Pérdida del poder adquisitivo versus disminución del tiempo de trabajo socialmente necesario

Loss of Purchasing Power Versus Decrease in Socially Necessary Work Time

Perda de poder de compra versus diminuição do tempo de trabalho socialmente necessário

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Resumen
Los trabajadores en cualquier latitud del planeta pierden poder adquisitivo con respecto a los recursos que obtienen por el pago de su salario. Existe una tendencia contraria a la baja del poder de compra, es la disminución del tiempo de trabajo socialmente necesario. Esta ley consiste en medir el tiempo que se requiere para realizar tareas tanto al interior del trabajo como en la vida cotidiana. El desarrollo tecnológico abarca todas las actividades y hace posible disminuir el esfuerzo que se requiere en cada espacio social. Ambas tendencias económicas forman parte de una ley general denominada tendencia a la baja de la tasa de ganancia. En este trabajo se exponen reflexiones teóricas al respecto originadas en autores clásicos.

Palabras clave: consumo, recesión económica, tecnología, teoría económica, trabajo.
Abstract
Workers in any latitude on the planet lose purchasing power with respect of the resources they obtain for the payment of their wages. There is a tendency that is contrary to the decrease in purchasing power, it is the decrease in socially necessary work time. This law consists of measuring the time required to perform tasks both inside the work and in daily life. Technological development encompasses all activities and makes it possible to reduce the required effort in each social space. Both economic trends are part of a general law called downward trend in the rate of profit. In this work theoretical reflections originated in classic authors are exposed.

Keywords: consumption, economic recession, technology, economic theory, work.

Introduction
This work is the result of a theoretical reflection by means of which two economic trends that have survived since the birth of capitalism as modes of production are explained: the constant losses of purchasing power of the vast majority of the working population and the constant decline of socially necessary work time. The objective of this work is to describe how one and the other act in reverse with respect to the well-being of consumers.
The loss of purchasing power is covered, like many other economic phenomena, with a social veil; inflation is one of the distractors in the full understanding of the loss of purchasing power. To measure the proportions in which purchasing power is lost (or gained), prices must be deflated, that is, it is necessary to subtract the effect of price inflation (in this case, from a worker's salary) to convert them to “real prices”. For example, if a worker had a monthly salary of $500 and, at the beginning of the year, through agreements between owners and workers, received a 3% increase, that is, a new salary of $515, everything would seem to indicate a scenario positive; However, and assuming even more, if the inflation rate of that new year were 5%, then, in order for him to buy the same as the previous year, he should have obtained 525 as salary and not 515. This hypothetical worker lost purchasing power by a ratio of 1.09%.

On the other hand, the law of the reduction of the socially necessary working time, which is with which the value of a worker's salary is measured, is constituted by the sum of the cost of all those things that he acquires to be able to subsist and has for characteristic that in all areas there are constant decreases due to the implementation of technological advances.

Objectives

Demonstrate through a theoretical confrontation of different currents of economic thought how two phenomena typical of capitalism act simultaneously, one detrimental to the well-being of workers and the other in favor.

Methodology

An analysis was carried out of the main scientific influences that address the laws of economic functioning, highlighting those that focus on the fact of the loss of purchasing power of workers, and those that study the effect of socially necessary work time. The results are exemplified with historical facts in which these phenomena are more clearly appreciated.
Results

In order to elucidate the influence of the two tendencies mentioned above, it has been essential to turn to the classical theorists, since they remain valid in a good part of their statements. Historically, the decline in purchasing power is constant and appears as a regular phenomenon in the economic space, and is measured with the official information offered by central banks. A factor that makes the analysis complex takes shape in the generalized idea that "we all lose purchasing power." To reveal the problem, we must take into account that the inflationary index represents the general average of all transactions, and in this set, the salary, which is the payment of the "labor merchandise", the vast majority of cases increases below average. In other words: the inflation rate is the general average of total merchandise;

Taking the example of the 5% wage increase over the previous year, it means that many goods increased more than that proportion and many others less. In economics, it is not possible that "we all lose." If many commodities rose less than 5%, it means that the differences (in this case, profits) were obtained by those who raised their prices above the average proportion. The particular case is that in all countries the merchandise, in its form of payment of wages and salaries, increases proportionally less than the rest of the sales. Therein lies the loss of purchasing power of workers.¹ It is very rare, although it has happened, that the average of the merchandise decreases in a short period of time, but it is the exception and never the rule. A simple clarification and, despite its apparent banality, at the same time necessary, if one takes into account that the economic field is very flexible: all goods have an owner, those that lose value are suffered by their owner and those that gain, their master enjoys the usufruct. We must see it then without euphemisms: people win and lose, not goods.

