The Internet research is mainly driven by data. Obtaining such data by planning and launching measurement campaigns is rather time consuming and costly. Much more efficient, and in many cases, sufficient data acquisition strategy is to exploit the existing datasets available in public databases, repositories, and documents. Hence, the public data sources related to the Internet usage and other Internet statistics are systematically surveyed and categorized to make the search for the Internet data much easier and faster. Extensive online searches and exploring websites of the key organizations were used to identify the data sources. Each data source was then carefully explored to describe its characteristics and contents. The data are usually aggregated over certain time periods and regions, and often indexed by age, gender, application, website, activity and other attributes. Some data sources also support various data visualization options, and offer data export in multiple formats.

© 2018 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).
How data was acquired
Survey of public datasets on WWW
Data format
URL with brief description
Experimental factors
Each dataset was explored for its contents and then categorized.
Experimental features
Guided searches on WWW. Search of WWW of relevant organizations.
Data source location
N/A
Data accessibility
Included with this data brief.

Value of the data

- There is no other centralized collection of public datasets on the Internet usage and other Internet statistics while searching for such datasets is a very time consuming process.
- The identified data sources can be used to identify and understand the current and future trends in the Internet usage.
- Having the Internet usage data and statistics is important to understand a rapidly ongoing digitalization of many sectors of the economy including manufacturing, healthcare, education and entertainment.
- It is vital that data sources on the Internet usage are regularly updated and made available to the researchers as well as policy and decision makers in order to keep evolving the Internet for the maximum benefits of the society.

1. Data

There are different types of data associated with the Internet. The Internet measurements are used for real-time network management, long-term network planning as well as to evaluate how the Internet is used and its impact on the economy and the society. The measurements used for network management are obtained directly from the Internet traffic flows. The network planning for 1 or 2 years ahead of the current demand is based on the traffic trend forecasting by extrapolating historical data. For longer-term planning beyond a 2 year horizon and to evaluate the long-term and large scale impacts of the Internet, the user questionnaires and other market research methods are necessary. The Internet data are regularly published by the government institutions, regulatory bodies, communication service providers, and private organizations. The data with low level of aggregation are usually only accessible for a fee. The published Internet usage data are highly aggregated which reduces the resolution, but also the variations in data. In order to obtain measurements for high volume and high throughput traffic, or to efficiently represent the Internet topology at multiple time scales, statistical sampling strategies are required to process smaller but statistically relevant traffic traces.

The collected datasets were somewhat liberally organized in the following 5 tables:

Table 1. Internet measurements: These datasets mostly contain data on the Internet usage in a given region such as the number of subscribers, cellular coverage, security issues and the quality of service including access speeds and response times.

Table 2. Internet applications: These datasets can be used to evaluate how the users spent their time on the Internet, often focusing on the specific regions of the world and specific websites such as social networking applications or Youtube.

Table 3. Various Internet statistics: These datasets provides information about the Internet usage and usage analytics in various parts of the world.

Table 4. Internet availability: These datasets are concerned with the Internet accesses in different countries and world regions.
### Table 1
Internet measurements.

