

## Behavior of the purchasing power of the real salary of the university professors from the Center Western Region of Mexico, from the years 2020 to 2022

### Comportamiento del poder adquisitivo del salario real de los profesores universitarios de la Región Centro Occidente de México, de los años 2020 al 2022

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#### Abstract

Quantitative study, which analyzes the behavior of the nominal and real salary of professors from a sample of four state public universities in the Central West Region of the Mexican Republic. The objective is to determine if the salary of the teaching staff of the public universities in the sample has increased or decreased in real terms. As a hypothesis, it is considered that the salary of teachers in the Central West Region (RCO) of Mexico has had a loss of purchasing power. It is considered necessary to reflect on the salary received by university professors from state public universities of the RCO, since the effort that professors make to generate future professionals in Mexico and the world must be dignified with a fair income. Likewise, it is considered that those professors who additionally make the effort to obtain some external accreditations from the universities, such as the National System of Researchers of CONACYT, or the PRODEP profile of the SEP, require an added effort.

**Public universities, Salary, Inflation, Purchasing power**

#### Resumen

Estudio de corte cuantitativo, que analiza el comportamiento del salario nominal y real de los profesores de una muestra de cuatro universidades públicas estatales de la Región Centro Occidente de la República Mexicana. El objetivo es determinar si el salario del profesorado, de las universidades públicas de la muestra, se ha incrementado o decrementado en términos reales. Como hipótesis se considera que el salario de los profesores de la Región Centro Occidente (RCO) de México ha tenido pérdida de poder adquisitivo. Se considera necesario hacer una reflexión sobre el salario que reciben los profesores universitarios de universidades públicas estatales de la RCO puesto que el esfuerzo que hacen los profesores por generar a los futuros profesionistas de México y el mundo debe ser dignificado con un ingreso justo. Igualmente, se considera que, aquellos profesores, que adicionalmente hacen el esfuerzo por obtener algunas acreditaciones externas de las universidades, como el Sistema Nacional de Investigadores del CONACYT, o perfil PRODEP de la SEP, requieren un esfuerzo agregado.

**Universidades públicas, Salario, Inflación, Poder adquisitivo**

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**Introduction**

This document provides a brief explanation of the conditions that have been developing in the world and in Mexico as a result of the pandemic and structural changes in the behaviour of the inflation index, seeking to provide some insight into the reasons for it, as well as the implications for the salaries of university professors in public educational institutions.

In order to make a comparative analysis of the behaviour of the purchasing power of the salary, or real salary, of public universities in the Central West Region (RCO) of Mexico, four universities were taken as a sample, namely: The Autonomous University of Nayarit (UAN), the University of Guadalajara (UdeG), the University of Colima (UCol) and the Michoacán University of San Nicolas de Hidalgo (UMSNH); one criterion for the sample was the availability of the information, either through secondary or direct channels; another criterion was that they have a participation, in the RCO, of social presence and acceptance.

The document is structured in four sections: The first is a theoretical and conceptual review, under which the document is analysed; the second is entitled methodological aspects, which expresses the research process; a third chapter corresponds to the contextual framework, which explains the context under which the current inflationary spiral is being experienced in the world and its consequences in the country; the next section, called the behaviour of real wages in public state universities in the OCR of Mexico, deals with a comparison of indicators and percentage rates to observe the behaviour of the base salary of the four universities taken as a sample. Finally, some conclusions are presented.

**Brief theoretical framework**

The form of organising production under the capitalist system, in terms of the worker/employer relationship, is through the sale of the productive capacity of the worker to the owner of the means of production, for colloquial purposes known as the employer; the payment is normally expressed by an amount of coins, although it could be another expression of value, this amount of coins that the employer gives to the worker is called salary, this must be a sufficient amount to be able to acquire the food and satisfiers that are required for the worker or labourer to recover his strength to be able to produce; At the same time, so that the worker can perpetuate the working class, i.e. have offspring to ensure the replacement of workers in the event of the death of the first, for Marx (2010) "What characterises, therefore, the capitalist epoch is that labour power assumes, for the worker himself, the form of a commodity that belongs to him, and his labour, therefore, the form of wage labour. At the same time, this generalises the commodity form of the products of labour [...] its natural price, that is to say, the natural price of labour, consists in the amount of the means of living and enjoyment necessary, according to the climate and habits of a country, to ensure the subsistence of the labourer and to enable him to raise a family which will ensure the constant supply of labour on the market" (p. 123, 125). 123, 125). Normally, it is the worker who offers the credit to the employer, since the wage is paid for work already earned, therefore, the one who gives the credit is the worker.

