IA Internet Association

IA Industry Indicators™

Data And Analysis For The U.S. Internet Industry
Q3 2019 Data, Q1 2020 Release
March 2020

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With trillions of dollars in market value, hundreds of billions in revenue, and millions of employees throughout every state, the internet sector represents a significant driver of the U.S. economy. IA's quarterly Internet Industry Indicators Report provides new metrics and analysis of the internet sector – America's fastest growing sector.

Key Internet Sector Takeaways:

↑ Hiring is up **4.3%** QoQ

↑ Job openings are up **4.3%** QoQ

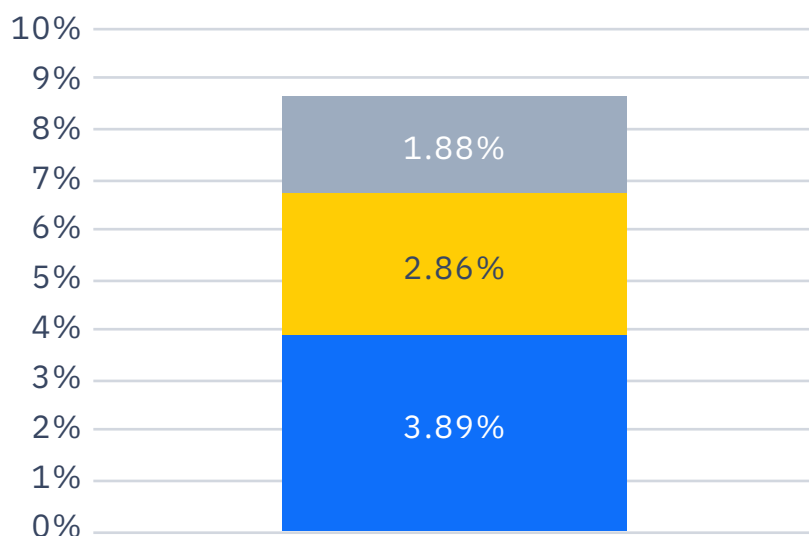↑ Separations are up **14.7%** QoQ

↑ CapEx is up **21.4%** QoQ

↑ Total revenue is up **6.4%** YoY

↑ Monthly personal spending by consumers is up **4.4%**

↑ Expected monthly personal spending by consumers is up **7.7%**

New Breakdown Of Consumers Preferences On Peer-To-Peer Carsharing

- I only use peer-to-peer carsharing services — 1.88%
- I typically use peer-to-peer carsharing services — 2.86%
- I use them about the same as traditional services — 3.89%

Key Takeaways

→ **Nearly 10 percent of Americans say they now use peer-to-peer carsharing services,** according to IA's newest Internet Sentiment Survey question.

→ **Consumers have a weak, but consistent preference for car rentals over peer-to-peer carsharing services,** but historical data from other survey questions indicates that could change.

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IA Industry Indicators™

Chief Economist's Insight

Internet Association's *IA Internet Indicators (3i) Quarterly Report* offers rare insights into the internet sector. IA uses the report series and the proprietary data in it to offer a one-of-a-kind resource for internet stakeholders and those interested in the internet sector's impact on the economy. It is the go-to resource for anyone looking to understand the digital economy and the evolution of America's most innovative industry.

The internet sector contributed $2.1 trillion in value-added and 6 million direct jobs to the U.S. economy in 2018. These are equivalent to 10.1 percent of GDP and 4 percent of national employment, which makes the internet sector the fourth largest industrial sector in the U.S. economy. The data provided in the *3i Quarterly Report* (and the *3i Monthly Jobs Report*) add critical context to those numbers, including the identification of key trends of the sector.

The *3i Quarterly Report* offers information from five perspectives: Macroeconomic Indicators based on U.S. government datasets; Microeconomic Indicators based on publicly-traded internet company data; a unique of Digital Price Index measure based on common household digital goods/services; an internet Industry Risk Assessment on the major issues facing the internet industry; and an Internet Sentiment Survey, which offers insights into individual usership, expenditure, and preferences related to internet services and goods. Internet Association presents these data in a neutral manner through standardized tables and graphs, which will be repeated in every issue. IA also provides a short summary and Industry Focus section concentrating on a particular aspect of the data to start each issue.