| Data source | Data | Notes |
|-------------|------|-------|
| 1. Individual usage of the Internet. The World Bank Group. [http://data.worldbank.org](http://data.worldbank.org) | 1960–2015: Number of Internet users. Fixed broadband subscriptions. Fixed telephone subscriptions. Secure Internet, servers. Mobile cell subscriptions. Yearly updates. XLS, XML and CSV format. Indexing by global, region, country and income. In 5 langs. | |
| 2. The World Factbook. The CIA. [https://www.cia.gov](https://www.cia.gov) | 2014: Number of Internet users. | Updated 2014 (15th ed.). TXT format. Indexing by country. In 8 langs. |
| 3. ICT facts and figures. ITU. [https://www.itu.int](https://www.itu.int) | 2000 and 2015: Internet users. 2011 and 2015: 3G mobile broadband coverage. 2005–2015: Mobile and fixed broadband subscriptions. Individuals using Internet. Household Internet access. 2008–2014: Internet prices. 2014: Internet speeds. | A report published in 2015. PDF format. Indexing by global, region, country and level of development. |
| 4. ICT Fact and figures. ITU. [https://www.itu.int](https://www.itu.int) | 2005–2014: Fixed and mobile broadband subscriptions. Individuals using Internet. Household Internet access. 2013: Internet speeds. | A report published in 2014. PDF format. Indexed by country and level of development. |
| 5. Measuring the information society. ITU. [https://www.itu.int](https://www.itu.int) | 2020: The targets. 2015: Internet access. 2005–2015: Individuals using the Internet. 2005–2015: Household Internet access. 3G network coverage. 2014: Cyber security level. 2010 and 2015: Internet development induction. 2008–2014: Internet prices and speeds. 2000–2015: Fixed and mobile broadband subscriptions. Individuals using Internet. Household Internet access. | A report published in 2015. PDF format. Indexed by global, level of development, gender, region and country. |
| 6. Women’s rights online. WWW Foundation. [http://webfoundation.org](http://webfoundation.org) | 2014: Internet user and access. Barriers to using Internet. Reasons for using social media. Internet use in political and economic issues. | A report published in 2015. PDF format. Indexed by gender, education, age and gender. For 9 countries. |
| 7. Men vs. Women: Who Is more active on social media? Iris Vermere. [https://www.brandwatch.com](https://www.brandwatch.com) | 2014: Internet user activity in social media. | A 2015 online article. PNG and BMP format. Indexed by gender. In 5 langs. |
| 8. Map of Internet users. Visually website. [https://visual.ly](https://visual.ly) | 2014: Internet users. | Last update in 2012. PNG format. Indexed by country and gender. |
| 9. Internet users by country and gender. Gilly Wright. [https://www.gfmag.com](https://www.gfmag.com) | 2000–2014: Internet users. | Last update in 2014. JPG and TXT format. Indexed by level of development, country and gender. Survey published in 2014. PDF format. Indexed by global, region and gender. For 20 countries. |
| 10. Global Internet report. Internet Society Organization. [http://www.internetsociety.org](http://www.internetsociety.org) | 2007–2012: Internet users. 2008–2012: Fixed Internet subscriptions. Mobile broadband. 2010–2018: Fixed Internet traffic. 2011–2018: Mobile Internet traffic. 2013: Traffic generated different apps. 2014: Open and sustainable Internet survey. | |
| Data source | Data | Notes |
|-------------|------|-------|
| 11. UNECE Statistical Database. UNECE. http://w3.unece.org | 1990–2016: Internet use | Yearly, quarterly and weekly updates. XLS, CSV and PX format. Indexed by age, gender and country.\(^a,b\) |
| 12. Over a quarter of the world’s Internet users are aged 16–24. Global Web Index by Jason Mander. http://blog.globalwebindex.net | Q3-Q4 2014: Internet users. | Article published in 2015. PNG and BMP format. Indexed by age (16–24), global and selected country.\(^a\) |
| 13. World Internet users. UN Data Organization. http://data.un.org | 1960–2015: Internet users. | Yearly updates. XML and CSV format. Indexed by global, region and country.\(^a\) |
| 14. Internet users - for all countries. Fact Fish. http://www.factfish.com | 1990–2011: Internet users. | Last update in 2011. SVG, PNG and BMP format. Indexed by country. In 3 langs.\(^a,b\) |
| 15. Internet users - country rankings. The Global Economy. http://www.theglobaleconomy.com | 1960–2015: Internet users. | Yearly. Free for JPG. Not free for Excel and CSV format. Indexed by global, region and country. In 6 langs.\(^a\) |
| 16. Internet use and income. Internet Monitor. https://dashboard.thenetmonitor.org | 2007–2014: Internet use and income. | Continuous updates. SVG, PNG and BMP format. Indexed by country.\(^a\) |
| 17. Real time web monitor for internet traffic and attack. Akami. https://www.akamai.com | Real time web monitor for Internet traffic and attack. |  |
| 18. Traffic data. Internet Traffic Report. http://www.internettrafficreport.com | Traffic index, response times and packet losses. | Daily, weekly and monthly updates. GIF and BMP format. Indexed by region and country. |
| 19. Fixed broadband subscriptions. Index Mundi. http://www.indexmundi.com | Internet users. | Yearly updates. Indexed by region and country.\(^a\) |
| 20. Distribution of Internet users in Europe. Statista. https://www.statista.com | 2014: Internet users in Europe. | Last update 2014. PNG, XLS, PPT and PDF format. Indexed by age. Sourced from more than 18,000 datasets. In 4 langs. |
| 21. Internet users. ITU. http://www.itu.int | 2008–2010: Internet users. | Last update in 2012. JPG and BMP format. Indexed by gender and country in Europe. |
| 22. Internet users. Data Market. https://datamarket.com | 1990–2015: Internet users. | Yearly updates. XLS, PDF, PPT, SVG, PNG, BMP, CSV and TSV format. Indexed by income and region,\(^a\) |
| 23. Internet users. FRED. https://fred.stlouisfed.org | 1990–2015: Internet users. | Yearly updates. XLS, PDF, PPT, JPG and CSV format. Indexed by global and country.\(^a\) |
| 24. Middle East Internet users to hit 413 million in 2015. Arabian Gazette Ayesha Sarfraz. https://arabiangazette.com | 2015: prediction of Internet users in the Middle East. | Article published in 2013. JPG and BMP format. |
| 25. Top 10 Internet countries in Africa. IT Web Africa by Gareth van Zyl. http://www.itwebafrica.com | 2014: Most connected countries in Africa. | Article published in 2014. PNG and BMP format. Indexed by users and country.\(^a\) |
| 26. Africa’s top 20 most connected countries. IT News Africa. http://www.itnewsafrica.com | 2015: Top 20 connected countries in Africa. | Article published in 2015. TXT format. Indexed by users and country.\(^a\) |
| 27. Africa Internet User Statistics. Statistic Brain. http://www.statisticbrain.com | 2000 and 2015: Internet users in Africa. | Data published in 2016. TXT format. Indexed by country.\(^a\) |
| Data source | Data | Notes |
|-------------|------|-------|
| Latin American Internet Audience Nears 310 Million. | 2013–2018: Internet users in Latin America. | Article published in 2014. GIF and BMP format. Indexed by country. |
| Internet User in the UK. | 2011–2017: Internet users in the UK. | Yearly updates. XLS format. Indexed by age, gender, economy and location. |
| Internet Users in Georgia. | 2012: Internet users in Georgia. | Data published in 2013. PNG and BMP format. Indexed by regions, cities, operators and activities. |
| India to have the second-largest internet user base in the world. | 2015: Internet users in India. | Article published in 2015. PNG and BMP format. Indexed by rural and urban area. |
| Internet Users in the USA. | 2013: Internet users in the USA. | Yearly updates. XLS format. Indexed by gender, race, age, education and income. |
| First Look: Internet Use in 2015. | 2013–2015: Internet users in the USA. | Report published in 2016. PNG and BMP format. Indexed by age and education level. |
| United Kingdom fact file. | 2011–2016: Internet users. | Yearly updates. TXT format. Indexed by country. Some data not free. |
| Internet use in the Middle East and North Africa. | 2012: Internet use in Middle East and North Africa. | Article published in 2013. JIF and BMP format. Indexed by region. |
| A snapshot of Internet use in Africa. | 2012: Internet use in Africa. | Article published in 2013. JIF and BMP format. Indexed by region. |
| Internet users. | 2017: Internet users. | Yearly updates. TXT, PNG and BMP format. Indexed by region. |
| Internet topology data. | 2017: Macroscopic Internet topology data kit. | Router level topology data on the Internet nodes and links. |
| Internet topology data. | 2017: University of Adelaide project of Internet topologies. | 250 datasets on various Internet networks at different scales. |

