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FUTURE TRENDS

Report

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FUTURE TRENDS

Report

Future Trends Report, published in English and Arabic by TRENDS Virtual Office in Montreal, stands out as a distinctive publication dedicated to highlighting:
1. the most important forward-looking studies that aim to identify future trends, analyze various variables that may influence these trends, and determine the best future scenarios.
2. the most important applied studies that explore the application of knowledge, scientific theories, and information to solve current problems and overcome future challenges.
3. the most important illustrative and graphic forms that visually summarize significant studies, helping readers understand the trends and challenges of the future world.

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1 Prospective research

Exploring Alternative Futures of Global Governance

Sætra, H. S., & Rogerson, E. (2026). Four visions on the future of global governance, AI, and climate change. AI & SOCIETY, 41, 4751–4766.

Sætra and Rogerson explore the relationship between AI, climate change, and global governance through a prospective approach that considers alternative futures.





Their research addresses a critical question: how might the development of AI and the intensification of climate-related challenges reshape global political systems, institutional arrangements, and the capacity for collective action? By combining futures thinking with reflections on governance and technological change, the study contributes to debates concerning the long-term consequences of contemporary global transformations. The research is based on an interdisciplinary conceptual and historical investigation of the three domains, followed by the construction of four narrative scenarios for the year 2045. Rather than predicting a single outcome, the authors explore different configurations of governance systems, climate trajectories, and AI development. Their analysis draws attention to the interdependencies between political institutions, technological innovation, and ecological conditions, demonstrating how decisions in one domain can generate consequences in the others.

The principal contribution of the article lies in its methodological approach to futures research. By using fictional yet theoretically grounded scenarios, Sætra and Rogerson seek to expand collective imagination and encourage critical reflection on present-day political choices. Their analysis suggests that market-driven and insufficiently regulated approaches to AI may intensify inequalities and environmental pressures, whereas coordinated governance could create opportunities for more sustainable and equitable outcomes. However, stronger coordination may also involve tensions concerning national sovereignty, cultural identity, individual liberty, and the distribution of power. These findings are not presented as empirical predictions but as exploratory implications derived from the constructed future scenarios.

The significance of this research extends to international relations, global environmental governance, and the political study of emerging technologies. By positioning global governance as a connecting framework between AI and climate change, the article challenges disciplinary approaches that treat these developments in isolation. Its prospective methodology offers researchers and policymakers a way to examine how different institutional arrangements might influence future technological and ecological trajectories. More broadly, the study demonstrates the value of scenario analysis as a tool for questioning contemporary assumptions, identifying potential risks, and considering alternative pathways toward sustainability and justice.

Unregulated AI risks inequality and environmental harm, while coordinated governance promotes sustainability and equity.

Scenario analysis challenges assumptions, identifies risks, and explores sustainable and just futures.

Prospective research

Beyond the Departure Gate: De-Anchoring Tourism Through Strategic Foresight

George, B., Lema, J., Linnes, C., & Agrusa, J. (2026). Beyond the departure gate: De-anchoring tourism through strategic Foresight. Tourism and Hospitality, 7(8), Article 242.

In their 2026 article, George, Lema, Linnes, and Agrusa examine how strategic foresight can contribute to understanding the potential transformation of tourism. The study addresses the future of tourism beyond its conventional reliance on physical mobility and destination-based experiences, considering how technological developments and evolving tourism systems may challenge established assumptions within the sector.





The study adopts a structured, desk-based foresight methodology rather than empirical forecasting. Drawing on tourism scholarship and developments in computation, biosciences, and cognitive science, the authors integrate three established futures studies approaches: Voros's futures cone, Inayatullah's causal layered analysis, and Dator's four generic futures. This framework enables them to identify four assumptions underlying conventional tourism theory: geographic displacement, embodied co-presence, the destination as a passive stage, and the distinction between tourists and hosts. By examining what happens when these assumptions are relaxed, the research develops four conceptual scenarios: the de-materialization of place, biologically mediated travel, autonomous destination ecosystems, and the erosion of the touristhost distinction. Importantly, the authors clarify that these scenarios are not predic-tions, but authors test analytical tools designed to stress-test established theoretical categories.

The results demonstrate how technological transformation could extend beyond incremental improve-ments in booking systems, destination management, or visitor experiences. Instead, emerging technologies may challenge the foundations of tourism itself, including the meaning of place, the role of the human body, destination governance, and the social relationship between visitors and host communities. The authors connect these potential transformations to concrete tourism and hospitality concerns, such as destination economics, labor displacement, experiential inequality, tourism statistics, and the transition from sustainability toward regeneration. The study therefore encourages researchers to consider how future technological developments could reshape not only tourism practices but also the conceptual frameworks through which tourism is understood.

The article's academic impact is primarily conceptual and methodological: rather than offering a definitive forecast, the research provides scholars with a framework for exploring alternative futures and identifying the institutional, social, and economic consequences of technological change. This approach is valuable for tourism researchers, destination policymakers, and scholars of digital transformation be-cause it connects speculative futures with practical questions concerning governance, inequality, labor, and sustainability.

Technological advances and evolving tourism systems challenge conventional assumptions about the sector.

Emerging technologies may redefine tourism, challenging concepts of place, physical presence, govern-ance, and visitorhost relationships.

Prospective research

From Supplementary to Substitutional: Metaverse Tourism Futures in 2035

McKie, A. L. (2026). From supplementary to substitutional: Metaverse tourism futures in 2035. Journal of Tourism Futures.

The rapid development of immersive technologies, AI, and virtual environments is transforming debates about the future of tourism. In her article, Alison Lesley McKie examines whether metaverse-enabled experiences could evolve be-yond their current complementary role to become a viable substitute for conventional, on-site tourism.





The research addresses an important question for tourism studies: under what technological, environmental, economic, and ideological conditions might virtual tourism challenge established assumptions about physical travel? Rather than presenting a definitive prediction, the article explores alternative fu-tures and examines the potential paradigm-shifting implications of the metaverse for tourism systems.

The study adopts a qualitative, participatory futures approach grounded in critical realism and struc-tured through Inayatullah's Six Pillars framework. It integrates nine foresight techniques, including envi-ronmental scanning, the Futures Triangle, the Polak Game, causal layered analysis, scenario construc-tion, and back casting. Online futures workshops enable participants to explore underlying worldviews, assumptions, and competing interpretations of technological change. This process generates four sce-narios for 2035: The Invisible Hand, A Promised Land, Fountain of Youth, and Garden of Eden. These sce-narios represent different configurations of technological governance, economic organization, envi-ronmental sustainability, and social values.

The research findings challenge the dominant understanding of the metaverse as a supplementary tour-ism tool used primarily for marketing, pre-trip planning, or enhancing travel experiences. McKie propos-es that virtual tourism could become a substitute for physical travel under specific structural condi-tions, particularly where climate pressures, technological convergence, and governance transformations encourage alternative forms of tourism participation.

The article's interest extends beyond the tourism industry to questions of sustainability, digital govern-ance, cultural representation, and global inequality. By demonstrating how alternative futures can be constructed and critically examined, the research offers scholars and policymakers a framework for Exploring uncertainty and developing anticipatory capacity. Its impact is primarily conceptual and strate-gic: it encourages tourism stakeholders to reconsider the relationship between physical mobility and virtual experience while emphasizing that future technological outcomes depend on governance choic-es, social values, and the conditions under which innovation develops.

Virtual tourism could replace physical travel under favorable climate, technological, and governance conditions.

Tourism's technological future hinges on governance, social values, and innovation.

Prospective research

Building In-stitutional Capacity for Future Challenges

Panizzon, M., & Janissek-Muniz, R. (2026). The role of universities in AI augmented anticipatory governance: Towards a maturity model proposition. Futures, 176, Article 103753.

In this article, the authors examine how universities can move beyond their traditional roles as providers of education and research to become active actors in anticipatory governance. The article is situated at the intersection of futures studies, higher education, artificial intelligence, gov-ernance, and responsible innovation.





