



FUTURE TRENDS

Report

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TRENDS RESEARCH & ADVISORY



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

Can AI Harm Learning?

Bastani, H., Bastani, O., Sungu, A., Ge, H., Kabakçı, O., & Mariman, R. (2024). Generative ai can harm learning. Available at SSRN, 4895486.

This article investigates how generative AI affects students' learning and achievement. The study delves into a basic question: does AI use in learning settings impair the process of skills acquisition? The researchers conducted a field experiment in a Turkish high school with nearly 1,000 students in ninth to eleventh grade.



Students were allocated randomly into a control group with no AI access, a group that used GPT Base, and a group using GPT Tutor, an optimized version designed with safeguards to allow learning through hints and teacher-recommended prompts. The AI software was utilized in math practice sessions, which accounted for 15% of the material.

The results demonstrate a complex dynamic. Students who utilized GPT Tutor outperformed the control group on practice problems by a 127% gain. GPT Base also improved practice performance by 48%. However, these gains did not transfer to independent performance. On follow-up testing, the GPT Base group scored 17% lower than the control group, implying a negative learning effect. Conversely, GPT Tutor users had no loss of test performance, indicating that its design allowed for the maintenance of learning results. Students who used GPT Base treated the tool as a "crutch" and copied the answers directly without any interaction. On the other hand, GPT Tutor promoted positive interaction, requiring students to justify their reasoning and build problem-solving skills.

The article further identifies that the students who used GPT Base were largely unaware of the negative effects on learning. Although their performance was inferior, they perceived that they

had done a good job and learned well, showing a gap between perceived and actual learning. On the other hand, users of GPT Tutor reported a better sense of performance and appreciation for the value of the tool's aid, even when their exam results were not higher than the control group. This indicates that well-crafted AI tools can augment the learning experience without harming it.

The research explores the processes behind these findings. The analysis reveals that GPT Base often generates erroneous responses, and students are likely to take these answers at face value without examining them. In particular, even mathematical errors, which students should have been able to react to, had a powerful negative effect—implying failure to engage with the material. Lastly, this study provides a cautionary note: generative AI may enhance performance in the short term but may undermine precisely those learning processes that will ultimately contribute to overall success when executed without limits. Tools like GPT Tutor demonstrate a possible path forward—to leverage the convenience of AI but safeguard instructional integrity. The researchers call for consideration of meticulous design, transparency, and regulation to ensure that AI used in teaching fosters, rather than replaces, human learning.



Well-crafted AI tools can augment the learning experience without harming it.

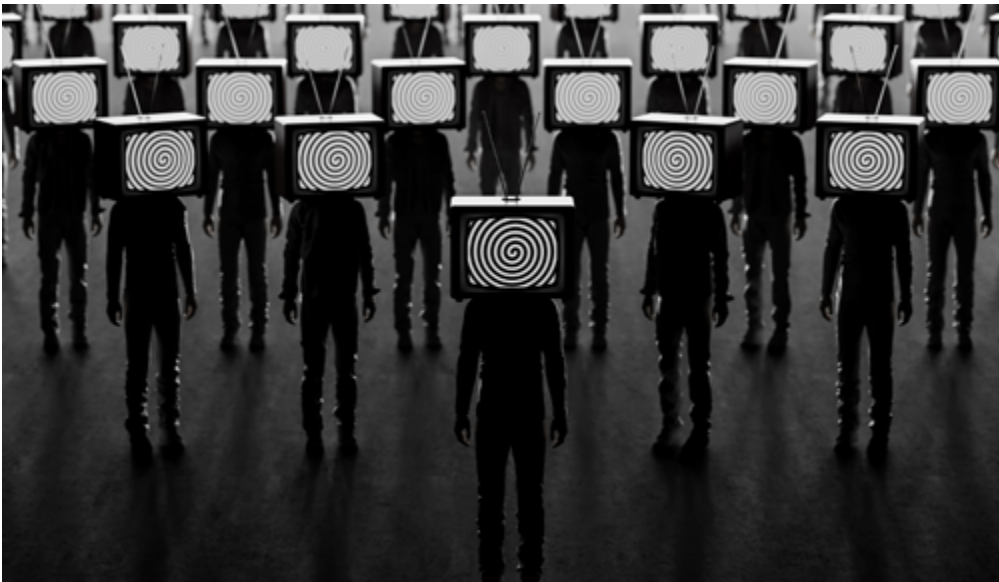


Tools like GPT Tutor demonstrate a possible path forward—to leverage the convenience of AI while safeguarding instructional integrity.

Media Coverage and Insomnia: Exposure to War

Fekih-Romdhane, F., Helmy, M., Alhuwailah, A., Shuwiekh, H. A. M., Naser, A. Y., Maalej, E., ... & Hallit, S. (2024). Mediating effect of depression and acute stress between exposure to Israel-Gaza war media coverage and insomnia: a multinational study from five Arab countries. BMC public health, 24(1), 1498

The study assesses the influence of war media coverage on insomnia, with a specific focus on the mediating roles of depression and perceived stress. Two weeks following the outbreak of the October 2023 Israel-Gaza war, 2,635 Egyptian, Jordanian, Kuwaiti, Omani, and Tunisian adults participated in this cross-sectional study. Participants completed an online questionnaire measuring exposure to war media, depressive and stress levels, and insomnia severity.



