FUNDAÇÃO GETULIO VARGAS

ESCOLA DE DIREITO FGV DIREITO RIO

GRADUAÇÃO EM DIREITO

Trabalho de Conclusão de Curso

PHILIPPE ANTOINE LECLERC LANGEL

Applied Law and Economics: A study of Brazil's 2017 labour law reform

Rio de Janeiro, junho/2018

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Applied Law and Economics: A study of Brazil's 2017 labour law reform

Trabalho de Conclusão de Curso, sob orientação do professor Antônio Maristrello Porto apresentado à FGV DIREITO RIO como requisito parcial para obtenção do grau de bacharel em Direito.

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Título do trabalho: Applied Law and Economics: A study of Brazil's 2017 labour law reform

Elaborado por PHILIPPE ANTOINE LECLERC LANGEL

Trabalho de Conclusão de Curso apresentado à FGV DIREITO RIO como requisito parcial para obtenção do grau de bacharel em Direito.

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Nota Final: ____________________________

Rio de Janeiro, ______ de ____________de 2018.

RESUMO:

O presente trabalho tem dois objetivos: mostrar como a Análise Econômica do Direito pode ser um instrumento eficaz na análise do direito trabalhista, e pela sua aplicação avaliar os potenciais efeitos da reforma trabalhista de 2017. Primeiro, introduzimos conceitos básicos usados na Análise Economica do Direito e microeconomia. Depois, aplicamos estes conceitos á lei.

As conclusões feitas mostram que as mudanças consideradas da lei 13.467 oferecem incentivos econômicos positivos e devem gerar eficiência. No entanto, a importância da magnitude desses efeitos foi considerada pequena, e não deve haver um impacto considerável nos mercados de trabalho.

PALAVRAS-CHAVE: Direito do Trabalho. Reforma Trabalhista. Análise Economica do Direito.

ABSTRACT:

The objective of this paper is twofold: to show how Law and Economics can be an effective tool in the analysis of labour law, and through its application to evaluate the potential effects of Brazil's 2017 Labour Law reform. First, we introduced basic concepts used in Law and Economics and Microeconomics. Later we applied these concepts to the law on a point-by-point basis.

The findings show that the considered changes brought by bill 13.467 offer positive economic incentives and should generate efficiency. However, the impact was deemed minor should not have earthshaking effects to employment markets.

KEYWORDS: Labour law. Employment Law. Brazilian labour reform. Law and Economics.

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1. INTRODUCTION

Brazil is often accredited as being "The country of the future". From rich mineral deposits to fertile land and favourable climates, along with wealthy oil and water reserves, the country seems to be a physiocrat's dream. If the wealth of a nation was solely derived from its endowment in land and other natural resources as these premodern economists would believe then by all accounts Brazil should be one of the most economically prominent and developed countries in the world. However, Physiocratic theory, which considers that all wealth is solely derived from the exploration of agriculture and other natural resources, is long discredited and obsolete and many theories have been drafted to explain Brazils lagging progress. Historical determinism, institutional theories, cultural determinism, too much government, too little government… If there is one thing Brazil does not lack, other than rich natural resources, are theories and explanations as to why it has not yet reached it prophesized potential and become the country of the present. Amongst emerging economies, Brazil's growth is outperformed by other BRIC countries, often competing with Russia for last place in terms of GDP growth.

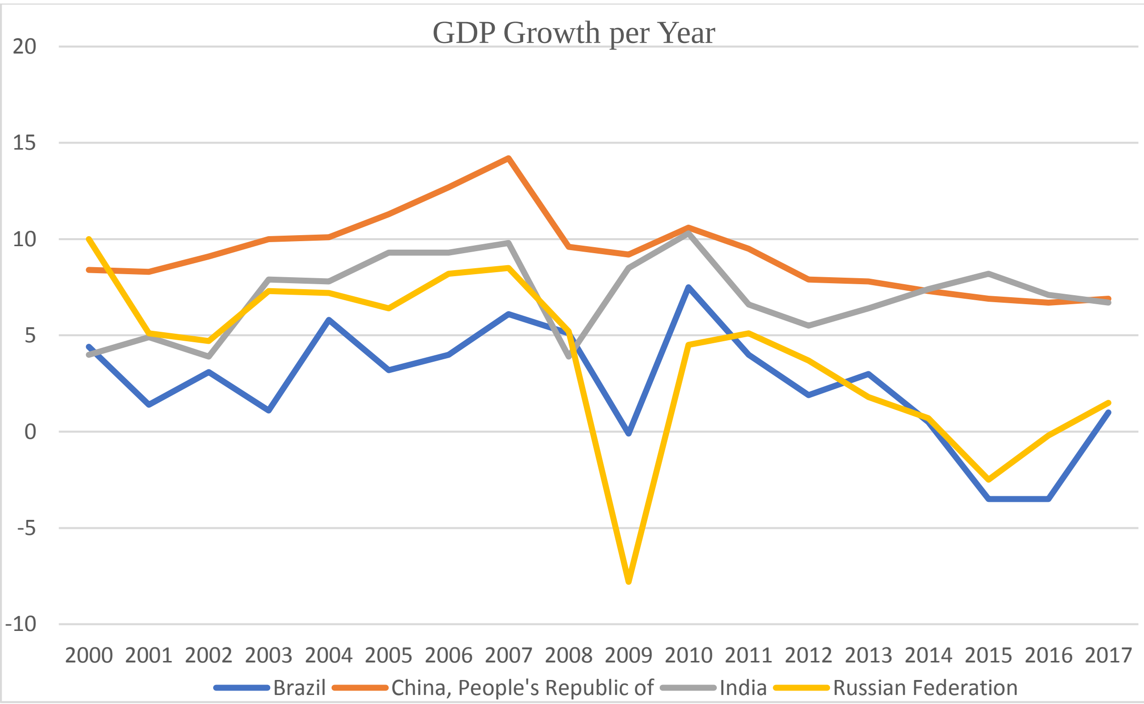

Figure 1: GDP growth of BRIC countries - Data by the International Monetary Fund

The solution seems abundantly clear and uncontroversial to all parts of the political spectrum and is constantly reiterated in debates: the need for reform. Political reform, judiciary reform, tax law reform, reform of bureaucracy, pension reform... all of them recurring themes of the Brazilian political landscape. Unfortunately, that is where consensus ends and an interminable dispute over what this reform should be begins. The result is the stagnation or abandonment of reform projects, long delays on the adoption of reformist measures, when at all enacted, and a tendency to maintain the status quo. The impetus for reform is often marred by ideological or political sophistry and little credence is given to the rigors of scientific reasoning and conclusions.

It is in this context that Brazil enacted a reform to employment law under bill 13.467 in July of 2017. This piece of legislation makes a long list of amends to the "*Consolidação das leis do Trabalho"*, or CLT, the country's main labour and employment law statute, whose original text dates from 1943. The alterations to the law were mainly focused on a broadening of contractual liberties in employer-employee relationships, with the loosening of mandatory elements of contractual obligations, restriction of mandatory union jurisdiction and emancipating employers from certain controversial obligations. Reception of the reform has been generally mixed. Some hailed the changes as a welcome modernisation to dated and paternalistic restrictions, empowering employees to make their own choices. Others considered the changes to be relatively insignificant modifications, incapable of real impact and unable to act as the hoped catalyst for an economy recovering from recession. Lastly, some even considered the changes to be a gruesome attempt on the dignity and wellbeing of the working class, a theory fuelled by the controversy surrounding Michel Temer's ascension to the presidency.

What does seem initially clear is that the reform does not bring any direct changes to labour in the macroeconomic sense. In order to attempt to compose a better understanding of the true significance and impact of some of the more important modifications brought about by bill 13.467, this paper will use the approach of law and economics theory and Microeconomic theory.

To do so we will first provide a very brief overview of what is law and economics and how it relates to labour and employment law.

We will then provide a brief overview of economic concepts that will be applied in this analysis, for those who are unfamiliar with law and economics or microeconomic theory. We will start with a quick overview of how free markets work, or at least should work. Then we will define and attempt to explain some of the problems that these markets might face, which are called market failures. We will show that these can either be naturally occurring due to the innate qualities and actions of the market and its participants, or because of artificial constraints imposed by the government.

Once we have made these concepts clear, we will proceed to apply them to the changes brought about by the workplace law reform on a point-by-point basis. Note that not every single change brought by the law will be considered. We will ignore changes for which the author considered economic analysis as inadequate, such as changes allowing pregnant women to work in unsound environments or new procedures for employee representation commissions. While there may be a way to apply the cited economic concepts towards predicting the effects of these changes, the author felt that it would require a degree of abstraction or of knowledge beyond his ability, which would lead to entirely speculative results.

