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Status of Women in Economics: Mexico

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Abstract

The status of women in Economics in Mexico is unmoved. Progress has stalled at all levels. Female representation among students has varied from around 38 to 42% on average between 2010 and 2022. I found tiny declines in female representation from undergraduate to doctoral level, so there is no strong evidence of a leaky pipeline. Among researchers, 34% of the Economics researchers in the National System of Researchers are women. Female representation falls sharply for researchers as we climb the system's ladder. At the top of the system are four male economists per woman. Women's representation in academic production has increased over time, but for women in Mexican institutions, it has stalled, even though they are now teaching relatively less than men. Overall, Mexican women in Economics are facing stagnation in their progress toward a more balanced representation in student bodies, faculties, and academic production.

Keywords: Mexico, Economics, women, underrepresentation. **JEL Codes**: A11, J16, J44.

Resumen

La situación de las mujeres en la economía en México se mantiene inalterada. El progreso se ha estancado en todos los niveles. La representación femenina entre los estudiantes ha oscilado entre el 38% y el 42% en promedio entre 2010 y 2022. Encontré pequeñas disminuciones en la representación femenina desde el nivel de licenciatura hasta el de doctorado, por lo que no hay evidencia sólida de una fuga de información. Entre los investigadores, el 34% de los investigadores en economía del Sistema Nacional de Investigadores son mujeres. La representación femenina del sistema hay cuatro economistas hombres por cada mujer. La representación femenina en la producción académica ha aumentado con el tiempo, pero en el caso de las mujeres en las instituciones mexicanas, se ha estancado, a pesar de que ahora imparten docencia relativamente menos que los hombres. En general, las mujeres mexicanas en economía

se enfrentan a un estancamiento en su progreso hacia una representación más equilibrada en el estudiantado, el profesorado y la producción académica.

Palabras claves: México, Economía, mujeres, subrepresentación. Códigos JEL: A11, J16, J44.

Status of Women in Economics: Mexico

Eva O. Arceo-Gómez *

January 2025

Abstract

The status of women in Economics in Mexico is unmoved. Progress has stalled at all levels. Female representation among students has varied from around 38 to 42% on average between 2010 and 2022. I found tiny declines in female representation from undergraduate to doctoral level, so there is no strong evidence of a leaky pipeline. Among researchers, 34% of the Economics researchers in the National System of Researchers are women. Female representation falls sharply for researchers as we climb the system's ladder. At the top of the system are four male economists per woman. Women's representation in academic production has increased over time, but for women in Mexican institutions, it has stalled, even though they are now teaching relatively less than men. Overall, Mexican women in Economics are facing stagnation in their progress toward a more balanced representation in student bodies, faculties, and academic production.

Keywords: Mexico, Economics, women, underrepresentation.

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Introduction

Building upon the work of Kahn (1993; 1995), Ginther and Kahn (2004), and Dynan and Rouse (1997), a significant debate has emerged regarding the lack of diversity in academic economics departments, both in terms of student composition and faculty representation. In recent decades, economists have played a prominent role in public-sector decision-making (Christensen, 2018; Christensen & Mandelkern, 2022; Friedman, 1986; Hirschman & Berman, 2014) and have even influenced the administration of justice (Ash, Chen, & Naidu, 2022). Consequently, the underrepresentation of women in economics contributes to a limited gender perspective in the field's influence on public life, with implications for societal well-being, particularly affecting women and other vulnerable groups. However, there is limited empirical evidence regarding female representation in economics in the case of Mexico. This chapter aims to address this knowledge gap by examining the representation of women in Mexican economic academia.

Dynan and Rouse (1997) argue that the low enrollment of women in economics programs is driven by misperceptions about the nature of the field and a lack of female role models. For instance, Bansak and Starr (2010) demonstrate that students perceive economics as a business-oriented discipline that prioritizes mathematical skills and financial gain. This perception is less appealing to women, partly due to gender stereotypes suggesting that women have weaker abilities in mathematical disciplines (Steele, 1997). This view is further supported by the findings of (Owen, 2010), who shows that the likelihood of enrolling in economics increases for women when they receive a high grade in the introductory economics course, whereas this is not the case for men. For women, achieving a high grade in the introductory course helps dismantle gender stereotypes, whereas, for men, it is considered a normative outcome.

However, Emerson, McGoldrick, and Mumford (2012) contend that gender gaps in economics specialization originate well before students take an introductory course due to a process of self-selection. They, therefore, recommend introducing economic concepts at earlier educational stages to foster female interest and, consequently, increase the demand for economics courses. Similarly, Bansak and Starr (2010) suggest that promoting economics programs based on their applications to social welfare analysis could make the discipline more attractive to female students.

Another crucial factor in increasing female enrollment is the presence of role models. Given the low

representation of women in economics, female students often struggle to find relatable academic figures in universities. Experimental evidence suggests that having more female role models increases the likelihood that women will choose to study economics (Porter & Serra, 2020). Greater representation of women is expected to reduce the significance of biases and stereotype threats in explaining gender disparities in quantitative sciences (Ginther, Kahn, & McCloskey, 2016).

Despite the growing number of women obtaining doctoral degrees, this has not translated into a higher proportion of female faculty members and researchers in universities (Ginther & Kahn, 2004). A qualitative study by Boustan and Langan (2019) found that economics departments with higher success rates in placing students in academic jobs tend to have greater female faculty representation, better faculty advising and mentorship, more collegial seminar environments, and senior faculty members who are more attuned to gender disparities in academia. Even when women secure academic positions, promotion processes exhibit a clear bias in favor of men. Ginther and Kahn (2004) find that women are less likely to attain tenure and take longer to do so, even after controlling for productivity and personal characteristics. However, they argue that gender differences in publication records explain only part of the tenure gap, as family-related factors—particularly having children—negatively impact women's tenure prospects, unlike men's. This highlights the existence of institutional barriers affecting women economists' likelihood of obtaining tenure.

One such institutional barrier is the assignment of tasks that do not contribute to tenure evaluations. Women are significantly more likely than men to be assigned administrative or academic service responsibilities, such as committee participation, event organization, and student advising. While these roles are essential to institutional functioning, they are undervalued in promotion and tenure processes (Babcock, Recalde, Vesterlund, & Weingart, 2017). This imbalance in task distribution not only reduces women's available research time but also limits their opportunities to enhance their academic productivity, a key criterion for professional advancement.

Another potential barrier to academic promotion is bias in teaching evaluations. Buser, Hayter, and Marshall (2019) find that women tend to receive more negative evaluations than men, particularly after distributing grades to students. These biases can affect women's promotion prospects and contribute to the perception that female academics perform at a lower level. In the Mexican context, although studies have not specifically focused on economists, Arceo-Gomez and Campos-Vazquez (2019) provide evidence of these

biases in student evaluations and the ways in which students refer to their female professors: students are less deferential towards female instructors, are more likely to comment on their personality and appearance, and use the word "bad" to describe them twice as often as they do for male professors.

Gender disparities are also evident in the selection of economics subfields. Beneito, Boscá, Ferri, and García (2018) find that women are underrepresented in macroeconomics and finance. They also present evidence that women tend to adopt a more microeconomic perspective, whereas men favor a macroeconomic viewpoint. Dolado, Fernández, and José (2005) complement these findings by linking the likelihood of choosing a specialization area to the proportion of women in the field. This gender-based heterogeneity in specialization influences research network formation, with women being more likely to publish articles independently (Boschini & Sjogren, 2007). This gender bias in research networks affects women's academic output: female economists in fields with lower female representation have a lower probability of conference paper acceptance (Chari & Goldsmith-Pinkham, 2017). Consequently, women tend to have lower citation and publication rates, which negatively impacts their academic reputation and career advancement prospects (Ferber & Brün, 2011). Furthermore, research networks play a crucial role in job market outcomes, increasing the likelihood of receiving job offers (Combes, Linnemer, & Visser, 2008).

One possible reason why women are more likely to work independently is that the returns to coauthored papers are lower for them than for men. Sarsons, Gërxhani, Reuben, and Schram (2021) find that women receive less credit than men for coauthored work. This bias is particularly pronounced when women collaborate with male colleagues, as the credit is more frequently attributed to the man. This phenomenon discourages women from engaging in joint projects, further limiting their visibility and impact within the field. It also creates clear biases in the hiring and promotion processes for female economists in academia. As a result, economists have recently opted to randomize the order of authors' names in published articles.

Motherhood also has a significant impact on women's academic careers. Although female academics with children exhibit similar or even higher research productivity compared to those without children, they often face greater trade-offs between pursuing an academic career and starting a family—or even feel compelled to forgo motherhood to meet the demands of an academic job (Joecks, Pull, & Backes-Gellner, 2014). Krapf, Ursprung, and Zimmermann (2017) find a "motherhood penalty" in academic publications starting from the second child, whereas men's research output increases after having their first child. Moreover,

policies designed to level opportunities, such as tenure clock extensions, have yielded mixed results. Antecol, Bedard, and Stearn (2018) find that these policies have benefited men more than women, exacerbating disparities in career advancement.

Research on this phenomenon remains scarce in Mexico. This article aims to describe the issue of gender representation in economics as an academic discipline, from the undergraduate level to researchers in the field.

The document is divided into two main sections: Students and Researchers. Within each section, I detail the data sources and processing I undertook. I then provide a descriptive analysis of the status of female students and researchers over time. Section 3 presents the analysis of the composition of editors in Mexican journals. The final section concludes.

1 Female students in Economics

In this section, I will analyze the status of women studying Economics and provide some context for the Economics programs at different levels in Mexico.

1.1 Data

The students' data comes from the National Association of Universities and Higher Education Institutions (ANUIES for its Spanish acronym). The ANUIES has data per academic year from 2010-2011 to 2022-2023 at the academic year, institution, and program level. The Ministry of Education's 911 format collected this data, and ANUIES processed it and made it public. The data has information on total enrollment, the size of the graduating class, and the number of people who have obtained their degrees.¹ ANUIES reports all these variables as total, male, and female students, allowing me to analyze gender differences. The data spans from the academic year starting in 2010 to 2022.

From 2011 to 2022, ANUIES also reported the number of applications, the incoming class size (again,

¹In Mexico, universities have different graduation requirements. Some only request to complete the coursework with passing grades. Others require a comprehensive examination, while others have a thesis requirement. Some universities give different graduation choices to their students. Hence, the data differentiates between the size of the graduating class, meaning those who have completed their coursework successfully, and those who have obtained their degree, meaning those who have completed all the requirements to be granted the bachelor's, master's, or Ph.D. degree.

total, male and female students), and the number of places in each program.² In addition, from 2016 to 2022, ANUIES also reported the number of students who self-identified as Indigenous. So, during the last five years of data, we know how many Indigenous students applied, entered, enrolled, graduated, or obtained their degrees in each program. Unfortunately, ANUIES only reports the enrollment data for students of Indigenous descent; as such, I cannot analyze the intersectionality of gender and Indigenous descent in the rest of the variables.

I processed the data as follows. I encoded the state and the municipality³ according to the National Statistical and Geography Institute's (INEGI for its acronym in Spanish) coding. Using the states where the university is located, I encoded a region variable commonly used in Mexico, which divides the country into five regions. These regions have similar characteristics in terms of their historical and natural qualities. The five regions are the following: Northwest (Baja California, Baja California Sur, Chihuahua, Durango, Sinaloa, and Sonora), Northeast (Coahuila, Nuevo León, and Tamaulipas), Center (Ciudad de México, Estado de México, Hidalgo, Morelos, Puebla, Querétaro, and Tlaxcala), Center-west (Aguascalientes, Colima, Guanajuato, Jalisco, Michoacán, Nayarit, San Luis Potosí, and Zacatecas), and South (Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Veracruz, and Yucatán). Figure 1 shows these regions. Below, I will explain which regions have the top 10 programs in Economics.