The results indicate that indirect experience through mass and social media strongly relates to mental disorders. In particular, exposure to war in the media was associated with elevated symptoms of depression and stress, which were in turn linked with greater insomnia. Yet, the direct link between media exposure and insomnia was not statistically significant, indicating that psychological factors completely mediate this relationship. The study relies on earlier research that has demonstrated that both direct and indirect exposure to trauma can disrupt sleep. Previous studies have shown comparable results following natural disasters and terrorist attacks, but the present study extends this information to a non-Western Arab population. The authors argue that exposure to horrific and disturbing media content can instill emotional and cognitive arousal, disrupting both falling asleep and maintaining sleep. Moreover, depression and acute stress, typically compounded by such exposure, are established predictors of insomnia. The most significant strength of the study is its use of a newly redeveloped scale to assess war-related media exposure in terms of hours per day, which is more precise than previous studies based on subjective or imprecise estimations. The report highlights the necessity of considering the psychological effects of media consumption during conflict, particularly in regions like the Middle East and North Africa, where mental

health threats are already exacerbated by ongoing instability. The study also suggests that the media's impact can cross geographic boundaries, affecting audiences far removed from the conflict location. Mediation analysis showed that both depression and stress were significant and full mediators of the association between media exposure and insomnia, and that "focused interventions are needed." The authors suggest screening for and treating symptoms of depression and stress in those with high levels of media exposure as a potential avenue to alleviate insomnia. The authors assert the need for public awareness of the potential perils of war-related media coverage and advocate for a pre-view warning before such content is broadcast. While the study is constrained by its cross-sectional design, self-report measures, and non-random sampling, it provides significant early evidence of how psychological processes mediate the connection between war media exposure and sleep disturbance. The findings have important public health implications and suggest that mental health professionals and policymakers ought to monitor and regulate the psychological effects of war media coverage, especially during times of heightened conflict. More longitudinal and cross-cultural studies should be conducted to confirm these results and determine more effective prevention and intervention approaches.



Depression and acute stress, compounded by exposure to horrific and disturbing media content, are established predictors of insomnia.



Mediation analysis showed that both depression and stress were significant and full mediators of the association between media exposure and insomnia, and that "focused interventions are needed."

The Normative Constraints of Project-Based Research

Obadia, L. (2024). "Programmation, pilotage, politique, prospective... Les contraintes normatives de la « recherche sur projet » en SHS (France-Europe)." *Communications* 114(1), 161- 172.

Lionel Obadia's article examines the political and economic constraints placed on the funding of project-based research in the social sciences and humanities (SSH) in France and Europe. It is a critical survey of how the shift towards competitive funding, made operational by national and European agencies, has rebalanced the research landscape. Since the early 2000s, the traditional model of public support has given way to a system that requires researchers to continually compete for funds by answering calls for proposals.



While intended to serve excellence and creativity, this system generates excessive administrative burdens, promotes hyper-individualism, and can undermine long-term scholarly autonomy and researcher solidarity. In France, the creation of agencies such as the Agence nationale de la recherche (ANR) marked the institutionalization of this model, in line with concurrent European trends. The state's transition from an enabler to a controller of research is evident in performance measurement and audit cultures that quantify scientific output in economic terms. Although this approach promises greater thematic concentration, it generally limits thematic focus and marginalizes non-explicitly related disciplines, such as most SSH fields. The article reveals a paradox: despite an increase in the number of SSH-specific funding instruments, they are often symbolic or offer uneven benefits. Thierry Mandon's 2016 "Plan for the SSH," for instance, included several supportive measures, but only those taken by the ANR had tangible effects. Despite this, SSH projects remain underrepresented in terms of their demographic and institutional impact within the academic paradigm. Obadia also considers the European context, including the evolution of

research programs like Horizon 2020 and Horizon Europe. While early frameworks reserved specific spaces for SSH, later ones sacrificed their autonomy by embedding them in broader interdisciplinary themes. This transformation, with gradual increases in budget share, has made SSH research harder to identify and have an impact. There is now a twofold organization: one where SSH is recognized through targeted labels, and the other where it comes under more general societal concerns, articulated in techno-economic terms. Despite recent evidence of transformations, such as the expansion of ANR's SSH funding axes and their increasing inclusion in large-scale research projects, the boundaries are still vast. The author warns that these advances may obscure deeper structural issues, as SSH remains vulnerable to top-down programming that inhibits imagination and promotes reliance on uncertain political agendas. Finally, while acknowledging some beneficial tendencies, the paper asserts that SSH is still far from being recognized, gaining independence, or being seriously embedded in national and European research environments shaped by economic rationale and managerial governance.



The shift towards competitive funding, implemented by national and European agencies, has rebalanced the research landscape.



Deeper structural issues as SSH remains vulnerable to top-down programming, inhibiting imagination and promoting reliance on uncertain political agendas.

Living-lab in Architecture, Urbanism and Landscape Research

Fleury, F., & Nguyen, T. H. (2024, June). «Xoay», laboratoire vivant de prospective en architecture, urbanisme et paysage. In Formation, recherche et pratiques francophones en architecture, aménagement et paysage en Asie du sud-est: innovation et entrepreneuriat.

This article mentions the potential construction of a Franco-Vietnamese "living laboratory" targeting architectural, urban, and landscape research. Through an intercultural approach, the project is meant to innovate and encourage imagination, extend epistemological debate, and enlarge methodological variety through cooperative research. The authors determine that cultural dissonance, such as that which Western researchers encounter upon their arrival in Vietnamese realities, provokes intellectual appetite and opens horizons.



Such intercultural tension, supported by precedent literature, is regarded as a key driver of creativity and innovation, particularly in topics still in the process of defining scientific foundations, as in architecture.

The proposed lab serves as a fertile ground for hybrid research and transdisciplinary collaboration, where scholars would have an opportunity to cross-reference methodologies, test fielded solutions in practice, and engage in co-productive practices. The lab bridges knowledge gaps between academic research and the real world, supplementing the limitations of conventional architecture studies. The authors are calling for research based on reality and with the potential to generate generalizable knowledge. They are advocating for methodologies like action research, in-situ experimentation, and project-based inquiry, all of which necessitate direct engagement with rich, dynamic, and real-world settings.

The Franco-Vietnamese living lab would revolve around eco-design, which is seen as central to addressing the urgent socio-ecological transitions the world is confronting. The aim is to study and put in place adaptive responses that minimize environmental footprints and enhance social justice. Three research issues of greatest priority include: construction materials and recycling facilities,

mechanisms to mitigate urban heat islands, and water management across scales.

To illustrate how the living lab is able to work, two samples of ongoing projects are presented. The first analyzes the informal system of waste collecting in Hanoi. From it, the connection between waste pickers, or "đồng nát," and the institutional system of garbage collecting is observed, including recycling chain contribution. It highlights territorial waste movement logic, stakeholder relationships, and socio-environmental impacts.

