



# Sharing Japan

*New paths to success in the sharing economy*

IBM Institute for Business Value

## Executive Report

Japan



## *In this report*

*New opportunities for growth and value creation that the sharing economy can provide in Japan.*

*Examples of innovative organizations in Japan and elsewhere that are successfully leveraging the principles of the sharing economy.*

*Step-by-step approaches Japanese businesses, government organizations and others can adopt to accelerate the benefits of the sharing economy.*

## **How IBM Digital Strategy and iX can help**

We are renegades and realists who blend strategy, technology and creativity to tackle every client challenge. We imagine the businesses that will shape tomorrow's world and help our clients make them real. We uncover insights from data that others can't see, and deliver progressive ideas through the use of IBM Design Thinking. We ground every strategy with a focus on delivering the ultimate experience – for customers, for employees, for shareholders. Everything we do drives measurable impact at scale. For more information, visit [ibm.com/ibmix](http://ibm.com/ibmix).

---

## A new route to success

*The Japanese economy is at a crossroads. With erratic international markets and equivocal domestic growth, Japanese businesses once again face challenges. Without a major paradigm shift, many Japanese organizations face the risk that business headwinds could become a sustained economic storm. However, paradigms do change. New business ecosystems are emerging, founded on the operating principles of platform business models and the “sharing economy.” These ecosystems provide new pathways to transform how customers engage, and redefine ways in which products are produced, priced and marketed.*

---

Buffeted by dramatic regional and global economic forces, Japan finds itself at the leading edge of a demographic tide – one that is likely to cause domestic markets to remain static at best, or perhaps even to shift into a phase of sustained contraction. In the face of these challenges, Japan’s businesses need to fundamentally rethink how they engage markets and customers. A new strategic blueprint is required.

Emerging business ecosystems and platforms based on the rapidly evolving principles of the sharing economy provide a new direction forward (see the sidebar, “What is the sharing economy?”). By embracing the sharing economy, Japanese businesses might not only avert the most dramatic impacts of unfavorable demographics, but actively chart a new route toward sustained economic success.

### What is the sharing economy?

The sharing economy can be defined as an economic or socio-economic ecosystem built around activities in which ownership or use of human, physical and intellectual resources are distributed across more than one individual or entity. It might include shared creation, production, distribution, trade or consumption of goods or services by different people or organizations.



## 54%

of Japanese executives surveyed recognize that participation in the sharing economy offers significant benefits to Japanese consumers



## But 35%

of Japanese executives say that the sharing economy is merely a passing fad



## Only 13%

say that the sharing economy impacts their industry or organization

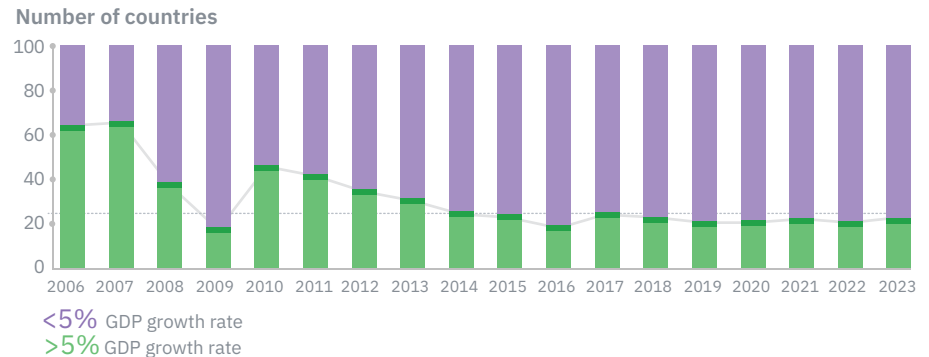
## Facing an uncertain future

Japanese business titans have had a hard row to hoe for the past two decades. Confronted by regional instability, intensifying global competition and slow growth at home, many of the top Japanese business leaders have ceded market leadership to competitors. As a consequence, between the years 2000 and 2015, the number of Global Fortune 500 businesses headquartered in Japan fell from 107 to 54, a decline of almost 50 percent.<sup>1</sup>

Until recently, international business has been set against a background of growing global markets. However, this trend is beginning to change. The effects of an aging population and other demographic challenges are beginning to also impact Europe, China and other major trading partners of Japan. Growth of other emerging economies, which have given impetus to the success of global business over the past 30 years, is also likely to decline, while global competition is set to further intensify (see Figure 1).<sup>2</sup>