This issue focuses on internet-enabled, peer-to-peer car-sharing services, like IA's member company Turo. As part of our ongoing Internet User Sentiment survey, IA has added a new question on the preference of users for car-sharing services versus traditional rental car companies. We believe this is the first national survey of its kind and the first sentiment index of its kind in this area. The results of the first set of surveys show the majority of Americans have

a modest, but solid preference for traditional car rentals -- the user sentiment index was -0.0987 on a -1 to 1 scale. This preference level remained relatively flat over the past three quarters and is similar in overall levels to what we saw in other internet preference questions in our survey. The current preference for traditional car rentals suggests there is still plenty of room for growth for peer-to-peer car-sharing services. Many of the other sentiment indexes have shown steady growth since IA began collecting data in Q1 2018 through today and we will track the car-sharing index closely to see if it begins to follow a similar pattern as more users begin using these types of platforms.

The broader goal of the 3i series is to improve our understanding of the internet as an economic sector. We know the internet contributes massively to the U.S. and other economies around the globe, but we are just starting to piece together the details of the story – what drives the industry, how are people using the internet, how broader trends impact the internet, etc. Numerous governments and other stakeholders are grappling with the same issues and IA provides these reports (along with their data) to help shed light on this dynamic sector.

As we continue to refine our understanding of the internet sector from a measurement standpoint, IA will also revise this report as necessary to ensure as accurate of information as possible. IA notes all changes and any caveats clearly throughout the document in the appropriate section. And as we all read and learn more about the internet as an economic sector, IA will continue to engage with partners and other stakeholders to share valuable insights.

Christopher Hooton, Ph.D.
Chief Economist & Head Of Research
Internet Association

Summary & Highlights

Investment

Total capital expenditures totaled nearly $62 billion in Q3 2019 which is up about 86 percent since Q3 2018 and nearly 21 percent lower compared to Q2 2019. Average capital expenditures per firm decreased by 21 percent in Q3 2019 over Q2 2019 and increased by 78 percent since Q3 2018.

Revenues

Macro

IA's macroeconomic indicators show total revenues for the sector rose 2.17 percent in Q3 2019 over Q2 2019 and by nearly 6.4 percent since Q3 2018.

Micro

IA's microeconomic indicators show gross revenue rose by 17.5 percent in Q3 2019 over Q2 2019 and dipped by approximately 0.05 percent since Q3 2018. Average revenues increased by 12 percent for the quarter in Q3 2019 and decreased by 5 percent for the year.

Hiring

Hiring levels increased by 4 percent in Q3 2019 over Q2 2019, but the increase was low when compared to the Q2 2019 over Q1 2019 increase of 24 percent.

Customer Focus

The internet sector continued to prioritize the area of *Product & Services Development* according to IA's assessment of firm risk factors. The percentage of companies citing *Product & Services Development* as a risk factor was 37.4 percent in Q3 2019, and it remains the primary risk factor for the internet sector. *Security & Data Privacy* was top five cited a risk factor for the industry (in Q3 2019) for the first time since Q4 2018, with 17.4 percent of companies citing it.

Time Online

Average internet usage decreased in Q3 2019 over Q2 2019, by 0.2 percent, with the average American spending 3 hours and 6 minutes online per day for personal use. Average time spent online was up by 2.38 percent over the past year since Q3 2018 when the total was approximately 3 hours and 1 minutes per day.

Carsharing

IA is debuting a new data point to measure the preference of users between using peer-to-peer carsharing services versus traditional rental cars. Data is collected through the Internet User Sentiment survey and will be included as a question in each issue going forward. IA will provide analysis on this new measurement in this and upcoming reports.

Issue Leader: Carsharing

IA began collecting data on how Americans use the internet in Q1 2018 as a unique effort to better understand the value of the internet to everyday Americans and how they perceive a variety of online services.