The second case study, "Archi-Adapt," focuses on thermal comfort of city housing during heatwaves. The project presents three methodology choices: finding urban heat islands by mapping, sorting buildings in terms of vulnerability type, and applying in-situ measurements of user perception and indoor climate. It aims to co-create responsive solutions with citizens, architects, and government officials.

Overall, the article argues that a Franco-Vietnamese living lab would offer an engaged paradigm to generate relevant knowledge, foster intercultural collaboration, and create more sustainable and just urban environments. By linking research to on-the-ground realities without ignoring universal challenges, such a lab can become a powerful tool of socio-ecological transformation.



The cultural dissonance which Western researchers encounter in their arrival at Vietnamese realities provokes intellectual appetite and opens horizons.



A living lab would offer an engaged paradigm to generate relevant knowledge, foster intercultural collaboration, and create more sustainable urban environments.

Anticipation and Strategic Deployment of Organizations Facing the Future

Dartiguepeyrou, C., & Saloff-Coste, M. (2024). La prospective en action: Anticipations et déploiements stratégiques des organisations face au futur (Vol. 17). ISTE Group.

"La prospective en action: Anticipations et déploiements stratégiques des organisations face au futur", examines how organizations use strategic foresight to anticipate future challenges, seize opportunity, and define their transformation. The book collates different case studies to show how anticipation is applied within industries—ranging from firms and universities to public institutions and municipalities—emphasizing that foresight is not just prediction but action, collaboration, and innovation.



The book demonstrates that foresight is sensing weak signals, imagining possible futures, and mobilizing collective intelligence to make informed choices in the here and now. The first part introduces theoretical and practical approaches and tools used by futurists. It illustrates how systematic foresight tools help businesses develop resilience and manage uncertainty, using examples from industries like tourism and journalism. One chapter is dedicated to the impact of generative AI on businesses, highlighting its disruptive power and the need for reimagining professional habits in the context of new technologies. The book also looks at the development of foresight globally, particularly in countries like China, and offers a comparative view of the adoption of anticipatory strategies.

The second part goes on to discuss how organizations and public institutions use foresight to guide strategic transformation. Through rich examples from institutions such as Michelin and Bouygues Construction, the book describes how foresight is embedded in innovation processes and decision-making. It illustrates how anticipation is not only used to forecast trends but to reimagine organizational mission and identity. At the academic level, foresight is becoming an institutional development instrument

strategically. Universities such as the Université Catholique de Lille and the University of Strasbourg are cited as examples of how higher education institutions are using foresight to create long-term strategies, enhance collaboration, and promote innovation in teaching and research.

The final part of the book deals with territorial governance and territorial foresight. It highlights that local authorities such as the Greater Lyon and Isère departments utilize foresight to facilitate policy alignment towards longer-term visions like sustainability, inclusion, and climate adaptability. It takes the Rev3 initiative for the Hauts-de-France region as a case study to introduce foresight into public action through collaborative partnerships with institutions, enterprises, and people.

Overall, La prospective en action makes a solid case for foresight to be integrated into every level of organization. Where vision and action are mixed together and uncertainty is embraced, foresight acts as a means to involve diverse stakeholders, facilitate flexibility, and initiate transformative change. With theory, observation of the real world, and examples across sectors, the book gives useful guidance for leaders, researchers, and public servants who are bent on overcoming the challenges of the future.



Foresight is sensing weak signals, imagining possible futures, and mobilizing collective intelligence to make informed choices in the here and now.



Where vision and action are mixed together and uncertainty is embraced, foresight acts as a means to involve diverse stakeholders, facilitate flexibility, and initiate transformative change.

2 Applied research

Healthcare in Canada's Francophone Minority Context

Bouchard, L., Savard, J., & Dumond, M. (2024). La santé en contexte francophone minoritaire au Canada: 20 ans de recherche: introduction. Minorités linguistiques et société, (22).

This paper provides an overview of twenty years of health research in Canadian Francophone minority communities (CFSM). It traces the evolution of this research, referencing the support of federal agencies such as Health Canada and the Consortium national de formation en santé (CNFS), which facilitated the creation of academic research centers across the country. These projects were also supplemented by funding from the Canadian Institutes of Health Research (CIHR) and led to the development of networks, research teams, and dedicated chairs in health services and access for Francophones in minority contexts.



One of the issues in this literature concerns how linguistic minority status affects access to healthcare. Three assumptions about research emerge: belonging to a CFSM affects determinants of health; linguistic concordance between practitioners and clients is central to quality of care; and fear that one will not be able to receive services in one's own language could discourage timely care-seeking.

The thematic section summarizes research in five domains: language and health policies, determinants of health, service delivery, human resources, and professional education and user experience. Some papers document progress in these areas. For instance, studies show how health law is often not implemented in practice, particularly where providers have no awareness or institutional support.

Access to services remains problematic, especially in mental health and for seniors. Research shows that Francophone seniors often have inadequate home care and lack access to bilingual health professionals. In more remote areas of Western and Northern Canada, people with neurocognitive disorders face considerable barriers due to the limited availability of services in French and a shortage of adapted materials.

New methods and tools have been created to address these deficiencies,

such as databases of the mapping of service availability, studies on virtual care technologies, and models of estimating potential access to French-speaking physicians. Such tools enable the targeting of underserved areas and propose targeted interventions. However, systemic barriers like a paucity of quality data on languages spoken in the delivery of care and the inability to undertake large-scale research on small populations persist as obstacles. The other priority has been preparing for the future health and social service workforce. Since 2008, there have been efforts to integrate the concept of active offer into training, develop evaluation tools, and better equip trainers.

The paper concludes by proposing some avenues for further research. There is a need to study more geographically diverse CFSMs, strengthen national health databases with language variables, and secure long-term funding for research beyond pilot projects. The authors suggest creating an observatory on Francophone minority health to guide efforts, synthesize research, and inform better health planning and policy. Through continued investment and collaboration, research can more effectively address equity in access to health and health status for Francophone minority communities in Canada.