**Figure 1**

*Emerging market economic activity, 2006-2023*

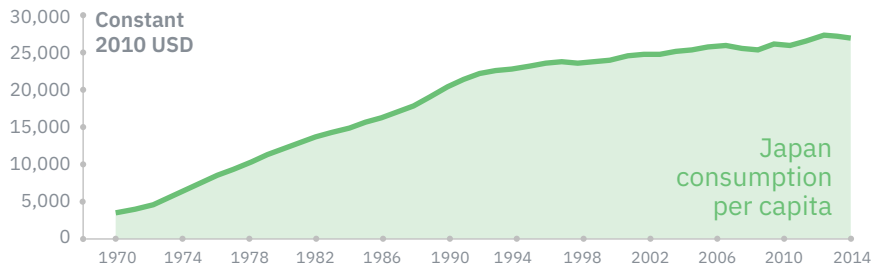


Source: IMF World Economic Outlook Database, 2018.

Japanese businesses seeking growth opportunities in the domestic market are also likely to experience constraints. Consumption per capita in Japan has grown by less than half a percentage point annually in real terms over the past decade.<sup>3</sup> Equally low – or even negative – rates of consumption growth are projected to become commonplace in the future (see Figure 2).<sup>4</sup> The net impact of this confluence of economic and demographic forces paints a challenging picture for even the most dynamic and entrepreneurial Japanese business leaders.

**Figure 2**

*Boom to decline – Japan domestic consumption growth, 1970-2014*



Source: World Bank Database.

## Defining a new approach

With companies approaching markets with the same products, channels and messages as in the past, it should be unsurprising that customers are responding in the same ways. If Japan's businesses are to grow, a new paradigm is required. The sharing economy provides such a shift. Beyond the initial hype and overpromises, the underlying principles of the sharing economy – combined with platform economics and ecosystems – can help traditional businesses redefine engagement with customers; restructure creation, production and distribution of products and services; and reinvent markets and business models.<sup>5</sup>

Sharing economy principles can provide building blocks for businesses to advance new forms of innovation. In the process, these businesses can better satisfy unmet or emergent customer needs and inject renewed economic vitality, even into staid markets. Benefits to customers and businesses are manifest: new products, services and ownership models rekindling existing – and creating entirely new – demand.

But sharing economy principles can also be applied to other societal challenges in Japan. Low labor-force participation and birthrates, constrained infrastructure and a rapidly aging population, among other issues, can be significantly redressed through creative application of sharing economy principles.

---

*First, the sharing economy can support construction of more efficient marketplaces.*

Unlike traditional markets, digital platforms – on which businesses founded in the sharing economy are typically based – enable real-time matching of demand and supply. So inefficiencies due to poor information or other disconnects between buyers and sellers, for example, are reduced or removed.

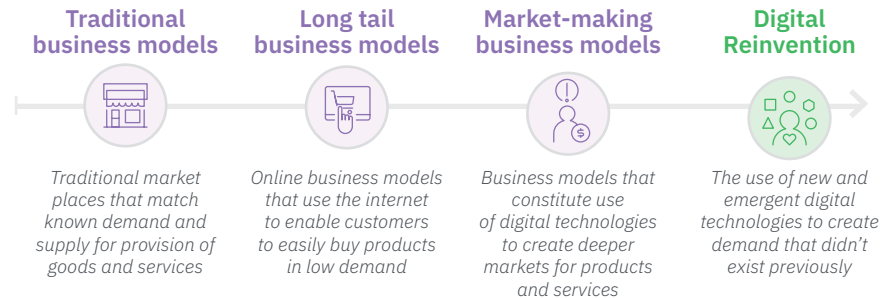
*Second, the sharing economy challenges the traditional role of consumers.* Rather than acting as passive receivers of products and services, consumers can also become producers. A clear example is co-generation of electricity. Historically, electricity was generated at large private or state-owned power stations, transmitted to urban centers and then distributed to individual households.

However, in markets in which households are equipped with solar or other types of renewable generation capability, consumers not only consume, but also contribute electricity to the grid. Such situations are rapidly becoming universal with organizations such as Vandebron, a new energy services company in the Netherlands that connects consumers directly to local power producers. Using a subscription model, Vandebron verifies that supply matches demand and that the selected producer can generate sufficient power to meet consumers' needs.<sup>6</sup>

Third, in the sharing economy, consumption – and for that matter, production – becomes significantly more experience-based. Digitalization enables much greater opportunity to link and match people, and to create and orchestrate a dialog or conversation, which provides the foundation of experience. With this capability, organizations or other parties are able to construct deeper, richer, more engaging experiences through new business models or processes (see Figure 3).

