

How ripple effects are impacting every business

insight series



Countless stories and articles have examined the massive impacts of the COVID-19 pandemic on industries and economies. Behind each of these—often overlooked and underestimated—is an intertwined network of second- and third-order effects that are rippling through value chains.

These ripple effects will reshape value chains and redistribute more than US\$3 trillion of value to those businesses that best anticipate the impacts.¹

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Since March 2020, lockdowns around the world caused immediate impacts that reverberated throughout economies. The widespread recession that followed is resulting in a slow recovery of the global economy. While the initial focus has naturally been on the companies and industries immediately affected by restrictions and lockdowns, Accenture Strategy estimates the most important impacts will result from a reshaping of interconnected value chains and a fundamental restructuring of the global economy driven by long-term shifts in consumer behaviors.

The big value shift

To bring this interconnectivity to life, we analyzed three trends characterized by significant shifts in value:

Trend 01

People are spending more time at home. The decade of the home is here. Of the 15 countries analyzed, there has been an increase in time spent at home, with a peak of 31% in the month of April.²

Trend 02

People are flying less.
Travel gets (re)grounded.

Global air traffic was down 25% in October 2020 compared to October 2019, with 40% of aircrafts currently parked.^{3, 4}

Trend 03

Consumers are spending differently. Savvy, sustainable consumption is sustained.

Between April and September 2020, consumer spending in the United States fell by 6.6% compared to the same period in 2019. At the same time, the savings rate nearly tripled from 7.3% to 20.6%.

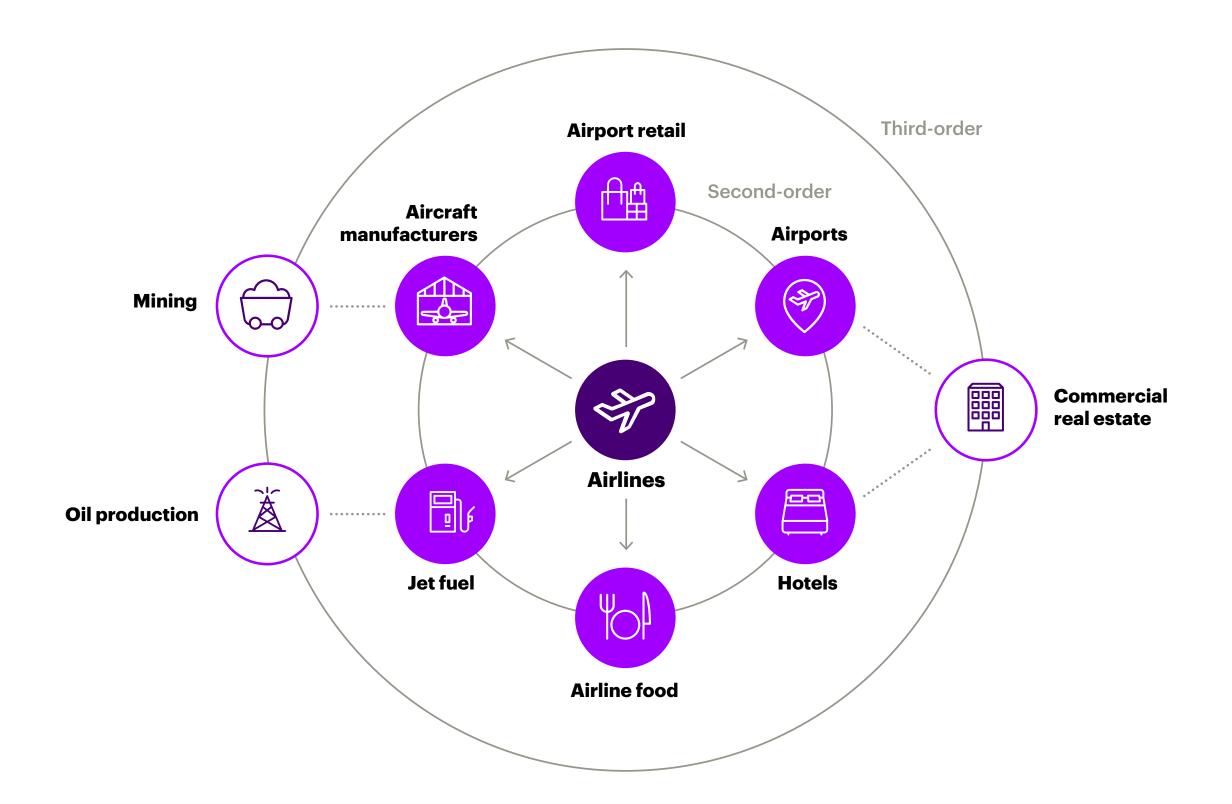
By aggregating the global value shifts resulting from each of these trends, Accenture Strategy discovered that more than US\$3 trillion of value—equivalent to the size of the economy of the United Kingdom—may either shift to other sectors or be lost entirely, creating losses for many but opportunities for those that best anticipate the changes.