From other authors and approaches, López (1997) "The provision of subordinate work and remuneration are referred, one to the other, as reciprocal benefits, and for this reason the employment relationship is qualified as synallagmatic or of exchange since its typicality consists in the exchange of subordinate work for a remuneration or salary. And each one of these benefits functions as a consideration with respect to the other [...] the salary has a very evident purpose of subsistence: to procure the goods and services required for the life of the worker and, if it is the case, his family [...] this does not mean that the salary can be confused with the food quota that is owed to some relatives under certain circumstances, since this quota is not against the provision of subordinate work" (p. 446, 447). From the legal point of view, the wage corresponds to a consideration of an agreed contract, either by mutual agreement between two persons, one of whom is subordinate, or by collective agreement, by means of a collective contract.

In order to study the behaviour of the wage, in its capacity to acquire a quantity of goods, inflation must be conceptualised, in general it is known as the increase in the prices of goods that are offered in the market, and this leads to a debate that, although it is correct, for practical purposes is the same, this debate is whether it is inflation or depreciation of the value of money, which is correct, they are two different phenomena, in real life, what the person who acquires the goods experiences, is that they pay a greater quantity of coins to acquire it. Gutiérrez and Zurita (2006) write that inflation "is a generalised and continuous increase in the general price of goods and services in the economy. Inflation is usually calculated as the percentage variation of the Consumer Price Index (CPI) [...] Inflationary pressures or causes that unleash inflation can be classified as basic or structural, circumstantial and cumulative, induced by the inflationary process itself." (p. 82, 83) In general, the concept of inflation is similar in the world, where there is a variant is how the phenomenon is interpreted, i.e., the causes, the Bank of Mexico (2012) has also stated that inflation

"is the sustained and generalised increase in the prices of goods and services of an economy over time, it should be noted that the increase of a single good or service is not considered inflation. In addition, to measure inflation, and given the impossibility of monitoring all prices in the economy, a basket of representative products consumed by households in a society is selected. Based on this basket and the relative importance of its products, an indicator called consumer price index is calculated whose percentage variation helps to measure inflation." (p. s/n)

Inflation has an implication on the behaviour of the purchasing power of household income, or wages. This concept refers to the amount of merchandise, in the form of goods and services, that can be obtained on the basis of a given amount of money, in theory to satisfy a need; Although the study of these issues can be traced back to Aristotle, in a basic way, when he compares exchange values and their variation, authors such as Salcedo (2020) express that the theory of purchasing power parity (PPP) can be attributed to the Salamanca school, in the 16th century, with the inflows of precious metals from the Americas, perfected in the 18th and 19th centuries by the schools of Sweden, France and England. Dornbusch (1985) comments that PPP is a theory of exchange rate determination, where the exchange rate, under a given period of time, is expressed in price levels, if countries are considered, then it is the relative exchange rate between their currencies; this is from a mathematical viewpoint. According to Baudin (n.d.) there are 4 theories on the subject, namely: metallism, statism, marginalism and nominalism, "what must be retained from these observations is that purchasing power has a real character, while currency has a nominal character; it refers to goods and services [...] the State alone can create currency, labour and savings create purchasing power" (p. 22, 27).

Currency, from another point of view, then, is the instrument that allows the exchange of labour, expressed in commodities, or goods and services, the quantity of coins that each commodity represents, in its tabulation, is given, then, as a function of the quantity of necessary labour represented in itself, "what determines the quantity of value of an object is nothing more than the quantity of socially necessary labour, that is, the labour socially necessary for its production [...] in the direct form of circulation [...] in the direct form of circulation [...]. ...] in the direct form of commodity circulation, which we have been studying so far, the same quantity of value is represented twice over, at one pole as a commodity, at the other pole as money" (Marx, 2010, P. 7, 92). 7, 92).

### Brief methodological aspect

West Central Region (RCO) corresponds to the designation given to 9 states of the Mexican Republic that are located towards the mid-western part of the country, namely: Nayarit, Aguascalientes, Colima, Guanajuato, Jalisco, Michoacán, Querétaro, San Luis Potosí and Zacatecas.



**Figure 1** RCO of Mexico

Source: Own elaboration with images from google maps and RCO

Initially, it was planned to carry out a study of all the universities in the RCO; however, in the process, it was detected that it was quite complex to locate the information required to fulfil the objectives of this research, so a sample of universities in the RCO was selected based on three main criteria:

- They should be state public universities.
- That they were universities that had a presence in the society of their states.

- The information needed to carry out the research should be accessible on a website, or else have direct access to the necessary information.

Based on these criteria, it was determined that four state public universities met the above criteria, and the sample shown below was obtained:

- Universidad Autónoma de Nayarit (UAN).
- Universidad de Guadalajara (UdeG).
- Universidad de Colima (UCol).
- Universidad Michoacana de San Nicolas de Hidalgo (UMSNH).

With this sample of four universities, we proceeded to obtain the information regarding the salary received by their professors in the highest category of the tabulator, for each university in the sample; subsequently, the salary increases for the years 2020-21 and 2021-22 were obtained.