ANUIES reports the data from private and public universities separately; hence, I defined an indicator variable equal to one if the university is private. The data is also reported separately for undergraduate, master's, and Ph.D. programs. So, I defined a categorical variable for the degree level. Finally, ANUIES does not report the field of the program; it only reports the program's name. Consequently, I classified each program into 14 fields: Economics, Physics, Chemistry, Mathematics, Engineering, Biology, Health Sciences, Information Technologies and Communications, Computer Science, Earth Sciences, Social Sciences (except Economics), Business, Humanities, and Other Sciences or Fields.⁴ Figure 2 presents the distribution of the programs into fields in 2022. I also generated a STEM indicator variable that includes all programs in Physics, Chemistry, Mathematics, Engineering, Biology, Health Sciences, Information Technologies and Communications, Computer Sciences, Information Technologies and Communications, Computer Science, and Earth Sciences. Considering all the programs, the dominant fields

²Table B.1 has the variables and period covered for each.

³ANUIES did not report the municipality where the university was in 2010; the municipality reports were incomplete in 2011 and 2012.

⁴Other Sciences or Fields include highly multidisciplinary programs and programs such as Fitness, Bakery, and Firefighting.

Figure 1. Mexico's five regions classification



Notes: The figure presents the five region classifications of Mexican states. The states in each region are as follows: *Northwest* – Baja California, Baja California Sur, Chihuahua, Durango, Sinaloa, and Sonora; *Northeast* –Coahuila, Nuevo León, and Tamaulipas; *Center* –Ciudad de México, Estado de México, Hidalgo, Morelos, Puebla, Querétaro, and Tlaxcala; *Center-west* –Aguascalientes, Colima, Guanajuato, Jalisco, Michoacán, Nayarit, San Luis Potosí, and Zacatecas; and *South* –Campeche, Chiapas, Guerrero, Oaxaca, Quintana Roo, Tabasco, Veracruz, and Yucatán.

in 2022 are Business (26.8%), STEM fields (26.7%), and Social Sciences (25%). However, in college, STEM (30%) and Business (28%) fields are more predominant, whereas at the master's degree level, Social Sciences (33%) lead. Finally, at the doctoral level, universities offer Social Sciences (29.7%) and STEM (29.3%) programs almost equally. Economics gains popularity as we move up the schooling level, coming from 0.43% at the undergraduate to 1.66% of the programs at the doctoral level.

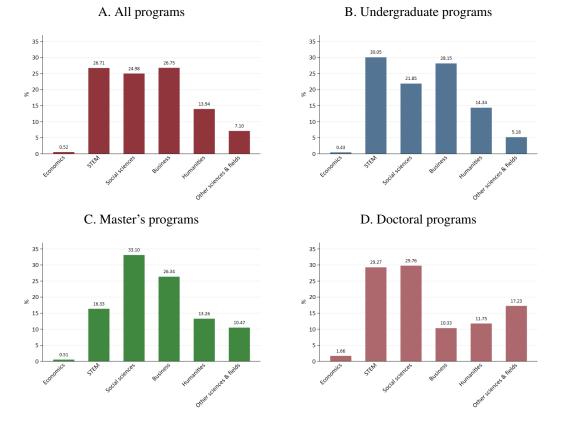


Figure 2. Distribution of programs across fields by level in 2022

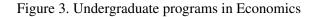
Source: Author's elaboration using 2022 ANUIES data. The figure shows the percentage of programs by field.

1.2 Undergraduate students

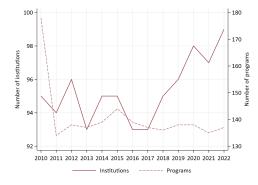
In this subsection, I analyze the data of undergraduate students in economics. I describe the number of programs, institutions, absolute enrollment, and the geographic distribution of programs and enrollment. Then, I will describe the trends in female representation at different stages of graduate education: applicants, incoming classes, enrollment, graduating class, and conferred degree. Finally, I will analyze female representation in public and private universities and then describe female access to the top 10 universities, as well as their geographic distribution and type of university (public or private).

As we saw, in 2022, Economics represented less than half a percentage point of all the programs offered at the undergraduate level. However, the number of institutions offering Economics programs has varied little over time, from a high of 100 in 2010 to a low of 94 in 2016-17 (see Figure 3, Panel A). I found a significant drop from 2010 to 2011 in the number of programs offered, from 193 to 137. The number of

programs has fluctuated around 140 since 2018. In 2022, most of the programs were offered in the Estado de México and Mexico City, some states in the northern border, Querétaro, Puebla, and Oaxaca (see Panel B). Panel C shows enrollment has steadily increased for men except in 2011 and 2022. In the case of women, enrollment was relatively constant between 2010 and 2016 and has increased almost every year since then. Finally, Panel D shows that enrollment is primarily concentrated in Mexico City, followed by the Estado de México, Nuevo León, Jalisco, and Puebla.



A. Number of institutions offering undergraduate Economics and number of programs offered

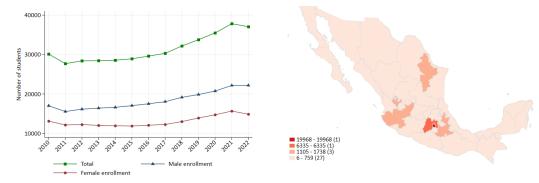


C. Male and female undergraduate enrollment

B. Distribution of undergraduate programs in Mexico (2022)



D. Distribution of undergraduate enrollment in Mexico (2022)



Source: Author's elaboration using ANUIES data, using the sample of undergraduate programs.

Despite overall increasing enrollment, Figure 4 shows that female enrollment had a downward trend from 43.5% in 2010 to 40% in 2022 (maroon line with solid circles). As such, we can barely say that Economics has gender parity according to Anand's (2021) definition of parity (between 40-60%). On average, the applicants' pool has a larger percentage of women than the incoming class (hollow circles vs. hollow triangles in shades of blue), suggesting that more men are admitted to the programs relative to women (ex-

cept in 2020). Whether the universities select the best women from this pool is a matter of discussion. Still, relative to enrollment, women are overrepresented in the graduating and conferred degree pool of students (both green lines have a higher percentage of women than enrollment), showing they are better at finishing coursework and the degree requirements of Economics programs.

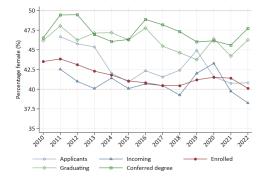


Figure 4. Female representation in undergraduate Economics

Source: Author's elaboration using ANUIES data, using the sample of undergraduate programs.

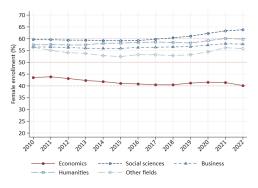
Economics might not be an outlier when compared with other STEM programs. Figure 5 compares enrollment in Economics to STEM, Business, the Social Sciences (except Economics), and the Humanities. The pink horizontal dashed lines at 40 and 60% mark the gender parity region. Panel A contrasts Economics to hard-STEM programs: Physics, Mathematics, Engineering, ITCs-related, and Computer Science. Men have traditionally dominated these fields. Compared to these fields, Economics has a high female representation, though it is more evident in this figure that there has been a downward trend. A case in point is Engineering, whose female enrollment has increased by almost six percentage points (pp). Math, Computer Science, and ITCs-related programs have seen a sharp decrease in female enrollment during this period.

Economics does a dismal job compared to Bio/med-STEM fields (see Panel B in Figure 5). Earth Sciences has an impressive trend in this panel, increasing enrollment by almost 10pp. Strictly speaking, women are now overrepresented in Earth Sciences, with more than 50% female enrollment. Finally, Panel C presents Economics against Social Sciences, Business, Humanities, and other fields. All these fields (except "other fields") have an increasing trend in female enrollment during the period, and in all of them, women are strictly overrepresented. Other Social Sciences have increased their enrollment beyond the 60% threshold. Economics is undoubtedly an outlier among Social Sciences.

A. Hard-STEM B. Bio/Med-STEM 70 70 65 65 60 60 8 55 8 55 50 -50 45 45 40 35 35 30 30 25 25 20 20 2022 2015 2015 2026 2012 2026 201 205 0 Chemistry Biology Engineering ITCs-related Health science - Farth sciences Computer science

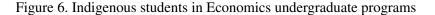
Figure 5. Female undergraduate enrollment in Economics vs. other fields (%)

C. Social Science, Business, Humanities, and other fields

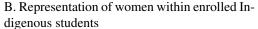


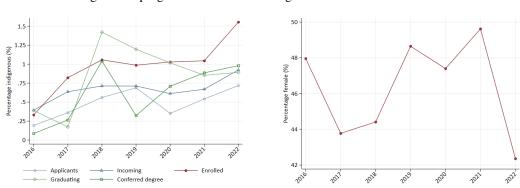
Source: Author's elaboration using ANUIES data, using the sample of undergraduate programs.

Figure 6 shows the percentage of Indigenous students in Economics at different stages of their undergraduate program. The population of Indigenous descent represents around 10% of the Mexican population. As the graph shows, Indigenous people do not reach 2% of total enrollment during the period. However, the representation has increased from 0.33% to 1.55%. Incoming classes have a higher percentage of Indigenous people than the applicants' pool, possibly suggesting an affirmative action effort. In contrast, the graduating classes and the conferred degree pool have a lower percentage of Indigenous people than the pool of enrolled students almost every year. These figures suggest that Indigenous students may struggle to finish their undergraduate studies. Indigenous women represent about 46% of Indigenous students (Panel B); hence, there is no evidence of a greater struggle for Indigenous women to enter Economics programs than the general population. Finally, Indigenous students are as underrepresented in all other fields of knowledge, except Earth Sciences, where their representation is over 4% during the period (see Figure A.1).



A. Representation of Indigenous population in Economics undergraduate programs





Source: Author's elaboration using ANUIES data, using the sample of undergraduate programs.

Figure 7 shows female enrollment in Economics by type of university: public or private. Female representation in undergraduate programs in private universities is lower than in public universities. However, the percentage of women enrolled in public universities decreased during the period, from 45% to 41%, whereas in private universities, there was a 1.75pp increase.

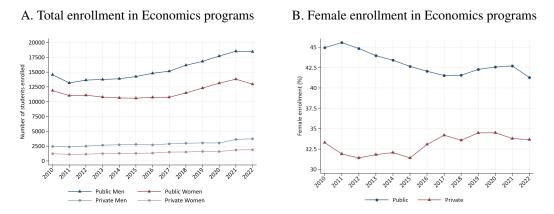


Figure 7. Enrollment in Economics undergraduate programs, public vs. private

Source: Author's elaboration using ANUIES data, using the sample of undergraduate programs.

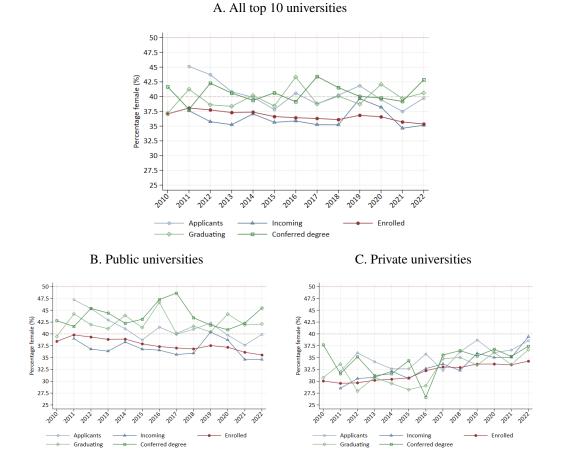
Mexico's higher education system has a wide variation in quality, so these figures might not be telling on the ability of women to access high-quality programs. There are elite public and private universities, as well as low-quality public and private universities. The newspaper *El Universal* publishes a ranking of the best 22 universities to study Economics in Mexico (El Universal, 2024).⁵ However, some universities decide not to participate in such rankings, such as *Instituto Tecnológico Autónomo de México* (ITAM), a very successful private university in their placement of students in PhDs in Economics in the United States. I consulted other rankings such as Reforma (2023) and Mextudia (2024) and found three more universities. These elite programs are located in Mexico City, Estado de México, Nuevo León, Jalisco, and Puebla, which are states in the center, northeast, and center-west of Mexico.