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Figure 1 Bumpy ride ahead

Volume 01

As people fly less, airlines will be hit hardest. Significant ripple effects are also felt in second-order sectors such as airports and retail, and in third-order sectors such as mining and oil production.



Second- and third-order effects defined

Behind and beyond each behavioral shift are often overlooked and under-analyzed secondand third-order effects. We define second-order effects as direct impacts—positive or negative—from a business to its suppliers, and third-order effects as indirect impacts to companies further down the value chain.

Take the travel industry, for instance. There is an entire ecosystem associated with airlines that faces significant challenges. Second-order effects include the projected loss of up to 323,000 airport jobs—such as baggage handlers, and convenience store workers (Figure 1).

There are also major third-order effects, defined as indirect consequences that go up to the beginning of the value chain. In the mining

industry, for example, where 125,000 jobs are at risk if demand declines as aircraft production slows.

In addition, there are far-reaching implications for countries that rely heavily on the role that tourism or business travel plays in supporting entire value chains and driving their long-term economic outlook.

About the research

To depict the interconnectedness of global value chains and to develop estimates of monetary shifts in value pools, we incorporated data from over 38,000 companies across 25 industries into our macroeconomic model. We analyzed data on household spending across 12 categories for the 15 largest economies, which account for 80% of global GDP.⁷

The big value shift

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There are material shifts in how people live, work and play—and evidence that suggests these changes may last. 8, 9

Figure 2 introduces the behavioral changes driving value shifts and can be used by businesses to begin to understand the fundamental impacts that these value shifts will have. Companies will need to consider strategic responses as "normal" demand may not return.

While some businesses will be more impacted than others, many companies—not just the most obvious ones—will face moderate or severe liquidity and revenue pressures (Figure 3).

Certain behavioral shifts will have far-reaching implications. For example, people avoiding public spaces will lead to greater value shifts in the economy, as a significant portion of household weekly spending is impacted—

from traveling to work, to buying food and coffee at the office, to spending more on home entertainment.

It is uncertain to what extent new consumer behaviors will endure. However, even if only some remain, when considered in aggregate, they could have material impacts on numerous areas including corporate earnings outlooks, corporate strategies, the need for mergers and acquisitions, and the overall long-term viability of certain businesses. This would inevitably lead to huge transfers in value, creating both risks and new opportunities for many sectors.

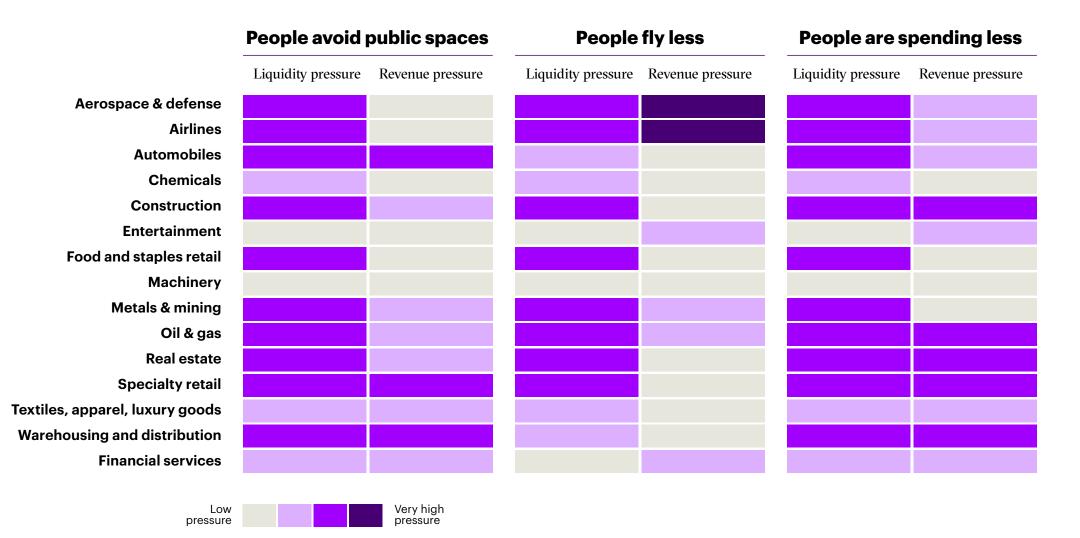
Figure 2
Preparing for the long term

Companies must focus on potential long-term consumer behavior shifts to better inform strategic decision making.