To deflate and obtain the real salary, as well as the purchasing power of the professors' salaries, information on inflation for the years 2020, 2021 and the projection for the year 2022 was obtained from the Bank of Mexico (BanXico).

With the required information, we proceeded to deflate and obtain the gain or loss of purchasing power of the salaries of the teaching staff of the sample universities.

In addition, some information was obtained that is known particularly by personnel who work or used to work in some of the universities in question. Although this information is not quantitative, it also highlights the context in which some of the universities operate, although it is known beforehand that there are always two or more versions of a context or event, so the study does not seek to find the absolute truth.

The hypothesis is that the purchasing power of the salaries of university lecturers in the RCO has decreased in the previous three years, although it is considered that the problem is more long-standing.

## Contextual framework

The current problem of inflation is structural, not cyclical, it has to do with the supply chain, the shortage of chips, the war in Ukraine and the increase in energy prices (which were already in short supply), the aftermath of the Covid quarantine; this is why, for example, some 2018 model vehicles currently cost more, in nominal terms, than they did when they were purchased, something that would be illogical in another context. Buying on credit ceases to be attractive the more the interest rate increases, but also in the Mexican case there is no way that the interest rate will not increase if the U. S. increases it, unless you want to buy on credit. In the case of Mexico, there is no way not to increase the interest rate if the US increases it, unless it wants to have a comparative devaluation of the national currency with respect to the dollar and other currencies, making imports and productive inputs more expensive, which ends up increasing the inflationary process in the production process, that is by means of the exchange parity; But this increase also generates a cascading increase in public debt, and in private debt if it is contracted at free or non-fixed payments, a similar effect is experienced with the debt if the outflow of capital devalues the national currency; however, through the increase in the interest rate it is also pro-cyclical and, in the case of the exchange rate, pro-cyclical: pro-cyclical and, at this time, pro-inflationary; since, on the one hand, it contracts economic activity and, on the other hand, at this time in economic history, it contracts supply, instead of increasing it, as a strategic compensatory measure to inflation (something that is very rarely used as a stability tool, since a more active participation of the state is required, not as an economic agent or regulator, but as a promoter of economic activity, something that is usually expensive).

The complex thing about a country's economic actions is that each context can be similar, but can be different in the origin that generates it, which is the measure that must be taken, otherwise it can be counterproductive for the country and its inhabitants.

Inflación en:

May 2022

Inflación medida por:	Mensual	Acumulada en el año	Anual
INPC índice general	0.18	3.17	7.65
INPC subyacente <sup>1/</sup>	0.59	3.50	7.28
INPC no subyacente	-1.02	2.18	8.77

**Figure 2** Inflation in Mexico to May 2022, monthly, cumulative for the year and annual to May 2021-2022

Source: Banco de México, 2022

As can be seen in the previous image, there is a significant rise in the inflation indicator, which has been maintained, on average, between 3 and 4 points in the last 10 years in the Mexican case, with the exception of 2021, which also exceeded 7.3 points (Gaceta Económica, 2022).

## Behaviour of real wages in state public universities in the OCR of Mexico

The previous chapter frames the context under which some macroeconomic indicators of the Mexican Republic have been behaving, which have diverse effects on the different branches, sectors, regions, states and others in Mexico. But the one that interests us now is the purchasing power of the basic salary of university professors. In general, it can be pointed out, as a hypothesis, that university professors in public institutions in Mexico have lost purchasing power of their salaries, that is to say, that each time they can buy a smaller and smaller basket of goods with the same, Camelo (2009) points out "Within the configuration that leads to establish conditions of expansion or contraction of economic activity, is implicit in the loss or gain of the purchasing power of the real wage, since the agglomerate of the different economic variables has a mobility that directly or indirectly affects the behaviour of the prices of goods and services that the market offers, generating processes of inflation or deflation" (p. 127).

In order to make a comparative study of the behaviour of the salary of university professors in public educational institutions, we will take the mid-west of Mexico as a sample, although it may not be a significant sample for the Mexican Republic as a whole, for the RCO it is considered to already have a preponderance.

