

# world digital media factbook

2014-15

SPECIAL REPORT

**fipp**  
INSIGHT

# MOBILE, TABLETS AND APPS

Mobile and tablet ownership, apps access and advertising are surging in the double and triple digits around the world. The unrivalled media growth represents an unprecedented opportunity for media companies to develop content and advertising strategies for mobile devices.

The 2014 Mobile World Congress in Barcelona drew 80,000 participants, a 12 percent increase over 2013, underscoring the growing importance of learning about the cutting-edge technologies and strategies about all things mobile. Compared to previous years, fewer technologists and more marketers, media executives and business strategy executives are attending. This year, this emerging group represented one-fourth of the MWC audience.

Among the key themes for MWC 2014 were increases in speed for handsets and networks, more smartphone functionality, growing developing world penetrations and cheaper handsets. Mozilla Corporation announced a US\$25 smartphone prototype, while GSMA and Facebook's Mark Zuckerberg announced a joint initiative to "connect the unconnected" in the developing world.

A multitude of clever mobile apps were well-represented at the mega-conference, which demonstrate promise for smartphone apps now and in the future:

- WhatsApp (owned by Facebook), app for text, voice, video chat
- Snapchat, app for photo sharing and messaging
- Line, app for free calls and messaging
- WeChat (owned by Tencent), app for mobile voice and text messaging
- Instagram, photo and video sharing app
- Spotify, app-managed digital music service
- Shazam, app that recognises music playing in the background
- King, app for social gaming

- Tumblr, an aggregation of blogs
- Share, app that enables app sharing
- Mint, app for personal finance
- Jawbone, app-managed fitness tracker bracelet
- Withings, app-managed fitness accessories
- LoseIt, weight management app
- Nest (owned by Google), app-managed home controls, like thermostat and smoke detector
- Uber, app that connects driver and passenger for taxi services
- Jumptap, targeted mobile advertising network
- MoPub, global mobile ad network and real-time bidding company
- Criteo, mobile display advertising network app

The explosion of mobile apps is already driving major growth in mobile advertising expenditure and the spawning of mobile ad networks and exchanges, including Jumptap, MoPub and Criteo.

The mobile opportunity also includes social media. Major social media networks are already reporting that more than half of their users access their websites from mobile phones. The shift toward mobile and social will continue, offering major opportunities to media companies to develop and integrate social media into their mobile offerings.

New media business opportunities in social media and mobile require media companies to evaluate their media portfolio priorities, short-term and long-term goals, and strategies for media for the future. A methodical, step-by-step innovation process can help media companies create competitive and customer-

engaging strategies now and for the future.

In this competitive and customer-centric business landscape, defining the customer for the media product is the first order of business. Without buy-in and engagement, there would be no success.

Next is to define, in detail, the jobs to be done, the timeline, the resources needed and the objectives. In order to properly reach the customer with this product, research in advance customers' needs, including any unmet needs by competitors' products. Use research to determine audience segments that would engage with the product. Estimate the size of these audiences.

Finally, conduct a competitive analysis of businesses already in the space and determine the opportunities for differentiating the product and the challenges to competing head-to-head with those businesses. Based on the competitive analysis and audience analysis, craft the innovation strategy, including the pricing strategy, a clearly defined business solution and a market target for the business solution.

Fairfax Media's Sydney Morning Herald worked with Forrester Research in 2013 to plan its mobile strategy. The newspaper and research firm pinpointed when customers use their mobile phones each day to access news and information from the SMH, in order to determine the market opportunity for mobile content and advertising for each audience: commuters, students/workers, and a general audience. They outlined the objectives for each time of day and each target audience, and determined a general need to publish news and information during the first part of the day, and lighter, more entertaining content during the latter part of the day.

Here are some general tactics to consider when planning a mobile strategy:

1. Start with a customer-centric plan, with the goal to serve customers during the times they use their mobile phones, during commutes, lunch hours, evening free time, during wait times
2. Use customer analytics to refine the design of services during target mobile usage periods
3. Evaluate mobile relationship and integration with other channels
4. Expand the role mobile plays throughout the organisation
5. Leadership is key to moving the strategy forward
6. Empower mobile teams to make faster and better decisions
7. Hire talent or complementary companies to achieve goals
8. Leverage mobile's marketing strengths of intimacy, immediacy and context
9. Look to leaders, such as countries like Japan, and companies like Facebook, for inspiration

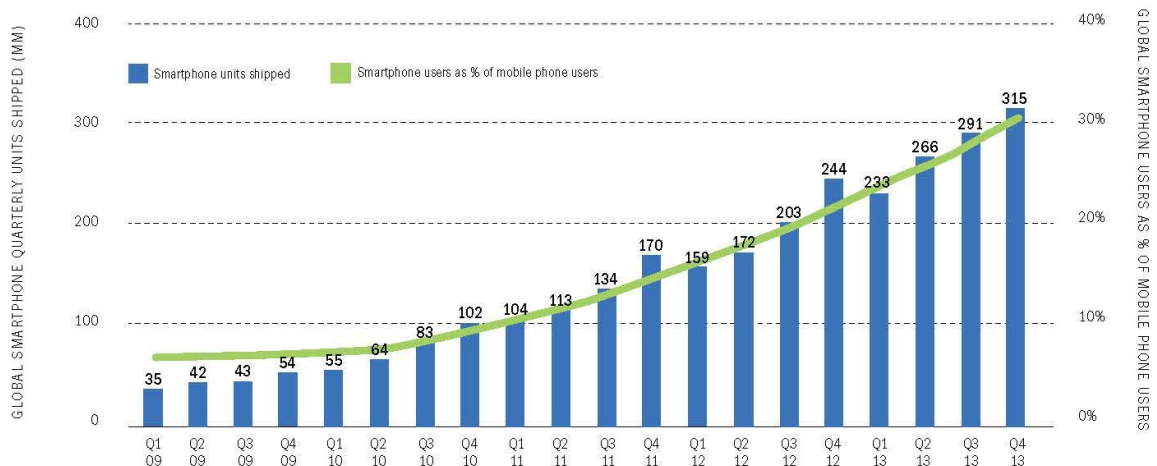
## The developing world: Smartphone's next frontier

Mobile Internet access is leapfrogging PC-based Internet access in the developing world. Meanwhile, smartphone penetration is rising in the double digits in developing nations, driven by demand and by sharply falling smartphone prices.

As these disruptive digital forces change the media

### Global smartphone shipments and users, 2009-2013

Quarterly smartphone unit shipments and smartphone users as a percent of mobile phone users



Source: Deloitte, May 2014, as reported by Internet Trends 2014 by Mary Meeker for Kleiner Perkins Caufield & Byers  
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## Global PC and tablet shipments, 1995-2013

Quarterly desktop and laptop PC and tablet unit shipments



Source: Deloitte, May 2014, as reported by Internet Trends 2014 by Mary Meeker for Kleiner Perkins Caufield & Byers  
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landscape across Africa, the Middle East, Asia and Latin America, so, too, is the consumption of news and information on mobile. These disruptions present threats and opportunities for media companies.

Smartphone unit sales and percent of smartphone users as a percent of mobile phone users have grown exponentially around the world since 2009, according to Morgan Stanley research, as reported in Mary Meeker's Internet Trends 2014 report. The trajectory, led by developing countries like India, China, Brazil and South Africa, is expected to reach 40 percent penetration later this year or early in 2015.

Smartphone manufacturers are producing inexpensive smartphones that are affordable for consumers in these countries. As smartphone penetrations surge, the opportunity for publishers to produce multimedia content and to sell advertising also grows.

Global tablet shipments are steeply rising and surpassing incumbent desktop PCs and notebook PCs, according to Morgan Stanley research. The flood of tablets to the marketplace, particularly in Asia, North America and Europe, is attempting to meet the demand for these devices. Usership of tablets for consuming multimedia content, advertising and purchasing goods and services is growing at a feverish pace.

The reasons for mobile-based Internet use eclipsing PC-based Internet use in the developing world are many, but data show that the affordability of mobile phones and connectivity, the ubiquitous availability of mobile phones and the pervasiveness of mobile networks (and lack of Wi-Fi networks) are among the main reasons for this growing trend. Only one-fourth of those in developing nations have access to fixed broadband, while more than three-quarters of those in developed nations do, according to the United Nations. Meanwhile, most developing countries have at least 75

percent mobile penetration, with the exception of half of Africa's nations, according to the Central Intelligence Agency.

World Newsmedia Network has constructed the Digital Hot Spots map each year since 2006. (See map on next page.) The map shows the nations with the highest penetrations of Internet and mobile users in red, the highest concentrations of mobile but not Internet in purple, and the countries with high penetration of Internet but not mobile in green. Those nations shaded in blue continue to underperform in both mobile and Internet penetrations, according to global Central Intelligence Agency and Internet World Stats data.

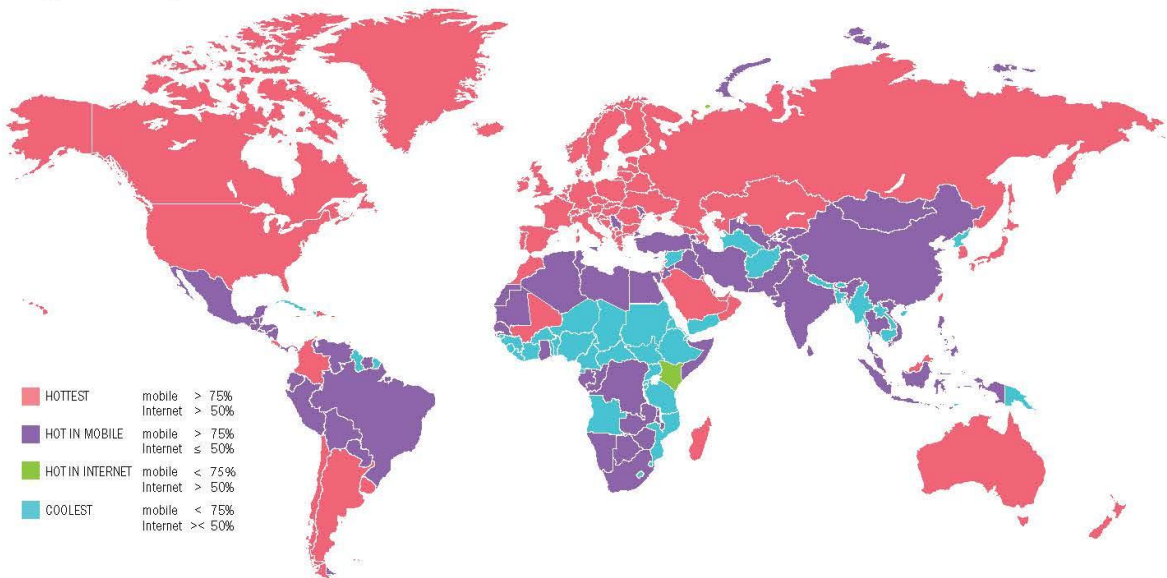
Since 2006, the world has seen dramatic growth in mobile and Internet penetrations. An important change that started in 2011 is the shift toward mobile-focused access of the Internet, particularly in Africa, Latin America and parts of Asia. The main drivers of this shift are inexpensive smartphones and connectivity that are making it possible for people of limited means to access the Internet.

From 2013 to 2014, a variety of countries are graduating from the ranks of unconnected to connected via PC and mobile. The most notable changes are China, India and a host of Latin American and African countries, all of which have moved to mobile hotspots, with more than 75 percent mobile penetrations.

Mobile Internet usage as a percent of all Internet usage is on the ascendancy, particularly in Africa and Asia, according to StatCounter 2014, as reported in Mary Meeker's Internet Trends 2014. Steep increases are seen between May 2013 and May 2014, underscoring how Internet users are changing their browsing behaviour from PCs to mobile, and how developing world users are now able to purchase smartphones so they can browse the Internet and download apps.



## Digital Hot Spots 2014



Source: 2014 World Factbook, Central Intelligence Agency, Internet World Stats 2014  
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### Cheap handsets a driving force

Many mobile handset manufacturers are producing inexpensive smartphones, making it yet easier to access news and information. Some basic feature phones can be cheaply retrofitted to perform smartphone functions. These phones are more rugged and can last longer than smartphones, which are more delicate and computer-like, and also have more battery life than smartphones, a necessary feature for people living in remote villages without electricity.

Regardless, smartphone sales are rising rapidly in developing countries. In 2011, China's Huawei mobile handset manufacturer introduced a US\$80 Android smartphone, Huawei Ideos X1, to the Kenya market, and now claims almost half of the smartphone market share there. Meanwhile, Samsung last year introduced the Galaxy Pocket to Kenya, and is setting its sights on building a profit-making market share.

At the 2012 Mobile World Congress in Barcelona, the CEOs of the world's largest telecoms serving the Developing World, Bharti Airtel, Telefonica Latin America and VimpelCom, reiterated that the "magic" price point for smartphones in the emerging markets is around \$50, and that smartphone manufacturers are working toward that goal. Of the six billion mobile phone subscriptions today, an estimated three quarters are from developing countries.

The mobile Internet could bring billions of people into the connected world, thus levelling the playing field for

the access to essential news and information, according to the McKinsey Institute's Disruptive Technologies report, released in May 2013.

The question is, will these telecoms budge on providing deeply discounted subscription plans for these new, but cash-strapped customers who live on an average of just \$2 per day? At the moment, the fastest increasing mobile subscription charges are happening in developing countries, according to a McKinsey study.

