



MARKET RESEARCH OF THE LÁZARO CÁRDENAS PROFESSIONAL UNIT (FOREIGN TRADE)

PESQUISA DE MERCADO DA UNIDADE PROFISSIONAL DE LÁZARO CÁRDENAS (COMÉRCIO EXTERIOR)

INVESTIGACIÓN DE MERCADO UNIDAD PROFESIONAL DE LÁZARO CÁRDENAS (COMERCIO EXTERIOR)



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ABSTRACT

The document addresses market research at the Lázaro Cárdenas Professional Unit, specifically in the area of Foreign Trade. Market research in education aims to identify the needs, preferences, and trends of the sector, supporting decision-making, the design of educational offerings, and the launch of relevant products or services. Key areas include: Educational demand: analysis of the training needs of students, teachers, and institutions, interest in new methodologies, and the educational levels with the highest demand. Competition and existing offerings: evaluation of competing institutions and digital education platforms. Student/user profile: understanding the characteristics and expectations of those who participate in the educational process.

Keywords: Market Study. Foreign Trade. Population. Evolution.

RESUMO

O documento aborda a pesquisa de mercado na Unidade Profissional de Lázaro Cárdenas, especificamente na área de Comércio Exterior. A pesquisa de mercado em educação tem como objetivo identificar as necessidades, preferências e tendências do setor, apoiando a tomada de decisões, o desenho de ofertas educacionais e o lançamento de produtos ou serviços relevantes. Entre as áreas-chave estão: Demanda educacional: análise das necessidades de formação de estudantes, docentes e instituições, do interesse em novas metodologias e dos níveis educacionais com maior demanda. Concorrência e oferta existente: avaliação de instituições concorrentes e plataformas de educação digital. Perfil do estudante/usuário: compreensão das características e expectativas daqueles que participam do processo educacional.

Palavras-chave: Estudo de Mercado. Comércio Exterior. População. Evolução.

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RESUMEN

El documento aborda la investigación de mercado en la Unidad Profesional de Lázaro Cárdenas, específicamente en el área de Comercio Exterior. La investigación de mercado en educación tiene como propósito identificar las necesidades, preferencias y tendencias del sector, apoyando la toma de decisiones, el diseño de ofertas educativas y el lanzamiento de productos o servicios relevantes. Entre las áreas clave se encuentran: Demanda educativa: analizar las necesidades de formación de estudiantes, docentes e instituciones, el interés en nuevas metodologías y los niveles educativos con mayor demanda. Competencia y oferta existente: evaluación de instituciones competidoras y plataformas de educación digital. Perfil del estudiante/usuario: comprensión de las características y expectativas de quienes participan en el proceso educativo.

Palabras clave: Estudio de Mercado. Comercio Exterior. Población. Evolución.



1 DEVELOPMENT

Education market research is a key process to understand the needs, preferences, and trends in the education sector, whether for institutions, companies, governments, or entrepreneurs. Its objective is to collect data that allows strategic decisions to be made, improve the educational offer or launch products/services aligned with demand. (Altamirano & Cusme, 2022).

Key Research Areas in the Education Market

1. Educational demand:

- What training needs do students, teachers or institutions have?
- Is there interest in new methodologies (e.g., hybrid learning, micro-credentials)?
- Which educational levels are most in demand (primary, secondary, higher, job training)?

2. Competition and existing supply:

- Analysis of competing institutions (public/private).
- Offer of e-learning platforms (Coursera, Udemy, Khan Academy).

3. Student/User Profile:

- Purchasing behavior (do they prefer free courses or paid certificates?).
- Preferences by modality (online, face-to-face, hybrid).
- Age, geographical location and economic capacity.

2 METHODOLOGY

According to data from INEGI and other sources, the population of the municipality of Lázaro Cárdenas, Michoacán, in 2020, was 196,003 **inhabitants**. Of this figure, **97,484 were men** (49.74%) **98,519 were women** (50.3%)

- **Total population:** 196,003 inhabitants
- **Males:** 97,484 (49.74%)
- **Female:** 98,519 (50.3%)

Sample size is the number of complete responses your survey receives. It should represent the target population whose opinions or behavior you are interested in. And that you want to investigate or know.

