Mercados y Negocios
1665-7039 printed
2594-0163 on line
Year 27, n. 57, January-April (2026)

FINANCIAL AND ECONOMIC INDICATORS

The Value and Life of Products and Services based on Culture, Knowledge, and Technology

https://doi.org/10.32870/myn.vi57.8094

Juan Gaytán Cortés
Universidad de Guadalajara (México)
jgaytan@cucea.udg.mx
https://orcid.org/0000-0002-4388-0138

Success in business management, particularly in a globalized environment, depends to a large extent on a comprehensive understanding of the relationship between the philosophy of life, the business idea, strategic planning, and the business plan, in close connection with culture, knowledge, and technology. This interrelationship constitutes an essential framework of reference for business decision-making aimed at creating sustainable value.

The value of businesses is closely linked to their ability to generate wealth in a sustained way throughout the useful life of the products and services they offer. This useful life does not respond only to technical or economic criteria. Still, it is determined by the degree of social acceptance, cultural adoption, and symbolic and functional permanence that products and services achieve in the markets. In this sense, the life cycle of goods and services across different regions or countries in the world is fundamentally driven by the dynamic interaction among culture, knowledge, and technology, factors that influence both demand and organizations' capacity to innovate and adapt.

These three elements act in a systemic and interdependent way, configuring consumption patterns, organizational learning processes, and technological trajectories that explain why certain products manage to consolidate and maintain themselves over time, while others disappear prematurely. Each of these pillars is discussed below.

Culture

Culture constitutes the symbolic, normative, and cognitive framework within which individuals interpret, value, and adopt products and services. From an ethnographic perspective, culture or civilization is defined as "that complex whole that includes beliefs, art, morals, law, customs, and any other habits and capacities acquired by man as a member of society" (Kahn, 1975). This definition highlights the integral, historical, and cumulative character of culture as the foundation of social and economic behavior.

From a contemporary sociological approach, Giddens (1998) conceives culture as the set of values (abstract ideals), norms (concrete rules of behavior), and material goods produced and shared by a social group. It also stresses that culture is not static. Still, an engine of social change, influencing how people live, relate to each other, and make decisions, continuously redefining norms and values in the context of modernity.

In the business environment, culture directly impacts the perception of value, consumption habits, acceptance or resistance to innovation, and the social legitimacy of products and services. Therefore, organizations that understand, respect, and properly manage cultural differences not only facilitate the entry into new markets but also manage to prolong the life of their offerings and strengthen their competitive positioning in diverse contexts.

Knowledge

Knowledge is a fundamental intangible strategic resource for value creation, innovation, and organizational learning. Nonaka and Takeuchi (1995) analyze this concept from two complementary approaches. The first, aligned with traditional Western epistemology, conceives knowledge as something formal, explicit, and static, oriented to the search for objective truth and expressed through propositions, models, and formal logic. This approach privileges the codification, systematization, and transfer of knowledge.

The second approach conceives of knowledge as a dynamic human process, through which individuals justify their personal beliefs in the search for truth. From this perspective, knowledge is contextual, subjective, and active, underpinned by experience, commitment, and individual values, making it a key element of continuous innovation and the generation of sustainable competitive advantages. Various authors have proposed classifications that show the complexity of organizational knowledge. Spender (1996) proposes a matrix based on two dimensions: tacit–explicit and individual–social, from which four types of expertise emerge:

1. Conscious,
2. Automatic,
3. Objective, and
4. Collective.

For his part, Zack (1999) classifies explicit and shared knowledge into three categories:

1. Declarative knowledge, which describes what something is;
2. Procedural knowledge, which explains how an activity is carried out; and
3. Causal knowledge, which analyzes why phenomena occur.

The diversity of approaches and typologies highlights the lack of absolute consensus in the literature. Still, it underscores the relevance of knowledge as a strategic asset that directly

influences companies' ability to design products, optimize processes, adapt to the environment, and extend the economic life of their goods and services.