Figure 8 shows female representation in the top 10 Economics universities and their representation in top public and private universities. Women are clearly less represented in top programs: representation goes from an average of 42.5% for all universities to around 36% in top universities. Within the top 10 universities, female representation in graduating classes and conferred degrees is still higher than in enrollment, suggesting higher graduating rates among female students. The trends in female representation in public and private universities still hold. However, graduation and conferred degree rates are only higher among females in public universities, whereas this result is less clear in private universities.

In sum, I found a declining trend in female representation in undergraduate Economics programs. An opening gender gap in public universities is the driving force behind this trend, overall and in the top 10 universities. Moreover, STEM fields are doing a better job than Economics, showing at least minor progress (hard-STEM) or female over-representation in Bio/Med-STEM fields. Economics is the only social science that did not reach parity during the study period.

⁵Table B.2 presents the 2024 ranking.

Figure 8. Female representation in universities with top 10 Economics economics universities at the undergraduate level



Source: Author's elaboration using ANUIES data, using the sample of undergraduate programs and universities with top 10 Economics programs as defined in Table B.2.

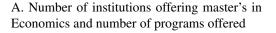
1.3 Master's students

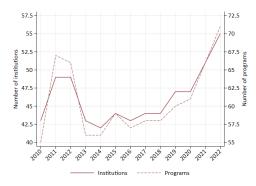
In this subsection, I present the analysis of master's students. As in the previous section, I first show the number of programs, institutions, absolute enrollment, and the geographic distribution of programs and enrollment. Then, I will describe the trends in female representation at different stages of the master's programs. I then look into female representation in public and private universities. I end this subsection by showing how women are represented in the top 10 programs with master's degrees, as well as the geographical distribution of these programs.

There is more variation in the number of master's programs in Economics than in the number of

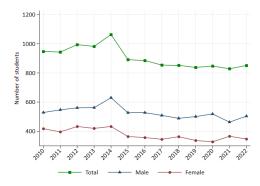
undergraduate programs (see Figure 9). The study period started with 55 programs and reached 71 programs in 2022. The number of institutions offering Economics master's programs varied almost equally, starting with 43 institutions and finishing with 55 in 2022. In 2022, there were eight states without master's programs in Economics (Panel B), which is better reflected in the fact that they have no enrollment (Panel D). Again, Mexico City has the most programs, followed by Puebla, Guanajuato, Estado de México, Veracruz, and Chihuahua. Enrollment decreased in 2015 by almost 200 students nationwide (Panel C) and has decreased slightly since then. The increasing number of programs suggests fewer students per program on average. Male and female enrollment followed similar trends up to 2018 and opposite trends since then. Enrollment is concentrated in Mexico City, Puebla, and Estado de México.



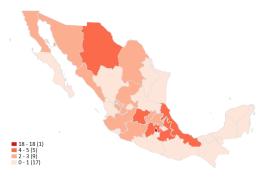




C. Male and female master's enrollment



B. Distribution of master's programs in Mexico (2022)



D. Distribution of master's enrollment in Mexico (2022)



Source: Author's elaboration using ANUIES data, using the sample of master's programs.

Female representation in Econ master's programs fluctuated between 44% and 39%, though the trend is not clear since there is much variation after 2017 (see Figure 10). As opposed to undergraduate programs,

in master's programs, I found that, on average, women are less represented in the application pool than in the incoming class. There is a significant spike in the percentage of women applying in 2020 that is not observed in other fields (not shown). As in the case of undergraduate programs, women are, on average, more represented among the pool of students who finish their coursework or are conferred their degrees than in enrollment. However, the representation in graduating classes and conferred degrees decreased in the last ten years.

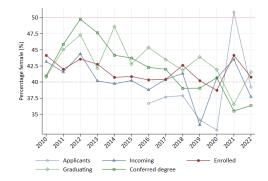


Figure 10. Female representation in master's programs in Economics

Source: Author's elaboration using ANUIES data, using the sample of master's programs.

Compared to master's programs in other fields, Economics does not fare as dismally as we saw in the previous subsection: female representation has remained relatively constant at around 42.5% on average during the study period (see Figure 11). I also found an increasing trend in the representation of women in Engineering and, more recently, in Physics and Mathematics (Panel A). I still found that women are less represented in Economics than in Bio/Med-STEM fields (Panel B) and Social Science, Business, and Humanities (Panel C). The gap between those fields and Economics is narrower than in undergraduate programs. Business, Humanities, Earth, Health, and Social Sciences have an increasing trend in the percentage of female students. Economics compares poorly with all those increases.

Representation of Indigenous students in master's programs increased from 0.25% to 1.6%, but they are still poorly represented in master's programs (see Figure 12, Panel A). However, the representation of women among Indigenous students is impressive. It has varied between 50% and 75% during the period (Panel B). Compared to hard STEM fields, social sciences, Business, and humanities, there has been slightly more representation of Indigenous students in Economics master's programs in the last three years (see

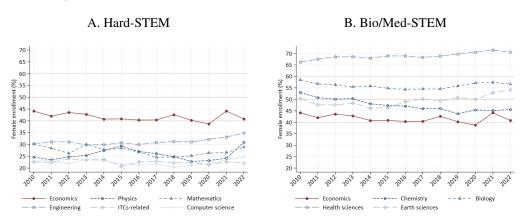
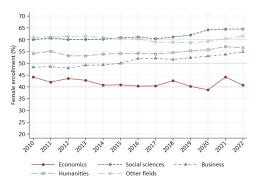


Figure 11. Female master's enrollment in Economics vs. other fields (%)

C. Social Science, Business, Humanities, and other fields



Source: Author's elaboration using ANUIES data, using the sample of master's programs.

Figure A.2). Finally, the representation of Indigenous students in Bio/Med-STEM programs is very similar to that in Economics (see Figure A.2, Panel B).

As for the type of university, Panel A of Figure 13 shows that enrollment in Economics master's degrees decreased in public universities since 2014, whereas it has increased in private universities since 2019. Panel B shows that women are only slightly better represented in programs from public universities than private universities on average, but the time series shows too much variation.

Given that there are no systematic records of the top 10 graduate programs in Economics, I will assume that the same universities with the highest quality undergraduate programs are also the highest quality at the graduate level. Figure 14 Panel A shows female representation in master's programs at the top 10 universities. Representation in these programs is lower than in all M.A. programs in Economics, ranging from 28 to 38% or a 33% mean during the period with no discernible trend. When we look at public and

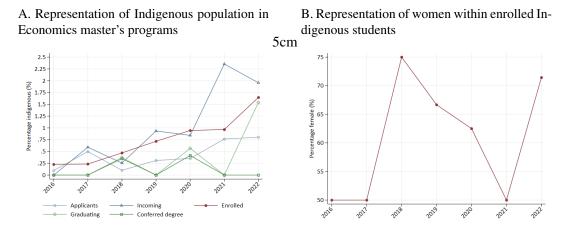


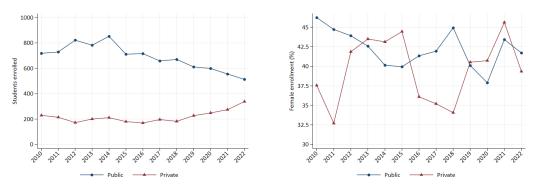
Figure 12. Indigenous students in Economics master's programs

Source: Author's elaboration using ANUIES data, using the sample of master's programs.

Figure 13. Enrollment in Economics master's programs, public vs. private

A. Total enrollment in Economics programs

B. Female enrollment in Economics programs

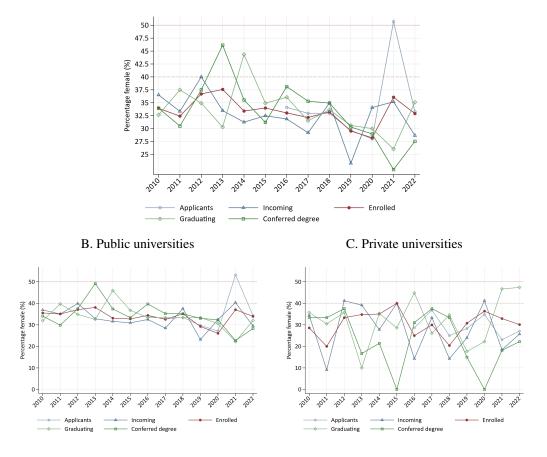


Source: Author's elaboration using ANUIES data, using the sample of master's programs.

private universities within the top 10, female representation is lower on average in private universities, though there is too much variation in the data to be conclusive.

In sum, female representation in master's programs in Economics has remained below 45%, hitting a period minimum of 39% in 2020. There has been more variation in female representation over time than in undergraduate Economics programs, with no discernible trend during this period. As such, representation of women in master's Economics programs has stalled. This is also true for the top 10 Economics universities.

Figure 14. Female representation in universities with top 10 Economics universities at the master's level



A. All top 10 universities

Source: Author's elaboration using ANUIES data, using the sample of master's programs and universities with top 10 Economics programs as defined in Table B.2.

1.4 Doctoral students

In this subsection, I will examine female representation among doctoral students in Economics. I will follow the same order as in the previous two sections.

The number of doctoral programs offered in Mexico has increased from 23 in 2010 to 42 programs in 2022 (see Figure 15 Panel A). Similarly, the number of institutions offering Ph.Ds in Economics has increased from 19 to 35 institutions (Panel A). Again, most of these programs are located in Mexico City and the Estado de México (Panel B). Enrollment has increased over time, from 400 students in 2010 to a little over 600 in 2022. However, female enrollment has stagnated at around 220 students since 2016 (Panel C). Mexico City has the highest enrollment, with 202 students, followed by Estado de México and Puebla,

with a little over 140 students (Panel D).

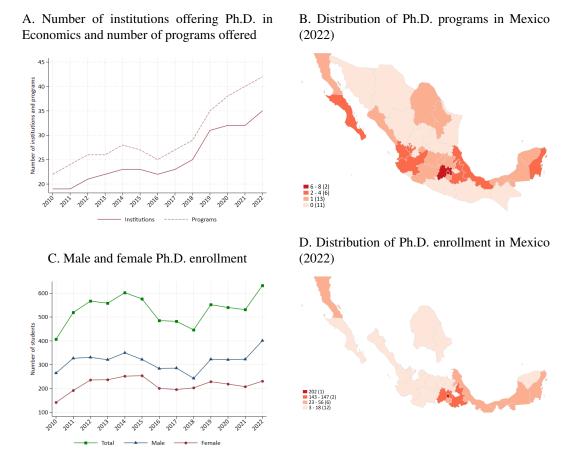


Figure 15. Ph.D. programs in Economics

Source: Author's elaboration using ANUIES data, using the sample of Ph.D. programs.

Figure 16 presents female representation among doctoral students in Economics. There has not been much progress since 2010. Though the percentage of women enrolled in Economics Ph.D. programs increased initially from 35 to 45% between 2010 and 2018, representation has declined back to 36% in 2022. The trends are not much better for applicants, incoming and graduating students. However, between 2010 and 2016, the proportion of women among the students conferred their degrees increased and has stayed larger than that of female enrollment in Ph.D. programs.

Figure 17 compares the representation of women in enrollment in Economics to other doctoral programs. Female representation at the Ph.D. level seems to have stalled at low levels in hard-STEM fields. Similarly, Bio/Med-STEM has not seen progress except in Earth Sciences. The big difference is that Bio/Med-

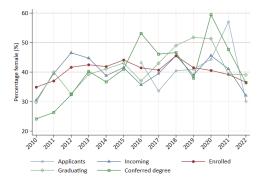


Figure 16. Female representation in Ph.D. programs in Economics

Source: Author's elaboration using ANUIES data, using the sample of Ph.D. programs.

STEM is within the band of parity in representation. Any further progress would mean that men are lagging. This over-representation is what is happening in other Social Sciences, Business, and Humanities: women are about to break the 60% of representation in those fields.

Indigenous students are tragically underrepresented in Economics (see Figure 18 Panel A). Only 2022 saw Economics Ph.D. degrees conferred to students of Indigenous descent during the observation period. Representation in enrollment increased from zero in 2017 to 1.5% in 2022. Panel B shows that women's representation surpasses 60% all years except 2019 and 2020. Other fields also have low representation, and, in fact, Economics is among the three areas with the highest Indigenous representation (see Figure A.3).