Here are some key concepts you'll need to understand to calculate your sample size:

Population size represents the total number of people in the group you want to study. In this case it is the population of the municipality of Lázaro Cárdenas, the size of the population according to INEGI data is 196,003 inhabitants.



The margin of error is a percentage that shows how accurately the results of a survey reflect the views of the entire population. The smaller the margin of error, the more accurate the answer will be at a given confidence level.

The confidence level measures how confident you can be that the population will choose an answer within a given range. For example, a 95% confidence level means that you can be 95% confident that the results will range from the numbers x to y.

The confidence interval represents a statistical range in which the true result is likely to be found. For example, a 95% confidence interval indicates that if you were to repeat the sampling of the same population multiple times, the true result would be within the range for about 95% of the samples.

Therefore, for the population size with a confidence level of 95% and a margin of error of 5%, the sample size was 385 people.

The sampling is random, simple, face-to-face and on Google Forms.

Conducting market research for a new academic program in Lázaro Cárdenas, Michoacán, involves analyzing local needs, competition, and employability opportunities.

Table 1

Evolution of the total population of Lázaro Cárdenas

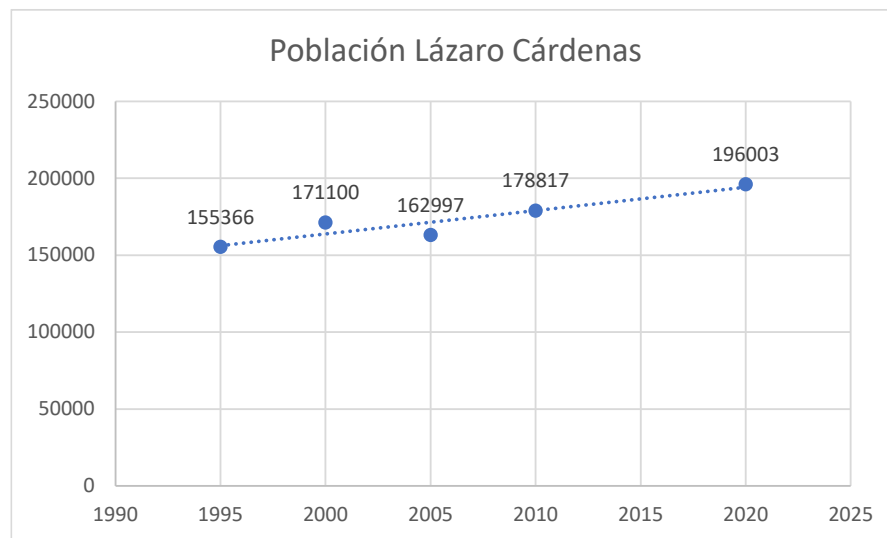
Periodos	Población Lázaro Cárdenas
1995	155366
2000	171100
2005	162997
2010	178817
2020	196003

Source: Prepared by the authors with data from the National Institute of GeoFigurey and Statistics (INEGI).



Figure 1

Evolution of the total population of Lázaro Cárdenas and trend line



Source: Prepared by the authors with data from the National Institute of GeoFigurey and Statistics (INEGI).

The population of the municipality of Lázaro Cárdenas has grown, however, it is important to identify the evolution of people of higher education age. In the case of the municipal population, it is important to note that from 2000 to 2005 the population contracted by 4%, by 2010 it grew by 9% as for 2020. (Inegi, 2025)

Let's look at the evolution of the population aged 15 to 19, which is the period of time they study higher education.

In the 2020 population and housing census, the population aged 15 to 19 had the following composition:

Table 2

	Population 15 -19
Men	8,358
Women	8,239

Source: Own elaboration with data from Inegi and Conapo.

This is the population that we can consider a potential market for foreign trade.

The total population of Lázaro Cárdenas in 2020 was 196,003 inhabitants, being 50.3% women and 49.7% men.

The age ranges that concentrated the largest population were 5 to 9 years old (18,539 inhabitants), 10 to 14 years old (17,699 inhabitants) and 0 to 4 years old (16,915 inhabitants). Between them they concentrated 27.1% of the total population.

