

The impact of funding for public state universities in Mexico on the quality of education



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ABSTRACT

This research aims to centrally analyze the impact of state and federal public funding allocated to public state higher education institutions in Mexico on the performance of scientific research. Through the review of previous studies, international indicators, and government official data, a database of indicators was created for comparison and correlation. The findings presented highlight the importance of allocating adequate resources and contribute to the understanding of how funding can influence performance in scientific research, innovation, social impact, and, consequently, the continuous improvement of the quality of education in the universities under analysis. Finally, it provides recommendations to strengthen this link for the benefit of students and society.

Keywords: Quality Education; Education; Higher Education Institutions; Sustainable Development Goal 4 (SDG 4).

El impacto del financiamiento de las universidades públicas estatales de México en la calidad de la educación

RESUMEN

Esta investigación tiene como objetivo central analizar el impacto financiamiento público estatal y federal asignado a las instituciones de educación superior públicas estatales de México en el desempeño de la investigación científica. A través de la revisión de estudios previos, indicadores internacionales y datos oficiales del gobierno, se creó una base de datos de indicadores para su comparación y correlación. Los hallazgos presentados destacan la importancia de asignar recursos adecuados y contribuye a la comprensión

de cómo el financiamiento puede influir en el desempeño en la investigación científica, la innovación, el impacto social y por consiguiente en la mejora continua de la calidad de la educación en las universidades en análisis. Por último, proporciona recomendaciones para fortalecer este vínculo en beneficio de los estudiantes y la sociedad en general.

Palabras clave: Calidad Educativa, Educación, Instituciones de Educación Superior, Objetivo de Desarrollo Sostenible ODS 4.

O impacto do financiamento das universidades públicas estaduais do México na qualidade da educação

RESUMO

Esta pesquisa tem como objetivo principal analisar o impacto do financiamento público estadual e federal alocado às instituições de ensino superior públicas estaduais do México no desempenho da pesquisa científica. Através da revisão de estudos anteriores, indicadores internacionais e dados oficiais do governo, uma base de dados de indicadores foi criada para sua comparação e correlação. Os achados apresentados destacam a importância de alocar recursos adequados e contribui para o entendimento de como o financiamento pode influenciar no desempenho em pesquisa científica, inovação, impacto social e, conseqüentemente, na melhoria contínua da qualidade da educação nas universidades em análise. Por último, fornece recomendações para fortalecer esse vínculo em benefício dos estudantes e da sociedade em geral.

Palavras-chave: Qualidade Educacional, Educação, Instituições de Ensino Superior, Objetivo de Desenvolvimento Sustentável ODS 4.

1. Introduction

Universities play a fundamental role in society, being responsible for the academic and professional training of individuals in a wide variety of disciplines. At the same time, they are the main generators of knowledge that is created to transform current realities and promote the development of a country. According to the United Nations (2023), higher education enhances people's quality of life because having access to it enables greater financial stability and economic security, access to medical services, improved working conditions, a healthier life, and reduces the likelihood of engaging in criminal activities. On the other hand, one can enjoy other benefits such as access to the internet, artistic activities, and other forms of entertainment.

According to the above, it is evident that investing in improving access to higher education entails a clear and achievable benefit for social well-being. This investment opens the doors to a wide range of opportunities that encompass economic, security, health, civic participation and citizen security aspects, therefore, it is undeniable that the positive impact of such an investment extends not only at the individual level, but it also has a significant impact on society (Mendoza Rojas, 2022).

Taking into account the previously developed context, this research is conducted with the central objective of analyzing the impact of public funding allocated to public state higher education institutions in Mexi-

co on their performance in terms of scientific research, innovation, and social impact. To achieve this, previous studies, international indicators, and government official data are reviewed, and a database of indicators is created for comparison and correlation.

The findings presented highlight the importance of allocating adequate resources and contribute to the understanding of how financing can influence the quality of education in the universities under analysis. Finally, it provides recommendations to strengthen this link for the benefit of students and society in general.

2. Method

This study is framed within a quantitative correlational research, since it focuses on the exploration of relationships between institutional financing and performance in scientific research, innovation and social impact in the 35 state public universities of Mexico. Furthermore, the variables are investigated with the aim of identifying causal relationships and highlighting significant differences between these institutions. The research approach is transversal, as it is carried out during the period between 2022 and 2023, involving the review of university reports, official sources of the Mexican government and data from the international classification of universities SCIMAGO (Hernández et al., 2010).