This structure was decided in order to promote clarity, especially considering that some microeconomic concepts might be foreign to jurists, as they certainly seem to be to lawmakers, and the ample scope of the law. The reform brings about a myriad of changes of varying significance and we have therefore chosen to divide these changes into themes that can be individually tackled.

The objective here is to show how Law and Economics can be a very useful tool in understanding the impact that the law may have on markets and individuals. We will not be developing new theories or methods, but rather demonstrate how flexible existing resources are to being applied to a variety of legal changes. Law and Economics is a school of thought that uses the methodology of economics to better understand the impacts of the Law, be it through the evaluation of the economic efficiency of a norm or more broadly by predicting its impacts. Francesco Parisi provides an ample definition of Law and Economics:

> Law and economics is probably the most successful example of the recent surge of applied economics into areas that were once regarded as

> beyond the realm of economic analysis and its study of explicit market transactions. Methodologically, law and economics applies the conceptual apparatus and empirical methods of economics to the study of law.[1]

We will do our best in order to remain as faithful to the objectivity of economic analysis and remain free of any political bias. As such, we will not be exploring any political or moral aspects of the 2017 reform, and arguments that would cause the methodology to stray from the rigors of economics', such as equity or distributive justice.

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[1] PARISI, Francesco, **Positive, Normative and Functional schools in Law and Economics**. European Journal of Law and Economics, Vol. 18, No. 3, pp. 259-272. 2004, p. 2.

2. THE LAW AND ECONOMICS OF LABOUR AND EMPLOYMENT

Scholars currently differentiate between labour and employment law and economics. The first is the oldest and most studied aspect[2], and deals mainly with the economics of the relations between industry and trade unions. These are predominantly political norms in the sense that they guide the establishment and organization of trade unions, rules for membership, extent and limits of power, rules and procedures for collective bargaining and strikes. Economic analysis of these norms is usually interested in their efficiency, in other words in how they contribute towards the optimal allocation of resources. If a rule is inefficient, which can happen by impeding trades, which generate allocations that are more desirable or by creating costly barriers or procedures that generate waste. The concept of efficiency used will be that of allocative efficiency, also known as Pareto efficiency. An allocation is considered Pareto efficient, according to Cooter and Ulen, when it cannot be modified in any way as to increase one individual's wellbeing without diminishing that of another.[3]

The second stems from the mainly civil relationship between employee and employer. In employment law, statute functions by directly intervening in contractual liberty between parties. This intervention causes restrictions by the inclusion of statutory implied terms in employment contracts, which may or may not be explicitly modified by covenants. One of economics' principal axioms is that in the absence of externalities and market failures, the equilibrium reached by the free market, without government interference, is Pareto efficient.

In this case, government interference in the free market by the imposition of restrictions to the freedom of defining the elements of employment contracts is undesirable. At best the interference would benefit a player in favour of another with no overall gain to social wellbeing or efficiency, and at worst government interference may cause a loss to social wellbeing and a reduction of utility for market participants without benefiting anyone.

[2] SCHWAB, Stewart J. **Law-and-Economics Approaches to Labour and Employment Law**. 33 International Journal of Comparative Labour Law and Industrial Relations, 2017, p. 116.
[3] COOTER, Robert; ULEN, Thomas. **Direito & Economia**. 5.ed. Porto Alegre. Bookman. 2010. p. 38.

Markets are, however, often imperfect. Many market failures render the outcome of freely negotiated transactions to be inefficient. These market failures and widely studied by economic scholars and are regarded by neoclassical scholars as a possible justification for government intervention and regulation in an otherwise free market. It is important to note that although market failures lead to inefficient results, government interference is not always desirable. The government is an imperfect agent, and government failure can lead to results, which are also socially inefficient, at the risk of being even more undesirable than the free market allocation. Inefficient allocations caused by government failure, are a recurring argument amongst critics of government interference in the economy, and notably for the theme of this paper amongst critics of existing employment and labour regulation and proponents of reform.

3. RELEVANT ECONOMIC CONCEPTS

3.1. Competitive Markets

Competitive markets are central to economic theory. A market is considered perfectly competitive when there are a sufficient number of sellers and a sufficient number of buyers for no participant to be individually capable of influencing the price[4]. In this situation, all buyers and sellers are price takers. As a price rises, the offer for that particular good will rise accordingly, while demand drops. Correspondingly, as price drops, offer becomes lower and demand higher. Thus, in a competitive market the price is determined by the rule of supply and demand. The following graph exemplifies this in the labour market, where W are the wages, W* the wage in a competitive equilibrium, Qs and Qd the amount of labour supplied and demanded and Q* the amount of labour at equilibrium.

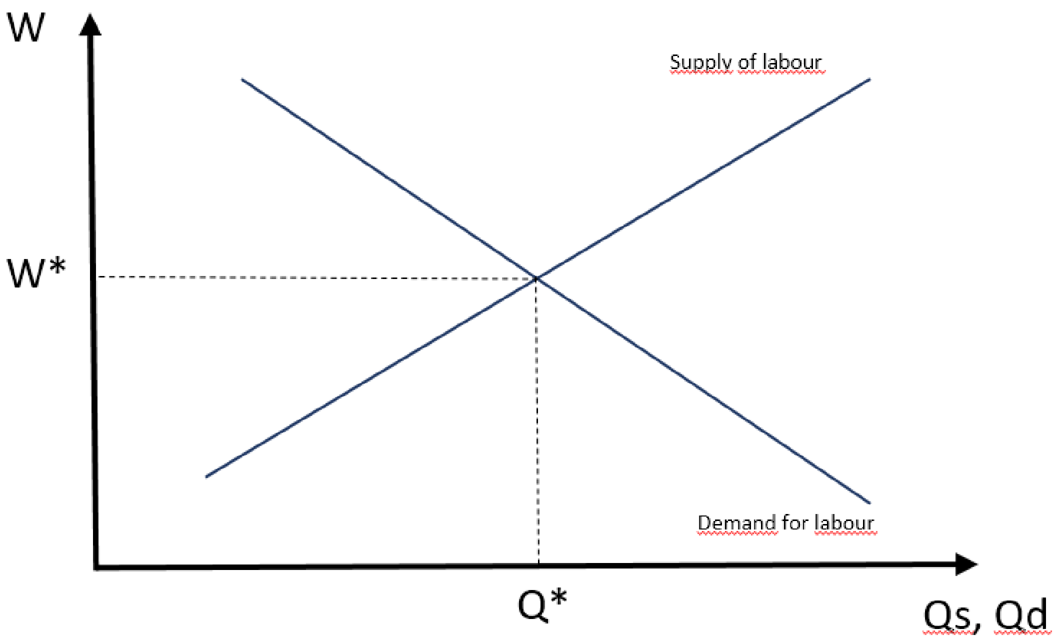

Figure 2: Supply and Demand of Labour

[4] PINDYCK, Robert; RUBINFELD, Daniel. **Microeconomia**. 8.ed. São Paulo. Pearson Educação do Brasil. 2013, p. 8.

In his popular textbook, *Principles of Economics*, Greg Mankiw defines 10 basic principles of economics. [5] The sixth principle states that states that "markets are generally a good way to organize economic activity"[6]. This is because markets, when they are working correctly, efficiently represent the value attributed by society to goods, services and work, and allocate resources in an efficient manner. The corollary to this principle is that government interference in functioning markets tends to distort this efficient allocation and thus creates inefficiencies, which are socially undesirable. Herbert Hovenkamp provides a summary of this:

> In neoclassical theory, the freely contracted wage, like any other bargained transaction, is Pareto superior. Neither the employer nor the laborer will strike the bargain unless he or she feels better off as a result. The same thing cannot be said of the minimum wage. The hiring of a worker at the minimum wage is Pareto superior to not hiring her at all, since the minimum wage law does not require employers to hire anyone. Even under the minimum wage law, a worker would not be hired unless he earned his contribution. But it cannot be shown that the change from a regime without minimum wage was to a regime with such laws is a Pareto improvement. Presumably those forced to pay the higher wages are worse off, as are workers who lose their jobs when the minimum wage law takes effect.[7]

This leads to the next item of this chapter, on how governments interfere in the labour market.