These surging mobile Internet and smartphone trends create a game-changing scenario for media consumers and media companies for a number of reasons:

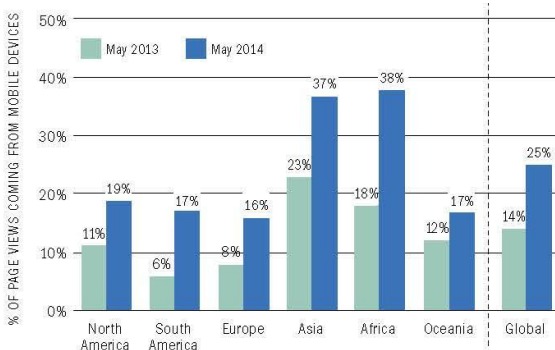
- Level the playing field for the access of news and information for everyone, regardless of socio-economic status, in the developing world, and to improve digital literacy for all
- Improve transparency of government through a wider dissemination of information across societies
- Enable services necessary for daily existence, such as banking and weather information, which are currently either out of reach or difficult to access for many
- Better understand the unique needs for feature phone and smartphone users in the developing world through the analysis of Big Data
- Enable cheap communications through popular chat apps, such as WeChat and WhatsApp

Among the many issues that make developing nations unique in the mobile and mobile Internet landscape are:

- While battery power and life extension would benefit advanced economies in the areas of innovation, like battery-powered cars, battery life improvements for the developing world would have a huge impact on feature phone and smartphone sales and usership. For those living in remote villages without electricity, battery power is critical. Smartphone battery life beyond a day is essential. As one example relayed in the report, an entrepreneur in a small village in Senegal would collect all of the villagers' phones, bring them to a faraway village with electricity, and return the phones in the morning, charged. Improved battery life would be a game changer, affecting the entire mobile phone landscape.

### Mobile Internet usage as a % of Web usage

May 2013 vs. May 2014, by region



Source: Deloitte, May 2014, as reported by Internet Trends 2014 by Mary Meeker for Kleiner Perkins Caufield & Byers  
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- Infrastructure is needed to enable the Internet and mobile economy, including reliable electricity supply, roads to allow postal delivery, and fixed or mobile Internet connectivity including 3G, 4G, WiMAX, satellite, cable and dial-up.
- Secure servers or cloud solutions are needed for data storage and processing.
- Internet stakeholders, including businesses, governments and individuals are dedicated to raising digital literacy, cutting costs to access the Internet, and developing content in the national language, according to McKinsey.
- Promote business-to-business and business-to-consumer e-commerce and the online payment and delivery infrastructures to support them.
- Encourage entrepreneurship. Examples of this entrepreneurship include the design of new ways to pay online, like mobile payments tied to bank accounts, according to McKinsey. Innovation in parcel delivery has yielded new solutions such as those involving networks of local businesses in the delivery

of products to end users. Examples of digital entrepreneurship in developing countries include:

- Trendyol, a Turkish Internet service with a business model similar to Gilt Groupe, successfully leverages social networking for sales and marketing, has drawn a large number of followers on Facebook and has a large mobile presence.
- Magpi, a Web and mobile phone-based data collection platform often used to collect public health data remotely, has played a critical role in tracking polio monitoring.
- M-Pesa, a rapidly growing innovative service created by Safaricom and owned by Vodafone, and run by Roshan in Afghanistan. M-Pesa originally allowed microfinance borrowers to receive and repay loans conveniently, using a network of mobile airtime resellers. M-Pesa now operates in South Africa, Kenya and other African countries and accounts for 7 percent of Vodafone's total money transfer revenue.

- Governments can have the biggest impact on their citizens' digital literacy by providing e-government services and building stable Internet and mobile networks. These governments can also provide free or inexpensive devices and mobile subscription plans to encourage mobile literacy, especially in the poorest areas. The governments can provide forms for drivers' licenses, tax forms, online education and more.
- The app store model used in developed countries, which requires consumer credit or debit card details, is one that will not work as well in emerging markets due to the lack of banking facilities available to consumers there. According to the Upstream Emerging Markets Mobile Report, 42 percent of those mobile users in Brazil, Nigeria, Saudi Arabia and India prefer to pay for them via their mobile operator. That means it is the mobile operators, not app store owners, that have the advantage when developing apps and content. This opens up opportunities for mobile operators like Latin America's Telefónica, which is launching an open platform with Firefox OS. Android will dominate low-end devices in developing countries for now, but Firefox, Samsung's Tizen and/or Nokia's budget Windows devices might take over.
- Mobile Internet consumption has changed the way society, business and economies operate. Mobile Internet not only vastly changes patterns of information consumption, but also creates major opportunities for entrepreneurs, new products and services, drives economic growth or productivity, and much more.

A variety of facts make the developing world mobile landscape vastly different from the developed world. For example, China and India account for the majority



of new mobile connections, and in developing countries mobile saturation hasn't yet hit and is still experiencing double-digit growth, according to UNICEF technologist Erica Kochi.

Also consider:

- The average developing world user buys a device for a few month's salary, and sustains the mobile connection with about 10 percent of her income.
- 70 percent of all handset shipments are feature phones, mostly going to developing nations, especially in low income or rural areas.
- The limitations caused by these low-tech phones have inspired creative adaptations. For example, many farmers in rural areas in Africa and Asia use SMS services to find out the daily prices of agricultural commodities. This information allows them to improve their bargaining position when taking their goods to market, and also allows them to switch between end markets.
- Another successful example in this space is UNICEF's RapidSMS initiative, a scalable SMS-based open-source framework for dynamic data collection, logistics coordination and communication. For example, in Ghana, a local entrepreneur uses RapidSMS to monitor the sales of cook stoves around the country.
- In many countries where the majority of people have no bank, mobile airtime has become another form of currency. Imagine you need to get a small amount of money to your sister who lives in a village that's a 10 hour drive away. The easiest way for you to do that is to buy some airtime, but instead of topping up your own prepaid mobile service you top up hers. For a small fee, she can now go and cash out this airtime with an agent that sells airtime, according to UNICEF. In San Francisco you may pay a cab driver with a credit card, but in Nairobi, you may send him some air time.
- The Nokia 1100 series is the most popular phone in the world. It is dust proof, water resistant, has a simple menu system, few separate parts and features a flashlight. Spare parts for simple Nokias are easy to find at local repair shops across the developing world. The Nokias potentially have battery life for a week.
- There is a demand for apps, especially banking, weather, chat, social and market information, but for these apps to take off, it's crucial they use as little bandwidth as possible. A popular Android feature is the data usage screen, which allows the user to set limits for data usage and makes it clear how much data has been used.
- Demand for full-featured, but much cheaper smartphones. China's most popular search engine, Baidu, sells smartphones made by Lenovo. Its latest handset is the LePhone A586, which has a 4.5-inch screen, runs Android 4—including Baidu's own cloud features, apps, voice search and even voice unlock—and costs just £100/US\$153. That's about four times cheaper than an iPhone. The marketing for LePhone is expected to be successful and then it is expected to be marketed in Brazil, where smartphone penetration is about 14 percent.
- Google is launching a service, called Free Zone, first in the Philippines via local carrier Globe Telecom. The service allows phones with an Internet connection but limited functionality to access, for free, basic Google products like search, email and its social networking service Google+. Users will be able to access websites that are found through Google's search engine. Results that occur outside this parameter will prompt an invitation to subscribe to the mobile operator's data plan. Google Product Manager Abdel Karim Mardini has stated: "It's aimed at the next billion users of the Internet, many of whom will be in emerging markets and encounter the Internet first on a mobile phone, without ever owning a PC."
- Researchers are giving basic phones smartphone-like features, such as fast browsing. Falling smartphone prices also offer promise, but upgraded feature phones will still cost less. For example, mobile phones have been used to diagnose and monitor diseases such as dengue fever and tuberculosis, while mobile phone-based banking service M-Pesa allows customers to move money without having to travel potentially long distances to a bank. Furthermore, mobile phone-based monitoring of the UN's Millennium Development Goals in Bangladesh and the Philippines has given the development community important feedback to help use funding more effectively.
- Many mobile users in the developing world say free voice over IP service apps such as Skype and FaceTime are among the top reasons for owning a smartphone. The savings from free phone calls offsets the high cost of owning a smartphone.

## Mobile usage patterns

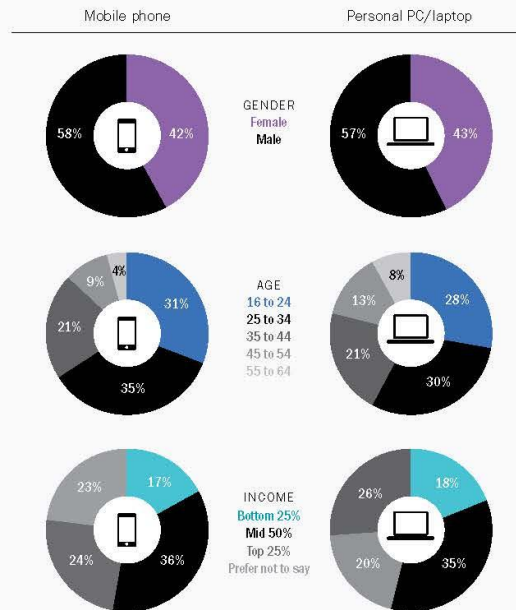
Mobile phones, and in particular, smartphones, continue to proliferate around the world. Publishers and broadcasters can take advantage of the trend in usership by creating mobile content and apps for their users.

Mobile Internet users tend to be male, young and middle-income, according to GlobalWebIndex's Device Report 2014. More specifically, 58 percent of the mobile Internet using population and 57 percent of the PC/laptop Internet-using population are male.

Meanwhile almost one third of the mobile Internet (31 percent) and 28 percent of PC/laptop Internet users are ages 16 to 24, while 35 percent of mobile Internet and 30 percent of the PC/laptop Internet users are 25 to 34. More than one third of mobile and PC/laptop Internet users are in the mid-50 percentile of income earners, while one-fourth of those are in the highest income brackets.

There are many reasons people own more than one mobile phone, particularly to keep business and personal call and phone activity separate, and also to navigate out-of-country usage. Russia, 51 percent; Brazil, 48 percent; Italy, 35 percent; and China, 36 percent, lead in the numbers of respondents owning more than one phone, according to Nielsen Company research.

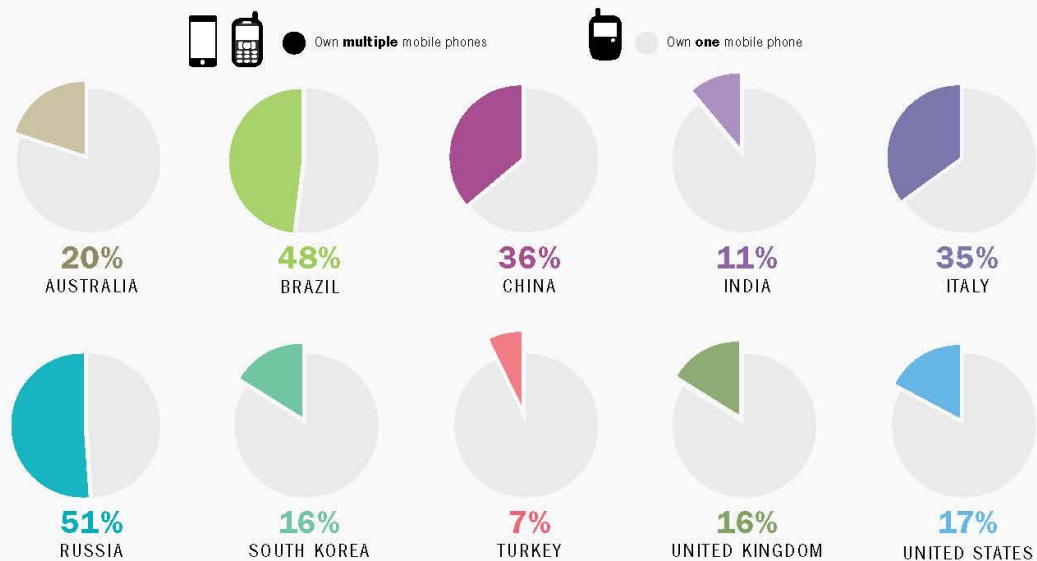
### Global demographics for mobile Internet users % of mobile users 16 to 64



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

### Global, multiple phone ownership

Percentage of mobile phone owners who own more than one mobile phone in 10 selected countries

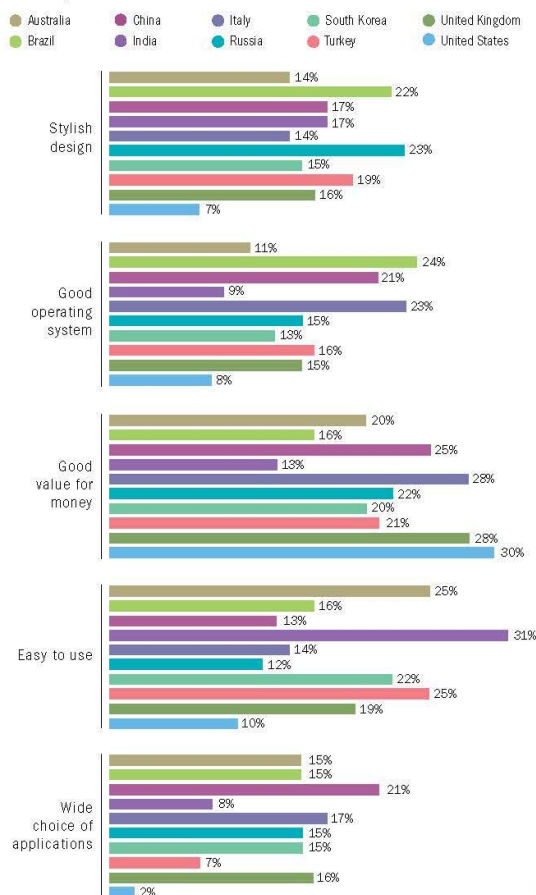


Source: The Nielsen Company, 2013  
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### Top criteria for buying mobile devices

Reasons for purchasing model of mobile phone, in percentage of mobile phone owners in 10 selected countries



Source: The Nielsen Company, 2013  
© World Newsmedia Network 2014

The top reasons to buy mobile devices are good value for money, especially in China, India, the United Kingdom, the United States and Russia. A stylish design is particularly important in Brazil, Russia and Turkey, while the ease of use is key for Australia, India, South Korea, United Kingdom and Turkey. A good operating system is particularly key for Brazil, China and Italy.