Also, the method for accessing and utilizing information in this study is based on the data retrieval and utilization system provided by Higher Education, Format 911, for the academic period 2021-2022. This system covers educational levels, including Technical University Degrees (TSU), Bachelor's degrees, and Postgraduate studies. Likewise, a similar system is integrated for Upper Secondary Education, corresponding to the 2021-2022 school year. The data used are sourced from information collected until February 2022 by the Directorate of Institutional Strengthening of the DGESUI-SEP. Additionally, data related to the 2022 subsidy is considered, which encompasses both federal and state subsidies. It's worth noting that the subsidy calculation per student in Upper Secondary Education is 0.7. It's important to bear in mind that this value only includes the regular subsidy and may undergo changes at the end of the fiscal year (Secretaría de Educación, 2022).

3. Analysis And Results

Institutional financing

Financing is a term used to refer to economic resources or financial funds, which make up the base of the capital used for the execution of an activity, project or organization (Villalobos Carballo, 2017). It is the provision of money or financial resources necessary to cover expenses, investments or specific needs. This can come from various sources, such as government subsidies, financial institutions, investors, among others.

The fundamental purpose of financing is to obtain the necessary resources to finance the acquisition of goods, services and human resources that allow optimal performance of the activities that said organization develops or provides as a service to the community.

In the state public universities of Mexico, financing refers to the economic and financial resources that are allocated for the operation, development and maintenance of these educational institutions. These are financed mainly by the state government to which they belong, although they may also receive additional resources from other sources, in the case of Mexico, from the federal government. This financing is used

to cover a wide range of needs, such as the payment of salaries of academic and administrative staff, the construction and maintenance of facilities, the acquisition of educational equipment and materials, research and development, extension programs and projects, and other expenses related to higher education.

Regionally, funding for state public universities can vary by country, state, and government policy. Some universities may rely heavily on the budget allocated by the state government, while others may seek additional funding sources, such as donations, agreements with companies, research contracts, scholarship programs and international collaborations (Guerrero-Vega y Flores-Montes, 2023). Importantly, funding at public universities has a direct impact on their ability to offer quality programs, maintain adequate infrastructure, attract and retain qualified faculty, and provide educational services and opportunities to students. Therefore, the availability and allocation of financial resources are fundamental aspects for the functioning and development of these institutions.

Bok (2003), Slaughter and Rhoades (2004) comment that the financing granted to public universities allows them to offer affordable and accessible educational programs to a greater number of students. This helps ensure that higher education is not exclusive to those who can afford higher tuition and study fees. Equitable access to education is essential to promoting social mobility and providing opportunities to people from diverse backgrounds and economic circumstances.

Therefore, state funding contributes to maintaining and improving the quality of education in universities. It helps recruit and retain highly qualified faculty, improve teaching infrastructure and resources, upgrade equipment and laboratories, and promote research and academic development (Leyva et al., 2021). These investments are essential to ensure that students receive a quality education that prepares them to meet the challenges of the world of work.

At the same time, universities play a crucial role in generating knowledge through research and development. State funding is vital to support research in various disciplines, from basic to applied sciences, and foster innovation. Many scientific discoveries and technological advances have emerged from research conducted at universities. State funding helps finance research projects, scholarships and grants that promote scientific progress and the development of society.

It should also be considered that universities are economic and social engines in their communities and countries. In this regard, funding allows universities to hire personnel with diverse profiles and skills, support the local industry, foster entrepreneurship, and collaborate with public and private companies and institutions in problem-solving and knowledge transfer. Likewise, universities play a significant role in shaping highly skilled human capital, all of which drives the country's economy and competitiveness.

Public spending on education

Investment in education through public spending is a critical component of any society that seeks development and progress. In education, public spending represents a country's commitment to empowering its citizens and strengthening its human capital. In this sense, a society with access to quality, equitable and egalitarian education presents the three fundamental pillars to build cities with justice and development. In Mexico, public spending includes government spending on educational institutions, both public and private, as well as educational administration and subsidies for private entities. One of the indicators that allows measuring investment in education is the percentage of GDP that the country contributes to the educational sector. When carrying out a comparative analysis of these percentages, in the Latin American region the countries that contribute the most in percentage of GDP are Bolivia, Costa Rica and Honduras with 9.8%, 6.7% and 6.4% respectively (World Bank, 2020a). As for Mexico, its contribution is 4.3%.