3.2. Government interference in the labour market

Governments can interfere in many ways in the labour market. In Brazil, there is a legally mandated minimum wage of R$ 954 as of 2018. Minimum wages function in the same way as price controls for goods do. While government enforced price controls usually set a maximum price for a good or service, minimum wages effectively set a minimum price for labour. The result of the imposition of price controls in labour is a

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[5] MANKIW, N. Gregory. **Princípios de Microeconomia**. 6.ed. Sâo Paulo. Cengage Learning. 2014, p. 8.
[6] *Ibidem.* p. 10. Translated by the author from the Brazilian edition.
[7] HOVENKAMP, Herbert. **The First Great Law & Economics Movement Stanford Law Review**, Vol. 42, No. 4 pp. 993-1058. 1990, p. 1011.

reduction of demand for labour. This, of course, is only relevant if the legal minimum is higher than the competitive equilibrium. The consequence is an increase in unemployment and increase in wages for those lucky enough to keep their jobs. This generates a loss of allocative efficiency known as deadweight loss, represented by the blue triangle in the following graph.

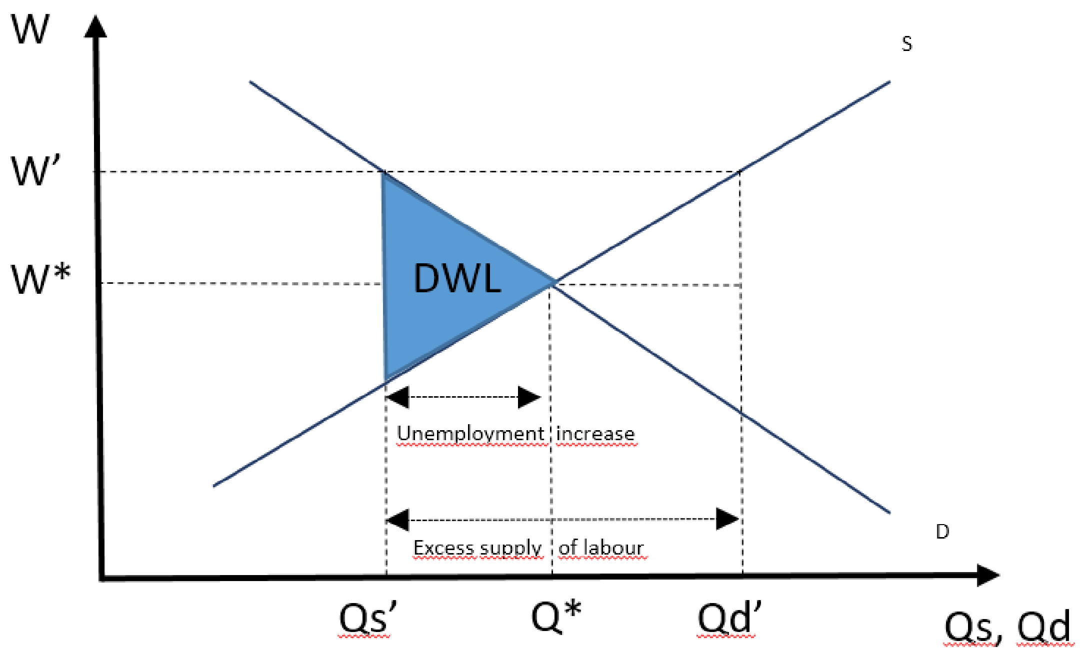

Figure 3: Supply and Demand of Labour under minimum wage constraints

On top of the minimum wage, there are added constrictions set by the government that influences the labour market. There are many of these factors, such as mandatory vacation days, termination rights, contributions to social programs such as INSS and FGTS (which can be modelled as taxes), actual taxes, additional costs for overtime and overtime limitations... While these do not change the nominal minimum cost of labour as represented by the minimum wage, they have important effects on wages Taxes increase the cost of labour, which we can model as a leftward shift in the labour supply curve. At the higher price of labour, the new quantity at equilibrium Qt is lower, representing a drop in employment. While employers now pay Wp wages, workers only receive Wr. The distribution of the burden of tax between the supply and demand of labour is dependent on the substitutability of labour and the elasticity of labour. Once again, this generates deadweight loss represented by the blue triangle.

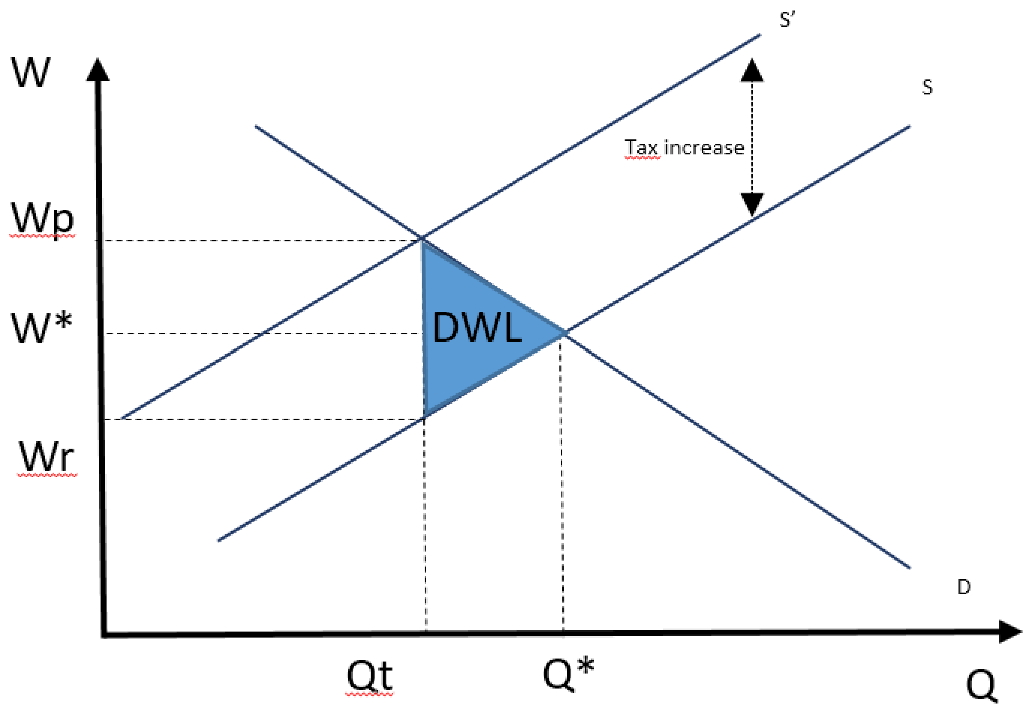

Figure 4: Supply and Demand of Labour under income tax constraints

Government interference in Brazil's labour market has led to incentives for market participants to carry out their economic activities informally[8], there being a positive correlation between the insertion of taxes and social benefits and the creation of informal jobs as found by Gerard and Gonzaga:

> The estimated results confirm previous findings in the literature. Our results revealed a robust and negative impact of changes in the minimum wage in the employment levels of formal sector workers in the long run, with the reverse taking place in the case of informal employment. That is, due to labour mobility, increases in the value of

[8] While it is the case that workers would prefer formal work for the added benefits, we can view that the distortions created by government constraints, distortions that create situations far too removed from what a natural market equilibrium would consider optimal or even viable, lead to the creation of these informal jobs. Workers that are incapable of landing formal labour are thus left with the alternative of working informally. While this is only possible because of inefficient enforcement of labour norms, we can only believe considering the situations that created the informal markets in the first place, that correct enforcement of these rules would create greater distortions in the market. It is the author's view that informal labour is the markets way of "correcting" these distortions. This is, however, a very controversial topic and flees from the scope of the paper in estimating the effects of the changes within the legal framework. This might be a grave oversight, as one cannot ignore the very real effects of parallel markets, but the study of the upsurge of informal market due to artificial constraints and faulty regulation would merit a separate and dedicated study.