When it comes to mobile phone usage globally, South Korea is in the lead, with a 99 percent penetration rate of mobile phones. This is followed by Russia, 98 percent; the United Kingdom, 97 percent; Italy, 97 percent; the United States, 94 percent; China, 89 percent; Australia, 86 percent; Brazil, 84 percent; and India, 81 percent, according to 2013 Nielsen Company research.

The Nielsen Company also looked at mobile phone

ownership based on device type, including smartphones, feature phones and multimedia phones.

The highest penetrations for smartphones is in South Korea, 67 percent, followed by China, 66 percent; Australia, 65 percent; Italy, 62 percent; and the United Kingdom, 61 percent. The highest penetration of feature phones (basic mobile phones), is in India, 80 percent; Turkey, 61 percent; Russia, 51 percent; and Brazil, 44 percent. By comparison, the smartphone penetrations in these four countries are 10 percent, 19 percent, 37 percent and 36 percent, respectively.

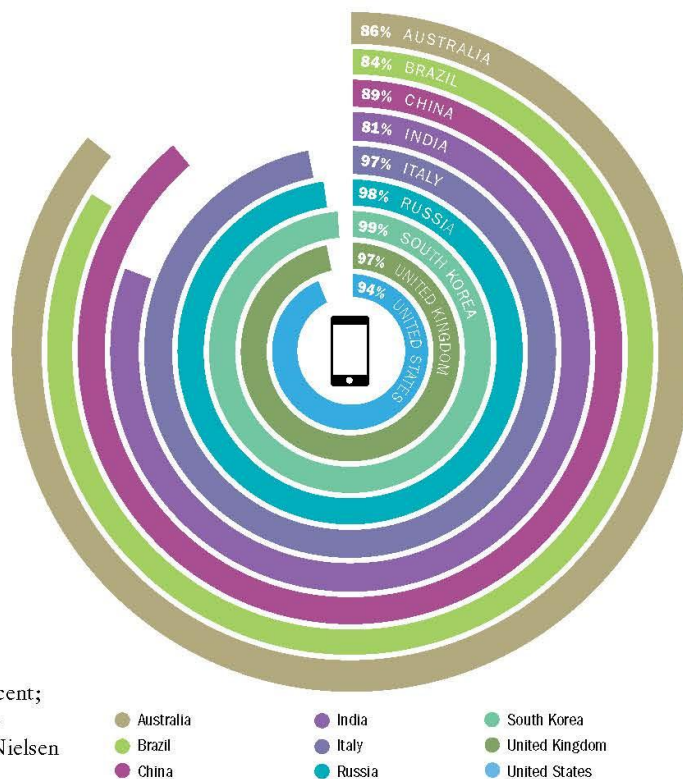
Multimedia phones are diminishing now that cheap smartphones are flooding the market. Twenty-one percent of Brazilian and 20 percent of Turkish users own multimedia phones, according to the Nielsen Company's 2013 research.

The Nielsen Company's mobile research in 2013 identified the demographics of smartphone and feature phone users in each of the 10 countries they studied.

- In Australia, smartphone owners tended to be younger, between the ages of 16 and 34, and split almost evenly between men and women. Feature

### Global mobile phone usership

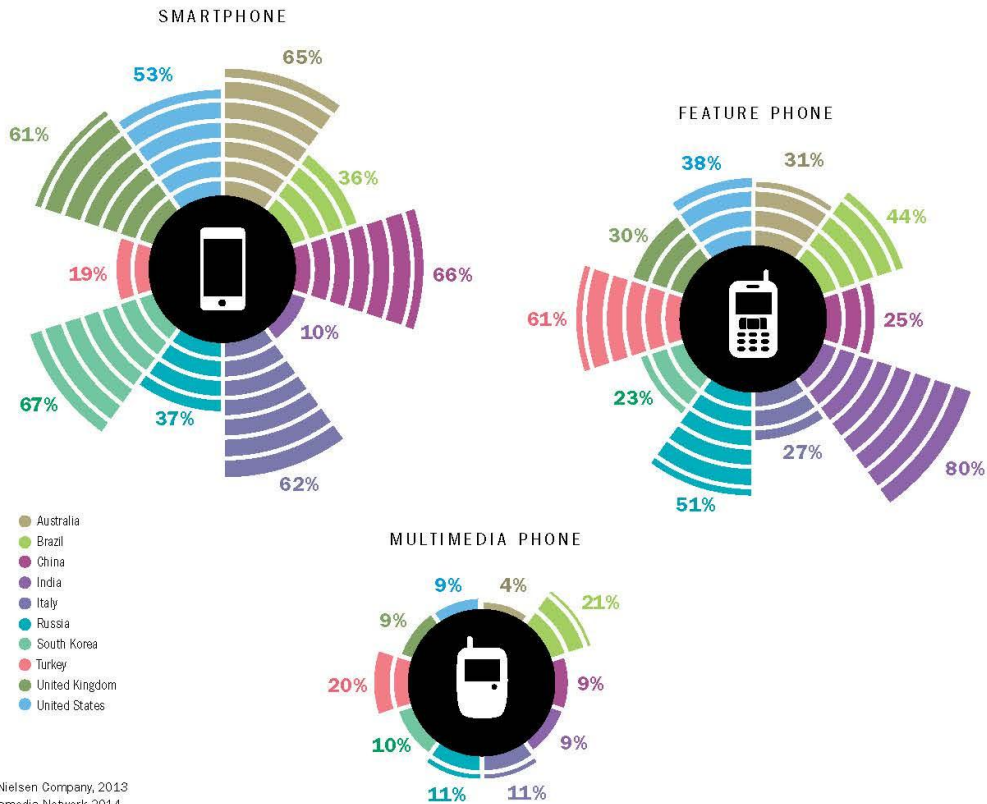
Percentage of mobile phone users 16+ in each of 9 countries



Source: The Nielsen Company, 2013  
© World Newsmedia Network 2014

## Ownership of mobile phone models

Percentage of mobile phone owners, by device type, in 10 countries



Source: The Nielsen Company, 2013  
© World Newsmedia Network 2014

phone users tended to be over 45.

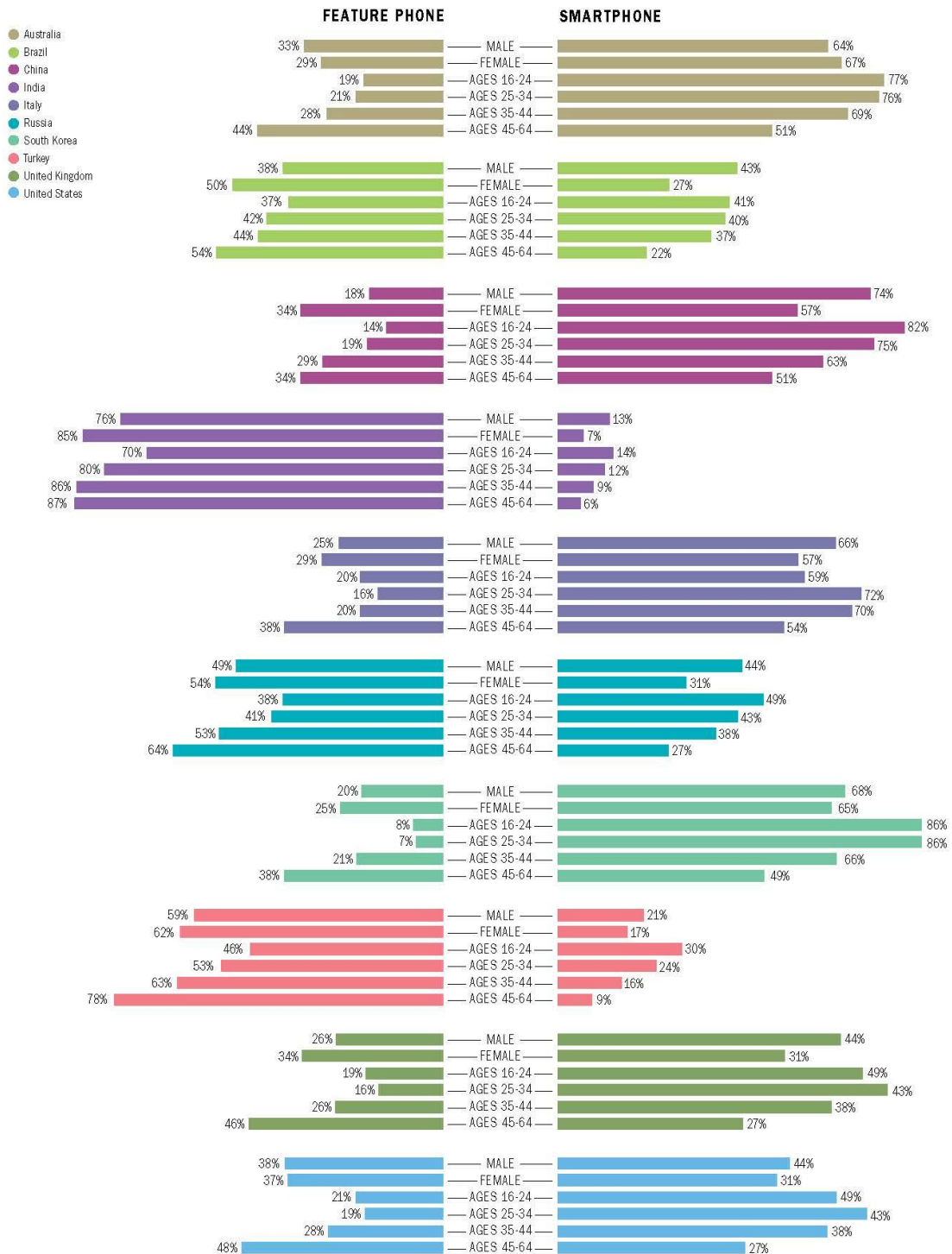
- In Brazil, smartphone users were overwhelmingly male, 43 percent, versus 27 percent female, and between 16- to 44-years-old. Feature phone users tended to be female, and over 45-years-old.
- In China, smartphone users tend to be male, 76 percent male versus 57 percent female, and younger, between the ages of 16 and 34. The relatively small percentage of feature phone users tend to be female, and skew older.
- In India, the vast majority of mobile users are feature phone users, who tend to be female and older. Only 12 percent of the mobile phone users are male, while 7 percent are female.
- In Italy, smartphone ownership skews higher among men, 65 percent vs. 57 percent; and skews younger, 25-to 44-years-old. Meanwhile, feature phones tend to be owned by those ages 45 to 64.
- In Russia, smartphone owners tend to be male, 44 percent vs. 31 percent female, and younger, 16-to 34-years-old. Feature phone ownership skews slightly female and are overwhelmingly devices owned by

those 45 and older.

- In South Korea, smartphone ownership is well matched between male and female, 68 percent and 65 percent, respectively; and skews younger, with 86 percent of those 16 to 34 owning a smartphone. Only one-fourth to one-fifth of the population owns a feature phone, and tend to be those older than 45-years-old.
- In Turkey, feature phones are the dominant mobile phone, with 59 percent of males and 62 percent of females owning one, and 78 percent of those 45 and over owning one. Meanwhile, smartphone owners tend to be male, 21 percent, and between 16 and 24, 30 percent.
- In the United Kingdom, 67 percent of males and 54 percent of females own a smartphone, especially those 16-to 34-years-old. Less than one-third of the population owns a feature phone, except for those over 45, who represent 46 percent.
- In the United States, 55 percent of male and 53 percent of females own a smartphone, most notably, those who are 16-to 34-years-old. Forty-eight percent of those over 45 own a feature phone.