IA has continued that effort by expanding our dataset and elements of analysis. IA began measuring the preferences of users for car rentals versus peer-to-peer carsharing services, such as Turo, in Q3 2019. IA will examine this variable going forward to better understand how Americans' view these types of services using a proprietary set of sentiment indexes. That data is presented in this issue for the first time.

The new question specifically asks respondents their preference between traditional rental cars or peer-to-peer carsharing services (such as Turo or others). The answer choices ranged from only using peer-to-peer carsharing services to only using car rentals. The results obtained indicate that 38.82 percent of Americans typically opt for rental cars more often as opposed to 4.74 percent who prefer to use peer-to-peer carsharing services like Turo and other services.

Table 1: Survey Results For Carsharing Question

Answer Choices	Percentage of Responses
I only use peer-to-peer carsharing services	1.88%
Peer-to-peer carsharing services	2.86%
I use them about the same	3.89%
Rental cars	29.40%
I only use rental cars	9.42%

Notes: Reports most recent figures available at time of collection for Q3 2019.

IA's data show that the consumer sentiment index was -0.0987 as of Q3 2019 (shown in Table 2 and Figure 1) indicating that users tend to opt for traditional car rentals over peer-to-peer carsharing services, though not by a lot. Table 2 shows the index scores on rental cars versus peer-to-peer carsharing services from Q3 2019 to Q1 2020.

Table 2: Index Scores For Carsharing

	Q3 2019	Q4 2019	Q1 2020
Index Scores	-0.0987	-0.1031	-0.1020

Note: Reports most recent figures available at time of collection for Q3 2019.

Figure 1 shows the user's sentiment trend on rental cars versus peer-to-peer carsharing services from Q3 2019 to Q1 2020. The quarter-over-quarter change will be available in the next issue of this report, and the year-over-year change will be available with Q3 2020 data.

Figure 1: IA Sentiment Index for Carsharing

IA Carsharing Index
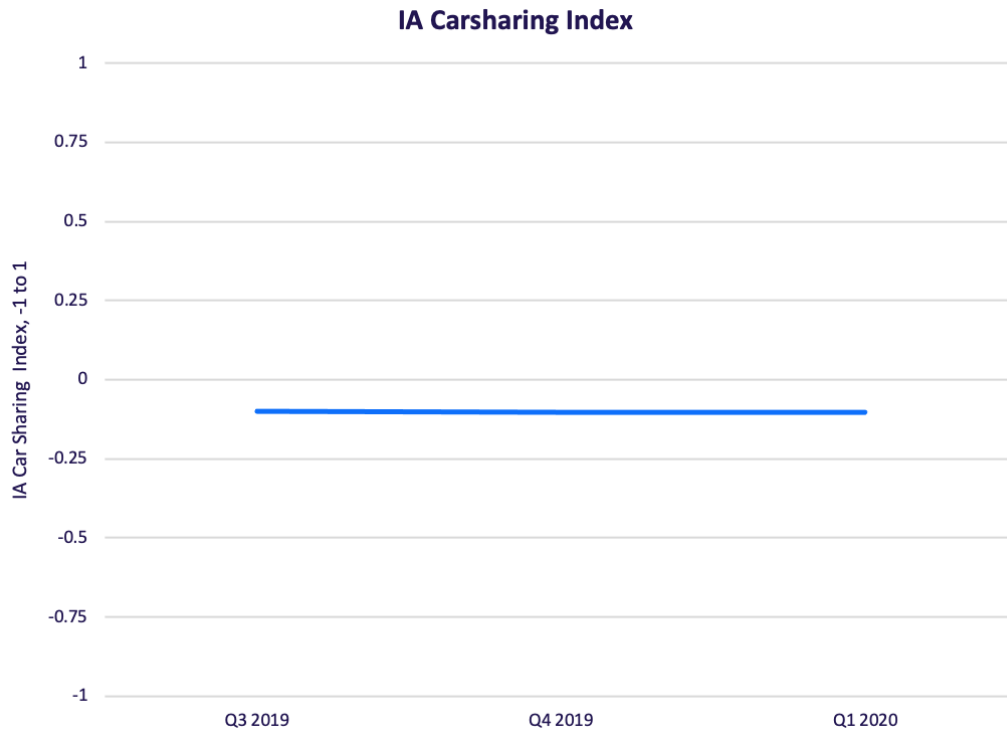
Note: Shows IA's carsharing index, which measures users' preference between using rental cars versus peer-to-peer carsharing services (such as Turo or others) for getting to places. Index range is -1 to 1 (negative one to one) with a -1 indicating users only prefer traditional car rental services and a 1 indicating users only prefer peer-to-peer carsharing services. A value of zero (0) indicates users equally prefer both.