Now if we compare the target population we have the following:



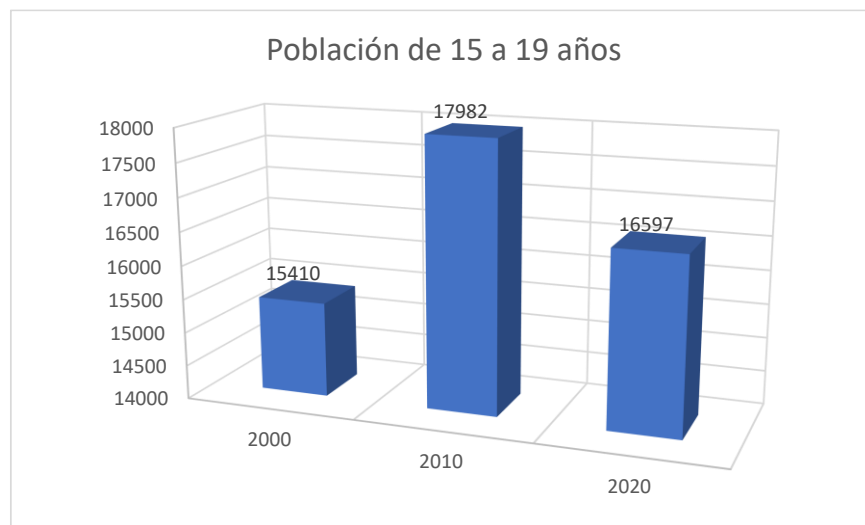
Comparison with previous years

- **2010:** 17,892 young people (15-19 years old) in a total of 178,817 inhabitants. (**10.0%**).
- **2000:** 15,410 young people (15-19 years old) in a total of 155,896 inhabitants. (**9.9%**).

If we compare the population of this age group in 2010 with 2020 we have the population decreased by 7.3%. Conapo estimates that the representation of this group by 2025 will decrease to only 9.8% due to demographic transition. (González, 2025)

Figure 2

Population aged 15 to 19 years 2000 – 2020 Lázaro Cárdenas



Source: Own elaboration with data from Inegi and Conapo.

The population decline is due to the following factors:

1. Declining birth rate:

- Michoacán has a **fertility rate of 2.1 children per woman** (close to generational replacement).

2. Youth migration:

- Many young people migrate to other cities (Morelia, CDMX) or the U.S. for educational/work opportunities.

3. Population ageing:

- Progressive increase in the number of older adults, which reduces the % of young people.

2.1 LOCAL CONTEXT ANALYSIS

The city of Lázaro Cárdenas is the head of one of the 113 municipalities that make up the state of Michoacán, located in the southeast of the state, just on the border with the state of Guerrero, which is delimited by the Balsas River, at the geographical coordinates 17° 54'