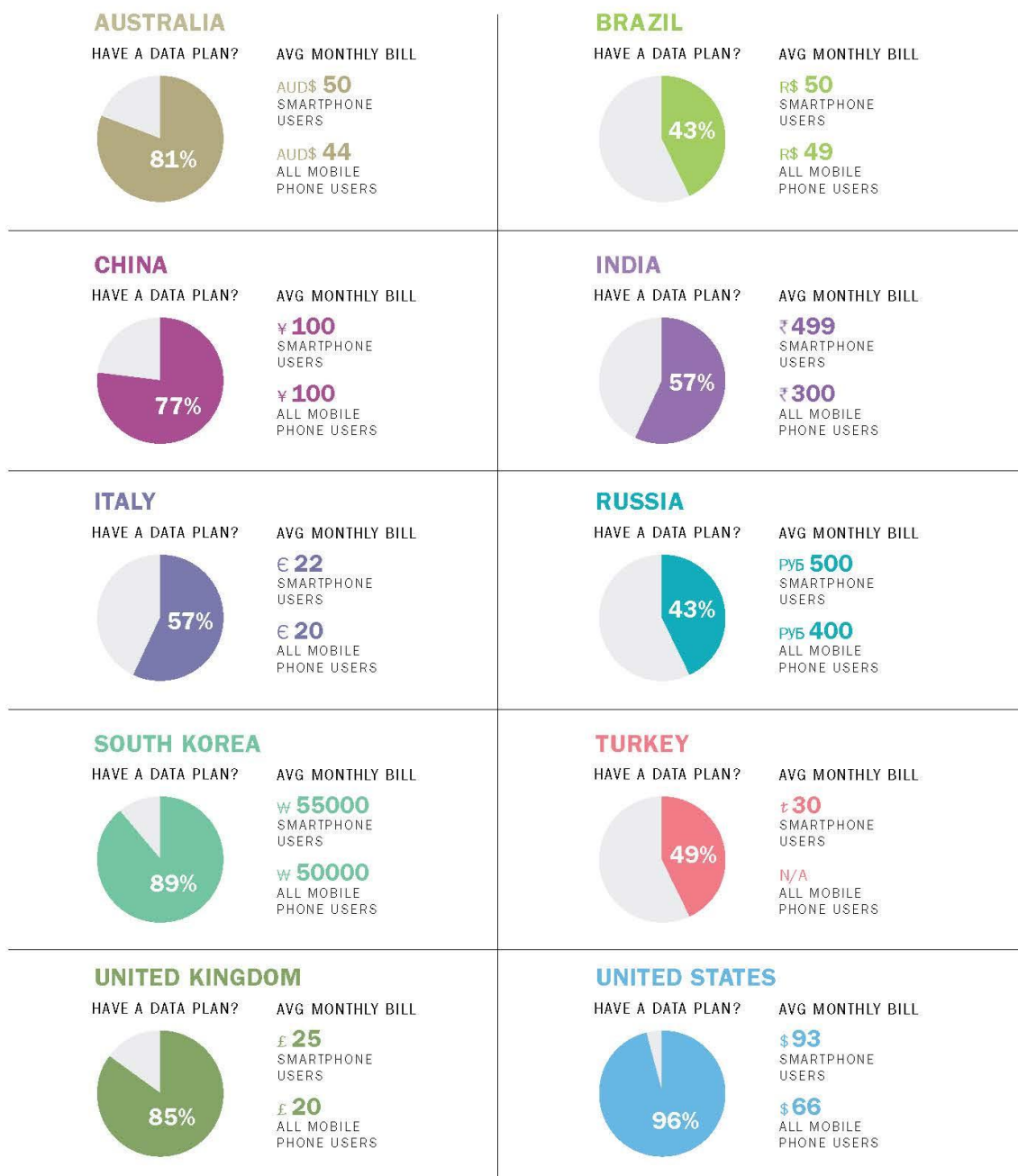
## Demographics of mobile phone model owners

Percentage of mobile phone owners of each model in each of 10 countries



## Global mobile phone service costs

Percentage of mobile phone owners who have data plans, and how much they pay for their phone services, on average, in 10 selected countries



Source: The Nielsen Company, 2013  
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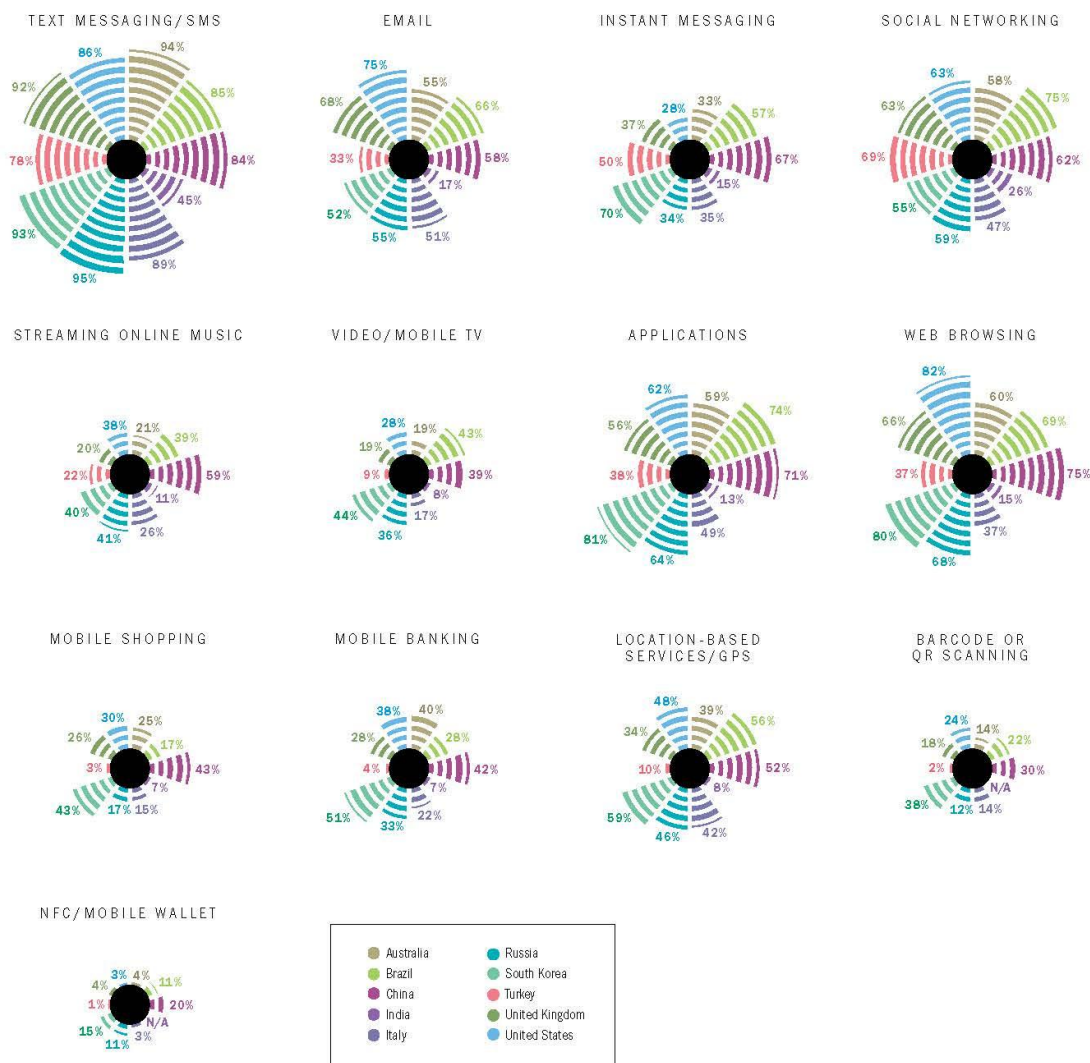
Mobile operators in every country offer a variety of usage plans to mobile customers. In the United States, the United Kingdom, South Korea and China,

for example, “all you can eat” data plans are readily available. In Russia, Turkey, Italy, Brazil and India, these plans are either not as available, or are prohibitively



## Global smartphone activities

Percentage of mobile phone owners who perform the following activities on their mobile phone in 10 selected countries



Source: The Nielsen Company, 2013  
© World Newsmedia Network 2014

expensive for many customers. The unlimited data plans are driving huge amounts of data usage in these countries, thus driving publishers to create more data-rich, multimedia content and apps to be downloaded by customers.

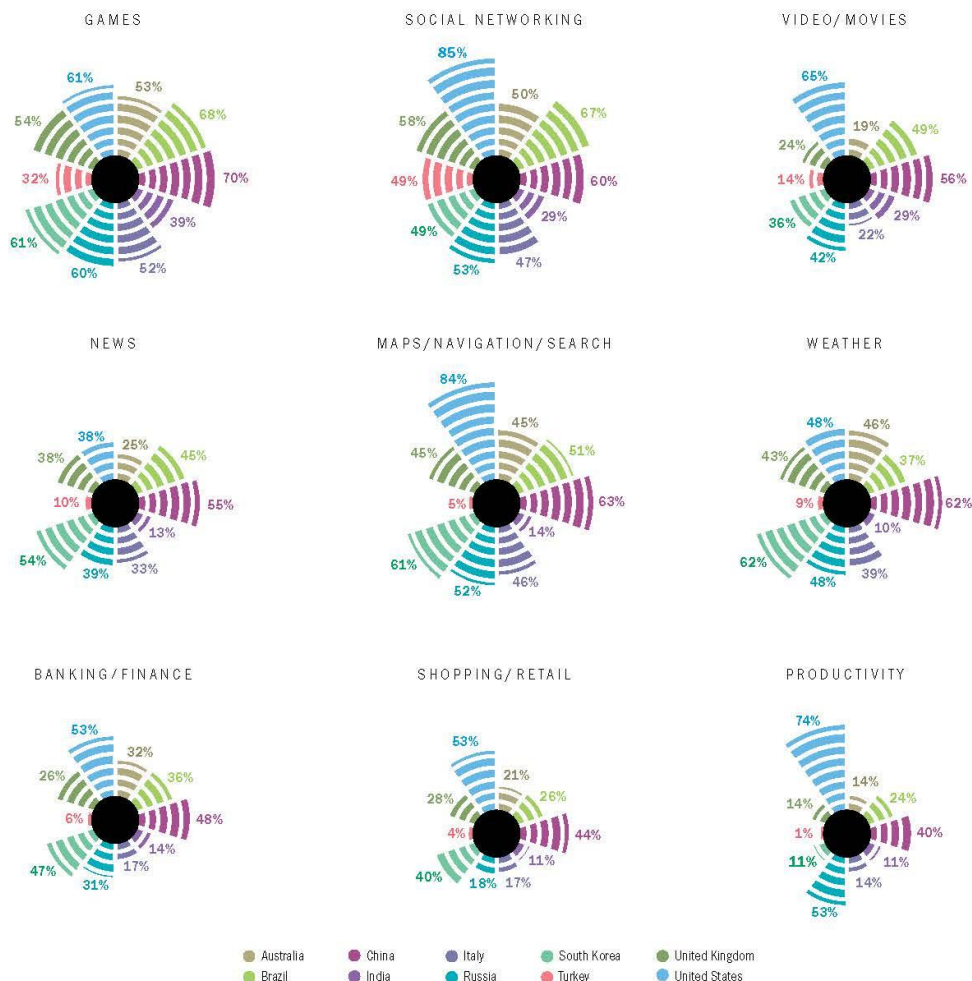
According to Nielsen's mobile research, the most popular smartphone activities in the world are text messaging, social networking, Web browsing, applications, instant messaging and location-based services/GPS. These activities are less popular in some

countries, such as India and Turkey, where the data plans needed to access these services may be prohibitive for many users.

Some of these activities are popular because they are more convenient or are native to the mobile platform, such as mobile banking, location-based services, applications and text messaging. However, some activities, such as social media, are an increasingly popular activity on mobile phones, having surpassed the percentage of users on PCs.

## Global smartphone apps

Percentage of mobile phone owners who use the following apps on their mobile phone in 10 selected countries



Source: The Nielsen Company, 2013  
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The most popular smartphone apps in the world are social media, gaming, video/movies, maps/navigation and weather. These apps are particularly popular in the United States, followed by China, South Korea and Russia.

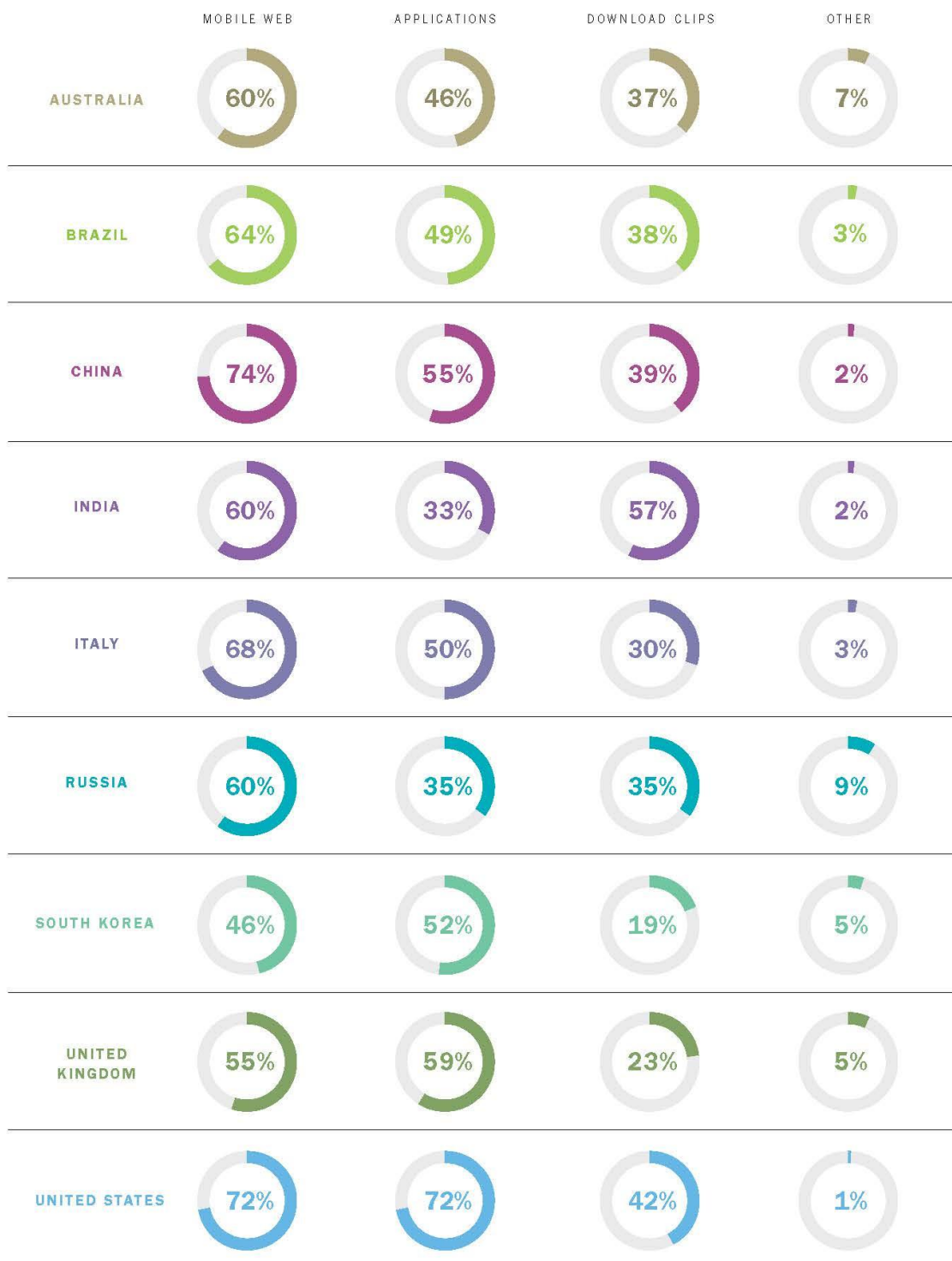
Video watching is the fastest growing digital activity overall and on smartphones. Video watching on the mobile Web is most popular in China and the United States, with 74 percent and 72 percent engaging in this activity. Video watching on apps in the United States is highest in the world, with 72 percent of

mobile owners engaging, followed by 59 percent in the United Kingdom and 55 percent in China. Fifty-seven percent of mobile owners in the India download video clips, followed by 42 percent in the United States and 39 percent in China.