The second of the trends, the decrease in the time of socially necessary work, presents greater difficulty for understanding as it encompasses greater spaces for analysis. First, it refers to the totality of goods that workers need for their support.;² second, that with the passage of time new goods appear; third, that for its full understanding it is essential to take into account the application of technological advances that take place throughout productive

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¹ According to a particular investigation, in Mexico between the years 1982 and 2010 a total of 24.46% has been accumulated in the loss of purchasing power (Gómez y Guerrero , 2013, pp. 152-154).

² “The capitalist is obliged to pay for labor power only its value, which is fundamentally determined by the labor time necessary for its production (and reproduction). Consequently, its value is equal to that of the means of subsistence, defined as a cultural minimum, to which are added the costs of education and preparation” (Marx, 1999, p. 73).
life, and that the latter is constantly expanding; and fourth, that because it deals with the analysis of cultural phenomena, its understanding is more difficult than when it comes to a simple mathematical formula.

When a technological development takes place, cultural changes are forced because the people in that environment stop doing things that they did ancestrally and are employed in new tasks. Suffice a simple example: half a century ago (actually a 50-year period in the economic calendar is a very short time), in rural communities of Mexico, women spent much of their time washing family clothes (This example has to do with a typical aspect of socially necessary work time). They would go to the shores of the town to the river or to a spring that was sufficient to cover that need; In times of low water, however, the situation was complicated, they moved the family’s clothes in baskets, wheelbarrows, bicycles or in pack animals; in most cases, the participation of other family members was necessary, generally other women. They moved to distances that could be between 100 to 1000 meters, they were located under the shade of a tree, they knelt on the ground to wash their clothes on a stone and other people, practicing the division of labor, carried the water . Once washed, the garments were sunk on bushes to dry. The activity, generally once a week, required the work time of two, three or more family members for more than three hours. With the advent of washing machines, when electricity was introduced, women did not have to leave the home, they did not draw water by hand and drying time was also drastically reduced with the use of the ad hoc appliance. In summary, analyzing only this example, it is easily demonstrable that the decrease in socially necessary work time is constant and encompasses all the activities that the common man performs for her subsistence. In this capitalist world, all areas of human behavior are flooded by goods that seek to replace the previous ones and above all that seek that people make minor efforts for activities of daily life, read socially necessary work time.

The two laws are omnipresent in the economy and their influence is in the opposite direction of each other: while the vast majority of workers lose purchasing power from year to year, technological advances make it possible for all activities of daily life to be carried out automatically, easier way or require less time. These two economic laws are part of a more influential one and is explained below.
The downward trend of the rate of profit

Capital is made up of three elements, a triad that the father of political economy, Karl Marx, called the organic composition of capital, namely: constant capital, variable capital and surplus value. The constant component is all that material or equipment that is used for production (buildings, machines, tools, computers, trucks, facilities, etc.), the variable component is the payment for the workforce (wages and salaries) and the surplus value they are the profits of the entrepreneurs. Historically, the constant component increases in a greater proportion than the profit of the workers and even the profits of the owners, and because the profit rate is obtained by dividing the capital gain by the sum of the constant and variable capital, the result over time is lower (Katz, 2018, p. 427). For this reason this law is called as its own process describes it: downward trend in the rate of profit.

\[ G = \frac{p}{c + v} \]

If you look closely, the two laws described above are combined here. Let's go by parts: when a technological advance takes place, it means either that a new equipment has been created for production, or that an existing one is improved by way of escalation, that is, if it was used, for example, to sew five pants simultaneously, now it does it for 30. It is not difficult to suppose that with this technological advance an enormous amount of economic resources has had to be invested, when it comes to an invention, or less if only the coverage of the production possibilities, but in either case, a high amount of value. Because more sophisticated equipment is used now, it means that the time workers spend on production (of pants, to continue with the example) is less; it is logical to assume that workers stop doing tasks that they previously did with equipment that has become obsolete and perform new ones because the new equipment requires it. This process had already been explained: the

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3 It is logical to assume that the costs of machinery are increasingly higher and, although they are accounted for in monetary units, they represent a value that has been the work that was dedicated to their manufacture. Another characteristic of high investments in equipment purchase is that its duration is long because its value is divided by the time of its use; then, always try to build these types of tools whose useful life is as long as possible (Mason, 2019, p. 225).

