Settlement – the amount to be paid by the employer to the employee, determined through a settlement between the parties. It is paid right after the agreement occurs.
- ✓ **VC:** Value of Condemnation – the amount to be paid by the employer to the employee, which is stipulated at court, by the judge. It is paid after the litigation process is over, and after the execution process is successful. (During the execution process, courts may fail in making the debtor (in this case, the employer) pay his/her debt, i.e., the condemnation imposed by the judge.)
- ✓ **L:** Return of Capital for the Employee – rate of return over an invested capital by the employee. If the employee could save money in the most profitable (and risk free) financial investment, what would that return be? This represents his/her opportunity cost of receiving

the amount of money owed by his/her employer only after a lengthy judicial and execution process.

- ✓ **Pc:** Probability of the Judicial Condemnation being favorable to the Employee.
- ✓ **Pe:** Probability of the Execution being successful towards the Employee (i.e., he/she successfully gets the money owed by the employer).
- ✓ **$Clit_l$:** Costs of litigation by the employee – how much does it cost for the employee to move ahead with the litigation process.
- ✓ **$AF_l$:** Attorney Fees paid by the Employee
- ✓ **n:** Average length of time for the litigation process and the execution process to be concluded.

On the other hand, employers also have a set of costs and benefits associated with litigation and with cooperative settlement:

Employer's Benefits:
- ✓ **VS:** Value of Settlement (same as above).
- ✓ **VC:** Value of Condemnation (same as above).
- ✓ **B:** Return of Capital for the Employer – rate of return over an invested capital by the employer. If the employer could save money in the most profitable (and risk free) financial investment during the lengthy process of the litigation, what would that return be? This represents his/her opportunity cost of engaging in an agreement and having an immediate cost of VS right after it; instead, he/she could keep the litigation and paid VC only after the process is over.
- ✓ **Pc:** Probability of the Judicial Condemnation being favorable to the Employee (same as above).
- ✓ **Pe:** Probability of the Execution being successful towards the Employee (same as above).
- ✓ **$Clit_b$:** Costs of litigation by the employer – how much does it cost for the employer to move ahead with the litigation process.
- ✓ **$AF_b$:** Attorney Fees paid by the Employer
- ✓ **n:** Average length of time for the litigation process and the execution process to be concluded (same as above).

One may notice that several variables affect both employee and employer at the same time and have the same value. This is obvious: while the value of condemnation (**VC**) is charged on the employer's side, it is credited on the employee's side with the exact value. The same is true for the value of settlement (**VS**). Other variables that affect both parties equally are **Pc, Pe** and **n**.

4.2 Employee's conditions for agreement.

Next, we evaluate the exact benefits of litigation and of settlement for both employer and employee.

✓ Employee's benefits for settlement.

The employee's main benefit in reaching a cooperative agreement with his/her employer is to get an amount of money immediately. In comparison with the situation in which he/she gets paid only after a lengthy judicial process, there are intertemporal gains of getting the money earlier. Thus,

$$Employee's\ benefit\ for\ settlement = VS * (1+L)^n \quad \text{[Eq.1]}$$

In other words, it is as if, he/she could invest the money gained in the settlement with the employer, and save it in a risk-free investment, which pays **L** of return, for **n** periods (the length of time for the duration of the litigation).

✓ Employee's benefits for litigation:

On the other hand, the employee could decide to keep up with the ligation at court. His/her net benefit for doing so may be represented by:

$$Employee's\ (net)\ benefit\ for\ litigation = (VC * P_c * P_e) - Clit_l - (1 - P_c)*AF_l \quad \text{[Eq.2]}$$

If the employee wins the litigation, he/she will be awarded VC; however, that depends on the probability of winning the case (**$P_c$**), and also on the probability that the execution process will be successful (**$P_e$**), i.e., that courts will be able to collect the money from the employer. At the same time, he/she needs to pay judicial fees in order to continue the case at courts. Furthermore, if he/she loses the case (with probability 1 - $P_c$), attorney fees are owed for the labor attorney.