The disparity of budgets allocated and executed on education issues is very marked in the region, therefore, to address the specific issue of financing education, it is necessary to recognize the existence of a series of institutional features, not exclusive to the educational sector but essential to understand the scope of the problem and its challenges. The financing structure of the educational system is related to the institutional organization of each country, its own educational system, the resources of its public sector and the participation of education. There is a belief that the efficiency of educational systems is maximized by increasing financing to improve the conditions of educational entities. According to the following table, Mexico is positioned as the tenth country of the eighteen presented in this region with the highest percentage of gross domestic product allocated to spending on education.

Table 1: Regional indicators on education spending.

Country	Population	% of public expenditure	% of GDP
Bolivia	12 224	14.2	9,8
Costa Rica	5 181	21.54	6,7
Honduras	10 433	24.25	6,4
Brazil	215 313	15.96	6,0
Chili	19 604	21.23	5,6
Argentina	45 510	11.92	5,0
Colombia	51 874	14.75	4,9
Nicaragua	6 948	22.82	4,6
Uruguay	3 423	16.36	4,6
Mexico	127 504	16.58	4,3
Peru	34 050	15.93	4,2
Ecuador	18 001	11.51	4,1
The Savior	6 336	13.09	4,1
Panama	4 409	10.24	3,9
Guatemala	17 844	21.14	3,3
Paraguay	6 781	9.84	3,3
Venezuela	28 302	23.87	1,3
Cuba	11 212	16.66	0,0

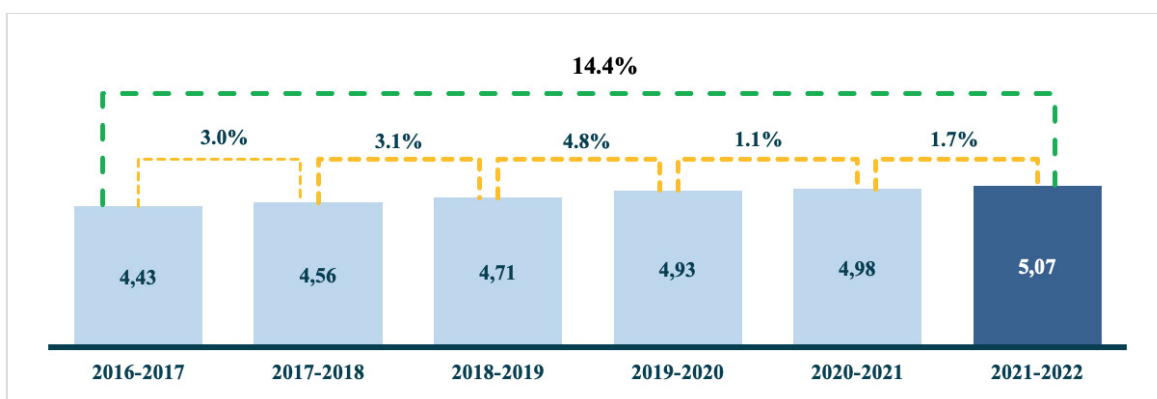
Source: Own elaboration based on population data from ECLAC (2022) and regional education spending by the World Bank (2020b).

The issue of financing in education is broader than just analyzing the percentages allocated to the different GDPs in the region. Although many countries steadily increase investment in education, it is not enough if one considers that the remaining percentage includes subsidies, transfers to private entities, spending on the acquisition of educational resources, among others. Even though the volume of resources allocated in each country does not necessarily cover the needs, several countries in the region allocate a proportion of GDP in line with what is proposed in the Education 2030 Action Framework: allocate at least between 4 and 6% to education. of GDP or, at least, between 15 and 20% of public spending. However, educational financing, educational gaps in coverage, quality, equity and inclusion are still very significant, which requires greater mobilization of resources (UNESCO, 2021).

The enrollment challenge

According to the National Association of Universities and Higher Education Institutions of Mexico – ANUIES (2022), one of the most notable challenges of the educational system is to cover the growth of annual enrollment, since the service must be guaranteed to the new students who join and ensure the quality of education provided to everyone, both in infrastructure and the knowledge that is transmitted. As seen in Figure 1, in the last six years, higher education enrollment has increased by 14.4%, meaning that around 638.2 thousand students enrolled to pursue higher education. Although this figure includes public and private institutions, the largest participation falls in the public sector, obtaining around 65% of the total enrollment (see figure 1).

Figure 1: enrollment per year of higher education



Source: Own elaboration with information from the Higher Education Statistical Yearbooks provided by ANUIES (2022).