**Figure 3**

*Evolution of digital business models – from bricks and clicks to Digital Reinvention™*



Source: IBM Institute for Business Value analysis.



---

*Fourth, the sharing economy redefines the concept of asset ownership.* With limited spending power and resources, consumers need no longer lock up sizeable investments in assets that they use only infrequently. Instead they can consume shared assets as needed, freeing up capital for other purposes that might provide additional benefits.

*Finally, the sharing economy opens the door to entirely new types of opportunities for monetization.* Rarely used assets become income generators within a sharing economy. For example, lending clothes, bags or jewelry – indeed, lending almost anything – becomes possible.

And with new capabilities comes innovation, enabling opportunities for entrepreneurialism and growth. Numerous entrants are identifying opportunities to help consumers monetize sharing. For example, Turo, Inc., a California-based startup, helps people share their cars when they are not using them; UK-based Rentez-Vous helps people share their clothing; and new businesses such as Transfix, Inc. and Loadsmart, Inc. are looking to optimize trucking loads by more efficiently matching customers with trucks in shared load space.<sup>7</sup>

In summary, by approaching traditional markets through the prism of the sharing economy, Japan's businesses – and consumers – not only can tap into existing unmet demand, but can create new demand in ways they might not previously have considered.

## Hesitating to share

To better understand the impact of the sharing economy on Japan, the IBM Institute for Business Value, in collaboration with Oxford Economics, conducted a survey of 854 Japanese executives across 17 industries, including 50 government leaders (see the Methodology section at the end of this report for more details).

As many as 54 percent of Japanese executives surveyed recognize that participation in the sharing economy can offer significant benefits to Japanese consumers. However, they have little confidence in Japanese consumers' willingness to make the changes necessary to benefit from it.

Fully 55 percent of executives say that Japanese customers are unwilling to share their assets, and only 26 percent say that customers are willing to cede complete asset control. Even more concerning, only 28 percent of executives say that Japanese customers are willing to engage in non-traditional channels, and only 20 percent say that new business models based on the principles of the sharing economy are actually emerging.

One-third of Japanese executives say that the sharing economy is merely a passing fad. And despite leading global automotive companies – such as BMW and Daimler – publicly adjusting the basis of their strategies from traditional manufacturing to experience-centered mobility services, just 14 percent of Japanese automotive industry leaders say that the sharing economy is impacting the Japanese economy to a large or great extent.<sup>8</sup> Similarly, despite the global penetration of peer-to-peer lending and other sharing economy principles across the banking and financial markets industry, only 8 percent of Japanese banking executives say that the sharing economy is having a large or great impact.

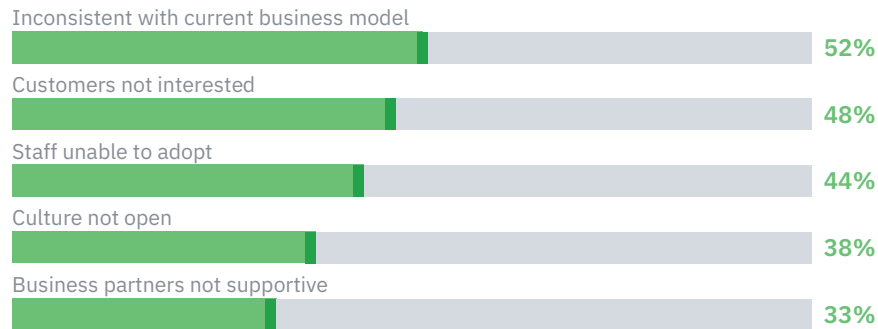
---

Skepticism of the sharing economy among Japanese executives is widespread. Overall, only 10 percent say that sharing activities and business models are impacting the Japanese economy overall, and 13 percent say that they are impacting their industry or organization. The number of executives who say they believe these things will impact their organization over the next three to five years rises slightly to 16 percent.

When asked why sharing economy principles are unlikely to succeed in Japan, executives cited a range of reasons, from inconsistency with established business models to an unwillingness of staff to adapt (see Figure 4).