Technology

Technology represents the practical application of knowledge for problem-solving and the satisfaction of human needs. According to UNESCO, technology is defined as the "know-how and creative process that uses resources, tools, and systems to solve problems and increase control over the natural and artificial environment, with the purpose of improving the human condition" (Ferreyra, 1994).

Levinson (1997) conceives of technology as the reorganization or redistribution of physical material according to human specifications, theories, and ideas, emphasizing its instrumental character and its dependence on previous conceptual frameworks. In a complementary way, Gay (1995) defines technology as an ordered set of knowledge and processes oriented to the production of goods and services, integrating technical, scientific, economic, social and cultural dimensions. From this perspective, technology not only responds to social needs, but also aspires to improve the quality of life.

In the business context, technology acts as an accelerating and, in many cases, disruptive factor in the life cycle of products and services. It allows both accelerated obsolescence and continuous renewal, so its strategic management, aligned with organizational culture and knowledge, is decisive to sustain competitiveness, innovation, and economic value in the long term.

Economic and financial indicators are valuable tools that help organizations make timely, appropriate decisions about their corporate and financial strategies. Next, the evolution of some economic and financial indicators in the Mexican environment is described to facilitate decision-making related to personal and business strategy in an integrated manner.

1. National Consumer Price Index (INPC, Spanish)
2. The Price and Quotation Index of the Mexican Stock Exchange (IPC, Spanish)
3. Exchange rate
4. Equilibrium interbank interest rate (TIIE, Spanish)
5. CETES rate of return
6. Investment units (UDIS, Spanish)

1. NATIONAL CONSUMER PRICE INDEX (INPC)

Born in 1995 and reflecting changes in consumer prices, it measures the country's overall price increase. It is calculated fortnightly by the Bank of Mexico and INEGI (2021). INPC is

published in the Official Gazette of the Federation on the 10th and 25th of each month. The reference period is the second half of July 2018.

Table 1

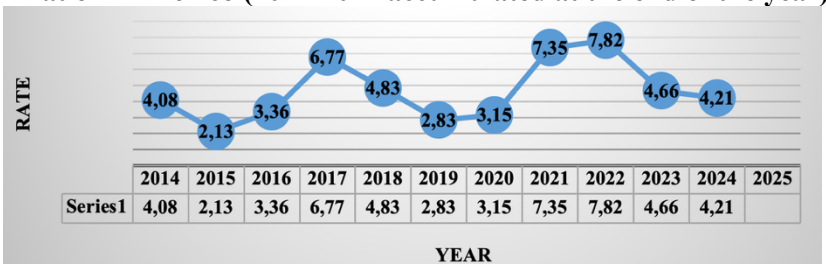
Accumulated inflation in the year (Base: 2nd. half of July 2018=100 with data provided by *Banco de México*)

Period	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
January	0.90	-0.09	0.38	1.70	0.53	0.09	0.48	0.86	0.59	0.76	0.89	0.29
February	1.15	0.09	0.82	2.29	0.91	0.06	0.90	1.50	1.43	1.24	0.99	0.56
March	1.43	0.51	0.97	2.92	1.24	0.44	0.85	2.34	2.43	1.51	1.28	0.88
April	1.24	0.25	0.65	3.04	0.90	0.50	-0.17	2.67	2.98	1.49	1.48	1.21
May	0.91	-0.26	0.20	2.92	0.73	0.21	0.22	2.88	3.17	1.27	1.29	1.50
June	1.09	-0.09	0.31	3.18	1.12	0.27	0.76	3.43	4.04	1.37	1.68	1.78
July	1.42	0.06	0.57	3.57	1.66	0.65	1.43	4.04	4.81	1.86	2.74	2.05
August	1.73	0.27	0.86	4.08	2.26	0.63	1.82	4.24	5.54	2.42	2.75	2.12
September	2.18	0.27	1.47	4.41	2.69	0.89	2.06	4.88	6.19	2.88	2.80	2.35
October	2.74	1.16	2.09	5.06	3.22	1.44	2.68	5.76	6.79	3.27	3.37	2.72
November	3.57	1.71	2.89	6.15	4.10	2.26	2.76	6.97	7.41	3.93	3.06	3.40
December	4.08	2.13	3.36	6.77	4.83	2.83	3.15	7.35	7.82	4.66	4.21	