Its central concern is how universities can develop the institution-al capacity to anticipate emerging challenges and contribute more systematically to long-term decision-making.

The research adopts a conceptual and prospective approach, grounded in a systematic literature review conducted according to the PRISMA protocol. The authors analyze research published between 2000 and 2025 concerning foresight, anticipatory governance, universities, and AI. They combine the Tech-nology–Organization–Environment (TOE) framework with the Antecedents–Behavior–Consequences (ABC) framework to identify the organizational dimensions necessary for universities to develop anticipatory capacities. From this synthesis, they identify four principal pillars: research and knowledge gen-eration; education and capacity building; community engagement and public discourse; and policy in-fluence and expertise. A fifth, cross-cutting pillar concerns responsible AI infrastructure and applied ca-pabilities. The main result is a five-stage maturity model describing how universities could progress from fragment-ed or reactive engagement with future challenges toward institutionalized, AI-enabled anticipatory gov-ernance. AI is presented as a potential tool for strengthening activities such as horizon scanning, trend analysis, scenario construction, strategic intelligence, and futures deliberation. At the same time, the authors emphasize that technological capabilities need to be embedded within institutional structures, responsible innovation principles, and human decision-making rather than treated as autonomous solutions. The model also draws attention to practical constraints including funding, leadership structures, institutional path dependencies, and differences between regional contexts.

The article's academic interest lies in repositioning the university as an anticipatory institution within wider governance ecosystems. Universities can potentially contribute scientific expertise, knowledge production, convening capacity, and spaces for public deliberation. Its principal impact is the creation of a conceptual framework that can subsequently be empirically tested and adapted across different universities and geographical contexts, providing a foundation for future comparative research on how higher education institutions can partic-ipate in shaping responses to complex future transformations.

Universities can expand their roles to become active participants in anticipatory governance.

AI can strengthen horizon scanning, trend analysis, scenario development, strategic intelligence, and futures deliberation.

Prospective research

Building Scenarios and Policy Mixes Based on Logical Consistency

te Boveldt, G., Tori, S., & Keserü, I. (2026). Introducing cross-impact scenario policy analysis (CRISPA): Building scenarios and policy mixes based on logical consistency. European Journal of Futures Research, 14, Article 16.

Uncertainty represents a major challenge for public decision-making, particularly in policy domains in-volving long-term investments and complex interactions between technological, economic, social, and environmental factors.





In this article, the authors address this challenge by proposing a new prospective methodology for con-necting scenario planning with policy analysis. The research focuses particularly on how policymakers can develop strategies that remain coherent and potentially robust across different possible futures. The research is situated within futures studies, strategic foresight, policy planning, and sustainable mobility.

The authors begin from a limitation of conventional Cross-Impact Balance (CIB) analysis. CIB can be used to identify internally consistent combinations of uncertain external factors and thereby reduce the enormous number of theoretically possible scenarios. However, conventional approaches generally treat policy measures separately from these external uncertainties. The authors therefore introduce Cross-Impact Scenario-Policy Analysis (CRISPA), a dependency-based extension designed to integrate contextual uncertainties and policy measures within a single analytical framework. Rather than repre-senting relationships simply as positive or negative impacts, CRISPA conceptualizes them as logical de-pendencies, allowing researchers to identify combinations that are mutually compatible or contradicto-ry.

To demonstrate the method, the researchers apply CRISPA to a metro construction project in Brussels. The case examines whether policy mixes work together, and whether they remain appropriate—or ro-bust—across different possible scenarios. The results show that CRISPA simplifies scenario analysis while including policy choices. This matters because policymakers must often combine policies that interact with each other and with uncertain future conditions.

CRISPA provides researchers with a structured way of connecting futures thinking to concrete policy formulation, moving from the exploration of possible futures toward the examination of strategies ca-pable of functioning across uncertainty. Its potential impact extends beyond urban transport: the methodology could be adapted to other fields involving complex policy choices, including climate gov-ernance, energy, infrastructure, technology, and potentially geopolitical or international policy plan-ning. The study therefore illustrates an important evolution in futures research: from simply imagining alternative futures toward systematically examining how policy mixes can be designed, tested, and made more robust in relation to those futures.

Uncertainty complicates long-term policymaking amid complex technological, economic, social, and environmental interactions.

CRISPA links futures thinking to policy formulation, helping researchers develop strategies resilient to uncertainty.

2 Applied research

AI and Higher Education in the UAE: Empirical Evidence on Student Learning and Faculty Efficiency

Aljneibi, W. S., & Frick, W. C. (2026). The role of artificial intelligence in enhancing student learning and faculty efficiency in high-er education: An empirical investigation in the UAE. Frontiers in Education.

The rapid integration of AI into higher education has generated considerable debate about its potential to transform teaching, learning, and academic work.





In their 2026 study, Aljneibi and Frick examine this transformation within the specific context of the UAE, where AI has become a strategic national priority through the UAE National Strategy for Artificial Intelligence 2031. Rather than approaching AI primarily as a theoretical or prospective development, the authors conduct an applied empirical investigation of how AI is currently perceived to affect student learning and faculty efficiency in UAE universities.

The study employs a quantitative, cross-sectional survey design involving 128 students and faculty members from four UAE higher education institutions. Participants were recruited through stratified convenience sampling, and the researchers analyzed the data using descriptive statistics, Pearson correlations, multiple regression, t-tests, and ANOVA. The study examines three principal dimensions: AI utili-zation, perceived student learning outcomes, and perceived faculty efficiency, while also considering institutional readiness.

The findings indicate statistically significant positive associations between AI utilization and both perceived student learning outcomes and faculty efficiency. AI utilization correlated positively with student learning outcomes ($r = .438$, $p < .001$) and faculty efficiency ($r = .394$, $p < .001$). Regression analysis showed that AI utilization was a significant predictor of student learning outcomes and faculty efficien-cy, whereas institutional readiness was not a statistically significant independent predictor in either model. The findings therefore suggest that participants who reported greater AI utilization also tended to report more positive perceptions of learning and faculty productivity. However, the authors empha-size an important methodological limitation: because the research is cross-sectional and based on self-reported perceptions, the results demonstrate associations rather than causal effects.

The study provides offers an important empirical foundation for future longitudinal and comparative studies examining whether AI adoption leads to changes in actual academic performance and faculty productivity over time. Its broader contribution is to link national AI strategies with the realities of uni-versity students and educators, demonstrating how the transformation of higher education can be as-sessed through concrete institutional evidence rather than technological speculation alone.

In the UAE, AI is a national priority under the Artificial Intelligence Strategy 2031.

Greater AI use may be associated with more positive perceptions of learning and faculty productivity.

Applied research

Empirical Evidence on Diplomacy and International Relations

Sadegh-Zadeh, S.-A., Kello, L., Véliz, C., Gordon, N., & Campbell, D. F. J. (2026). Is a new world order taking shape in the age of AI? Mapping the global distribution of AI readiness and its implications for diplomacy and global order. Frontiers in Political Sci-ence, 8, 1888614.

In this article, the authors examine whether the global distribution of AI capabilities is beginning to in-fluence the structure of international relations. Rather than speculating about a future AI-driven world order, the researchers use empirical cross-national data to map existing differences in national AI readi-ness and investigate how these differences relate to governance and diplomatic capacity.





The research draws primarily on the 2023 Government AI Readiness Index (GARI), covering 193 coun-tries, supplemented by four additional sources: the IMF AI Preparedness Index, selected indicators from the Stanford AI Index, the UN E-Government Development Index, and broadband-access data. The au-thors first test whether these different measures capture a common underlying dimension of national AI capacity. Their statistical analysis demonstrates a high degree of convergence between the indicators, with correlations between GARI and the other measures ranging from approximately .74 to .89 and a Cronbach's alpha of .93. A principal-component analysis indicates that the first component accounts for approximately 76% of the variance. The researchers subsequently use country fixed-effects and year fixed-effects models to examine whether changes in AI readiness are associated with subsequent changes in governance and diplomatic indicators.