It is not difficult to evaluate the circumstances under which it will be more profitable for a rational employee to prefer agreement instead of litigation; by comparing Eq.1 with Eq.2:

$$Settle\ down\ if:\ VS * (1+L)^n > (VC * P_c * P_e) - Clit_l - (1 - P_c)*AF_l \quad \text{[Eq.3]}$$

Under conditions demonstrated in Eq.3, the **employee prefers a settlement** instead of advancing with litigation. Situations which might push for the condition above to be observed:

✓ Very high values of **VS**: the amount offered by the employer to reach a cooperative settlement so high that it would be a loss not to accept it, and to insist with the litigation.

✓ Very high values of **L**: savings by the employee yield high rates of return. In this case, it would be more profitable for him/her to get the money as soon as possible, so to invest it in a fund and get high returns.

✓ High values of **n, the duration of the litigation process:** the judicial process takes long time to be concluded, so the employee has to wait a long period of time until he/she gets the money. Under such conditions, it is better to reach an agreement sooner.

✓ Low values of **VC:** the amount condemned at courts is very low; it is not rational accepting it, instead of VA.

✓ Low values of $P_c$ and $P_e$: chances of winning at labor courts and/or of having a successful execution (getting money from the employer) are very low; the employee has low expectations that courts will be favorable to his/her case.

✓ High values of **Clit$_l$**: it is very expensive for the employee to access courts.

✓ High values of **$(1 - P_c)*AF_l$**: expected attorney fees are very high; this may happen as a combination of high chances of losing the case $(1 - P_c)$ and of high attorney fees to be paid by the employee $(AF_l)$. If attorney fees are expensive, it costs significantly to continue with the litigation, just like the cases of high Clit$_l$.

4.3 Employer's conditions for settlement.

Now, let's turn our analysis to the employer's side. Here, all values paid for the employee are costs. Thus, instead of benefits for agreement, the employer has *costs* for the settlement.

$$Employer's\ cost\ for\ settlement = VS * (1+B)^n \qquad \text{[Eq.4]}$$

Employer's costs for the settlement are mainly his/her opportunity costs of not being able to save money until the future, more precisely, until the time the judicial process would be concluded. Instead of making and agreement now, he/she could save the money until "n", yielding capital returns of "B".

It is also possible to derive the employer's costs for litigation:

$$Employer's\ cost\ for\ litigation = (VC * P_c * P_e) + Clit_b + P_c * AF_b \quad \text{[Eq.5]}$$

He/she pays a value of condemnation, with probability $P_c$ times $P_e$ (employer is condemned, *and* his debt is executed); additionally, it costs him/her to access courts. Finally, he/she must also pay attorney fees ($AF_b$) if he/she loses the case.

Now, it is easy to derive the conditions under which the employer prefers settlement: it happens only if his/her costs of agreement (Eq.4) are smaller than the costs of litigation (Eq.5):

$$Settle\ down\ if:\ VS * (1+B)^n < \{(VC * P_c * P_e) + Clit_b + P_c * AF_b\} \quad \text{[Eq.6]}$$

Eq.5 shows the **conditions under which the employer prefers a settlement** instead of advancing with litigation. This may happen when:

✓ Low values of **VS**: if values agreed on a private bargaining are low, i.e., if the employee voluntarily accepts a low payment, it is preferred for the employer to pay it, instead of waiting to pay another higher value at courts.

✓ Low values of **B**: if the employer has a low rate of return on his/her capital investments, it is not so profitable to save the money now to pay it later; lower rates of capital return means money has lower value in the future, so it is not so much worth having it later.

✓ Low values of **n**, the duration of the litigation process: the employer here is a debtor (owes money to the employee); thus, the longer it takes for the litigation to be concluded and for him/her to be condemned, the better. On the other hand, if the judicial process is very short, there is not so much advantage in facing it; instead, a private agreement might become relatively more attractive.

✓ High values of **VC**, and high values of expected **VC:** the amount condemned at courts is very high; it is not rational for the employer to "choose" being condemned to pay VC instead of paying VA in a private agreement.

✓ High values of **$P_c$ and $P_e$**: chances of the employee winning at labor courts and being paid are very high; this would be negative for the employer, meaning he/she has low expectations that courts will be favorable to his/her case.