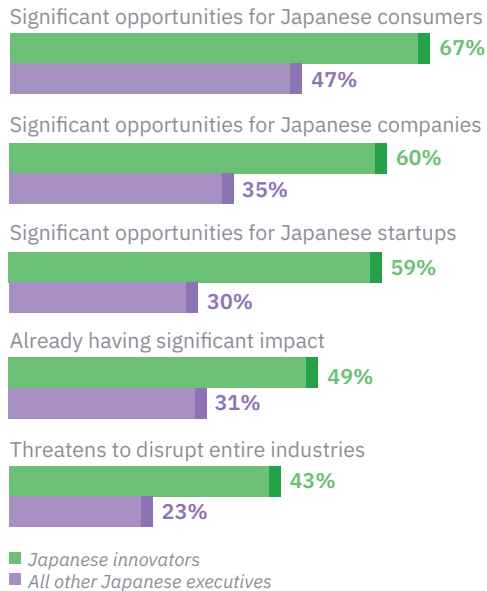
**Figure 4**

*No sharing today, thank you – barriers to sharing economy engagement*



Source: IBM Institute for Business Value analysis.

**Figure 5**  
*What the innovator saw – sharing economy opportunities for Japan*



Source: IBM Institute for Business Value analysis.

## Sharing a vision

When we segmented respondents by the extent of their focus on innovation as a core business activity, however, we saw different patterns. Only 36 percent of respondents rated their organizations as having a high focus on innovation.

These innovators see the impact of the sharing economy on Japan very differently. Sixty-seven percent of innovators say that the sharing economy offers significant benefits to Japanese consumers, and 60 percent indicate it offers significant benefits to Japanese companies – compared to just 47 percent and 35 percent for non-innovators respectively.

And innovators also see the sharing economy creating new opportunities for Japan's startup community. Fifty-nine percent of them say that the sharing economy offers significant benefits to the startup community, almost double that of non-innovators (see Figure 5).

Almost half of the executives from the innovator group indicate that the sharing economy will have a significantly positive impact on the wider Japanese economy, compared to just 20 percent of non-innovators. And innovators also see the sharing economy positively impacting some of Japan's more critical social challenges. Fifty percent said that the sharing economy can help address issues with elderly care, 50 percent said that it can help take on childcare issues, and 46 percent said that it can help redress issues with transportation, compared to 28 percent, 30 percent and 24 percent of non-innovator organizations respectively.

## Share it forward

In the IBM Institute for Business Value study, “Japan ascending: Four steps to reignite growth and vitality in the Japanese economy,” a survey of more than 1,000 Japanese executives revealed six central threats to the country’s economy (see Figure 6).<sup>9</sup> The sharing economy can foster new initiatives and solutions to help Japan address these challenges.

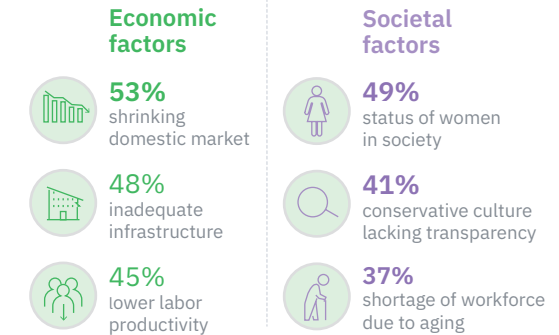
In relation to the shrinking domestic market, the sharing economy can create new possibilities for growth and value creation. For example, New York-based company WeWork Companies Inc. identified a lack of affordable workspace as a critical constraint among startups. To fill the gap, the company created a business model in which entrepreneurs and small businesses can rent shared workspaces. The company has been very successful in building its own business and in supporting entrepreneurs in growing their own.<sup>10</sup>

The sharing economy also promotes better usage of resources and infrastructure. For example, Seattle-based startup Flexe, Inc. has created a warehousing sharing platform with which participating organizations can buy or sell empty warehouse space among themselves.<sup>11</sup>

By providing a platform for discovering talent and building new skills, the sharing economy can help improve labor productivity. San Francisco-based online platform Udemy, Inc., for instance, has built a global marketplace for online learning and teaching. Udemy enables everyday experts to share their skills and experience by building curricula and creating online courses for people who want to expand their experience base and knowledge.<sup>12</sup>

**Figure 6**

*Time to focus – key challenges for the Japanese economy*



*IBM Institute for Business Value survey of 1,000 Japanese executives, 2016.*

The sharing economy is uniquely positioned to help facilitate reentry of women in Japan into the formal workforce by enabling them to engage in employment on their terms. For example, California-based Upwork Global Inc. is a global freelancing platform that built a network of 12 million registered freelancers and 5 million registered clients. Three million jobs are posted annually, allowing individuals outside of full-time or formal employment to engage – or reengage – with the formal economy on a part-time, shared or otherwise fractional basis.<sup>13</sup>

By opening up markets and matching buyers and sellers directly, the sharing economy can dramatically increase transparency and accountability. For example, Paris-based ridesharing company BlaBlaCar provides a two-way rating mechanism, whereby riders can rate the car owner and vice versa.<sup>14</sup>

