

Increase in the minimum wage in 2024: its effects and conditions in the Mexican labor market

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Abstract

During the current administration, increases in the minimum wage have averaged 20%. On december 1, 2023, CONASAMI announced that the increase in the minimum wage will be 20% for 2024, the same as in 2023. Contrary to what COPARMEX estimated at 12% and within the limit that some analysts estimated between 15% and 20%. Based on estimates of labor supply and demand, this report presents the effects of this increase on the labor market. In particular, it is observed that the valuation of workers and subsidies by the government are key so that the 20% increase in the minimum wage does not have a considerable impact on the imbalances in the labor market.

Key Words

salary increase, perception, labor market conditions, subsidies.

Clasificación JEL: E24, J01, J02, J41.

Introduction

Wages are defined as “the remuneration that the employer must pay to the worker for his or her work” (Art. 82). On the other hand, the minimum wage is conceived, by labor law in Mexico, as the lowest amount that the worker should receive in cash for services rendered in a working day. Moreover, it must be sufficient to meet the normal needs of a head of household in the material, social and cultural order; as well as to provide compulsory education for children (Art. 90)” (Campos, 1995; p.152).

In this way, the decision to move (increase or decrease) the amount of the minimum wage has a significant impact on the worker’s life, on the one hand, it increases their income and improves their working conditions; On the other hand, it has negative effects such as increased unemployment, given that the employer, not wanting to reduce his capital gain, decides to terminate his employment contract. Another element is the increase in the prices of products in the markets. Finally, whether the minimum wage is raised can generate inequalities at the

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national level as well as the global level, as well as in the field of gender, as Torrens and Goya (2019) point out.

Now, to justify such an increase in the minimum wage, it must be noted that inflation increases every year, regardless of size and country, so it is advisable that be a subsidy to counteract the imbalances in the population's budget. In this sense, the current administration since its first year in office has maintained increases in minimum wage. Base on the reports of CONSAMI (2023), in 2019 it began to increase with 16.2%, the lowest was for 2021 of 14.99% considering the effects of the pandemic and for 2022 the increase has been the largest reaching 22%, finally, the increase for 2023 was 20%.

Experts point out the importance of wage increases, as it is reflected in the productivity of workers and therefore in economic growth, together with the decrease in poverty and the increase in unemployment (ATCOM,2019). However, it is worth asking whether the working conditions are in place, on the part of companies and the government, to pay for such an increase. That's is, if it could result in a downsizing, if such an increase causes inflation and thus have a vicious circle and finally, in case the government subsidizes, if the authority will no neglect other public services or economic support to sustain such an increase.

On the other hand, any worker would want a wage increase; But the question is: is it enough to ensure the reach of commodities? Or as discussed Enderred (2022), that, while such an increase cannot secure basic commodities for an average family, getting the increase from the workers is perceived in a considerable way.

Based on the above, this article shows the repercussions in terms of unemployment that a percentage increase in wages could cause by 2024. The analysis is based on a database to estimate the labor demand and supply of Mexican workers in 2022. A key part of the analysis is worker's perceptions and potential government subsidies, which are considered to avoid drastic declines in employment.

The work is presented in 5 sections, in addition to the introduction, the first section shows the review of the literature corresponding to the topic. Then, the methodology on the labor market and the effects that the market has due to these increases are presented. The third section is the analysis and results. A brief comparison of the results with the relevant literature is presented in the fourth section. Finally, the conclusions, recommendations and limitations of the analysis are shown.

Literature

There is a complexity of the policy on the management of the minimum wage, which has aroused the interest of international research. The effects of the minimum wage are different, both on the workers who receive it and, on the industries, where these workers belong. In this sense,

Hernández, Valdés and González (2018) comment that increases in the minimum wage are associated with increases in employment in the construction, transportation and wholesale trade industries; On the other hand, increases in the minimum wage are associated with reductions in employment, in industries such as manufacturing, services and public administration; especially in the population of workers under 25 years of age.

Although there is a need for wage increases, as argued by Torrens y Real (2019), who point out the great inequality of minimum wages at the global and country level, as well as gender wage inequalities, with the minimum wage being recognized as vital for the satisfaction of the worker and his or her family. Despite this, there are workers who are dissatisfied with the salary increase, since it has been observed that some workers do not receive this increase in an equitable or proportional way. According to Lopresti and Mumford (2016), workers would be unhappy with the increase in minimum wage, when such an increase does not correspond to the wage increase that the company would give them. In relation to the above, Bárány (2016) comments that adjusting wage or possible increases base in minimum wages not only train and achieve better wages.