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	Immediate behavior shifts	Recession behavior shifts	Potential long-term behavior shifts
Driver	 Demand shock due to lockdowns Consumers must adapt due to temporary mandatory restrictions and quarantines For example, people cannot fly internationally due to closed borders 	 Experimentation with alternate social or entertainment occasions Consumer confidence remains low Consumer wallet sizes shrink Unemployment across certain sectors spikes, for example airlines, hospitality, retail 	 Mandatory regulations and laws Consumers will still spend, but on different things or in different channels Move to remote working
Effect on industries and companies	 Near-term volatility in value pools, but many of these immediate behavior shifts will dissipate 	Consumption recovery to pre-crisis levels is prolonged	 Second-order effects triggered Value pools shift to accommodate new consumer behaviors
Key considerations for companies	Manage the demand shockFocus on immediate liquidity needsMaintain customer base	 Manage the downturn Focus on cost reductions and operational efficiencies Build resiliency in supply chain 	Re-think business modelRe-think route-to-marketRe-think portfolio strategy

Figure 3 Under pressure

As a result of behavioral changes, corporate liquidity and revenue streams across a range of industries will suffer. While this chart shows the downsides, there are also opportunities arising from these shifts.



Source: Accenture Strategy analysis, CapIQ, S&P Global. Analysis is based on financial statements of approximately 38,000 publicly listed companies from June 2020. Revenue ratings: Very high – potential > 20% revenue impact; High – potential > 10% revenue impact; Medium – potential > 2% revenue impact (based on consumer spend modeling). Liquidity rating: Very high – Quick ratio < 0.5; High – Quick ratio < 1; Medium – Quick ratio < 2 (modeled averages).

Trend O1 The decade of the home is here

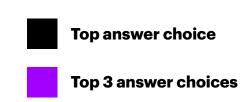
After six months—and counting—of adapting to the pandemic, some new consumer behaviors may become permanently entrenched. Our COVID-19 Consumer Research, which surveyed 8,529 consumers across 19 countries in June 2020, found that over the next six months, 73% of respondents expect to feel most comfortable passing their leisure time at home (Figure 4).10

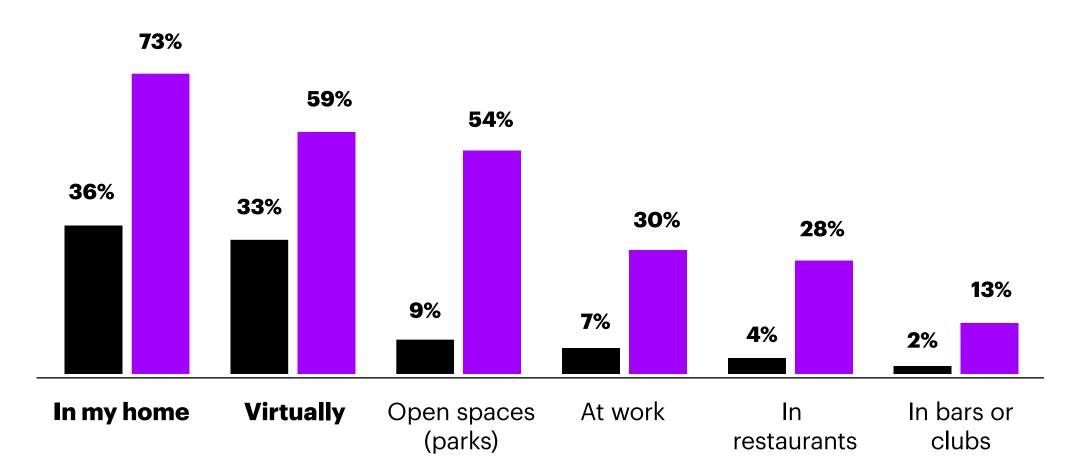
The big value shift

Trend 01: The decade of the home is here

Figure 4
Home sweet home

Nearly three-quarters of respondents prefer to socialize at home over the next 6 months.





