

Who on Earth Is Using Generative AI?

Global Trends and Shifts in 2025

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Abstract

Nearly three years after ChatGPT's launch, the generative artificial intelligence landscape remains in rapid flux. Using high-frequency website traffic data from Semrush, this paper tracks global adoption patterns for the 60 most-visited consumer-facing generative artificial intelligence tools through mid-2025. Five key findings emerge. First, fierce competition drives continuous innovation: two of 2025's top five tools—DeepSeek and Grok—are new entrants, and development is rapidly diversifying into multi-modal capabilities, reasoning, and specialized applications. Second, ChatGPT maintains dominance despite competition, accounting for 77 percent of traffic to the top 60 tools in April 2025. Third, usage of generative artificial intelligence has exploded since mid-2024: ChatGPT traffic grew 113 percent year-over-year, driven by 42 percent user growth and 50 percent increased visits per user, with session duration doubling. Fourth, high-income countries are pulling decisively ahead,

creating stark global divides. While 24 percent of internet users in high-income countries use ChatGPT, penetration drops to 5.8 percent in upper-middle-income countries, 4.7 percent in lower-middle-income countries, and just 0.7 percent in low-income countries. Regression analysis confirms that gross domestic product per capita strongly predicts adoption growth. Fifth, localization shapes competitive advantage: non-U.S. tools concentrate heavily in home markets, with Le Chat drawing 69 percent of traffic from Europe and several Chinese tools exceeding 90 percent domestic usage. These patterns reveal an artificial intelligence landscape characterized by intense innovation, persistent market leadership, accelerating growth, and deepening global inequality, underscoring the need for inclusive policies as generative artificial intelligence becomes central to economic participation.

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Who on Earth Is Using Generative AI?

Global Trends and Shifts in 2025*

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1 Introduction

Nearly three years after the launch of ChatGPT, generative AI (GenAI)¹ continues to capture global attention. User interest has surged, firms are ramping up investments in workforce training and GenAI integration, and governments are increasingly active in shaping AI governance frameworks. In 2024, we published *Who on Earth is Using Generative AI?* (Liu and Wang 2024)—the first study to leverage website traffic data to provide real-time, cross-country insights into GenAI usage patterns and the country-level factors influencing adoption.

Since then, the GenAI landscape has evolved significantly. New entrants such as DeepSeek and Grok have expanded the field, while established players have released powerful new models and capabilities, including OpenAI’s GPT-4o Mini and SearchGPT. Multimodal tools—especially for audio and video generation—have flourished, with platforms like ElevenLabs gaining traction and OpenAI’s Sora becoming publicly accessible. Meanwhile, GenAI models have become both more capable and more affordable, with advances in reasoning, interactivity, and deployment efficiency.

These developments call for an updated analysis. This paper builds on our earlier work and presents fresh evidence on how GenAI adoption patterns have shifted through mid-2025, offering new insights into global usage trends, the diffusion of new tools, and the evolving AI adoption divide.

To track GenAI adoption globally, we continue to rely on high-frequency website traffic data from Semrush, a digital analytics provider that compiles user interactions across billions of URLs daily. This data captures real-time usage at a global scale, offering consistent, tool-level insights unavailable from survey-based approaches. Building on our previous methodology in Liu and Wang (2024), we construct a panel of the 60 most visited GenAI tools as of June 2025, spanning categories such as chatbots, image and video generation, and productivity applications. While web traffic data has limitations—such as missing backend API use, mobile app integration, and enterprise deployments—it remains the most timely and granular proxy for consumer-facing GenAI engagement. In the absence of systematic tracking of embedded or professional API usage, our approach offers a unique lens into general-purpose GenAI diffusion across countries, tools, and user segments.

¹GenAI tools are applications that create new content such as text, images, audio, or video in response to user prompts, typically powered by large foundation models.

Below are the key findings from this update:

1. GenAI race heats up: New tools like DeepSeek and Grok are grabbing market share, and GenAI evolves with multi-modality, reasoning, and specialization

The field of GenAI has become a fiercely competitive arena since the launch of ChatGPT. The initial buzz created by OpenAI has ignited a frantic race, with a multitude of new companies and established tech giants piling in to develop their own models and tools. Among the top five most-visited tools in April 2025, two—DeepSeek and Grok—were entirely new entrants, with 9 of the top 60 tools representing fresh competition. Innovation is rapidly diversifying beyond text generation toward multi-modal capabilities, advanced reasoning systems, and specialized applications spanning voice synthesis (ElevenLabs), music generation (Suno), and video creation (Sora, Runway).

2. ChatGPT continues to dominate with an overwhelming market share

Despite intensifying competition, chatbots maintain overwhelming dominance, consistently capturing 95% of global traffic to the top 60 GenAI tools since 2023. Within this segment, ChatGPT continues to lead by a wide margin, accounting for 77% of total traffic in April 2025—down from 89% in April 2023 but still far ahead of competitors.

3. GenAI usage has surged since mid-2024, fueled by substantial growth in both user base and usage intensity

GenAI usage has exploded since mid-2024 across both adoption and intensity metrics. ChatGPT traffic grew 113% between April 2024 and 2025, reaching 4.5 billion monthly visits, driven by 42% growth in unique users and 50% increases in visits per user. Average session duration doubled from 7 to 15 minutes, with similar acceleration patterns observed across Gemini and DeepSeek. As organizations expand training and individuals integrate GenAI into more tasks, usage is widening as well as deepening.

4. High-income countries have pulled ahead on GenAI adoption, widening the global divide

The accelerating growth in GenAI traffic has been largely concentrated in high-income countries (HICs). Between April 2024 and April 2025, HICs' share of global traffic to the top

60 most visited GenAI tools increased from 55% to nearly 60%. In contrast, the shares of upper-middle-income countries (UMCs) and lower-middle-income countries (LMCs) declined slightly—from 25% to 24%, and from 20% to 19%, respectively. Low-income countries (LICs) saw a modest increase in share, from 0.1% to 0.2%, though their overall contribution remains negligible.

HICs also outpaced middle-income countries in both the growth of GenAI users and usage intensity. The number of unique ChatGPT users grew by 43% in HICs, compared to 42% in UMCs and 37% in LMCs. In absolute terms, HICs added nearly 100 million new users over the year—accounting for 60% of the global increase. UMCs and LMCs contributed 23% and 17% of new users, respectively, while LICs accounted for just 0.3%. Visits per user rose by 56% in HICs, compared to 44% in UMCs, 41% in LMCs, and 42% in LICs. Average visit duration followed a similar pattern, increasing by 133% in HICs, 94% in UMCs, 90% in LMCs, and 162% in LICs. Regression analysis confirms a positive association between GDP per capita and growth in traffic or user base, reinforcing concerns about a widening global digital divide in GenAI adoption.

Importantly, the divide in GenAI adoption is more pronounced on the extensive margin than the intensive margin. While average visits per user and visit durations are converging across income groups, the disparities in user penetration remain stark. As of April 2025, 24% of internet users in HICs were using ChatGPT, compared to 5.8% in UMICs, 4.7% in LMICs, and just 0.7% in LICs.

Looking beyond ChatGPT, combining traffic to the top 60 GenAI tools reveals similar gaps. In April 2025, the average HIC internet user visited GenAI tools 1.9 times per month, compared to 0.5 times in UMCs, 0.4 times in LMCs, and only 0.08 times in LICs. These patterns underscore that closing the adoption gap will require broadening participation, not just deepening engagement among existing users.

5. Home field advantage: Regions favor homegrown GenAI tools

Regional origin significantly shapes GenAI tool adoption patterns through localization advantages. While U.S. platforms like ChatGPT enjoy global reach, non-U.S. tools demonstrate strong home-market concentration: France’s Le Chat draws 69% of traffic from Europe,

DeepSeek captures one-third of users from East Asia, and Chinese tools like Doubao exceed 90% domestic usage. These patterns underscore the critical importance of cultural, linguistic, and distributional localization for sustained user engagement.

Our paper contributes to three strands of the rapidly expanding GenAI literature. First, we advance the emerging measurement literature that quantifies GenAI adoption patterns across time, tools, and geographies. The current body of work relies primarily on survey-based evidence to document adoption by individuals and firms across sectors, tasks, and locations. Individual-level studies include Bick, Blandin, and Deming (2024), who conduct repeated U.S. surveys distinguishing work and non-work usage while documenting heterogeneous uptake by occupation and task, and Humlum and Vestergaard (2024), who use a large Danish survey experiment linked to administrative registers to characterize adoption patterns and motivations. Cross-national perspectives come from Fletcher and Nielsen (2024) on attitudes and awareness, while Pew Research Center (2025b) and Pew Research Center (2025a) provide U.S. benchmarks on lifetime usage and workplace adoption through address-based panels. At the firm level, Bonney, Breaux, Buffington, et al. (2024) leverage the U.S. Census Business Trends and Outlook Survey for real-time adoption nowcasting, and McElheran, Li, Brynjolfsson, et al. (2024) document geographic and industry variation in corporate GenAI usage. Website traffic data offer a crucial complementary approach to survey-based measures, providing real-time, tool-specific revealed preference indicators that enable consistent cross-national comparisons. Our prior work Liu and Wang (2024) pioneered this methodology for tracking global GenAI adoption at scale. Here, we extend this framework through mid-2025 to capture emerging competitive dynamics and decompose the past year’s explosive growth into extensive and intensive margins across income groups and countries, revealing new insights into the evolving global GenAI landscape.

Second, we contribute to the emerging literature on AI market structure and competition by documenting tool rankings, market entry dynamics, and competitive concentration patterns in real time. Our findings provide timely empirical evidence for theoretical frameworks like Korinek and Vipra (2025), who emphasize scaling-driven barriers, vertical integration incentives, and market tipping risks in foundation model markets. While Lu, Phillips, and Yang (2024) demonstrate that AI adoption drives industry concentration—contrasting with cloud computing’s diffusion ef-

fects—our analysis reveals a more nuanced picture of sustained competition among leading GenAI platforms, with significant new entry challenging incumbent dominance. Critically, we uncover pronounced regional market segmentation driven by cultural and linguistic preferences, highlighting GenAI’s distinctive character as a deeply localized technology. Unlike purely technical infrastructure, effective GenAI adoption requires cultural resonance, language alignment, and region-specific customization to achieve broader user engagement. Our findings align with broader evidence on geographic frictions in AI diffusion (Hunt, Cockburn, and Bessen 2024), the role of cultural and linguistic alignment in shaping model reception (Tao, Viberg, Baker, and Kizilcec 2024), and persistent home bias in digital platform adoption and virtual collaboration (Abou El-Komboz and Goldbeck 2024). These patterns suggest that GenAI market structure may be fundamentally shaped by cultural geography rather than purely technical or economic factors.

Finally, we contribute to the literature on the global AI divide, the interaction of AI adoption with structural gaps in engagement across income levels, infrastructure, and regions. The digital divide has long been studied, with research emphasizing cross-country gaps in access to and effective use of networked technologies. These gaps are driven by differences in connectivity, affordability, and skills (Norris 2001; World Bank 2016). The GenAI divide is its frontier extension: unequal capacity to access and benefit from GenAI across countries and groups (Stanford 2025; World Bank 2025). Core dimensions highlighted in recent assessments include compute and infrastructure, usable data and governance, and AI-relevant skills and institutional capacity (Oxford Insights 2024; OECD 2025; Tony Blair Institute for Global Change 2023). Our contribution is to quantify disparities in actual GenAI use across income groups and regions, and the divide in usage growth along the intensive and extensive margins.

The paper proceeds as follows. Section 2 describes the Semrush website traffic dataset and our tool selection methodology, establishing the empirical foundation for tracking GenAI adoption at global scale. Section 3 analyzes market dynamics among leading GenAI tools, documenting rapid entry, evolving rankings, and competitive concentration patterns that reveal the intensity of ongoing innovation races. Section 4 examines ChatGPT’s explosive growth trajectory, decomposing traffic increases into extensive and intensive margins while uncovering stark disparities in adoption rates across income groups that point toward a widening global AI divide. Section 5 investigates geographic patterns in GenAI diffusion, revealing strong home-market advantages for non-U.S.

tools and highlighting the critical role of cultural and linguistic localization in shaping competitive dynamics. Section 6 synthesizes our findings, discusses policy implications for digital equity, and identifies potential directions for future research on AI adoption and its implications.

2 Using Website Traffic Data to Measure GenAI Adoption

Website traffic data remain our preferred lens for measuring consumer-facing GenAI adoption. It captures real-time user behavior at a global scale, offering timely and consistent insights into how individuals adopt GenAI tools. Unlike survey data, which often suffer from recall bias and reporting delays, website traffic data reflects actual usage patterns. Its continuous and high-frequency nature allows for the detection of emerging trends, shifts in usage intensity, and geographic diffusion. Moreover, because the data are based on observed interactions rather than self-reported intentions or perceptions, they provide a more objective and scalable measure of engagement across a wide range of tools and user segments. An additional advantage is tool-level granularity: website traffic allows us to track dozens of distinct tools—across categories such as chatbot, image, video, and productivity—which would be difficult to cover comprehensively through surveys alone.

Our traffic statistics originate from Semrush, a digital-analytics provider that combines large click-stream panels, embedded tracking codes, and server-log feeds. Its collection system observes on the order of 25 billion URLs per day and reconciles them, via proprietary machine-learning algorithms, into harmonized estimates of visits, unique visitors, pages per session, bounce rates, and average session duration. The underlying methodology is uniform across countries and over time, ensuring that cross-sectional and longitudinal contrasts are not confounded by changes in measurement.