✓ High values of **$Clit_b$**: it is very expensive for the employer to access courts.

✓ <u>High values of $P_c*AF_b$:</u> expected attorney fees are very high. This may happen as a combination of high chances of the employer losing the case ($P_c$) and of high attorney fees to be paid by the employer ($AF_b$). If attorney fees are expensive, it costs significantly to continue with the litigation, just like the cases of high $Clit_b$.

4.4 Joint condition for agreement [Eq.3 and Eq.6]:

Eq. 3 above gives conditions for the employee to choose for settlement:

$$(VC * P_c * P_e) - Clit_l - (1-P_c)*AF_l < VS * (1+L)^n$$

At the same time, Eq. 6 gives the conditions for the employer to choose to do so:

$$VS * (1+B)^n < \{(VC * P_c * P_e) + Clit_b + P_c*AF_b)\}$$

It is very reasonable to assume that $L < B$, always. The reason is very simple: employers have more opportunities and knowledge about where to invest his/her money and yield higher returns (B); employees, on the other hand, have limited knowledge about savings opportunities. Thus, is expected that, for a given period of time, employers will be able to yield higher rates of return in their capital investments than employees ($B > L$, or $L < B$).

Now, we jointly combine the conditions above: for a settlement to occur, one must have:

$$(VC * P_c * P_e) - Clit_l - (1-P_c)*AF_l < \{VS * (1+B)^n\} < \{(VC * P_c * P_e) + Clit_b + P_c*AF_b\}$$
[Eq.7]

As conclusion of the analytical model, Equation 7 shows that, for a settlement to occur, the dimension of some variables is determinant:

→ $Clit_l$ has to be large;

→ $(1 - P_c)*AF_l$ has to be large;

→ L has to be large;

→ B has to be small;

→ $Clit_b$ has to be large;

→ $P_c*AF_b$ has to be large;

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On the other hand, dimensions of VC, VS, n, $P_c$ and $P_e$ have unclear effects on the chances for a settlement to occur. In the end, one must observe the aggregate result of these multiple impacts.

From this, it is already possible to infer that in a long run equilibrium it is possible to have high values of $P_c$ without discouraging employers' interest in litigation, since other factors may still push them for it. Furthermore, changes in some exogenous variables may significantly alter the incentives for litigation. For instances, a legislation reform that increases $Clit_l$ and $AF_l$ may significantly diminish employees' incentives for litigation. This is exactly what the Labor Reform of November 2017 did. As a consequence, numbers of labor lawsuits dropped drastically and consistently in years 2018 and 2019. A future version of this paper will discuss the impacts of the Labor Reform in details.

## 5. Empirical Analysis, Part II – Evidence of the Theoretical Model

In Section 3, we presented part of the empirical analysis with data on labor litigation. By means of text mining techniques, we found some startling results. In this section, let us bring some true values found in the empirical exercise and fit them into the model we have just derived in the previous section. They will demonstrate why there is no motivation for the parties to reach settlement in Brazilian labor courts; on the contrary, litigation is a win-win game for both employees and employers.

N: Length of Time for Trial and Execution Process

Statistics from the official report "Justiça em Números" indicate that the average duration for a trial to happen at a first-degree labor court (after the deposit of the claim) is 2 years and 9 months; time for execution is 4 years and 10 months (58 months). Thus, for our purposes, "n" from the analytical model above will be 58 months.

VC, L and B: Average Values of Condemnation, Employee's Rate of Return on Savings, Employer's Rate of Return on Capital

Above, we found that in a sample of approximately 130,000 decisions on labor conflicts that occurred between 2001 and 2017, 88.55% favored the plaintiff, i.e., employees, and only 11.45% of the decisions favored the defendant, i.e., the employer (Table 2).