Source: Accenture COVID-19 Consumer Research, June 2020.

As individuals continue to avoid stores, gyms, and other public spaces, we estimate more than US\$2 trillion of economic value may shift away from industries such as restaurants, retail, and commercial real estate¹¹ (Figure 5). For example, demand for office space has already declined sharply. This is driving second-order effects for shops and eateries that rely on office workers, as well as for companies that manage corporate real estate. Retail and leisure sectors are seeing value redistributed too, as consumers increasingly switch to eCommerce and digital entertainment options.

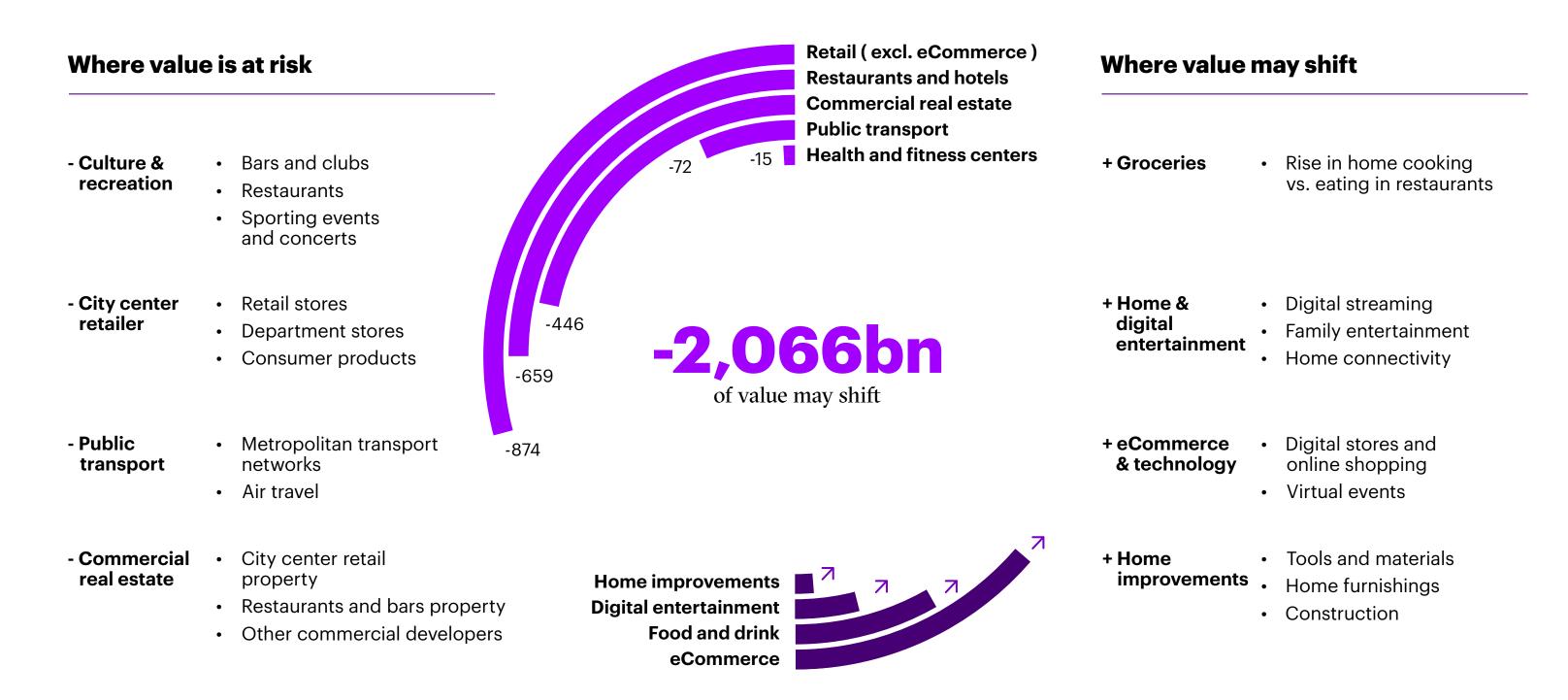
The big value shift 8

Trend 01: The decade of the home is here

Figure 5

The big shift away from public spaces

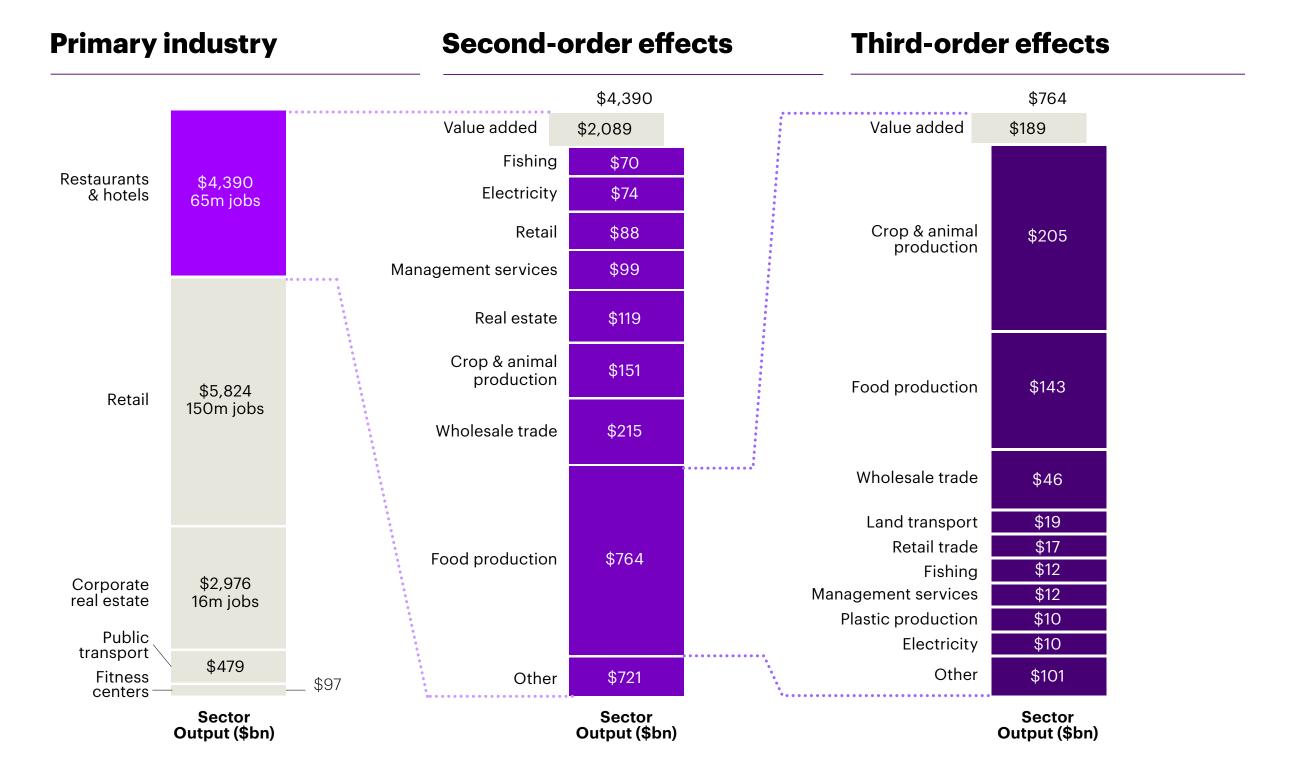
Changing consumer preferences may cause US\$2+ trillion of annual value to migrate from public spaces to home-focused industries.



Sources: OECD, Financial Times, MSCI, Accenture Strategy analysis, 2020. Notes: Assumes sectors affected by consumer behavioral shift are impacted by a 15% reduction in value add from 2019 to 2022. Positive figures are illustrative.

Figure 6
Ripple effects

Restaurants, retail, and related ecosystems created significant value in 2019, but much of that is uncertain in 2020.



Sources: OECD, ILO, Accenture Strategy analysis, 2020. Notes: Primary industry sector output equates to the total gross value add and intermediate consumption globally (US\$bn). Second- and third-order industries are the total intermediate consumption related to the preceding sector globally (US\$bn).

The big value shift

Where will the money go?

Trend 01: The decade of the home is here

The shift in value is creating new opportunities for other industries. Demand for online collaboration tools is up significantly as people are working more from home. We are also seeing increased expenditure on "do-it-yourself" home improvement as consumers spend more time at home. While eateries that catered to office workers in urban areas are experiencing a smaller addressable market as many consumers work from home, certain consumer goods brands are seeing a corresponding increase in demand. Consumers will still spend money on food, recreation, and entertainment. Where and how they spend it will highlight which companies are best prepared to capture consumers' future share of wallet.