To systematically analyze this evolving landscape, building on the methodology of our July 2024 study, we compiled a dataset of the 60 most visited websites designed specifically for GenAI functions in June 2025. We verified each platform’s functionality to distinguish dedicated GenAI tools from general platforms with embedded GenAI features, such as Bing.com and Notion.ai, and the latter were excluded from the main analysis. It retains the 40 commonly used domains identified earlier,² and adds 20 GenAI tools that have either emerged or attracted substantial traffic over the past year, including, for example, DeepSeek, Grok, and several new image- and

²For details on the original 40 GenAI tools, see Table A1 in Liu and Wang (2024).

video-generation tools. The selected 60 tools were grouped into four categories based on their primary use case: chatbots, image generation and design, video and audio tools, and productivity or business applications. Table 1 presents the detailed list of our selection, along with traffic volumes and ranking comparisons relative to 2024.

Using the Semrush API, we retrieved monthly traffic files for each month from January 2022 to May 2025. Our primary analysis focuses on year-over-year changes between April 2024 and April 2025 to ensure consistent measurement accuracy. This timeframe avoids potential data distortions from ChatGPT’s domain transition in May 2024, when the platform changed its web address and temporarily generated duplicate traffic counts that would inflate usage statistics. For each website in every month, the dataset includes five key metrics: total visits, unique visitors, average visits per user, average session duration, and average bounce rate. Each metric is further disaggregated by country (based on IP geolocation) and by device type, separating desktop and mobile traffic. Desktop traffic covers visits from traditional PCs and laptops, whereas mobile traffic aggregates visits from smartphone or tablet browsers and, where Semrush observes them, in-app flows. When coverage permits, Semrush provides coarse age- and gender-profile shares inferred from user’s browsing patterns, offering a tentative view of user composition. ³

While website traffic data offers a timely and scalable lens on individual AI usage, it comes with several limitations. First, the use of VPNs can obscure users’ true geographic locations, potentially distorting country-level usage patterns—though this issue is more pronounced in smaller or offshore economies and less relevant for large markets. Second, Semrush’s coverage is strongest for traffic originating from Google, while data from alternative search engines such as Bing, DuckDuckGo, Yandex, and especially Baidu remains limited, reducing accuracy in certain regions, particularly China. Third, as GenAI becomes increasingly embedded in other services—through APIs or integration into platforms like search engines and digital assistants (e.g., Siri)—such indirect or backend usage is not captured by website-level data. Professional and enterprise adoption, such as developers accessing models via the ChatGPT API or firms deploying open-source models internally, also lies outside the scope of this dataset. These forms of usage are growing rapidly, particularly in

³We validated the reliability of Semrush data in Liu and Wang (2024) using multiple tests, including comparisons with Google Trends, mobile app downloads, and alternative traffic datasets. Across these exercises, we found strong consistency in both levels and trends, supporting the robustness of the Semrush traffic metrics. Due to space constraints, we do not replicate these validation exercises here; see Liu and Wang (2024) for full details.

industry-specific or firm-level applications, and often follow different patterns of market competitiveness, segmentation, and geographic distribution compared to consumer-facing tools. Finally, Semrush periodically updates its estimation algorithms, which may revise historical traffic figures. Although these adjustments typically maintain the same order of magnitude (e.g., millions or tens of millions of visits), they can affect precise values across versions, so comparisons across different extraction dates should be made with caution.⁴

Given these limitations, it is important to clarify the scope of our analysis. While website usage accounted for the majority of observable GenAI activity in our earlier study, the landscape is now more fragmented, with growing adoption through APIs, embedded applications, and privately deployed open-source models—channels not captured by web traffic data. This shift likely leads to increasing divergence between consumer-facing and enterprise-level usage, though the absence of systematic data on backend adoption prevents us from quantifying this trend. Nonetheless, our measurement remains highly relevant. Website traffic continues to provide the most timely, scalable, and tool-specific signal of real-world engagement, especially among individuals. Recent studies also highlight that enterprise AI adoption is still in its early, top-down phase, while spontaneous, bottom-up usage of widely accessible tools (e.g., ChatGPT, Copilot) remains common in practice Bick, Blandin, and Deming (2024) and Bonney, Breaux, Buffington, et al. (2024). Thus, website-based measures remain a useful proxy for tracking general-purpose adoption and public-facing diffusion of GenAI.

3 The Rise of New Tools and Intensifying Competition

The GenAI landscape is evolving with remarkable speed. Over the past year, GenAI adoption has accelerated, and a new wave of tools quickly emerged, with some rising to global prominence within months and others thriving in niche or regional markets. This section tracks how usage patterns are shifting and which tools are gaining ground.

⁴In this paper, we rely solely on the historical data extracted in June 2025, which reflects Semrush’s latest estimation algorithm, and do not reuse the historical data from the previous paper.

3.1 The Emergence of New Tools

The release of OpenAI’s ChatGPT in November 2022 marked a pivotal moment in AI innovation. Its rapid success triggered a global “AI boom”, unleashing a wave of unprecedented investment and competition as major tech companies scrambled to develop rival tools and platforms. Since then, the GenAI landscape has expanded rapidly. Anthropic introduced Claude in 2023, Google DeepMind released Gemini in 2024, and Microsoft integrated Copilot across its suite of applications. By March 2024, hundreds of GenAI applications were already available, and the number has continued to grow in 2025.

As of 2025, the GenAI landscape has become even more dynamic and competitive, with new and more powerful models entering the market. In early 2025, Chinese startup High-Flyer emerged as a strong contender with DeepSeek-R1—an open-source model that achieved GPT-4-level performance at significantly lower training cost. Around the same time, Elon Musk’s xAI introduced Grok, further intensifying the competitive landscape.

A comparison of website traffic rankings between April 2024 and April 2025 (Table 1) illustrates this rapid evolution. DeepSeek now ranks second globally, just behind ChatGPT, while Grok ranks fifth—remarkable achievements for tools launched only months prior. Together, they account for two of the top five most visited GenAI tools. In total, 9 of the 60 tools in the 2025 rankings are new entrants. Other notable additions include Tencent’s Yuanbao, OpenAI’s video-generation platform Sora, and the AI-powered search tool Nano AI Search.

Beyond new entries, several existing tools have seen significant gains in popularity. ByteDance’s chatbot Doubao rose 28 positions to rank 10th; PixVerse, an image-generation platform with strong social media traction, climbed 26 spots to 18th; and Google’s document assistant, NotebookLM, jumped 23 positions to 27th. These shifts underscore not only the competitiveness of the GenAI landscape but also the expanding diversity of use cases—from chatbots and image generators to video and audio generation and productivity tools—that are driving user adoption and engagement.

Table 1: List of selected Generative AI tools

Rank	GenAI tool	Type	Traffic in Apr 2024 (in millions)	Rank in Apr 2024	Traffic in Apr 2025 (in millions)	Change
1	ChatGPT	Chatbot	2093.4	1	4456.3	=
2	Deepseek	Chatbot	-	-	295.9	New
3	Gemini	Chatbot	118.3	2	133.3	↓ 1
4	Perplexity	Chatbot	46.0	5	125.4	↑ 1
5	Grok	Chatbot	-	-	117.5	New
6	Claude	Chatbot	46.6	4	96.2	↓ 2
7	Copilot	Chatbot	37.0	7	88.1	=
8	Suno	Video & Audio Tools	42.5	6	46.5	↓ 2
9	Eleven Labs	Video & Audio Tools	20.6	8	37.4	↓ 1
10	Doubao	Chatbot	1.9	39	33.1	↑ 29
11	DeepAI	Chatbot	16.6	10	28.0	↓ 1
12	Poe	Chatbot	50.6	3	25.4	↓ 9
13	Kimi chatbot	Chatbot	11.4	14	24.9	↑ 1
14	Gamma	Image Generation & Design	10.8	15	21.7	↑ 1
15	Blackbox AI	Chatbot	8.3	18	17.9	↑ 3
16	Tencent Yuanbao	Chatbot	-	-	17.5	New
17	Midjourney	Image Generation & Design	12.1	13	16.5	↓ 4
18	PixVerse	Image Generation & Design	0.9	45	14.5	↑ 27
19	Meta AI	Chatbot	5.2	25	12.9	↑ 6
20	Leonardo	Image Generation & Design	9.3	16	12.4	↓ 4
21	Runway	Video & Audio Tools	4.9	27	12.1	↑ 6
22	Ideogram	Image Generation & Design	7.3	20	11.6	↓ 2
23	Zapier Chatbots	Productivity & Business	15.1	11	11.0	↓ 12
24	KREA	Image Generation & Design	6.0	24	10.6	=
25	Prezi	Image Generation & Design	16.8	9	10.4	↓ 16
26	Sora	Video & Audio Tools	-	-	8.4	New
27	NotebookLM	Productivity & Business	0.4	50	8.2	↑ 23
28	Le chat	Chatbot	2.0	36	7.4	↑ 8
29	v0.dev	Productivity & Business	0.3	51	6.6	↑ 22
30	Pixai	Image Generation & Design	5.0	26	6.4	↓ 4
31	Nightcafe	Image Generation & Design	6.7	23	5.2	↓ 8
32	OpusClip	Video & Audio Tools	3.2	32	5.1	=
33	Ernie Bot	Chatbot	6.8	22	4.6	↓ 11
34	Youchat	Chatbot	8.8	17	4.3	↓ 17
35	ChatPDF	Chatbot	7.3	21	3.9	↓ 14
36	Synthesia	Video & Audio Tools	2.1	34	3.3	↓ 2
37	Pictory	Image Generation & Design	1.0	43	3.1	↑ 6
38	Canva AI	Image Generation & Design	1.9	37	2.9	↓ 1
39	Craiyon	Image Generation & Design	3.5	31	2.8	↓ 8
40	Tongyi Qianwen	Chatbot	4.2	28	2.7	↓ 12
41	Nano AI Search	Chatbot	-	-	2.6	New
42	MaxAI	Chatbot	14.4	12	2.5	↓ 30
43	Playground	Image Generation & Design	7.7	19	2.3	↓ 24
44	Easy-peasy	Chatbot	-	-	2.0	New
45	Writesonic	Chatbot	3.5	30	1.8	↓ 15
46	Liner	Chatbot	2.0	35	1.5	↓ 11
47	Murf AI	Video & Audio Tools	1.8	40	1.5	↓ 7
48	Stable Diffusion	Video & Audio Tools	1.8	41	1.5	↓ 7
49	DALL·E 3	Image Generation & Design	-	-	1.3	New
50	Jasper AI	Productivity & Business	1.9	38	1.3	↓ 12
51	Phind	Chatbot	4.2	29	1.2	↓ 22
52	Artbreeder	Image Generation & Design	0.8	46	1.0	↓ 6
53	Fliki	Video & Audio Tools	0.9	44	1.0	↓ 9
54	Luma Dream Machine	Productivity & Business	-	-	0.9	New
55	Designs.AI	Image Generation & Design	1.2	42	0.9	↓ 13
56	Iflytek spark	Chatbot	2.7	33	0.9	↓ 23
57	Genmo AI	Video & Audio Tools	0.5	48	0.3	↓ 9
58	InVideo	Video & Audio Tools	0.5	47	0.2	↓ 11
59	10Web AI Website Builder	Productivity & Business	-	-	0.1	New
60	Meta image	Image Generation & Design	0.4	49	0.0	↓ 11

3.2 Dominance of Chatbots and ChatGPT

As shown in Figure 1 and Figure 2, ChatGPT remains the dominant GenAI platform, capturing 77% of total traffic in April 2025—down from 89% in April 2023 (see A.1), but still well ahead of newer entrants like DeepSeek and Gemini, which rank second and third. Its continued lead reflects a strong first-mover advantage, built on early deployment, broad capabilities, and strong brand recognition. Chatbots hold the top seven positions and account for 95% of total traffic, underscoring their continued popularity.

Figure 1: Monthly visits (in millions) of 60 selected GenAI tools (April 2025)

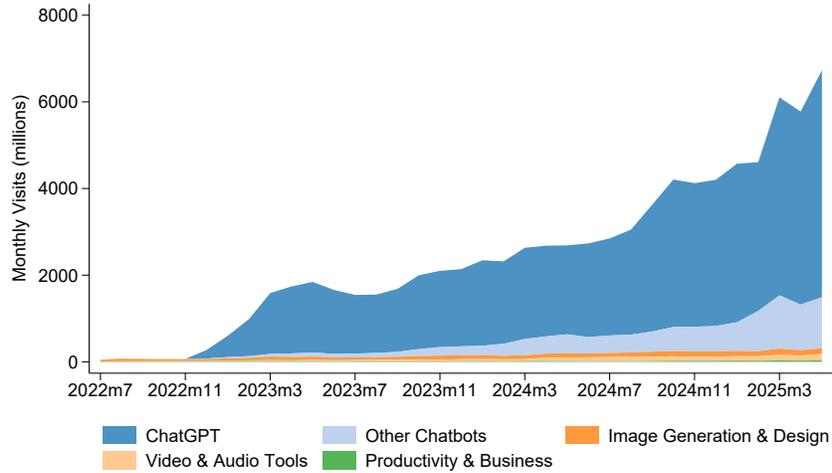


Note: Monthly visits (in millions) in April 2025 to 60 selected GenAI tools, based on Semrush traffic data. Tools are grouped into four categories: chatbots, image generation and design, productivity and business, and video and audio tools, with box sizes proportional to total visits.

DeepSeek, launched in early 2025, stands out among newcomers—capturing 6.6% of total traffic and surpassing all other chatbots except ChatGPT, with traffic volumes double that of the third-ranked tool. While new platforms targeting specialized use cases continue to emerge, their reach remains limited: image generation tools account for 2.4% of traffic, video and audio tools 1.9%, and productivity tools less than 0.5%.

The growing integration of multimodal capabilities—such as image generation, document pro-

Figure 2: Monthly Visits by GenAI Tool Category (2022–2025)



Note: Monthly visits (in millions) to GenAI tools from July 2022 to May 2025 using Semrush traffic data. Tools are grouped into ChatGPT, other chatbots, image generation and design tools, video and audio tools, and productivity/business applications.

cessing, and voice interfaces—has enhanced the appeal of GenAI platforms. Notably, users increasingly engage with multiple tools in parallel, suggesting an expanding ecosystem driven by complementary use rather than direct substitution.