This significant challenge is not unique to Mexico but is also faced by other countries in the Latin American region, which encounter difficulties in acquiring adequate funding to ensure their optimal performance. It is well known that spaces for innovation are clouded by basic needs that enable the daily functioning of the university ecosystem. However, the lack of access to public funding not only limits the institution's capabilities but also restricts students' access to other benefits, such as scholarships or credits that guarantee them to complete their studies satisfactorily. Along these lines, it has been proven that when there are sufficient resources, its effect is totally positive and impacts enrollment in universities. On the other hand, it is observed that in Mexico there is inequality in terms of the allocation of resources to universities with characteristics like others (Valenzuela & Yáñez, 2022).

Institutional performance and internationalization

Institutional performance is nothing more than the outcome of actions aimed at work, and this result is a direct consequence of the workers' skills and their motivation to carry out their functions (Castillo et al., 2016). Performance implies the consideration of a dynamic organizational process over time and reflects changes in the organizational environment, power structures and objectives; it also includes both the efficiency and effectiveness of a recurring activity or a specific project ECLAC (2022). In higher education institutions, this process is immersed in Teaching, Students, Scientific Research, Linkage, Extension and Infrastructure (COPAES, 2021).

Regarding the international panorama of Mexican public universities that depend on State financing, the National Autonomous University of Mexico stands out in Scimago's international classification, as one of the most prestigious and recognized worldwide. It is observed that during the 2023 edition, it is in position number 2 among Latin American universities and position 223 worldwide. Another relevant university, is Instituto Tecnológico y de Estudios Superiores de Monterrey, which is a private institution with high prestige, especially for its investments in technology and its organization.

Table 2: Classification of SCIMAGO universities at the Latin American level.

Rank	Global Rank	Institution	Country
1	50	Universidade de Sao Paulo *	Brasil
2	223	Universidad Nacional Autonoma de Mexico	México
3	486	Universidade Estadual Paulista Julio de Mesquita Filho	Brasil
4	600	Universidade Estadual de Campinas *	Brasil
5	710	Universidade Federal do Rio de Janeiro *	Brasil
6	733	Universidade Federal do Rio Grande do Sul	Brasil
7	789	Pontificia Universidad Catolica de Chile *	Chile
8	793	Universidade Federal de Minas Gerais	Brasil
9	807	Universidad de Chile *	Chile
10	1027	Universidad Nacional de Colombia *	Colombia
11	1368	Universidad de Buenos Aires *	Argentina
12	1434	Universidade Federal de Santa Catarina *	Brasil
13	1446	Universidade Federal do Parana	Brasil
14	1681	Universidade Federal de Sao Paulo *	Brasil
15	2129	Universidad de Antioquia *	Colombia
16	2210	Universidade de Brasilia	Brasil
17	2496	Universidad de Concepcion *	Chile
18	2735	Instituto Tecnológico y de Estudios Superiores de Monterrey	México
19	2835	Universidad Nacional de La Plata *	Argentina
20	2971	Universidade Federal de Vicosa	Brasil
21	2980	Universidade Federal de Sao Carlos	Brasil

Source: SCIMAGO university classification (2023).

Despite this favorable context, there arises the question about the situation of the other public universities in Mexico. As can be seen in the previous table, Brazil has the greatest representation in this classification. If the total number of Latin American universities in this classification is analyzed, Brazil has a participation of 40.7% of the total number of universities in Latin America and Mexico with 12.2%. Along these lines, a total of nearly 85% of UPE appear in these international university classifications, since the majority dedicate efforts to the development of science and technology, which are relevant aspects considered for their evaluation.

In themselves, global university rankings are instruments that evaluate performance according to a series of indicators that are weighted to give a score, that is, quality is defined by the position it occupies in relation to others (Baltodano-García, 2021). Currently there are a number of national and international classifications that it's difficult to select the most suitable one to measure the universities of the Latin American region, in this sense, Albornoz and Osorio (2018) emphasize that the SCImago university clas-