Source: Own elaboration (INEGI, 2025). Route: Indicadores económicos de coyuntura > Índices de precios > Índice nacional de precios al consumidor. Base segunda quincena de julio de 2018=100 > Mensual > Índice > Índice general

Graph 1

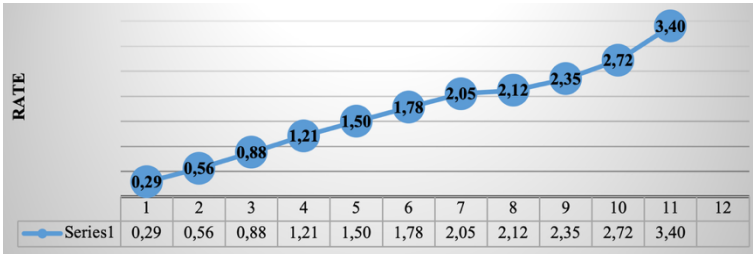
Inflation in Mexico (2014-2024 accumulated at the end of the year)



Source: Own elaboration (INEGI, 2025). Route: Indicadores económicos de coyuntura > Índices de precios > Índice nacional de precios al consumidor. Base segunda quincena de julio de 2018=100 > Mensual > Índice > Índice general

Graph 2

Inflation in Mexico (accumulated January-November 2025)



Source: Own elaboration (INEGI, 2025). Route: Indicadores económicos de coyuntura > Índices de precios > Índice nacional de precios al consumidor. Base segunda quincena de julio de 2018=100 > Mensual > Índice > Índice general

2. THE PRICE AND QUOTATION INDEX OF THE MEXICAN STOCK EXCHANGE (IPC)

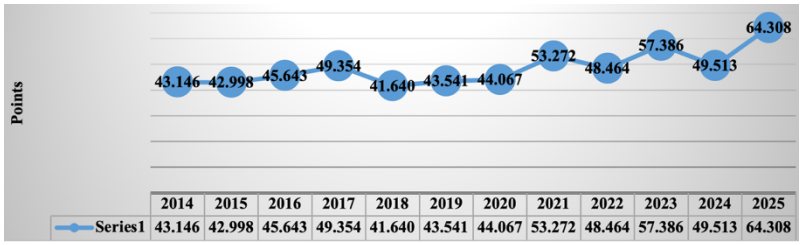
Represents the change in the values traded on the Mexican Stock Exchange concerning the previous day to determine the percentage of rise or fall of the most representative shares of the companies listed therein.

Table 2
The Price and Quotation Index of the Mexican Stock Exchange
(Base: October 1978, 0.78=100)

Period	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
January	40,879	40,951	43,631	47,001	50,456	43,988	44,862	42,986	51,331	54,564	57,373	51,210
February	38,783	44,190	43,715	46,857	47,438	42,824	41,324	44,593	53,401	52,758	55,414	52,326
March	40,462	43,725	45,881	48,542	46,125	43,281	34,554	47,246	56,537	53,904	57,369	52,484
April	40,712	44,582	45,785	49,261	48,354	44,597	36,470	48,010	51,418	55,121	56,728	56,259
May	41,363	44,704	45,459	48,788	44,663	42,749	36,122	50,886	51,753	52,736	55,179	57,842
June	42,737	45,054	45,966	49,857	47,663	43,161	37,716	50,290	47,524	53,526	52,440	57,451
July	43,818	44,753	46,661	51,012	49,698	40,863	37,020	50,868	48,144	54,819	53,094	57,398
August	45,628	43,722	47,541	51,210	49,548	42,623	36,841	53,305	44,919	53,021	51,986	58,709
September	44,986	42,633	47,246	50,346	49,504	43,011	37,459	51,386	44,627	50,875	52,477	62,916
October	45,028	44,543	48,009	48,626	43,943	43,337	36,988	51,310	49,922	49,062	50,661	62,769
November	44,190	43,419	45,286	47,092	41,733	42,820	41,779	49,699	51,685	54,060	49,813	63,597
December	43,146	42,998	45,643	49,354	41,640	43,541	44,067	53,272	48,464	57,386	49513	64,308