4 Pay for work is always proportionally lower than for investment in equipment and buildings, notwithstanding the above, according to Keynes, the working day could well be reduced to 15 hours a week without thereby reducing access to wealth (Briales, 2018, p. 574)
decrease in socially necessary working time means that workers or workers in general, by obligation, have to experience firsthand the cultural changes that technological transformation requires. In the same way, by virtue of the fact that variable capital (wages and salaries) increases in less proportion than constant capital (the cost of the things with which it is produced or on which it is produced), there is a loss of power acquisitive (Katz, 2018, p. 427).

On the other hand, let us remember that the inflationary rate is the average of the increases (or decreases, because it can happen) in total sales, and that historically the merchandise worked in the vast majority of cases increased below the average, which it means, of course, that other commodities (their owners, because they are not entities) earned what wages lost. The downward trend in the rate of profit thus encompasses the two laws that act in reverse order to each other in the daily life of workers. According to Marx, the existence of the low percentage of profits, which forced sales in superlative quantities, was to be constituted as the beginning of the end of capitalism as a system of economic production.\(^5\) He was unaware of the resilience of that mode of production and has been the subject of tons of scholarly articles of theoretical discussion. The crises have been recurrent and many of them bring new characteristics, however, the ways to recover as well. An economic event that has become a classic for analysis was the great crisis in the United States.

**The great Depression (1929-1933)**

This event represented the greatest economic collapse that the world has suffered and brought with it an infinity of experiences unsuspected by common people and also by scholars. The United States is the country recognized as the greatest representative of the economic decline. This economic fact was so important that it demonstrated with millimeter clarity that the main characteristics of economic thought are riddled with appearances and that reality becomes very difficult for a considerable part of the academic world to understand. At the beginning of the Great Depression, for a moment, Germany became one of the most unfortunate countries; but just as he suffered it suddenly, so quickly it disappeared, and that is because Hitler's irruption was essential to turn the crisis around. The

\(^5\) Mason claims that capitalism does not tend to disappear, but to constantly mutate. There are authors who speak of the theory of "long waves", they say that crises are recurrent and appear in periods generally of 50 years. Samuelson classifies them as science fiction writers (Mason, 2019, p. 66-67).
recruitment of youth for war and the mass production of equipment for future conflagrations doused unemployment and created a pool of financial wealth, which was difficult for the other countries of the Western world to understand for some time.\textsuperscript{6}

The Great Depression originated in the antipodes of what is considered an economic crisis by the general public: the absence of merchandise. At the end of the 1920s, the United States was enjoying overproduction in all its areas (Wionczek, 1956, p 90). Or said in the words of Marx (1999), "the cause of crises is the inability of society to consume what it produces" (p. 219). If the American population of the time was characterized by anything, it was by the demand for industrial, commercial and agricultural employment. But reality was imposing itself and in a short period of time it uncovered an entire accumulation of contradictions. One thing that has been well documented when the crisis was the attitude of agricultural producers to the staggering numbers of unemployment, hunger and poverty, burning their crops as a challenge to the unacceptable drop in prices. No less important social contradiction is represented by the fact that the origin of the great crisis has been widely “explained”: the fall in the prices of the shares on the Wall Street Stock Exchange; It has well been said that speculative activities in economics are the least regulated and also the least understood.

In the stock markets not a nail is produced, shares are bought and sold in the least reasonable way possible, speculation is generated as an activity totally planned by the wealthy of the moment.\textsuperscript{7} His business is to grow or decrease the image of a company that trades its shares. Likewise, the existence of two groups of speculators who became billionaires is well documented, either by making the prices of an entity rise, or by making it decrease. But none of them was a producer, their businesses did not leave the trading floor of the New York Stock Exchange. Economists break their heads to understand these phenomena without a possible rationality (Wionczek, 1956, p. 76); They seek to discover laws that explain the phenomena, although in speculative money they always run into a wall.\textsuperscript{8}

Falling stock prices represented a symptom of the crisis, but the true epicenter was a long

\textsuperscript{6}Money was borrowed and people were given jobs; According to Galbraith (1983), with these ideas Hitler was ahead of Keynes.