As was the case in undergraduate and master's level programs, most of the students are enrolled in public universities, about a third (see Figure 19 Panel A). As a result, the overall female representation is driven by public universities, which also exhibit a flattened inverted U shape in female representation over time. Most of the years, female representation in private universities is below that of public universities, with the exception of 2018 and 2020.

Figure 20 shows female representation in the top 10 universities that have doctoral programs.⁶ Female representation in these programs is 2-3pp below female representation in all programs. However, female representation in the top 10 universities has decreased since 2015. As a result, representation in 2022 stood at 30%, which is below the 32% representation at the beginning of the period. Private universities in the top 10 have almost no female representation in their doctoral degrees. As such, female representation in the top

⁶I identified the top 10 universities using undergraduate programs since there are no trustworthy rankings for graduate programs.

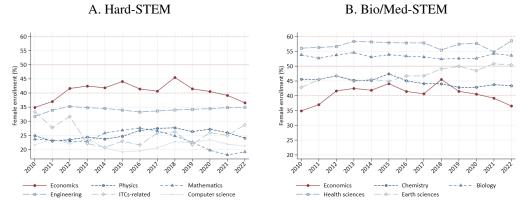
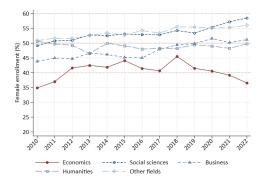


Figure 17. Female Ph.D. enrollment in Economics vs. other fields (%)

C. Social Science, Business, Humanities, and other fields

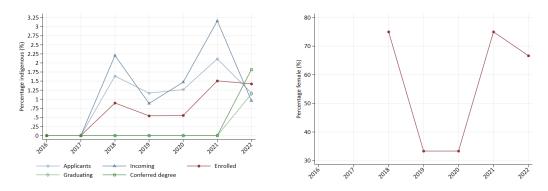


Source: Author's elaboration using ANUIES data, using the sample of Ph.D. programs.

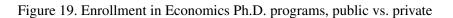
Figure 18. Indigenous students in Economics Ph.D. programs

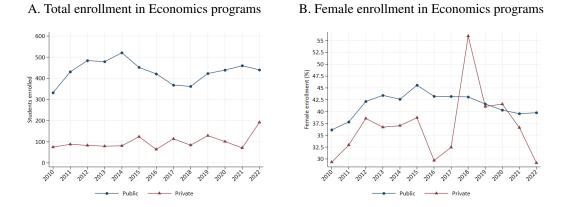
A. Representation of Indigenous population in Economics Ph.D. programs

B. Representation of women within enrolled Indigenous students



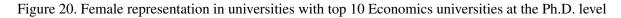
Source: Author's elaboration using ANUIES data, using the sample of Ph.D. programs.

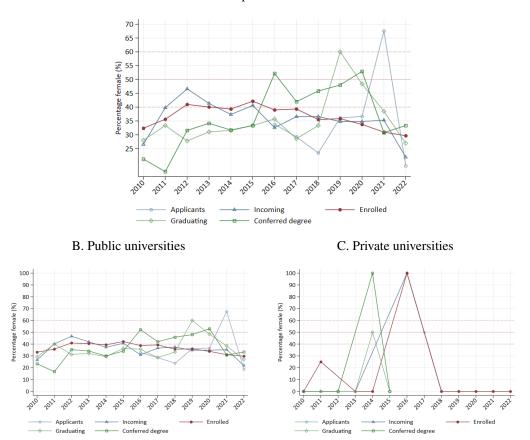




Source: Author's elaboration using ANUIES data, using the sample of Ph.D. programs.

universities is driven by public universities.





A. All top 10 universities

Source: Author's elaboration using ANUIES data, using the sample of Ph.D. programs and universities with top 10 Economics programs as defined in Table B.2.

2 Professors and researchers in Economics

2.1 Full-time professors

2.1.1 Data

As opposed to most universities in the United States and other more developed economies, universities in Mexico often do not have departmental web pages, much less a list of their faculty members and their job position titles. For these reasons, a full roster of Mexican professors in Economics was not viable, given the available information on the internet. However, some key departments have websites with their faculty rosters. I web-scrapped this data along with their fields of research when available. The universities included in this small cross-sectional dataset are Benemérita Universidad Autónoma de Puebla (BUAP), Centro de Investigación y Docencia Económicas (CIDE), El Colegio de México (Colmex), Instituto Tecnológico Autónomo de México (ITAM), Universidad Autónoma Metropolitana (UAM), Universidad Autónoma de Nuevo León (UANL), Universidad de Guanajuato (UGTO), Universidad de las Américas Puebla (UDLAP), Universidad Iberoamericana (Ibero), and Universidad Nacional Autónoma de México (UNAM). The sample includes most of the top 10 universities and 323 professors.

2.1.2 Descriptive analaysis

The universities with the largest departments are BUAP and UNAM, each with more than 80 professors (see Figure 21 Panel A). CIDE, ITAM, and UAM and the following departments in size with over 25 professors. Overall, 27% of the professors in these universities are women (red line in Panel B), but IBERO and UNAM have a larger female representation with 36% and 35%, respectively. UDLAP stands out for not having any women in its Economics department. UANL and ITAM also stand out as having a female representation of 20% or lower. The rest of the departments are closer to the sample mean. The 2022 WELAC report found that, in Mexico, 28% of Assistant Professors, 32% of Associate Professors, and 29% of Full Professors are women.⁷ In the next sections, I will use my finding of a 27% female representation as a benchmark for female representation in SNII, in publications, and teaching.

The data on the fields of research was complete for all but one university: BUAP. Hence, the analysis below will exclude this university. I only collected data on the primary field of research as classified by the

⁷Though these categories do not exist in Mexican Academia, the report somehow drew a parallel with American Academia.

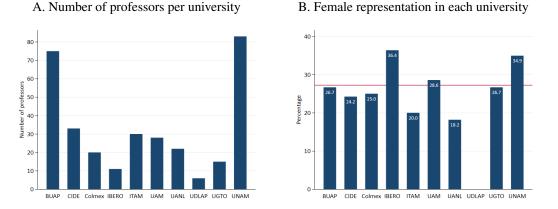


Figure 21. Professors of Economics in selected universities

Source: Author's elaboration web-scrapped data from selected universities' Economics departments. The red line in Panel B marks the mean female representation in these selected Economics departments.

Journal of Economic Literature subject classification.⁸ Figure 22 reports the number of professors in each field (Panel A) and the percentage of women within each field (Panel B). The most popular field among the professors in the selected universities is Microeconomics (D), followed by Economic Development, Innovation, Technological Change, and Growth (O). There are some fields that are not represented in the selected faculties: Law and Economics (K) and Business Economics (M). Besides those, the least popular fields are History of Economic Thought (B), Industrial Organization (L), and General Economics and Teaching (A). Female representation within fields varies wildly. For instance, History of Economics (R) have no women. At the same time, General Economics and Teaching (A), Financial Economics (G), and Health, Education, and Welfare (I) are balanced, and Labor and Demographic Economics (J) and Economic History (N) are nearly balanced. The balance in Financial Economics is particularly surprising since it is one of the most male-dominated fields in economics alongside Macroeconomics (E). The red line at 27% in Panel B marks female representation in the selected Economics departments.

⁸The JEL classification can be found here: https://www.aeaweb.org/econlit/jelCodes.php?view=jel

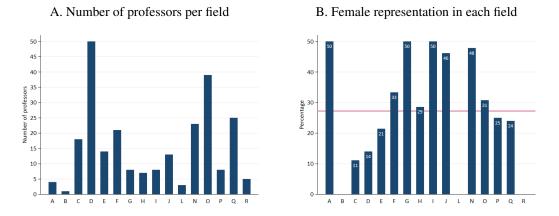


Figure 22. Professors' fields of research

Source: Author's elaboration web-scrapped data from selected universities' Economics departments. The red line in Panel B marks the mean female representation in these Economics departments. The X-axis has the JEL classification of Economics subjects: A - General Economics and Teaching; B - History of Economic Thought, Methodology, and Heterodox Approaches; C - Mathematical and Quantitative Methods; D - Microeconomics; E - Macroeconomics and Monetary Economics; F - International Economics; G - Financial Economics; H - Public Economics; I - Health, Education, and Welfare; J - Labor and Demographic Economics; L - Industrial Organization; N - Economic History; O - Economic Development, Innovation, Technological Change, and Growth; P - Political Economy and Comparative Economic Systems; Q - Agricultural and Natural Resource Economics, Environmental and Ecological Economics; and R - Urban, Rural, Regional, Real Estate, and Transportation Economics.

2.2 Researchers

2.2.1 Data

The data for this section comes from the National System of Researchers (SNII for its acronym in Spanish). The Mexican government created the National System of Researchers program in 1984 to incentivize academia and industry researchers to produce more research of better quality. Researchers receive a monthly transfer, which depends on their level in the system. Nowadays, there are five levels or distinctions: Candidate, 1, 2, 3, and Emeritus.⁹ The stipend is generous enough to represent a significant portion of researchers' income. According to the current rules, SNII evaluates researchers every five years. The Evaluation Commissions decide whether the researcher stays at the same level, is promoted to the next level, or is expelled from the program. SNII evaluations are rigorous but rely primarily on the quantity and not the quality of academic products. Despite this, getting this distinction and being promoted is still an honor in Mexican academia; it is a recognition of outstanding and constant work in research, teaching, and the diffusion of knowledge.

At the beginning of this project, data on the beneficiaries of SNII from 2012 and 2023 was available ⁹The Emeritus category is fairly recent and is, thus, not reported in the data for many years. from the SNII website. I requested data from the National Institute of Transparency, Information Access, and Personal Data Protection (INAI for its Spanish acronym) to get the data since 1984. Unfortunately, the data from 1984 to 1999 was not digitalized, but SNII provided me with the data from 2000 to 2011.¹⁰ The datasets have information about all the researchers who are beneficiaries of the National System of Researchers in Mexico. It has a researcher identifier (the number of her Unique Curriculum Vitae or CVU for its Spanish acronym, or the SNII file number), the researcher's full name, a nobilis, the SNII level, the beginning and end of their distinction period, the field of knowledge, their field of concentration, the subfield of concentration, their research specialty, the institution of employment, the state and country where the institution is.¹¹

Since gender is not coded in the data, I used GenderAPI to assign the gender according to the researcher's name. Upon checking the matches, I noticed many mismatches between the GenderAPI gender and the gender from a 2014 dataset that used to have this variable. Hence, I corrected the GenderAPI data for 2014 and used web searches or artificial intelligence to assign the gender to new names as they appeared in the rest of the datasets.¹² I coded the state where the researcher's employment is according to INEGI's state codes. I coded the 8- and 5-region classifications used in the ANUIES data (see Figure 1). I also homogenized the fields of knowledge since there were minor changes in their classification recently. The full dataset has 437,595 researcher-year observations. After eliminating the 32 observations without information on their level or gender, we are left with 437,595 researcher-year observations.

2.2.2 Descriptive analysis

The National System of Researchers was created by a presidential decree on July 26, 1984, starting with 1,392 researchers. The system has grown substantially over time. Figure 23 presents the growth of the National System of Researchers from 2000 to 2023. By 2000, the system already had 7,306 researchers, and in 2023 it had 40,372 researchers.

The SNII evaluates its members every few years and receives new applications every year. The evaluation processes either admit or reject the researcher from the system. If admitted, the researchers are classified into four levels: Candidate, level 1, level 2, and level 3. Figure 24 presents the number of researchers by level

¹⁰All these datasets, from 2000 to 2023, are now publicly available at https://conahcyt.mx/sistema-nacional-deinvestigadores/archivo-historico/

¹¹Mexican researchers working abroad can earn the distinction but are not eligible for the stipend.

¹²This version of the 2014 dataset is no longer available from the SNII website.