> the minimum wage provoke disemployment effects in the formal sector, which are then matched by increases in informal occupations. [9]

Indeed, the imperfect enforcement of these rules has permitted the upsurge of parallel labour markets, which ignores the artificial constraints imposed by law. Wachter and Cohen elegantly reference this sort of phenomenon:

> The theme running throughout the law and economics approach is that the law does not so much repeal market forces as restrict the channels through which those forces.[10]

Why then, does the government interfere in the labour market? An economic justification would find its roots in the material welfare school, as condensed by Hovenkamp:

> The material welfare school believed that some involuntary transfers of wealth could make society as a whole better off. They derived this notion from two things: the law of diminishing returns and the concept of marginal utility. The law of deiminishing returns suggested that a person obtained less pleasure from this tenth dollar than his first and much less pleasure from his millionth dollars than his tenth one. The concept of marginal utility suggested that society's utility would be maximized when individual marginal utilities were equalized.[11]

Wachter and Cohen bring an interesting explanation to why the American government behaves this way:

> To date, few scholars have argued that American labor law is in any way attentive to or consistent with the goal of efficiency. In fact, recent works by law and economics scholars conclude that the primary purpose of labor law is to cartelize the labor market in order to enable workers to achieve higher wages than those that would be obtainable in an unregulated labor market. According to this view, labor law exemplifies the "capture theory" of regulation, which postulates that

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[9] GERARD, Francois; GONZAGA, Gustavo M. **Informal Labor and the Cost of Social Programs: Evidence from 15 Years of Unemployment Insurance in Brazil**. 2013, p. 30.
[10] COHEN, George M.; WACHTER, Michael L. **The Law and Economics of Collective Bargaining: An Introduction and Application to the Problems of Subcontracting, Partial Closure, and Relocation**. University of Pennsylvania Law Review, Vol. 136, No. 5 pp. 1349-1417. 1988, p. 1359.
[11] HOVENKAMP, Herbert. *op. cit*., p. 1001.

> government supplies regulation in response to the demands of interests groups seeking limits to competition and associated noncompetion profits, wages, or returns to capital.[12]

In a further critique of government regulation of the labour market, the same authors state:

> One reason that labor law scholars have paid little attention to economic efficiency may be that they for external labor markets. External labor markets-the markets for new employees-closely resemble the textbook economic model in which the supply of and demand for labor determine the wage. These markets approach allocative efficiency because of the mobility of workers and competition among firms for these workers. Under such circumstances, the law cannot enhance the efficiency of the economic result. Hence, if labor law is concerned with the external labor market, its focus must be on distributive or other noneconomic goals rather than allocative efficiency.[13] [14]

3.3. Transaction Costs

Transaction costs is a broad term, which encompasses a large variety of expenses, occurred during a trade. In perfect market models, trades happen magically, the buyer instinctively and effortlessly finding the desired object from the seller with the lowest price, negotiation happening instantaneously and without costs. Reality is not so simple. Numerous expenses may be occurred in order for a trade to happen, such as search costs, information costs and negotiation costs. Even after a trade has been executed, further costs might still occur such as enforcement and monitoring costs.

Let us imagine an example relevant to the present study where a company is looking to hire a new employee. This process may be as simple from posting a "help wanted" sign on the door of a store, to a long multi-step selective process. A company may hire a headhunting firm, or pay to have the opening posted on an employment website, provide initial online tests of prospective employees basic capacities, then have

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[12] COHEN, George M.; WACHTER, Michael L. *op. cit*. p. 1360.
[13] COHEN, George M.; WACHTER, Michael L. *op. cit*., p. 1353.
[14] The authors here refer to "External labor markets" as the market for labour external to the firm, instead of the market compromised of the workers who are already employees of the company.

human resources analyse the curriculums of applicants, submit them to further in-house testing, series of interviews… This kind of investment in the search of new collaborators can be very costly. It would be incorrect to assume that the only cost the company will occur to hire the employee would be his salary. Likewise, in searching for a job, the individual would have to spend time updating his résumé, search for vacancies, spend time informing himself of those vacancies, then time going through the entire application process: tests, interviews, potentially having to travel long distances with all the costs that incurs.

Even once the employment contract is signed, transaction costs persist. The employer will suffer coordination and monitoring costs, having to supervise employee activity to ensure that his functions are being carried out satisfactorily. In the event the firm decides to terminate employment, to find a more desirable replacement or because the position is no longer needed, further costs can occur depending on termination clauses in the contract or labour regulations, possibly leading to paying severances or damages.

While it is not the case in Brazil, certain countries such as the Netherlands also provide restrictions for employees to quit their jobs unilaterally. As Donald L. Martin discovered:

> If job searchers may not dissolve future employment relationships unilaterally, the costs of mistakes in job selection and of attempts to respond to subsequent higher valued alternatives will be greater than if at will arrangements obtained. To economize in the face of these higher costs of employment, we would expect would-be employees to be more selective in their choice of employer and to search more extensively, than they otherwise would, for better paying positions. This suggests that, ceteris paribus, the length of the job search process should be relatively longer for would-be employees in those industries and occupations subject to the law prohibiting unilateral quits.[15]

[15] MARTIN, Donald L. **The Economics of Employment Termination Rights**. The Journal of Law & Economics, Vol. 20, No. 1 pp. 187-204. The University of Chicago Press for The Booth School of Business. 1977, p. 199.

We interpret this as higher transaction costs. Indeed, if the length of the job search is increased, then it is simple to understand that costs must be higher in time, effort and opportunity costs[16].

Even if entitlements granted by law may be freely traded in markets to generate more efficient allocations, these trades can also be subject to transaction costs. If the costs are too great, then they may prove to be a barrier to them happening at all, effectively leaving the market "stuck" in the less efficient arrangement. Ronald Coase explains this in the seminal work *The Problem of Social Cost*:

> In earlier sections, when dealing with the problem of the rearrangement of legal rights through the market, it was argued that such a rearrangement would be made through the market whenever this would lead to an increase in the value of production. But this assumed costless market transactions. Once the costs of carrying out market transactions are taken into account it is clear that such a rearrangement of rights will only be undertaken when the increase in the value of production consequent upon the rearrangement is greater than the costs which would be involved in bringing it about. When it is less, the granting of an injuction (or the knowledge that it would be granted) or the liability to pay damages may result in an activity being discontinued (or may prevent its being started) which would be undertaken if market transactions were costless. In these conditions the initial delimitation of legal rights does have an effect on the efficiency with which and the economic system operates.[17]

3.4. Information Failure

Perfect markets work under the assumption of perfect information. In this case, there are no mistakes during economic transaction. Information failure can present itself in two forms. A market agent can have imperfect information about its own needs, or about the product/service purchased. The first point is an endogenous constraint to rational choice, the individual being incorrect about what choice would maximize his

[16] The concept of opportunity costs refers to the trade-off the decision maker incurs when he chooses one alternative over another. In this case, we might look at the opportunity cost of the job seeker as the trade-off of spending more time searching for a better job instead of what he might be earning if he had settled on an earlier opening, or time he could have otherwise spent investing in education or leisure.

[17] COASE, Ronald H.. **The Problem of Social Cost**. The Journal of Law & Economics. Vol. 3. pp. 1-44. Chicago. 1960. p. 15.

wellbeing. A common example is when an individual comes to regret a purchase made on impulse. Another classic manifestation is that of the sunk cost fallacy, where an individual makes decisions taking into account costs he may already have incurred. For example, after purchasing a ticket to a certain event, a person thinks, “I don’t want to go but I already spent money on it so I might as well”. In this case, the person does not act in rational utility maximizing manner.

The second kind of information failure, most traditional and relevant to our present study, is imperfect information about the object of a transaction. In a transaction between two parties, one part will commonly know more about the object than the other will. A common example, used by George Akerlof in his paradigmatic paper *Market for Lemons*[18] is in the purchase of a used car. The seller of the vehicle is much more likely to know more about the qualities of what he is selling. The buyer on the other hand, is more limited in his information and has to rely on the good faith of the seller or on the seller’s obligations to divulge information. The seller therefore has greater knowledge of the true value of the object of the transaction. A trade occurs when the sellers values an object less than the accorded price, while the buyer values it more. Three things can happen if the buyer has imperfect information. The first is that the agreed upon price is so distorted from what the buyer thought it was worth, that he actually values it less than what he paid for it. In this case, the trade is entirely inefficient as the buyer incurred a net loss in utility from the purchase he comes to regret. The second is that the object is worth less than what the buyer estimated, but still more than what he paid for. In this case, the purchase is not inefficient, as there are gains for both parts of the transaction but there is a greater part of the buyers surplus that is captured by the seller. This is a key component of bargaining power that will be further explored in a following item. Lastly, the buyer knowing of the risks of his deficient information, will not want to risk making a purchase he might come to regret and the transaction will simply not occur. This might lead to inefficiency in the event that the object in question did indeed hold superior worth to the buyer than its price, barring the transaction and the more desirable allocation from happening.