Linguistic minority status affects access to care and health status for Canadian francophone communities.



Through continued investment and collaboration, research can more effectively address equity in access to health and health status.

Sino-Russian Security and Military Ties

Facon, I. (2024). La coopération militaire et de sécurité sino-russe. In *Annuaire français de relations internationales* (pp. 435448-). Éditions Panthéon-Assas.

The article by Isabelle Facon examines the evolution and strategic implications of Sino-Russian security and military ties. Since the 2014 annexation of Crimea, Russia-China relations within the sphere of security have intensified, yet without culminating in a treaty of alliance. The relationships are driven by a shared vision of a disturbing Western order, specifically embodied by the U.S. and NATO. Military exercises, joint patrols, and more intricate coordination between the two nations are aimed at extending a stabilizing presence in the Asia-Pacific region and beyond and sending clear signals to Western powers.



The cooperation has spilled over into combined naval and air training, some well beyond their shores, such as the Mediterranean and off Alaska, that indicate reciprocal strategic support. These exercises are typically framed as defensive but clearly exist to demonstrate their growing military capacity and interoperability. While actual interoperability—like permanent headquarters and weapons that can work together—remains in its youth, both sides have made considerable strides in uniting forces, sharing tactics, and harmonizing strategic plans. Russia brings extensive operational experience, and China brings expanding technological range and industrial scale. As regards arms sales, the balance has been altered.

In the 1990s, China relied heavily on Russian weapons to mechanize the military. This was slowed by issues of intellectual property right infringement and China's reverse-engineering capabilities. With the 2014 sanctions imposed on Russia, arms sales between the countries increased again, with huge contracts for advanced systems like the Su-35 fighter jet and S-400 anti-aircraft systems. Yet, Russia remains cautious about selling its most strategic technologies, especially considering China becoming an increasingly capable and competitive defense industry

manufacturer.

Collaboration has also escalated in R&D, particularly in areas including AI, aerospace, and missile defense. China desires Russian technology in missile systems and nuclear deterrence while Russia desires to benefit from Chinese commercial and dual-use technologies as Western sanctions constrict its ability to access principal components.

Both share the objective of enhancing strategic deterrence and resilience against assumed U.S. hegemony. Strategically, both nations oppose what they see as U.S. attempts to gain ultimate military supremacy, especially in missile defense and militarization of space. Missile launch notification, nuclear postures, and early warning system arrangements show a high level of mutual confidence.

At bottom, the Sino-Russian defense alliance has not been entirely lacking in asymmetry or strategic ambivalence but has become a healthy and politically valuable one in fact if not name. On impetus from their common disdain for U.S. power and both nations' enthusiasm to determine a multipolar international order, increasingly the two states have come into alignment over their defense planning. Not a defense alliance formally speaking, yet in trend an indicative deeper merging of interests, certainly if interregional tensions show no letdown.



Since the 2014 annexation of Crimea, the Russia-China security relations have intensified, yet without culminating in a treaty of alliance.



China desires Russian technology in missile systems and nuclear deterrence while Russia desires to benefit from Chinese commercial and dual-use technologies.

The Interdependence of Climate, Finance, Energy, and Geopolitics

Hoffart, F. M., D'Orazio, P., Holz, F., & Kemfert, C. (2024). Exploring the interdependence of climate, finance, energy, and geopolitics: A conceptual framework for systemic risks amidst multiple crises. *Applied Energy*, 361, 122885.

This paper presents case studies considering interlinked, multifaceted risks that arise when experiencing simultaneous crises in energy, finance, and the climate system in a global scenario. It offers a conceptual framework for researching and investigating relationships connecting climate change to financial instability and geopolitical crises that cause or facilitate energy transitions, thus addressing different issues facing world systems. The authors argue that traditional approaches only deal with these issues in isolation, failing to capture how short-horizon emergency responses, like those to geopolitical shocks such as the war in Ukraine, can erode long-term climate targets and strain financial systems.



The new approach helps identify ways in which policy in one area can have cross-area interlinkages, which can either encourage or hinder the accomplishment of a world with zero emissions.

Applying this perspective to analyze Germany's response to the 2022 energy crisis, the research focuses on two core policy reactions: the establishment of liquefied natural gas (LNG) terminals as a fossil-fuel-based energy security measure and the adoption of weak, "soft" climate-related fiscal policies. The authors demonstrate that investment in LNG infrastructure contradicts Germany's long-term climate goals and could result in a "fossil lock-in," with future energy systems continuing to depend on carbon-based fuel sources. Such terminals, especially the fixed onshore ones, might become stranded assets, posing risks to public and private investments and hindering the shift towards renewable energy.

Simultaneously, the authors find that German financial regulation has not properly addressed climate risks, leaving the banking sector vulnerable to asset devaluation from emissions-intensive sectors. Financial institutions face transition risks from their investment portfolios, but macroprudential policies remain poorly equipped to address these issues. The disconnection between climate goals and financial regulation

further increases systemic exposures. The study outlines four critical transmission channels that illustrate how geopolitical and climate crises drive financial as much as energy systems. These include the direct effect of climate dangers on the fiscal sector, energy transition risk due to geopolitical shocks, the feed mechanism of financial instability in the case of green deficit investment, and the wider economic ramifications when they collide. The German experience indicates that short-term energy security measures, such as the expansion of LNG imports, can potentially divert funds and attention away from renewable energy infrastructure.

Ultimately, the paper warns that crisis-response policies decoupled from climate objectives are unlikely to sustain financial stability or accelerate the energy transition. Instead, the authors propose integrating climate risks into financial decision-making, avoiding fossil infrastructure lock-ins, and balancing short-term emergency responses with long-term climate commitments. They argue that coherent, cross-sectoral policy is required to guide systemic risks and enable a just and sustainable transition. The proposed framework should be employed by policymakers as a tool to compare policy options from a holistic perspective, consider the spillover effects of interest.



Short-term energy security measures may divert funds from renewable energy infrastructure, reduce green finance availability, and delay decarbonization in hard-to-abate sectors such.