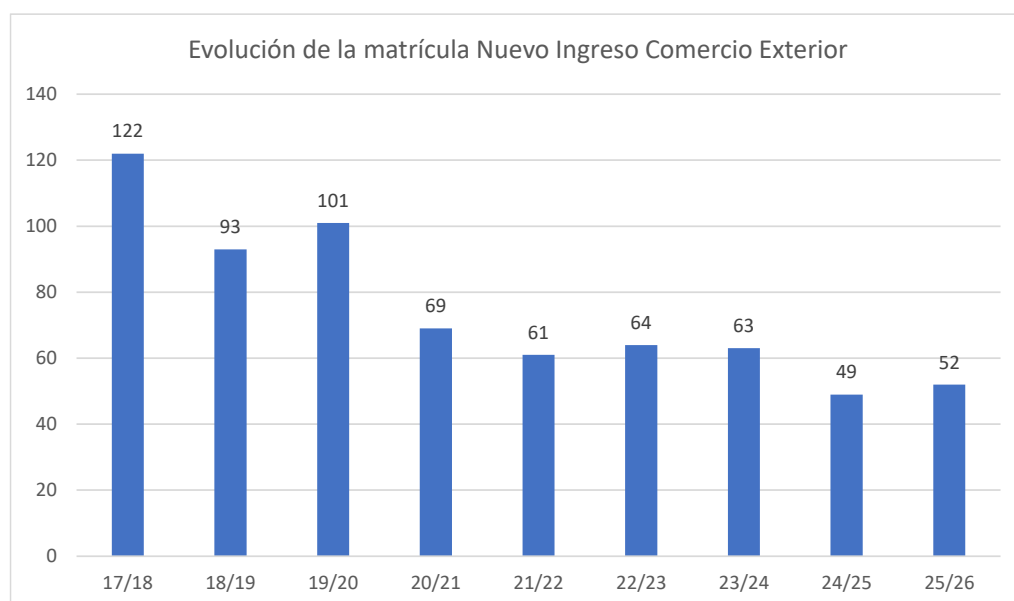
58.2" N, 102° 10' 22.5" W, its area is 2'468, 168 m², representing 1.83% of the state. It has an average altitude of 100 meters above sea level. With 35 years of existence, the Port of Lázaro Cárdenas is a young and dynamic seaport located on the Mexican Pacific coast in the state of Michoacán. Originally, the Lázaro Cárdenas Port emerged as an industrial port, but as the container market began to gain importance, the Lázaro Cárdenas Port found a new role, the movement of commercial cargo. It is one of the five main ports in the country, operating 18% of the total commercial cargo (excluding oil and derivatives) that is operated throughout the National Port System. The Port of Lázaro Cárdenas stands out for its important and consolidated industrial activity and for its young and growing commercial activity. In the last 10 years, the total activity of the port has grown by 63.56% and with respect to 2006, the year of the beginning of the validity of the previous PMDP, there has been a growth of 54.82%. "This increase in total cargo is mainly due to the growth in containerized cargo and mineral bulk, as well as the recovery of the movement of fluids under the control of an Integral Port Administration of the Port of Lázaro Cárdenas (APILAC)." (Semar, Lázaro Cárdenas Michoacán)

a) Educational profile:

We have little to say about the educational profiles and it is better to review the results obtained in the Foreign Trade program offered by the Professional Unit of Lázaro Cárdenas.

Figure 3

Evolution of new enrolment



Source: Prepared by the authors with UMSNH school control data.



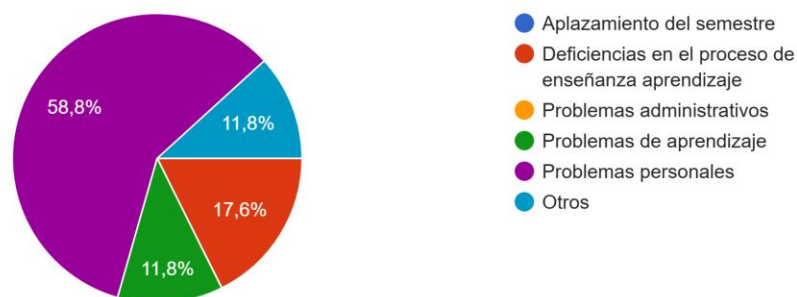
The sharp drop shown in the last 9 years of the foreign trade career is more than evident and we can see that the contraction from 2017 to 2025 is 70 students, equivalent to practically 3 sections.

The causes of the decrease in enrollment are diverse and among them the following stand out.

Figure 4

Causes of abandonment

Si decidieras abandonar la carrera cual de los siguientes motivos sería el principal:

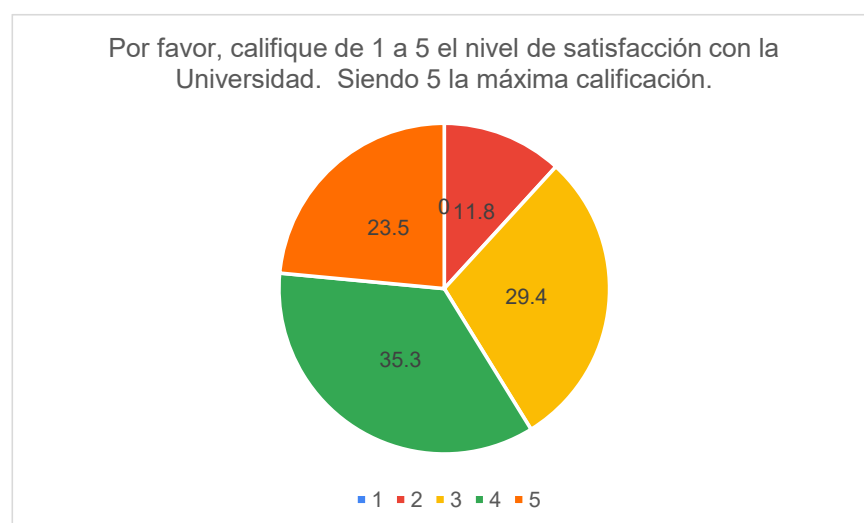


Source: Prepared by the authors with data from the survey on reasons for dropping out.