Macroeconomic Indicators

Overview: *Tables 3 and 4 provide information on the internet industry derived from North American Industrial Classification System (NAICS) codes. IA identifies the appropriate NAICS codes for inclusion through an internal identification methodology for the internet industry and the tables summarize quarter-over-quarter and year-over-year aggregate changes. See the methodology note below for more detail.*

Table 3: Internet Industry Revenue

	Qtr-over-Qtr Percent Change	Year-over-Year Percent Change
Total Revenue (Sum)	2.17%	6.38%
Revenue From Businesses (Sum)	148.73%	149.26%
Revenue From Government (Sum)	7.04%	617.21%
Revenue From Households (Sum)	1.83%	0.47%

Notes: Reports most recent quarterly figures available at time of collection. Quarterly figures for Q3 2019 over Q2 2019 changes. Yearly figures for Q3 2019 over Q3 2018 change.

Table 4: Internet Industry Employment

	Qtr-over-Qtr Percent Change	Year-over-Year Percent Change
Hires (Levels)	4.34%	3.26%
Hires (Rate)	-82.14%	26.71%
Job Openings (Levels)	4.32%	-10.19%
Job Openings (Rate)	-32.52%	113.20%
Total Separations (Levels)	14.65%	4.06%
Total Separations (Rate)	-2130.03%	19.30%

Notes: Reports most recent quarterly figures available at time of collection. Quarterly figures for Q3 2019 over Q2 2019 changes. Yearly figures for Q3 2019 over Q3 2018 change.

Microeconomic Indicators

Overview: *Table 5 provides information on the internet industry derived from information reported by publicly-traded internet companies. IA identifies the appropriate businesses through an internal identification methodology and the tables summarize quarter-over-quarter and year-over-year aggregate changes. See the methodology note below for more detail.*

Table 5: Internet Industry Financial Data, Annual

	Qtr-over-Qtr Percent Change	Year-over-Year Percent Change
Capital Expenditures (Absolute Value)	21.40%	86.80%
Capital Expenditures (Sum)	21.40%	86.80%
Market Capitalization (Sum)	5.09%	5.48%
Net Revenue (Sum)	1.39%	15.29%
Gross Revenue (Sum)	17.47%	-0.05%
Employees (Sum)	2.80%	13.84%
Capital Expenditures (Average)	21.40%	78.50%
Market Capitalization (Average)	2.98%	0.80%
Net Revenue (Average)	0.75%	7.77%
Gross Revenue (Average)	11.72%	-4.70%
Employees (Average)	17.66%	22.83%
Capital Expenditures (Median)	1.97%	11.07%
Market Capitalization (Median)	25.98%	-21.71%
Net Revenue (Median)	25.90%	-16.39%
Gross Revenue (Median)	5.75%	21.84%
Employees (Median)	0.71%	-4.61%

Notes: Reports most recent quarterly figures available at time of collection. Quarterly figures for Q3 2019 over Q2 2019 changes. Yearly figures for Q3 2019 over Q3 2018 change.

Digital Price Index

Overview: *Table 6 provides information on Internet Association's proprietary digital price index. The index tracks the prices of a typical basket of online, internet-based services and the table summarizes quarter-over-quarter and year-over-year aggregate changes. See the methodology note below for more detail.*

Table 6: Digital Price Index

	Year-over-Year Percent Change	Qtr-over-Qtr Percent Change
DPI	12.9%	15.27%
National CPI	1.7%	0.2%

Notes: The DPI measure uses a basket of common household internet services and products for individual consumers for which price data was available since 2013. IA collected prices annually for 2013-2017 and began collecting quarterly data starting in Q1 2018.