\textsuperscript{7}During the Great Depression “no one could claim that stock prices had any relationship to corporate earnings or the general outlook of the economy” (Wionczek, 1956, p. 80).

\textsuperscript{8}According to Wionczek (1956), “in the interests of historical truth we must repeat that virtually all the leading economists of the time were unable to understand the dangers inherent in the stock market boom in 1928 and 1929”.

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way off the street in Manhattan; she was in the overproduction of merchandise (Wionczek, 1956, p. 77). That's right, the drop in prices represented what the increase in temperature represents in health, just a symptom, there is no fever disease, it is just the reflection of some infection in the stomach, throat or some other another part of the body: the increase in temperature is not the disease. The stock market crisis represented the economic symptom that some businessmen were losing money by having acquired shares, but an economic law establishes that when someone loses money, another gains it (as well as the loss of the purchasing power of workers, when some lose, the "other goods" gain it).

In summary, what happened in the Great Depression was that there was a constant fall in the rate of profit and this forced producers to increase their activities exponentially to obtain greater profits in the sale of many of their products, because they had invested more in its technological advances. Henry Ford became one of the richest people in the world even when he decreased the price of his cars, increased the salary of his workers and financed thousands of buyers to launch a vehicle and pay it in monthly installments. But Ford did not reach the first places in the world of millionaires for selling few cars, its famous Model T was produced ten million times when the producers of the time presumed to have assembled 3,000 for sale. This is the crux of the matter. The first of the major economic crises originated from constant technological advances that required a greater investment in the constant part of the organic composition of capital, which generated a fall in the production of profits and forced a very high production to compensate the percentage drop with the increase in unit sales.\footnote{In light of the results of this economic law, it is possible to know that a single American company, Walmart, generates sales greater than those produced by a hundred countries. And that another, Mitsubishi, generates more production than all of Indonesia, or that General Motors produces in its entirety more than the entire country of Denmark. The true origin of the economic crisis of 1929 was Fordism because it generated large amounts of wealth and accumulated in the few hands of capitalists who invested large sums in technology. There are authors who, on the contrary, assert that Fordism itself was one of the main factors in overcoming the crisis (Kurz, 2018, p. 121).}

What Henry Ford did with the introduction of the conveyor belt far exceeded the Taylorian vision of focusing all attention on the supervision and overexploitation of workers;\footnote{In economics, the exploitation of workers is measured with the proportion of dividing the surplus value they create by the salary they receive (variable capital), and it is to be assumed that when they use more developed equipment they produce proportionally more goods and receive less salary: } the band that carries all the supplies that the worker requires to their very work

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\text{Tasa de explotación} = \frac{\text{plusvalía}}{\text{capital variable}}
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space. This prevented not only the existence of “downtime” (Radetich, 2016) that workers did when going to warehouses for supplies, but also effectively boosted sales. Let us think that not only the automotive industry had vehicles available in record time for sale, but also in warehouses in all sizes, colors and flavors (Wionczek, 1956, p. 90); Thus, the textile industry, by including the conveyor belt in its workplaces, made it possible to offer clothing in all sizes and multiplicity of colors, and avoided the romantic and far-off time of tailoring; the same happened with the shoe industry. In short, the vast majority of industrial branches adopted conveyor belts in their series productions, increased their investments in machinery and installations (constant capital), decreased the profit rate and increased their sales on unthinkable scales.