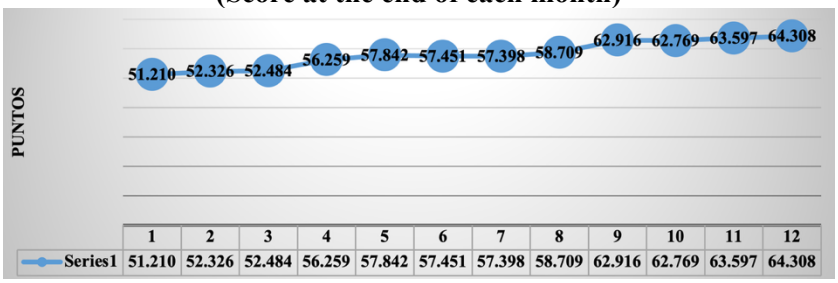
Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=7&accion=consultarCuadro&idCuadro=CF57&locale=es

Graph 3
The Price and Quotation Index of the Mexican Stock Exchange, 2014 - 2025
(Score at the end of each year)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=7&accion=consultarCuadro&idCuadro=CF57&locale=es

Graph 4
The Price and Quotation Index of the Mexican Stock Exchange, January-December 2025
(Score at the end of each month)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=7&accion=consultarCuadro&idCuadro=CF57&locale=es

3. EXCHANGE RATE

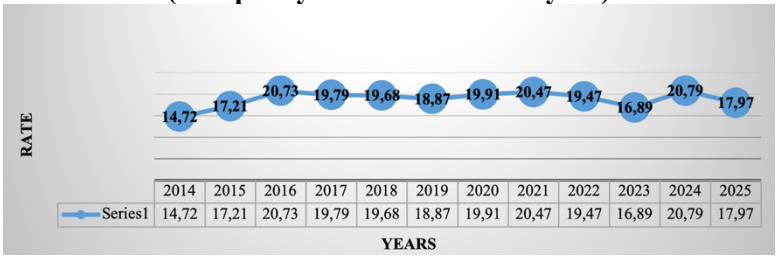
It is the value of the Mexican peso relative to the dollar, calculated from the daily average of the five most important banks in the country, which reflects the spot price (cash) negotiated between banks. It is closely related to Inflation, interest rates, and the Mexican Stock Exchange.

Table 3
Exchange rate (National currency per US dollar, parity at the end of each period)

Period	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
January	13.37	14.69	18.45	21.02	18.62	19.04	18.91	20.22	20.74	18.79	17.16	20.61
February	13.30	14.92	18.17	19.83	18.65	19.26	19.78	20.94	20.65	18.40	17.06	20.51
March	13.08	15.15	17.40	18.81	18.33	19.38	23.48	20.44	19.99	18.11	16.53	20.44
April	13.14	15.22	19.40	19.11	18.86	19.01	23.93	20.18	20.57	18.07	17.09	19.61
May	12.87	15.36	18.45	18.51	19.75	19.64	22.18	19.92	19.69	17.56	17.01	19.33
June	13.03	15.57	18.91	17.90	20.06	19.21	23.09	19.91	20.13	17.07	18.24	18.89
July	13.06	16.21	18.86	17.69	18.55	19.99	22.20	19.85	20.34	16.73	18.59	18.76
August	13.08	16.89	18.58	17.88	19.07	20.07	21.89	20.06	20.09	16.84	19.60	18.65
September	13.45	17.01	19.50	18.13	18.90	19.68	22.14	20.56	20.09	17.62	19.64	18.33
October	13.42	16.45	18.84	19.15	19.80	19.16	21.25	20.53	19.82	18.08	20.04	18.57
November	13.72	16.55	20.55	18.58	20.41	19.61	20.14	21.45	19.40	17.14	20.32	18.31
December	14.72	17.21	20.73	19.79	19.68	18.87	19.91	20.47	19.47	16.89	20.79	17.97