---

1. Other data available.
2. Various visualization options available.
| Data source | Data | Notes |
|-------------|------|-------|
| 1. World internet and digital future. Digital Centre Organization [http://www.digitalcenter.org](http://www.digitalcenter.org) | 2009–2015 and 2000–2016: Internet usage in social, political, media, entertainment, security and economy for selected countries. | Project reports. PDF format. Indexed by age, gender, income, location and education. |
| 2. Global internet usage. Build Export. [https://build.export.gov](https://build.export.gov) | 2013: Global internet usage. | A PDF report. Indexed by region, language, browsers, search engine, social media and mobile vs. desktop. Article published in 2017. PNG and BMP format. Indexed by avg. daily time.¹ |
| 3. Daily time spent on social networks rises to over 2 h. Global Web Index Jason Mander. [http://blog.globalwebindex.net](http://blog.globalwebindex.net) | 2012–2016: Time spent on social networks. | Infographics published in 2012. GIF and BMP format. Indexed by global, activity, website and apps.² |
| 4. How people spent time on the Internet. Go-Gulf. [https://www.go-gulf.com](https://www.go-gulf.com) | 2012: How users spent time on the Internet. | Data published in 2008. PDF and DOC format. Indexed by country.³ |
| 5. Internet access and use in Europe. European Commission. [https://ec.europa.eu](https://ec.europa.eu) | 2006–2008: Internet access and use in Europe. | Data published in 2007. TXT format. Indexed by global, countries, region and avg. time spent on website.⁴ |
| 6. Internet usage in Asia-Pacific. Visual.ly [https://visual.ly](https://visual.ly) | 2000–2010: Internet usage in Asia-Pacific. | Infographic. JPG and BMP format. Indexed by selected countries. |
| 7. Internet usage in Asia-Pacific. comScore Inc. [http://www.comscore.com](http://www.comscore.com) | 2007: Internet usage in Asia-Pacific. | Data published in 2007. TXT format. Indexed by global, countries, region and avg. time spent on website.⁴ |
| 8. Asia Internet Usage. SCRIBD. [https://www.scribd.com](https://www.scribd.com) | 2000 and 2010: Asia Internet Usage. | Data published in 2010. PNG and BMP format. Indexed by selected countries. |
| 9. Mobile Internet Usage in Asia-Pacific. Internet Society Organization. [https://www.internetsociety.org](https://www.internetsociety.org) | 2016: Mobile Internet usage in Asia-Pacific. | Report published in 2016. PDF format. Indexed by activity, operator, device, age and app. Report. PDF format. Indexed by device, location, spending time, social media, age, income, and app.⁵ |
| 10. The Arab World Online 2014. Mohammed Bin Rashid School of Government. [http://www.mbrsg.ae](http://www.mbrsg.ae) | 2014: Arab world online. | Infographics published in 2013. Indexed by country and app.⁶ |
| 11. Internet usage in the Middle East. Go-Gulf. [https://www.go-gulf.ae](https://www.go-gulf.ae) | 2001, 2012 and 2015: Internet usage in the Middle East. | Infographics published in 2013. Indexed by country and app.⁶ |
| 12. Internet usage in the Middle East. Info Graphicspedia [http://www.infographicspedia.com](http://www.infographicspedia.com) | Internet Usage in the Middle East. | Infographics. PNG format. Indexed by access and app. |
| 13. Mobile internet usage in the Middle East. [https://www.middleeast-infographics.com](https://www.middleeast-infographics.com) | 2014–2017: Mobile internet usage in the Middle East. | Infographics. PNG format. Indexed by age, device, users, employment, education, gender and app. Report published in 2014. PDF format. Indexed by activity, downloading speed, device, age and app. Reports. PDF format. Indexed by location, device, activities, game, browsing, access, age and app.⁷ |
| 14. Out-of-home use of the Internet. BSG. [http://www.broadbanduk.org](http://www.broadbanduk.org) | 2014: Internet use in the UK Adults media use and attitudes. | Reports. PDF format. Indexed by gender, age, activities and use of websites.⁸ |
| | [https://www.ofcom.org.uk](https://www.ofcom.org.uk) | 2011–2017: Internet use in the UK. | Reports. PDF format. Indexed by location, device, activities, game, browsing, access, age and app.⁷ |
| | | 2013: Internet use in the UK. Internet citizens. | |
| Data source | Data | Notes |
|-------------|------|-------|
| Internet and computer use in London. | 2016: Internet use in the UK. Smartphone cities. 2014 and 2015: Mobile broadband performance in the UK. 2011–2016: Internet use and attitudes in the UK bulletin. | Reports. PDF format. Indexed by speed and operator. Reports. PDF format. Indexed by operator, speed, latency, cities, device, activity, speed, and operator. Reports. PDF format. Indexed by age, gender, income, unemployed, rural/urban area, ethnicity and disability. Data published in 2013. XLS format. Indexed by access. |
| Mobile connectivity research study. | 2016: Internet use in the UK trains. | Report published in 2016. PDF format. Indexed by device, spend time, connectivity and activity. |
| How internet use has ballooned in the last decade. | 2012–2014: Internet use among teenagers in the UK. | Article published in 2015. SVG, PNG, BMP, JPG and PDF format. Indexed by device and social website. |
| India Internet Usage. | 2015: Internet usage in India. | Infographic. PDF format. Indexed by speed, time spend, gender, area and speed. |
| Internet Usage in China. | 2012: Internet usage in China. | Infographic published in 2013. Indexed by device, gender, area, access and activity. |
| Internet Usage in China. | 2013: Internet Usage in China. | Infographics. PNG and BMP format. Indexed by gender, age, education, occupation, device and activity. |
| Internet usage in Hong Kong. | 2013 and 2014: Internet usage in Hong Kong. | Infographics published in 2014. Indexed by device, access, activity, age, gender, spent time and area. |
| Internet use in Canada. | 2005, 2007 and 2009: Internet use in Canada. | Last update 2010. XLS, CSV and HTML format. Indexed by individuals, location of access and province. |
| Internet usage in Brazil. | 2014: Internet usage in Brazil. | Last update 2014. TXT format. Indexed by activity, access, spend time and app. |
| Internet usage in Brazil. | 2015: Internet usage in Brazil. | Published in 2016. PNG and BMP format. Indexed by device, activity and app. Report. PDF format. Indexed by operator, device, age, activity, social media and app. |
| Global internet industry research. | Different years. | Report. PDF format. Indexed by operator, device, age, activity, social media and app. |
| The 100 websites that rule the internet in the USA. | 2017: Top 100 websites in the USA. | Infographic published in 2017. JPEG format. |
| The state of the Internet. | State of the Internet connectivity, security and speeds. | Quarterly updates. Data form 2008. Indexed by region and country. In 8 langs. |
| The Internet usage. | The top 500 sites on the web. | |