58% of students drop out due to personal problems, 17.6% due to deficiencies in the teaching-learning process and 11.8% due to learning problems and others.

Figure 5

Level of satisfaction with the institution



Source: Prepared by the authors with data from the survey on reasons for dropping out.



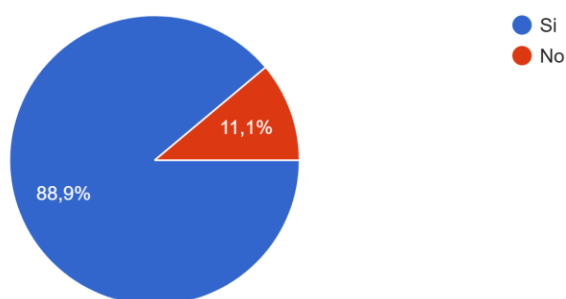
23.5% give us a rating of 5 which is the maximum satisfaction, while 11.8% give us a rating of 2, from what was observed more than 50% are satisfied with the treatment received, while 40% consider their level of satisfaction to be fair to low.

b) Economy and employability:

Figure 6

Location in the labour market

UBICACIÓN EN EL MERCADO DE TRABAJO ¿Trabaja Ud. actualmente?



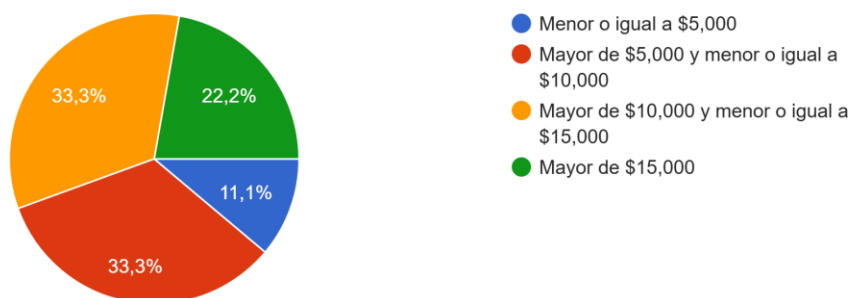
Source: Own elaboration with data from the 2025 graduate survey.

Despite the good results in terms of employment of our graduates, this advantage is not reflected in the enrollment of new entrants, which is in a clear decline.

Figure 7

Income level of graduates

El promedio de tu ingreso mensual (MONEDA NACIONAL) por el desempeño de tu puesto actual es:



Source: Own elaboration with data from the 2025 graduate survey.



Perhaps one of the elements that weighs on the drop in enrollment is the low salaries obtained by our graduates, since 78% earn less than 15,000 pesos per month.

c) Existing educational offer:

Polytechnic University

Logistics and Transportation Engineering

They are professionals capable of designing, evaluating and implementing strategies aimed at optimizing the supply chain and logistics function. He is a professional capable of linking the company and its products in a global chain of trade and production.

Bachelor of Arts in International Business

"The bachelor's degree in International Business will train professionals capable of managing foreign trade operations, which will allow them to develop business projects in the international market." ("UPLC")

Master's Degree in International Trade and Logistics

The Online Master's Degree in Logistics and International Trade at the Polytechnic University of Lázaro Cárdenas was created to improve the professional level of directors, managers, and leaders who seek to establish international level work plans to meet their business objectives.

ITLAC

Logistics

"To train professionals who contribute to business management and process innovation; as well as the design, implementation and development of strategic business systems, optimizing resources in a global environment, with ethics and social responsibility." ("Career Profile – Technological Institute of Puebla")

Unicla

Not schooled international relations, four-month term.