Although the salary increase has a general purpose like reduce poverty, some authors say that its effect is very insignificant, however, Romich and Hill (2018) suggest that, to avoid an insignificant effect, the authorities should focus on who dictates the increases, also, a fiscal policy of support to employees to accomplish that proposal of salary increase.

The objective of our essay, is to analyze the effect of the salary increase of 20% for 2024 on the level of employment, trying to condition that the minimum salary increase does not have an impact on the employment. Despite some authors, consider that the effects of the minimum salary aren't always positive. For example, Bazan et. Al. (2022) justify with evidence, the little negative effects on the statistics significant on the minimum wage increase (specifically on teenagers). A similar result has been pointed by Cebrian et al. (2010), pointing out the existence of a little negative effect Kaitz index on the level of employment of the companies and a null effect on the employment rate, even with the teenagers

In the case of Mexico, figure 1 shows a growing tendency along of the almost 23 years, although insufficient according to Martínez (2018). This has allowed a better distribution of income as Campos and Rodas (2020, P,51) point out, "the minimum wage increase is reflected practically one by one in the first five quantiles on the distribution. Then, the minimum wage has an effect on the salary structure, on average, up to the 10th quantile of the distribution".

In the same line of measuring the effectiveness of increases in the minimum wage in the distribution of income, Medina (2018), through the analysis of the behavior of salaries during the period 2007-2017 to know if its performance has been reflected positively in the salaries of workers in said sector; Their results show that there is a positive and significant relationship

between labor productivity and wages. However, although in the same way to productivity levels, these increases are insufficient.

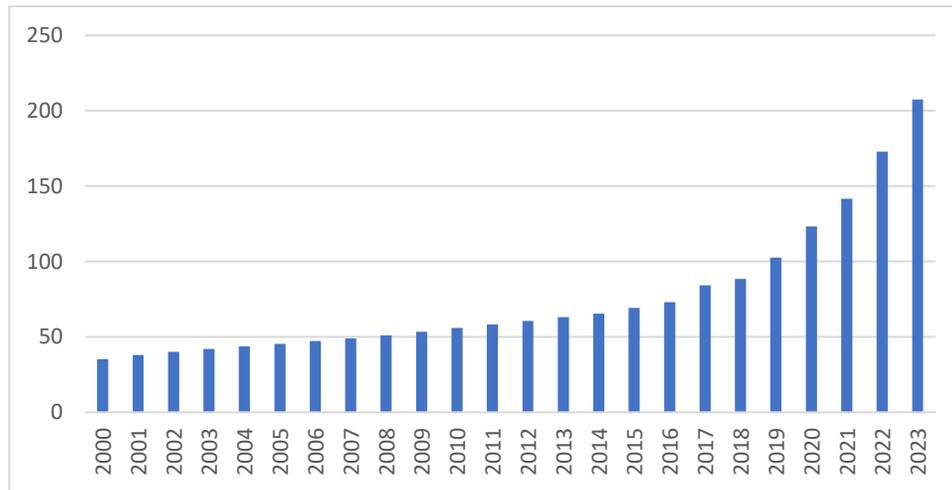


Figure 1. Evolution of the minimum salary in Mexico.
Source: National minimum wage commission, 2023.

Although our objective is to condition the increase in the minimum wage on maintaining or increasing the level of employment, its effects on employment could be negative. For Jimenez (2022), the impact of the increases in the minimum wage that have been granted since 2019 on the level of employment is discussed, since these have been well above inflation, which resulted in bad news. For job creation, especially in a scenario of relatively low economic growth.

Methodology

We show concepts of labor supply and demand, to analyze the effect of the minimum wage. In this way be:

$$l_d = a + bw, \text{ con } b < 0, \quad (1)$$

The labor demand equation, where l_d is the quantity of workers demanded by companies and W is the salary they are willing to pay for the work demanded. While, the work l_s offered by workers who aspire to a salary w is,

$$l_s = c + dw, \text{ con } d > 0, \quad (2)$$

The equilibrium wage in the labor market is, $w_{eq} = \frac{a-c}{b+d}$, that observes on figure 1 and 2.