**Table 2 (continued)**
### Table 2 (continued)

| Data source                                                                 | Data                                            | Notes                                                                 |
|----------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------|
| Alexa                                                                      | Daily updates. Indexed by global, country, category, spent time, traffic, website and apps. Free and non-free data. | Daily updates. Indexed by global, country, category, spent time, traffic, website and apps. Free and non-free data. |
| FCC                                                                        | Reports from as early as 1985 in PDF or TXT formats. Index by performance, coverage, subscriptions, pricing. | Reports from as early as 1985 in PDF or TXT formats. Index by performance, coverage, subscriptions, pricing. |
| Social Blade                                                              | Rich indexing and filtering.                    | Rich indexing and filtering.                                        |
| Personal data on Google.                                                  | Export, share and manage personal data on Google. | Export, share and manage personal data on Google.                    |
| Social apps usage. Social Bakers                                          | Indexed by country, global, industry, most active profiles, daily and monthly uses. | Indexed by country, global, industry, most active profiles, daily and monthly uses. |
| Wiki groups statistics. Wikipedia                                         | Monthly update. Various formats.                | Monthly update. Various formats.                                     |
| Media use in the Middle East. North Western University in Qatar.          | Report. PDF format. Indexed by country, penetration, device, usage, and age and app. HTTP tables with sorting. Also in real time. | Report. PDF format. Indexed by country, penetration, device, usage, and age and app. HTTP tables with sorting. Also in real time. |
| Social apps usage. Usage data for selected social applications including YouTube, Facebook and Twitter. | Rich indexing and filtering.                    | Rich indexing and filtering.                                        |
| Wiki groups statistics. Statistics about wiki groups.                    | Monthly update. Various formats.                | Monthly update. Various formats.                                     |
| Media use in the Middle East. North Western University in Qatar.          | Report. PDF format. Indexed by country, penetration, device, usage, and age and app. HTTP tables with sorting. Also in real time. | Report. PDF format. Indexed by country, penetration, device, usage, and age and app. HTTP tables with sorting. Also in real time. |
| Social apps usage. Usage data for selected social applications including YouTube, Facebook and Twitter. | Rich indexing and filtering.                    | Rich indexing and filtering.                                        |
| Wiki groups statistics. Statistics about wiki groups.                    | Monthly update. Various formats.                | Monthly update. Various formats.                                     |
| Media use in the Middle East. North Western University in Qatar.          | Report. PDF format. Indexed by country, penetration, device, usage, and age and app. HTTP tables with sorting. Also in real time. | Report. PDF format. Indexed by country, penetration, device, usage, and age and app. HTTP tables with sorting. Also in real time. |

* Other data available.

### Table 3

| Data source                                                                 | Data                                            | Notes                                                                 |
|----------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------|
| 1. The Internet statistics and resources. Info Please.                    | 2001–2016: a lot of various Internet statistics in the USA and worldwide. | Last updated in 2016. TXT format. Indexed by gender, age, race, income, education, employment, region and country. |
| Sobworldindata.org                                                         | Data published in 2017. BNG and BMP format. Indexed by country, age, education, income, access and devices. | Data published in 2017. BNG and BMP format. Indexed by country, age, education, income, access and devices. |
| 3. The Internet. Our World in Data.                                       | Internet statistics, various years.              | BNG and BMP format. Indexed by country, access, economy and app. | BNG and BMP format. Indexed by country, access, economy and app. |
| 4. Social Media Facts and Statistics. Jeff Bullas.                        | 2013 and 2015: Social media statistics.          | Articles. TXT format. Indexed by age, gender, region, device and app. | Articles. TXT format. Indexed by age, gender, region, device and app. |
| 5. Internet Stats & Facts for 2016. Hosting Facts.                        | 2016: Internet statistics.                      | Article published in 2016. TXT, BNG and BMP format.                  | Article published in 2016. TXT, BNG and BMP format. |
Table 3 (continued)