And finally, where the economics of traditional business might be inconsistent in addressing particular needs of specific populations such as the elderly, the sharing economy can forge new business models and environments that provide otherwise unavailable services with significantly less overhead. For example, Seattle-based Rover.com connects pet owners with pet sitters and dog walkers, and even allows pet owners to discover, book and manage personalized care for their pets while away from home.<sup>15</sup>

---

## Sharing Japan

As with many startups, those relying on the principles of the sharing economy often face delays in achieving profitability.<sup>16</sup> But despite this, sharing economics continue to disrupt traditional business models. And in many areas, sharing-oriented businesses and business models are still expected to grow faster than traditional ones.<sup>17</sup>

Indeed, sharing economy principles are already permeating the Japanese economy. For example, the Sharing City project supports local city governments in revitalizing regional economies and solving social issues. It does so by leveraging sharing economy business models such as ride sharing and space sharing. Fifteen Japanese cities have certified themselves to be sharing cities.<sup>18</sup> These cities are partnering with sharing economy businesses such as Airbnb, a space sharing platform, AsMama Inc., a child rearing platform to help working mothers, and TABICA, a tourism-matching platform, to attract more tourists.<sup>19</sup>

Similarly akippa Inc., an online garage and parking-sharing platform based in Osaka, Japan, is helping improve utilization of and investment in new infrastructure. Established in 2014, akippa is expanding the net supply of available parking spaces by enabling owners of unused spaces to rent them out by the hour or the day. Since starting operations in 2014, akippa has grown to become the third-largest parking provider in Japan.<sup>20</sup>

While some “gig-economy” businesses have struggled elsewhere, in Japan they are playing a critical role in opening avenues for underemployed segments to re-engage with the formal workforce. CrowdWorks Inc., a major freelancing platform in Japan headquartered in Tokyo, has almost one million registered workers and 130,000 clients, including government ministries. The platform has grown by 146 percent per year since September 2013.<sup>21</sup>

In an environment in which birthrates are reaching new lows, Yokohama-based AsMama Inc. has made child-rearing easier by building a platform in which parents can share childcare responsibilities within safe and comfortable online and offline communities.<sup>22</sup> AsMama currently has a user base of more than 36,000 Japanese under seven years old.<sup>23</sup>

And Yamato Transport Co., Ltd. developed a privacy system for delivery of goods purchased on online peer-to-peer marketplaces. The system masks the name and address of both the seller and the buyer. Confidence in the security of users’ personal information is essential: Yamato’s privacy system supported growth in Japan’s largest online marketplace app, Mercari.<sup>24</sup>



---

## Share away: Putting it in motion

Japan's businesses can adopt a four-step approach for better utilizing the principles of the sharing economy (see Figure 7).

### Step 1: Envision new ways of customer engagement

Recognize that traditional modes of innovation no longer deliver the outcomes or value they once did. Identify and pursue new customer engagement opportunities even as they involve new or alternate business models. Recognize opportunities and pitfalls associated with new and different ways of connecting with customers. Employ design-thinking tools to better understand customers needs, wants and aspirations. Brainstorm new ideas and visualize new scenarios.

#### Figure 7

*Ready to move forward – four steps to a new type of engagement*



Source: IBM Institute for Business Value analysis.

**Step 2: Build a long-term program of many innovations and launches**

Promote continuous reinvention of customer experiences. Involve customers directly in strategic discussions and planning with a view to co-creating new business models, products and services. Invest in capabilities that accelerate your organization's ability to launch new ideas into the market. Use agile development to quickly create pilots and prototypes through rapid testing and calibration.

**Step 3: Rethink organizational culture and better incentivize employees to succeed**

Recognize that sharing initiatives inevitably disrupt traditional organizational structures and lines of business (LoBs). Assemble "skunkworks" teams – small groups that develop and own innovative initiatives, then sell new value propositions to LoBs. And prepare resources based on targeted future environments and scenarios.

**Step 4: Build and promote ecosystem connectivity**

Reassess how your current business environment operates, how partnering occurs and how your people interact with customers. Seek collaborations and partnerships with other complementary organizations that are similarly committed to innovation and exceptionalism. Think beyond your organization, broadening the aperture of possible business and engagement models based on what might be done by bringing together assets, capabilities, people and technologies from across the ecosystem.

The Japanese government can pursue a three-step approach to accelerating benefits from the sharing economy (see Figure 8).