Vizcaya University

Bachelor's Degree in International Trade and Customs

You will learn how to use administrative, legal, technological, health and commercial fundamentals to carry out export and import activities (also online). ("Bachelor's Degrees - Ensenada Campus")

Idesum

International trade

- 1.To train professionals in the communication sciences who are technically and theoretically trained in the different media. ("IDESUM UNIVERSITY - BACHELOR'S DEGREE IN COMMUNICATION SCIENCES")



2. To be a professional with clear competencies in the critical analysis of the historical, social, psychological and legal contexts that move the media.
3. To train a professional capable of technically handling the digitization of audio, video and Figureic design oriented to radio, television and advertising production.

One of the big problems we have is that there are 5 public and private institutions that offer similar careers and that by location have greater advantages.

We must clarify that another reason that decreased our career was the appearance of foreign trade in the city of Uruapan offered by the UMSNH and that if we see the drop in enrollment in Lázaro Cárdenas it corresponds to the appearance in Uruapan; since a large part of our enrollment was transferred from municipalities adjacent to Uruapan and now they remain in this program.

d) Trends and Feasibility

Figure 8

Age of new students



Source: Authors' elaboration with data from the new admission survey.

The trend is that most students are between the ages of 17 and 19, where the average is 18 years old.

66% of the students are from Lázaro Cárdenas, however the other 44% come from other cities and states such as Morelia, Uruapan, Peribán, Chiapas, Guerrero and Veracruz.

22% of our new students come from Cecytem, followed by Cetis 14% and Cetmar with 12%.



Figure 9

How did you find out about the race

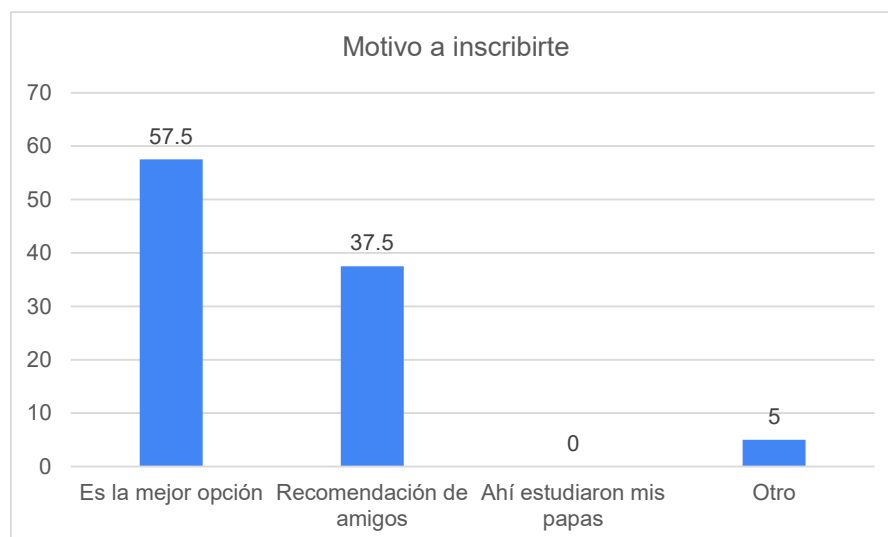


Source: Authors' elaboration with data from the new admission survey.

40% of the new students found out about the degree from their friends, 37.5% from visits to their school or Seeorienta, 17.5% from advertising and only 5% from social networks.

Figure 10

Reasons for entering the program



Source: Authors' elaboration with data from the new admission survey.

An interesting fact is that 57.5% of the new students considered the UMSNH as the best option, and a significant 37.5% on the recommendation of friends.



Figure 11

Preferred turn



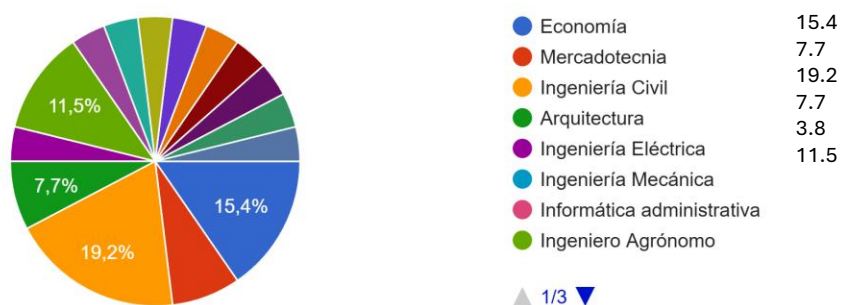
Source: Authors' elaboration with data from the new admission survey.