Meanwhile, banking, shopping and productivity apps are most popular in the U.S., followed by China and South Korea. News and weather apps are most popular in China and South Korea, while maps and navigation apps are most popular in the U.S., followed by China, South Korea and Russia.

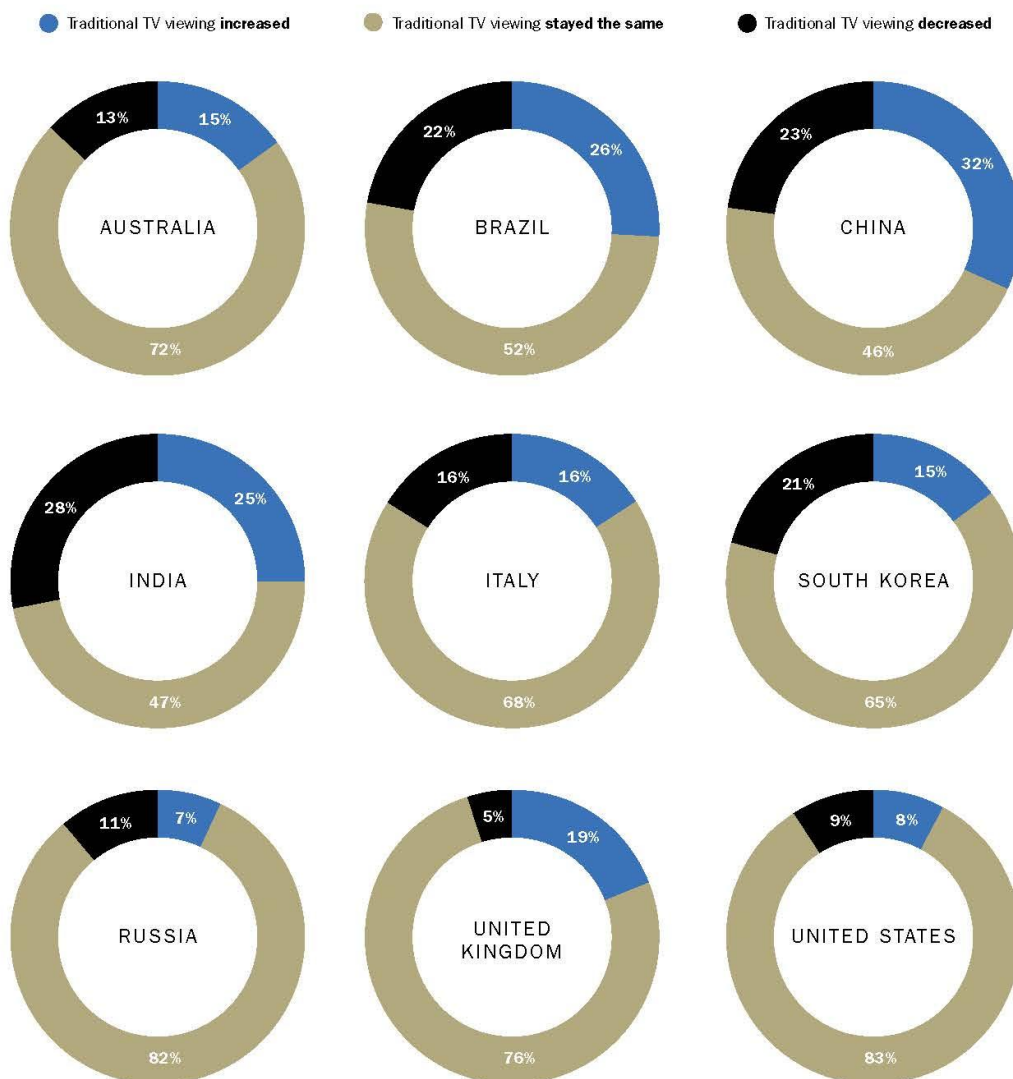
## Global mobile video watching

Percentage of video consumers who watch video on the following platforms in 9 selected countries



## Impact of mobile video on TV viewing

Percentage of mobile video viewers who said TV viewing increased, decreased or stayed the same



Source: The Nielsen Company, 2013  
© World Newsmedia Network 2014

Particularly in the developed world, mobile video viewing is growing new audiences, while it tends to cannibalise some TV-watching audiences in the developing world, according to a Nielsen study in 2013. The development of mobile video content signals opportunities for media companies around the world, especially in the developed world.

Nielsen analysed how much impact mobile video watching had on television viewing in each of the nine countries studied, and found that in the developed

world, mobile video watching had little impact on TV watching, and that in the developing world, mobile video is poised to replace some of mobile owners' video-viewing habits. For example, while half of the respondents in China, Brazil and India said their TV video viewing has stayed the same, about one-fourth has caused TV viewing to decrease, and one-fourth has caused TV viewing to increase. Meanwhile, three-fourths to four-fifths of TV viewing habits have remained the same in the United States, United Kingdom, Russia, Australia and South Korea.

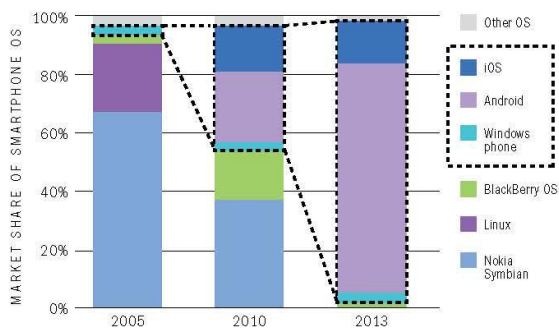


## Mobile devices and operating systems

Gartner Group and IDC research show the seismic changes in the smartphone operating system landscape in the years from 2005 to 2010, and then from 2010 to 2013. In 2005, Nokia's Symbian operating system ruled the roost, with a 67 percent market share. By 2010, Symbian commanded only a 40 percent share, overtaken

### Global smartphone operating system market share

Number of units shipped in 2005, 2010 and 2013

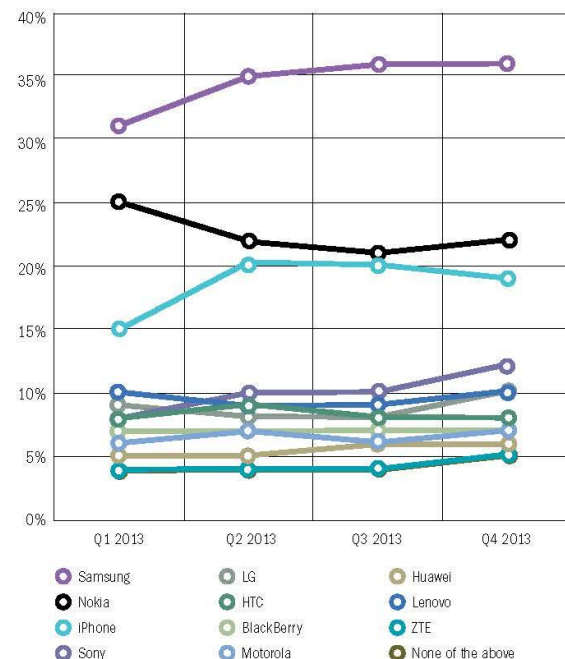


Source: Deloitte, May 2014, as reported by Internet Trends 2014 by Mary Meeker for Kleiner Perkins Caufield & Byers

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### Top mobile handsets in 2013

% of mobile users 16 to 64 owning phones by the following brands



Source: GlobalWebIndex, 2014  
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by newcomers Apple iOS and Google's Android, and incumbent, BlackBerry OS. By 2013, Android had nearly monopolised the market with an 80 percent share, while iOS maintained less than a 20 percent share.

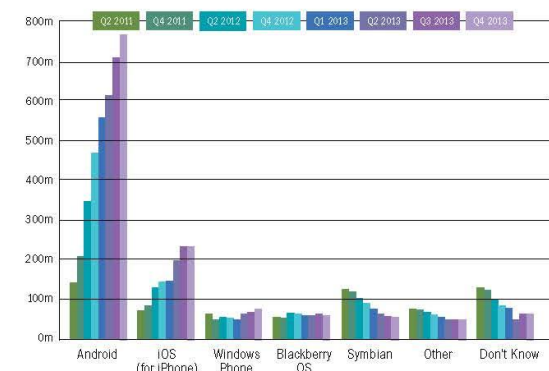
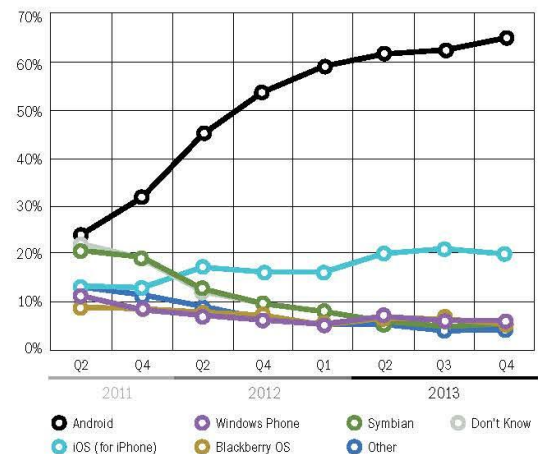
The top mobile handsets owned by those ages 16 to 64 around the world are models made by Samsung, Nokia and iPhone, according to GlobalWebIndex's Device Report 2014. The penetration of Samsung handsets has grown 5 percentage points during the four quarters of 2013, from a 31 percent market share to a 36 percent market share.

Meanwhile, the penetration of Nokia handsets declined from 25 percent to 22 percent, and the iPhone's share spiked from 20 percent to almost 25 percent. Sony came in a distant but notable fourth place, growing its share from 8 percent to 12 percent.

Android adoption has surged as the de facto mobile operating system, growing from a 25 percent market

### Mobile operating system adoption

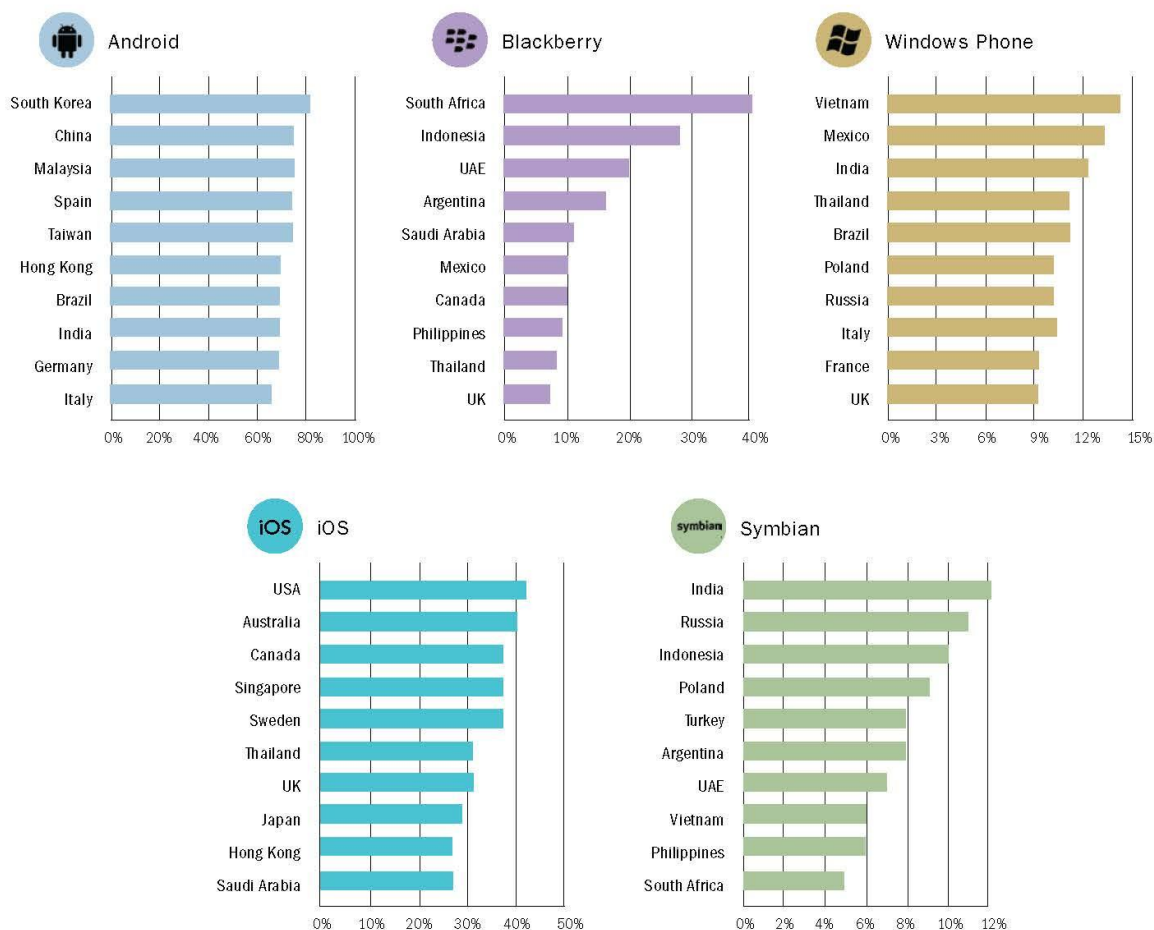
% of global mobile Internet users, top; and in millions of users, 2011-2013, bottom