Coherent, cross-sectoral policy can guide systemic risks and enable a just and sustainable transition.

Explainable AI for Operational Research

De Bock, K. W., Coussement, K., De Caigny, A., Słowiński, R., Baesens, B., Boute, R. N., ... & Weber, R. (2024). Explainable AI for operational research: A defining framework, methods, applications, and a research agenda. *European Journal of Operational Research*, 317(2), 249272-.

This paper presents a comprehensive framework for understanding how explainable artificial intelligence (XAI) can be utilized in operational research (OR). As data-driven decision-making is increasingly practiced, the ability to explain and interpret AI models is becoming increasingly important to build trust and ensure accountability as well as effective implementation. The authors of XAIOR have described it as an intersection of three main dimensions: performance analytics, which ensures model accuracy; attributable analytics, which identifies reasons for a model's predictions; and responsible analytics, which speaks to ethical, transparent, and equitable use of AI systems.



They note that while most OR models prefer performance, increasingly stakeholders need greater transparency over decision-making and how results are obtained. The paper describes how these dimensions cut across the entire analytics pipeline, from data collection and preparation through model selection, post-hoc explanation, and evaluation. It also discusses a few technical methods, such as sensitivity analysis, feature importance, counterfactual explanations, and explainable models like decision trees and additive neural networks. The paper also discusses some domains of XAIOR application in different areas of OR, such as forecasting, supply chain management, inventory control, and risk analysis. Each of these areas does have some challenges about interpretability and accountability. For instance, in forecasting, the ability to know the cause of a forecast can help an organization better prepare for future demand. In risk management, the ability to know the reason behind a high-risk assessment is crucial for regulatory response and strategic adjustment. The authors note, however, that while performance analytics is relatively mature for the majority of OR applications, there is very much a lag in the development and application of attributable and responsible analytics that is hampering the broader ramifications of XAI in practice.

Five major themes to enable prospective research and application are listed by the paper. Among them are spearheading data innovation to produce more superior quality inputs and interpretability, developing interpretable methods for deep models, integrating all three dimensions of XAIOR in one comprehensive framework, addressing novel societal needs such as fairness and reduction of biases, and entering novel domains of deployment where explainability is instrumental. The authors suggest that this agenda can help researchers and practitioners to build AI systems that are not just resilient, but also understandable and ethically accountable. Overall, the research argues that as operational research is increasingly engaged with AI and machine learning, it must evolve to meet an increasing demand for transparency and accountability. Explainability must be designed into the process, rather than added on subsequently. By framing XAIOR as a trade between performance, attribution, and responsibility, the paper presents a structured approach to the design of effective and reliable decision support systems. The model can potentially improve decision-making in contexts of complexity without undermining the alignment of AI system outputs with human values and social requirements.



The ability to explain and interpret AI models is becoming increasingly important to build trust and ensure accountability as well as effective implementation.



As operational research is increasingly engaged with AI and machine learning, it must evolve to meet an increasing demand for transparency and accountability.

The Impact of Realism on US Foreign Policy during the Trump Presidency

Taim, A. (2024). The Impact of Realism on US Foreign Policy during the Trump Presidency. *Presidency*, 4, 2.

This article by Adam Taim explains Donald Trump's foreign policy from 2017 to 2021 through the lens of the realist theory of international relations. It examines if Trump adhered to classical realism or developed his own distinct variant, which the author refers to as "Trumpian unique realism." Trump's foreign policy was a significant departure from that of his predecessors on the basis of its national interest centrality, skepticism of multilateral institutions, and favoring of transactional diplomacy.



Although grounded in realist fundamentals like power politics and state centrality, Trump's approach was shaped by his unconventional political style, which often included unilateral action and abrupt policy flip-flops.

The article draws the connection between Trump's "America First" philosophy and classical realist thinkers like Hans Morgenthau and Kenneth Waltz, and how Trump's emphasis on sovereignty, military strength, and economic advantage constituted a realist agenda. Nevertheless, it also states that his policies regularly diverged from the traditional practice of realism, namely in undermining long-term alliances, eschewing institutional cooperation, and favoring short-term political gains. Trump's withdrawal from major international agreements such as the Paris Climate Accord and the Iran nuclear deal was a characteristic of his divergence from multilateralism. While these actions were described as an effort to reassert U.S. power and independence, they also strained relations with allies and hurt America's credibility around the globe. The article discusses specific elements of Trump's foreign policy, including his trade wars, most prominently with China, his "maximum pressure" campaign against Iran, and his diplomacy with North Korea. Each is given as an illustration of Trump's application of realist principles in his own unique manner. For

example, Trump's tariffs and renegotiation of trade deals were in accordance with realism's emphasis on national interest and relative gains. However, retaliatory measures by trade partners and instability in the global supply chain illustrated the cost of such a strategy. His national security strategy, based on coercive action and economic pressure, particularly on North Korea and Iran, highlighted his belief in hard power, but more often than not failed to produce desired outcomes, and instead contributed to instability.

Trump's personal style, including his use of social media to conduct diplomacy, also had a profound impact on his foreign policy. Although this unorthodox approach sometimes produced symbolic gains, it more frequently resulted in diplomatic faux pas and confronted traditional global norms. His skepticism of international institutions and scorn for collaborative global governance were realist stances, but his disdain for diplomacy and inconsistency in policy application made his realism typically erratic and disruptive. Those who support Trump's foreign policy argue that it reasserted a commitment to U.S. sovereignty and realism in international affairs. Critics, however, contend that it eroded alliances, emboldened competitors, and contributed to global instability. The author contends that future leaders must blend realism with moral leadership and multilateral cooperation to address the complexities of international politics more effectively.