| Data source | Data | Notes |
|-------------|------|-------|
| 6. 96 Amazing Social Media Statistics and Facts. Brand Watch. [https://www.brandwatch.com](https://www.brandwatch.com) | 2016: Social media statistics. TXT format. Indexed by app. In 5 langs. | Article published in 2016. |
| 7. Internet Trends 2017. VPN Mentor Guy Fawkes. [https://www.vnmentor.com](https://www.vnmentor.com) | 2017: Stats & Facts in the USA and Worldwide. | Article. JPG and BMP format. Indexed by region, users, age, device, speed, activity and browser. In 25 langs. |
| 8. There are now 3 billion Internet users worldwide in 2015. Mobile Industry Review. [http://www.mobileindustryreview.com](http://www.mobileindustryreview.com) | 2015: Internet statistics in the UK. | Article published in 2015. PNG and BMP format. Indexed by use mobile web, mobile broadband, mobile data growth, spend time, speed, region, device, social media and app. |
| 9. Mobile usage statistics. Internet Stats Today. [http://internetstatstoday.com](http://internetstatstoday.com) | Live mobile usage statistics. Live updates. Indexed by activity, device and app. | |
| 10. How the world uses the internet. IDC. [http://www.idc.com](http://www.idc.com) | 2009–2018: Internet statistics. Infographics. PDF format. Indexed by region, country, activity. In 11 langs. | Report and presentation. JPG and BMP format. |
| 11. Internet trends. Kleiner Perkins Caufield and Byers. [http://www.kpcb.com](http://www.kpcb.com) | 2017: Global internet trends, advertisement, game, media, China and India internet and healthcare. | |
| 12. Internet use and statistics. Eurostat. [http://ec.europa.eu](http://ec.europa.eu) | 2013 statistics in Europe. | Article. PNG and BMP format. Indexed by users, age, activity, websites and shopping. In 22 langs. Articles. PNG, BMP and XLS format. Indexed by access, usage and device. In 22 langs. |
| 13. Digital economy and society statistics - households and individuals. Eurostat. [http://ec.europa.eu](http://ec.europa.eu) | 2016 statistics in Europe. | Articles. PNG, BMP and XLS format. Indexed by access, usage and device. In 22 langs. |
| 14. Social Media Report. Sensis. [https://www.sensis.com.au](https://www.sensis.com.au) | 2015 and 2017: Social media statistics in Australia. Reports. PDF format. Indexed by device, age, gender, access and social media. | |
| 15. Digital landscape of Southeast Asia. Tech in Asia. [https://www.techinasia.com](https://www.techinasia.com) | 2015: Internet statistics in Southeast Asia. Presentation. JPG and BMP format. Indexed by Facebook usage, gender, age and country. | |
| 16. Digital landscape in Asia. Go-Globe. [https://www.go-globe.com](https://www.go-globe.com) | 2015: Internet statistics in Asia. | Infographics published in 2015. Indexed by country, users, device, spend time and speed. |
| 17. Internet usage in Hong Kong. Go-Globe. [https://www.go-globe.hk](https://www.go-globe.hk) | 2013 and 2014: Internet statistics in Hong Kong. | Infographics published in 2014. Indexed by device, access, activity, age, gender, spend time and area. Data published in 2016. TXT format. Indexed by internet users, Facebook users and country. |
| 18. Internet user statistics in Asia. Statistic Brain. [http://www.statisticbrain.com](http://www.statisticbrain.com) | 2000 and 2016: Internet user statistics in Asia. | Annual survey. PNG and BMP format. Indexed by activity and app. |
| 19. Social media statistics in the Middle East. Middle East media organization. [http://www.mideastmedia.org](http://www.mideastmedia.org) | 2015: Social media statistics in the Middle East. | Infographics published in 2013. Indexed by language, age, gender, access and country. |
| 20. Social media statistics in the Middle East. Go-Gulf. [https://www.go-gulf.ae](https://www.go-gulf.ae) | 2013: Social media statistics in the Middle East. | |
| Data source                                                                 | Data                                                                 | Notes                                                                                                                                 |
|---------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 21. Internet statistics in selected countries.                            | 2015: Internet statistics in India.                                   | Presentations. PDF and PPT format. Indexed by many different attributes.                                                            |
| Slideshare users.                                                         | 2015: China mobile Internet statistics.                              | 2014: Internet statistics in Russia.                                                                                                 |
| https://www.slideshare.net                                                  |                                                                      | Report. PDF format. Indexed by access and activity.                                                                                  |
| 22. Global internet report in Latin America and North America.             | 2015: Internet statistics in America.                                 | Study. PDF format. Indexed by download, upload, latency and packet loss.                                                             |
| Sandvine.                                                                 |                                                                      | Data published in 2013. PNG and BMP format. Indexed by activity, region, operators and access.                                         |
| https://www.slidev.com                                                      |                                                                      | Infographics. Indexed by gender, activity and area.                                                                                  |
| 23. Irish communications market.                                          | 2015: Internet statistics in Ireland.                                | Research. PDF format. Indexed by access, usage, penetration, pricing, users, operators, speed and traffic.                             |
| Commission for Communications Regulation.                                 |                                                                      | Study. PDF format. Indexed by download, upload, latency and packet loss.                                                             |
| https://www.comreg.ie                                                      |                                                                      | Data published in 2013. PNG and BMP format. Indexed by activity, region, operators and access.                                         |
| 24. Analysis of broadband performance in Ireland.                         | 2014: Broadband quality in Ireland.                                  | Study. PDF format. Indexed by download, upload, latency and packet loss.                                                             |
| Sam Knows.                                                                |                                                                      | Data published in 2013. PNG and BMP format. Indexed by activity, region, operators and access.                                         |
| https://www.samknows.com                                                   |                                                                      | Infographics. Indexed by gender, activity and area.                                                                                  |
| 25. Statistics of Internet Users in Georgia. IDFI.                        | 2012: Internet statistics in Georgia.                                | 1997–2016: Internet statistics in China. 37 reports published annually. PDF format. Indexed by user provinces, gender, age, education, occupation, income, access, usage and app.  |
| https://idfi.ge                                                            |                                                                      | Infographics. Indexed by gender, activity and area.                                                                                  |
| 26. Social Media Users in Argentina.                                      | 2015: Social media statistics in Argentina.                          | Infographics. Indexed by users, usage, access, device, gender, age and app.                                                           |
| Innovatemedtec.                                                           |                                                                      | Whitepapers, presentations, articles, posts. PPT, PNG, BMP and TXT format. Indexed by users, area, age, gender, education, occupation, income, access, device, activity and app.  |
| https://innovatemedtec.com                                                 |                                                                      | Infographics. Indexed by gender, activity and area.                                                                                  |
| 27. Internet statistics in India.                                          | 2015: Internet statistics in India.                                  | 1997–2016: Internet statistics in China. 37 reports published annually. PDF format. Indexed by user provinces, gender, age, education, occupation, income, access, usage and app.  |
| Social Prachar.                                                           |                                                                      | Infographics. Indexed by gender, activity and area.                                                                                  |
| https://socialprachar.com                                                  |                                                                      | Infographics. Indexed by gender, activity and area.                                                                                  |
| 28. Statistical report on the Internet development in China.              | 2015: Chinese social media statistics.                               | Infographics. Indexed by users, usage, access, device, gender, age and app.                                                           |
| By China Network Information Centre CNNIC.                               |                                                                      | Whitepapers, presentations, articles, posts. PPT, PNG, BMP and TXT format. Indexed by users, area, age, gender, education, occupation, income, access, device, activity and app.  |
| http://www.apira.org                                                      |                                                                      | Infographics. Indexed by gender, activity and area.                                                                                  |
| 29. Chinese social media statistics.                                      | 2015: Chinese social media statistics.                               | Infographics. Indexed by users, usage, access, device, gender, age and app.                                                           |
| Make a website hub.                                                       |                                                                      | Whitepapers, presentations, articles, posts. PPT, PNG, BMP and TXT format. Indexed by users, area, age, gender, education, occupation, income, access, device, activity and app.  |
| https://makeawebsitehub.com                                                |                                                                      | Infographics. Indexed by gender, activity and area.                                                                                  |
| 30. China internet statistics.                                            | 2009–2017: Chinese social media statistics.                         | 2015–2016: Internet statistics in Vietnam. Post published in 2016. TXT format. Indexed by users, activity, spend time, device and app. |
| China Internet Watch.                                                     |                                                                      | Post published in 2016. TXT format. Indexed by users, activity, spend time, device and app.                                         |
| https://www.chinainternetwatch.com                                        |                                                                      | Post published in 2016. TXT format. Indexed by users, activity, spend time, device and app.                                         |
| 31. Internet statistics in Vietnam.                                       | 2015–2016: Internet statistics in Vietnam.                          | 2015–2016: Internet statistics in Vietnam. Post published in 2016. TXT format. Indexed by users, activity, spend time, device and app. |
| Chabrol.                                                                  |                                                                      | Post published in 2016. TXT format. Indexed by users, activity, spend time, device and app.                                         |
| http://chabrol.net                                                         |                                                                      | Post published in 2016. TXT format. Indexed by users, activity, spend time, device and app.                                         |
| 32. Internet statistics in Russia.                                        | 2015: Internet statistics in Russia.                                 | Article published in 2016. PNG and BMP format. Indexed by penetration, device, age and city size.                                      |
| East-West digital news.                                                   |                                                                      | Article published in 2016. PNG and BMP format. Indexed by penetration, device, age and city size.                                      |
| http://www.ewdn.com                                                       |                                                                      | Article published in 2016. PNG and BMP format. Indexed by penetration, device, age and city size.                                      |
| 33. Russian internet growth and development.                             | 2014: Internet statistics in Russia.                                 | Article published in 2015. JPG and BMP format. Indexed by penetration and area.                                                        |
| Russian Search Marketing.                                                 |                                                                      | Article published in 2015. JPG and BMP format. Indexed by penetration and area.                                                        |
| http://russiansearchmarketing.com                                          |                                                                      | Article published in 2015. JPG and BMP format. Indexed by penetration and area.                                                        |
| 34. Internet statistics in Malaysia.                                      | 2013 and 2015: Internet statistics in Malaysia.                      | Infographics published in 2016. PDF format. Indexed by usage, access, activity and device.                                           |
| Department of Statistics Malaysia.                                       |                                                                      | Infographics published in 2016. PDF format. Indexed by usage, access, activity and device.                                           |
| https://www.dosm.gov.my                                                   |                                                                      | Infographics published in 2016. PDF format. Indexed by usage, access, activity and device.                                           |
Table 3 (continued)