The findings reveal a highly uneven but geographically dispersed global AI-readiness landscape. Countries with strong AI capabilities are not concentrated in a single region, suggesting the emergence of a more multipolar distribution of technological capacity. The study also finds positive associations between AI readiness and indicators of governance and diplomatic capacity. However, an important result concerns what the data do not demonstrate: the temporal analyses produce relatively small and statistically un-certain effects.

The study's contribution is particularly valuable because it moves beyond broad claims that AI will trans-form geopolitics and instead establishes measurable patterns across almost the entire international sys-tem. It also has practical implications for governments and diplomatic institutions: AI-related infra-structure, skills, data governance, and innovation capacity may increasingly form part of countries' stra-tegic and foreign-policy priorities. At the same time, the authors highlight risks associated with unequal technological capacity, including new forms of competition, inequality, and surveillance.

AI infrastructure, skills, data governance, and innovation capacity may increasingly shape national stra-tegic and foreign-policy priorities.

Global AI readiness is uneven but increasingly multipolar.

Applied research

Black Box Warfare: Human Judgment and Military Decision-Making in the Age of AI

Shandler, R., Gross, M. L., & Shereshevsky, Y. (2026). Black box warfare: Human judgment and military decision-making in the age of AI. Journal of Conflict Resolution.

The rapid integration of AI into military operations is transforming not only the technological character of warfare but also the ways in which human actors make decisions under conditions of uncertainty and high risk. Here, the authors examine "how military personnel respond to AI-generated recommendations in targeting decisions."





Rather than approaching AI-enabled warfare primarily through theoretical or normative analysis, the study provides empirical evidence based on two controlled experiments involving military personnel. The research therefore offers an important applied contribution to debates about human–AI interac-tion, algorithmic decision-making, and meaningful human control in contemporary conflict.

Drawing on publicly available material, freedom-of-information requests, investigative reporting, and interviews with military personnel, the researchers developed realistic targeting scenarios without re-producing classified operational technology. Participants were randomly exposed to recommendations attributed either to an AI system or to human analysts and were asked to approve or reject potential mil-itary strikes. The scenarios varied in factors such as predicted accuracy and anticipated collateral dam-age, allowing the researchers to examine how the source of a recommendation and the perceived conse-quences of an operation affected decision-making.

The results challenge the widespread assumption that military personnel will necessarily exhibit auto-mation bias, namely a tendency to accept algorithmic recommendations. Instead, the study identifies substantial algorithmic aversion: participants were often more reluctant to accept AI-generated recom-mendations than comparable human recommendations, particularly when scenarios involved high lev-els of potential collateral damage. Further research demonstrates that this reluctance was not fixed. Providing partial explanations of the factors underlying AI recommendations reduced algorithmic aver-sion and encouraged more considered evaluations. Trust in AI therefore emerged as dynamic and con-text-dependent, shaped by the perceived stakes of a decision as well as by individual characteristics and the information provided through the decision-support interface.

The academic significance of the research liesinitsmovementfromlargelyspeculative debates about autonomous and AI-assisted warfare toward experimentally grounded evidence. It demonstrates that keeping humans formally "in the loop" does not automatically guarantee meaningful human judgment: human decision-makers interpret technological recommendations through their existing beliefs, emo-tional dispositions, institutional contexts, and perceptions of risk. The study consequently contributes to international security, conflict studies, military sociology, AI governance, and the emerging literature on human–machine interaction.

AI is reshaping warfare and high-risk decision-making.



Human responses to AI recommendations are shaped by beliefs, emotions, institutional contexts, and perceptions of risk.

Applied research

Generative AI and Learning Dynamics in Higher Education: A Longitudinal Em-pirical Study

Melanou, C., Beege, M., & Kimmig, M. (2026). Generative AI and learning dynamics in higher education: A longitudinal empirical study. Journal of Computer Assisted Learning, 42(5),

In this paper, the authors move beyond short-term evaluations of AI-assisted education by examining how students' learning develops over an entire semester.





The study focuses on the interaction between " several dimensions of learning—including knowledge acquisition, motivation, cognitive load, critical thinking, and metacognitive reflection"—and asks whether the educational effects of generative AI depend on how the technology is incorporated into teaching. Its longitudinal and empirical approach is particularly valuable because much previous re-search has examined AI through cross-sectional surveys or isolated learning outcomes.

The results provide a nuanced picture of AI-supported learning. All groups demonstrated significant knowledge gains during the semester, but students using AI did not achieve significantly greater knowledge gains than students in the control condition. Motivation remained relatively stable, while critical thinking also showed little overall change. Importantly, however, students in the AI conditions demonstrated greater reflective use of the technology, and reflective engagement was positively associ-ated with critical thinking. The study also found no evidence of a "Matthew effect," meaning that students with stronger prior achievement or greater previous AI experience did not systematically obtain larger learning benefits from AI. These findings challenge the assumption that access to generative AI au-tomatically produces superior educational outcomes.

Rather than asking simply whether AI "works," the research examines how, when, and under what in-structional conditions AI becomes educationally meaningful. This contributes to scholarship on educa-tional technology, higher education, cognitive learning, metacognition, and human–AI interaction. Practically, the findings suggest that universities should not treat the introduction of generative AI as an educational intervention in itself. Structured pedagogical guidance, reflective activities, and appropri-ate scaffolding may be necessary to transform AI access into meaningful learning. At the same time, the study's findings should be interpreted within its limitations: it was conducted within one program and a relatively small cohort, and the quasi-experimental rather than fully randomized design limits causal generalization. Overall, the research makes an important applied contribution by demonstrating that the educational impact of generative AI is not inherent to the technology itself, but emerges from the interaction between AI, instructional design, learner regulation, and the broader learning environment.

Generative AI shapes learning, motivation, cognitive load, critical thinking, and metacognition.

Structured pedagogical guidance, reflective activities, and scaffolding can help transform AI access into meaningful learning.

Applied research

Artificial Intelligence in Higher Education: Motivations, Academic Consequences

Quintanilla Villegas, M. A., & Pineda Rivas, E. E. (2026). Motivations, consequences, and concerns about the use of artificial intelligence in higher education: Empirical evidence. Frontiers in Education, 11, 1903769.

The rapid incorporation of generative AI into higher education is changing the ways students study, manage academic workloads, and approach learning. Yet the consequences of this transformation re-main difficult to generalize because students use AI tools for different purposes and under very different academic and institutional conditions.