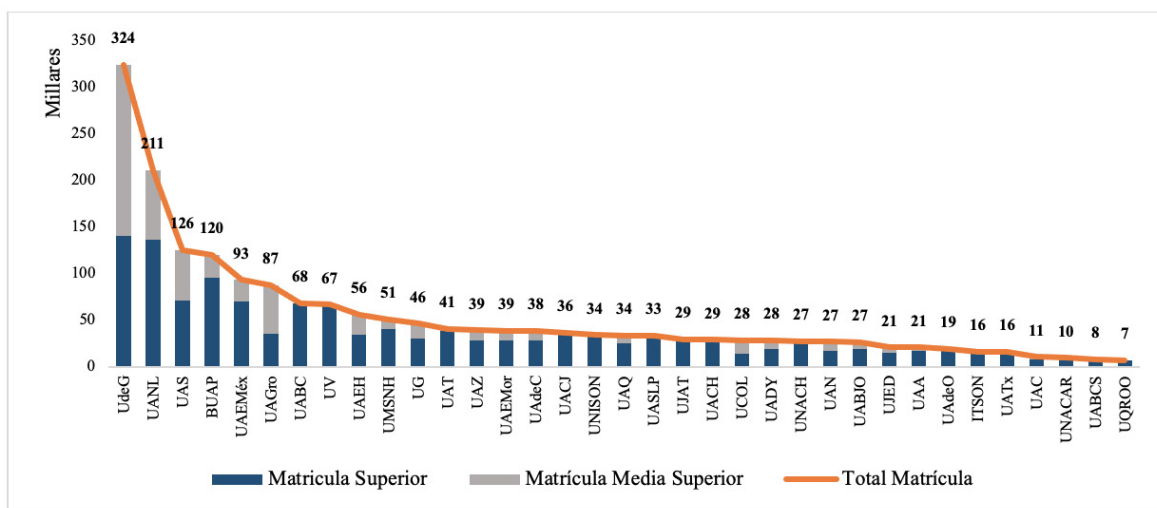
sification specializes in measure academic institutions and its algorithm favors Mexican universities by evaluating nearly 85% of UPE according to the indicators they select.

SCImago (2022) is a competitive instrument that brings together thousands of academic institutions in the world considering three different sets of performance indicators prioritized under a value system in the areas of scientific research, innovation and social impact. Firstly, research performance is measured through a series of indicators, including leadership, quality published documents, own journals, international collaboration, open access to published documents and the scientific talent of the authors. Secondly, innovation performance refers to the analysis of innovative scientific publications, patent citations and the number of patent applications, and thirdly, Social Impact is calculated through the documents with the highest impact value. normalized in the PlumX Metrics platforms, social networks and Mendeley, as well as the number of Backlinks, which are the number of incoming networks or subnetworks from other institutions, finally, the size of resources (URL) associated with the institution, that is, the social impact is measured through the visibility of the scientific products associated with each institution.

Before comparing these performance indicators between the UPE, it is necessary to previously review the designation of the public worlds to have a perspective on how financing may have some implication on performance and perceived quality both nationally and internationally.

The 35 state public universities (UPE) were established by the Mexican State with the purpose of satisfying the growing demand of more than 1 million 682 thousand students who study at the intermediate and higher levels. Curiously, 51% of this demand is served only through five educational institutions: the University of Guadalajara UdG (17%), the Autonomous University of Nuevo León UANL (11%), the Autonomous University of Sinaloa UAS (7%) , the Benemérita Universidad Autónoma de Puebla BUAP (6%), the Autonomous University of the State of Mexico UAEMéx (5%) and the Autonomous University of Guerrero UAGro (4%). These institutions play a vitally important role in this study due to the breadth of services they provide to the educational community.