The new students 100% showed their preference for studying in the morning shift, I would like to add that the highest failure and dropout is with the afternoon students.

Figure 12

Preferred career

Si su respuesta fue NO, entonces, ¿Qué carrera elegiría?



Source: Authors' elaboration with data from the new admission survey.

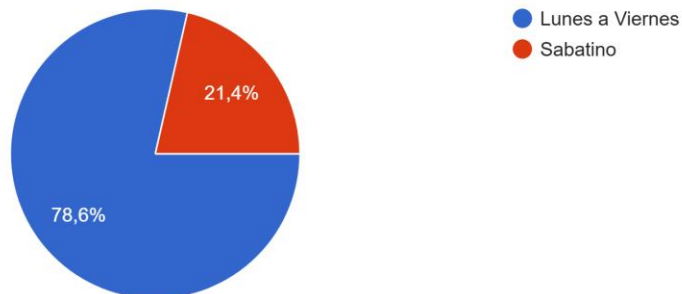
The career with the highest number of mentions is civil engineering with 19.2%, Economics with 15.4%, civil engineering with 19.2% and mechanical engineering with 11.5%.



Figure 13

Days of class preference

¿Qué día prefieres?



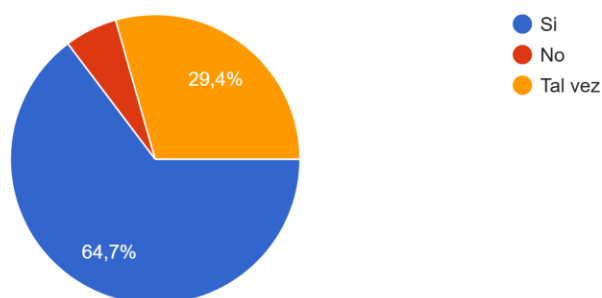
Source: Authors' elaboration with data from the new admission survey.

78.6% prefer classes from Monday to Friday, but 21.4% consider it interesting to study on Saturdays.

Figure 14

Would you recommend the Lázaro Cárdenas Professional Unit

Recomendaría a la Unidad Profesional de Lázaro Cárdenas?



Source: Authors' elaboration with data from the new admission survey.

Of those surveyed, 64.7% would recommend the Professional Unit, while 30% do not have a positive perception.

3 RECOMMENDATIONS FOR POTENTIAL PROGRAMS

Based on the industrial profile of Lázaro Cárdenas, these options would be highly relevant:



1. Higher University Technician (TSU) in Port Logistics.
2. Bachelor's degree in Environmental Engineering (with a focus on industry and ports).
3. Master's Degree in Maritime Business Administration.
4. Diploma in Foreign Trade and Customs (for professionals who are already working).
5. Master's Degree in Customs Law.

4 CONCLUSION

In summary, the results reflect a favorable perception towards the Lázaro Cárdenas Professional Unit and support the relevance of developing new educational programs aligned with the needs of the industrial and port environment. The implementation of these options would strengthen the academic offer and contribute to local development, training professionals capable of responding to the current and future challenges of the region.

REFERENCES

- Altamirano, M., & Cusme, L. (2022). Marketing educativo como estrategia en el sector educativo. FIPCAEC Revista Científica, 24-34.
- González, K. (2025, 20 de octubre). Envejecimiento demográfico en México: Análisis comparativo entre las entidades federativas. Conapo. http://www.conapo.gob.mx/work/models/CONAPO/Resource/2702/06_envejecimiento.pdf
- Instituto Nacional de Estadística y Geografía. (2025, 20 de octubre). Resultados del Censo de Población y Vivienda 2020. https://www.inegi.org.mx/contenidos/saladeprensa/boletines/2021/EstSociodemo/ResultCenso2020_Nal.pdf
- Secretaría de Marina. (s. f.). Cuestionario del puerto de Lázaro Cárdenas, Michoacán. Dirección General Adjunta de Oceanografía, Hidrografía y Meteorología. <https://digaohm.semar.gob.mx/cuestionarios/cnarioLazaro.pdf>