Until recently, the law of the downward trend of the rate of profit was one of the Marxist theoretical postulates considered less falsifiable than the rest, but lately there have been few scientific voices that have begun to hang it with pins. As already mentioned, the organic composition of capital is made up of constant capital, variable capital and surplus value, however, in the previous expositions, for the sake of simplicity, it was not clarified that in Marxist theory, when talking about capital constant, this is divided between fixed and current; The first, as its name says, refers to everything fixed that is used to produce or is about what is produced, namely: buildings, machinery, computer systems, and so on; and the currency is everything that has movement: fundamentally transportation. Well, of the two components, it is the fixed component that increases the most in proportion to total investment and we can assume, as it happens, that surplus value generally decreases (remember that we are talking about proportions because there are cases that in absolute terms it can increase, however, purchases of technological equipment that replace the previous ones are, by far, with higher prices). The same happens with variable capital, the most reasonable thing is that by acquiring more developed equipment, the work to be done is easier.11 For example, with the introduction of robots in the assembly of cars, qualified personnel are required for the maintenance and elaboration of equipment, but proportionally the payment for the implementation of new production processes is always higher than the payment of salaries.12

11 In other words, a smaller amount of labor is needed for each unit of capital investment. (Piqueras, 2018).
12 Work is one of the three forms in which merchandise manifests itself, namely: money, things that are bought to satisfy some need and work. Well, skilled work costs more to update than unskilled work, that is, generally
The space for which scientists have questioned the survival of the downward trend of the rate of profit is located in the fixed part of constant capital, and very particularly because of the increasing influence of information technologies and communication (ICT), that is, in its computational part.\(^1\) And it is that a great amount of free software has proliferated, that is to say, that the hardware is sold but the systems that they use for the operation are free. In the words of Marx (1999), “foreign trade cheapens, in part, the elements of constant capital and in part, the necessary means of subsistence in which variable capital is invested” (p. 169) (that is, wages).

In short, the part of the organic constitution of capital that has historically increased in greater proportion than the other elements has begun its trajectory in reverse. Even an ingredient that for a long time was considered insubstantial has taken on a very large influence: piracy, that is, the sale of cheap software that makes competition outside the law. What we must emphasize in this space is that no matter how illegal it may be, it also originates from the business side, it is not the workers who compete with the owners, but other unscrupulous owners who seek the same ends as those correctly established: obtaining capital gain.

**Discussion**

The solution to the economic crisis of the Great Depression

The theoretical solution to the economic ravages left by the great crisis was provided by John Maynard Keynes, an English scientist who asserted his contributions to an academic world that believed it knew everything and did not accept recipes. They did not solve the problem and neither did they accept external solutions. And it was not for less, the classical theory had offered since its appearance that the invisible hand accommodated everything in society, a kind of social Darwinism with its postulates that the deficiencies or excesses of people who study at a university are training as skilled workers and all the time of their training carries value. Well, although the value involved in training skilled workers may be twice that of unskilled workers (Mason, 2019, pp. 214-215), in any case the proportion in constant capital investment, as a general rule, is greater than that of variable capital.

\(^1\) At the beginning of the 21st century, the most important companies in the world were oil, industrial and automotive companies, but they have been replaced by electronic ones. To date, the most relevant are Google, Amazon, Facebook and Twitter (Kats, 2018). One of the constant capital costs that was represented by paying for internet services, also known as bandwidth, has dropped dramatically. The price of a megabit in 2000 was one thousand dollars a month, in 2019 it is twenty-three (Mason, 2019, p. 223).
merchandise accommodated themselves (Galbraith, 1983, p. 256). As the rural proverb says, “pumpkins are accommodated at the jumps of the cart”. The only evil that could be suffered would be the intervention of the State, that was unthinkable. Political economy, ancestral opponent of the classical one, offered exactly the opposite recipe: there must be no individual gain, only social gain, and the only entity capable of successfully distributing wealth by handing it over to those who generate it is the State. So when the Great Depression was at its height, governments and academics were reluctant to accept that the reins of the economy be left to the state because it was the worst administrator. The Roosevelt government, with its New Deal policy, had to ignore its intellectuals and implement the Keynesian postulates of generating the “speed of money”, and this meant distributing it among the working classes to reactivate the economy, to make possible the rebirth of the market for products made and stored in wineries. In addition to printing tickets, they had to be spent (Galbraith, 1983, p. 253) This is how great works were created, of which the Hoover Dam is the most representative, the largest hydroelectric plant in the world at that time, which, strictly speaking In a sense, it was not necessary, but its construction generated the possibility of creating jobs, which was the main claim of the time. An innumerable amount of works were planned and executed to reactivate the economy under the leadership of the State. that is to say, doing the opposite that the governments of the time of all the capitalist countries had supported. Only their enemies could propose that: the socialist world led by the then nascent Union of Soviet Socialist Republics. This part of world economic history again supports the idea that contradictions are always on the surface in this science. And the most redeemable in practical terms: it was the best way to rescue the capitalist system that was shaken from its foundation stones.