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

## Top global markets for mobile operating systems

% of mobile users 16 to 64 using each operating system, by country



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

share in Q2 2011 to 65 percent penetration in Q4 2013. iOS for iPhone lags far behind in second place, growing its share from 13 percent to 20 percent during the same time frame. All other mobile operating systems' market shares are in decline, according to the GWI's report. Symbian OS, used mainly in India, Russia and Indonesia, has declined in global market share from 21 percent to about 5 percent, for example.

Some operating systems are popular in some countries and not others. For example, Apple iPhone iOS is most popular in the United States, commanding a 41 percent market share, followed by Australia, 39 percent; Canada, Sweden and Singapore, 38 percent; Thailand and the United Kingdom, 31 percent; and Japan, 28 percent.

Meanwhile, Android is most popular in South Korea,

commanding an 80 percent market share, followed by China, Malaysia and Spain, 76 percent; and Taiwan, 75 percent. The troubled Blackberry operating system is most popular in South Africa, with a 40 percent share, followed distantly by Indonesia with a 28 percent share; and the UAE with a 20 percent share. The Windows Phone has less than 13 percent share in countries including Vietnam, Mexico and India.

The penetration of platforms in individual countries should drive publishers and broadcasters to prioritise the development of mobile Internet content and apps for the most popular platforms first, and then secondary platforms.

For example, publishers in India should consider developing content for Android, Symbian and Windows phones, while U.S. publishers should plan to prioritise Apple iOS and Android platforms.

## Tablet usage patterns

When tablets were first introduced to the world in 2010, early adopters tended to be wealthy, educated and middle-aged. In the past four years of double-digit tablet sales worldwide, tablets are becoming ubiquitous devices on which to access digital content. The device has now reached the mass market across income, gender, education and generational categories, around the world.

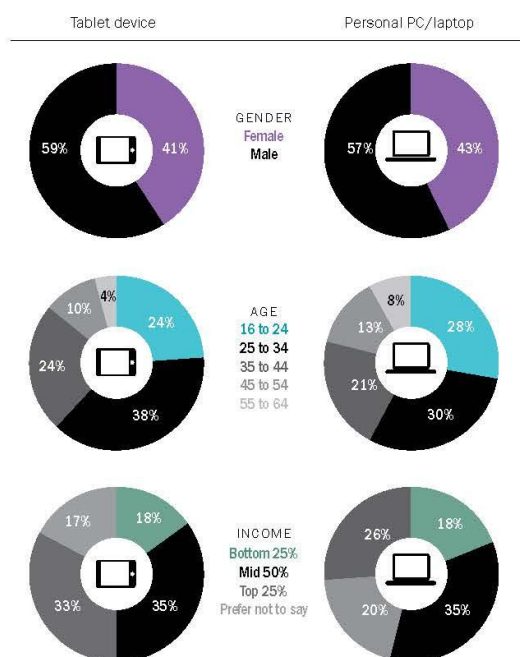
Tablet users tend to be male, under 34-years-old, and high income. Of tablet Internet users, 59 percent are male, while 57 percent of PC/laptop Internet users are male, according to the GWI study. Almost two-thirds of tablet Internet users are under 34-years-old (62 percent), while 58 percent of PC/laptop Internet users are.

Tablet Internet users are represented well across all incomes, especially those in the top 25 percent income bracket, with 33 percent of tablet Internet users, compared to only 20 percent for laptop/PC Internet users. The largest age group for both tablet and personal PC/tablet Internet users the middle 50 percent of income earners, represented by 35 percent of each category.

Mobile phones continue to rule for access to the

### Global demographics for tablet users

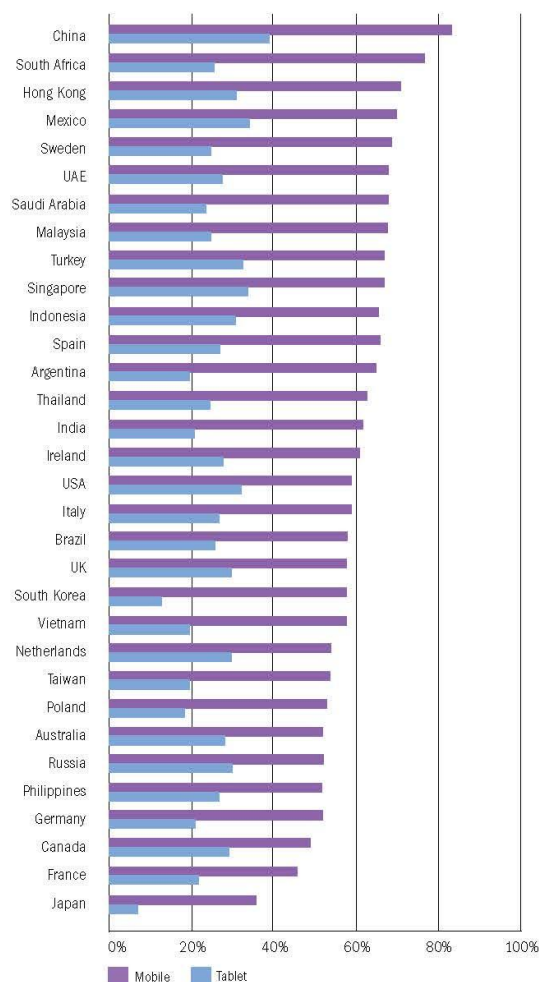
% of mobile users 16 to 64



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

## Mobile and tablet Internet access, by country

% of Internet users 16 to 64 accessing Internet via each device



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

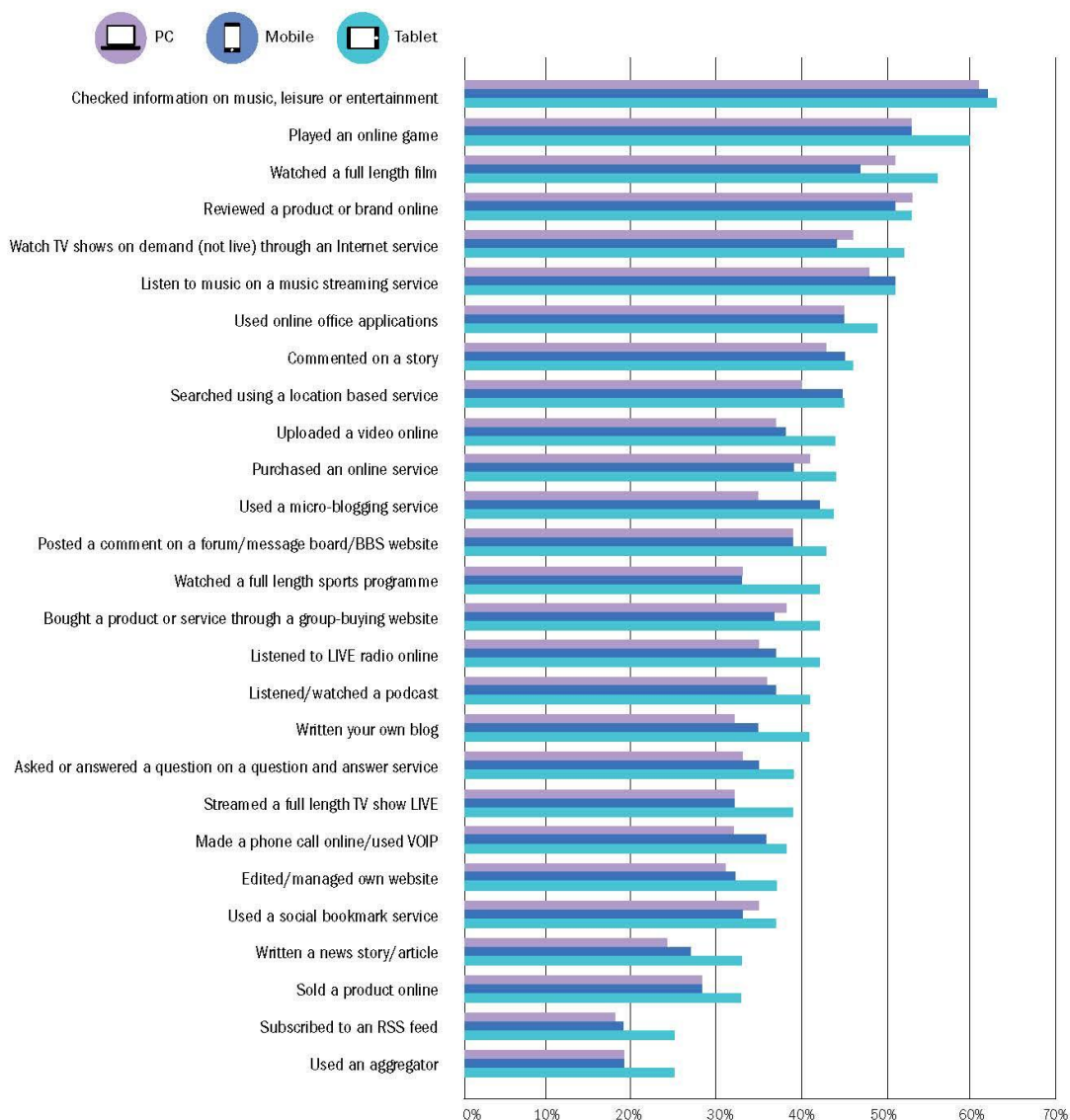
Internet, compared to tablet access. However, some countries studied by GlobalWebIndex in 2014 have high penetrations of tablet access to the Internet, and are growing in the double digits.

For example, in China, more than 80 percent of adult Internet users access the Web via mobile, while almost half as many do so on their tablets. Almost half as many tablet users access the Internet via tablet than those who access via mobile in Mexico, Singapore, the United States, the United Kingdom and the Netherlands.

However, some countries studied by GlobalWebIndex in 2014 have high penetrations of tablet access to the Internet, such as China, Singapore, Turkey, United States and United Kingdom. These countries with high penetrations of tablet access continue to grow tablet usage in the double digits, year-over-year.

## Content access, by device

% of global app users 16 to 64



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

Tablet publishers have advantages over mobile and PC when it comes to utility. According to GWI, tablets outperformed other digital devices in almost all usage categories, particularly video watching; audio activities like radio, music and podcasts; e-commerce research and purchases; and social media activities.