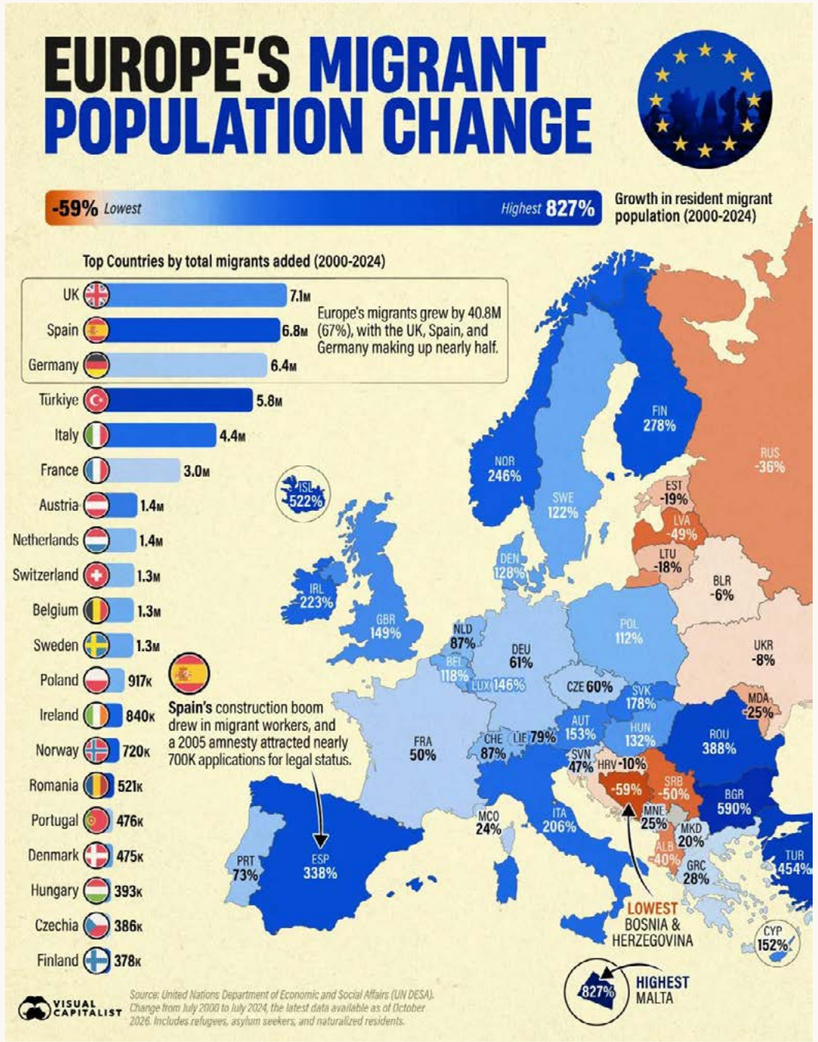


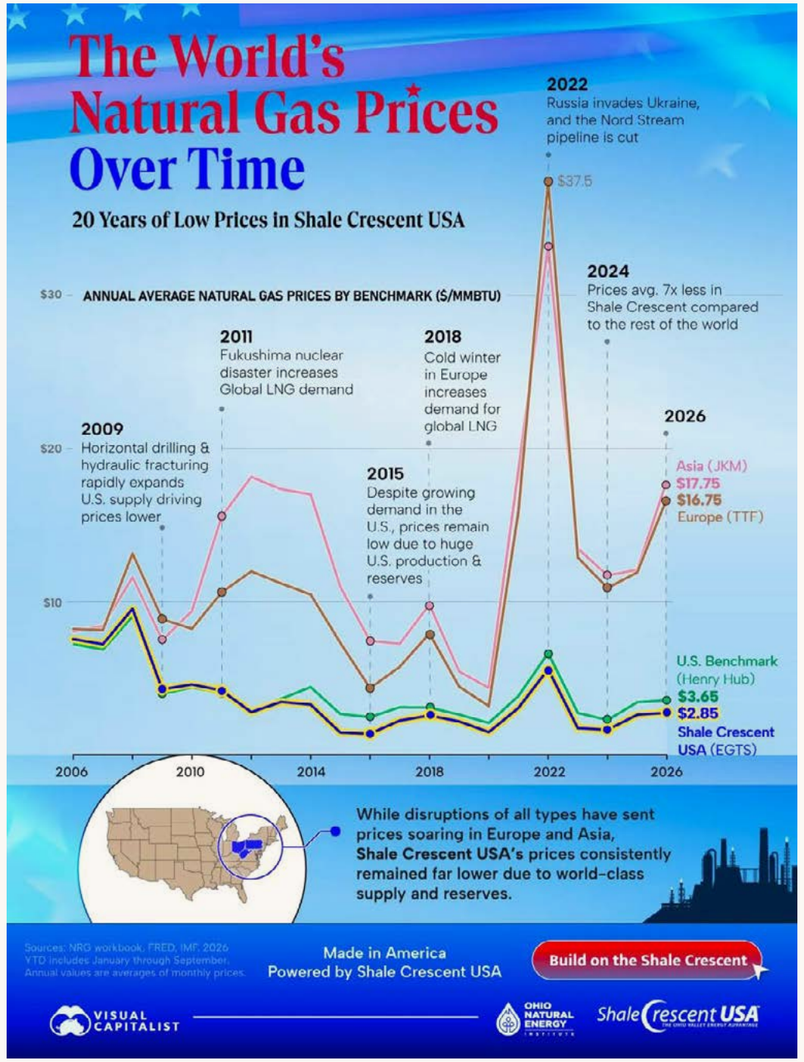
In their 2026 study, Miguel Alexander Quintanilla Villegas and Elia Elizabeth Pineda Rivas examine these dynamics among university students in El Salvador. Rather than treating AI use as either inherently bene-ficial or harmful, the researchers investigate the heterogeneous circumstances that motivate students to use ChatGPT and the academic and cognitive concerns that may accompany this use. The study therefore contributes empirical evidence from a context that remains comparatively underrepresented in the in-ternational literature on AI and higher education.

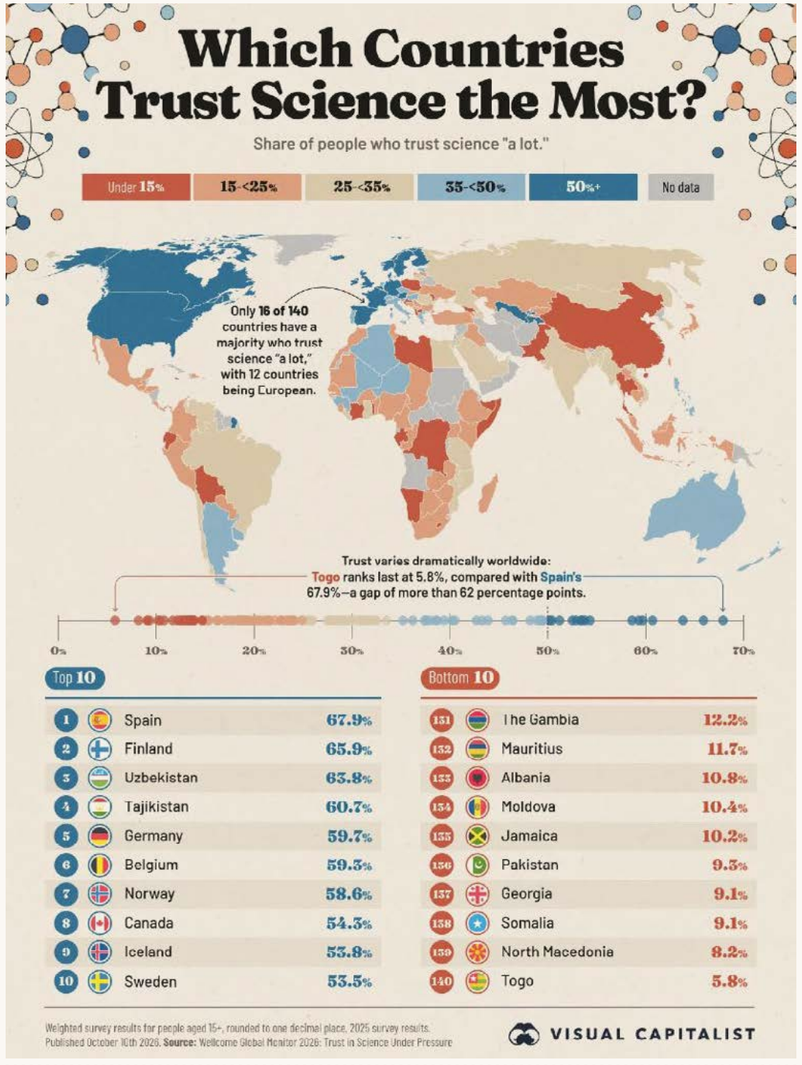
The research adopts a quantitative, cross-sectional and exploratory design based on data from 268 uni-versity students attending seven private higher-education institutions in El Salvador. Participants com-pleted a questionnaire examining academic workload, time pressure, motivation, perceived quality, ChatGPT use, procrastination, academic performance, and perceived memory difficulties, alongside de-mographic characteristics such as age, employment status, academic cycle, and parenthood. The re-searchers analyzed the data using CHAID (Chi-square Automatic Interaction Detection), an exploratory decision-tree technique that identifies statistically significant relationships between variables and pro-gressively separates students into different profiles. Four principal models were developed, allowing the researchers to examine how academic and sociodemographic characteristics intersect with patterns of AI use. Importantly, the authors emphasize that CHAID identifies statistical associations rather than causal relationships.