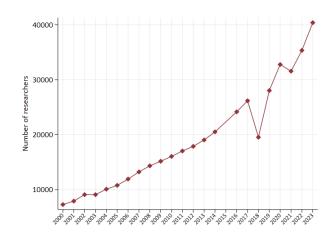
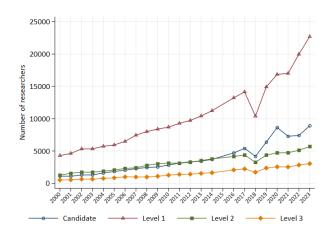


Figure 23. Evolution of the National System of Researchers

Source: Author's elaboration using SNII data from 2000 to 2023.

between 2000 and 2023. Though Candidates are at the lowest rung of the ladder, SNII Level 1 is more numerous because a researcher can only be a candidate for one period (now five years, but previously it was three years), and she either gets promoted or is kicked out. In any subsequent applications for readmission, the researcher can only apply to SNII Level 1. Naturally, SNII Level 2 has fewer researchers than Level 1, and the coveted SNII Level 3 is an even smaller group. All levels have observed an increase in their ranks over the period, most notably Level I and the Candidates, the latter particularly since 2016.

Figure 24. Evolution of the National System of Researchers by level



Source: Author's elaboration using SNII data from 2000 to 2023.

Now, let's turn to overall female representation in the system. Figure 25 presents my findings. In

the system overall, female representation increased from 28% to almost 40% in the study period. However, while there is almost gender equality at the candidate level, this representation is lost as we move up the SNII ladder. In 2023 at level 1, there is a 20pp gender gap. The gap increases to 30pp in level 2 and to 47pp in level 3. This means that in level 3, there are almost 2.8 men per woman in the system. Over time, however, representation has been steadily increasing in all levels with a few bumps in the way.

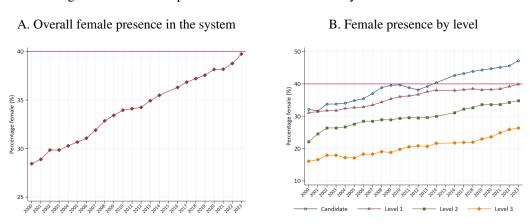


Figure 25. Female representation in the National System of Researchers

Source: Author's elaboration using SNII data from 2000 to 2023. The horizontal line at 40% represents the lowest benchmark for the balanced representation of the sexes.

What is the situation in Economics? In 2000, there were 321 economists in the system, whereas, in 2023, there were 1,802 (see Figure 26 Panel A). The number of economists increased almost every year since 2000, with the exception of 2004, 2018, 2021, and 2022. Female representation has varied from 26% to 34% (Panel B). Considering that females represented 27% of the faculty in universities with top undergraduate programs in 2024 (horizontal red line in Panel B), it seems that women are well represented at SNII and that other non-top universities have greater female representation in their faculties.

In 2023, there were 1,802 economists in SNII. Of those, only 34% were women. This naturally means that, in Figure 28 Panel A, we see more male than female economists at every level. In contrast to the whole system, in economics, only 41% of the candidates for SNII are female; even at the lowest level, there is already an 18pp gap in female representation. The gap opens as we climb the SNII ladder: in level 1, we see a 28pp gap in female representation, which increases to 48pp in level 2 and, finally, to 61pp in level 3. To place matters in perspective, there are four times as many male economists as female economists in the highest rung.

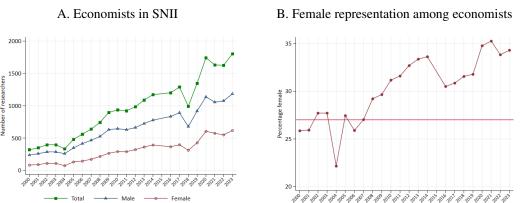
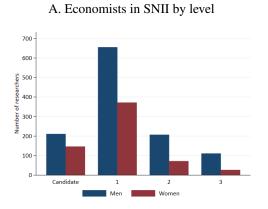
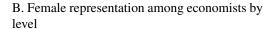


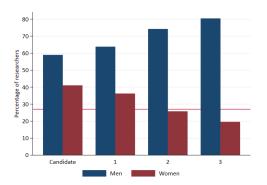
Figure 26. Female representation among economists in SNII

Source: Author's elaboration using SNII data from 2000 to 2023. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1.

Figure 27. Female representation among economists in SNII by level in 2023







Source: Author's elaboration using SNII data from 2000 to 2023. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1.

Over time, matters improved only slightly for female economists. Figure 16 shows female representation in each SNII level from 2000 to 2023. There was a sharp increase in female Candidates between 2007 (20%) and 2013 (46%). Over time, this greater representation in the lower rung has not made a big dent in the representation in the upper levels. Female representation in level 1 has increased by only 6pp since 2000. Women gained representation in level 2 during the first few years of the 21st century, but progress has stalled since 2005 at around 27%. There was little progress in level 3 between 2007 and 2011, but again, it ceased at a low 20% female representation on average since then.

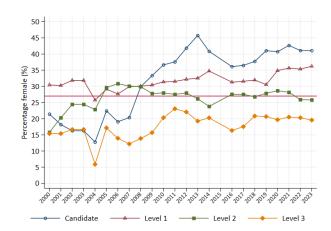
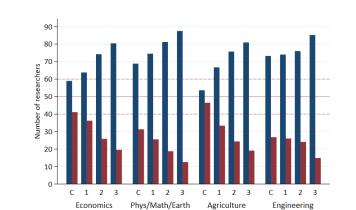


Figure 28. Female representation among economists in SNII by level

Source: Author's elaboration using SNII data from 2000 to 2023. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1.

As I did with ANUIES, I will now compare Economics to other fields. Figure 29 shows this comparison. Panel A has the Hard-STEM fields. These fields have the same problem as Economics: it is hard for female researchers to move up in the SNII. Physics, Mathematics, and Earth Sciences have even less representation of female researchers across all SNII levels than economics. Engineering has a problem, but it is different. Female representation is meager from the start (around 27%) and remains almost constant up to level 2 (25%), and then it decreases to 15% in level 3. Panel contrasts Economics to Bio/Med-STEM, a field balanced for a while among students. We can see that it is relatively balanced among researchers, too. Female representation in these fields is almost always above 40%, except SNII level 3, where it falls below 35%. In any case, females are much better represented in these fields than in Economics. Finally, Panel C compares Economics to the Humanities and other Social Sciences. We can see that the Humanities are a balanced field: female representation falls within the 40-60% band across all SNII levels. Other Social Sciences are balanced up to SNII 2 level. Getting SNII level 3 balance in other Social Sciences is only a matter of time.

Figure 30 presents two other areas of study to contrast the poor trends in Economics. Though female representation was lower in Physics, Mathematics, and Earth Sciences, these fields have seen steady improvement in female representation in the last 24 years (Panel A). The same applies to Biology and Chemistry: female representation has steadily increased across all SNII levels (Panel B). Candidates converged towards



A. Economics vs. Hard-STEM

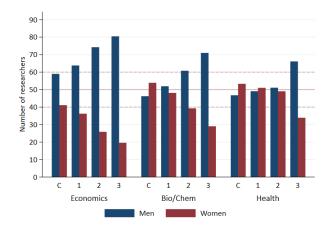
Figure 29. Female representation among economists in SNII by level in 2023



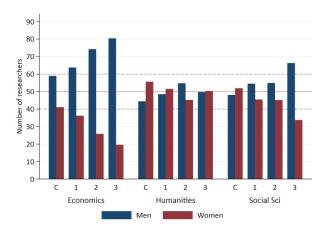
Women

Men

1







Source: Author's elaboration using SNII data from 2000 to 2023.

full parity in 2012. Representation in the SNII 3 level increased by 12pp during the period.

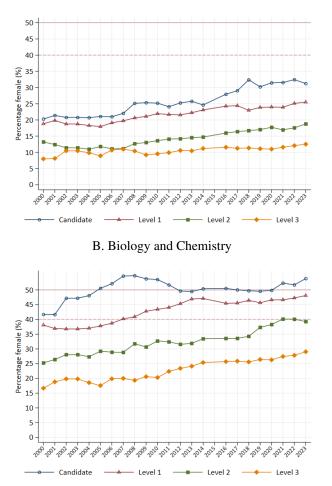


Figure 30. Female representation among economists in SNII by level in 2023

A. Physics, Mathematics, and Earth Sciences

Source: Author's elaboration using SNII data from 2000 to 2023.

2.3 Researchers' production: RepEc Data

2.3.1 Data

We web-scrapped data on publications from the list of Mexican institutions on RepEc.¹³ For each institution, we obtained the information for all authors, and then for all published papers and book chapters for each author.¹⁴ We gathered information on 2,883 author-publication observations. There were some old publications, so I limited the publication year from 1990 to 2024. This left me with 2,880 author-publication

¹³Here is the list of all Mexican institutions listed on RepEc: https://edirc.repec.org/mexico.html

¹⁴Though the data has papers and book chapters, I will sometimes refer to all this production as papers.

observations.

2.3.2 Descriptive analysis

There are 261 distinct names listed in RepEc, of which 21% are women. RepEc authors published between have published between 1 and 317 papers and book chapters from 1990 to 2024, with a median production of 11 papers and chapters. Figure 31 shows the evolution of the number of papers listed in RepEc published per year. From 2000 to 2013, the number of papers on RepEc increased on an exponential trend. From 2014 to 2020, the number of papers steadied at around 170 per year. Possibly due to the pandemic, 2021 saw an abnormal production of 204 papers, and then the number of papers decreased drastically to 75 in 2024.

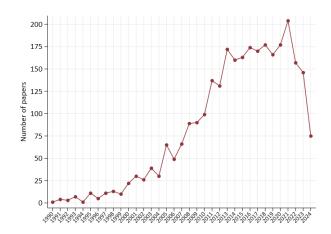


Figure 31. Total academic production listed in RepEc per year

Source: Author's elaboration using web-scrapped RepEc data.

Though the number of papers grew almost exponentially from 1990 to 2013, the percentage of papers listed by a female RepEc author in a Mexican institution made much more modest progress. I estimated the percentage of papers from female RepEc-listed authors in Mexican institutions and the percentage of papers from RepEc-listed authors in Mexican institutions with at least one female co-author. Figure 32 shows the evolution of these two percentages from 1990 to 2024. Let's first look at female RepEc authors in Mexican institutions. From 1990 to 1999, no women in Mexican institutions listed a paper in RepEc. From 2000 to 2004, the percentage of papers with a female reporting author increased from 4.5% to 17%. Since then, the percentage of papers with a female reporting author has varied between 8 and 20%. Given that male authors in Mexican institution, who are not currently in a Mexican institution,

the second time series in the figure looks at papers with at least one female coauthor. This percentage has grown since 1998 from around 8% to 41%.

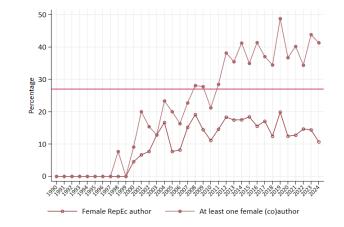


Figure 32. Female representation among (co)authors of papers listed in RepEc

Source: Author's elaboration using web-scrapped RepEc data. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1.

The papers listed in RepEc are a subset of the academic production. This production might be more representative of economists in Europe and the United States than that in Mexico. There are several reasons and hypotheses for this difference. First, many Mexican researchers do not have a RepEc account. Second, Mexican researchers face different incentives. As I explained before, SNII prioritizes quantity over quality in its evaluations of Mexican researchers. Since SNII's monetary incentive can represent up to 50% of a researcher's income, researchers work the system and produce low-quality papers in great numbers. The journals and editorials of these papers tend not to be listed in RepEc. Third, at an anecdotal level, researchers in Mexico without coauthors in the global North feel that they are discriminated against in international publications (i.e., those listed in RepEc). Finally, the time it takes to publish a paper in an international journal has gotten too long for people who are seeking to produce more papers quickly. For these reasons, I will complement the analysis of academic production with data from SNII.

2.4 Researchers' production and teaching: SNII Data

2.4.1 Data

To get evaluated at SNII, researchers must fill out a unique curriculum vitae (CVU, for its acronym in Spanish) online. In this CVU, we pour all the information about our academic production (published papers, book chapters, and books), our teaching (courses, hours taught per course, and theses directed), our presentations in seminars and conferences, and other contributions to diffuse knowledge (media interviews, media articles, books for the general public, and so on). This data is not publicly available. Hence, I made a request for all 2023 economist's CV information through the National Transparency Platform. To make this analysis comparable to RepEc, I limited the study period from 1990 to 2023.