Tablet, mobile and PC (desktop and laptop) users have preferences about which device to use for the type of content they are accessing. According to the GWI device study, mobiles lead in the access of webmail, weather, social networking, uploading photos, managing social

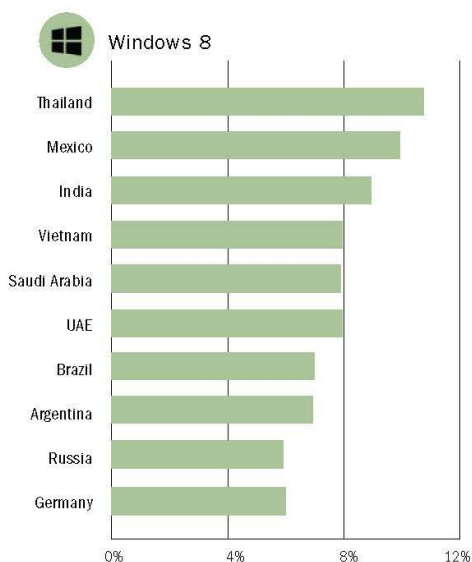
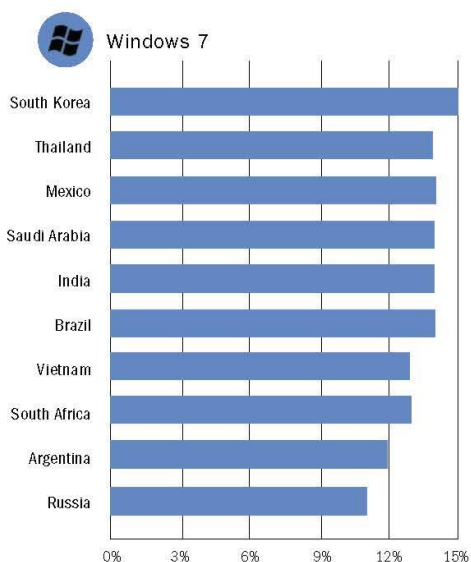
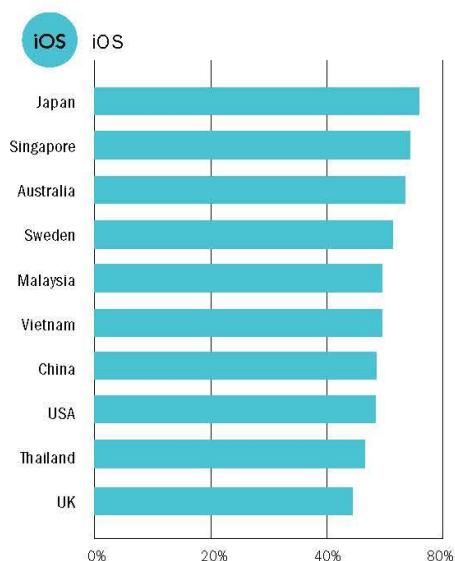
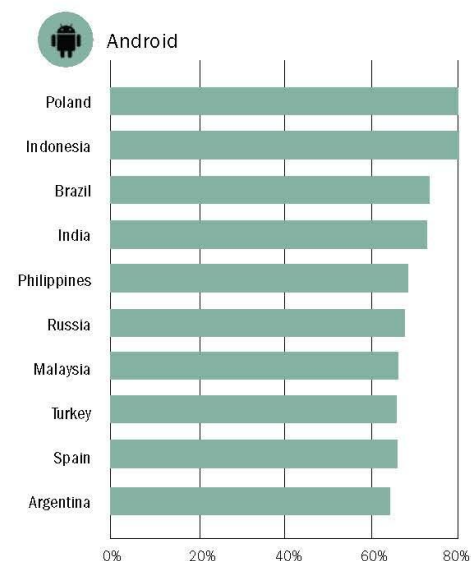
network profiles and using instant messenger.

Content activities where PCs and laptops lead are watching video clips, searching for products and services to buy, purchasing products online and using Internet banking. Content activities where tablets lead are checking information on music, leisure and entertainment, playing online games, watching full-length films, reviewing products or brands online, watching TV shows on demand, listening to music, using office online applications and commenting on a story.



## Top global markets for tablet operating systems

% of Internet users 16 to 64, by country



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

Some countries tend to embrace some tablet operating systems more than others. Countries with the highest penetrations of Android tablets include Poland and Indonesia, 80 percent each; Brazil and India, 72 percent each; the Philippines, 68 percent; and Russia, 67 percent. Countries with the highest penetrations of iOS tablets including Japan, 55 percent; Singapore, 53 percent; and Australia, 51 percent. Countries with the highest penetrations of Windows 8 tablets include Thailand, Mexico, India, Vietnam and Saudi Arabia, all with

penetrations of less than 10 percent.

These differences in tablet operating systems in each country make it necessary for publishers to develop content for Internet and apps that are made for these operating systems. For example, publishers in Brazil should prioritise tablet content development on Android and Windows platforms, while Malaysian publishers should prioritise development on Android and Apple iOS platforms.

## Apps usage patterns

The most popular apps downloaded and used by global app users ages 16 to 64 are by far game apps, followed by a variety of entertainment, music and social networking apps, according to the GlobalWebIndex's Device Report 2014. Respondents ages 16 to 64 were asked which apps they downloaded and used in the last month. The study was conducted in 2013.

The most popular downloaded apps were games, music, entertainment, utilities, social networks, books, news, banking/financial services, travel, health and fitness, VOIP (such as Skype), location-based services,

TV, lifestyle and sports. The most popular apps actually used were games, social networks, music, entertainment, utilities, news, banking/financial services, books, travel, lifestyle, health and fitness and VOIP apps.

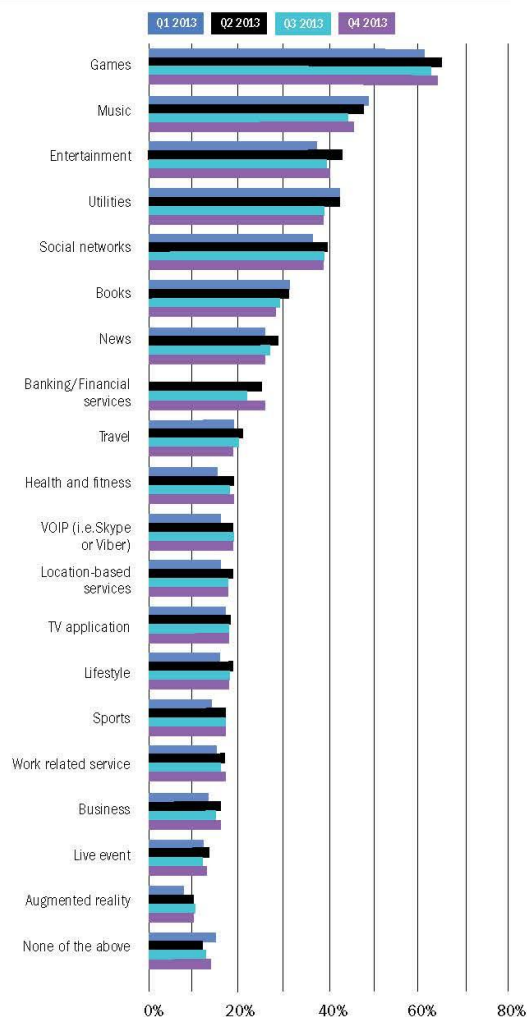
Regardless of whether users access by mobile or tablet website or app, the top four websites are Google, YouTube, Facebook and Yahoo!, according to the GWI device study.

However, messaging apps such as Tencent, Baidu and Sina are among the most popular websites and apps for mobile following the Top 4, mostly because of their high usage in China.

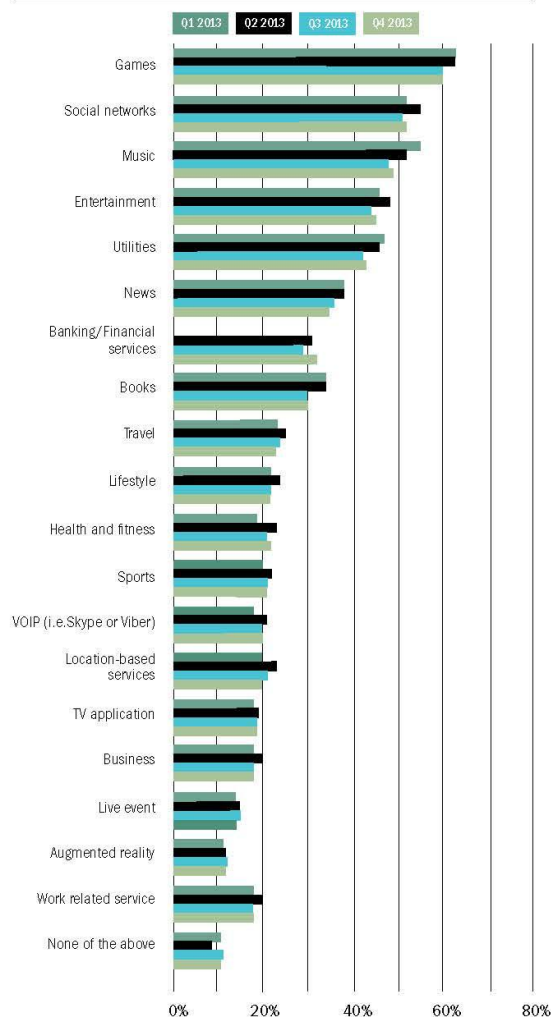
### Apps downloaded and used in the past month, 2013

% of global app users 16 to 64

APPS DOWNLOADED

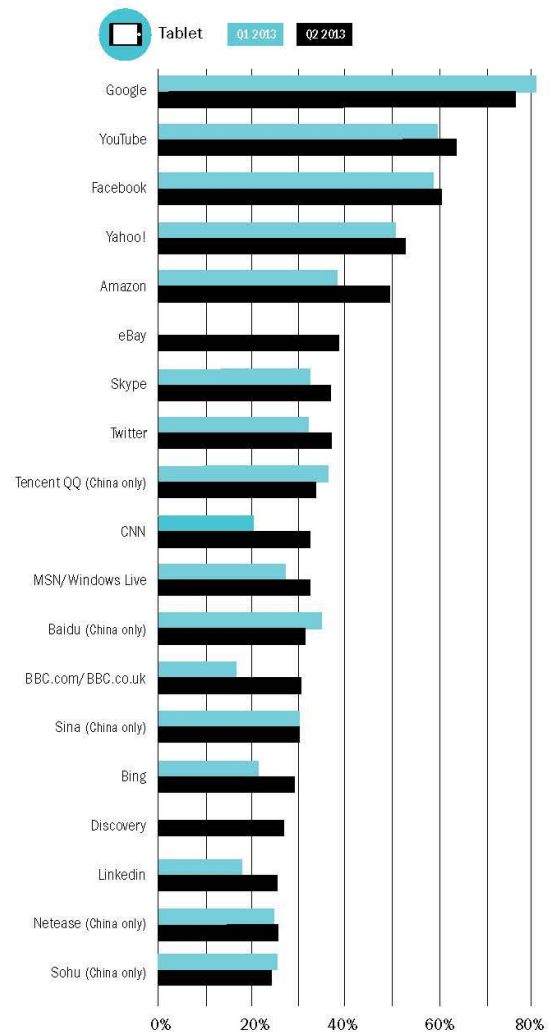
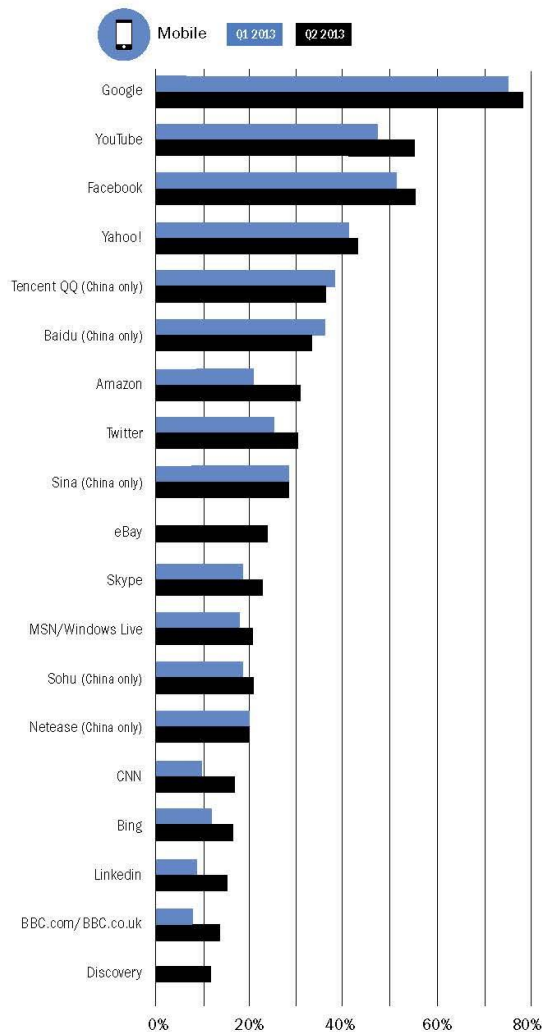


APPS USED



## Top websites and apps for mobile, tablet

% of global app users 16 to 64



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

Meanwhile, the most popular tablet websites and apps after the Top 4 include Amazon, eBay, Skype and Twitter, underscoring the ease of use for shopping and communicating via the tablet device.

Both the percentage of penetration for each website or app, and the percentage of growth from Q1 to Q3 in 2013 is growing in most cases, according to GWI. Usage penetrations for mobile and tablets are growing overall, and in particular, the most accessed sites.

Google alone commands 80 percent of the world's usage population, for example. However, the growth of usage in 2013 is especially pronounced on the top six mobile apps and sites: Google, YouTube, Yahoo!, Facebook, Baidu and TenCent.

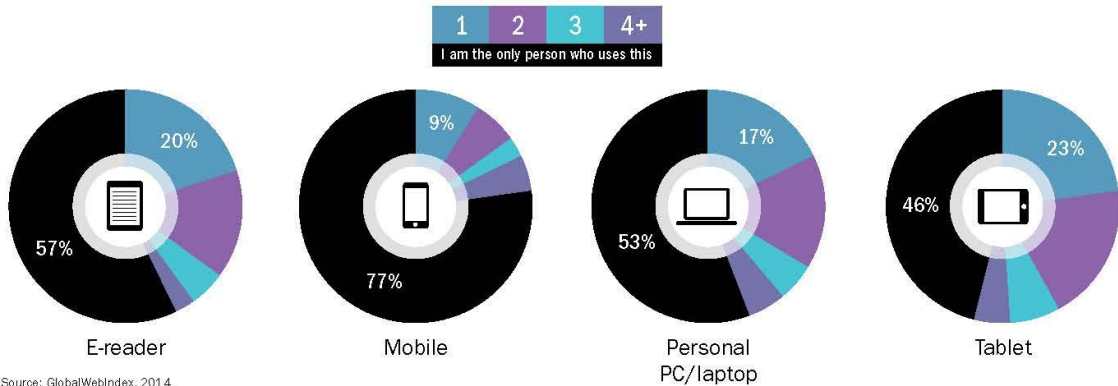
As for tablet apps and Internet access, usage in 2013 grew on most of the top sites, including YouTube, Facebook, Yahoo!, Amazon, Skype, Twitter, CNN, Windows Live, BBC and Bing.