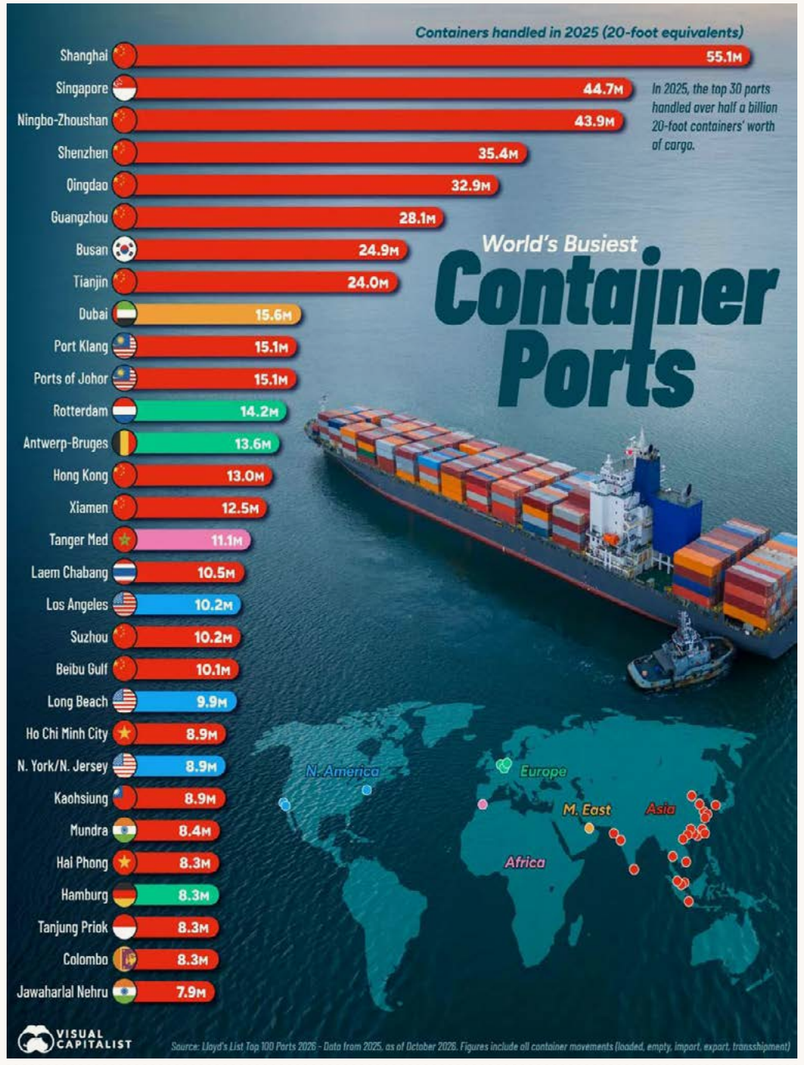
The study's findings support the development of digital competencies, explicit ethical guidelines, and pedagogically structured approaches to AI use, rather than leaving students to negotiate the technology entirely on their own. At the same time, the researchers acknowledge important limitations: the conven-ience sample, concentration on private institutions, cross-sectional design, and reliance on self-reported perceptions limit causal inference and broader generalization. Nevertheless, the research demonstrates the value of examining AI adoption through concrete student experiences and social contexts. Its princi-pal contribution is therefore to show that generative AI in higher education should be understood not simply as a technological innovation, but as a phenomenon embedded within academic pressure, insti-tutional structures, learning strategies, and changing relationships between students and knowledge.

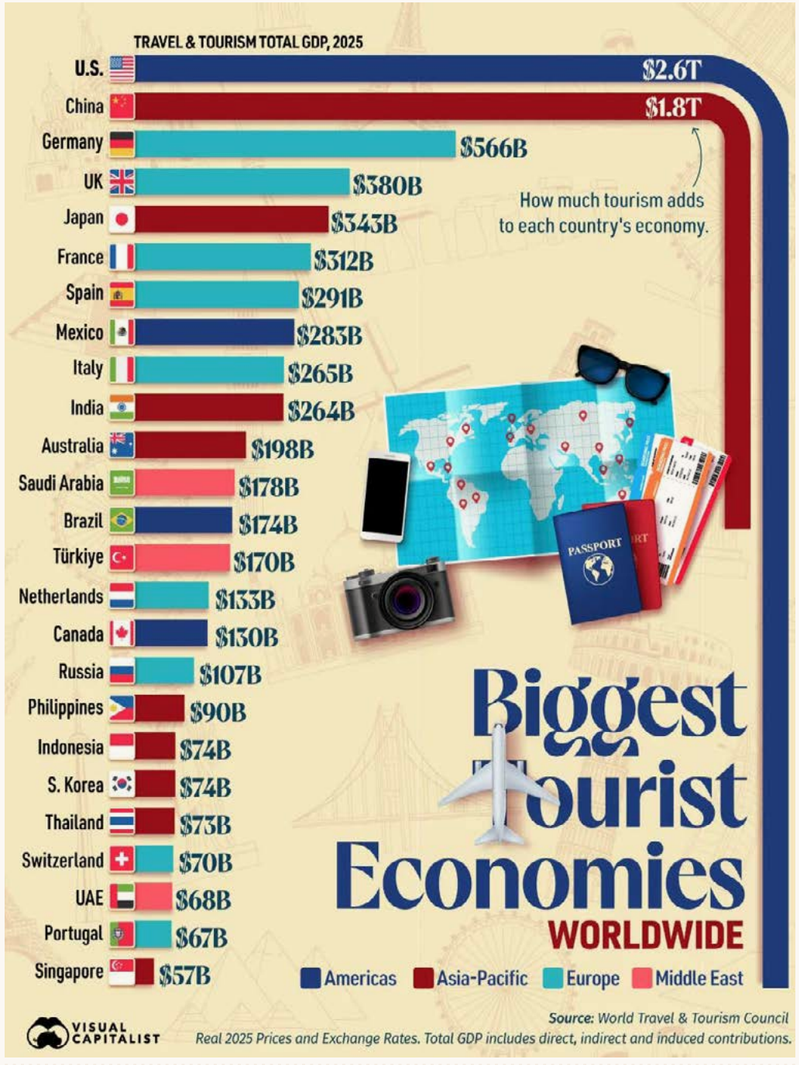
Generative AI in higher education is shaped by academic pressures, institutional structures, learning strategies, and evolving student–knowledge relationships.