In labour relations, information failure can be present on both the employer and the employee side. An employee may be remiss in the full disclosure of his qualities or

[18] AKERLOF, George A.. **The Market for "Lemons": Quality Uncertainty and the Market Mechanism**. The Quarterly Journal of Economics, Vol. 84, No. 3, pp. 488-500. 1970.

qualifications, giving the employer a wrong idea on his worth. This might lead to a company hiring an employee unfit for a position or otherwise less qualified than expected. Likewise, an employee may be unaware of the full expectations or workload of a sought after position. The consequences are the same as those of information failure in a purchase transaction. The employer might wrongfully overvalue the employees work, and a job might be too costly to an employee for the wage received. The effects of these failures can vary in degree according to a variety of factors. If an employer can terminate an employee that did not meet his expectations at-will, then the effects of information failure are much lesser than what would be the case if employment protection laws demanded the employee be compensated or even be given to right to keep his position. Transaction costs also play a significant role in the effects of these failures. As cited in the previous sub-chapter, there are costs inherent to finding a job or an employee. A lot of these, such as testing and interviews by the employer, can be viewed as a form of reducing the risk of information failure. However, no methodology of candidate selection is perfect and if the new hire proves unfruitful, they might have to be incurred again in the selection of a new candidate.

These kinds of failures are not necessarily born out failures to disclose relevant information from each part of a transaction during negotiation. Expectations and knowledge of factors exogenous to the transaction may play a significant role. For example an employee may accept a job with a lower wage at a large company, over a better paying one in a smaller firm, with false hopes of better chances of career advancement in a bigger company. The employee may also have incorrect information of employment conditions in the form of entitlements. In the United States, most states do not have any wrongful discharge restrictions, allowing employers to fire their employees at will. However, workers often believe otherwise as cited by Christine Jolls exemplifying a justification for wrongful discharge Laws:

> The most straightforward justification for wrongful discharge laws is that in the absence of such laws, inadequate employee-side information about the ability of an employer to discharge employees without offering an adequate justification for the discharge leads employees to oversupply labor at a given wage rate. […] If, in the absence of wrongful discharge laws, many employees incorrectly believe that they can only be discharged after a threshold level of justification has been met, then wrongful discharge laws can improve both employee welfare

> and efficiency by eliminating the gap between employees' observed and "true" willingness to supply labor. With a wrongful discharge law in place, the governing regime is consistent with employees' belief – although of course in the real world the mandated level of justification for discharge may not match employees' beliefs, or its imposition may impose very large costs.[19]

3.5. Bargaining Power

This concept is controversial and very open to debate. We can define bargaining power as the capacity that one part has in capturing a greater piece of the other parties economic surplus. Disparities in bargaining power can occur for a variety of factors. If one of the parts has a greater cost to remove itself from the bargain, for example if has already made investments that will have to be changed or adapted if it were to look for another partner, then we can say that the other party may have a significant advantage in bargaining power. This is mainly a manifestation of transaction costs. If one part has no choice but to do business with the other, which happens in the event of a monopolist of monopsonist, then they are probably in a weaker position to bargain. Likewise, disparities may happen if one part has a significant advantage in information. These examples all have something in common. They are all actually manifestations of other kinds of market failures: high transaction costs, monopoly and asymmetry of information. It seems then that bargaining power is not a market failure in itself but rather a term used to explain the consequences of an imperfect market. On this point we will agree with Professor Schwab in deciding that unequal bargaining power is not in itself a market failure. As we have already cited, market failures in economic theory are the main justification for why government intervention can sometimes be desirable. However, if this is not a market failure then attempts to correct it incur the risks of greater damage to the market. Professor Schwab expresses a similar position:

> I accept the characterization that individual workers largely take terms dictated by employers, but the terms that employers dictate are

[19] JOLLS, Christine. **Employment Law**. Yale Law School, Public Law Working Paper No. 132; Yale Law & Economics Research Paper No. 344, 2006, p. 39.

> themselves dictated by the workings of increasingly competitive labor markets. This is not to say that labor markets are perfect. I have outlined ways in which they fail, which include such things as externalities, collective goods, and information assymetries. But unequal bargaining power is not a market failure. [...] My argument is not that unequal bargaining power is a meaningless concept (although it is notoriously slippery). Rather, I argue that unequal bargaining power is not a good reason for intervening in labor markets and that in the future its rhetorical power will decline[20]

> Let's discuss the unequal bargaining power issue. For non-economists, this is the basic argument for legal intervention in employment markets. Economists are dubious of this argument. They don't believe that the concept is meaningless; in fact, I think we can give bargaining power a meaning. Bargaining power explains which side will get the lion's share of gains from trade, including the gains from providing a particular benefit that workers are willing to pay for. However, unequal bargaining power does not explain why a particular benefit will not be provided at all. In other words, the following argument shows a lack of understanding of labor markets: "Here is a benefit that workers want, are willing to pay for, but it's not being provided. Why not? Because of unequal bargaining power. Companies are big and employees are little." Unequal bargaining power is not a problem that will cause markets not to provide all benefits that workers are willing to pay for, nor is unequal bargaining power a type of market failure.[21]

Albert Choi and George Triantis, while they provide a different view, also diminish the relevance of bargaining power:

> The set of questions addressing when and why bargaining power is a determinant of nonprice terms remains unexplored and worthy of investigation. The conventional law-and-economics theory offers a starting point for this analysis by offering two irrelevance prepositions (1) bargaining power affects the price but not the nonprice terms of a contract (the strong-form version); and (2) the allocation of bargaining power may lead to different nonprice terms but does not change the likelihood that the parties will agree to efficient terms (the weak-form version).[22]

[20] SCHWAB, Stewart J.. **Predicting the Future of Employment Law: Reflecting or Refracting Market Forces?** Cornell Law Faculty Publications Paper 527. 2001, p. 46.
[21] *Ibidem*, p. 5.
[22] CHOI, Albert; TRIANTIS, George. **The effects of bargaining power on contract design**. Virginia Law Review, Vol. 98, No. 8 pp. 1665-1743. 2012, p. 1670.

3.6. Adverse Selection

Adverse selection is one of the more dramatic effects of information failure. In a market where there are different grades of products and great risk for imperfect information, the market may become so distorted as to remove “good” products from the market, leaving only “bad” products.

The example of the used car market, previously cited in the chapter on information failure, is the textbook example of adverse selection introduced in George Akerlofs seminal paper *The Market for Lemons: Quality Uncertainty and the Market Mechanism*:

> After owning a specific car, however, for a length of time, the car owner can form a good idea of the quality of this machine; i.e., the owner assigns a new probability to the event that his car is a lemon. This estimate is more accurate than the original estimate. An asymmetry in available information has developed: for the sellers now have more knowledge about the quality of a car than the buyers. But good cars and bad cars must still sell at the same price- since it is impossible for a buyer to tell the difference between a good car and a bad car. It is apparent that a used car cannot have the same valuation as a new car - if it did have the same valuation, it would clearly be advantageous to trade a lemon at the price of new car, and buy another new car, at a higher probability q of being good and a lower probability of being bad. Thus the owner of a good machine must be locked in. Not only is it true that he cannot receive the true value of his car, but he cannot even obtain the expected value of a new car.[23]

Let us apply this concept to the employment market. As we have already seen, there is an inherent asymmetry of information in this market. A company might prefer to pay more in order to hire a quality employee, but it cannot tell apart a hard worker from a lazy one. However, it is very difficult and/or costly (transaction wise) to tell the two kinds of workers apart. The company therefore incurs the risk of hiring an unproductive employee at the price it was willing to pay for the productive one. Estimating this risk, the company is likely to offer less for the position, to offset the risk of hiring the unproductive employee. This ultimately leads to a reduction of wages and in employment if companies are not capable of discriminating between the different workers.

[23] AKERLOF, George A.. *op. cit.* p. 489.

The problem is exacerbated and adverse selection more prevalent if companies find themselves stuck with employees due to termination constraints. On top of the moral hazard caused by these clauses, be they contractual or statutory, adverse selection could also contaminate the market.

Professor Schwab brings a very interesting example in where government intervention might be desirable in order to correct adverse selection:

> For example, suppose a health-insurance plan exists that each worker would value at one-hundred dollars and that costs an employer ninety dollars per worker to provide. In a well-functioning market, the pension would be provided as employers compete with each other to attract workers. Wages would fall to cover the employers' extra costs. The law does not have to intervene in this well-functioning market in order to have health insurance provided. Not all labor markets function well, however. Adverse selection may prevent employers from offering health insurance to all workers, for fear that they will be swamped with unhealthy workers. For example, suppose unhealthy workers cost $270 to insure. Employers cannot distinguish unhealthy from healthy job applicants, although the applicants know which they are (and unhealthy applicants, knowing their status, value health insurance at $300). If so, no employer can remain competitive while offering health insurance to all workers. Net social gains might improve if employment law intervenes in the market and mandates health insurance.[24]

[24] SCHWAB, Stewart J. *op. cit.*, p. 47.