Chat apps are experiencing the fastest usage growth. According to the GWI report, a variety of chat apps grew in double digits from Q3 2013 to Q4 2013. The fastest growing chat app is WeChat, 62 percent; kik Messenger, 58 percent; Kakao Talk, 48 percent; Line, 37 percent; WhatsApp, 23 percent; and Yahoo! Messenger, 18 percent.

Other popular, fast-growing apps are Snapchat, 56 percent; Amazon, 50 percent; Vine, 40 percent; Yelp, 34 percent; eBay, 28 percent; and Shazam, 27 percent.

## Connected device sharing, by device

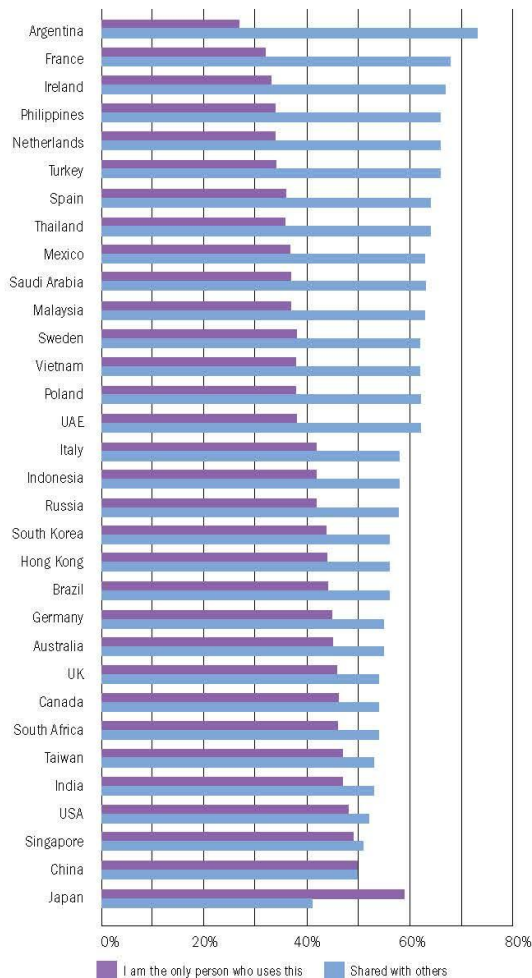
% of global Internet users 16 to 64 sharing Internet-connected device



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

## Tablet sharing, by country

% of global Internet users 16 to 64 sharing tablets, by country



Source: GlobalWebIndex, 2014  
© World Newsmedia Network 2014

Tablet sharing behaviours are different in each country. Tablet owners in Argentina, France, Ireland, the Philippines, the Netherlands, Turkey, Spain, Thailand and Mexico tend to share their devices, while those tablet owners in Japan, China, Singapore, the United States, Taiwan, India, South Africa, Canada, the United Kingdom and Australia tend to be singular users of their devices.

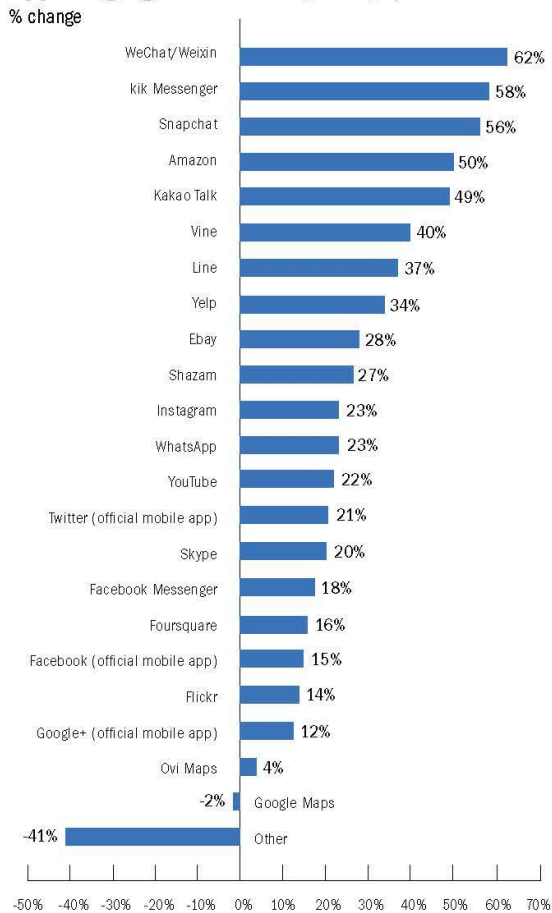
Of all connected devices, mobile phones are the least likely to be shared, while tablets are the most likely, according to GlobalWebIndex's study on digital device usership in 2014. Seventy-seven percent of mobile users surveyed said they are the only person to use their mobile device, while 46 percent of tablet users said so. Twenty-three percent of tablet users reported that one other person uses the device, while another quarter of the respondents reported that two other people use the device.

Meanwhile, 53 percent of PC desktop and laptop owners said they are the only users of their devices, while 17 percent said one other person uses the device and another one-fifth said two others use the device. Fifty-seven percent of e-reader users are singular users, while 20 percent have another user and about a fifth have two other users.

What are the implications for device sharing? Internet Protocol (IP) addresses are assigned to each individual device, and publishers use these IP addresses to study trends in usage patterns, and then target individual users with marketing and content suggestions. When multiple users access the devices, it makes it harder to identify individual user behaviours.



### App usage growth from Q3 to Q4, 2013



Source: GlobalWebIndex, 2014  
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Smartphone and tablet use for news has been on the rise between 2013 and 2014, according to the Reuters Institute's Digital News Report 2014. The largest increases in mobile access for news are happening in Brazil, 12 percent; Italy, 11 percent; Germany, 10 percent; and France, Denmark and Spain, 9 percent each. Meanwhile, the largest increases for tablet access of news is happening in Denmark, up 9 percent; Spain, 8 percent; the United Kingdom and France, 7 percent each; and Brazil, 6 percent.

Apps are an increasingly popular way to access news on smartphones and tablets. According to the Reuters Institute's Digital News Report 2014, the percentage of weekly news apps access has grown fastest in Denmark between 2013 and 2014, with a 19 percent increase, followed by the UK, 16 percent; United States, 15 percent; Spain, 13 percent; and Germany, 12 percent.

In the United Kingdom, the percentage of weekly news app usage on smartphones and tablets depends on age.

### Smartphone and tablet use for news

Percentage of weekly news access on smartphones and tablets, by country

SMARTPHONES

	US	UK	GER	FR	DEN	FIN	SP	IT	BRA	JPN
2014	31%	33%	32%	35%	52%	41%	44%	36%	35%	26%
2013	28%	29%	22%	24%	43%	--	35%	25%	23%	19%
Change	+3%	+4%	+10%	+9%	+9%	N/A	+9%	+11%	+12%	+7%

TABLETS

	US	UK	GER	FR	DEN	FIN	SP	IT	BRA	JPN
2014	19%	23%	15%	18%	34%	23%	21%	18%	20%	10%
2013	16%	16%	10%	11%	25%	--	13%	14%	14%	6%
Change	+3%	+7%	+5%	+7%	+9%	N/A	+8%	+2%	+6%	+4%

Source: Reuters Institute Digital News Report 2014  
© World Newsmedia Network 2014

News apps are most used on smartphones by the younger set, and most used on tablets by the 45-to 54-year-old age group, according to the Reuters report.

While most studies focus on the particularly of how much and who is consuming videos, the Reuters Institute's digital study sought to find out why non-users are not interested in consuming videos. The majority of these respondents said they would prefer to read articles than watch videos and would rather watch videos on a larger screen.

Fifty-two percent of Finnish respondents said they would

### News apps usage on smartphones and tablets

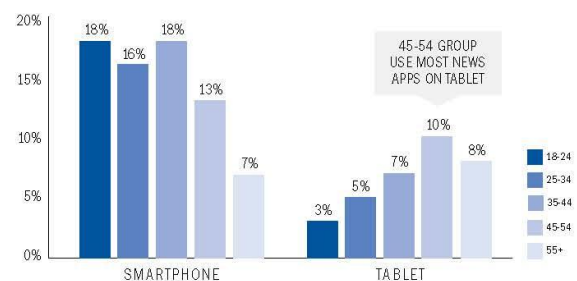
Percentage of weekly news apps accessed on smartphones and tablets, by country

COUNTRY	NEWS APPS
DENMARK	19%
UK	16%
US	15%
SPAIN	13%
GERMANY	12%

Source: Reuters Institute Digital News Report 2014  
© World Newsmedia Network 2014

### News apps usage on smartphones and tablets, by age

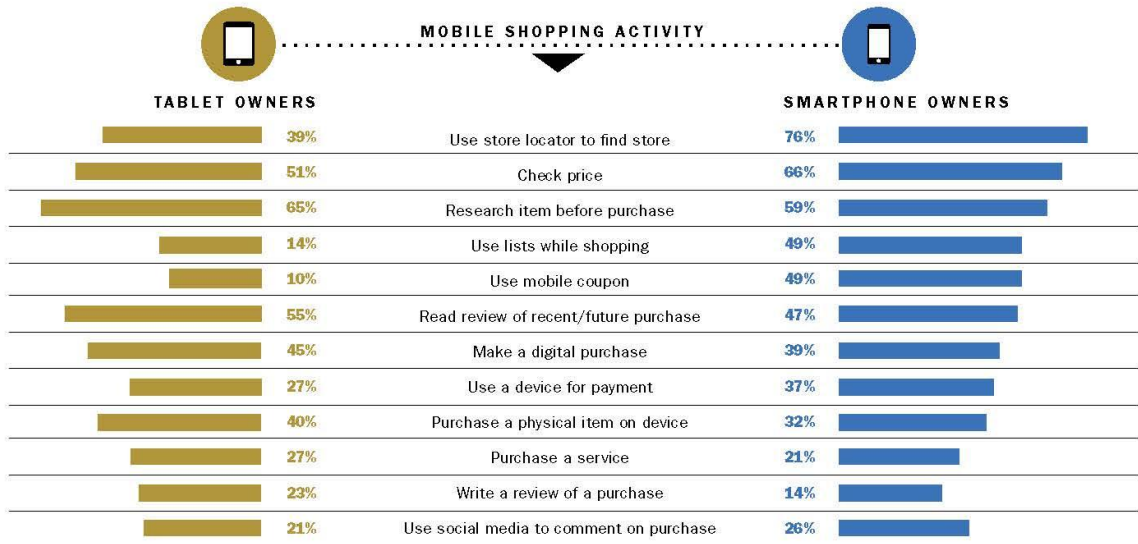
Percentage of weekly news apps accessed on smartphones and tablets in the UK



Source: Reuters Institute Digital News Report 2014  
© World Newsmedia Network 2014

## U.S. mobile shopping activities

Percentage of smartphone or tablet users who are using their connected devices for shopping activities



Source: The Nielsen Company, 2013  
© World Newsmedia Network 2014

prefer to read articles than watch videos, followed by 46 percent of German respondents and 39 percent of U.S. respondents. Between 23 percent and 29 percent of respondents from the United Kingdom, Spain, Germany, Finland and the United States prefer video on a larger screen.

Arts and culture is the most popular genre of video as a general interest, and also actual video consumed in the genre, with 57 percent of those from the United Kingdom, United States, Germany, Spain and Finland, on average, saying they consume video in this category.

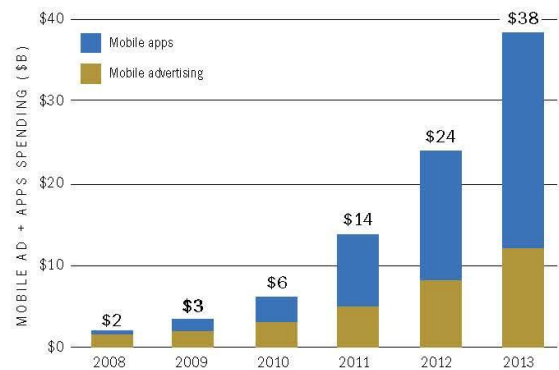
Other popular categories of video consumed by respondents from the five countries are fun/weird news, 48 percent; science and technology, 38 percent; news about the economy, 30 percent; entertainment and celebrity, 27 percent; business and financial, 27 percent; and sports news, 27 percent.

Mobile advertising is rising steeply, led by in-app advertising, according to Strategy Analytics and PricewaterhouseCoopers research, as reported in Mary Meeker's report, Internet Trends 2014. While the growth is phenomenal, only a handful of advertising networks are making the lion's share of the mobile advertising revenue, led by Google with about 75 percent share.

The Nielsen Company studied online shopping behaviour, comparing the ways people research and buy using smartphones and tablets in the United States. The study found that twice as many smartphone owners

## Global mobile advertising vs mobile app advertising, 2008-2013

In billions of US\$



Source: Deloitte, May 2014, as reported by Internet Trends 2014 by Mary Meeker for Kleiner Perkins Caufield & Byers  
© World Newsmedia Network 2014

use the store locator on the smartphone (76 percent) compared to tablet owners, and slightly more tablet owners (65 percent) research items before purchase than smartphone owners (59 percent).

Slightly more tablet owners make a digital purchase on tablets (48 percent) than on smartphones (39 percent) and also to purchase a service online, 27 percent on tablets versus 21 percent on a smartphone. Smartphone users are more likely to use lists while shopping, as well as use mobile coupons and use devices for payment, according to Nielsen.