The following figures take a closer look at the top-performing chatbots: ChatGPT, Gemini, and DeepSeek. Given the multifunctional nature of chatbots and their overwhelming share of user traffic, this category—especially ChatGPT—remains the central focus of our analysis.

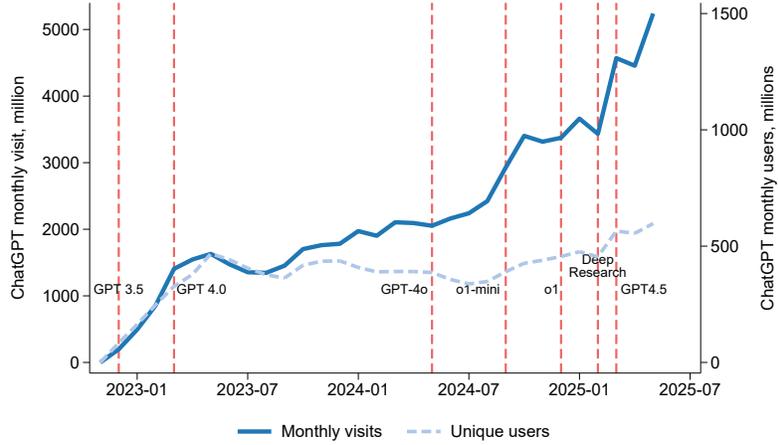
ChatGPT Table 2 and Figure 3 chart this trajectory from 2023 to 2025, showing a sharp acceleration in both total visits and user counts beginning in mid-2024. As shown in Figure 4, ChatGPT

Table 2: ChatGPT Traffic over Years

Year-Month	Traffic	Change	Users	Change	Traffic per User	Change
2023-04	1545.90	-	378.32	-	4.09	-
2024-04	2093.44	↑ 35.4%	390.74	↑ 3.3%	5.36	↑ 31.1%
2025-04	4456.29	↑ 112.9%	555.14	↑ 42.1%	8.03	↑ 49.8%

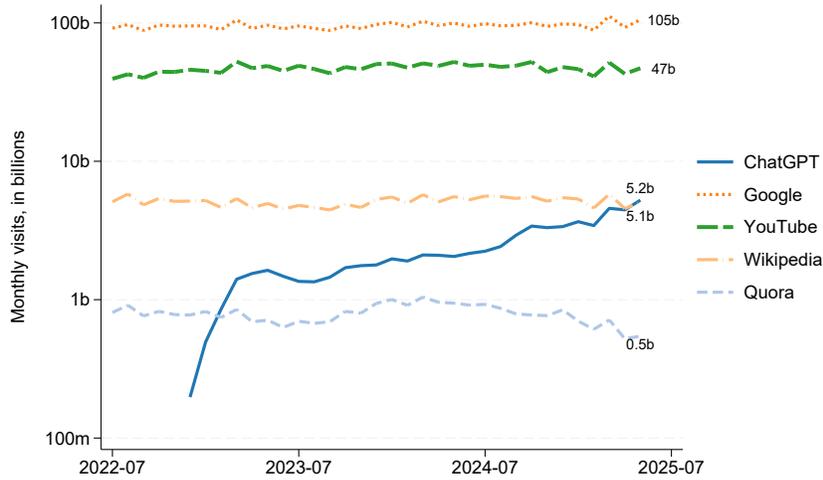
even surpassed Wikipedia in monthly traffic by early 2025, signaling its growing role in the digital ecosystem. Still, global traffic to ChatGPT remains modest relative to the largest platforms—just 11% of YouTube’s and 5% of Google’s.

Figure 3: ChatGPT monthly visits and unique users



Note: ChatGPT’s monthly visits and unique users (in millions) using Semrush traffic data. Solid lines indicate monthly visits, dashed lines show unique users, and red dashed vertical lines mark major model and feature release dates.

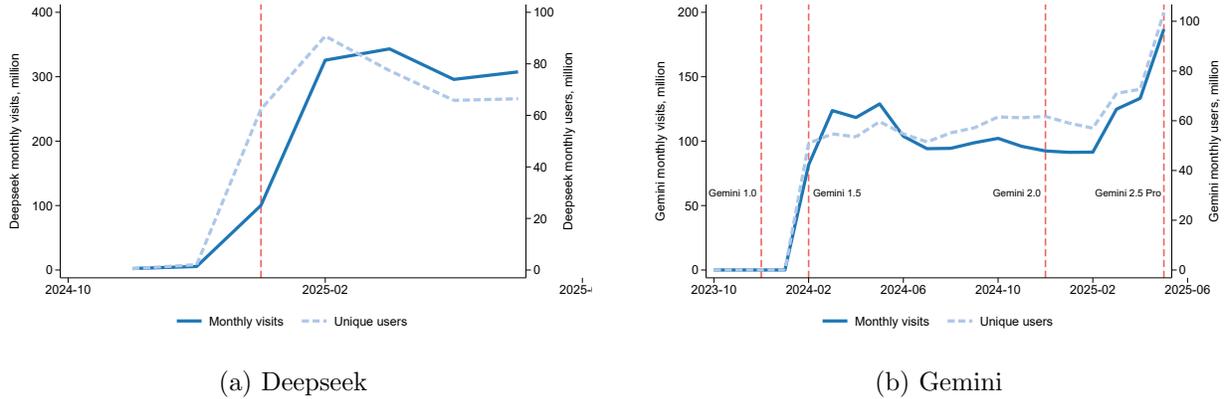
Figure 4: Monthly traffic comparison between ChatGPT and other leading websites



Note: This figure compares monthly visits (in billions) to ChatGPT and other leading websites: Google, YouTube, Wikipedia, and Quora using Semrush traffic data. The series spans July 2022 to July 2025, with each site represented by a distinct line style.

Deepseek DeepSeek saw limited use until the launch of its R1 model in early 2025, after which traffic and user numbers surged. By May 2025, monthly visits topped 300 million, and traffic per user had nearly tripled. As shown in Figure 5a, DeepSeek quickly became the second most used chatbot globally, trailing only ChatGPT.

Figure 5: Monthly Visits and Unique Users



Note: monthly visits and unique users (in millions) for DeepSeek and Gemini, based on Semrush traffic data. Solid lines represent monthly visits, and dashed lines represent unique users. Red dashed vertical lines mark major product release dates for each tool.

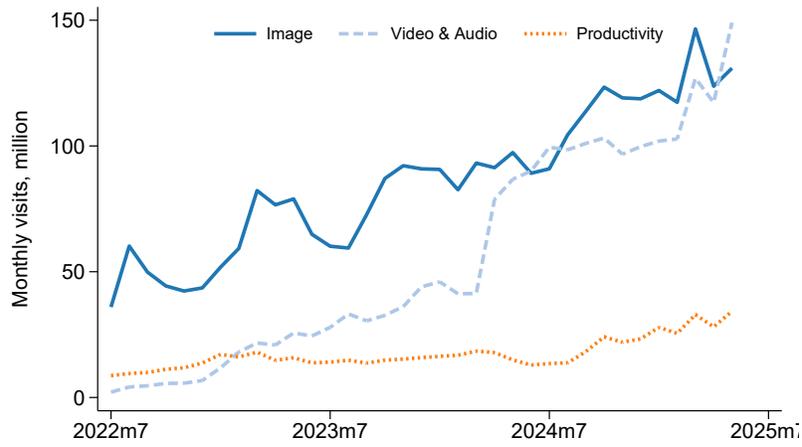
Gemini Gemini’s user base and traffic have grown steadily since its late 2023 launch, reaching 187 million monthly visits and 104 million users by May 2025 (Figure 5b). Following strong initial uptake with Gemini 1.0 and 1.5, growth leveled off in mid-2024, with declining traffic per user signaling weaker engagement. Usage began to rebound in early 2025, when Gemini released a new family of general use tools to the public, including Gemini 2.0 Flash, Gemini 2.0 Flash-Lite, and Gemini 2.0 Pro Experimental. Traffic surged after the public release and show reinforced momentum, with visits up 182% year-over-year and users growing 6.5% by May, indicating renewed traction in the lead-up to and following the upgrade.

3.3 Rising Popularity of Image, Audio, and Video Generation Tools

While chatbots continue to dominate overall traffic, Figure 6 shows rapid growth in image, video, and audio generation tools since late 2023.⁵ By mid-2024, both categories surpassed 100 million monthly visits and continued to grow through early 2025. Productivity tools, though smaller in scale, have also gained traction, led by applications like NotebookLM. These trends point to a more diversified GenAI ecosystem, with specialized tools driving broader adoption across new use cases.

⁵Detailed category trends are provided in Appendix A.2.

Figure 6: Aggregate Traffic by Category



Note: Monthly visits (in millions) to image, video and audio, and productivity tools from July 2022 to May 2025, based on Semrush traffic data. Categories are defined by primary tool function, with separate lines representing image tools, video and audio tools, and productivity tools.

4 Broadening User Base, Increasing Usage Intensity, and Widening Divide across Income Groups

Building on the global patterns of GenAI adoption, this section focuses on ChatGPT—the most widely used and representative GenAI tool—for which consistent data on both monthly visits and unique users are available. These data allow us to decompose growth into extensive and intensive margins, a level of detail not feasible for other tools whose user bases are less consistently observable. Adoption has expanded over the past year across all income groups, not only in terms of how broadly the tool is being used but also in how deeply users engage with it. This section disaggregates usage into two dimensions: the extensive margin, reflecting how many people are using ChatGPT and how that compares to the broader internet population⁶; and the intensive margin, capturing how often and how long users interact with the tool. We further investigate how these dimensions of growth vary across income groups and countries, highlighting growing divides in both the width and depth of GenAI adoption between rich and poor countries.

4.1 Trends in Total Traffic by Country Income Group

While all income groups experienced growth in ChatGPT adoption in the past year, measured as the total traffic, HICs recorded the fastest and largest gains, with sharp increases in both adoption rates and usage intensity. Total monthly ChatGPT visits from HICs rose from 1,142 million in April 2024 to 2,545 million in April 2025. UMCs doubled their traffic, from 490.0 million to 1,000.0 million over the same period, while LMCs saw an increase from 421.7 million to 816.2 million. LICs more than tripled their traffic from 2.3 million to nearly 10 million.

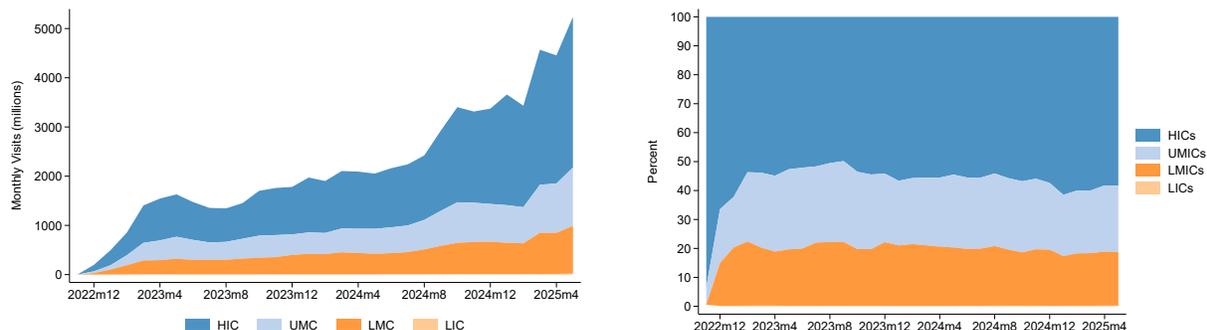
Figure 7 illustrates how different income groups contributed to ChatGPT’s traffic growth till April 2025. Figure 7a shows that HICs have been the dominant driver of growth since early 2023, with a sharp acceleration in the past year. UMCs and LMCs also recorded substantial gains, but from a smaller base, while LICs remain negligible in terms of total traffic volume.⁷ Figure 7b illustrates traffic share by country income group over time. HICs account for roughly 60% of the

⁶Internet user counts are from ITU statistics. The definition and sophistication of “internet user” can vary across countries, so traffic per internet user should be interpreted as a broad indicator rather than a precise measure of engagement.

⁷Table A1 ranks the top 30 economies by monthly ChatGPT traffic in April 2025, compared with April 2024 levels.

global traffic in April 2025, up from 55% in April 2024. UMCs’ traffic share slightly decreased from 25% in 2024 to 24% in 2025, and LMCs’ share contracted from 20% to 19%. LICs’ traffic share ticked up from 0.1% to 0.2% but remains negligible.