Next, we narrowed our focus on "big employers", i.e., companies that faced 100 lawsuits or more at the TRT-2, the labor court covering the metropolitan area of São Paulo City. From this selection, the largest state-owned bank, Banco do Brasil, had a win rate of 17% against its employees; another state-owned bank, Caixa Econômica Federal, had a very similar rate, winning in 18% of all labor cases. Private banks had lower winning rates: Itaú (the largest bank in the country, 100% private and 100% of Brazilian capital) had a 14% win-rate against its employees; Santander, a Spanish bank, 15%; Citibank, 11%. English bank HSBC had the highest win-rate among banks, 20%. Outside the banking sector, numbers are not much different for employers. General Motors, for instances, had a relatively high win rate, 24% of all cases. On the other side, Swissport had a meager 4% win rate in its labor lawsuits. Again, we pose the question: why would any employer/company keep litigation with such numbers? Why they do not try to settle? Are they being rational?

We then accessed the average value of condemnation for these "big employers". Although values found are not definite (since appeals to these decisions are still possible), they are interesting to look at:

**Table 3: VC – Average Condemnation (selection of companies)**

| Firm | Average value of condemnation (in $ reais) |
|---|---|
| Banco do Brasil | $51.554 |
| Itaú | $121.784 |
| Santander | $58.205 |
| Bradesco | $52.453 |
| General Motors | $51.234 |
| Mercedes-Benz | $68.407 |
| TIM (Telecom Italia Mobile) | $32.340 |
| Telefônica (Spanish telecom company) | $21.779 |
| Tam (Brazilian airlines) | $34.343 |

Source: Author's own calculation.

The average value of condemnation (which we called VC in the theoretical model above) for big employers was of $28,500 reais, which is approximately US$ 8,500. But, as one might see in Table 3, average values vary significantly across firms. It is possible to find conditions under which it might be interesting for both employees and employers to wait for the trial.

Let us take the case of Itaú. It is not difficult to verify that in many instances litigation is indeed a win-win strategy both for the employee and the employer: if interest rates for savings (L, as we denoted before) were 0.5% per month (the average level for savings accounts in Brazil), the employee/plaintiff prefers to move on with the lawsuit for 58 months (n, as above) instead of accepting any settlement with proposed values under R$91,192 (VS). He/she only accepts to settle down if the offer coming from the bank is higher than that value. On the other hand, instead of offering an immediate settlement, the employer (Itaú) could invest the amount of R$ 91,192 yielding an interest rate of (at least) 1% per month (B, as we called above). 58 months later, that would yearn an amount of R$162,404 – or $40,600 more than the judicial condemnation. In other words, the bank can make (high) profits by *not* settling down and investing the money while waiting for its final condemnation by the courts. We may say that the assumption of a monthly rate or return of at least 1% is a realistic one. According to Itaú's accounting report of December 2019,

its yearly ROE (return on equity) was of 26.1% per year, the equivalent of 1.95% per month. Thus, our exercise is a very conservative one.

There is more. In our empirical sample, Itaú is defendant in 1,251 cases. If it adopts the rule of never settling down, i.e., always preferring to litigate, it would have generated R$50.8 million of "profits" by not engaging in any settlement. It could postpone its obligation to compensate its employees, and invest the amount owed for the duration of the labor lawsuit. Any investment yielding at least 1% of interest rate per month (B) would do the job. This is realistic for any Brazilian big company, especially one in the financial sector. We could do the same exercise for any big employer in our sample.

Clit$_l$: Waiver of Judicial Fees

According to Brazilian laws, poor people may be waived of all judicial fees. Thus, in practice, judicial access is free in Brazil, in other words, Clit$_l$ = 0. In order to get this benefit, one needs only to self-declare financial incapacity, the same judge who makes the decision on the substance also decides over the pertinence of the waiver request. A law issued in 1983 (Law Number 7,115) made official poverty certificates dispensable, assuming "presumption of veracity to any statement signed by the interested party (or his/her attorney)". Thus, one should simply testify his/her financial necessity and expect the judge's approval. Once it is granted, it costs nothing for an employee to access labor courts, even if one loses the case.

One of our empirical analysis tried to identify the number of cases in which employees requested judicial waiver. Furthermore, we wanted to check the percentage of requests that was attended by judges. Results are quite impressive. Not less than 77.31% of all cases in our sample explicitly demanded judicial fee waiver; in other words, 110,287 cases demanded free access to the Labor Justice. And in 99.63% of all these cases the request was granted. It is very clear that labor courts are pretty much free for any employee-plaintiff.