Figure 2: Total enrollment of Mexican state public universities

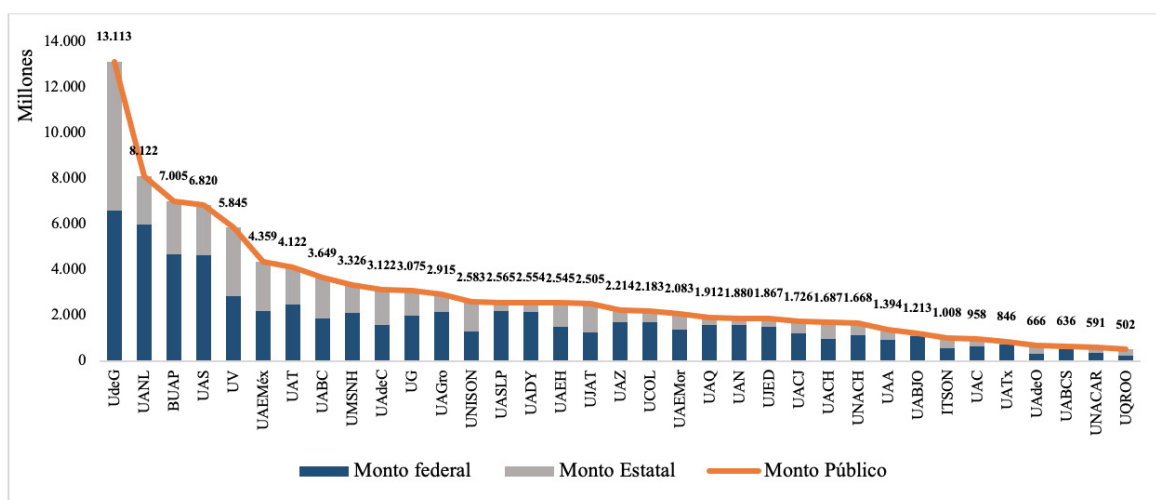


Source: Secretariat of Higher Education (2022). (Benemérita U. Autónoma de Puebla- BUAP; Instituto Tecnológico de Sonora - ITSON; U. Autónoma Benito Juárez de Oaxaca-UABJO; U. Autónoma de Aguascalientes-UAA; U. Autónoma de Baja California-UABC; U. Autónoma de Baja California Sur-UABCS; U. Autónoma de Campeche-UAC; U. Autónoma de Chiapas-UNACH; U. Autónoma de Chihuahua-UACH; U. Autónoma de Ciudad Juárez-UACJ; U. Autónoma de Coahuila-UAdeC; U. Autónoma de Guerrero-UAGro; U. Autónoma de Nayarit-UAN; U.

Autónoma de Nuevo León-UANL; U. Autónoma de Occidente-UAdO; U. Autónoma de Querétaro-UAQ; U. Autónoma de San Luis Potosí-UASLP; U. Autónoma de Sinaloa-UAS; U. Autónoma de Tamaulipas-UAT; U. Autónoma de Tlaxcala-UATx; U. Autónoma de Yucatán-UADY; U. Autónoma De Zacatecas Francisco García Salinas-UAZ; U. Autónoma del Carmen-UNACAR; U. Autónoma del Estado de Hidalgo-UAEH; U. Autónoma del Estado de México-UAEMéx; U. Autónoma del Estado de Morelos-UAEMor; U. Autónoma del Estado de Quintana Roo-UQROO; U. de Colima-UCOL; U. de Guadalajara-UdeG; U. de Guanajuato-UG; U. de Sonora-UNISON; U. Juárez Autónoma de Tabasco-UJAT; U. Juárez del Estado de Durango-UJED; U. Michoacana de San Nicolás de Hidalgo-UMSNH; U. Veracruzana-UV)

Regarding the allocated budget, a trend is indeed observed in which universities with a greater number of students receive more substantial financing. This financing is divided into state and federal resources; however, the allocation of resources by both entities is not always proportional. In other words, if we calculate an average of the percentages, we will see that the states contribute approximately 63%, while the federation contributes around 34%. However, there are notable exceptions, such as the case of the Autonomous University of San Luis Potosí and the Autonomous University of Yucatán, where states subsidize up to 85%. If we consider universities with a greater number of students, such as the University of Guadalajara (UdG), a balance of around 50% is observed. In contrast, in the case of the Autonomous University of Nuevo León (UANL), the state provides a considerable 74% of the financing. The following illustration shows the budget assigned by the university in millions of pesos.

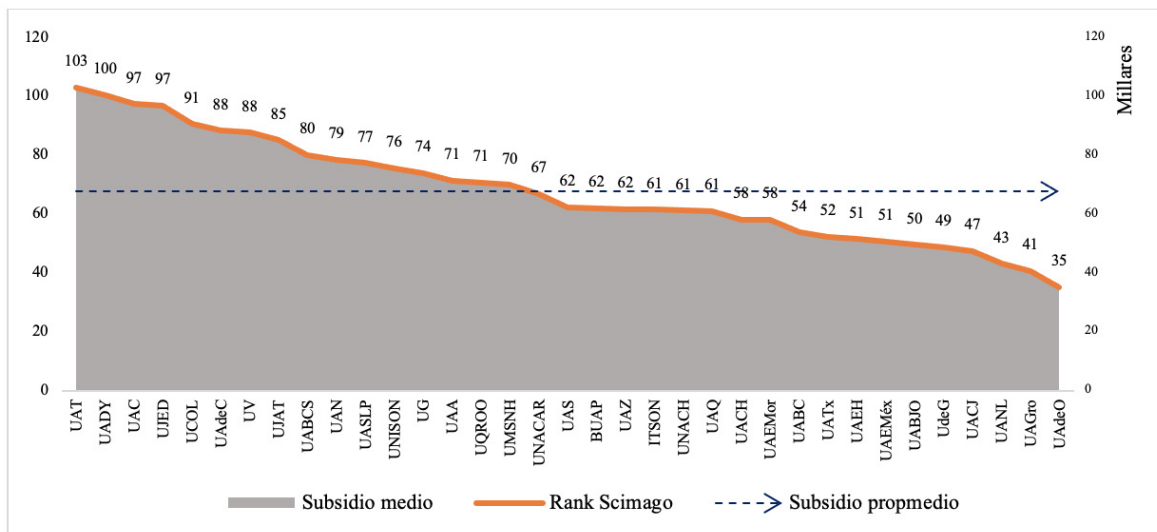
Figure 3: Total public, federal and state amount received by each UPE.