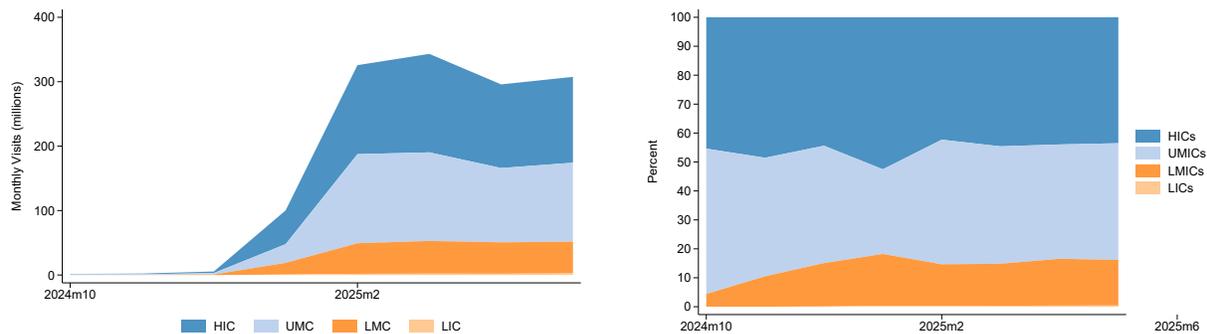
Figure 7: ChatGPT Traffic by Country Income Group



(a) ChatGPT Traffic

(b) Global Share

Figure 8: Deepseek Traffic by Country Income Group



(a) Deepseek Traffic

(b) Global Share

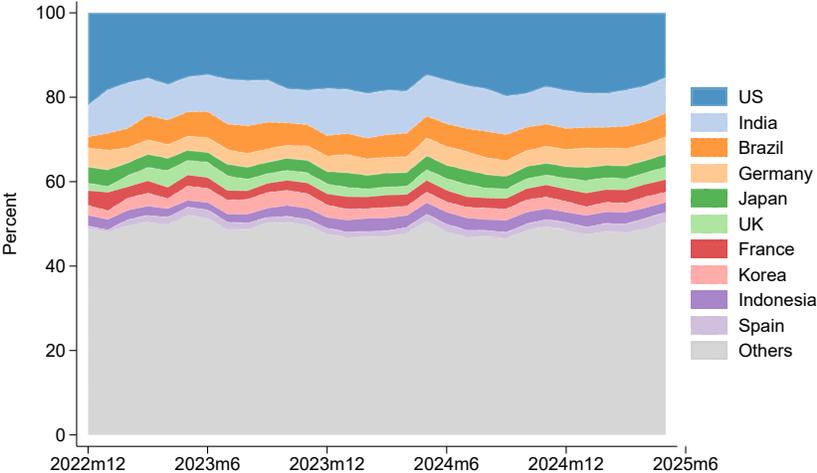
Note: Based on Semrush monthly visit estimates, Panel (a) shows ChatGPT/Deepseek traffic (in millions) by income group from Dec 2022 to Apr 2025. The stacked area chart aggregates traffic to display both overall growth and each group’s contribution. Panel (b) shows each country income group’s global share of total ChatGPT/Deepseek traffic.

A parallel look at DeepSeek (Figure 8) shows both similarities and differences in adoption dynamics across income groups. Since its launch in early 2025, DeepSeek has grown rapidly, reaching over 300 million monthly visits by May 2025. Unlike ChatGPT, whose traffic surge since 2023 has been concentrated in high-income countries, DeepSeek’s growth is heavily driven by China, which accounted for 44% of its global traffic in October 2024. By April 2025, however, China’s

share had fallen to 20%, with HICs making up 44%, UMCs (including China) 40%, and LMCs 16%. Despite its Chinese origins, DeepSeek has achieved broad global uptake—standing out from most other Chinese GenAI tools. This reflects both its positioning as a lower-cost alternative and its localization advantages in Asia, illustrating that while the global GenAI divide persists, locally tailored solutions can meaningfully reshape the geography of adoption.

Figure 9 breaks the distribution down by country. The United States has consistently been the largest source of ChatGPT traffic, with its share remaining stable at around 20% over time. Contributions from emerging markets such as India, Brazil, and Indonesia have grown steadily since early 2023. Between April 2024 and April 2025, ChatGPT’s global user base expanded by 42%, while the average number of visits per user rose from 5.4 to 8. Combined, these changes produced a 113% increase in global traffic.

Figure 9: Distribution of ChatGPT Traffic by Country

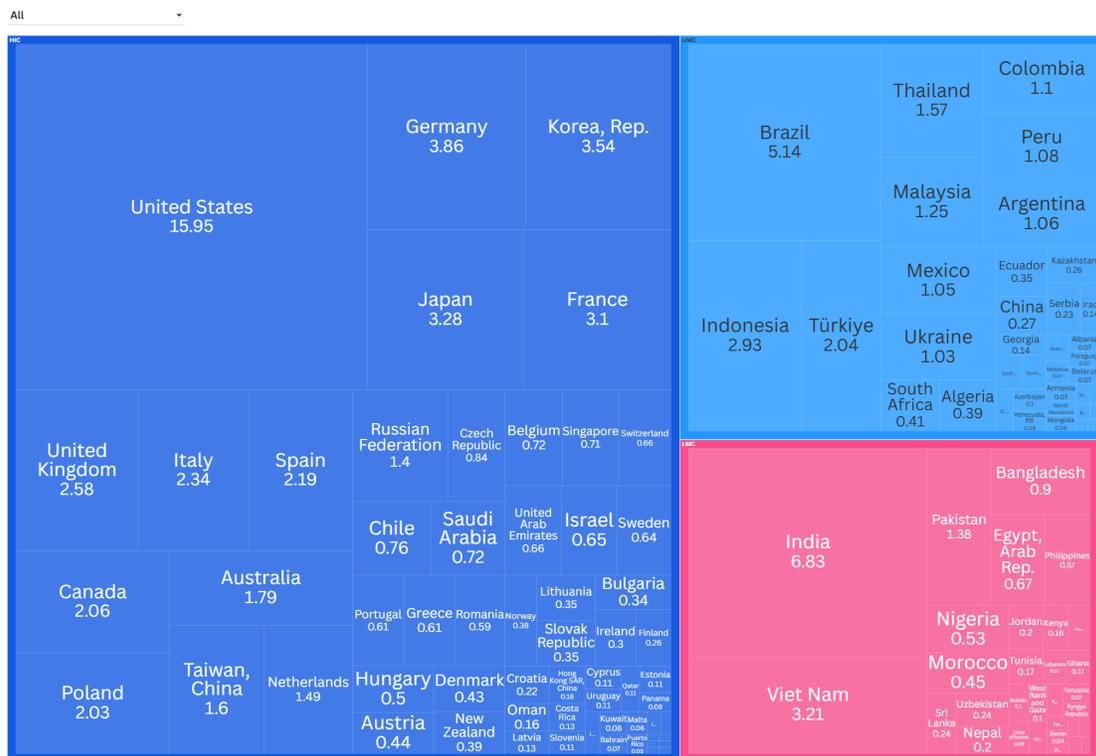


Note: The figure shows the distribution by top traffic-contributing countries. Shares are calculated from Semrush monthly traffic data.

Figure 10 illustrates the change in monthly ChatGPT traffic between April 2024 and April 2025, highlighting each country’s contribution to global growth in percentage points. The United States was the single largest contributor, accounting for 16% of the increase, followed by India (6.8%), Brazil (5.1%), Germany (3.9%), the Republic of Korea (3.5%), Japan (3.3%), and France (3.1%). Emerging economies contributed substantially to the expansion. India alone accounted for nearly

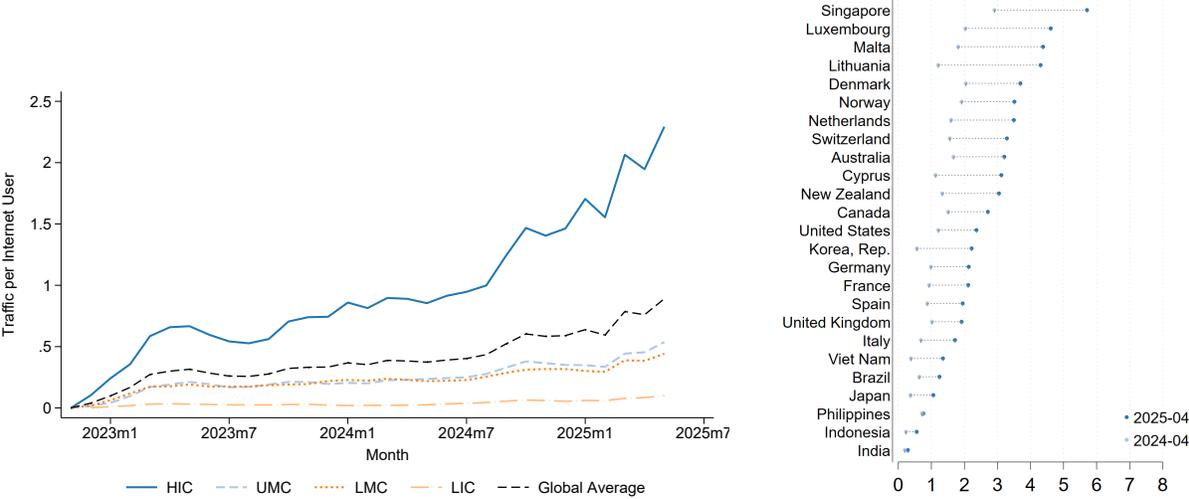
7% of the global increase, while Brazil, Viet Nam (3.2%), and Indonesia (2.9%) were also major drivers. From an income-group perspective, HICs accounted for about 61% of total traffic growth, UMCs for 22%, and LMCs for 17%, while LICs contributed just 0.4%.

Figure 10: ChatGPT monthly traffic growth decomposed by country (percentage)



economies such as Singapore, Luxembourg, and Lithuania top the list, each exceeding 4 visits per internet user per month. Many high-income countries like Denmark, Norway, and Switzerland also record high traffic per internet user. Large economies such as the United States, France, and Japan show moderate values, while populous emerging economies, including India, Indonesia, and the Philippines, remain in the lower range despite year-on-year growth.

Figure 11: ChatGPT traffic per internet user



(a) By income group

(b) Selected Country

Note: Panel (a) shows the average monthly ChatGPT traffic (number of visits) per internet user from January 2023 to May 2025, by country income group, based on Semrush monthly traffic data. The dashed black line indicates the global average, while solid and dashed colored lines represent group-specific trends. Panel (b) compares ChatGPT traffic per internet user across countries in April 2024 and April 2025. Dots represent country-level data, with 2024 values in light blue and 2025 values in dark blue; dotted lines connect the two years to indicate changes over time. Countries are ranked by their April 2025 value.

To understand what drives traffic growth across income groups, we decompose ChatGPT visits per internet user into two components: the extensive margin, **ChatGPT users per internet user**, and the intensive margin, **ChatGPT visits per ChatGPT user**.

Formally, let $Visits_{gt}$ denote monthly GenAI visits for group g at time t , Int_{gt} represent the number of internet users, $Users_{gt}$ the monthly ChatGPT users. Then ChatGPT visits per internet user can be written as

$$\frac{Visit_{gt}}{Int_{gt}} = \frac{User_{gt}}{Int_{gt}} \times \frac{Visit_{gt}}{User_{gt}}. \tag{1}$$

Taking logs and first differences across two years yields a log-additive decomposition:

$$\Delta \log \frac{Visit_{gt}}{Int_{gt}} = \Delta \log \frac{User_{gt}}{Int_{gt}} + \Delta \log \frac{Visit_{gt}}{User_{gt}}, \quad (2)$$

This decomposition allows us to distinguish whether increases in traffic per internet user are driven by broader diffusion (extensive margin), or deeper engagement among existing users (intensive margin).

Table 3: Extensive and Intensive Margin of ChatGPT Usage

	Overall Usage:			Extensive Margin:			Intensive Margin:		
	ChatGPT visits <i>per</i> internet user			ChatGPT users <i>per</i> internet user			ChatGPT visits <i>per</i> ChatGPT user		
	2024 Apr. (N)	2025 Apr. (N)	Growth (%)	2024 Apr. (%)	2025 Apr. (%)	Growth (%)	2024 Apr. (N)	2025 Apr. (N)	Growth (%)
Global	0.38	0.76	98.4	7.16	9.48	32.5	5.35	8.02	49.8
HIC	0.89	1.95	118.8	17.27	24.28	40.6	5.15	8.02	55.7
UMC	0.23	0.45	98.0	4.21	5.80	37.9	5.45	7.83	43.6
LMC	0.23	0.38	67.7	3.92	4.67	19.1	5.84	8.22	40.8
LIC	0.02	0.08	270.5	0.26	0.68	161.3	8.74	12.39	41.8

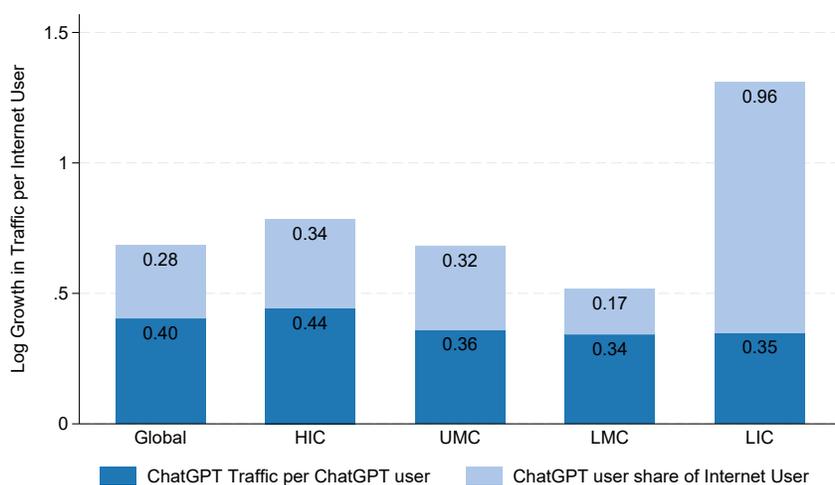
Note: Table reports changes in ChatGPT usage from April 2024 to April 2025, decomposed into the extensive margin (growth in the share of internet users who use ChatGPT) and the intensive margin (growth in average visits per ChatGPT user). Columns show levels and percentage increases in April 2024 and April 2025 by income group.

Table 3 reports these two components in level terms for April 2024 and April 2025, along with their percentage changes. Figure 12 shows the same decomposition in log-growth form: each stacked bar equals the log change in traffic per internet user (overall growth in the first panel of the table), split into the log change in ChatGPT user share (light blue) and the log change in visits per ChatGPT user (dark blue).⁸ This direct correspondence allows the table to convey the magnitudes in percentage terms, while the figure highlights the proportional contribution of each margin to total growth. Both margins contributed positively to growth across income groups, but their relative importance varied. In HICs, growth was large and balanced between wider adoption and deeper

⁸Example (HICs): the percentage increase in average visits per ChatGPT user from Table 3 is 56.0%, which corresponds to a log change of $\ln(1 + 0.557) \approx 0.44$ in Figure 12. Similarly, the 41.0% increase in the share of internet users who are ChatGPT users translates to $\ln(1 + 0.406) \approx 0.34$. Summing these two components gives the total log growth shown in the stacked bar, i.e., $\ln(1 + 1.188) \approx 0.78$.

engagement. In UMCs, wider adoption contributed slightly more. In LMCs, most growth came from deeper engagement among existing users, with limited expansion of the user base, likely reflecting affordability and connectivity barriers alongside more limited awareness, relevance and institutional exposure compared to higher-income economies. In LICs, both adoption and engagement increased substantially, reflecting the very low initial user base combined with high engagement among early adopters. In general, HIC growth outpaced that of middle-income countries, widening the divide despite rapid percentage gains of LICs.