4. THE 2017 REFORM

4.1 Mandatory leave from work

The previous version of legislation regarding vacation days stipulated that workers be granted 30 consecutive days of paid leave per year, which may be divided into two periods so long as both be at least 10 days long. The new rule now flexes the fractioning of vacation time into 3 periods of extended leave with a minimum period of 5 days, but adds a restriction by requiring one of these leaves to be at least 14 days long. This change is rather peculiar as instead of amplifying or restricting contractual liberties it instead shifts the restrictions created by requirements in the extension of vacation leaves.

The relevance of now allowing the fractioning of vacation into 3 periods is questionable. Brazilian law allows workers to “sell” up to one third of their yearly vacation allowance, effectively reducing mandatory yearly vacation leave to 20 days. In other words, workers have an entitlement of 30 days, 20 of which are inalienable and another 10, which follow property rule and may be traded. Wachter and Cohen explain this rule:

> Under a property rule, parties may voluntarily trade entitlements but entitlements may not otherwise be legally them.[25]

These authors also explains when lawmakers use inalienable entitlements:

> Policymakers use inalienable entitlements when they determine that transaction costs are so high that efficient trades cannot be made. In particular, if the potential for strategic behavior is great, It may be undesirable to allow the entitlement to be traded because o that the trade represents strategic coercion or a sacrifice of long-term interests to achieve a short-term gain.[26]

[25] COHEN, George M.; WACHTER, Michael L. ***op. cit.*** p. 1370
[26] *Ibidem*, p. 1371.

If we are to believe Wachter and Cohen's reasoning, then Brazilian lawmakers do not seemed to be preoccupied by economic efficiency or reasoning. Indeed, it makes no sense to consider that there is a difference in transaction costs between trading one third of vacation entitlements, and the whole. The justification that mandatory leave from work entitlements is beneficial to workers as a wealth-transfering measure is also very questionable as stated by Jolls:

> An obvious but critical starting point in the economic analysis of employment law is that legal regulation of the treatment of employees typically takes place against the backdrop of a market relationship. This market relationship often imposes significant limits on the prospects for using employment law purely for the purpose of transferring power, wealth, or other entitlements to employees – although employment law is often enacted with such motives as the law's declared purpose. In the area of mandated leave from employment, for instance, if employment law seeks to better employees' situation by specifying minimum entitlements to leave from work, it is possible that the end result will be to worsen employees' situation as wages or employment levels adjust in response to the new legal requirements.[27]

Interestingly, most workers choose to trade one third of their vacation entitlements, to receive an added 10 days wages in exchange for giving up 10 days of paid leave.[28] This seems to point towards the possibility of existence of government failure caused by the imposition of a quantity of vacation days above optimum, revealed preferences indicating that 20 days of vacation provide a more desirable allocation than 30 days. Considering this behaviour in workers preferences, it is easy to imagine that an even further reduction in vacation time in exchange for higher wages would be preferable, for example 2 weeks as modelled by Stewart J. Schwab in the United States[29]. However interesting and tempting it would be to delve deeper into this discussion, it flees from the scope of this paper, as there is no change for days workers may give up. Nonetheless, this

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[27] JOLLS, Christine. op. cit.. p. 3.
[28] The author failed to find research supportive of this statement and should be taken at speculative value. The author believes this to be true at least for low-wage earners, for whom the additional pay would provide greater relative gains in well-being. While the opportunity cost in terms of brute amount of money in the case of high-earning individuals is higher, decreasing marginal returns of consumption makes it more likely that these individuals would be closer to satiation than low-earning ones, and thus prefer to enjoy longer leaves from work than the additional earnings.
[29] SCHWAB, Stewart J. Law-and-Economics **Approaches to Labour and Employment Law**. 33 International Journal of Comparative Labour Law and Industrial Relations, 2017, p.. 4.

behaviour, which changes the amount of vacation days taken by most employees from 30 days to 20 days, is entirely relevant to the 2017 labour reform. If we consider employees taking 20 days, then the changes permitting vacations to be divided into 3 periods become entirely irrelevant. Indeed, with the law mandating one leave of at least 14 days and prohibiting leaves of under 5 days, the only possibility for vacation partitioning would be either a single 20-day vacation or one 14-day and one 6-day vacation in the year. There is no scenario where three distinct vacation periods are possible in this case. This changes from the previous model in which, still based on 20 days per year, workers could either take a single 20-day vacation, or divide those 20 days into two 10-day leaves. In this light the changes seems entirely incidental. Of course, in the event that a worker does decide to maintain his entire 30-day vacation entitlement, then the new rule provides entirely greater flexibility in how he may decide to allocate his vacation time.

We now ask ourselves if there if economic reasoning can show the existence of an upside in the greater flexibility of vacation rationing. From the employee perspective, such a consideration is entirely based on his utility curve and notably the marginal value attributed to each vacation day after the first. A typical utility curve with diminishing returns would show that the worker values his first day more than his second day, his second more than his third and so on.

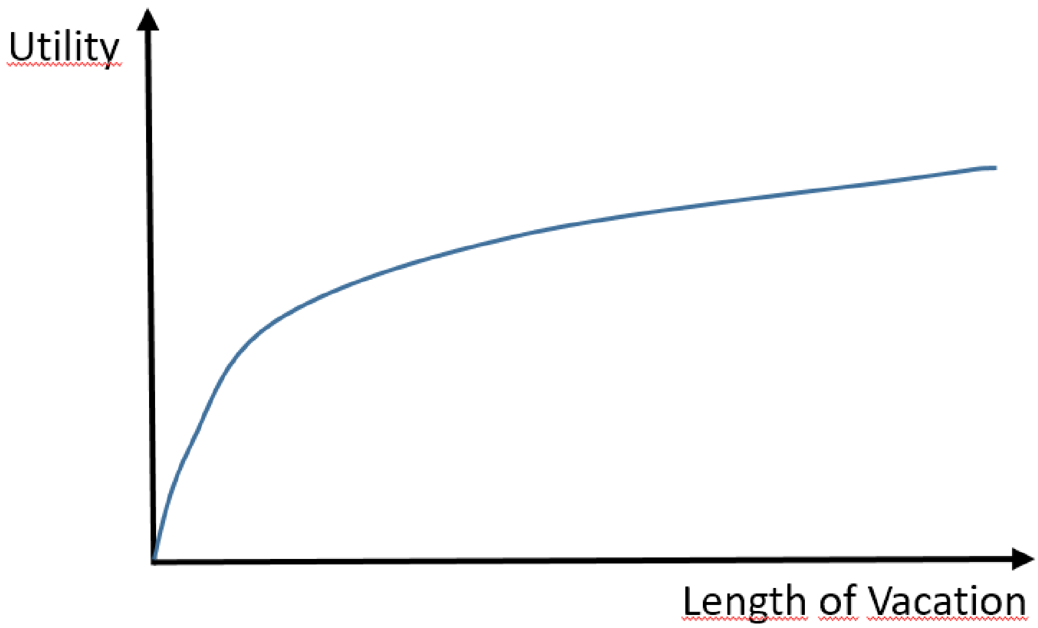

Figure 5: Utility function with decreasing marginal utility in function of vacation length

If we are to believe this model, then a worker would much rather divide his vacation entitlement into as many small periods of consecutive off days as possible. The principle of preference of diversification would then permit us to conclude that the worker would prefer to split his vacation days as even as possible in as many periods as possible considering the legal constraints. The following graph represents an indifference curve. This sort of graph, commonly used in microeconomics, shows a curve in which all points represent the same level of utility but with different combination of goods, or in this case different lengths in 2 vacations. Points further from the curve and the origin, represent points of superior utility and thus that the consumer, or in this case worker, would find preferable. Contrarily, points between the curve and the origin are of lesser utility. Considering the convex nature of the curve, if we were to take two points of the curve and link them, any point on the resulting segment would be preferable to those representing the allocations on the curve. This shows the consumers preference for diversification.