**Step 1: Engage with ecosystem partners to envision new economic opportunities**

Recognize that new technologies and business models are significantly disrupting industries – creating some losers, but also new opportunities for economic growth. Identify and engage with key ecosystem partners – industry and education leaders, entrepreneurs and others – and find ways to remove constraints to economic growth. Identify any potential risks of new business models, and become a partner in advancing new regulatory approaches.

**Step 2: Collaborate in new business model experiments and evaluate impact**

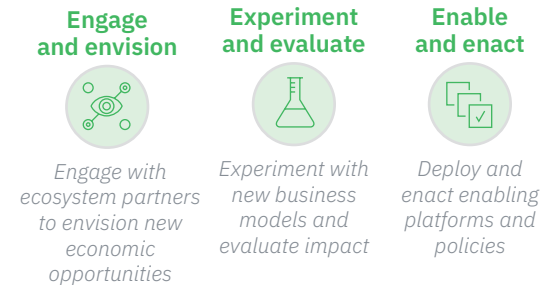
Work with key ecosystem partners to understand and architect new experiments, pilots and other initiatives, and test and optimize potential policies and regulatory approaches.

**Step 3: Support deployment of new sharing economy platforms**

Collaborate with ecosystem partners to enable sharing economy platforms and business models that support economic growth and redress societal challenges. Develop sustainable governance structures that continually assess effectiveness of policies and regulations.

**Figure 8**

*Let's accelerate – three steps to richer innovation*



*Source: IBM Institute for Business Value analysis.*

### Relevance to the 2020 Tokyo Olympics<sup>25</sup>

Application of sharing economy principles can help Tokyo address some of the key challenges associated with the 2020 Olympic Games. Recent experience in Rio de Janeiro provided a proof of concept for ride services, such as Uber and 99, and accommodation sharing services such as Airbnb and Voltem, to help alleviate infrastructure, accommodation and transportation constraints.

To achieve similar benefits in Tokyo, organizing officials can proactively engage with entrepreneurs and traditional businesses to explore opportunities for how sharing economy platforms and business models can help. The city still has time to experiment and pilot systems to evaluate them for viability and feasibility. Government leaders can leverage this opportunity to assess the economic contributions of the sharing economy to the wider Japanese economy and society.

## Is your organization ready for the sharing economy?

- What are the major avenues to growth and expansion that your organization is currently pursuing, and how likely are they to yield the business outcomes you seek?
- How might you begin to apply sharing economy principles to your current business models and customer engagement activities?
- How can you use sharing economy principles to fundamentally rethink how your business engages with other organizations and customers to build entirely new market opportunities?

## Authors

Kazuaki Ikeda is Vice President and leader of the IBM Strategy and Analytics practice area in Japan. He is a visiting lecturer for the Faculty of Science and Engineering at Waseda University, where he teaches business strategy. Kazuaki Ikeda can be reached at [K7IKEDA@jp.ibm.com](mailto:K7IKEDA@jp.ibm.com).

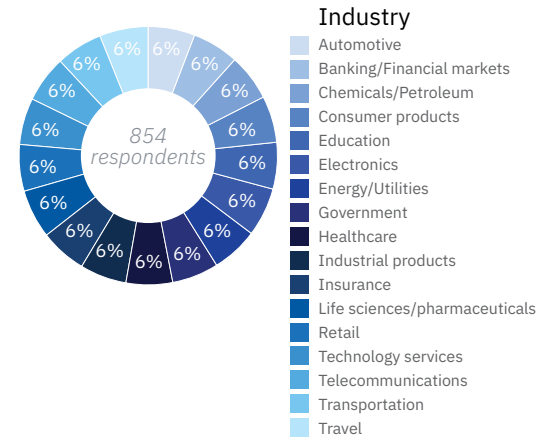
Anthony Marshall is Research Director at the IBM Institute for Business Value. Anthony is responsible for directing thought leadership research on a variety of issues related to the public and private sectors. Anthony can be reached on LinkedIn at [bit.ly/AnthonyMarshall](https://bit.ly/AnthonyMarshall), Twitter at [@aejmarshall](https://twitter.com/aejmarshall) and email at [anthony2@us.ibm.com](mailto:anthony2@us.ibm.com).

Shuma Okamura is an Associate Partner for Business Strategy Consulting Group in IBM Japan. He consults in both public and private sectors in areas including strategy formation, business turnaround, marketing strategy, change management and public affairs. Shuma Okamura can be reached at [oshuma@jp.ibm.com](mailto:oshuma@jp.ibm.com).