Figure 12: Log Growth in ChatGPT Traffic per Internet User by Income Group



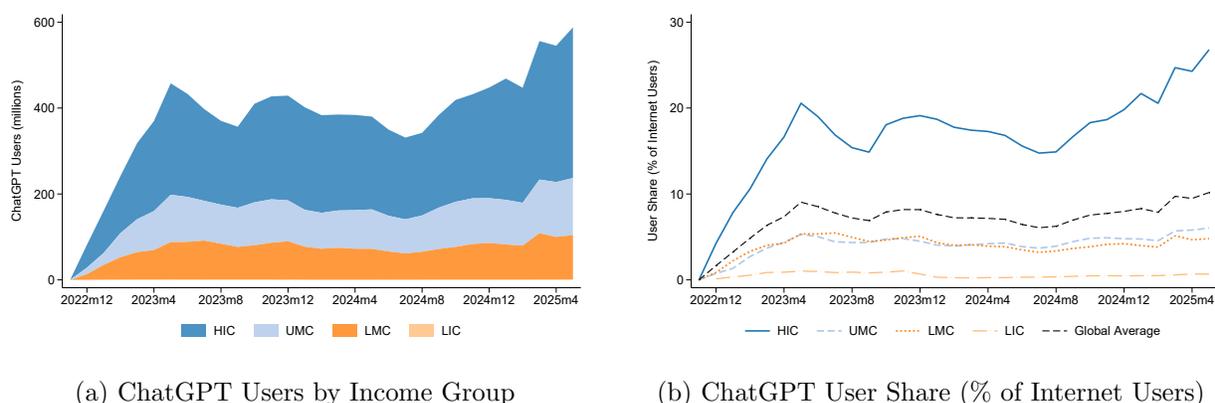
Note: Bars show the log growth in ChatGPT traffic per internet user from April 2024 to April 2025, decomposed into changes in traffic per ChatGPT user (dark blue) and changes in the share of internet users who are ChatGPT users (light blue), by income group.

4.3 Extensive Margin

HICs account for the lion’s share of ChatGPT’s expanding user base. Figure 13 illustrates the evolution of ChatGPT penetration across country income groups. Panel 13a shows that HICs dominate in absolute terms, consistently making up around 60% of global users. Between April 2024 and April 2025, they added nearly 100 million new users, bringing their total to over 320 million. Over the same period, UMCs gained 38 million users (around 130 million), and LMCs added 27 million (around 100 million). LICs experienced rapid percentage growth from a very low base, adding 0.5 million users to reach just 0.7 million by April 2025.

Despite this expansion, penetration rates reveal striking disparities across income groups. Figure 13b illustrates the extensive margin—the share of internet users adopting ChatGPT. By April 2025, penetration stood at 24% in HICs, compared with 5.8% in UMCs, 4.7% in LMCs, and only 0.7% in LICs. The adoption gap has widened over time, driven by surging uptake in HICs since mid-2024. While internet users have expanded in middle- and low-income countries, ChatGPT usage has not kept pace: only a small fraction of internet users engage with the tool. These imbalances reflect deeper divides in economic development, digital maturity, AI awareness, industry composition, labor market structures, and the perceived relevance of GenAI across contexts.

Figure 13: Extensive Margin by Income group (ChatGPT)



Note: Panel (a) shows the number of monthly ChatGPT users (in millions) from December 2022 to April 2025, aggregated by income group. User counts are derived from Semrush monthly active user data by country, summed within each income group. Panel (b) presents the share of internet users within each income group using ChatGPT over the same period. Shares are calculated by dividing ChatGPT monthly users by the total internet users in each group. The dashed line in Panel (b) shows the global average. Colors in both panels correspond to income groups.

4.4 Intensive Margin

This subsection examines ChatGPT usage intensity across income groups, focusing on two dimensions of the intensive margin: usage frequency and session duration.

Usage frequency

Figure 14a tracks the evolution of average monthly visits per user. From early 2023 to mid-2025, all income groups saw steady gains in frequency, with broadly similar patterns across groups except for

LICs. In April 2023, users across all groups visited ChatGPT about five times per month. Usage began rising steadily in 2024, reaching around eight monthly visits by mid-2025. Between April 2024 and April 2025, HICs recorded a 56% increase in average visits per user (from 5.2 to 8), UMCs a 44% increase (from 5.5 to 7.8), and LMCs a 41% increase (from 5.8 to 8.2). This convergence suggests that once adoption occurs, frequency grows at a comparable pace across income levels.

Low-income countries stand out. LICs recorded by far the highest usage frequency, exceeding 12 visits per user per month despite their small user base. Several factors may explain this:

Selection effect: In LICs, users tend to be highly motivated “power users” (students, freelancers, professionals) who overcome barriers of awareness, connectivity, and cost, while in richer countries adoption is more widespread and includes casual, low-frequency users.

Substitution effect: In LICs, ChatGPT substitutes for scarce or costly resources—tutors, textbooks, professional advice, or software tools—whereas in richer countries it competes with many alternatives.

Infrastructure constraints and proxy use: Some users may batch questions or use the tool on behalf of others who cannot access it, further inflating average usage intensity in LICs.

Session duration

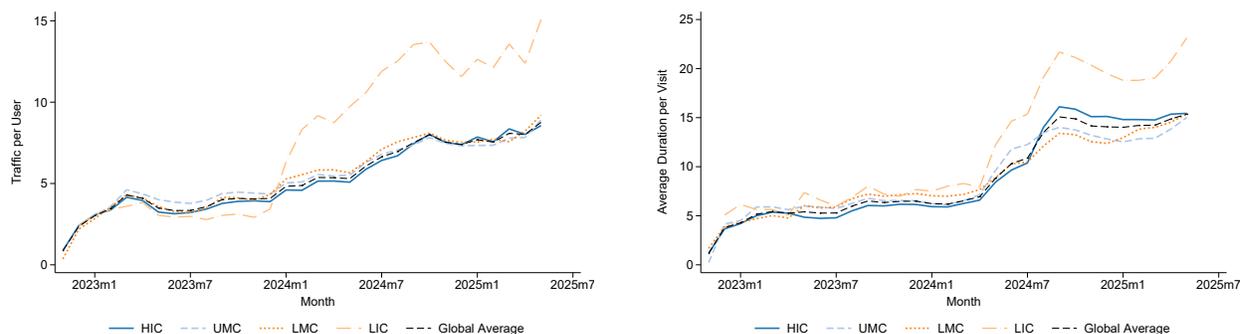
Figure 14b complements frequency data by tracking average visit duration. From early 2023 to mid-2025, session lengths rose steadily across all income groups, with sharper increases after early 2024. In HICs, average visit duration more than doubled to over 15 minutes by April 2025. UMCs and LMCs show similar patterns, with sessions averaging around 14 minutes. LICs again recorded the highest intensity, with average sessions exceeding 20 minutes—likely reflecting the same selection, substitution, and proxy-use dynamics noted above.

The sharp rise in mid 2024 does not correspond directly to major model releases but may relate to design changes that encourage sustained engagement. For example, ChatGPT and other leading tools began experimenting with automated follow-up prompts and conversational nudges around this period, features that became more visible by early 2025. These modifications may have contributed to longer sessions by encouraging continued use, although genuine increases in user engagement and perceived utility likely also played an important role.

Overall, these trends show that ChatGPT use is widening and also deepening along both fre-

quency and duration dimensions. The widening divide across income groups is less about how intensively adopters use ChatGPT, and more about adoption itself: the extensive margin remains the primary driver of global disparities.

Figure 14: Intensive Margin by Income group (ChatGPT)



(a) Avg. ChatGPT Visits per ChatGPT User

(b) Avg. Visit duration per Visit

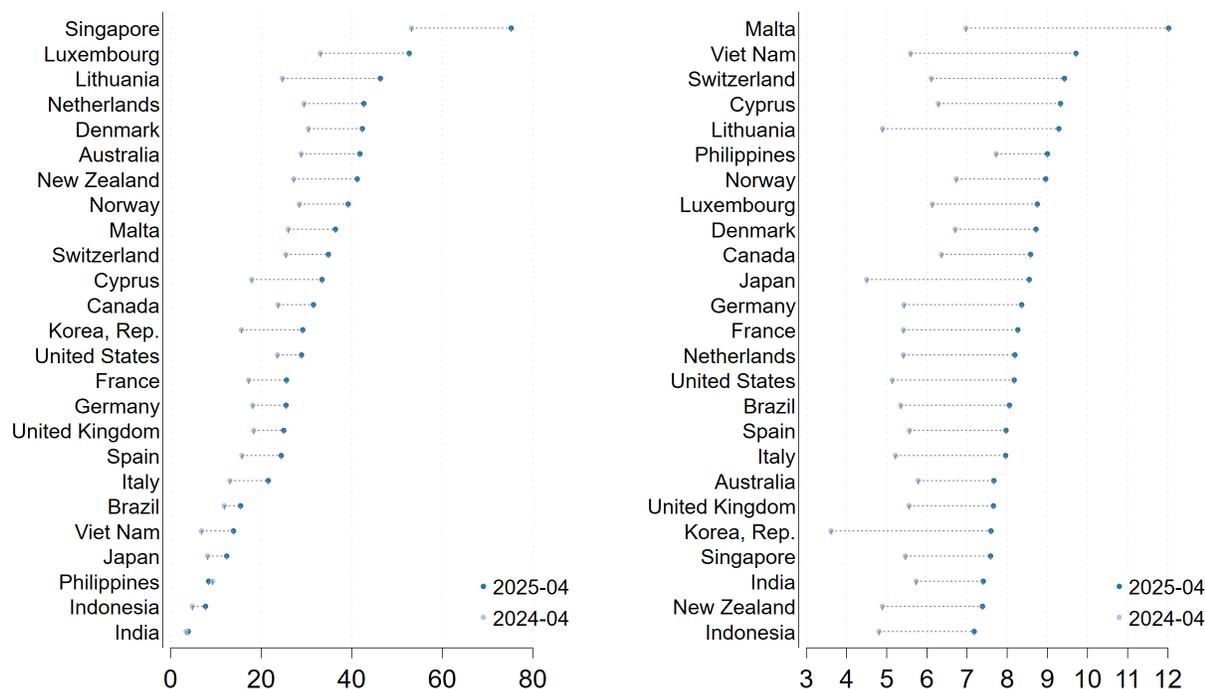
Note: Panel (a) shows the average number of monthly visits per ChatGPT user from January 2023 to May 2025, and Panel (b) shows the average duration per visit (in minutes) over the same period. Both metrics are calculated for each income group, calculated from Semrush traffic data. Lines show group-specific trends, with the dashed black line indicating the global average for reference.

4.5 Growth Dynamics by Country

Figure 15 highlights cross-country differences in ChatGPT adoption and usage frequency as of April 2025. Singapore stands out with by far the highest penetration rate (80%), followed by Luxembourg, Lithuania, the Netherlands, and Denmark, each at around 50%. In terms of intensity, Malta leads with the highest usage frequency among major user countries (12 visits per user per month), with Viet Nam, Switzerland, Cyprus, Lithuania, and the Philippines close behind at around 9 visits.⁹

⁹Table A3 presents the top 30 countries ranked by ChatGPT visits per internet user, user penetration and usage frequency in April 2025, with comparable figures from April 2024 for reference.

Figure 15: ChatGPT usage intensity by country: ChatGPT user share of Internet user vs. ChatGPT visits per ChatGPT user



(a) ChatGPT user share of Internet user (%)

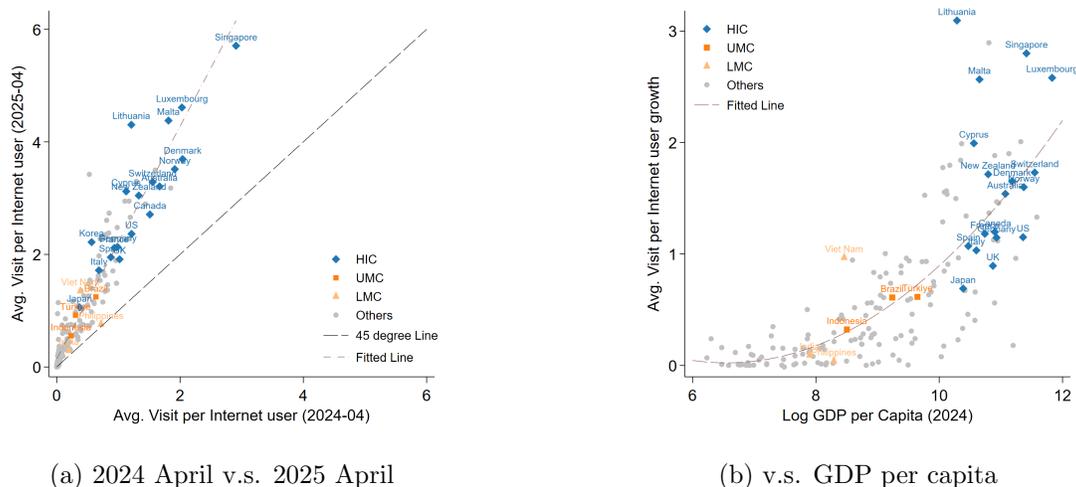
(b) ChatGPT visits per ChatGPT user

Note: The figure compares ChatGPT usage intensity across countries in April 2024 and April 2025, using two metrics: (a) ChatGPT user share of internet user (extensive) and (b) visits per ChatGPT user (intensive-frequency). Dots represent country-level averages, with 2024 values in light blue and 2025 values in dark blue; dotted lines connect the two years to indicate changes over time. Countries are ranked by their April 2025 value in each metric.