2.4.2 Academic production

In this subsection, I will describe the data on papers, book chapters, and books published.

Papers

There are 8,299 papers listed from 1990 to 2023. Researchers published between 0 and 286 papers during this period, with a median production of 10 papers during the whole period. Figure 33 presents the evolution of papers' production from 1990 to 2023. This production grew exponentially from 1990 to 2019, reaching a maximum of 996 papers. During the next three years of data, the production of papers has decreased slightly, dropping to 880 papers in 2022.¹⁵

Figure 34 presents paper production by gender (Panel A) and the percentage of the total production produced by female economists (Panel B). Since women represented only about 32% of SNII economists, it is natural to find that there are many fewer papers coming from women. However, as a percentage of the production, female paper production represented between 15 and 40% in the period, varying around 23% since 2010. This percentage is lower than that of female representation in SNII and that of female representation in selected universities (27%).

To further characterize gender differences in paper production, Figure 35 presents the mean papers

¹⁵There might be data misreporting in the CVUs since some researchers only update their information as their evaluation is approaching. This problem is likely worse in 2023 than in 2022, and hence the sharp drop in the number of papers. This problem might be present in the rest of the results that use CVUs data.

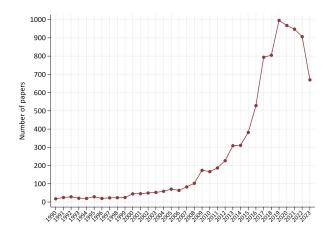
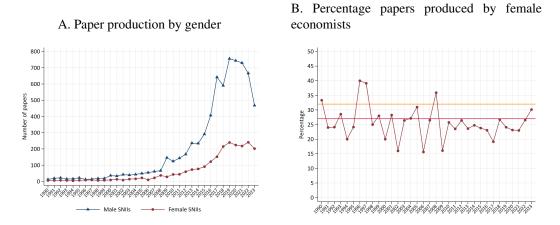


Figure 33. Total paper production listed in the CVUs per year

Source: Author's elaboration using CVUs 2022 data for economists.

Figure 34. Production of papers by gender in CVUs data



Source: Author's elaboration using CVUs 2022 data for economists. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1, and the orange line at 32% marks the total female representation at SNII in the period in Subsection 2.2.

produced per year by male and female SNIIs. The mean production of papers per year increased from one paper to 2.5 papers per year for both men and women. Though from 1990 to 2012, there was much variation in the series, from 2013 to 2021, women systematically produced fewer papers per year. In fact, in 23 out of the 33 years of data, women produced fewer papers than men. In 2020, the first year of the COVID pandemic, women observed a sharp drop in their paper production that is not comparable to that of men.

The CVUs data only contains the surnames of coauthors. So, I could not identify their gender. How-

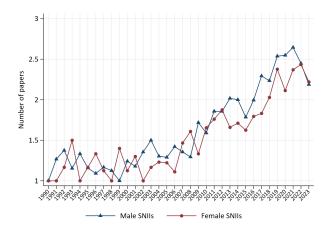


Figure 35. Mean papers produced per year by gender

Source: Author's elaboration using CVUs 2022 data for economists.

ever, there remains an interesting feature to explore among coauthors: is there a difference in the mean number of coauthors by paper between male and female SNIIs? Such a difference would reflect a gender difference in the research network used in each paper. Figure 36 presents my findings. First, since 2005, the mean number of coauthors increased for male and female researchers. From 1990 to 2014, there is no systematic difference between the mean number of coauthors per paper between men and women.¹⁶ However, from 2015 to 2022, women have, on average, fewer coauthors than men, and the difference is statistically significant at a 1% significance level. We need further analysis of the total size of the research network to verify whether women work overall with fewer coauthors than men, or if they just produce each paper with fewer coauthors.

Book chapters

Since the CVUs data separate book chapters from papers, I then proceeded to analyze gender differences in book chapter production. Between 1990 and 2022, Mexican economists in SNII produced 5,238 book chapters (see Figure 37). These researchers produced between zero and 147 chapters, with a median production of 6 chapters during the period. The production of book chapters almost steadily increased from 10 chapters in 1990 to 557 in 2022. As opposed to the production of papers, the book chapters have not seen a decrease between 2020 and 2022.

¹⁶A t-test on the difference of means reveals that the difference is not statistically significant.

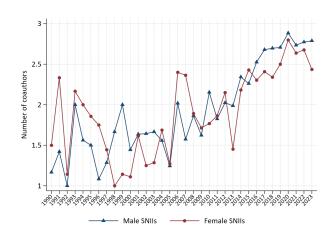
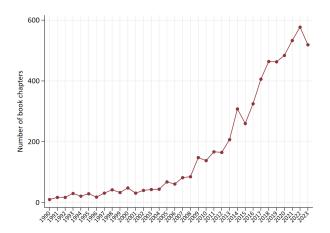


Figure 36. Mean coauthors per paper by gender

Source: Author's elaboration using CVUs 2022 data for economists.

Figure 37. Total book chapter production listed in the CVUs per year



Source: Author's elaboration using CVUs 2022 data for economists.

Figure 38 shows the book chapter production of economists in SNII by gender. As opposed to papers, female representation in the production of chapters is almost always within our two benchmarks: female representation at SNII and female representation at selected Economics departments. Women produced, on average, 30% of the book chapters listed in the SNII CVUs during the period.

Figure 39 further explores gender differences in the production of book chapters and presents the mean book chapters produced per year. As opposed to the mean production of papers per year, women produced, on average, a quarter more chapters during the period. This favorable difference in chapter production began

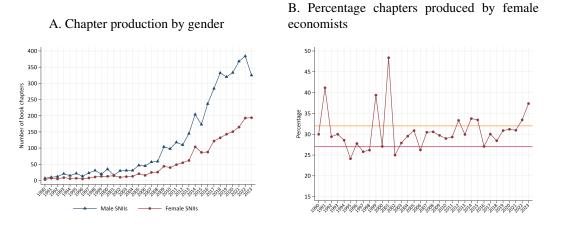
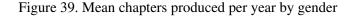
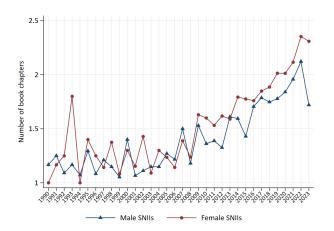


Figure 38. Production of book chapters by gender in CVUs data

Source: Author's elaboration using CVUs 2022 data for economists. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1, and the orange line at 32% marks the total female representation at SNII in the period in Subsection 2.2.

in 2009, before then, the difference in the mean chapter production per year was statistically insignificant. Even though this seems to be good news, the fact that women are producing more chapters than papers is counterproductive: in my experience, book chapters receive many fewer citations than papers. Thus, female economists may be spending more time on academic work that is much less recognized in the profession (but is as well recognized in SNII evaluations).





Source: Author's elaboration using CVUs 2022 data for economists.

As for the mean number of coauthors per paper, I did not find any statistically significant difference

by gender during the period (see Figure 40). If anything, there is only a small difference, with women having fewer coauthors, between 2007 and 2014.

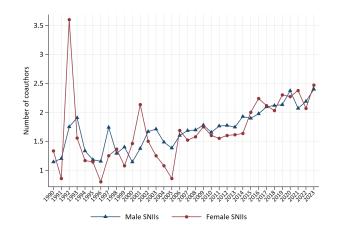


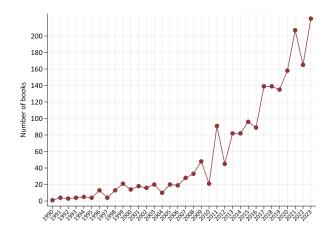
Figure 40. Mean coauthors per book chapter by gender

Source: Author's elaboration using CVUs 2022 data for economists.

Books

The last academic product that is highly valued in SNII evaluations is book production. Books are, in fact, the most valued academic product in SNII. This creates an incentive for academics to publish books, which are often published by their own university presses following supposedly double-blind refereeing. Apart from being highly endogamic, the process is suspicious since, as an evaluator, one tends to find clusters of coauthors who, at times, figure as contributors and other times as coordinators or editors. These roles are distinctively evaluated at SNII: being an editor or coordinator is more highly valued. Figure 41 presents the total book production per year. Book production also increased exponentially during the period, going from one book to a maximum of 221 in 2023. During the period, researchers produced between 0 and 72 books, with a median of one book per researcher.

Figure 42 presents the total books produced per year by gender (Panel A) and the percentage produced by women (Panel B). Albeit with some variation, book production increased for male and female SNIIs. During the period, women authored, coordinated, or edited 23% of the books without any apparent trend over time. In general, the percentage of books produced by female researchers is below both of our benchmarks, meaning that women produce fewer books than men. In terms of SNII evaluations, this means that women





Source: Author's elaboration using CVUs 2022 data for economists.

might have a harder time ascending in SNII, especially SNII level 3, in which having a book is almost a pre-requisite.

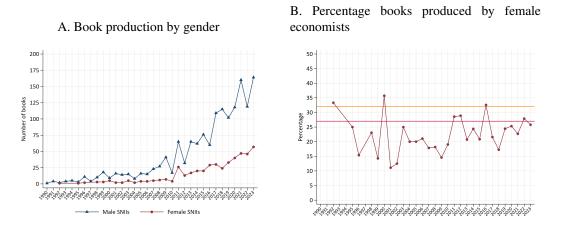


Figure 42. Production of books by gender in CVUs data

Source: Author's elaboration using CVUs 2022 data for economists. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1, and the orange line at 32% marks the total female representation at SNII in the period in Subsection 2.2.

Women did not produce any books in 1990, 1991, 1993, and 1994. For the rest of the years up to 2007, they only produced one book on average, whereas men managed to produce up to two books on average in 2004 (see Figure 43). There is no statistically significant difference between genders in the mean number of books produced since 2008.

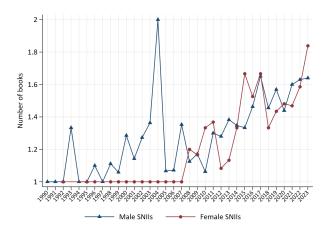
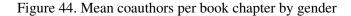
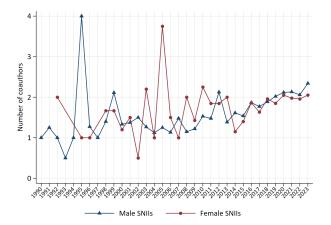


Figure 43. Mean books produced per year by gender

Source: Author's elaboration using CVUs 2022 data for economists.

Finally, Figure 44 presents the mean coauthors per book during the period. I also find a recent increase in the mean number of coauthors per book, by 2023 it was more than two coauthors for male and female researchers, whereas in the beginning of the period it was closer to one coauthor. However, there is no statistically significant difference in the number of coauthors per book between genders.





Source: Author's elaboration using CVUs 2022 data for economists.

2.4.3 Teaching

In this section, I will explore gender differences in the number of courses taught per year. Given that school terms might differ across universities, going from quarters to semesters, I will also explore the number of hours taught per year. I will also explore gender differences in the number of theses advised.

Courses and hours taught

Figure 45 explores courses and number of hours taught. The number of courses (Panel A) and hours taught (Panel C) increased almost steadily for male and female professors. However, it reached a maximum for males in 2019 and for females in 2020. This stark change in the trend cannot be explained by enrollment in programs and is possibly due to misreporting in the data if SNII researchers have not updated their CVUs.¹⁷ If men are more prone to this misreporting, then misreporting itself might explain the increasing trend in the percentage of courses (Panel B) and hours taught (Panel D) by women. If we only look at pre-pandemic trends, it seems women are teaching less than their fair share (recall that 32% of SNIIs are women on average, orange lines in Panels B and D). Though, in the mid-1990s, women taught much more than their fair share.