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14 In the United States, the civil service was spending 1.4 billion dollars in 1930; it amounted to almost 10,000 in 1940; the amount of 1930 represented 2% of the gross national product, and in the 50s and 60s the amount rises proportionally to 10-12% (Galbraith, 1983, pp. 272-273).
15 One of the possibilities to get out of the crisis, in addition to "giving speed to money", that is, distributing large amounts among the working class to reactivate the economy, consisted of the proposal to reduce the workload from 40 to 30 hours a week. It was never accepted, although it was proposed as one of the actions that should be added to the New Deal. (Briales, 2018, pp. 572-573).
16 According to John K. Galbraith, a prestigious American economist, the success lay in the fact that Roosevelt managed to increase the purchasing power of the population by injecting resources obtained from loans. (Galbraith, 1983, p. 256).
17 Mount Rushmore is a classic work of construction that is unnecessary from the practical point of view, but excellent from the economic point of view, which required the distribution of money among the lower classes as a basic principle. The national monument is a huge sculptural work where the effigies of four presidents of the United States were carved: Washington, Jefferson, Roosevelt and Lincoln.
Another great crisis in the United States, that of 2008, required the participation of the State, but now not to employ millions of workers, but to rescue a part of the big businessmen, and certainly, usurious capital: the bankers (Katz, 2018). With this mention in no way is it intended to make a historical explanation of the crises, it is only mentioned to highlight that on this occasion the participation of the State as a direct economic entity was also necessary, although in this case to directly benefit real estate entrepreneurs, and not to the workers as in 1929-1933; in no way is it intended to expose all of the important historical changes.

Conclusions

The origin of the escalation of industrial growth took place in the phenomenon known as Fordism. Before, the workers' administration used inhumane methods forged in Taylorism, where the supervision of the workers' movements with the chronometer in hand was privileged (better known as “times and movements”); then Fordism appeared, introducing conveyor belts, which, among other things, gave the workers the impression that they were not being supervised when in fact they were being even more watched and exploited than in the Taylorist system. The increase in technification meant a substantial increase in the constant part of capital, which in turn meant a constant decrease in the downward trend of the profit rate, and this forced an increase in the escalation of production in Serie. With the social saturation of all types of merchandise (including agricultural ones, because their processes were also the object of greater investments in the fixed part of constant capital), an accumulation was caused in the warehouses even when exports and exaggerated competition were increased. And demand collapsed. The Western world observed with amazement that one of the Marxist theories was devouring the most developed markets with the appearance of enormous economic crises at a time when the capitalist route offered the best results, namely: the workers of the big cities had increased their standard of living in a way that they did not believe themselves: they bought big houses, they drove cars, cities grew, there were public services in all areas and women entered a new standard of living by driving cars and buying household appliances in shopping centers distant from their habitat.

Economic development took their fingers with the door. Neither they nor the theorists of the time were aware of the coming economic crisis. And since it was the first time, then
they did not know what to do, the Americans did not think of copying the Hitlerian recipe of extinguishing the crisis with the increase of jobs and the distribution of wealth with their war economy. The most important thing in terms of economic theory: the State had to intervene to regulate the economy and restore social peace as far as possible, distributing money among the working class; in short, the opposite of what classical theory said.

And now, the central reason for this article: capitalism has sought many paths for its survival, and one of them, that we live it daily and do not see it through the eyes of an economist, is that one of the unobjectionable results to which the Law of the downward trend of the rate of profit is the loss of purchasing power of the majority of workers. And another, even less observable, is that the decrease in socially necessary work time makes it possible for everyone (owners, workers and economically inactive staff) to do all the tasks easier and in less time. The environment in which the capitalist world unfolds is everything that we imagine and also everything that we do not imagine, everything is capable of planning to create something new that we acquire as merchandise for our daily work outside the workplace, and that originates precisely in work spaces. The two laws are omnipresent and act in opposite directions to each other.
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