Source: Secretariat of Higher Education (2022).

If we only consider the total amount of public financing, there is no significant difference that can be considered important. However, to more accurately identify any disparities in the allocation of these resources, it is essential to compare the average subsidy awarded per student. In this context, it is evident that five of the six universities that serve most of the demand have a lower subsidy per student, with the exception of BUAP, which is ranked 19th in terms of subsidy, considering from highest to lower allocation of resources. In this scenario, the institution that receives the highest subsidy per student is the Autonomous University of Tamaulipas UAT despite serving only 2% of the demand. (see Figure 4)

Figure 4: Average subsidy per student per UPE.



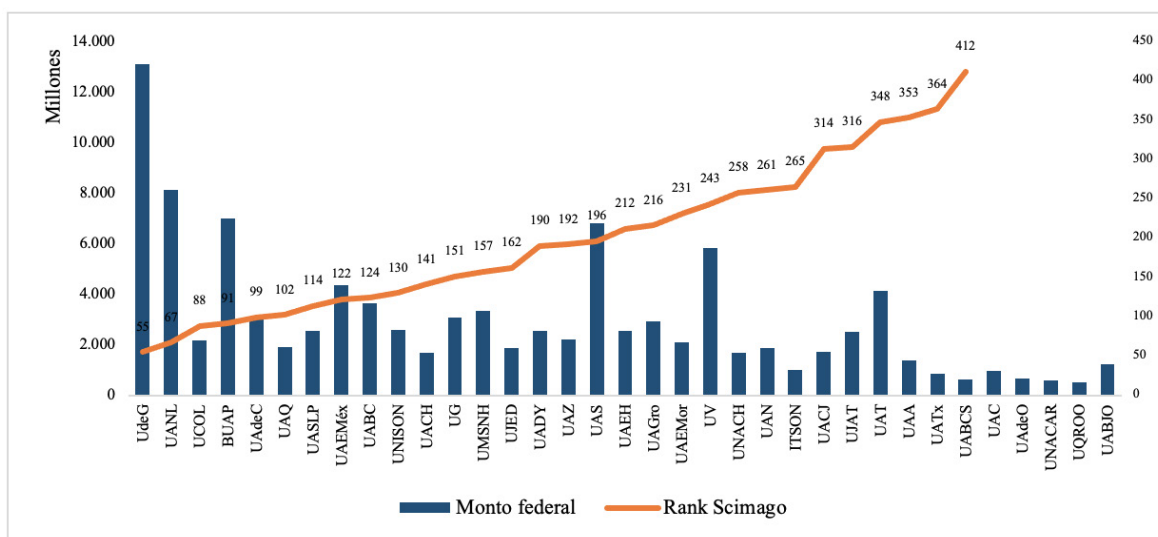
Source: Secretariat of Higher Education (2022).

In accordance with the above, it is imperative that both state and federal entities carefully review the allocation of resources in order to adequately align it with the needs they must address. It is evident that the current distribution of resources is not directly related to student demand, which could have negative repercussions on the quality of education provided by these institutions.

Furthermore, it is crucial to address in detail the notable exceptions that have been identified, which raise questions about the underlying rationale for resource allocation. This also raises the question of whether there are valid justifications for such differences. Transparency and equity in the allocation of funds are essential to ensure that all educational institutions have the capacity to offer quality and accessible education.

Addressing again the issue of the international status of Mexican universities, particularly the UPE, internally, the universities that have a greater capacity to serve many students are those that achieve a better position in the international arena. Notable examples are the UdeG and the UANL, which together cover almost 30% of the demand and achieve first and second place in the SCImago classification among their own categories. (see Figure 5)

Figure 5: Public Amount and Position in the SCImago qualification by university.



Source: Secretariat of Higher Education (2022) and SCImago (2023).

On the other hand, in the previous illustration it is noted that most universities with lower allocation of resources do not appear at all in the SCImago classifications, which is why a review is required about the financing they receive from the federal and state governments or look for other alternatives that can boost your international visibility.