Figure 16 examines changes in ChatGPT visits per internet user between April 2024 and April 2025. Panel 16a compares traffic per internet user in April 2025 with that of April 2024. The fitted line lies well above the 45-degree line, indicating broad-based growth over the year. Lithuania, the Korea Republic, and Viet Nam experienced particularly rapid growth. Panel 16b relates this growth to GDP per capita in 2024. The results show a clear positive association: higher-income countries experienced faster growth in traffic per internet user. HICs—particularly Singapore, Luxembourg, and Lithuania—continued to post the strongest gains, building on already high baseline levels of usage. By contrast, most low- and middle-income countries recorded only modest increases, leaving their relative position further behind. This pattern suggests that rather than narrowing over time,

disparities in GenAI usage between rich and poor countries are widening, with the frontier economies pulling further ahead.

Figure 16: Change in ChatGPT Visits per Internet User (2024 April - 2025 April)



Note: Panel (a) compares April 2025 and April 2024 visits per internet user, with a 45-degree reference line and a fitted line. Panel (b) plots the change in average monthly visits per internet user from April 2024 to April 2025 against 2024 log GDP per capita, with point shapes denoting income groups.

To complement the descriptive country trends, we use a simple cross-sectional OLS regression to examine how basic country-level characteristics relate to the growth of GenAI traffic and users. For each tool, the dependent variable is the log change in per capita traffic or per capita users between April 2024 and April 2025. Specifically, we use $\log((\text{traffic}_{2025} - \text{traffic}_{2024})/\text{pop})$ and analogously for users, which ensures comparability even when growth is negative. The key explanatory variables include the share of population using the internet, log GDP per Capita (USD), and fixed-broadband download speed (Mbps).

Table 4 presents regression results comparing the drivers of traffic and user growth for several GenAI tools as well as Google. Columns 1–6 show that traffic and user growth for ChatGPT, Gemini, and Claude are consistently and positively associated with GDP per capita and internet penetration. In contrast, Google’s growth patterns in Columns 7–8 are much less responsive to these structural factors, with weaker or even negative associations. These patterns are consistent with earlier figures and Table A3, underscoring how newer GenAI tools remain more sensitive to foundational conditions than mature platforms like Google. As such, structural readiness continues

to shape the pace and intensity of GenAI diffusion across countries.

Table 4: Correlation between Chatbot GenAI growth and country factors

Dependent variable	ChatGPT		Gemini		Claude		Google	
	Traffic Growth	Users Growth						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
% Population Using Internet	0.031*** (0.008)	0.028*** (0.008)	0.017 (0.012)	0.021** (0.009)	0.019** (0.009)	0.024*** (0.009)	-0.012** (0.005)	-0.010** (0.005)
log GDP per Capita (USD)	0.623*** (0.129)	0.611*** (0.115)	0.792*** (0.211)	0.783*** (0.161)	0.628*** (0.138)	0.635*** (0.142)	0.157* (0.084)	0.171* (0.093)
Fixed-Broadband median	0.002 (0.004)	0.004 (0.003)	-0.002 (0.005)	-0.000 (0.004)	0.000 (0.003)	-0.000 (0.003)	-0.003** (0.001)	-0.003* (0.002)
Constant	-4.893 (0.822)	-7.299 (0.743)	-9.633 (1.220)	-10.460 (0.985)	-7.724 (0.862)	-9.962 (0.883)	-0.192 (0.425)	-0.562 (0.455)
Observations	153	148	118	138	131	139	164	164
R-squared	0.67	0.67	0.55	0.65	0.61	0.63	0.12	0.06

Note: Standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. For ChatGPT and other GenAI tools, we define growth of traffic as $\log[(2025 \text{ traffic} - 2024 \text{ traffic})/\text{population}]$, and growth of users as $\log[(2025 \text{ users} - 2024 \text{ users})/\text{population}]$. For Google, to avoid sample loss from negative growth values, we use the log ratio of per capita traffic $[\log(2025 \text{ traffic} / 2024 \text{ traffic}) \text{ per capita}]$ instead. Results are qualitatively robust. Other covariates are from Liu and Wang (2024).

5 Regional Preferences and Localization Effects

As the GenAI landscape evolves and more countries move closer to the innovation frontier, distinct regional patterns are emerging. Adoption appears increasingly shaped not just by infrastructure or affordability, but by location-specific factors—linguistic alignment, cultural familiarity, and market targeting. This section presents suggestive evidence of users’ preference for locally-produced GenAI tools. While these patterns are not yet definitive, they point to important gravity-model dynamics worth deeper investigation. This section reviews recent literature on localization and AI adoption and then examines regional preferences reflected in platform traffic data.

Unlike earlier general-purpose technologies—such as the steam engine or electricity—that spread globally once physical infrastructure was in place, GenAI is inherently a social and cultural technology. Its usefulness depends not only on technical performance but also on alignment with users’ language, norms, and cognitive expectations. Models that fail to “speak the user’s language,” literally and figuratively, risk limited uptake even where connectivity is widespread. Recent research therefore characterizes AI as a cultural technology, whose diffusion and impact hinge on its fit with

local institutional and linguistic environments Farrell, Gopnik, Shalizi, and Evans (2025). This perspective explains why adoption patterns can diverge sharply across countries with similar levels of internet infrastructure.

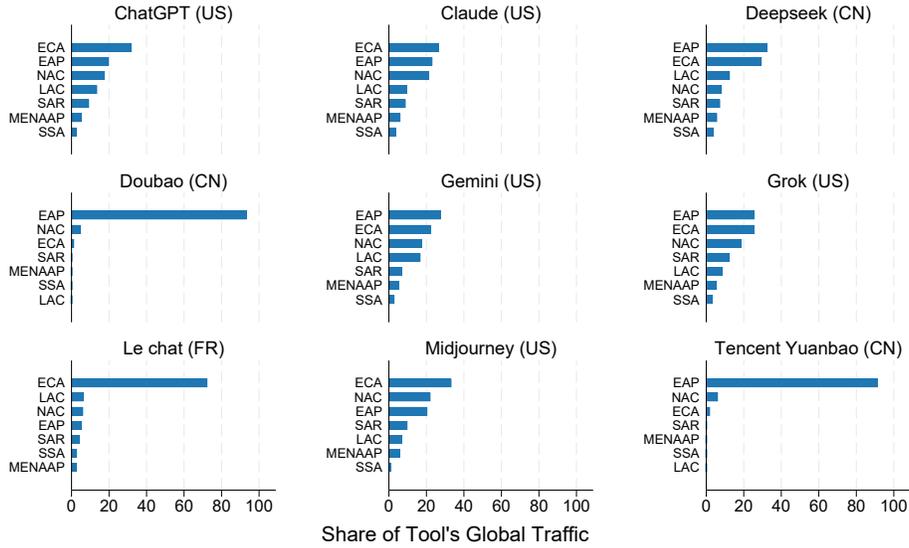
A growing body of evidence supports this view. Bearson and Wright (2025) show that AI entrepreneurs often target large and culturally familiar markets first, leveraging early network effects and maximizing product–market fit. Krakowski, Haftor, Luger, Pashkevich, and Raisch (2025) emphasize that distance from the technological frontier, whether geographic, linguistic, or institutional, can slow GenAI adoption and limit the benefits realized. For example, engineers in Asia frequently prefer Chinese GenAI models over American ones, as these tools better capture linguistic subtleties and cultural nuances. Chinese models are trained on far larger volumes of Chinese-language data, which not only strengthens performance in Chinese but also creates spillovers for users of related Asian languages.¹⁰

Evidence from related digital technologies also shows that cultural distance can be a systematic barrier to adoption. Choudhury (2022) find that differences in language, trust norms, and communication styles between countries significantly reduce adoption rates of global digital platforms, even when technology and infrastructure are available. These barriers are larger when platforms are designed around context-specific social interactions, requiring adaptation to local user expectations. This suggests that localization is not a secondary consideration but a key determinant of adoption trajectories for AI as well.

Website traffic data provide clear evidence of users’ preference for local GenAI tools, consistent with the localization hypothesis. Figure 17 shows the regional composition of traffic for selected platforms. Globally oriented models such as ChatGPT, Gemini, and Claude attract users from diverse regions but still retain a strong home-region advantage. By contrast, platforms like Le Chat, Tencent Yuanbao, Doubao, and DeepSeek draw the overwhelming majority of their traffic from their primary linguistic and cultural markets—Europe and Central Asia in the case of Le Chat, and East Asia and the Pacific for the Chinese-developed tools. These patterns suggest that even in a highly interconnected global environment, linguistic and cultural proximity, coupled with localized product design, can generate powerful “home-court advantages” that shape adoption.

¹⁰China’s Lead in Open-Source AI Jolts Washington and Silicon Valley. <https://www.wsj.com/tech/ai/chinas-lead-in-open-source-ai-jolts-washington-and-silicon-valley-ffdec83b?st=UJaqv>

Figure 17: Traffic share of selected tools by Region



Note: Each panel shows the regional distribution of traffic for a single generative AI tool, based on Semrush traffic data. Bars represent the share of the tool’s total global traffic originating from each world region, with regions ordered by their share size. Tool names are shown with their country of origin in parentheses.

In the coming years, as more countries engage in different stages of the GenAI value chain—from foundational model development to specialized applications—usage patterns could become more fragmented and locally concentrated. While many leading tools remain globally accessible, user engagement shows regionally concentrated patterns, driven by factors such as linguistic alignment, cultural familiarity, and differential access. This emerging localization trend carries broader implications for capital flows, skill development, innovation trajectories, and geopolitical dynamics. Looking ahead, these regional usage patterns underscore the growing importance of localization and strategic adaptation. At the same time, they raise concerns about fragmentation and divergence, highlighting the need for global AI governance, cross-border interoperability, and open standards to ensure that innovation remains inclusive and widely beneficial.

6 Conclusion

This paper provides an updated analysis of global GenAI adoption one year after our initial study (Liu and Wang 2024), using high-frequency website traffic data from Semrush to track adoption patterns across the 60 most visited GenAI tools as of mid-2025. While website-level data cannot capture backend or enterprise usage, they remain the most timely and scalable proxy for measuring general-purpose GenAI adoption among individual users. Our analysis reveals five key findings with significant implications for understanding the evolving AI landscape.

First, the GenAI market exhibits intensifying competition and rapid innovation. DeepSeek and Grok—absent from our previous analysis—now rank among the top five platforms by global traffic, while 9 of the 60 tools in our sample represent entirely new entrants. This churn underscores the remarkable pace of innovation as open-source and proprietary models compete for user attention. The current wave of innovation increasingly emphasizes multi-modality, advanced reasoning capabilities, and sophisticated image, audio, and video generation tools.

Second, despite increased competition, ChatGPT maintains its dominant position. ChatGPT still accounted for 77% of global traffic to the top 60 GenAI tools by April 2025, underscoring its first mover advantage. More broadly, chatbots continue to dominate the GenAI landscape, accounting for 95% of global traffic to the top 60 tools since 2023. This persistence reflects chatbots’ flexibility, versatility, and accessibility across diverse user populations.

Third, GenAI usage has surged across both extensive and intensive margins since mid-2024. The number of unique monthly ChatGPT users increased by 42% globally between April 2024 and 2025. Simultaneously, average visits per user per month rose by 50%, and average visit duration doubled. Similar patterns emerge across other leading platforms including Gemini and DeepSeek, suggesting broad-based intensification of GenAI engagement.

Fourth, HICs are establishing a widening lead in GenAI adoption. As of April 2025, HICs account for nearly 60% of ChatGPT traffic and users, experiencing faster growth than middle-income countries in both user adoption and usage intensity. The traffic and user shares of UMCs and LMCs have contracted slightly to approximately 20% each, while LICs maintain negligible shares below 1%. Regression analysis confirms a positive relationship between GDP per capita and traffic/user growth, pointing toward an emerging structural digital divide in the AI era.

Fifth, GenAI tools demonstrate strong home market advantages. While US-produced tools enjoy global recognition, platforms like France’s Le Chat and Chinese tools including DeepSeek, Doubao, and Tencent Yuanbao derive disproportionate user shares from their home regions. These patterns underscore the critical importance of localization—encompassing language, cultural alignment, and targeted distribution strategies—for achieving widespread adoption and sustained user engagement.

These findings carry significant policy implications as GenAI becomes increasingly integrated into daily life and economic activity. Ensuring equitable access and participation will be essential to prevent countries with lagging adoption from being excluded from the productivity and innovation gains that GenAI may generate. Addressing this emerging divide will require targeted investments in digital infrastructure, skills development, local adaptation strategies, and responsible AI governance frameworks.

Our analysis also highlights several avenues for future research. Complementing consumer-level tracking with firm-level adoption data and backend usage metrics would provide a more comprehensive picture of AI diffusion patterns. Additionally, longitudinal studies examining the relationship between GenAI adoption and economic outcomes could help quantify the stakes of the GenAI divide we document. As the GenAI landscape continues its rapid evolution, sustained monitoring and analysis will be crucial for understanding its broader implications for global economic development and digital equity.