From the above and based on Snyder and Nicholson (2008), suppose that the government orders all companies to provide a particular or additional benefit to their workers, where this benefit costs t per hired worker. With this arrangement, labor cost increase to $w + t$ and thus the labor demand equation is,

$$l_d = a - b(w + t), \quad b > 0, \quad (3)$$

Also suppose that the new benefit has a monetary value for the workers of k per unit of work offered; so, the net return on employment offered increases to $w + k$. Thus, the labor offer will be,

$$l_s = c + d(w + k), \quad d > 0, \quad (4)$$

And the new balance is,

$$w_{eq}^N = \frac{a-c}{b+d} - \frac{bt+dk}{b+d} = w_{eq} - \frac{bt+dk}{b+d} \quad (5)$$

Some cases,

- i) If workers do not obtain any value from the benefit mandated by the government that is, $k=0$; then the mandate is reflected as a tax on employment,

$$w_{eq}^N = \frac{a-c}{b+d} - \frac{bt}{b+d} = w_{eq} - \frac{b}{b+d}t$$

And the employees pay a part of taxes of each relation $\frac{b}{b+d}$, this is, the initial salary drops $\frac{b}{b+d}t$. Furthermore; the equilibrium quantity of hired labor decreases, which is seen in the lower demand line in figure 1.

- ii) Now, if workers value the benefit precisely by its cost $k = t$, then according to (5)

$$w_{eq}^N = w_{eq} - t \left(1 + \frac{d}{b+d} \right),$$

And the new equilibrium wage decreases by the same value of the tax cost t , furthermore, the level of employment remains the same (See figure 2, left).

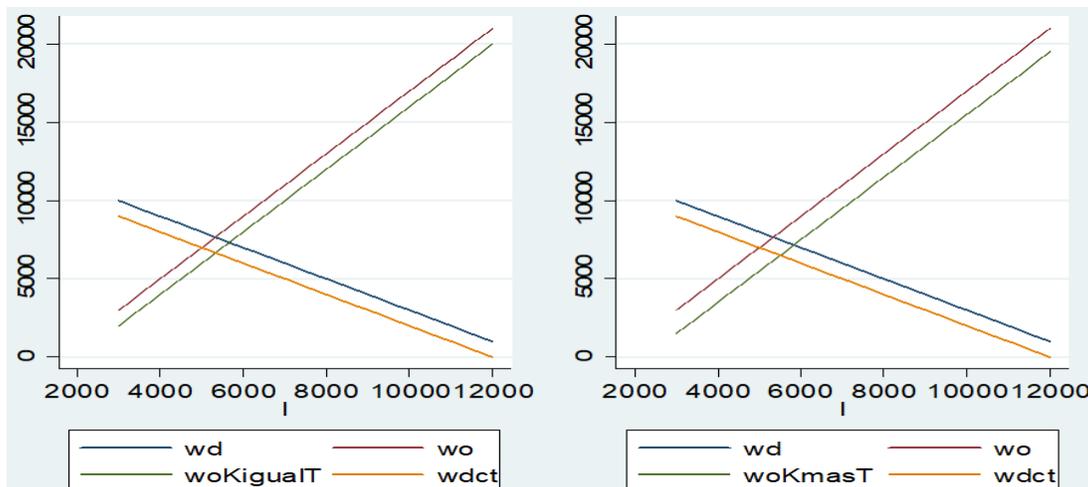


Figure 2. Valuation by workers, equal to the tax charged to the company (left) and greater than the tax charged to companies (right). Source: self made.

- iii) But, if workers value the benefit more than it costs the firm to provide it ($k > t$), then the equilibrium wage will fall more than the benefit provided by the firm and equilibrium employment will increase (see figure 2, right).

Analysis and resulted

Our purpose is to show the valuation of the 20% increase in the minimum wage by 2024 and its consequences in the Mexican labor market; To do this, we will estimate labor demand and supply equations. It is well known that there is a lack of information about people who earn a certain number of minimum wages; however, we rely on Andrade's (2023) construction of data and his market analysis.

In this way, Andrade (2023) shows that the estimate of labor supply is,

$$\ln l_o = 6.013 + 0.542 \ln w \quad (6)$$

$P_{valor} \quad (0.000)$

And the estimation of the labor demand is,

$$\ln L_d = 18.754 - 0.926 \ln w \quad (7)$$

$P_{valor} \quad (0.000)$

So the equilibrium without compensation, from (6) and (7), is.