Dave Zaharchuk is Research Director and Global Government and Education Industry Leader for the IBM Institute for Business Value. Dave is responsible for directing thought leadership research on a variety of issues related to emerging technologies, government and the public sector. Dave can be reached on LinkedIn at [bit.ly/DaveZaharchuk](https://bit.ly/DaveZaharchuk), Twitter at [@DaveZaharchuk](https://twitter.com/DaveZaharchuk) and email at [david.zaharchuk@us.ibm.com](mailto:david.zaharchuk@us.ibm.com).

## Methodology

In collaboration with Oxford Economics, the IBM Institute for Business Value surveyed 854 Japanese executives representing 17 industries, including 50 government leaders. Of the respondents, 205 were designated as chief executive officers and 137 as chief marketing officers, with the remaining 512 equally divided between the roles of chief information officer, chief finance officer, chief operating officer and head of business unit.



## Notes and references

- 1 "Fortune Global 500 – 2000 to 2015." *Fortune*. Accessed June 1, 2016. <http://fortune.com/global500/>
- 2 IMF World Economic Outlook Database, 2018. <https://www.imf.org/external/pubs/ft/weo/2018/01/weodata/index.aspx>
- 3 "Household final consumption expenditure per capita (constant 2010 US\$)." World Bank National Accounts. <https://data.worldbank.org/indicator/NE.CON.PRVT.PC.KD>
- 4 Ibid.
- 5 Qin, Amy. "In China, Umbrellas and Basketballs Join the Sharing Economy." *The New York Times*. May 28, 2017. [https://www.nytimes.com/2017/05/28/business/china-communal-sharing.html?\\_r=2](https://www.nytimes.com/2017/05/28/business/china-communal-sharing.html?_r=2); Baker, Dean. "Don't buy the 'sharing economy' hype: Airbnb and Uber are facilitating rip-offs." *The Guardian*. May 27, 2014. <https://www.theguardian.com/commentisfree/2014/may/27/airbnb-uber-taxes-regulation>
- 6 Van Gool, Lorenz. "Vandebon lets you buy green energy straight from the source." Startup Juncture. March 13, 2014. <https://startupjuncture.com/2014/03/13/vandebon-lets-you-buy-green-energy-straight-from-the-source/>; "An online marketplace for energy; a world first in The Netherlands." Vandebon Newsroom. March 12, 2014. <http://vandebon.pr.co/72191-an-online-marketplace-for-energy-a-world-first-in-the-netherlands>
- 7 Broida, Rick. "Rent private cars for cheap with Turo." CNET.com. February 22, 2016. <https://www.cnet.com/how-to/rent-private-cars-for-cheap-with-turo/>; Cave, Andrew. "Can Turo Do For Automobiles What Airbnb Has Done For Apartments?" *Forbes*. December 15, 2016. <https://www.forbes.com/sites/andrewcave/2016/12/15/can-turo-do-for-automobiles-what-airbnb-has-done-for-apartments/#693bbb6b216>; Pike, Helena. "Will the 'Sharing Economy' Work For Fashion?" *The Business of Fashion*. May 8, 2016. <https://www.businessoffashion.com/articles/fashion-tech/will-the-sharing-economy-work-for-fashion-rent-the-runway-rental/>; "Loadsmart technology helps 'transform' FTL shipping." FleetOwner. January 25, 2017. <http://fleetowner.com/technology/loadsmart-technology-helps-transform-ftl-shipping>
- 8 Coppola, Gabrielle, Oliver Sachgau and Christoph Rauwald. "Daimler, BMW Reach a Deal to Merge Car-Sharing Units." *Bloomberg*. March 28, 2018. <https://www.bloomberg.com/news/articles/2018-03-28/daimler-bmw-are-said-to-reach-deal-to-merge-car-sharing-units>
- 9 Ikeda, Kazuaki, Anthony Marshall and Shuma Okamura. "Japan ascending: Four steps to reignite growth and vitality in the Japanese economy." IBM Institute for Business Value. July 2016. <https://www-935.ibm.com/services/us/gbs/thoughtleadership/japanascending/>
- 10 Konrad, Alex. "Inside The Phenomenal Rise Of WeWork." *Forbes*. November 5, 2014. <https://www.forbes.com/sites/alexkonrad/2014/11/05/the-rise-of-wework/#19e762b36f8b>
- 11 Morris, David. "This startup could change the game for same-day shipping." *Fortune*. October 9, 2015. <http://fortune.com/2015/10/09/flexe-warehousing-startup/>
- 12 Horton, John J. "Human Capital in the Sharing Economy." John Horton blog. December 4, 2014. <http://john-joseph-horton.com/human-capital-in-the-sharing-economy/>