| Data source | Data | Notes |
|-------------|------|-------|
| 35. The Canadian internet. CIRA. [https://cira.ca](https://cira.ca) | 2011–2012: Internet statistics in Canada. | Post published in 2014. PNG and BMP format. Indexed by access, area, activity, device and app. \(^a\) |
| 36. Internet statistics in the USA. NTIA. [https://www.ntia.doc.gov](https://www.ntia.doc.gov) | 1998–2015: Internet statistics in the USA. | Yearly updates. XLS format. Indexed by device, access, activity, age, income, employment, education, gender and race. \(^b\) |
| 37. Global broadband penetration. Global Finance Magazine. [https://www.gfmag.com](https://www.gfmag.com) | 2011: Global broadband penetration. | Online article. Indexed by access, penetration and country. \(^a\) |
| 38. Internet statistics in the Arab countries. IPSOS. [https://www.ipsos.com](https://www.ipsos.com) | 2013: Internet statistics in the Arab countries. | Study published in 2013. PDF format. Indexed by penetration, access, device, browsers, country, gender, age and activity. \(^b\) |
| 39. Internet statistics. Internet Monitor. [https://thenetmonitor.org](https://thenetmonitor.org) | Various Internet statistics. | Indexed by country, access, cost and speed. \(^a\) |
| 40. Global Internet Maps. Internet Society. [http://www.internetsociety.org](http://www.internetsociety.org) | 2013: Internet statistics. Internet Measurement Project. | Reports, surveys, external references to free and non-free documents. White papers. PDF format. |
| 41. Avazu. [http://avazuinc.com](http://avazuinc.com) | 2016: Social media statistics. | Article published in 2016. PNG and BMP format. Indexing by app. |
| 42. Social media statistics. UK Business Insider. [http://uk.businessinsider.com](http://uk.businessinsider.com) | 2002–present: Web traffic data analytics, traffic, ranking and other information. | Data on 30 million websites. Partly free. HTML format. Complete web access statistics with paid account. |
| 43. Web Traffic Analytics. Alexa Internet. [https://www.alexa.com/](https://www.alexa.com/) | | |

\(^a\) Other data available.
\(^b\) Various visualization options available.

---

Table 4

Internet availability.

| Data source | Data | Notes |
|-------------|------|-------|
| 1. Internet access. OECD. [https://data.oecd.org](https://data.oecd.org) | 2005–2015: Internet access. | Yearly updates. XLS format. Indexed by country. \(^ab\) |
| 2. Internet access and use in the EU27. European Commission. [https://ec.europa.eu](https://ec.europa.eu) | 2006–2008: Internet access in Europe. | Data published in 2008. PDF and DOC format. Indexed by access, activity and country. \(^a\) |
| 3. Digital economy and society statistics. Eurostat. [http://ec.europa.eu](http://ec.europa.eu) | 2016: Internet access for households and individuals in Europe. | Data published in 2017. XLS, PNG and BMP format. Indexed by usage, household, area, device and shopping. |
| 4. The net-children go mobile project. LSE Research Online. [http://eprints.lse.ac.uk](http://eprints.lse.ac.uk) | 2013: Internet access among European children. | Initial findings published in 2013. PDF format. Indexed by usage, age, device, activity, social media and gender. \(^a\) |
Table 5. More comprehensive datasets related to the Internet: These datasets often contain various other data in addition to the Internet data.