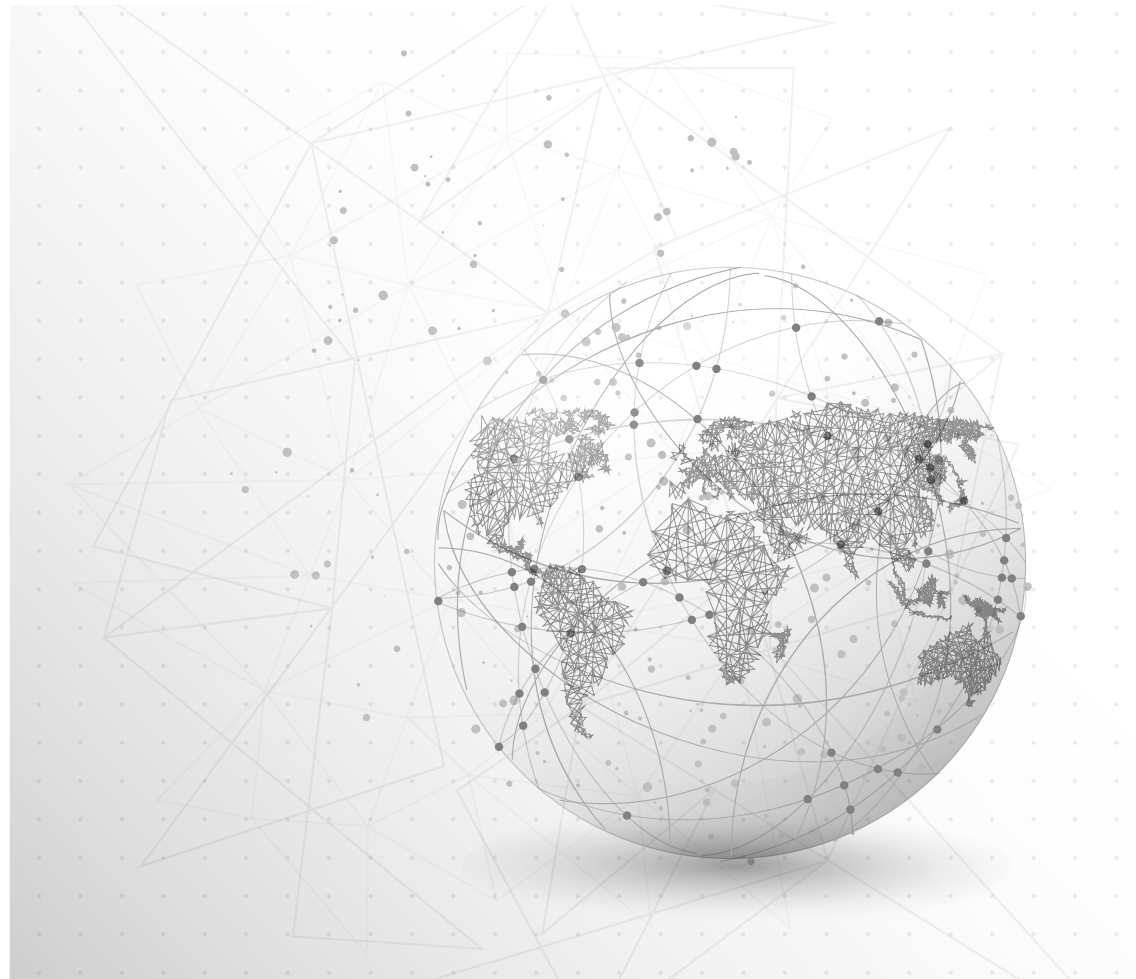


Trump's withdrawal from major international agreements is a characteristic of his divergence from multilateralism.