- 13 Chamberlain, Andrew. "How the Sharing Economy is transforming the freelance landscape." *The Guardian*. February 17, 2016. <https://www.theguardian.com/small-business-network/2016/feb/17/sharing-economy-freelance-landscape>; "About." Upwork company website. Accessed July 5, 2018. <https://www.upwork.com/about/>
- 14 "Sharing à la française." *The Economist*. July 2014. <http://www.economist.com/news/business/21606273-french-startup-sharing-economys-newest-star-sharing-la-francaise>
- 15 Levy, Nat. "Rover hits \$100M run rate, releases new features to track Fido's walk route and bathroom breaks." *GeekWire*. August 22, 2016. <http://www.geekwire.com/2016/rover-app-update/>
- 16 Takeo, Yuko. "Sharing-economy boom slow to take off in Japan at just 0.005% of GDP." *Japan Times*. October 30, 2017. <https://www.japantimes.co.jp/news/2017/10/30/business/sharing-economy-boom-slow-take-off-japan-just-0-005-gdp/#.WxTnj5-RVPY>
- 17 "The Sharing Economy – Sizing the Revenue Opportunity." Consumer Intelligence Series – PricewaterhouseCoopers LLP. 2015. <https://www.pwc.com/us/en/technology/publications/assets/pwc-consumer-intelligence-series-the-sharing-economy.pdf>
- 18 Sharing Economy Association Japan website. <https://sharing-economy.jp/en>
- 19 "Japan's 'Sharing Economy' all the rage in 2016." *Kyodo News* website. November 2016. <https://english.kyodonews.jp/photos/2016/12/450680.html>; Yamaguchi, Junji. "Service helps new moms juggle kids and careers." *Japan Times*. January 12, 2014. <https://www.japantimes.co.jp/news/2014/01/12/national/service-helps-new-moms-juggle-kids-and-careers/#.W1By-NL-hPY>
- 20 "Expansion into Sharing Business and Strategic Collaboration with akippa Inc." Sumitomo Corporation press release. September 28, 2016. <https://www.sumitomocorp.com/en/jp/news/release/2016/group/20160928>
- 21 Tegos, Michael. "How Crowdworks is changing Japan's employment market." *Techinasia.com*. September 2015. <https://www.techinasia.com/crowdworks-koichiro-yoshida-tech-in-asia-tokyo-2015>
- 22 Kaneko, Kaori. "Japanese birth rate to drop below 1 million for first time since records began in 1899." *Independent*. December 22, 2016. <http://www.independent.co.uk/news/world/asia/japan-birth-rate-sex-decline-below-million-first-time-century-1899-a7489741.html>; "AsMama Inc.: A Sharing Economy Solution for Childcare in Japan." Stanford University Event. April 25, 2016. <http://events.stanford.edu/events/602/60255/>
- 23 "AsMama Inc.: A Sharing Economy Solution for Childcare in Japan." Stanford University Event. April 25, 2016. <http://events.stanford.edu/events/602/60255/>
- 24 Press release by Yamato of their new service with Mercari (in Japanese). [http://www.yamato-hd.co.jp/news/h26/h26\\_96\\_01news.html](http://www.yamato-hd.co.jp/news/h26/h26_96_01news.html); Press release by Mercari of their new service with Yamato (in Japanese). [https://about.mercari.com/press/news/article/20160118\\_tokumei/](https://about.mercari.com/press/news/article/20160118_tokumei/)
- 25 Bhuiyan, Johana. "Here's how Uber and Brazil's own 99 prepared to compete at the Rio Olympics." *Recode.net*. Aug 13, 2016. <http://www.recode.net/2016/8/13/12465568/rio-olympics-uber-99taxi-brazil-ride-hail-competition>; Ting, Deanna. "Airbnb Has a Golden Moment at the Rio Olympics." *Skift.com*. August 11, 2016. <https://skift.com/2016/08/11/airbnb-has-a-golden-moment-at-the-rio-olympics/>

© Copyright IBM Corporation 2018

IBM Corporation  
New Orchard Road  
Armonk, NY 10504

Produced in the United States of America  
July 2018

IBM, the IBM logo, ibm.com and Watson are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at: [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml).

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

This report is intended for general guidance only. It is not intended to be a substitute for detailed research or the exercise of professional judgment. IBM shall not be responsible for any loss whatsoever sustained by any organization or person who relies on this publication.

The data used in this report may be derived from third-party sources and IBM does not independently verify, validate or audit such data. The results from the use of such data are provided on an "as is" basis and IBM makes no representations or warranties, express or implied.

21018021USEN-02

**IBM**<sup>®</sup>