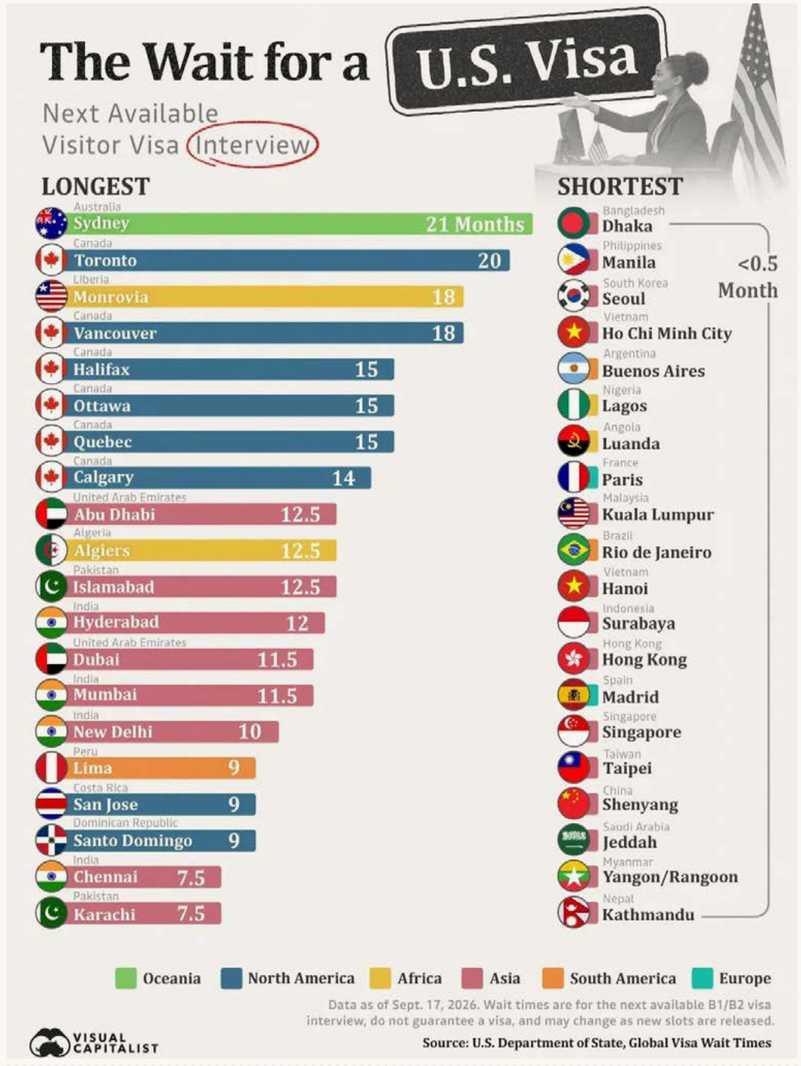

EUROPE'S MIGRANT POPULATION CHANGE
-59% Lowest
Highest 827%
Growth in resident migrant population (2000-2024)
Top Countries by total migrants added (2000-2024)
UK 7.1M
Spain 6.8M
Germany 6.4M
Türkiye 5.8M
Italy 4.4M
France 3.0M
Austria 1.4M
Netherlands 1.4M
Switzerland 1.3M
Belgium 1.3M
Sweden 1.3M
Poland 917K
Ireland 840K
Norway 720K
Romania 521K
Portugal 476K
Denmark 475K
Hungary 393K
Czechia 386K
Finland 378K
Europe's migrants grew by 40.8M (67%), with the UK, Spain, and Germany making up nearly half.
Spain's construction boom drew in migrant workers, and a 2005 amnesty attracted nearly 700K applications for legal status.
ISL 522%
NOR 246%
FIN 278%
RUS -36%
SWE 122%
EST -19%
LVA -49%
LTU -18%
DEN 128%
BLR -6%
IRL 223%
GBR 149%
NLD 87%
BEL 118%
LUX 146%
DEU 61%
POL 112%
UKR -8%
CZE 60%
SVK 178%
MDA -25%
FRA 50%
CHE 87%
LIE 79%
AUT 153%
HUN 132%
ROU 388%
SVN 47%
HRV -10%
SRB -50%
-59%
BGR 590%
MNE 25%
MCO 24%
ITA 206%
MKD 20%
ALB 40%
GRC 28%
TUR 454%
PRT 73%
ESP 338%
CYP 152%
LOWEST BOSNIA & HERZEGOVINA
827%
HIGHEST MALTA
VISUAL CAPITALIST
Source: United Nations Department of Economic and Social Affairs (UN DESA). Change from July 2000 to July 2024, the latest data available as of October 2026. Includes refugees, asylum seekers, and naturalized residents.

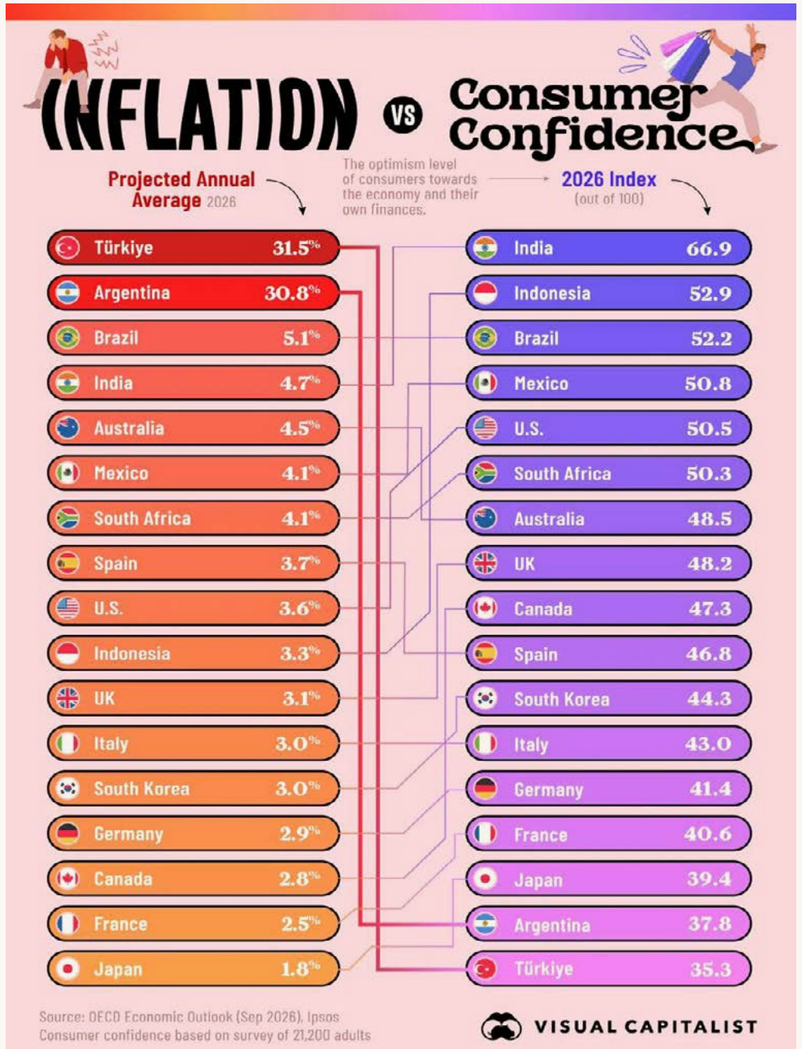

The World's Natural Gas Prices Over Time
20 Years of Low Prices in Shale Crescent USA
ANNUAL AVERAGE NATURAL GAS PRICES BY BENCHMARK ($/MMBTU)
$30
$20
$10
2009
Horizontal drilling & hydraulic fracturing rapidly expands U.S. supply driving prices lower
2011
Fukushima nuclear disaster increases Global LNG demand
2015
Despite growing demand in the U.S., prices remain low due to huge U.S. production & reserves
2018
Cold winter in Europe increases demand for global LNG
2022
Russia invades Ukraine, and the Nord Stream pipeline is cut
$37.5
2024
Prices avg. 7x less in Shale Crescent compared to the rest of the world
2026
Asia (JKM)
$17.75
$16.75
Europe (TTF)
U.S. Benchmark (Henry Hub)
$3.65
$2.85
Shale Crescent USA (EGTS)
2006
2010
2014
2018
2022
2026
While disruptions of all types have sent prices soaring in Europe and Asia, Shale Crescent USA's prices consistently remained far lower due to world-class supply and reserves.
Sources: NRG workbook, FRED, IMF, 2026 YTD includes January through September. Annual values are averages of monthly prices.
Made in America
Powered by Shale Crescent USA
Build on the Shale Crescent
VISUAL CAPITALIST
OHIO NATURAL ENERGY INSTITUTE
Shale Crescent USA