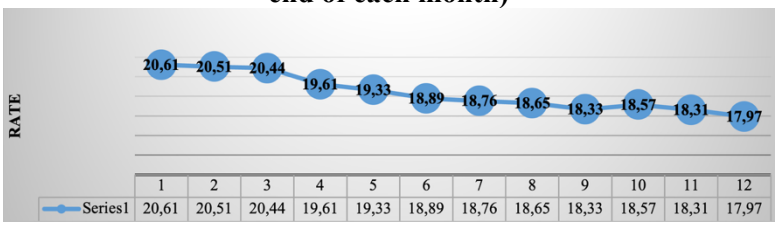
NOTE: Exchange rate FIX by The Banco de México, used for settling obligations denominated in foreign currency. Quote at the end Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=6&accion=consultarCuadro&idCuadro=CF102&locale=es

Graph 5
Exchange rate (National currency per US dollar, 2014-2025, (FIX parity at the end of each year)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=6&accion=consultarCuadro&idCuadro=CF102&locale=es

Graph 6
Exchange rate (National currency per US dollar, January-December 2025, FIX parity at the end of each month)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=6&accion=consultarCuadro&idCuadro=CF102&locale=es

4. EQUILIBRIUM INTERBANK INTEREST RATE (TIIE)

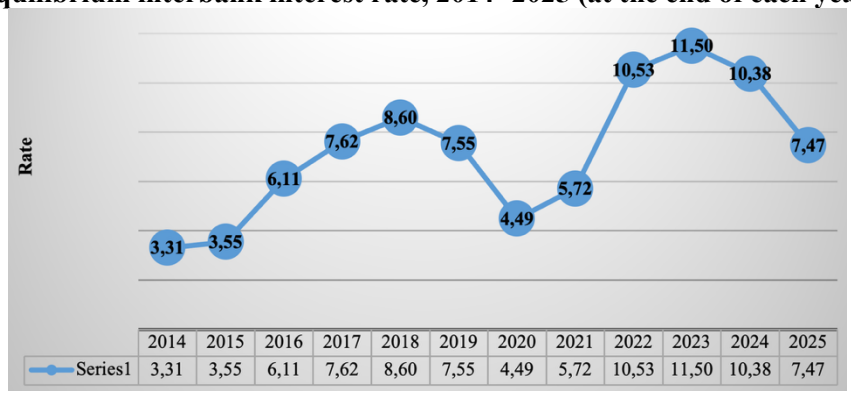
On March 23, 1995, the Bank of Mexico, to establish an interbank interest rate that better reflects market conditions, released the Interbank Equilibrium Interest Rate through the Official Gazette of the Federation.

Table 4
Equilibrium interbank interest rate (28-day quote)

Period	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
January	3.78	3.29	3.56	6.15	7.66	8.59	7.50	4.47	5.72	10.82	11.50	10.28
February	3.79	3.29	4.05	6.61	7.83	8.54	7.29	4.36	6.02	11.27	11.50	9.88
March	3.81	3.30	4.07	6.68	7.85	8.51	6.74	4.28	6.33	11.43	11.44	9.74
April	3.80	3.30	4.07	6.89	7.85	8.50	6.25	4.28	6.73	11.54	11.25	9.28
May	3.79	3.30	4.10	7.15	7.86	8.51	5.74	4.29	7.01	11.51	11.24	9.05
June	3.31	3.30	4.11	7.36	8.10	8.49	5.28	4.32	7.42	11.49	11.24	8.74
July	3.31	3.31	4.59	7.38	8.11	8.47	5.19	4.52	8.04	11.51	11.25	8.26
August	3.30	3.33	4.60	7.38	8.10	8.26	4.76	4.65	8.50	11.51	11.08	8.09
September	3.29	3.33	4.67	7.38	8.12	8.04	4.55	4.75	8.89	11.50	11.08	8.02
October	3.28	3.30	5.11	7.38	8.15	7.97	4.51	4.98	9.56	11.50	10.95	7.81
November	3.31	3.32	5.57	7.39	8.34	7.78	4.48	5.13	10.00	11.50	10.74	7.61
December	3.31	3.55	6.11	7.62	8.60	7.55	4.49	5.72	10.53	11.50	10.38	7.47