$\ln w = \frac{18.754 - 6.013}{0.542 + 0.926} = 8.67$, Finally, $w^{eq} = e^{8.67} = 5879$, with an employment of 45120 people earning this quantity.

Now the compensation and valuation, Andrade (2023) do,

$$\ln L_d = 18.754 - 0.926 \ln (w(1 + t))$$

$$\ln l_o = 6.013 + 0.542 \ln (w(1 + k))$$

Applying laws of the logarithms we have,

$$\ln L_d = 18.754 - 0.926 \ln (1 + t) - 0.926 \ln w \quad (8)$$

$$\ln l_o = 6.013 + 0.54 \ln(1 + k) + 0.542 \ln w \quad (9)$$

From (8) and (9) we can propose values of the salary increase (t) and how such increase will be perceived by k workers. The equilibrium for (8) and (9) is found based on expression (5).

Effects of the increase by 20% in the minimum wage for 2024

Let's analyze what happens with the imposition of the 20% salary increase and its respective valuations. Suppose that such increase is absorbed by the company. Then we have the following cases,

- i) If the valuation by the workers is the same as the increase, this is, $k = t = 0.2$, substituting these values in (8) and (9) we have,

$$\ln L_d = 18.585 - 0.926 \ln w, y$$

$$\ln l_o = 6.195 + 0.542 \ln w$$

Under these conditions under balance we should have, $W_{eq} = 165.29$, that is very low in relation with the history that has been perceived.

This would generate, $L = 46750$ people. Luckily, the disempowerment drops about 3%, this is,

$$\text{Desemployment rate} = \frac{46750 - 45120}{45120} = 0.03.$$

Now,

- ii) If the valuation is higher, we can proceed analogously for values $t = 0.2$ and $k = 0.283$, we have, $W_{eq} = 160.48$, a much lower salary than the previous situation. Such a salary would generate, according to expressions 8 or 9, an employment of $L = 46091$ people. Furthermore, unemployment only decreases 2%.

Possible solutions

If the government agrees to subsidize 50% of this 20%, the situation in scenario i) of equitability valuing $t=0.1$, analogously making the balances (8) and (9) for values $t = 0.1$ and $k = 0.1$, then:

$W_{eq} = 217$, a salary closer to reality and under this situation there would be no possibility for new jobs, that is, unemployment is at least zero.

Analogy and under situation (ii), where the valuation is greater than the 10% granted by the company and 10% by the government, a minimum wage of 221 would be reached, despite the fact that employment drops to 44,447 people who earn said salary.

Discussion

An analysis was done to measure the effects of the increase in the minimum wage by 2024; obviously, based on information on salaries set in minimum wages. Considering salaries based on information on salaries set in minimum wages. Considering salaries set in minimum wages. Considering salaries based on minimum wages can have economic repercussions, as analyzed by

Autor, Manning and Smith (2016), who comment that setting salaries based on the minimum wage has an impact on a decrease in inequality, but only for the highest deciles. Low. Our report is in line with the increase in the minimum wage, especially because it is one of the controllable mechanisms to correct the falls in the purchasing power of buyers. That is marginal increases in the minimum wage may not cover inflation levels at the time; In this sense, Jain (2019) comments that although the increases for 2019 are practically 3 times or more than the increases in 1960, the very high price level in the last 5 decades has made the purchasing power of consumers citizens has decreased almost 40%.

Now our vision in favor of a 20% increase by 2024 goes hand in hand with a condition on employment. However, MaCurdy (2015) comments that the impacts of wage increases are insignificant on employment, and that rather their effects are on the added value of products and thus have an impact on the level of inflation. And based on this vision, there is a contradiction in the effectiveness of this policy of wage increases on poverty reduction.

We show in general that increases in the minimum wage can have repercussions on employment; but they can offset by considering worker valuations of these increases and government subsidies. In addition, we also evaluate whether companies have the conditions to counteract such increases. In relation to our work, Harasztosi and Lindner (2019) based on a competition model applied to the Hungarian labor market, show that the elasticities on the level of employment are minimal and that 75% of the increase was absorbed by final consumers. Furthermore, companies reacted to the request for wage increases by substituting labor for capital, and although there was unemployment, it was in areas where companies could not counteract wage increases with increases in prices or substitution of inputs.