The index does not account for quality changes of services and products over time. National inflation figures come from U.S. Bureau of Labor Statistics CPI-All Urban Consumers (Current Series).

Quarterly figures for Q3 2019 over Q2 2019 changes. Yearly figures for Q3 2019 over Q3 2018 changes.

Internet Industry Risk Assessment

Overview: *Table 7 provides information on Internet Association's assessment of internet industry risk factors. IA aggregates reported risks from its member companies that are publicly-traded using quarterly reports and the tables summarize reported risks for the previous quarter and year. See the methodology note below for more detail.*

Table 7: Most Commonly Cited Risks To Internet Sector Companies Q3 2019

Top 5 Internet Sector Risk Factors Q3 2019	Percent of Risk Factor Observations
Product & Services Development	37.44%
Economic & Financial Conditions	25.57%
Security & Data Privacy	17.35%
Market	15.53%
Customer Satisfaction & Subscription Rate	12.33%
Top 5 Internet Sector Risk Factors Q2 2019	**Percent of Risk Factor Observations**
Product & Services Development	41%
Economic & Financial Conditions	25%
Competition	20%
Market	17%
Customer Satisfaction & Subscription Rate	11%
Top 5 Internet Sector Risk Factors Q3 2018	**Percent of Risk Factor Observations**
Product & Services Development	64.62%
Economic & Financial Conditions	21.54%
Customer Satisfaction & Subscription Rate	13.85%
Market	11.79%
Security & Data Privacy	11.28%

Notes: Table shows the citation frequency of the five most commonly cited risk factors for Q3 2019, Q2 2019, and Q3 2018 among the five most important risk factors of every individual company.

Internet User Sentiment

Overview: *Table 8 provides information on Internet Association's user sentiment survey. The table reports summarized responses from a U.S. national survey of internet users and presents information on the previous two quarters as well quarter-over-quarter changes.*

Table 8: Internet User Sentiment Responses

Q#	Question	Q3 2019	Q2 2019	Q3 2018	Q-over-Q Chg.	Y-over-Y Chg.
1^	For personal use (i.e. not for your job/business/work), how much time on average per day do you spend using the internet?	185.91	186.29	181.58	-0.20%	2.38%
2^	For personal use, how much time on average per day do you expect to use the internet over the coming three months?	219.17	221.28	216.11	-0.95%	1.42%
8	Do you currently use online sites, platforms, or other internet tools to pursue passion projects and/or hobbies? Examples include self-publishing a novel, selling crafts/art that you create, etc.	44.90%	44.68%	40.99%	0.22%	3.91%
9	Is the internet essential for you to pursue these passion project(s) and/or hobby(ies)?	40.95%	40.1%	35.18%	0.85%	5.77%
10	For personal use, how much money do you spend on average per month on all internet-based goods and services of any type? Please consider subscriptions, apps, games, shopping, movies, music, etc.	$93.24	$89.34	$91.42	4.37%	1.99%
11	For personal use, how much money do you expect to spend on average per month on all internet-based goods and services over the coming 3 months?	$123.52	$114.74	$119.21	7.65%	3.62%
Q#	Question	Q3 2019	Q2 2019	Q3 2018	Q-over-Q Chg.	Y-over-Y Chg.
4^^	Do you spend more time using the internet in your personal life or for your work?	0.2433	0.2415	0.2340	0.002	0.009
5^^	Do you spend more personal money shopping online or in ('brick and mortar'/physical) stores?	0.0001	-0.0302	-0.0407	0.030	0.041
6^^	For personal use, do you use taxis more often or do you use ride-sharing apps like Lyft, Uber, Via, and others?	0.1135	0.0928	0.0585	0.021	0.055
7^^	Do you spend more personal time watching movies, TV, and other videos online or watching them on cable/satellite?	0.0072	0.1511	0.0531	-0.144	-0.046
12^^	Do you prefer staying in hotels or short-term rentals (e.g. Airbnb, HomeAway, other vacation rentals) for personal trips?	-0.2779	-0.2389	-0.2516	-0.039	-0.026