In this study, 35 UPE were analyzed, obtaining a total average subsidy of \$67,792 per university, a minimum of \$35,024 and a maximum of \$102,993 with a SD standard deviation of 18,064. In terms of total federal amounts, an average of \$2,250 million pesos was obtained. 84 million pesos million pesos and maximum 46,603.79 million pesos. Regarding the SCImago international classification, the positions of the universities vary between 55 and 412, with an average of 199 positions and a ds of 97.

Table 3: Descriptive statistics

	N	Minimum	Maximum	Average	Typical deviation.
Average subsidy	35	35024	102993	67792	18064
Federal amount	35	250848521	6603790527	1876398615	1485021264
State Amount	35	108080833	6509513068	1073892741	1210743355
Public Amount	35	501697042	13113303595	2950291356	2569198199
Rank Latam	30	55	412	199.13	97.301
INNOV_Rank	30	11	384	175	109
INVEST_Rank	30	86	409	225	85
IMP_SOCIAL_Rank	30	35	380	185	107
Valid num. (according to list)	30				

Source: Own elaboration (2023)

According to the performance indicators considered by the SCImago university classification, it is seen that there is a significant relationship with the public amounts assigned to each university and the global performance that includes social impact, scientific research and innovation. On the other hand, and separately, a level of significance is appreciated between the amounts, the social impact and the scientific research.

Table 4: Pearson correlations between the variables in analysis.

Variables	Description	Rank	IMP_SOCIAL_Rank	INVEST_Rank
Public Amount	Pearson correlation	-.504**	-.645**	-.569**
	Sig. (bilateral)	.005	.000	.001
Federal amount	Pearson correlation	-.529**	-.639**	-.592**
	Sig. (bilateral)	.003	.000	.001
State Amount	Pearson correlation	-.419*	-.581**	-.478**
	Sig. (bilateral)	.021	.001	.008

** The correlation is significant at the 0.01 level (two-sided). Source: Own elaboration (2023).

The relationship that exists between the variables is inverse, this is because when the public amounts allocated to universities are greater, the position in the international classification decreases, which means that the larger the budget, the better they will be positioned in terms of the international visibility. An example of this is the Public Funding, where negative values of *r* are observed, indicating a negative correlation. This means that when Public Funding increases, the positions of the public universities under analysis decrease in the international ranking. This reflects a clear linear relationship between both variables.

4. Conclusions

This research carried out a detailed analysis of 35 State Public Universities (UPE) in Mexico, evaluating the financing they receive and their performance in terms of scientific research, social impact and innovation. The results show that, on average, these universities receive a total subsidy of \$67,792 per university, with a variation ranging between \$35,024 and \$67,792, demonstrating a significant disparity in resource allocation. In addition, an average of \$2250.84 million pesos in federal financing is observed, with a maximum of \$46,603.79 million, which underlines the importance of financial support from government entities, as well as a commitment from the State to guarantee higher education to Mexican citizens.

Regarding the international classification of SCImago, the universities studied show variability in their positions, ranging from position 55 to 412, with an average of 199 positions compared to the other universities in the Latin American region and a standard deviation of 97. This reflects the diversity in the academic performance of these institutions. However, it leaves the question that we need to continue working to improve aspects such as innovations and scientific research that are fundamental pillars for social progress.

The most significant thing about this study is that a significantly important relationship has been identified between the allocation of public resources and the overall performance of universities, which covers aspects such as social impact, scientific research and innovation. These findings underscore the importance of allocating adequate resources to higher education institutions to boost their quality and ability

to positively influence society. Taken together, this study provides a solid basis for decision-making and policy formulation that promotes academic excellence and the positive impact of universities in Mexico. In accordance with the above, it is suggested to incorporate the principle of equity into federal and state-level budget planning, along with its specific criteria, with the aim of reducing disparities in funding, accessibility, and educational quality among different regions, states, and territories of the country. This will be done while considering the specific educational needs of each region and locality to provide high-quality higher education services.

Furthermore, it is recommended to include in the annual budget allocation, both at the federal and state levels, the estimates of resources required to achieve, by the year 2030, an equitable budget that allows students to access high-quality higher education, scientific and humanistic research, as well as technological development and innovation.

Finally, effectively align the federal and state budgets allocated to public universities with the mechanisms that facilitate the implementation of funding policies, such as the National Development Plan, programs of the Ministry of Public Education (SEP), and the Sectoral Education Program. This approach aims to comprehensively address the specific needs of each educational institution and provide the necessary resources to ensure a high-quality and equitable education for both new students entering due to the annual increase in enrollment and those who already benefit from this social advantage.

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