**Table 4: Requests for Waiver of Judicial Fees**

|  |  | N. of Cases |
| --- | --- | --- |
| Total sample | 100% | 129,720 |
| Request for judicial fee waiver | 77,31% | 110,287 |
| Waiver granted | 99,63% of the above | 109,879 |

Source: Author's own calculation

<u>VS: Values Reached in Judicial Settlements</u>

Due to over litigation and overcrowded courts, Brazilian procedural laws and courts are strongly encouraging parties to try settling down before the case goes for trial.

Unfortunately, our text mining procedures do not allow us to retrieve the information on the frequency which these judicial settlements occurred in our sample. However, we could learn about the average values reached in settlements, by company:

**Table 5: Value of Settlement (by Company)**

| Company / Employer | Average Value Paid by Employer as Settlement (in $ reais) [$3.4 reais for $1 US dollar] |
|---|---|
| Itaú (private bank) | 35,899.29 |
| Bradesco (private bank) | 29,703.32 |
| Banco do Brasil (state owned bank) | 31,463.39 |
| Caixa Econômica Federal (state owned bank) | 433.33 |
| Citibank | 39,091.71 |
| Volkswagen | 61,512.00 |
| General Motors | 26,323.45 |
| Brazilian Post Office (state owned, monopolist) | 126.67 |

Source: Author's own calculations.

Again, average value of settlement varies significantly across firms. That brought us a new hypothesis: this value may be related to winning rates. As a preliminary evidence, Swissport was a company in which there was zero cases of settlement before trial; at the same time, it had one of the lowest winning rates against its employees. We hope to be able to confirm this hypothesis in future works by employing econometric analysis to our data.

<u>$P_c$ and $P_e$: Win Rates by Employer and by Employee:</u>

In Table 2, Section 3 above, we showed the overall results for win rates derived from our text mining exercise. Numbers at the labor court in São Paulo (TRT-2) are, respectively, 11.45% for $P_c$ and 88.55% for $P_e$.

<u>$(1 - P_c)*AF_l$: Expected Attorney Fees Paid by the Employee:</u>

$P_c$, as we have seen above, are empirically high. Moreover, whenever an employee gets waiver of judicial fees, in general (but not necessarily), he/she will be also waived of paying his/her own attorney fees and the employer's attorney fees (in case the case is lost in trial). Thus, $(1 - P_c)*AF_l$ is, empirically, very low.

Clit$_b$: Employer's Cost to Access courts

It is significantly more expensive for employers (companies) to access courts, if one compares to the costs faced by employees (which is close to zero, as we demonstrated above). However, due to over litigation in Brazilian labor relations, most big companies have large internal legal departments, with the specific goal to deal with massive lawsuits. As shown by Aith (2000), an American bank operating in Brazil has a legal department employing 5 times more lawyers and staff than the equivalent found in its headquarters in the US. Thus, in this sense, paradoxically, for each new labor lawsuit, the marginal cost to access courts by the company is relatively small, since the legal structure is fixed and previously set.

P$_c$*AF$_b$: Expected Attorney Fees Paid by Employers

In theory, this variable may yield high values, because employers always have to pay AF$_b$: they lose cases very often (high P$_c$), and even if they win, employees will be waived of paying the company's attorney fees. On the other hand, as just mentioned before, in relative or marginal terms, AF$_b$ may be very small. The reason is that most large and medium-size companies usually have internal legal departments being ran constantly. This means that for each new labor lawsuit, variable and marginal costs dedicated to hiring attorneys are close to zero for the employer.

Summing up, most conditions derived in sections 4.2 and 4.3 for the occurrence of a settlement are *not observed* empirically.

Recapitulating, Eq. 7 provides the joint condition for the occurrence of a settlement:

$$(VC * P_c * P_e) - Clit_l - (P_c*AF_l) < \{VS * (1+B)^n\} < \{(VC * P_c * P_e) + Clit_b + (1 - P_c)*AF_b\}$$

The values of variables as they are observed in practice make the conditions of Eq. 7 not hold. The general conclusion is that, explicit costs (*Clit*, *AF*) and opportunity costs (*B, L*) are such, that it is profitable for employees and employers, at the same time, to continue litigation and not try a settlement. This causes overlitigation in Brazilian labor courts.