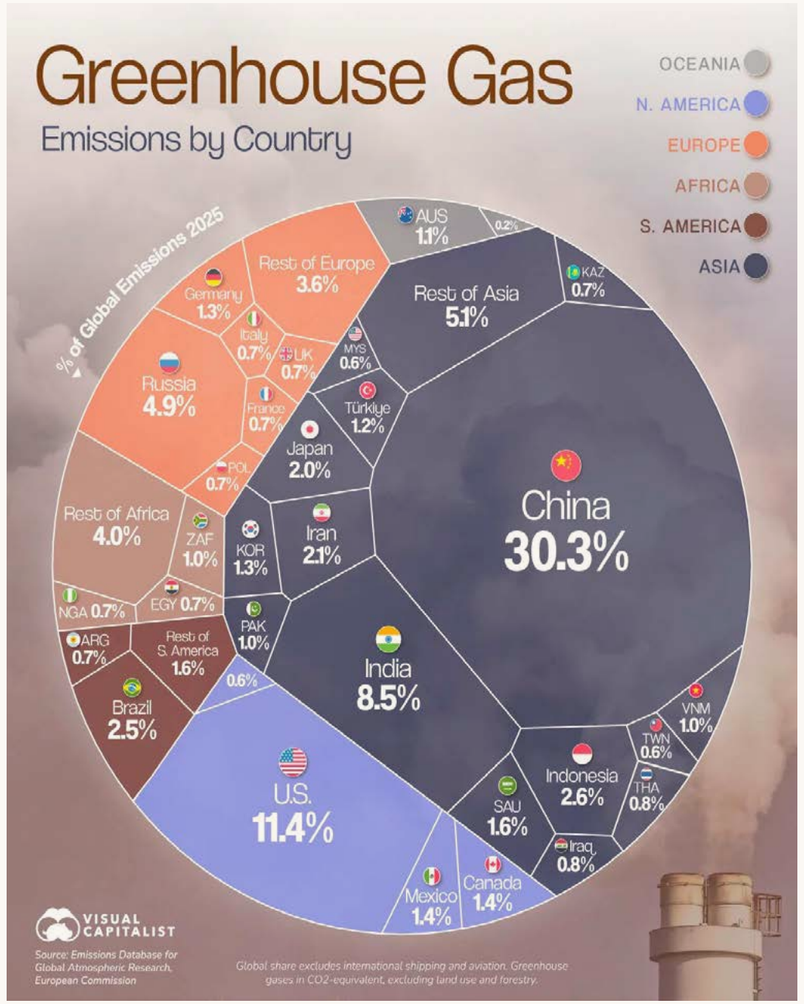

Which Countries Trust Science the Most?
Share of people who trust science "a lot."
Under 15%
15-<25%
25-<35%
35-<50%
50%+
No data
Only 16 of 140 countries have a majority who trust science "a lot," with 12 countries being European.
Trust varies dramatically worldwide:
Togo ranks last at 5.8%, compared with Spain's 67.9%—a gap of more than 62 percentage points.
0%
10%
20%
30%
40%
50%
60%
70%
Top 10
1 Spain 67.9%
2 Finland 65.9%
3 Uzbekistan 63.8%
4 Tajikistan 60.7%
5 Germany 59.7%
6 Belgium 59.3%
7 Norway 58.6%
8 Canada 54.3%
9 Iceland 53.8%
10 Sweden 53.5%
Bottom 10
131 The Gambia 12.2%
132 Mauritius 11.7%
133 Albania 10.8%
134 Moldova 10.4%
135 Jamaica 10.2%
136 Pakistan 9.3%
137 Georgia 9.1%
138 Somalia 9.1%
139 North Macedonia 8.2%
140 Togo 5.8%
Weighted survey results for people aged 15+, rounded to one decimal place, 2025 survey results.
Published October 10th 2026. Source: Wellcome Global Monitor 2026: Trust in Science Under Pressure
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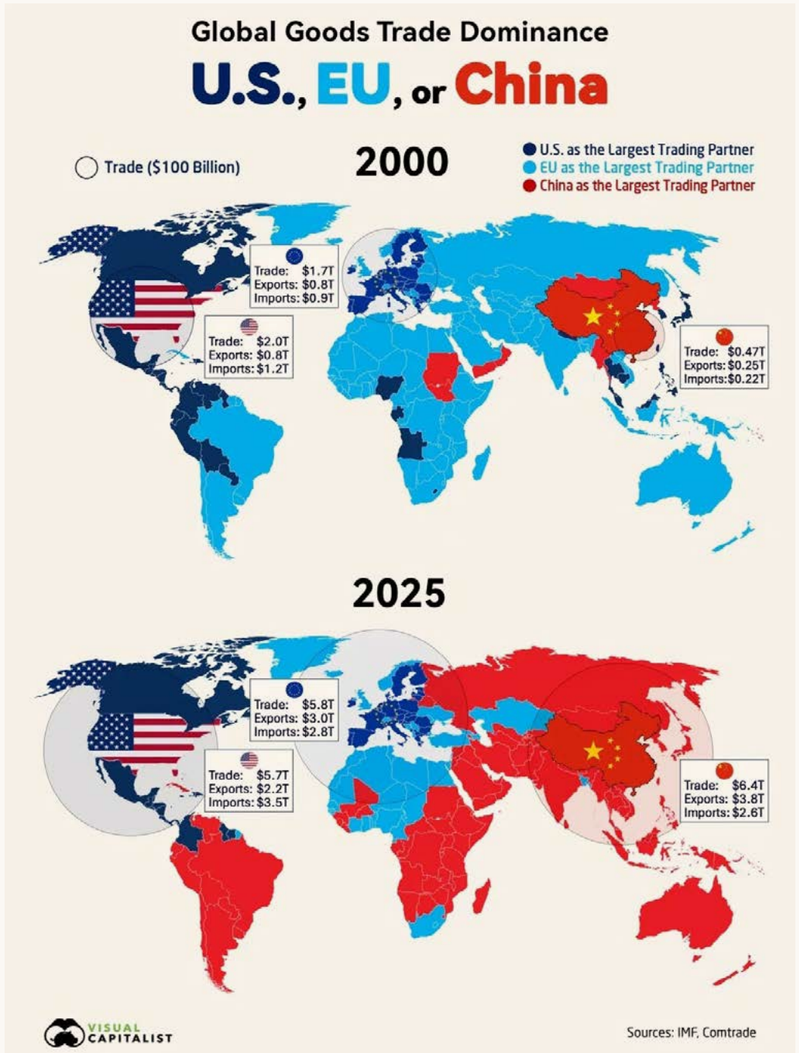

Containers handled in 2025 (20-foot equivalents)
Shanghai 55.1M
Singapore 44.7M
Ningbo-Zhoushan 43.9M
Shenzhen 35.4M
Qingdao 32.9M
Guangzhou 28.1M
Busan 24.9M
Tianjin 24.0M
Dubai 15.6M
Port Klang 15.1M
Ports of Johor 15.1M
Rotterdam 14.2M
Antwerp-Bruges 13.6M
Hong Kong 13.0M
Xiamen 12.5M
Tanger Med 11.1M
Laem Chabang 10.5M
Los Angeles 10.2M
Suzhou 10.2M
Beibu Gulf 10.1M
Long Beach 9.9M
Ho Chi Minh City 8.9M
N. York/N. Jersey 8.9M
Kaohsiung 8.9M
Mundra 8.4M
Hai Phong 8.3M
Hamburg 8.3M
Tanjung Priok 8.3M
Colombo 8.3M
Jawaharlal Nehru 7.9M
In 2025, the top 30 ports handled over half a billion 20-foot containers' worth of cargo.
World's Busiest
Container Ports
N. America
Europe
M. East
Asia
Africa
VISUAL CAPITALIST
Source: Lloyd's List Top 100 Ports 2026 - Data from 2025, as of October 2026. Figures include all container movements (loaded, empty, import, export, transshipment)