Q#	Question	Q3 2019	Q2 2019	Q3 2018	Q-over-Q Chg.	Y-over-Y Chg.
13^^	Do you prefer conducting your personal banking and attending to personal finances online or in a physical, 'brick-and- mortar' bank?	0.1879	0.1646	0.1294	0.023	0.059
14^^	Do you prefer meeting new people through online platforms, such as Match, Tinder, etc., or through offline interactions, such as blind-dates or at parties? Please consider both romantic dating and friendships.	-0.3679	-0.3831	-0.4314	0.015	0.064
15^^	How do you view the internet's contribution(s) to society?	0.4226	0.388	0.4046	0.035	0.018
16^^	For personal use, do you use rental cars or do you use peer-to-peer carsharing services (such as Turo or others) more often?	-0.0987	-	-	Available with Q4 2019 data	Available with Q3 2020 data

Notes: Question 3 is a filter question to ensure quality of responses.

^Figures given in number of minutes.

^^Figures given as an index with values ranging from negative one to positive one (-1 to 1). A value of negative one (-1) indicates the worst (negative) outcome for the internet industry. A value of zero (0) indicates a neutral sentiment that is equally good and equally bad for the internet. A value of positive one (1) indicates the best (positive) outcome for the internet industry.

IA Industry Indicators (3I) Report – Methodology Notes

Overview

Identification methodologies for the internet industry, technology sector, digital economy, and other synonymous terms have received little attention from academic researchers. The primary approach used by groups to identify 'high-tech' industries and companies overwhelmingly rely on expert panels, where individuals subjectively select which companies/industries are or are not part of 'tech'.

IA's general identification methodology is primarily based on a set of NAICS codes developed by an expert panel at Economists Incorporated in 2015. The method is in line with other 'tech sector' and digital economy identification methodologies, such as those issued by BLS, Brookings Institute, and others. The Internet Industry Indicators Report is primarily based on that methodology with adjustments where needed, such as in the case of weighting and or lesser detail levels. Further details on each set of indicators included in the 3I report are given below:

Macroeconomic Data And Estimates

Macroeconomic data were derived from government datasets broken out by industry. IA utilized datasets for 3 to 6-digit NAICS codes based on IA's internal identification methodology, which was developed by Economists Incorporated in 2015 using 2012 data. IA aggregated across these industry codes to develop approximations of industry totals and trends with weighted adjustments where necessary and possible.

IA Identification Methodology – Relevant NAICS Codes

2012 NAICS Title	IA NAICS Codes
Electronic Shopping	45411
Electronic Auctions	454112
Wireless Telecommunications Carriers (Except Satellite)	5172
Wired Telecommunications Carriers	5171
All Other Telecommunications	517919
Data Processing, Hosting, And Related Services	518210
Internet Publishing And Broadcasting And Web Search Portals	51913
Custom Computer Programming Services	54151
Computer Systems Design Services	
Computer Facilities Management Services	
Other Computer Related Services	

Microeconomic Data And Estimates

Microeconomic data were derived from publicly-traded internet companies and high-technology companies with significant internet-based revenues from a variety of sources including financial account reports, annual reports, and quarterly reports. All public IA member companies are included in this list as well as a set of other internet companies determined by IA using expert input and market analysis. IA identified 40+ publicly-traded internet companies in total at the time of data collection, which begins in the sixth week of each quarter with a one-quarter lag.

Digital Price Index Data And Estimates

IA developed its Digital Price Index using a basket of 11 internet services for which it found price data dating back to 2013. IA documented prices through online visits to the pricing detail pages of each service site using searches from its headquarters in Washington, DC. All searches are conducted on the same business day using the same computer and carried out in the sixth week of each quarter with a one-quarter lag. IA uses a 3-month average of monthly prices for this basket for quarterly estimates.