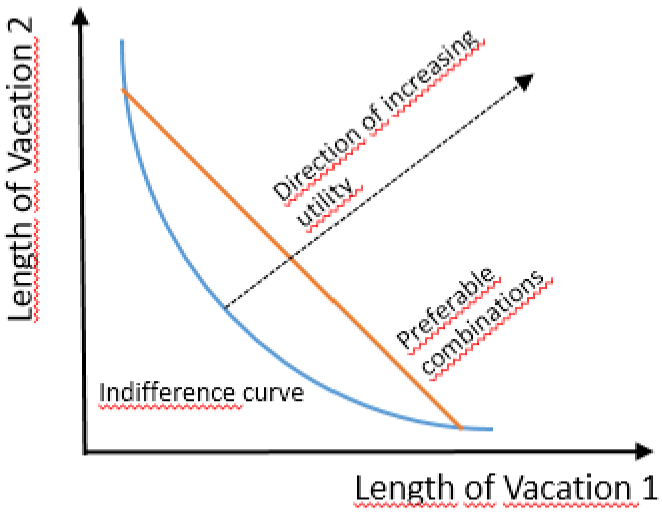

Figure 6: Indifference curve of vacation lengths

Do the changes in law then clearly benefit this individual? It depends if the individual opts for the full 30 day entitlements of if he trades 10 days and remains with 20 days off.

In the first case under the old law, the utility maximizing fractioning of vacations would occur if a worker split his vacations into two equal 15-day periods. Under the new rule, best results are achieved by fractioning into one 15-day period and the rest into a 7 and 8-day period (there is no such thing as a half day of vacation). In this situation, the new rule also permits for two 15-day periods, but the three period split is preferable. Therefore, the changes in the law are entirely beneficial to this kind of employee.

In the second case, the utility maximizing fractioning of vacations following the former rule would occur by splitting the entitlement into two 10-day periods. Notably, that is the only possible way to divide the vacations, considering the previous ban on vacations inferior to 10 days. The new redaction of the law also provides for a single possible way for an employee to divide his vacation entitlement, with a 15-day resting period and another 5-day period. In this case, if we are to believe that the worker prefers diversification, then the changes are detrimental to his wellbeing.

Preferences in how to divide these periods are however extremely personal and do not agree well with economic modelling which tends to assume a sufficient level of similarities between the preferences of individuals as for them to be considered equal for analytical purposes. Perhaps an individual actually prefers to take a single long vacation in order to take travel longer, spending more consecutive time abroad and saving money. Perhaps even an employee takes time to get into a “vacation mood” and values the second week of vacation more than the first. Maybe a worker does indeed prefer to split his entitlement and take many short breaks in order to be able to visit distant relatives more often. There are countless personal reasons that may affect preferences and therefore we cannot conclude that the new rules based on a 20-day entitlement is detrimental to all workers.

From an employer perspective, we can also argue a preference for diversification for dividing a workers vacation time into shorter vacations. It is easy to imagine how a company would be well capable of making doing without a certain worker for a short amount of time. For example, that worker’s responsibilities may easily be divided amongst those who remain working for a short amount of time. Over longer periods, the extra work may be unsustainable and require the employer to hire a temporary replacement. This not only incurs additional costs but temporary workers also tend to be less productive than a permanent worker is. According to Lisi and Malo, the reduction in productivity is directly related to the degree of technical difficulty of the job:

> The main finding of the paper is that TE[30] is even more damaging in skilled sectors, with a negative effect significantly heavier than in unskilled sectors, robust to little changes in the skill intensity index and in the sample used,as well as to the inclusion of non-linearity in the effect of TE. In particular, we find that an increase of 10 percentage points of the share of TE in skilled sectors would lead to a decrease of about 1–1.5% in labour productivity growth, where as in unskilled ones the reduction would be only of 0.5–0.8%.[31]

For the same reasons, a company would also prefer its employees to "sell" their 10-day property entitlements. In this case, the company would have to make do without its worker for a 5-day period and another 15-day period under the new rules. What is not at all evident is if this is better than an even 10-day split. The effect the different kinds of divisions of vacation days is entirely dependent on the production technology of the company and on how essential the worker is. We therefore also cannot conclude if this change is beneficial for employers.

4.2. Breaks from work

Previous legislation made a period for rest during an 8-hour workday mandatory. This period had to be between one and two hours, without the possibility shorter or longer breaks even if a worker desired such.[32]

The changes maintain this rule as default, but has provided for the possibility of employees and employers to agree to reduce the break to a half hour. Legally speaking, what was previously an inalienable entitlement is now partially subject to property rule.

Generally, economists consider changes that permit the trade of entitlements as being desirable. While they cannot guarantee that allocations that are more efficient will be reached, for example if transaction costs prove to be an impediment, they do expand

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[30] Temporary Employment

[31] LISI, Domenico.; MALO, Miguel.A. **The impact of temporary employment on productivity**. Journal for Labour Market Research 50: 91. 2017. p. 107.

[32] The previous state of the law already provided for the possibility of further reduction in workday breaks. However, these could only be achieved by special permission from the Ministry of Labour for companies that provided cafeterias, and never for those who worked overtime, according to article 71 paragraph 3 of Brazil's Labour Statute (*"Consolidação das leis do Trabalho")*. The new statute makes these entitlements tradeable through collective bargaining for low-wage workers, or by individual bargaining for high earning individuals, defined as those who earn double the maximum benefit conceded by social providence currently at around 5.500 Reais, and who also have university-level degrees.

on the possibilities of arrangements that may be reached. We cannot make a case for this change being any different. A shorter break would mean the worker could go home to rest earlier, which in most cases a half hour spent at home is certainly preferable to a half hour lounging at work. If the employee still values a longer break, maybe because he needs the rest to function properly at work, then can still maintain the longer break if he prefers.

From an employer's perspective, shortening rest periods could be very beneficial. It allows a firm to cut fixed operating costs such as lighting down by reducing the time it effectively spends operational, without cutting down on productive time. This small and simple change to the law therefore appears to easily promote efficiency and gains for both workers and employers.

4.3. Wages by efficiency

Previous legislation permitted remunerating labourers according to their productivity, such as commissions for salespeople. However, in the event that these wages linked to employees efficiency failed to meet or surpass minimum wage, the employer was obliged to compensate the employee so that his or her salary not fall beneath the legal minimum. New rules undo this obligation, relieving employers of any obligation to compensate employees who underperform.

This change seems, at first, to be largely pro-employer. After all, workers lose the benefit of a guaranteed minimum wage in the event of poor performance, while employers are relieved of the onus of compensating low productivity. This conclusion would be, however, a gross simplification. It would be more accurate to say that the changes provide a loss for unproductive employees, while they could provide a benefit for productive employees.

The following analysis will be considered in a market where competitive equilibrium wages are inferior to that of minimum wage, or sufficiently close to be considered equal for purposes of this reasoning. In this case the price for labour being superior to competitive equilibrium, supply of labour will be in excess of demand at the established minimum wage[33]. In a competitive market, wages are equal to the marginal productivity of labour[34]. It is hard to imagine a case where the employer might have the incentive to offer a form of performance based wages, while having to guarantee a minimum. For performance-based wages to be worthwhile to the employer, they must either: (i) provide the same productivity at a lower cost, or (ii) provide higher productivity at the same cost.

The first case is impossible since the employer must compensate for the difference between performance earnings and the legal minimum. The second case might be possible depending on the productivity of the employees hired. If we assume that competitive wages are good indicators of the productivity of a worker without added performance incentives, then in the current model a worker would naturally have to put in added effort in order for his performance-based wages to exceed the minimum. This is possible if the cost of opportunity of putting in the extra work is inferior to what he can expect to earn. This is more likely if the minimum wage is closer to the competitive wage, since the added effort is likely to be lesser. However, if there is a large distortion between competitive and minimum wages, a worker will require a much greater productivity for his performance wages to meet the minimum wage, and thus have a larger expenditure in effort. In this case, the worker is less likely to have the incentive to produce enough for his performance wage to surpass the minimum wage, if he is at all capable of doing so.

Productivity based wages in this old system can therefore be interesting for both parties under select circumstances. Employers may want to implement the policy, as an incentive for better productivity from employees. This is, however, a case of possible adverse selection, regulations making a grave market failure possible. Let us imagine a model were there are two types of workers. The first is productive, and in a wage system based on efficiency would earn W, which is superior to the minimum wage. The second worker is unproductive and would earn W', which is inferior to the minimum wage. However, since the law obliges the employer to guarantee the minimum wage to his employees. In a world with imperfect information, where the employer was previously indifferent between hiring the first worker for W or the second worker for W', he now

[33] VARIAN, HAL R. **Microeconomia Uma abordagem moderna**. 8.ed. Rio de Janeiro. Elsevier. 2012, p. 520.
[34] JELHE, Geoffrey A.; RENY, Philip J. **Advanced Microeconomic Theory**. 3.ed. Essex. Pearson Education Limited. 2011, p.136.

finds himself in a situation where there is a risk of hiring an unproductive employee for more than he is worth. In this model, if the employer is risk averse and considering there are heavy costs for firing an unproductive employee, the employer would be unwilling to base his wages on an efficiency-based system and instead prefer lower production with a lower demand of labour at the fixed minimum wage. The consequence for that particular market, which would offer productive employees less than they would otherwise earn, is a reduction in the offer of productive labour and consequent increase in the proportion of unproductive labour in the market.