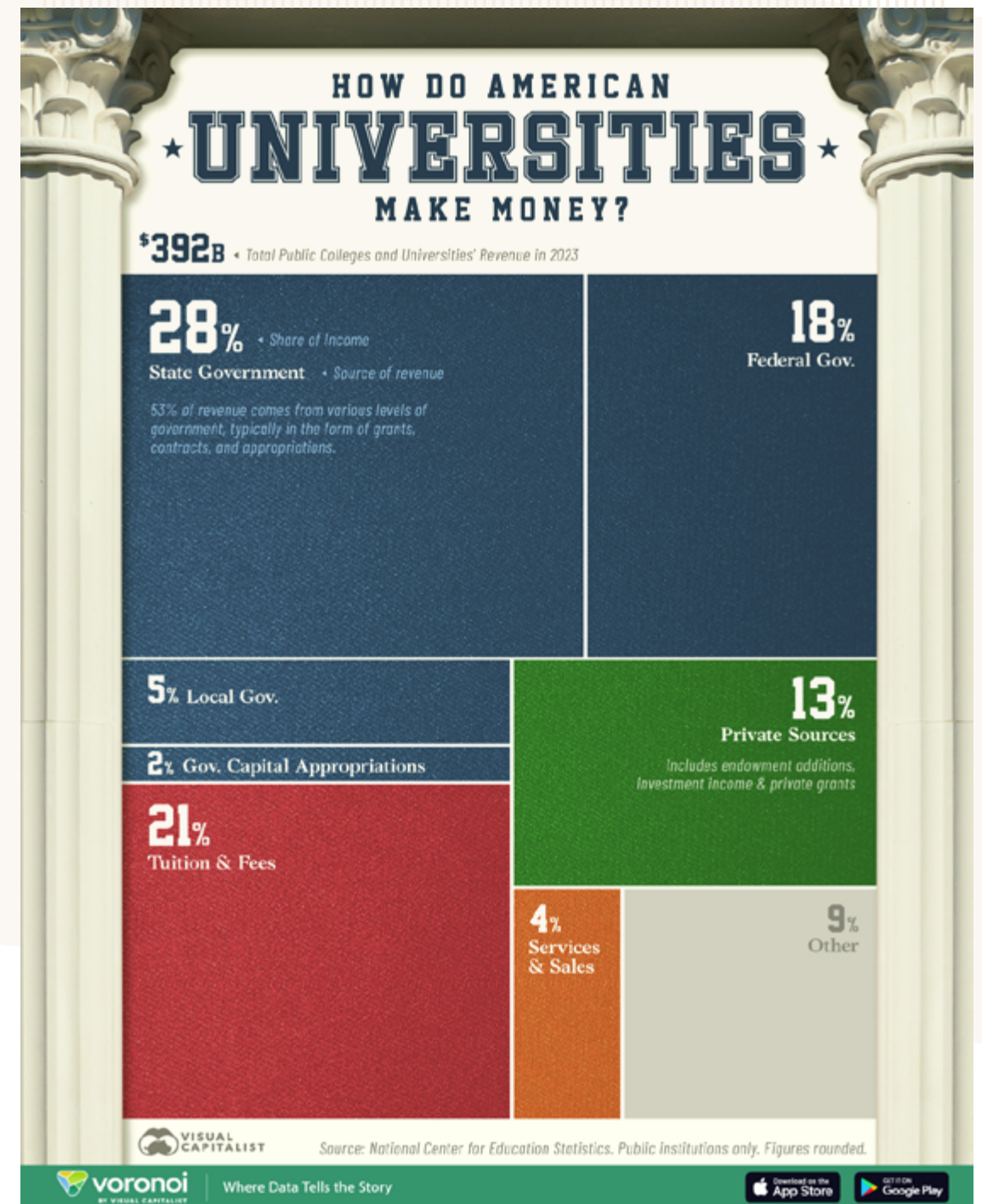


Future leaders must blend realism with moral leadership and multilateral cooperation to address the complexities of international politics more effectively.

3 The future in numbers



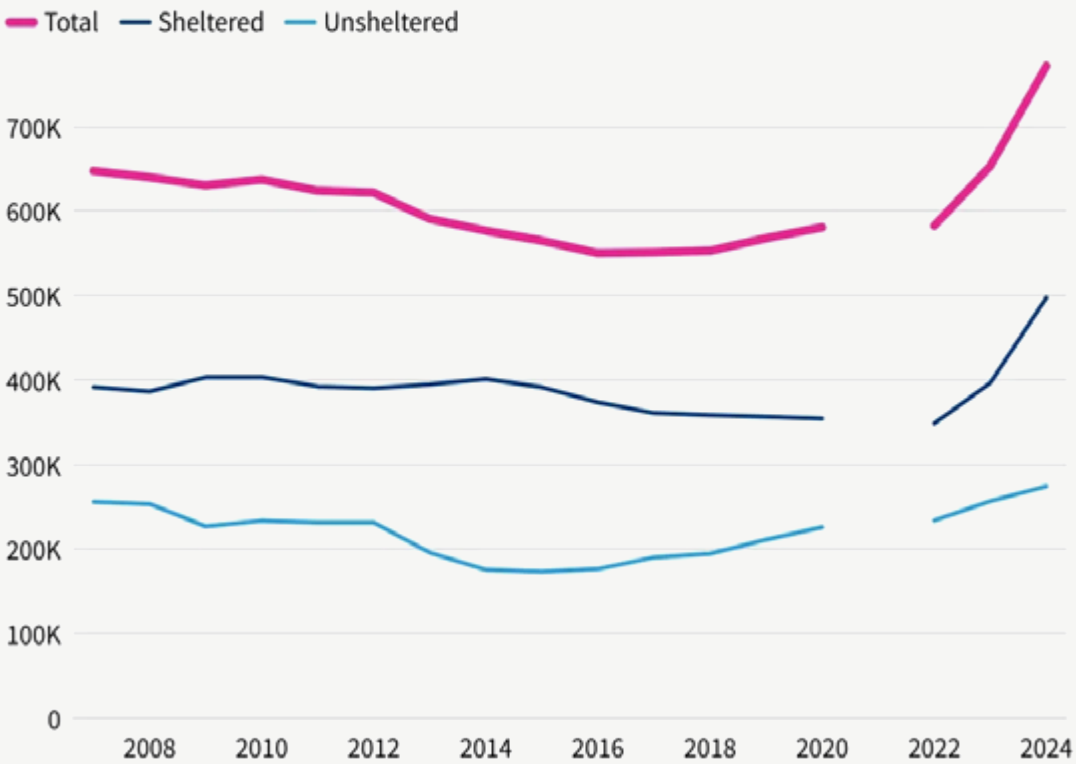
How Do U.S. Universities Make Their Money?



How many homeless people are in the US?

The total homeless population in the U.S. rose 32.5% from 2022 to 2024.

Point-in-time estimate of the homeless population, overall and by sheltered status