Now, let's turn to mean courses and hours taught per year by gender. Figure 46 indicates that both variables have an increasing trend during the period: in the case of males, courses went from 2.6 to almost 6 courses per year, whereas hours taught went from approximately 150 to over 330. Panel A in the figure reveals that women have taught fewer courses on average than men since 2007 and more courses on average than men before then. A similar pattern emerges when we look at the mean hours taught per year.

Theses advising

Figure 47 presents the number of theses advised by gender (Panel A) and the percentage of theses advised by women (Panel B and C). These theses include all types of degrees: undergraduate, master's, and doctoral theses.¹⁸ The number of theses advised increased almost steadily up to 2019 for men and women. Again, this variable has decreased quite sharply since 2020 for men and since 2022 for women, but it can be due to lags in CVUs updates. The percentage of theses advised by women has increased during the period

¹⁷I must confess that I tend to keep my publications up to date in my CVU, but not my teaching. I update my teaching only the years in which I'm evaluated. I am not sure if this is a generalized behavior.

¹⁸As explained in the ANUIES data, many universities have graduation requirements for undergraduate degrees that go beyond completing coursework successfully. One of these graduation requirements can be a thesis.

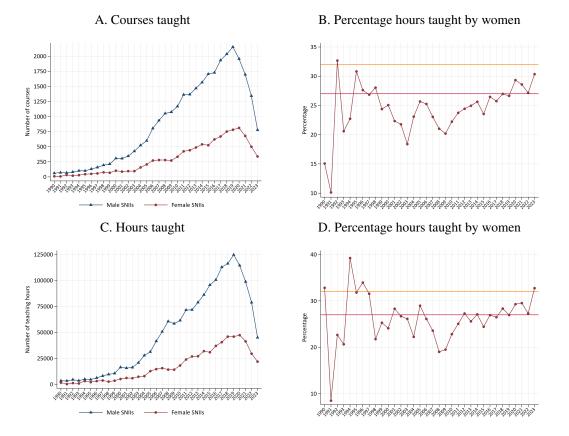
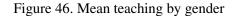
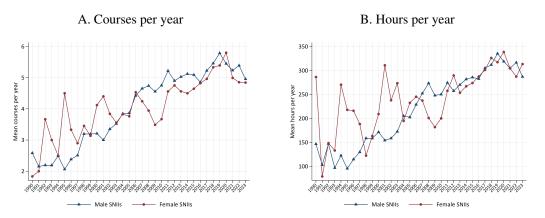


Figure 45. Courses and number of hours taught by gender

Source: Author's elaboration using CVUs 2022 data for economists. The red line at 27% in Panels B and D marks the mean female representation in the selected Economics departments in Subsection 2.1, and the orange line at 32% marks the total female representation at SNII in the period in Subsection 2.2.

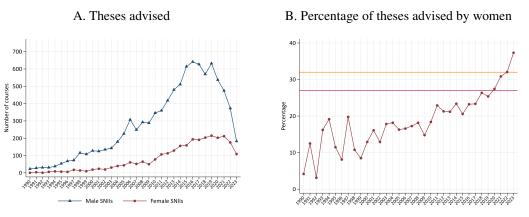




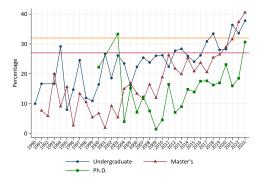
Source: Author's elaboration using CVUs 2022 data for economists.

from a low 5% to up to 38%. Theses advising at the graduate level is highly valued at SNII evaluations. These theses are often published with the advisees. Hence, Panel C presents the percentage of female-advised theses by schooling level. Before 2010, women tended to advise more college than graduate theses (with the exception of a few years for doctoral dissertations). Before 2000, the data did not have a single doctoral dissertation advised by a female professor. and the share of Ph.D. dissertations advised by women has just recently reached our two benchmarks. Fewer theses advising at the graduate level could turn into worse SNII evaluations.

Figure 47. Theses advising by gender



C. Percentage of theses advised by women and schooling level level



Source: Author's elaboration using CVUs 2022 data for economists. The red line at 27% in Panels B and C marks the mean female representation in the selected Economics departments in Subsection 2.1, and the orange line at 32% marks the total female representation at SNII in the period in Subsection 2.2.

Finally, Figure 48 presents the mean these advised for all schooling levels and by level. Panel A reveals that, even though women used to direct fewer theses before 2010, this is no longer the case. However, the distribution of theses by schooling level is not equal. Women advised, on average, fewer graduate theses than

men, confirming the results explained in the previous paragraph. Mean master's theses began equalizing in 2018, and women are still advising fewer doctoral theses than males.

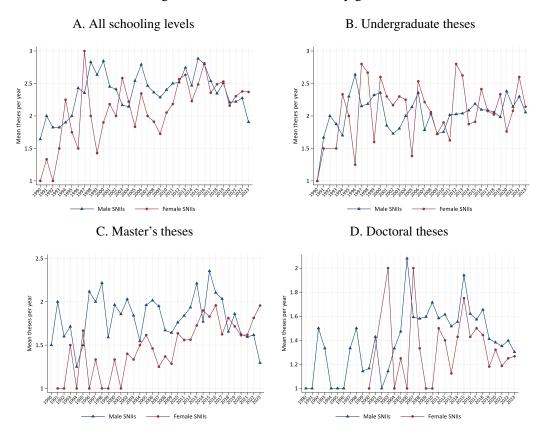


Figure 48. Mean theses advised by gender

Source: Author's elaboration using CVUs 2022 data for economists.

2.4.4 Academic presentations

Another important academic activity is the diffusion of our work, especially within the profession. Academic presentations are important in building research networks and meeting potential referees and potential editors, which could eventually lead to better publications. As our work gets known, these presentations also could lead to more research citations, making our work more impactful in the advancement of science. Figure 49 shows the evidence of the gaps in academic presentations by gender. Overall, academic presentations of Mexican economists grew from 1990 to 2017 and have dropped since then (Panel A). Women's representation in these presentations grew from 12% in 1990 and 2001 to 45% in 2023 (Panel B). Even if the data has not been correctly updated in the platform, we can see that women began presenting their fair share of

conferences and seminars in 2013 and more than their fair share within SNII since 2018. Finally, Panel C in the figure presents evidence that the mean academic presentations by women surpassed that of men in 2014.

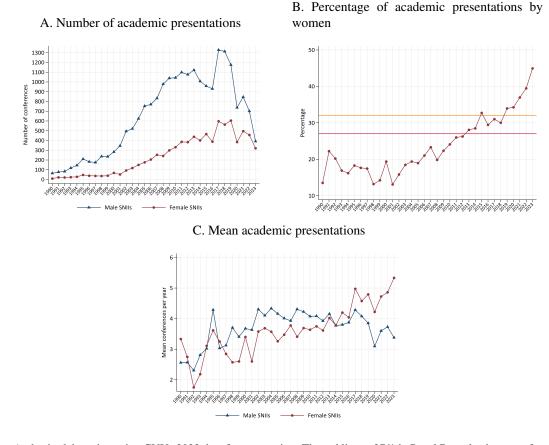


Figure 49. Academic presentations by gender

Source: Author's elaboration using CVUs 2022 data for economists. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1, and the orange line at 32% marks the total female representation at SNII in the period in Subsection 2.2.

Even though building national networks is extremely important, as a country in the global south, it is key to have research networks in the global north. Access to funding is more limited in countries like Mexico, which can be overcome by working with international coauthors, especially those in Europe and the United States. To build these international research networks, we need to present our work in international conferences or seminars in foreign institutions. Figure 50 shows that less than one-third of the presentations were abroad (Panel A). Naturally, the pandemic led to a significant drop in conferences abroad. The percentage of these academic presentations by women has also increased, though not as steadily as all presentations. In 2018, there was a larger percentage of female presentations abroad than of female professors in top in-

stitutions, and by 2020, that percentage was larger than female representation at SNII (Panel B). The mean number of female presentations abroad also surpassed that of males in 2019 and has remained above that of males since then (Panel C).

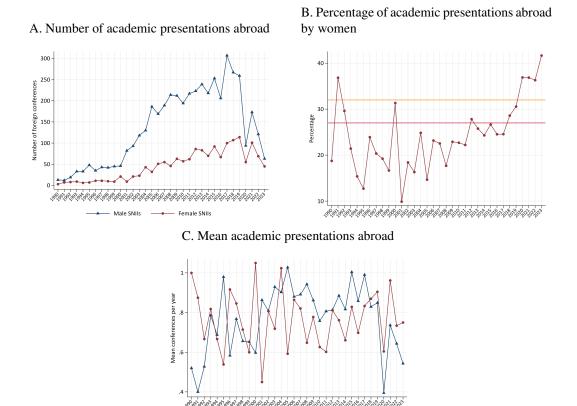
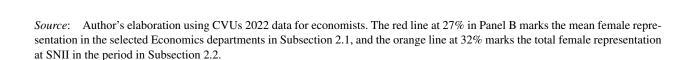


Figure 50. Academic presentations abroad by gender



Female SNIIs

Male SNIIs

3 Composition of editors in Mexican journals

3.1 Data

We collected the data from all journals listed in Latindex,¹⁹ a well-regarded information system for academic journals in Latin America, the Caribbean, Spain, and Portugal. The data from journals' editors, co-editors, editorial committees, and editorial boards was web-scrapped for 2024 and manually collected for all other

¹⁹https://www.latindex.org/latindex/

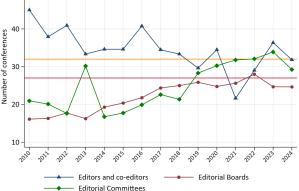
years, consulting the printed versions of the journals. The reason for this was that journals do not publish the editorial team in their digital versions. Some journals are of fairly recent creation and were thus excluded from the dataset. Table B.3 presents the list of journals included in our data collection. In 2024, there were 36 journals listed with more than a few numbers in print. Only four of those journals are listed in SCImago: *El Trimestre Econónomico, Estudios Fronterizos, Latin American Economic Review*, and *Problemas del Desarrollo*.

3.2 Descriptive analysis

Women may also be underrepresented in their role as journal editors. Editors imprint their own preferences, academic rigor, and perspectives into their editorial work. As such, having fewer women undertaking these roles biases journals towards male preferences, perspectives, and what they conceive as academic rigor. Figure 51 presents female representation in different editorial roles: editor and co-editors, editorial boars, and editorial committees. Women were overrepresented as editors or co-editors at the beginning of the period, but a slight declining trend corrected this over-representation. As for editorial committees, women were underrepresented in this role until 2018 and have been fairly represented since then. More or less, the same can be said of editorial boards, where women were under-represented but have reached fairer representation since 2018.



Figure 51. Percentage women with editorial service



Source: Author's elaboration using collected data from Mexican journals. The red line at 27% in Panel B marks the mean female representation in the selected Economics departments in Subsection 2.1, and the orange line at 32% marks the total female representation at SNII in the period in Subsection 2.2.

4 Conclusions

Past literature has found that women are underrepresented in the economic sciences. However, most of the research is focused on cases in the global north: Europe and the United States. This paper aims to report on the status of women in Economics in Mexican academia.

It first covers the representation of women in the student bodies of undergraduate, master's, and Ph.D. programs in Mexico using data from the National Association of Universities and Higher Education Institutions (ANUIES, for its Spanish acronym). Though there's some variation of female representation over time, I found no indication that female representation in Economics programs is increasing. If anything, there has been a slight decrease in the representation of female students. These declining trends are also confirmed in the top 10 universities in Economics in the country. I do not find strong evidence of a leaky pipeline, while, in 2023, female representation was around 40% among undergraduates, it was 41% among master's students, and 36% among doctoral students.

Moving on to professors, I was not able to get longitudinal data on the representation of women in the full-time faculty of selected universities. However, data from 2024 revealed that women represent only 27% of these selected institutions, almost all of them among the top 10 Economics departments. Surprisingly, women are overrepresented in the field of Finance, and, as expected, they are overrepresented in the fields of Health, Education, and Welfare, and Labor Economics. I found no women in the field of Industrial Organization, and they are also severely underrepresented in Mathematical and Quantitative Economics, and Microeconomics.