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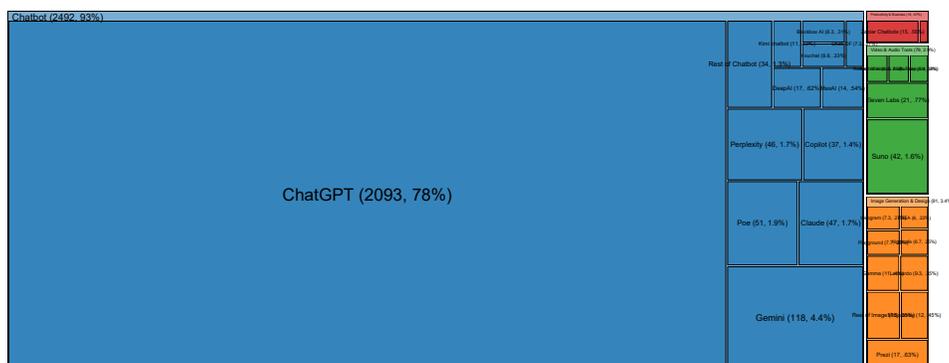
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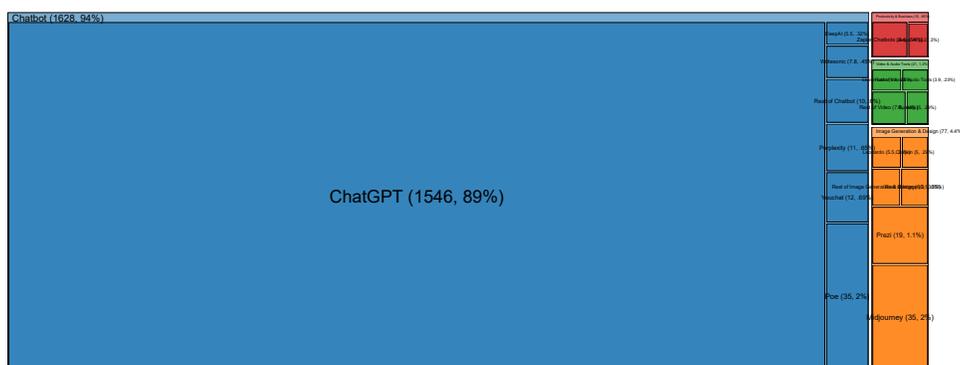
A Appendix: Additional Figures and Tables

A.1 Market Share: Treemap

Figure 1 illustrate the evolving landscape of GenAI usage across the top 60 tools. While ChatGPT remains the dominant platform, its share has gradually declined, from 89% in April 2023 to 78% in April 2025, as the market becomes more competitive. New and more powerful tools like DeepSeek and Gemini have gained traction, pushing both into the global top three by 2025. This diversification reflects not only the entry of standalone GenAI tools but also growing integration of GenAI features into existing platforms.



Monthly visits (million) of 60 selected GenAI tools (April 2024)



Monthly visits (million) of 60 selected GenAI tools (April 2023)

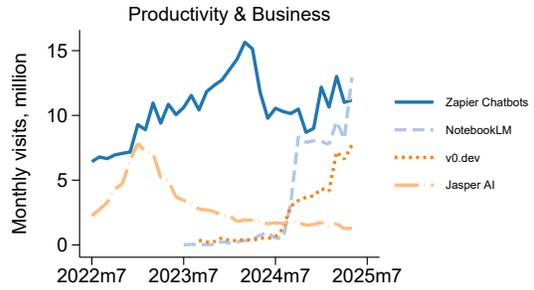
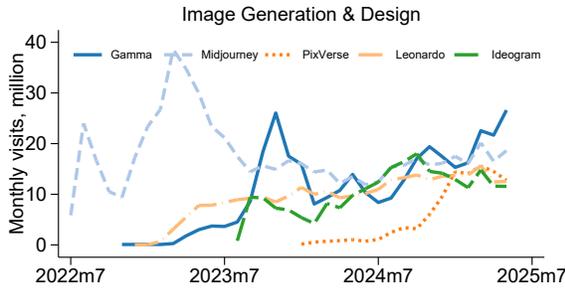
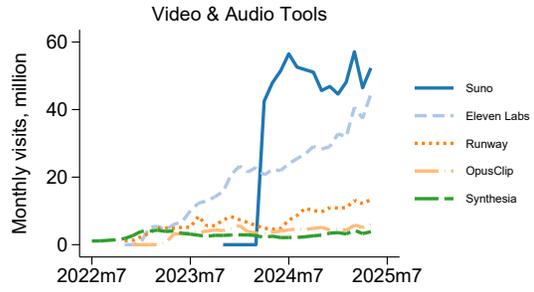
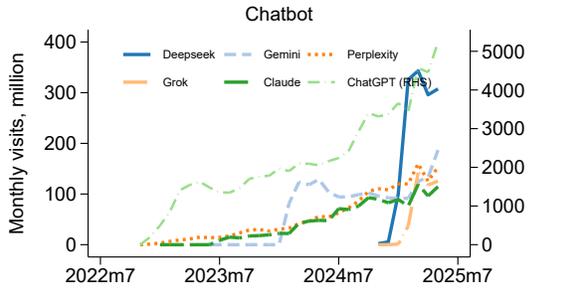
A.2 Trend by category (detail)

Figure A1 show notable divergence in scale and growth dynamics across GenAI tool categories. Chatbots (top left) continue to dominate in both scale and growth. ChatGPT retains a substantial lead, but emerging platforms like DeepSeek, Gemini, and Perplexity have rapidly reached over 100 million monthly visits since early 2024. This reflects both intensified competition and increasing user experimentation with alternative models. Image generation tools (bottom left) show more fragmented and volatile patterns. Midjourney initially led the category with a sharp rise in late 2022 but plateaued in 2023. By 2025, traffic is more evenly distributed across tools like Leonardo, Ideogram, and PixVerse, with no single platform sustaining dominance. The market appears to have matured, shifting from explosive early growth to a more stable distribution of user attention.

Video and audio tools (top right) are expanding rapidly. Suno, in particular, surged in early 2024 and now exceeds 40 million monthly visits, signaling strong demand for AI-generated voice and music. Eleven Labs also shows steady gains, while tools like Runway and Synthesia maintain moderate, sustained traffic. Together, Suno and Eleven Labs anchor the growth of this emerging segment. Productivity tools (bottom right) remain smaller but steadily growing. Zapier Chatbots, NotebookLM, and v0.dev now each attract over 10 million monthly visits. These tools reflect growing interest in workflow integration and practical AI use cases, beyond content creation.

A.3 GenAI tool distribution across countries

Figure A2 illustrates how GenAI tool usage differs across leading countries as of May 2025. While ChatGPT remains the dominant tool in most markets—with shares exceeding 80% in Germany, France, and Japan—regional variation is increasingly visible. In India and Brazil, tools like Gemini, Claude, and Jasper are gaining modest footholds. The clearest divergence is observed in China, where DeepSeek leads with 32% of total usage, followed by ChatGPT at 28%, alongside local tools such as Doubao and Kimi Chat. These patterns highlight how language compatibility, local marketing, and platform accessibility shape country-specific tool preferences—suggesting that regional ecosystems are becoming more differentiated even within a globally competitive market.



(a) Chatbot & Image traffic trends

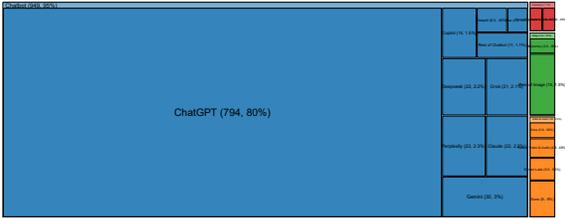
(b) Video & Others traffic trends

Figure A1: Monthly traffic trends by AI tool category

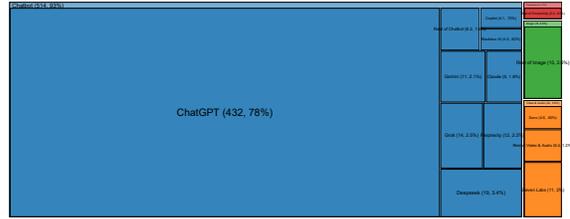
A.4 User Penetration: Top and Bottom Countries

The top 15 countries in terms of ChatGPT user penetration are all HICs, led by Singapore and Lithuania, where over 70% and 50% of internet users, respectively, used ChatGPT in April 2025. Conversely, in many LICs like Eritrea and Chad, usage remains extremely limited, pointing to persistent gaps in GenAI access and adoption.

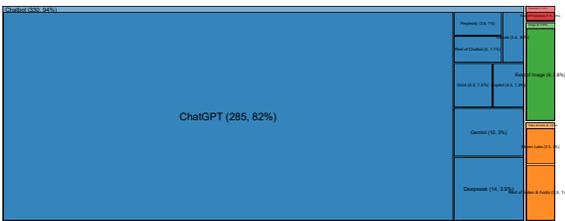
A.5 Ranking of ChatGPT usage: Top 30 countries



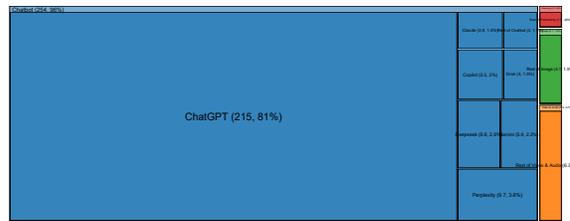
United States



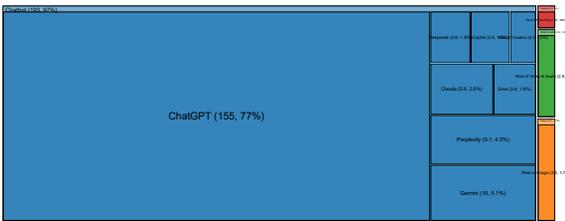
India



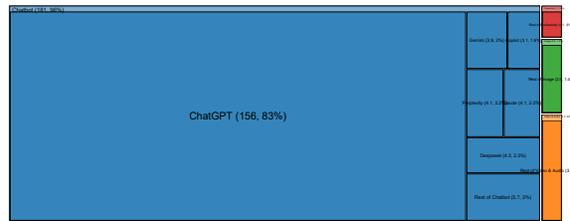
Brazil



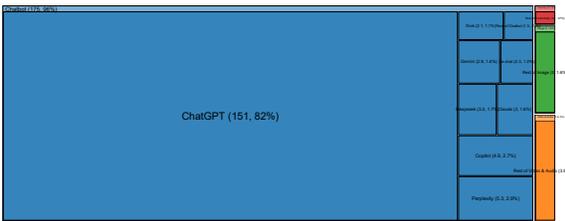
Germany



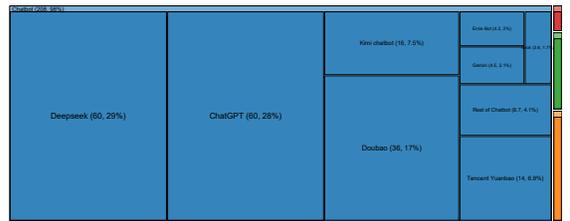
Japan



United Kingdom

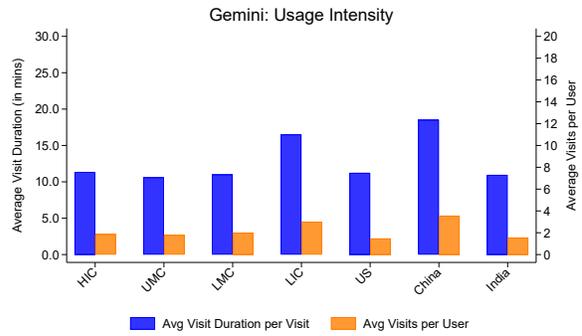
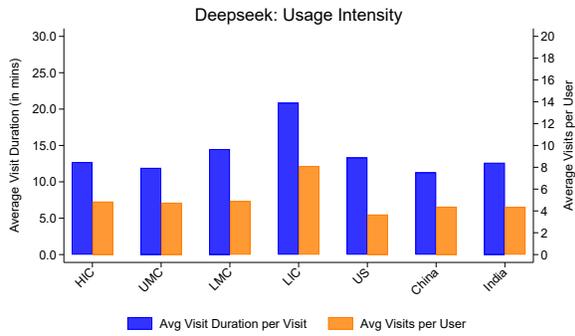


France

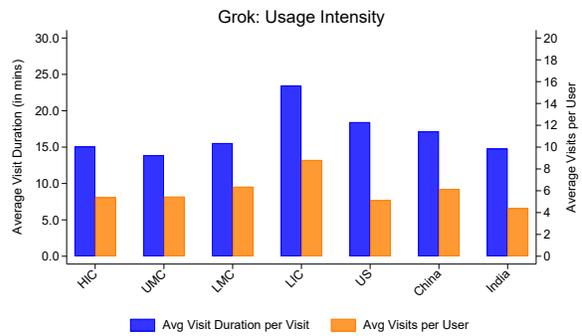
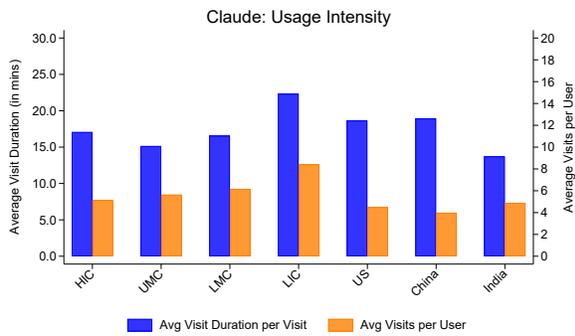


China

Figure A2: Treemap of GenAI tool usage by country (May 2025)



Note: HIC excludes US, UMC excludes China, and LMC excludes India.



Note: HIC excludes US, UMC excludes China, and LMC excludes India.