| Data source | Data | Notes |
|-------------|------|-------|
| 5. Internet access statistical bulletins. ONS. https://www.ons.gov.uk | 2012–2016: Internet access of households and individuals in the UK. | Yearly updates. PDF, JPG and XLS format. Indexed by device, activity, age and city.\(^a\) |
| 6. Internet access quarterly update. Government UK. https://data.gov.uk | 2011–2014: Internet access in the UK. | Quarterly updates; last in 2014. PDF format. Indexed by age, gender and region.\(^a\) |
| 7. Internet access and use. Tower Hamlets Council. http://www.towerhamlets.gov.uk | 2013: Internet access in the UK. | Report published in 2014. PDF format. Indexed by households, usage, activity, age, city, race and gender. |
| 8. Internet access datasets. Singapore Gov. https://data.gov.sg | 2017: 19 datasets on Internet access in Singapore. | Yearly updates. XLS format.\(^a\) |
| 9. Internet access among children in the USA. Child Trends Org. https://www.childtrends.org | 1994–2013: Internet access among children in the USA. | A report. PDF format. Index by age, gender, race, income and region. |
| 10. Americans internet access. Pew Research Center. http://www.pewinternet.org | 2000–2014: Internet access in the USA. | Report published in 2015. PDF, SVG, PNG and BMP format. Indexed by use, age, education, income, race, area and gender.\(^a,b\) |
| 11. Computer and Internet Access in the USA. The U.S. Census Bureau. https://www.census.gov | 1984–2012: Internet access in the USA. | Reports. XLS format. Indexed by age, gender, ethnicity and income. |

\(^a\) Other data available.
\(^b\) Various visualization options available.

Table 4 (continued)

2. Experimental design, materials and methods

The most important data sources on the Internet usage containing the most comprehensive datasets are summarized in Fig. 1. The following two main strategies were used to find the relevant datasets. First, the World Wide Web (WWW) was searched using various combinations of keywords to find about 80% of the collected datasets. The keywords considered combined the word ‘Internet’ with one or more of the following search terms: traffic, database, data, access, usage, users, and statistics. The keyword search can be further modified, for example, by specifying the country or a region. The second strategy for finding the relevant datasets is to first identify the institutions which are known to be reporting various Internet related statistics, and then examine their websites. Overall, over 400 candidate websites were explored to select the relevant datasets. It is not surprising that often, but fortunately, not always, the high quality datasets (i.e., those which are reliable and regularly kept up to date) are only available to the paying subscribers. However, these pay-for-access datasets have been excluded from the survey. The main attributes of interest that were checked for when screening the datasets are: whether the data are provided for free, who is maintaining the dataset, how often the data are updated, in what format the data are available, and especially, what data are specifically provided and how they are indexed or categorized. Moreover, many international institutions have a policy to publish datasets with description in multiple languages. The total volume of data in each dataset varies significantly among the data providers including the time coverage and the availability of historical data. Most data seem to be normally accessible in smaller chunks, usually organized around a specific reporting purpose or issue.
### Table 5
More comprehensive datasets related to the Internet.

| Data source | Data | Notes |
|-------------|------|-------|
| 1. Data hub. [https://datahub.io](https://datahub.io) | Total 11,238 datasets with 312 about the Internet. | Different formats. In 47 langs. |
| 2. European data portal. [https://www.europeandataportal.eu](https://www.europeandataportal.eu) | Total 764,778 datasets with 60,239 about the Internet. | Different formats. In 24 langs. European countries only. |
| 3. European Union Open Data Portal. [https://data.europa.eu](https://data.europa.eu) | Total 10,850 datasets with 293 about the Internet. | Different formats. In 24 langs. EU countries. |
| 4. Internet live stats. [http://www.internetlivestats.com](http://www.internetlivestats.com) | Live data about internet users, number of websites and apps. | Real-time data. |
| 5. ITU. [http://www.itu.int](http://www.itu.int) | Datasets about broadband, Internet use, mobile-cellular and mobile-broadband networks in the world. | Yearly updated data. Different formats. In 5 langs. |
| 6. World Bank Group. [http://www.worldbank.org](http://www.worldbank.org) | Total 774 million. Datasets about the Internet and other fields. | Yearly updates. Different formats. In 20 langs. Good for data on developing countries. |
| 7. Statista. [https://www.statista.com](https://www.statista.com) | Thousands of datasets about the Internet and other fields. | Yearly updates. Different formats. In 4 langs. Free and non-free access. |
| 8. Info Please. [https://www.infoplease.com](https://www.infoplease.com) | Lots of data about the Internet and other fields in the USA and in the world. | Yearly updates. Different formats. |
| 9. Ofcom. [https://www.ofcom.org.uk](http://www.ofcom.org.uk) | Lots of data about the Internet in the UK. | Yearly updates. Different formats. |
| 10. FCC [https://www.fcc.gov](https://www.fcc.gov) | Lots of data about the Internet in the US. | Yearly updates. PDF format. |
| 11. Pew Research Center. [http://www.pewglobal.org](http://www.pewglobal.org) | Lots of data about the Internet and other fields in the USA and in the world. | Data polling, research and analysis. Yearly updates. Different formats and visualizations. In 8 langs. |
| 12. Internet Society. [https://www.internetsociety.org](https://www.internetsociety.org) | Data about the Internet. | Collect, analyse and publish data about the UK. Yearly updates. Different formats. Daily updates. Different formats and visualizations. Data from 2.5 million websites. Indexed by browser, device, country, region and app. |
| 13. ONS. [https://www.ons.gov.uk](https://www.ons.gov.uk) | Lots of data about the Internet and other fields in the UK. | |
| 14. Stat. Counter. [http://gs.statcounter.com](http://gs.statcounter.com) | Data about the Internet. | |
| 15. Our World in Data. [https://ourworldindata.org](https://ourworldindata.org) | Lots of data about the Internet and many other fields. | Free data research and analysis. PNG and BMP format. |
| 16. UN data. [http://data.un.org](http://data.un.org) | Lots of data about the Internet and other fields also listing the UN organizations with the last and next update datasets. | Monthly updates. Different formats. Indexed by topic, country and time period. |
| Data source | Data | Notes |
|-------------|------|-------|
| 17. OECD. [http://www.oecd.org](http://www.oecd.org) | Lots of data about the Internet and other fields. | Yearly updates. XLS format. Indexed by penetration, usage, price, service, speed and coverage. In 2 langs. |
| 18. The Global Economy. [http://www.theglobaleconomy.com](http://www.theglobaleconomy.com) | Lots of data about the Internet and other fields. | Free and non-free data. JPG format. Other formats with free registration. Different visualizations. In 6 langs. |
| 19. Slideshare. [https://www.slideshare.net](https://www.slideshare.net) | Total 18 million presentations in 40 categories, many containing data about the Internet and other fields. | Different formats. In 5 langs. |
| 20. Knoema. [https://knoema.com](https://knoema.com) | Search engine for data. | Different formats. In 10 langs. |
| 21. Australian Bureau of Statistics. [http://search.abs.gov.au](http://search.abs.gov.au) | Official data Australia including the Internet. | Yearly updates. XLS format. |
| 22. Internet Stats Today. [http://internetstatstoday.com/](http://internetstatstoday.com/) | Live mobile usage statistics. | Live updates. Indexed by activity, device and app. |
| 23. Apira. [http://www.apira.org](http://www.apira.org) | The Internet developments in countries in the Asia-Pacific region. | Survey reports and Internet data in different countries. |
| 24. ABI research [https://www.abiresearch.com/](https://www.abiresearch.com/) | Research on technology markets. | Quarterly updates. Data and reports on the Internet, markets and technology. Registration required. Data access not free.\textsuperscript{a} |
| 25. Eurostat [http://ec.europa.eu](http://ec.europa.eu) | Lots of data about the Internet and other things in Europe. | Data about the Internet in Europe. Indexed by user, access, activity and security. Many formats. |
| 26. Pingdom [http://royal.pingdom.com](http://royal.pingdom.com) | Data and analysis on the Internet. | Lots of data about the Internet and other fields. |
| 27. Strategy Analytics [https://www.strategyanalytics.com](https://www.strategyanalytics.com) | Data on the Internet and other fields. | Lots of data and reports, but registration required. |
| 28. PWC [https://www.pwc.com](https://www.pwc.com) | Investment data in the USA including the Internet. | Quarterly update. SVG, PNG and BMP format. Indexed by sector, region, state. |
| 29. UNCTAD statistics [http://unctadstat.unctad.org](http://unctadstat.unctad.org) | United Nations Conference on Trade and Development. Data on ICT and Internet usage and economics. | Yearly update. IVT, XLS and CSV format. In 2 langs. |
| 30. Statistics Canada [http://www.statcan.gc.ca](http://www.statcan.gc.ca) | Data on the Internet and other things in Canada. | Data about the Internet and other statistics. |