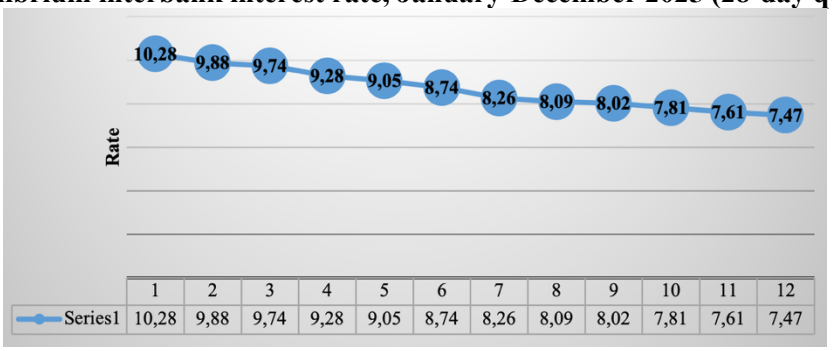
Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=18&accion=consultarCuadro&idCuadro=CF101&locale=es

Graph 7
Equilibrium interbank interest rate, 2014- 2025 (at the end of each year)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=18&accion=consultarCuadro&idCuadro=CF101&locale=es

Graph 8
Equilibrium interbank interest rate, January-December 2025 (28-day quote)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=18&accion=consultarCuadro&idCuadro=CF101&locale=es

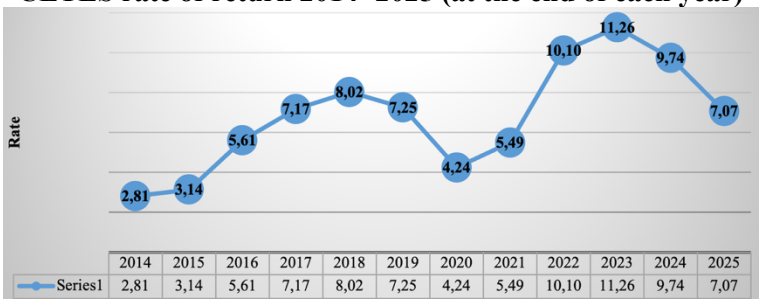
5. CETES RATE OF RETURN

Table 5
CETES rate of return (28-day)

Period	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024
January	3.14	2.67	3.08	5.83	7.25	7.95	7.04	4.22	5.50	10.80	11.28	9.87
February	3.16	2.81	3.36	6.06	7.40	7.93	6.91	4.02	5.94	11.04	11.00	9.44
March	3.17	3.04	3.80	6.32	7.47	8.02	6.59	4.08	6.52	11.34	10.90	9.02
April	3.23	2.97	3.74	6.50	7.46	7.78	5.84	4.06	6.68	11.27	11.04	8.65
May	3.28	2.98	3.81	6.56	7.51	8.07	5.38	4.07	6.90	11.25	11.03	8.12
June	3.02	2.96	3.81	6.82	7.64	8.18	4.85	4.03	7.56	11.02	10.88	8.00
July	2.83	2.99	4.21	6.99	7.73	8.15	4.63	4.35	8.05	11.09	10.87	7.48
August	2.77	3.04	4.24	6.94	7.73	7.87	4.50	4.49	8.35	11.07	10.65	7.27
September	2.83	3.10	4.28	6.99	7.69	7.61	4.25	4.69	9.25	11.05	10.35	7.20
October	2.90	3.02	4.69	7.03	7.69	7.62	4.22	4.93	9.00	11.26	10.20	7.10
November	2.85	3.02	5.15	7.02	7.83	7.46	4.28	5.05	9.70	11.78	9.95	7.15
December	2.81	3.14	5.61	7.17	8.02	7.25	4.24	5.49	10.10	11.26	9.74	7.07