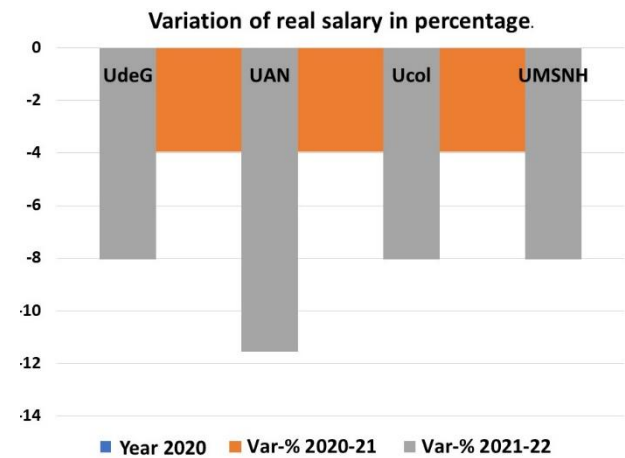
Position/remuneration	2020	2021	2022	Loss of purchasing power
Universidad de Guadalajara. Tabulador Titular C, basic salary concept, monthly.	28,986.07 Inflation: 3.15	29,971.60 Increase 3.4 Inflation: 7.36 Purchasing loss from previous year: -3.96	31,020.60 Increase 3.5 Inflation: 7.6* Purchasing loss from previous year: -4.1	-8.06
Universidad Autónoma de Nayarit. Tabulador Titular C, basic salary, monthly.	19,894.00 Inflation: 3.15	20,570.40 Increase 3.4 Inflation: 7.36 Purchasing loss from previous year: -3.96	20,570.40 (as of June 2022) Increase 0.0 Inflation: 7.6* Purchasing loss from previous year: -7.6	-11.56
Universidad de Colima Tabulador Titular C, basic salary, monthly.	41,595.20 Inflation: 3.15	43,009.60 Increase: 3.4 Inflation: 7.36 Purchasing loss from previous year: -3.96	44,515.20 Increase: 3.5 Inflation: 7.6 Purchasing loss from previous year: -4.1	-8.06
UMSNH Tabulador Titular C, tabular salary, monthly. Note: In the case of this university, there are a series of concepts that are accounted for separately, but it is accumulated monthly income.	27,922.26 Inflation: 3.15	28,872.34 Increase: 3.4 Inflation: 7.36 Purchasing loss from previous year: -3.96	29,882.86 Increase: 3.5 Inflation: 7.6 Purchasing loss from previous year: -4.1	-8.06

\*Expected inflation projection for 2022 from the Bank of Mexico.

**Table 1** Monthly income by basic salary at UAN, UdeG, UCol and UMSNH

Source: Own elaboration with data from: Transparency of UdeG, UdeColima, UMSNH and UAN direct, years 2020, 2021 and 2022; Banco de México (Op.Cit) 2020, 2021

The above table shows that the UdeG, UCol and UMSNH have failed to increase the base salary of professors at these institutions by a proportion equivalent to inflation, which has lost purchasing power in the order of 8.06% with respect to the year 2020. In the case of the Universidad Autónoma de Nayarit, this loss increases in the order of 11.56%, with the exception that there is the condition that in the middle of the year 2022 the salary has not yet been increased by one cent with respect to the year 2021, which is an atypical case.



Note: In the case of the UAN, with the already mentioned observation that as of June, the salary for 2022 has not been increased

**Graphic 1** Percentage behaviour of the variation in the real salary of university professors, from the selected sample, of the OCR

Source: Own elaboration with data from table 1

Although this brief study shows the data in relation to the base salary, it is worth noting that 11 universities in the country with acute financial problems, including the UAN, have had to implement a series of adjustments to the benefits of their contracted staff, so that if the study is observed in terms of net income, and not in base salary, the loss of purchasing power of the net income of workers has been reduced, even in the order of 15 to 20%, depending on the university in question. It is also worth making a self-criticism for these universities with financial problems, that there has been a series of exorbitant abuses that have led them to have debts totally out of all financial logic, to mention the case of the UAN, where according to the State Government (2021) the total global debt of the institution is in the order of 4 billion pesos. Its total budget for the year 2021 was in the order of 1.9 billion pesos. But the University of Zacatecas, the University of Morelos and others in the group have also leaked some abuses to the media; that is to say, the salary crisis of university professors in some cases is due to the crisis in the unhealthy management of the finances of the institutions.

**Conclusions**

1. This global inflationary process is structural, so it will take time for stability to be seen.



2. Everything seems to indicate that the worker's salary will be the tool to try to contain inflation, low salaries balance demand at the level of low supply, that is to say, it will be a period of unsatisfied social needs in favour of the search for stability of monetarist indicators.
3. It is worth noting that there is a difference between the market wage and the official wage (in the Mexican case established in the SMG), which is why while the Mexican minimum wage has increased by 60 to 70%, in reality there are jobs, as already mentioned, where in two years, the real wage has been reduced by up to 11%, i.e., no matter how much the minimum wage has increased, the real wage has been reduced by 11%. It does not matter how much the minimum wage increases, since the majority of wages are not calculated in minimum wages, but in market wages (unless the person who earns a minimum wage or who calculates his wages in minimum wages, which almost nobody does, except for the minimum wage per day), so the market wage does not explain the downward behaviour instead of the upward one.
4. The tendency for university teachers' salaries is for them to lose purchasing power in the coming years, especially in those universities with financial problems, where, viewed in terms of net income, they will be mostly reduced.

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