Salary increases are applied in any economy and we are just as concerned in the Mexican labor market, in any economy it has its pros and cons. For example, in Argentina, Groisman (2016) examines whether the modifications made to the minimum wage in recent years generated “trickle-down” effects on the wage structure. Therefore, it finds the existence of these effects in those segments of workers with salaries moderately higher than the legal minimum. The above shows that the increase in the minimum wage has been positive in the minimum wage has been positive in the perception of employees’ income. For their part, Borra and Gomez (2012) comment on the situation of the Spanish labor market, where the policy of increasing salaries has had a positive and significant and that, in addition there is a trade-off between salary and the facets (positive or negative) of the job.

Our analysis on conditions for salary increases, maintaining at least the level of employment, in the case of Mexico, is not the only one in Latin America. For example, Tillaguango and Jumbo (2018), through a statistical analysis applied to the economies of Colombia, Chile and Ecuador, comment that an increase in long-term wages contributes positively to the level of employment for the three countries. On the other hand, in the short term, for Colombia the minimum wage

contributes negatively. This result shows that the discussion about the relevance of the minimum wage on the level of employment is still open.

Finally, Torres (2016) found a negative relationship between employment and minimum wage for a period of 10 years for the 32 most important cities in Mexico. For their part, Alvarado, Orraca and Cabrera Hernandez (2023) maintain that the increase in the minimum wage did not significantly affect the probability of belonging to the labor force or being employed. However, among wage earners the probability of working in the formal sector increased by 1.38 percentage points, the effect of which amounts to 2.34 percentage points in women and is not significant among men. These results once again leave open the discussion about the impact of an increase in the minimum wage on the level of employment in Mexico

Conclusion

Based on CONASAMI's proposal for a 20% increase in the minimum wage by 2024, an analysis of labor supply and demand was carried out to measure the consequences of this increase in the level of final salary and unemployment. The above, considering government subsidies and workers' assessments of the increase.

In particular, it is observed that, if the company is responsible for paying the entire increase in the minimum wage, the conditions mean that the minimum wage does not exceed 200 pesos, regardless of the workers' evaluations. But, if the government can subsidize 50% of these increases and workers show greater appreciation for this increase, a daily minimum wage of 221 pesos per day can be achieved, more in line with the current administration's proposal.

It is important to comment that our proposal does not go against said increase, which undoubtedly improves the budgetary conditions of workers, rather our proposal is focused on considering when making these decisions regarding labor policy. For example, the valuation of workers, the conditions of companies and a possible subsidy from the government.

Our contribution can be a useful tool, since different government subsidies and worker valuations can be analyzed to determine final salaries and generated employment; In addition, it can be used to value future percentage increases in salaries. However, this is a mere approximation since it was carried out with generated data, although with real figures, it is only an estimate. Which could be more realistic, if the information existed, which deduces a pending task for everyone: a survey of people who receive a certain amount of minimum wages.

Literatura

Alvarado Pérez, R. ., Orraca Romano, P. P., & Cabrera-Hernández, F. (2023). El efecto de duplicar el salario mínimo en la brecha de género en empleo y salarios en México. *El Trimestre Económico*, 90(360), 961–999. <https://doi.org/10.20430/ete.v90i360.1777>

Andrade, L.A (2023). Percepción y valoración del aumento del salario mínimo en México y su efecto en el mercado laboral. En Gómez-Álvarez, D. y Gómez, R. (2023): ¡Súbanle! Salario Digno: Propuestas para la prosperidad equitativa en México, Debate: Penguin Random House, Grupo editorial. Primera edición.

ATCOM, 2019. Cuatro Consecuencias del aumento del sueldo mínimo en la economía. Recuperado de <https://www.atcom.cl/4-consecuencias-del-aumento-del-sueldo-minimo-en-la-economia> (12 de noviembre 2023)

Autor, D. H., Manning, A., & Smith, C. L. (2016). The Contribution of the Minimum Wage to US Wage Inequality over Three Decades: A Reassessment. *American Economic Journal: Applied Economics*, 8(1), 58–99.

Bárány, Z. L. (2016). The Minimum Wage and Inequality: The Effects of Education and Technology. *Journal of Labor Economics*, 34(1), 237–274.