New regulations maintain the previous incentives for productivity but without the guarantee of minimum wage. This provides a much greater incentive for the employer to offer productivity based wages, while at the same time resolving the problem of possible adverse selection. In this sense, analysis based on the theory of law and economics concludes that the change is wholly positive, bringing greater efficiency to employment contracts and productivity and thus improving social wellbeing.

4.4. Time spent *In Itinere*

The previous state of the Law considered that the time a worker spent in commute, otherwise known as time *In Itinere*, if the employer provided transport, was time available to the employer and thus integrated working hours. The economic absurdity of this system and the lack of incentive, or even negative incentive, for an employer to provide transportation for his workers is evident. In this case, employers would only offer transportation to their employees in the event of alternative methods of commute being impossible. For example for workers in a mine or offshore platform. It is naïve to believe that this would be wholly beneficial to employees. Employers being well aware of this cost would offer reduced wages to employees to reflect the added cost of time not actually spent producing. In the event that the employer is unable to internalize this cost in lower wages due to minimal wage constraints, the practical effect of the law would be the same as if the minimum wage were raised. This would once again lead to a decrease in demand for labour, reduction in productivity and increase in the competitive price of goods produced.

The new formulation of the law makes it clear that time spent *In Itinere* is not to be included as working hours. Along with correcting the creation of higher cost per hour worked for employees with wages nearing the legal minimum and who depend on employer provided transportation, it also creates incentives for employers to offer transportation to their employees. Let us imagine that employees value transportation at the amount X. They would be reasonably willing to sacrifice up to X, which is deducted from their wage, in exchange for the benefit of employer provided transportation. The employer, on the other hand, would be happy to offer this benefit so long as they are capable of contracting the transportation service for a value inferior to X. In this case both employee and employer benefit. The employer is paying less for the input, while the worker receives a positive surplus effectively paying less than what he is willing to pay for the benefit. If an employer is unwilling to provide this service, another employer might gaining a competitive edge for attracting labour[35]. Free bargaining clearly leads to gains in efficiency. The company is very likely to be able to provide transportation at a low cost, at least lower than what it would otherwise cost an individual employee, thanks to scale gains in implementing or contracting the service for a large amount of employees or through superior information and bargaining. Indeed a company looking for transportation for many employees is more likely to do better research and be more efficient in its pursuit of the service than one lone employee would otherwise be capable. How the gain will be distributed, as in, how the surplus will be spread between employer and employees will depend on economic factors such as the elasticity of the demand for transport and competition in the demand for labour.

4.5. Bilateral termination of employment

Bill 13.047 introduces a new form of bilateral termination of employment. Previously an employer could unilaterally terminate an employee under a no-fault rule, but was subject to the payment of 40% of the amount accumulated by the employee in

[35] AYRES, Ian; SCHWAB, Stewart J. **The Employment Contract**. Kansas Journal of Law & Public Policy, Vol. 8, 1999, p 5.

the FGTS[36] fund, along with damages for advanced notice[37] if the employer decided to immediately fire the employee. Likewise, an employee could unilaterally terminate the employment without receiving any of the previously cited benefits.

The reform brings a new modality for bilateral termination. Both parties can reach an agreement to terminate the employment contract with the payment of half the usual penalties the employer would occur under a no-fault unilateral termination. This translates into a 20% fine of the amount accumulated in the FGTS fund and half of the advanced notice. The employee is also granted access to 80% of the funds of his FGTS account.

How this modality of bilateral termination could be attractive to either employee or employer is confusing, and economically reasonable only under very specific circumstances. If an employee wants to leave his job but the employer wants to him to remain, the employer has no incentive to accept to release him under the bilateral accord and incur costs to develop a situation that does not benefit him. Likewise, if an employer wants to fire an employee that wishes to remain in his position, the employee has no incentive to accept the accord preferring instead to keep the job or wait for the employer to fire him and receive added severance benefits.

In what circumstances would this kind of agreement realistically happen? The zone of possible agreement is indeed very narrow. An employer would want to be rid of an employee, not enough to pay the full benefits but just enough that half the benefits becomes an attractive option. In addition, the employee would have to value his job enough to not simply quit, but not enough so that receiving half of the severance benefits is preferable to keeping his job. These criteria being met, we could also question the process that would lead up to the agreement being struck. The employee or employer would have to signal his or her desire for employment termination, and that this desire is great enough, but not so great, that it would only happen within the narrow margin we have determined.

[36] FGTS stands for "*Fundo de Garantia de Tempo de Serviço*". Employers must make monthly deposits in an amount corresponding to 8% of the workers salary, which the worker may withdraw under select circumstances such as to finance the purchase of a vehicle, a house, or in the event the employer terminates his employment.

[37] According to bill 12.506/2011, the duration of the notice is of 30 days, with the addition of 3 days per year of service up to a maximum of 90 days. An employer who wished a worker to immediately vacate the job would therefore be obligated to compensate the worker in the amount corresponding to the wages he would have earned during the notice period.

What to think of this in terms of efficiency? At first glance, even if the cases in which bilateral agreements would happen seem rare, we are inclined to think that the addition of a new modality of transaction would at best generate gains of efficiency in the rare cases they do happen, and at worst have no effect if they are irrelevant. But can the mere existence of this halfway agreement cause changes in bargaining behaviour, which would lead to undesirable results? This question might seem irrelevant, but let us consider not fully rational players that are subject to loss aversion. An employee has been working at a firm for 10 years and has accumulated a significant FGTS account there. He also has an offer for a considerably more desirable position at another firm. Ideally, he would want to be fired from his current job, receive a very considerable severance, and take the new position. Second best case scenario is he would quit his job and take the new one. The worst decision he could make would be to stay in his current job. However, this last and worst decision may be the one the employee takes if he is so loss averse that the thought of losing the possibility of being fired and receiving the severance cripples his capacity to make the optimal choice. The inclusion of the possibility of a bilateral agreement adds a new degree to his dilemma. While perhaps he would have quit his job beforehand, thinking that being unilaterally fired was too remote a possibility, he might now wrongly believe a mutual accord to be more likely and thus make the non-optimal decision. We can also imagine that the inclusion of his modality and the expectation for it could lead to greater hesitation of parties to make a decision, more inefficient attempts at bargaining and thus higher transaction costs. This analysis is however very conjectural and should be taken with a grain of salt.

Considering the fine bargaining range that renders the new modality of bilateral termination feasible, and possibility of negative effects on behavioural biases, we are hard pressed to make any reasonable conclusions on the economic desirability of this change in employment law. What we can say with relative certainty is that, whether positive or negative, its impact is likely to be slight if not negligible.

5. FINAL CONSIDERATIONS

This application of Law and Economics and Microeconomic Theory to bill 13.467 has resulted in an overall mixed appreciation of the changes brought. Negative interpretation to certain points of the bill have been limited, and often brought about debatable conjectures and the inclusion of very particular cases where there might be a negative impact.

Positive changes, identified as those that might be capable of bringing about gains in economic efficiency, were mostly considered minor. Indeed, there is a large variety of small points with the potential to provide potential gains. These changes are not unwelcome from an economic perspective, their relevance is however questionable.

In summary, we can consider bill 13.467 to bring some welcome relief to a market very heavily constrained by government interference whose effects are dominantly considered negative from a neoclassical perspective. We do however question the degree of significance of said relief, and whether the bill will be capable of providing a lasting positive impact on economic relations.

This paper has a few limitations. One is that this paper does not encompass all of the changes brought about the bill. There were many other changes brought about by the law, and exploring them all would have been far too much of a daunting task. Furthermore, it was felt that a lot of the changes were entirely inapt to be targets of economic analysis and methodology, or if there were relevant applications of law and economics to be made they were either not seen by the author or were far too removed from his practical knowledge. It was found that enumerating every minor change and justifying why it would or would not be a prospective candidate for economic analysis would prove to be an exercise in futility. Another limitation is the simplification given to the treatment of finer points of the law. There is no discussion on interpretation or great importance given to the attention of legal detail. Once again, it was felt that giving in to these factors would have made the paper stray from its objective of providing a neat example of the application of economic theory to the law.

However significant the limitations. I believe that this research has been successful in its objectives of providing a solid example of how Law and Economics can be practically applied to labour law, and in providing an economic perspective into the possible effects of the labour and employment reform brought by bill 13.467.

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