Given the availability of data, the paper mostly describes the representation of female researchers in Economics over time. The data comes from the National System of Researchers (SNII, its acronym in Spanish). As a benchmark for international comparisons, I also present results using web-scrapped data from RepEc. Female economists have had an increasing representation among economists at SNII going from 26% in 2000 to 34% in 2023: a gain of 8 percentage points increase in 23 years. However, women are much less represented at higher rungs of the SNII ladder. At the Candidate level, the lowest rung, women represented 40% of SNII economists in 2023; whereas at level 3, they represented 20%. If one looks at the trends per level, there have been almost no gains in female representation in the last six years of data,

suggesting stagnation, just as in the case of female representation in Economics programs.

As for the academic production of women in the Economics profession, if one considers having at least one female coauthor in a paper from a researcher in a Mexican institution, one finds that there is an increasing percentage of papers with at least one female coauthor. However, the percentage of papers listed by women in Mexican institutions has stagnated, or even decreased, since 2012. I also find this stagnation in the percentage of published articles, book chapters, and books reported by women to SNII. However, a measure of the mean number of published papers per year reveals that women have been publishing fewer papers than men since 2013, and more book chapters than men since 2014.

The SNII data also allowed me to analyze teaching. Before 2003, women taught many more courses on average than men and, as a result, contributed more than their fair share of courses and teaching hours. However, since 2007, women have taught fewer courses and hours on average than men. In consequence, women are now teaching less than the percentage that they represent at SNII. Unfortunately, as we saw, this reduced teaching did not translate into relatively more publications than men.

Women have also been increasingly involved in advising theses and dissertations. Though they were clearly relegated to advising undergraduate and master's theses at the beginning of the period, they started advising doctoral dissertations in 2000. According to the data, in 2023, women advised more than their fair share of master's and undergraduate theses and less than their fair share of doctoral dissertations.

Women have also increased the number of academic presentations they give over time. As a result, they went from giving 14% of the presentations in 2000 to 45% of the presentations in 2023, far greater than their 34% representation at SNII that year. In fact, women surpassed men in the number of presentations they gave per year in 2015 and have stayed above men since then.

Finally, the paper delved into the issue of women's representation in editorial services in Mexican journals. The percentage of female editors and co-editors has decreased over time and stood at 32% in 2024. However, the number of women invited to join scientific committees or editorial boards has increased steadily over time.

Overall, I see a story of stalled progress in the status of female Mexican economists. We need more research to know how to attract and retain women to Economics programs and the Economics profession

in academia. We also need more research to know why women are not producing more papers than their peers, despite the fact that their teaching load has reduced over time relative to males. As it is, there is still no research into the causes and consequences of this stagnation in female representation and female progress in Economic Sciences in Mexico.

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A Appendix Figures

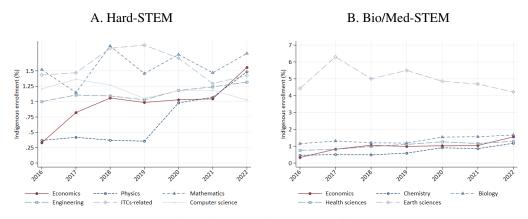
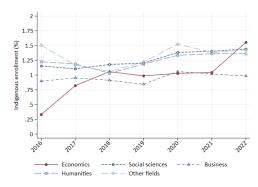


Figure A.1. Indigenous students undergraduate enrollment in Economics vs. other fields

C. Social Science, Business, Humanities, and other fields



Source: Author's elaboration using ANUIES data, using the sample of undergraduate programs.

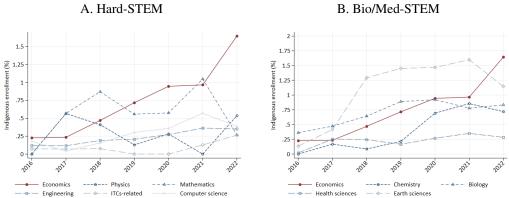
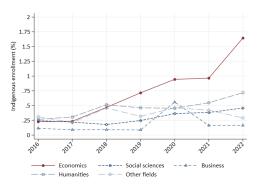


Figure A.2. Indigenous students master's enrollment in Economics vs. other fields

C. Social Science, Business, Humanities, and

other fields

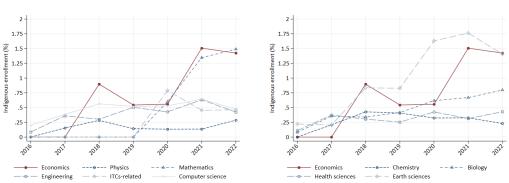


Source: Author's elaboration using ANUIES data, using the sample of master's programs.

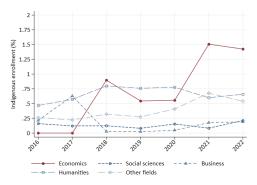
Figure A.3. Indigenous students Ph.D. enrollment in Economics vs. other fields

A. Hard-STEM

B. Bio/Med-STEM



C. Social Science, Business, Humanities, and other fields



Source: Author's elaboration using ANUIES data, using the sample of Ph.D. programs.

B Appendix Tables

Variable name	Definition	Period covered
year	Year in which the academic year begins	2010-2022
sch_niv	Schooling level: 1 College, 2 MA, 3 PhD	2010-2022
ent_nom	State name	2010-2022
ent	State code according to INEGI	2010-2022
institution	University or higher education institution	2010-2022
private	Indicator of private institutions	2010-2022
program	Program's exact name	2010-2022
econ	Indicator variable of an Economics program	2010-2022
enroll_men	Number of men enrolled	2010-2022
enroll_women	Number of women enrolled	2010-2022
enroll_total	Number of people enrolled	2010-2022
enroll_men_ind	Number of male indigenous language speakers	2016-2022
enroll_women_ind	Number of female indigenous language speakers enrolled	2016-2022
enroll_total_ind	Number of indigenous language speakers enrolled	2016-2022
grads_men	Number of men who finished their coursework	2010-2022
grads_women	Number of women who finished their coursework	2010-2022
grads_total	Number of people who finished their coursework	2010-2022
grads_total_ind	Number of indigenous language speakers who finished their coursework	2016-2022
degree_men	Number of men who got their degrees	2010-2022
degree_women	Number of women who got their degrees	2010-2022
degree_total	Number of people who got their degrees	2010-2022
degree_total_ind	Number of indigenous language speakers	2016-2022
places	Number of places offered by the program	2011-2022
apps_men	Number of men applying to the program	2011-2022
apps_women	Number of women applying to the program	2011-2022
apps_total	Number of people applying to the program	2011-2022
apps_total_ind	number of indigenous language speakers applying to the program	2016-2022
incoming_women	number of women in the program's incoming class	2011-2022
incoming_men	number of men in the program's incoming class	2011-2022
incoming_total	number of people in the program's incoming class	2011-2022
incoming_total_ind	number of indigenous language speakers in the incoming class	2016-2022
field	STEM fields of concentration: 1 Economics, 2 Physics, 3 Chemistry, 4 Mathe- matics, 5 Engineering, 6 Biology, 7 Medicine, 8 ITC's, 9 Computer Science, 10 Other sciences	2010-2022
region5	5 region classification: 1 Northwest, 2 Northeast, 3 Center, 4 Center-west, 5 South	2010-2022

Table B.1. Variable names in the ANUIES datasets

Rank	University	Public/Private	Top 10
1	Universidad Autónoma de Nuevo León	Public	Yes
2	El Colegio de México	Public	Yes
3	Centro de Investigación y Docencia Económicas	Public	Yes
4	Universidad Nacional Autónoma de México - Ciudad Universitaria	Public	Yes
4	Universidad de las Américas - Puebla	Private	Yes
5	Universidad Panamericana - Ciudad de México y Jalisco	Private	Yes
6	Universidad Autónoma de Metropolitana - Azcapotzalco	Public	Yes
7	Benemérita Universidad Autónoma de Puebla	Public	Yes
8	Universidad Nacional Autónoma de México - Acatlán	Public	Yes
9	Universidad Autónoma de Metropolitana - Iztapalapa	Public	Yes
9	Universidad Autónoma de Metropolitana - Xochimilco	Public	Yes
10	Universidad Iberoamericana - Puebla	Private	Yes
10	Universidad de Monterrey	Private	Yes
10	Universidad de Guadalajara	Public	Yes
11	Universidad Autónoma Chapingo	Public	No
12	Universidad Autónoma de Guadalajara	Private	No
13	Universidad Nacional Autónoma de México - Aragón	Public	No
14	Instituto Politécnico Nacional	Public	No
15	Universidad Autónoma del Estado de México - Toluca	Public	No
16	Universidad del Valle de México - Puebla	Private	No
17	Universidad Autónoma del Estado de México - Valle de México	Public	No
17	Universidad Autónoma del Estado de México - Texcoco	Public	No
Unranked ^a	Instituto Tecnológico Autónomo de México	Private	Yes
Unranked ^a	Universidad Iberoamericana - Ciudad de México	Private	Yes
Unranked ^a	Instituto Tecnológico y de Estudios Superiores de Monterrey	Private	Yes

Table B.2. El Universal's ranking of top Economics undergraduate programs

Notes: Author's elaboration using *El Universal* 2024 university rankings for undergraduate programs in Economics. ^{*a*} Unranked by *El Universal*, but ranked in other rankings such as *Reforma* or *Mextudia*.

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Journal title	Editing institution	@ SCImago
América Latina en la historia económica	Instituto de Investigaciones Dr. José María Luis Mora	No
Análisis económico	Universidad Autónoma Metropolitana	No
Boletín científico de las ciencias económico administra-	Universidad Autónoma del Estado de Hidalgo	No
tivas	-	
Carta económica regional	Universidad de Guadalajara, CUCEA	No
Clavigero	Instituto Tecnológico y de Estudios Superiores de Oc- cidente	No
Denarius	Universidad Autónoma Metropolitana	No
Economía UNAM	Universidad Nacional Autónoma de México	No
Economía, sociedad y territorio	El Colegio Mexiquense A.C.	No
Economía: teoría y practica	Universidad Autónoma Metropolitana	No
EconoQuantum	Universidad de Guadalajara	No
El Trimestre económico	Fondo de Cultura Económica	Yes - Q3
Ensayos. Revista de economía	Universidad Autónoma de Nuevo León	No
Equilibrio económico	Universidad Autónoma de Coahuila	No
Eseconomía	Instituto Politécnico Nacional	No
Estudios críticos del desarrollo	Universidad Autónoma de Zacatecas	No
Estudios económicos	El Colegio de México	No
Estudios Fronterizos	Universidad Autónoma de Baja Californai	Yes - Q2
Estudios regionales en economía, población y desar- rollo	Universidad Autónoma de Ciudad Juárez	No
Hitos de ciencias económico administrativas	Universidad Juárez Autónoma de Tabasco	No
Investigación económica	Universidad Nacional Autónoma de México	No
Latin American Economic Review	Centro de Investigación y Docencia Económicas	Yes - Q4
Ola financiera	Universidad Nacional Autónoma de México	No
Panorama económico	Instituto Politécnico Nacional	No
Paradigma económico	Universidad Autónoma del Estado de México	No
Perspectivas	Universidad Autónoma de San Luis Potosí	No
Problemas del desarrollo	Universidad Nacional Autónoma de México	Yes -Q4
Realidad, datos y espacio revista internacional de es- tadística y geografía	Instituto Nacional de Estadística y Geografía	No
Revista de economía	Universidad Autónoma de Yucatán	No
Revista del Observatorio Internacional de Salarios Dig- nos	Universidad La Salle	No
Revista Latinoamericana de Investigación Social	Universidad La Salle	No
Revista mexicana de economía y finanzas nueva época	Instituto Mexicano de Ejecutivos de Finanzas, A.C.	No
Revista nicolaita de estudios económicos	Universidad Michoacana de San Nicolás de Hidalgo	No
Revista RELAYN micro y pequeña empresa en Lati- noamérica	iQuatro Editores	No
SobreMéxico	Universidad Iberoamericana, Ciudad de México	No
The Anáhuac Journal	Universidad Anáhuac del Sur	No
Tiempo económico	Universidad Autónoma Metropolitana	No



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