CONSAMI, 2023. Evolución del Salario Mínimo. Recuperado de [Evolución del Salario Mínimo | Comisión Nacional de los Salarios Mínimos | Gobierno | gob.mx \(www.gob.mx\)](http://www.gob.mx/comision-nacional-de-los-salarios-minimos) (15 de noviembre 2023)

Bazán, C; Morales, Y; González-Taranco, C; & Álvarez-Quiroz, V. (2022). Análisis del Impacto del Salario Mínimo sobre el Empleo: Una Revisión de Literatura. *Revista de Análisis y Difusión de Perspectivas Educativas y Empresariales*, 2 (3): 79-107, <https://doi.org/10.56216/radee012022jun.a06>

Borra Marcos, Cristina; Gómez García, Francisco. (2012). satisfacción laboral y salario: ¿compensa la renta laboral las condiciones no monetarias del trabajo? *Revista de Economía Aplicada*, vol. XX, núm. 60, 25-51

Campos, A. (1995). El ciclo largo de la caída salarial en México. *Problemas del Desarrollo*, 26 (102), 152.

Campos Vázquez, R. My Rodas Milián, J. A. (2020). El efecto faro del salario mínimo en la estructura salarial: evidencias para México. *El trimestre económico*, vol. LXXXVII (1), núm. 345, 51-97. DOI: [10.20430/ete.v87i345.859](https://doi.org/10.20430/ete.v87i345.859)

Cebrián, I., Pitarch, J., Rodríguez, C y Toharia, L. (2010). Análisis de los efectos del aumento del salario mínimo sobre el empleo de la economía española. *Revista de Economía Laboral* 7, 1-38 [10.21114/rel.2010.01.01](https://doi.org/10.21114/rel.2010.01.01)

Edenred, 2022. [Todo lo que debes saber de incrementos salariales - Edenred México](https://www.edenred.mx/blog/todo-lo-que-debes-saber-de-los-incrementos-salariales). Recuperado de <https://www.edenred.mx/blog/todo-lo-que-debes-saber-de-los-incrementos-salariales> (21 de noviembre 2023).

- Groisman, F. (2016). Una aproximación a los efectos “derrame” del salario mínimo en la estructura de remuneraciones de argentina. *Cuadernos de Economía*, XXXV (68), 457-474. <https://doi.org/https://dx.doi.org/10.15446/cuad.econ.v35n68.45505>
- Harasztosi, P., & Lindner, A. (2019). Who Pays for the Minimum Wage? *The American Economic Review*, 109(8), 2693–2727.
- Hernández, J. C, Valdés, A. M, González, K. P. (2018). El efecto de cambios en el salario mínimo sobre el empleo industrial en Puerto Rico. *Forum Empresarial*, 23(1), 1-18.
- Jain, K. (2019). State and local minimum wage. *GPSolo*, 36(5), 24–27.
- Jiménez, A. (2022). Estimación de la demanda de trabajadores asalariados en México. *Análisis económico*, 37(94), 105-123. DOI: <https://doi.org/10.7440/res64.2018.03>
- Lopresti, J. W., y Mumford, k. j. (2016). Who benefits from a minimum wage increase? *ILR Review*, 69(5), 1171–1190.
- Martínez, J. G. (2018). La historia sin fin: el debate por el salario mínimo. *Análisis Económico*, 33(83), 5-28.
- MaCurdy, T. (2015). How Effective Is the Minimum Wage at Supporting the Poor? *Journal of Political Economy*, 123(2), 497–545.
- Medina, R. (2018). *Dinámica salarial de la industria automotriz en México: un análisis de datos de panel para el 2007-2017*. Tesis, El Colegio de la Frontera Norte.
- Romich, J., y Hill, h. D. (2018). Coupling a Federal Minimum Wage Hike with Public Investments to Make Work Pay and Reduce Poverty. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 4(3), 22–43.
- Snyder and Nicholson. (2008). *Microeconomic Theory: Basic Principles and extensions*. Cengage Learning.
- Tillaguando, B. y Jumbo, F. (2018). Salario mínimo y Empleo. Un análisis para Colombia, Ecuador y Perú, usando técnicas de cointegración. *Revista Económica*, 5(1), 1-9.
- Torres, D. (2016). Aumento del salario mínimo y su impacto en el empleo: Un análisis de datos panel para México 2005-2014. Tesis, Colegio de la Frontera Norte, Tijuana, México. <https://www.colef.mx/posgrado/wp-content/uploads/2016/11/TESIS-Torres-Flores-Diego.pdf>

Torrens, M. E y Real, G. (2019). Salarios Mínimos y Necesidades Vitales. *ECA Sinergia*, 10(3), 108-118. https://doi.org/10.33936/eca_sinergia.v10i3.1983