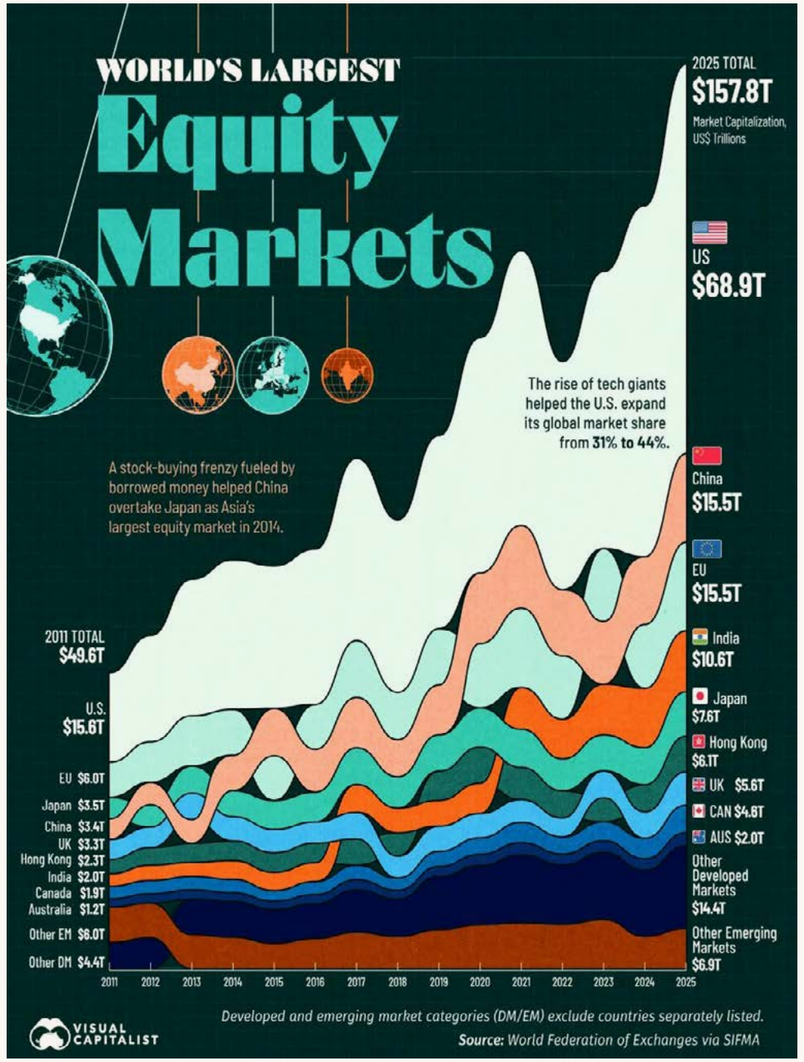

TRAVEL & TOURISM TOTAL GDP, 2025
U.S. $2.6T
China $1.8T
Germany $566B
UK $380B
Japan $343B
France $312B
Spain $291B
Mexico $283B
Italy $265B
India $264B
Australia $198B
Saudi Arabia $178B
Brazil $174B
Türkiye $170B
Netherlands $133B
Canada $130B
Russia $107B
Philippines $90B
Indonesia $74B
S. Korea $74B
Thailand $73B
Switzerland $70B
UAE $68B
Portugal $67B
Singapore $57B
How much tourism adds to each country's economy.
PASSPORT
Biggest Tourist Economies
WORLDWIDE
Americas
Asia-Pacific
Europe
Middle East
VISUAL CAPITALIST
Source: World Travel & Tourism Council
Real 2025 Prices and Exchange Rates. Total GDP includes direct, indirect and induced contributions.


The Wait for a U.S. Visa
Next Available Visitor Visa Interview
LONGEST
Australia Sydney 21 Months
Canada Toronto 20
Liberia Monrovia 18
Canada Vancouver 18
Canada Halifax 15
Canada Ottawa 15
Canada Quebec 15
Canada Calgary 14
United Arab Emirates Abu Dhabi 12.5
Algeria Algiers 12.5
Pakistan Islamabad 12.5
India Hyderabad 12
United Arab Emirates Dubai 11.5
India Mumbai 11.5
India New Delhi 10
Peru Lima 9
Costa Rica San Jose 9
Dominican Republic Santo Domingo 9
India Chennai 7.5
Pakistan Karachi 7.5
SHORTEST
Bangladesh Dhaka
Philippines Manila
South Korea Seoul
Vietnam Ho Chi Minh City
Argentina Buenos Aires
Nigeria Lagos
Angola Luanda
France Paris
Malaysia Kuala Lumpur
Brazil Rio de Janeiro
Vietnam Hanoi
Indonesia Surabaya
Hong Kong Hong Kong
Spain Madrid
Singapore Singapore
Taiwan Taipei
China Shenyang
Saudi Arabia Jeddah
Myanmar Yangon/Rangoon
Nepal Kathmandu
<0.5 Month
Oceania
North America
Africa
Asia
South America
Europe
Data as of Sept. 17, 2026. Wait times are for the next available B1/B2 visa interview, do not guarantee a visa, and may change as new slots are released.
Source: U.S. Department of State, Global Visa Wait Times
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INFLATION vs Consumer Confidence
Projected Annual Average 2026
The optimism level of consumers towards the economy and their own finances.
2026 Index (out of 100)
Türkiye 31.5%
Argentina 30.8%
Brazil 5.1%
India 4.7%
Australia 4.5%
Mexico 4.1%
South Africa 4.1%
Spain 3.7%
U.S. 3.6%
Indonesia 3.3%
UK 3.1%
Italy 3.0%
South Korea 3.0%
Germany 2.9%
Canada 2.8%
France 2.5%
Japan 1.8%
India 66.9
Indonesia 52.9
Brazil 52.2
Mexico 50.8
U.S. 50.5
South Africa 50.3
Australia 48.5
UK 48.2
Canada 47.3
Spain 46.8
South Korea 44.3
Italy 43.0
Germany 41.4
France 40.6
Japan 39.4
Argentina 37.8
Türkiye 35.3
Source: OECD Economic Outlook (Sep 2026), Ipsos
Consumer confidence based on survey of 21,200 adults
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Greenhouse Gas
Emissions by Country
OCEANIA
N. AMERICA
EUROPE
AFRICA
S. AMERICA
ASIA
% of Global Emissions 2025
China 30.3%
India 8.5%
U.S. 11.4%
Rest of Asia 5.1%
Rest of Europe 3.6%
Russia 4.9%
Japan 2.0%
Iran 2.1%
Rest of Africa 4.0%
Indonesia 2.6%
Brazil 2.5%
Rest of S. America 1.6%
Canada 1.4%
Mexico 1.4%
Türkiye 1.2%
AUS 1.1%
Germany 1.3%
Italy 0.7%
UK 0.7%
France 0.7%
POL 0.7%
ZAF 1.0%
KOR 1.3%
PAK 1.0%
EGY 0.7%
NGA 0.7%
ARG 0.7%
MYS 0.6%
KAZ 0.7%
VNM 1.0%
TWN 0.6%
THA 0.8%
SAU 1.6%
Iraq 0.8%
VISUAL CAPITALIST
Source: Emissions Database for Global Atmospheric Research, European Commission
Global share excludes international shipping and aviation. Greenhouse gases in CO2-equivalent, excluding land use and forestry.


Global Goods Trade Dominance
U.S., EU, or China
Trade ($100 Billion)
2000
U.S. as the Largest Trading Partner
EU as the Largest Trading Partner
China as the Largest Trading Partner
Trade: $1.7T
Exports: $0.8T
Imports: $0.9T
Trade: $2.0T
Exports: $0.8T
Imports: $1.2T
Trade: $0.47T
Exports: $0.25T
Imports: $0.22T
2025
Trade: $5.8T
Exports: $3.0T
Imports: $2.8T
Trade: $5.7T
Exports: $2.2T
Imports: $3.5T
Trade: $6.4T
Exports: $3.8T
Imports: $2.6T
VISUAL CAPITALIST
Sources: IMF, Comtrade


WORLD'S LARGEST
Equity Markets
2025 TOTAL
$157.8T
Market Capitalization, US$ Trillions
US
$68.9T
China
$15.5T
EU
$15.5T
India
$10.6T
Japan
$7.6T
Hong Kong
$6.1T
UK $5.6T
CAN $4.8T
AUS $2.0T
Other Developed Markets
$14.4T
Other Emerging Markets
$6.9T
The rise of tech giants helped the U.S. expand its global market share from 31% to 44%.
A stock-buying frenzy fueled by borrowed money helped China overtake Japan as Asia's largest equity market in 2014.
2011 TOTAL
$49.6T
U.S. $15.6T
EU $6.0T
Japan $3.5T
China $3.4T
UK $3.3T
Hong Kong $2.3T
India $2.0T
Canada $1.9T
Australia $1.2T
Other EM $8.0T
Other DM $4.4T
2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
VISUAL CAPITALIST
Developed and emerging market categories (DM/EM) exclude countries separately listed.
Source: World Federation of Exchanges via SIFMA

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