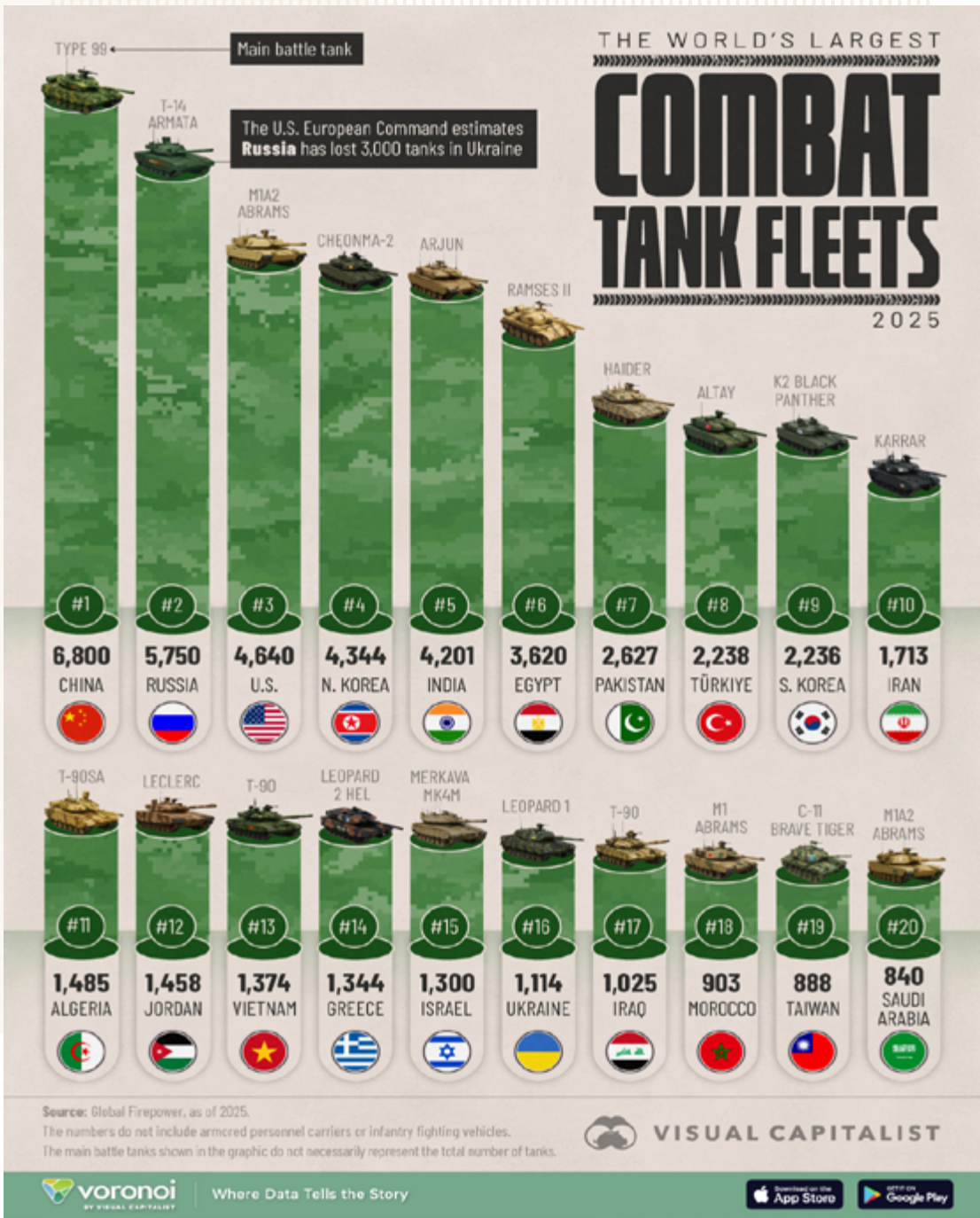


2021 data is excluded because many cities suspended counts during the COVID-19 pandemic.

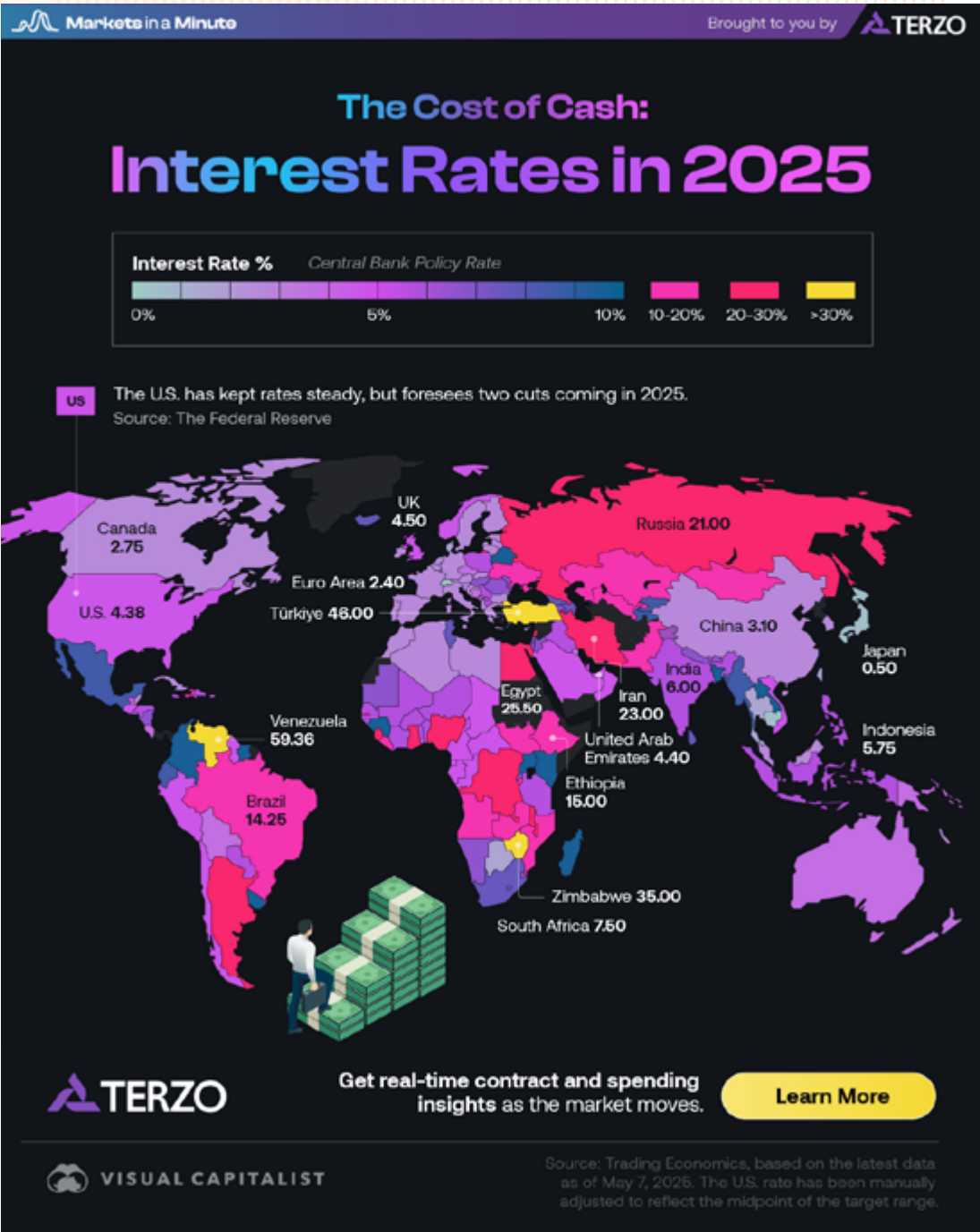
Source: Department of Housing and Urban Development

USA FACTS

The World's Largest Combat Tank Fleets in 2025



Interest Rates by Country in 2025



The Import Dependency of Major Economies