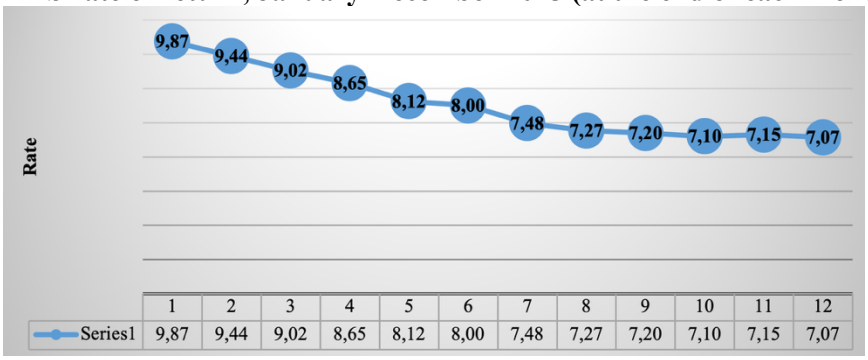
Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=22&accion=consultarCuadro&idCuadro=CF107&locale=es

Graph 9
CETES rate of return 2014- 2025 (at the end of each year)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=22&accion=consultarCuadro&idCuadro=CF107&locale=es

Graph 10
CETES rate of return, January-December 2025 (at the end of each month)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=22&accion=consultarCuadro&idCuadro=CF107&locale=es

6. INVESTMENT UNITS (UDIS)

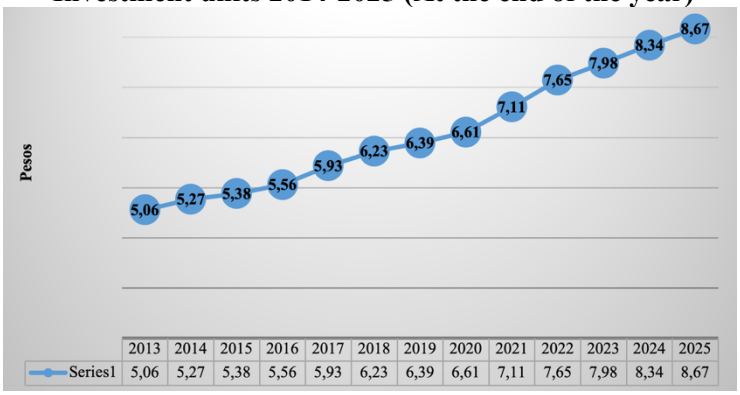
The UDI is a unit of account of constant real value to denominate credit titles. It does not apply to checks, commercial contracts, or other acts of commerce.

Table 6
Investment units (value concerning pesos)

Period	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
January	5.10	5.29	5.41	5.62	5.97	6.25	6.44	6.64	7.12	7.69	8.06	8.37
February	5.13	5.29	5.43	5.69	6.00	6.25	6.46	6.70	7.18	7.74	8.11	8.40
March	5.15	5.30	5.44	5.71	6.02	6.26	6.49	6.75	7.24	7.77	8.11	8.42
April	5.15	5.32	5.45	5.75	6.03	6.28	6.43	6.79	7.31	7.78	8.13	8.45
May	5.13	5.29	5.42	5.75	6.01	6.27	6.42	6.81	7.33	7.78	8.15	8.48
June	5.13	5.28	5.42	5.75	6.01	6.26	6.44	6.83	7.36	7.77	8.13	8.50
July	5.14	5.28	5.42	5.76	6.04	6.27	6.49	6.87	7.43	7.79	8.20	8.53
August	5.16	5.29	5.44	5.79	6.07	6.29	6.52	6.90	7.47	7.83	8.25	8.54
Sep.	5.18	5.31	5.45	5.82	6.11	6.29	6.55	6.92	7.53	7.87	8.25	8.55
Oct.	5.20	5.33	5.49	5.84	6.13	6.31	6.57	6.97	7.57	7.90	8.26	8.57
Nov.	5.23	5.36	5.53	5.89	6.17	6.35	6.60	7.04	7.62	7.94	8.32	8.61
Dec.	5.27	5.38	5.56	5.93	6.23	6.39	6.61	7.11	7.65	7.98	8.34	8.67