\textsuperscript{a} Other data available.
References [1–5] are recommended for performing longer-term traffic and applications forecasting in the Internet. The Internet measurement procedures are described in [6–9] whereas focus on measuring the digital economy can be found in [10–12]. Digitalization of the economy is explained in [13] while many technical and business aspects of digitalization of the Internet services are studied in [14]. The value of open access data and the associated data regulation are discussed in [15] and [16].

Funding sources

This work is part of a Ph.D. research work of Murooj Nadhom who received the full scholarship from the Iraqi Government. The grant is provided by the Iraqi Ministry of Higher Education and Scientific Research. The grant reference number is 1873.

Transparency document. Supplementary material

Transparency document associated with this article can be found in the online version at https://doi.org/10.1016/j.dib.2018.04.107.
References

[1] Akamai, State of the Internet, 2017. Available at: [https://www.akamai.com/uk/en/about/our-thinking/state-of-the-internet-report].

[2] Cisco, VNI Global Fixed and Mobile Internet Traffic Forecasts, 2017. Available: [https://www.cisco.com/c/en/us/solutions/service-provider/visual-networking-index-vni].

[3] M. Meeker, Internet Trends 2017, Kleiner Perkins, 2017. Available at: [http://www.kpcb.com/internet-trends].

[4] P. Loskot, M.A. Hassanien, F. Farjady, N. Doran, D.B. Payne, M. Ruffini, D. Nesset, J. Seton, Long-term socio-economical drivers of traffic in next generation broadband networks, Ann. Telecommun. 70 (1–2) (2015) 1–10.

[5] J. Curran, N. Fenton, D. Freedman, Misunderstanding the Internet, Routledge, Taylor & Francis Group, London and New York, 2012.

[6] M. Crovella, B. Krishnamurthy, Internet Measurement: Infrastructure, Traffic and Applications, John Wiley and Sons, England, 2006.

[7] Office of Communications, Measuring Mobile Broadband Performance in the UK, 2015. Available at: [https://www.ofcom.org.uk/research-and-data].

[8] SamKnows, UK Broadband Availability, 2015. Available at: [https://www.samknows.com].

[9] Federal Communications Commission, Measuring Broadband America: Fixed Broadband Report, 2016, Available at: [https://www.fcc.gov/general/measuring-broadband-america].

[10] M. Nathan, A. Rosso, T. Gatten, P. Majmudar, A. Mitchell, Measuring the UK’s Digital Economy with Big Data, National Institute of Economic and Social Research, 2013. Available at: [https://www.niesr.ac.uk/publications/measuring-uk’s-digital-economy-big-data].

[11] McKinsey & Company, “Digital Europe” and “Digital America”, 2015 and 2016, Available at: [https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights].

[12] Organization for Economic Co-operation and Development, Measuring the Digital Economy: A New Perspective, OECD Publishin, 2014, Available at: [http://dx.doi.org/10.1787/9789264221796-en].

[13] TM Forum, 2017. Available at: [https://www.tmforum.org].

[14] European Data Portal, “Benefits of Open Data” and “Creating Value through Open Data”, 2017. Available at: [https://www.europedataportal.eu].

[15] European Union Regulation (2016/679) of the European Parliament and of the Council, General Data Protection Regulation, L119, 4/5/2016, pp. 1–88.