The index does not account for quality changes of services and products over time. Where there are free options available for a particular service/good, IA uses the cheapest, premium subscription or per unit cost. Where there are no free options available for a particular service/good, IA uses the cheapest subscription or per unit cost. IA selected services/goods from a range of online activities to reflect a spectrum of typical online activities engaged in by users. IA emphasizes the fact that these are premium options and that many of the documented services include basic, free options as well. The current basket of services includes: Amazon Prime, Blue Apron, DropBox, Hulu, iCloud Storage, LinkedIn Premium, Netflix, New York Times, OneDrive, Spotify Premium, and Wall Street Journal. National and quarterly inflation from Bureau of Labor Statistics CPI-All Urban Consumers (Current Series). National Inflation reports annual average 12-month percent change for each year. Quarterly inflation reports aggregated 1-month percent change (not seasonally adjusted). Quarterly figures for quarter over quarter changes. Yearly figures for year over year changes.

Risk Assessment Data And Estimates

IA develops its risk assessment utilizing 10-K and 10-Q filings from each of the public internet companies included in its microeconomic dataset. IA aggregates risk assessments from each company filing and standardizes across uniform categories of risk.

Internet User Sentiment And Estimates

IA conducts a national survey of the U.S. general population utilizing SurveyMonkey panel service. IA runs the survey using a representative, statistically significant national sample of 1,600+ respondents with no segment/demographic targeting and a 3% error margin.

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The information contained herein is of a general nature and is not intended to address or identify, intentionally or unintentionally, any particular individual or entity. The information is derived using Internet Association's internal methodologies and definitions for the internet industry to provide illustrative analysis only. Although IA attempts to provide as accurate of information as possible, there can be no guarantee that such information is accurate at any time now or in the future. The information reported is not intended as advice of any kind and Internet Association bears no responsibility for any influence from it or any decisions made as a result of the information contained herein.
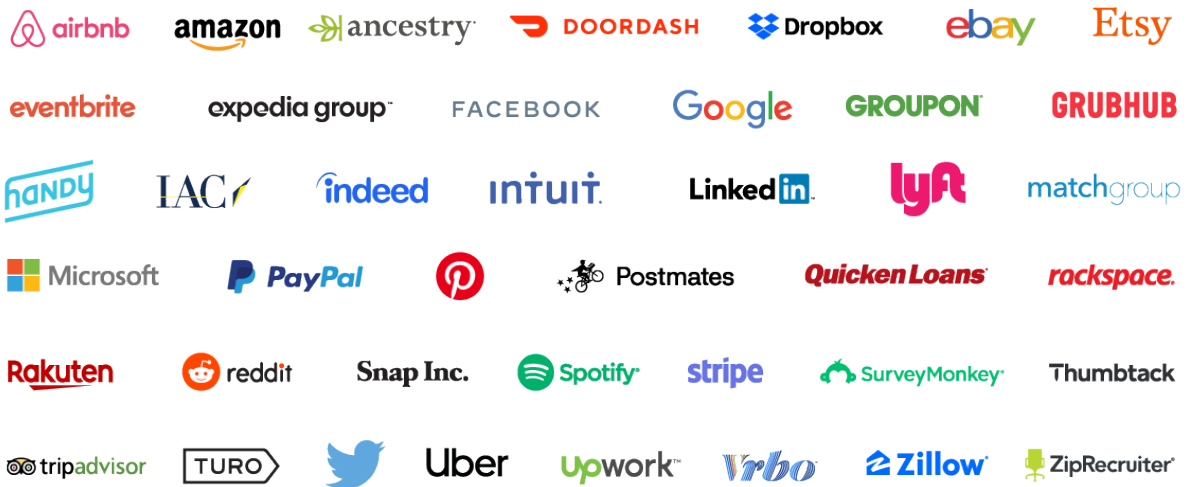
We are the unified voice of the internet economy

www.internetassociation.org

Internet Association is the only trade association that exclusively represents leading global internet companies on matters of public policy. Our mission is to foster innovation, promote economic growth, and empower people through the free and open internet. We believe the internet creates unprecedented benefits for society, and as the voice of the world's leading internet companies, Internet Association works to ensure legislators, consumers, and other stakeholders understand these benefits.