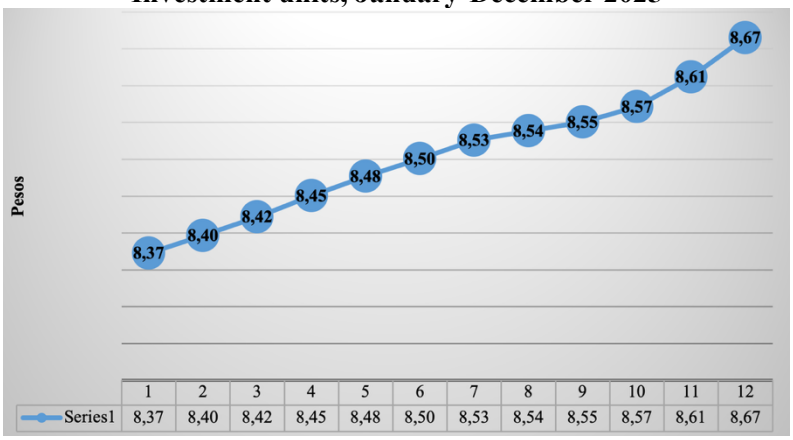
Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?accion=consultarCuadro&idCuadro=CP150&locale=es

Graph 11
Investment units 2014-2025 (At the end of the year)



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?accion=consultarCuadro&idCuadro=CP150&locale=es

Graph 12
Investment units, January-December 2025



Source: Own elaboration (BANXICO, 2025).
https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?accion=consultarCuadro&idCuadro=CP150&locale=es

Conclusions

The life of products and services based mainly on culture tends to be longer, since culture evolves slowly and gradually, resisting changes imposed by decree or by the simple appearance of new products in areas such as food, clothing, or recreation. In fact, there are goods and services whose permanence transcends even the lives of those who conceived them, becoming cultural symbols or socially rooted practices.

In contrast, the life of products and services based on knowledge and technology is usually shorter due to the dizzying pace of evolution in both factors. The constant appearance of innovations accelerates substitution processes that displace existing products, forcing organizations and individuals to plan their strategic incorporation and disincorporation from the market.

Together, culture, knowledge, and technology make up a strategic triangle that explains the creation, adoption, and permanence of products and services in society. The ability of organizations to coherently articulate these three elements determines not only the generation of economic value, but also the sustainability, legitimacy and social relevance of their business models in an increasingly dynamic and complex global environment.

REFERENCES

BANXICO. (2025). *Economic Information System.* Banco de México. Link: https://www.banxico.org.mx/

Ferreyra, R. (1994). *UNESCO Document*. Paris.

Gay, A., Ferreras, M. (1997). *Technological Education. Contributions for its implementation*. National Institute of Technological Education.

Giddens, A. (1998) *Sociology.* Alianza Editorial.

INEGI. (2025). *Economic Information Bank. Mexico: National Institute of Geography and Statistics.* Link: http://www.inegi.org.mx/sistemas/bie/

Kahn J. (1975). *The Concept of Culture: Fundamental Texts.* Anagrama.

Levinson, P. (1997). *The Soft edge. A Natural History and Future of The Information Revolution*. Routledge.

Nonaka, I., & Takeuchi, H. (1995). *The Knowledge Creating Company, How Japanese companies create the dynamics of innovation*. Oxford University Press.

Spender, J. (1996). Making knowledge the basis of a Dynamic theory of the form. *Strategic Management Journal*, 17, 45-62.

Zack, M. (1999). Managing codified knowledge. *Sloan Management Review*, 40(4), 45-58.