Table A1: Ranking of ChatGPT traffic, April 2025 and April 2024

No.	Economy	2025-04			2024-04			GDP share, % of global total GDP	Population share, % of global population
		ChatGPT Monthly traffic, million visits	ChatGPT Share in global traffic, %	Google share in global traffic, %	ChatGPT Monthly traffic, million visits	ChatGPT Share in global traffic, %	Google share in global traffic, %		
1	United States	759.4	17.0	21.5	382.8	18.3	19.6	26.7	4.3
2	India	364.8	8.2	4.9	203.4	9.7	7.1	3.6	18.5
3	Brazil	236.3	5.3	4.8	114.9	5.5	4.9	2.0	2.7
4	Germany	168.0	3.8	3.2	76.8	3.7	3.3	4.3	1.1
5	France	128.9	2.9	3.0	55.8	2.7	2.9	2.9	0.9
6	United Kingdom	128.4	2.9	3.2	67.5	3.2	3.1	3.3	0.9
7	Japan	117.8	2.6	6.5	40.3	1.9	6.3	3.7	1.6
8	Indonesia	115.2	2.6	2.5	45.9	2.2	2.5	1.3	3.6
9	Korea, Rep.	112.1	2.5	1.9	28.5	1.4	1.8	1.6	0.7
10	Canada	106.1	2.4	1.7	57.5	2.7	1.7	2.1	0.5
11	Viet Nam	105.9	2.4	1.7	30.0	1.4	1.7	0.4	1.3
12	Spain	92.5	2.1	1.9	40.8	1.9	1.9	1.6	0.6
13	Italy	90.7	2.0	2.6	35.4	1.7	2.4	2.2	0.8
14	Australia	85.9	1.9	1.8	43.5	2.1	1.6	1.6	0.3
15	Philippines	85.2	1.9	1.1	71.8	3.4	1.3	0.4	1.5
16	Mexico	81.8	1.8	1.9	57.1	2.7	2.2	1.7	1.7
17	Poland	74.5	1.7	1.7	26.6	1.3	1.9	0.8	0.5
18	Türkiye	70.6	1.6	2.9	22.6	1.1	2.6	1.2	1.1
19	Colombia	66.2	1.5	1.1	40.2	1.9	1.2	0.4	0.7
20	Netherlands	63.4	1.4	1.2	28.2	1.3	1.2	1.1	0.2
21	Pakistan	59.7	1.3	0.7	27.2	1.3	0.7	0.3	3.2
22	Taiwan, China	57.6	1.3	1.1	19.8	0.9	1.1	-	-
23	Peru	50.6	1.1	0.7	25.1	1.2	0.6	0.3	0.4
24	Russian Federation	50.1	1.1	3.5	17.2	0.8	3.2	2.0	1.8
25	Malaysia	49.0	1.1	0.9	19.6	0.9	0.9	0.4	0.5
26	Thailand	48.8	1.1	1.6	11.6	0.6	1.6	0.5	0.9
27	China	47.2	1.1	0.2	40.9	2.0	0.3	17.2	18.1
28	Argentina	45.4	1.0	1.1	20.5	1.0	1.3	0.6	0.6
29	Ukraine	44.8	1.0	1.0	20.4	1.0	1.0	0.2	0.5
30	Chile	35.9	0.8	0.7	17.9	0.9	0.8	0.3	0.3

Note: Only use “chat.openai.com” for April 2024, and only use “chatgpt.com” for April 2025.

Table A2: Ranking of Chatbot traffic, April 2025 and April 2024

No.	Economy	2025-04			2024-04			GDP share, %	Population share, %
		Chatbot Monthly traffic, million visits	Chatbot Share in global traffic, %	Google share in global traffic, %	Chatbot Monthly traffic, million visits	Chatbot Share in global traffic, %	Google share in global traffic, %		
1	United States	917.1	16.7	21.5	446.1	17.9	19.6	26.7	4.3
2	India	438.0	8.0	4.9	239.7	9.6	7.1	3.6	18.5
3	Brazil	272.3	4.9	4.8	128.0	5.2	4.9	2.0	2.7
4	Germany	199.8	3.6	3.2	87.1	3.5	3.3	4.3	1.1
5	China	187.9	3.4	0.2	76.3	3.1	0.3	17.2	18.1
6	France	151.9	2.8	3.0	62.5	2.5	2.9	2.9	0.9
7	United Kingdom	151.0	2.7	3.2	78.5	3.1	3.1	3.3	0.9
8	Japan	148.9	2.7	6.5	50.0	2.0	6.3	3.7	1.6
9	Indonesia	140.4	2.5	2.5	59.1	2.4	2.5	1.3	3.6
10	Korea, Rep.	133.7	2.4	1.9	32.4	1.3	1.8	1.6	0.7
11	Viet Nam	130.9	2.4	1.7	39.9	1.6	1.7	0.4	1.3
12	Canada	123.8	2.2	1.7	64.4	2.6	1.7	2.1	0.5
13	Italy	109.4	2.0	2.6	41.5	1.7	2.4	2.2	0.8
14	Spain	107.7	2.0	1.9	46.2	1.9	1.9	1.6	0.6
15	Australia	100.0	1.8	1.8	49.6	2.0	1.6	1.6	0.3
16	Russian Federation	99.3	1.8	3.5	23.6	0.9	3.2	2.0	1.8
17	Mexico	98.8	1.8	1.9	70.0	2.8	2.2	1.7	1.7
18	Philippines	98.8	1.8	1.1	82.3	3.3	1.3	0.4	1.5
19	Poland	86.1	1.6	1.7	29.8	1.2	1.9	0.8	0.5
20	Türkiye	80.2	1.5	2.9	26.1	1.1	2.6	1.2	1.1
21	Colombia	79.5	1.4	1.1	49.3	2.0	1.2	0.4	0.7
22	Netherlands	72.2	1.3	1.2	31.4	1.3	1.2	1.1	0.2
23	Taiwan, China	71.0	1.3	1.1	23.4	0.9	1.1	-	-
24	Pakistan	70.6	1.3	0.7	30.8	1.2	0.7	0.3	3.2
25	Peru	60.2	1.1	0.7	31.3	1.3	0.6	0.3	0.4
26	Thailand	58.5	1.1	1.6	15.3	0.6	1.6	0.5	0.9
27	Malaysia	58.1	1.1	0.9	23.0	0.9	0.9	0.4	0.5
28	Ukraine	52.5	1.0	1.0	24.1	1.0	1.0	0.2	0.5
29	Argentina	51.6	0.9	1.1	23.0	0.9	1.3	0.6	0.6
30	Singapore	43.4	0.8	0.6	19.8	0.8	0.6	0.5	0.1

Note: Only use “chat.openai.com” for April 2024, and only use “chatgpt.com” for April 2025.

Table A3: Ranking of ChatGPT traffic intensity, April 2025 V.S. April 2024

No.	Economy	2025-04				2024-04			
		Avg. ChatGPT Visits per Internet user	Avg. ChatGPT Visits per user	ChatGPT User/Internet User, %	Total Users, in millions	Avg. ChatGPT Visits per Internet user	Avg. ChatGPT Visits per user	ChatGPT User/Internet User, %	Total Users, in millions
1	Singapore	5.7	7.6	75.2	4.4	2.9	5.5	53.2	3.0
2	Luxembourg	4.6	8.7	52.7	0.4	2.0	6.1	33.1	0.2
3	Malta	4.4	12.0	36.4	0.2	1.8	7.0	26.0	0.1
4	Lithuania	4.3	9.3	46.3	1.2	1.2	4.9	24.7	0.6
5	Denmark	3.7	8.7	42.4	2.5	2.0	6.7	30.5	1.8
6	Norway	3.5	9.0	39.2	2.2	1.9	6.7	28.4	1.6
7	Netherlands	3.5	8.2	42.7	7.7	1.6	5.4	29.5	5.2
8	Andorra	3.4	10.4	32.8	0.0	0.5	6.7	7.9	0.0
9	Iceland	3.3	9.1	36.4	0.1	1.3	5.6	23.2	0.1
10	Switzerland	3.3	9.4	34.9	3.1	1.6	6.1	25.5	2.2
11	Australia	3.2	7.7	41.8	11.2	1.7	5.8	28.8	7.5
12	Ireland	3.2	7.7	41.2	2.2	1.8	6.1	30.1	1.6
13	Cyprus	3.1	9.3	33.4	0.4	1.1	6.3	17.9	0.2
14	Czech Republic	3.1	8.7	35.9	3.5	1.1	5.7	19.7	1.9
15	New Zealand	3.0	7.4	41.2	2.2	1.3	4.9	27.2	1.4
16	Latvia	2.9	9.0	32.8	0.6	1.2	5.7	20.5	0.4
17	Estonia	2.9	9.3	31.7	0.4	1.1	5.7	19.5	0.3
18	Sweden	2.9	8.3	34.7	3.6	1.4	5.7	25.0	2.5
19	Israel	2.7	7.4	37.1	3.1	0.9	4.5	18.8	1.6
20	Canada	2.7	8.6	31.6	12.4	1.5	6.4	23.8	9.0
21	Belgium	2.7	7.9	33.6	3.8	1.2	5.1	23.3	2.6
22	Slovak Republic	2.6	8.0	32.6	1.5	0.8	5.5	14.6	0.7
23	Portugal	2.5	8.1	30.5	2.9	1.0	5.4	18.3	1.7
24	Poland	2.4	8.2	29.2	9.1	0.8	4.9	17.3	5.5
25	United States	2.4	8.2	28.9	92.9	1.2	5.1	23.6	74.5
26	Croatia	2.4	7.1	33.1	1.1	0.8	4.3	18.7	0.6
27	Bulgaria	2.3	7.6	30.0	1.6	0.8	4.3	17.9	0.9
28	Finland	2.3	7.9	28.9	1.5	1.2	5.7	20.3	1.1
29	Austria	2.3	8.1	27.9	2.5	1.2	5.7	20.1	1.8
30	Greece	2.3	6.8	33.5	3.0	0.7	4.1	17.3	1.5

Note: Only use "chat.openai.com" for April 2024, and only use "chatgpt.com" for April 2025.

A.6 Effects On Other Websites

The rise of GenAI presents profound implications for the broader digital ecosystem, fundamentally altering user behavior patterns and challenging established website business models. Our analysis reveals differential impacts across platform types, with knowledge-sharing platforms experiencing the most pronounced disruption. StackOverflow and Quora have witnessed sustained traffic declines since ChatGPT’s launch, as users increasingly turn to conversational AI for coding assistance and general inquiries that previously drove visits to these community-driven platforms. This substitution effect is particularly stark for routine programming questions and factual queries, where GenAI tools can provide immediate, personalized responses without requiring users to navigate through forum discussions or evaluate multiple answers.

In contrast, Google Search has shown remarkable resilience at the aggregate level, with no perceptible overall decline in traffic despite the proliferation of GenAI alternatives. However, this stability masks significant demographic shifts in search behavior. Younger users, particularly those aged 18-24, are increasingly bypassing traditional search engines in favor of direct GenAI interactions for certain types of queries. This trend suggests a potential generational transition in information-seeking behavior that could have lasting implications for search engine dominance as these digital natives mature and represent a larger share of total users.

The long-term trajectory of total web traffic remains highly uncertain and will likely depend on the evolution of complementary dynamics between GenAI tools and traditional websites. On one hand, GenAI may reduce aggregate web traffic by providing direct answers that eliminate the need for users to visit source websites—a phenomenon that could prove particularly damaging to content publishers relying on advertising revenue. The traditional model of driving traffic through search engine optimization and capturing user attention for advertising purposes faces fundamental disruption when AI tools can synthesize and present information without directing users to original sources.

On the other hand, GenAI tools may generate new forms of web traffic through several mechanisms. First, conversational AI can surface lesser-known websites and content that users might not have discovered through conventional search, potentially democratizing traffic distribution. Second, GenAI-enhanced user experiences may increase overall digital engagement, expanding the

total time users spend online across all platforms. Third, as websites adapt by integrating GenAI capabilities—such as AI-powered chatbots, personalized content recommendations, or interactive features—they may create new value propositions that attract and retain users in novel ways. The sustainability of advertisement-based business models will ultimately hinge on how successfully traditional websites can adapt to this new paradigm. Publishers may need to evolve beyond passive content consumption toward more interactive, AI-enhanced experiences that provide unique value that standalone GenAI tools cannot replicate. This might include real-time community discussions, expert verification of AI-generated content, or specialized tools that combine human expertise with AI capabilities. Additionally, new monetization models may emerge, such as partnerships with GenAI platforms for content licensing, subscription-based AI-enhanced services, or advertising formats specifically designed for AI-mediated interactions.

The outcome will likely vary significantly across different content verticals and user demographics. While routine informational queries may increasingly be satisfied by GenAI tools, specialized professional communities, real-time news platforms, and entertainment websites may prove more resilient to AI substitution. The ultimate impact on the digital advertising ecosystem will depend on whether the total value created by GenAI-enhanced web experiences can compensate for the traffic redirected away from traditional websites, and whether new business models can effectively capture this value while maintaining the open, diverse character of the internet that has driven innovation for decades.

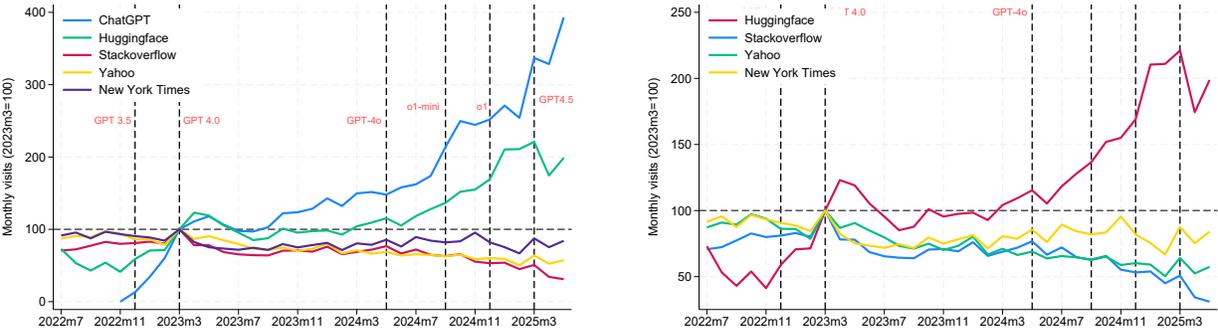


Figure A5: ChatGPT and other Search & News websites monthly traffic, relative to 2023m3