## 6. Preliminary Conclusions.

In this paper, we tried to understand the causes of over-litigation in Brazilian labor-courts. Following the literature of economic analysis of litigation, we assume that parties evaluate expected costs and benefits to decide whether they choose litigation or a cooperative settlement

with the side. In order to better evaluate this issue, we combined a theoretical model with empirical observations carried out by means of text mining techniques. We extracted approximately 130,000 cases brought to the largest first-degree labor court in Brazil. We found that win rates for employees are higher than 88%, while for employers are 11%. Under such situation, is it still rational for employers to litigate? To better understand this phenomenon, we derived an analytical model and found that, under certain circumstances – which are fully observed in the Brazilian context – litigation may represent a win-win game for both parties. Finally, going back to the empirical results brought by text mining and some other descriptive statistics, we corroborate the predictions of settlement *not occurring*, at least for most cases of labor disputes in Brazilian courts.

The agenda for empirical studies of the Brazilian Labor Justice is lengthy and has just begun. Plenty of research themes might be addressed. We hope we have been able to make a small but significant contribution to better understand the motivations for litigation and the obstacles to cooperative settlement. One limitation of this paper is that we did not run econometric causality regressions. Second, our empirical evidence relates to a particular court (although one very representative in Brazilian Labor Justice). Our purpose was solely to illustrate a case in which plaintiffs and defendants may consistently engage in a litigation win-win game. Also, we were unable to get data on extrajudicial agreement, which is also, by definition, hard to access by means of official databases. Finally, we did not address the impacts of the recent Labor Reform, which significantly altered the dimensions and values of several variables present in our analytical model. Evaluating the "before" and the "after" of the Labor Reform would add valuable insights to the analysis. We will leave this exercise (and others) for future papers.

# References

Aith, M. (2000) "O Impacto do Judiciário nas Atividades das Instituições Financeiras", *in* Castelar Pinheiro, A. (org.) **Judiciário e Economia no Brasil***,* São Paulo: Ed. Sumaré.

Castelar Pìnheiro, A.; Sadek, M. T.; Lamounier, B. (2000) "O Judiciário Brasileiro: a Avaliação das Empresas", *in* Castelar Pinheiro, A. (org.) **Judiciário e Economia no Brasil***,* São Paulo: Ed. Sumaré.

Cooter, R. D.; Rubinfeld, D. L. (1989) "Economic analysis of legal disputes and their resolution". **Journal of Economic Literature**, v. 27, n. 3, p. 1067-1097.

Conselho Nacional de Justiça (2017). **Justiça em Números***.* Brasília: CNJ. Available at: http://www.cnj.jus.br/programas-e-acoes/pj-justica-em-numeros.

Miller, G. (1994). "Introduction: Economic Analysis of Civil Procedure". **The Journal of Legal Studies***,* v. 23(1), p. 303-306.

Priest, G., & Klein, B. (1984). "The Selection of Disputes for Litigation". **The Journal of Legal Studies***,* v. 13(1), p. 1-55.

Ramseyer, J. Mark; Rasmusen, Eric B. "Are Americans more litigious? Some quantitative evidence". **The American Illness: Essays on the Rule of Law**, p. 43-68, 2013.

Wollschlägen, Christian (1998) "Exploring Global Landscapes of Litigation Rates". *In Soziologie des Rechts: Fetschrift für Erhard Blankenberg zum 60 Geburstag,* 577-582.

## Websites

BRASIL – CONSELHO NACIONAL DE JUSTIÇA: "Justiça em Números": http://www.cnj.jus.br/programas-e-acoes/pj-justica-em-numeros (accessed on March 12, 2018).

CLEMENTS WORLDWIDE: https://www.clements.com/sites/default/files/resources/The-Most-Litigious-Countries-in-the-World.pdf (accessed on March 12, 2018).

GURU FOCUS ON BANCO ITAÚ'S ROE: https://www.gurufocus.com/term/ROE/ITUB/ROE-/Itau-Unibanco-Holding-SA.