The retail, restaurant, and hotel industries generate more than US\$10 trillion in collective economic value annually. This has the potential to drastically shrink as these industries are especially vulnerable to changing consumer attitudes about being in public spaces (Figure 6). These sectors are labor intensive and have complex, globally distributed supply chains. For example, restaurants and hotels employ 65 million workers globally, and their demand is critical for downstream sectors such as food processing and production, construction,

real estate, and utilities. If consumers continue to spend more time at home, it could cause global supply chains to restructure as they are forced to find new ways to operate in a changed world.

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While some behavioral shifts will be temporary, partly due to government restrictions in many countries, others—such as people working from home more or an acceleration toward eCommerce—may become permanently entrenched. The longer-term implications of consumers avoiding public spaces leading to the rise of the home are far reaching. Commercial real estate and property demand will change as more people work from home, reducing demand for office and residential space in city centers. This shift in consumer and worker demand will ultimately impact the banking sector, as often the biggest credit risk exposure for banks sits within real estate. There will also be environmental implications as people may opt to drive more, causing a decline in public transportation. Given these far-reaching consequences across sectors, businesses must be acutely aware of the extended ripple effects to future outlooks.

Trend 02

Travel gets (re)grounded

Since the start of the pandemic, hundreds of thousands of airline industry workers have lost their jobs. Airlines in Europe, Asia, and Latin America have filed for bankruptcy.¹² Suppressed demand for air travel has sent ripples of disruption across airline ecosystems.

In the month of March, the world's busiest airport, Atlanta's Hartsfield-Jackson, saw fewer travelers than it did on any single day in 2019.13 In April, prices for petroleum—the fuel of the industry—were briefly negative for the first time. In May, US hotel bookings were down over 90% from January.¹⁴ In June, Airbus and Boeing received only one order for a new aircraft between them.15

It is not that air travel will never rebound. Remember, many predicted—incorrectly that airline demand would never recover after September 11, 2001. We anticipate travel volumes picking up once an approved vaccine is widely available and travel restrictions

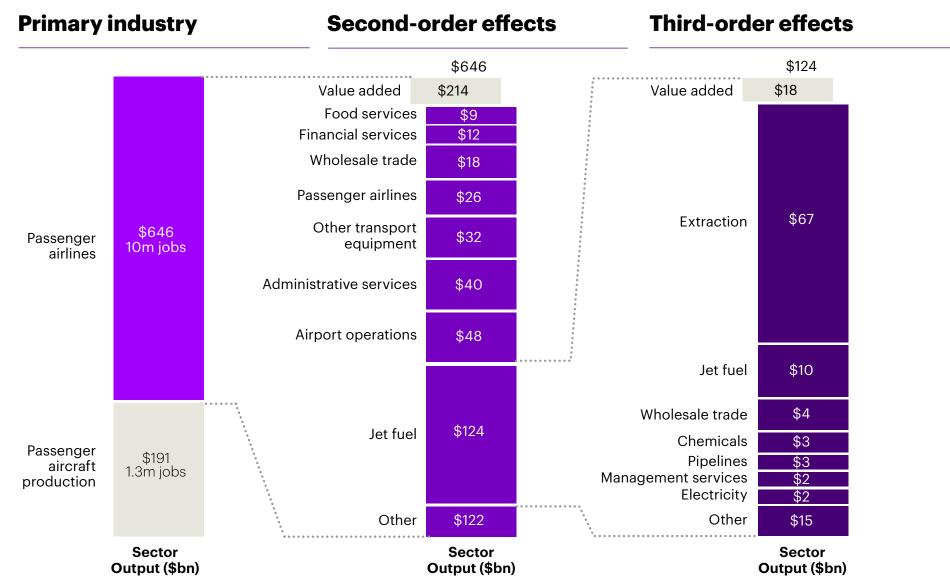
are eased. However, it is now also likely that we will see moderate drops in longer-term demand, such as for business travel due to a shift towards online meetings.

In 2019, the global passenger airline industry generated US\$646 billion in economic value and employed roughly 11.3 million people directly.16, 17, 18 Many sectors such as airports and fuel refiners directly rely on passenger airlines, while many more—oil extraction and chemicals, for example indirectly rely on it. Even a moderate drop in airline demand could trigger second-order effects across the entire airline ecosystem—impacting company earnings outlooks, bankruptcies, and industry consolidation (Figure 7).

Figure 7 **Ripple effects**

Airline ecosystems created significant value in 2019, but much of that is uncertain in 2020.





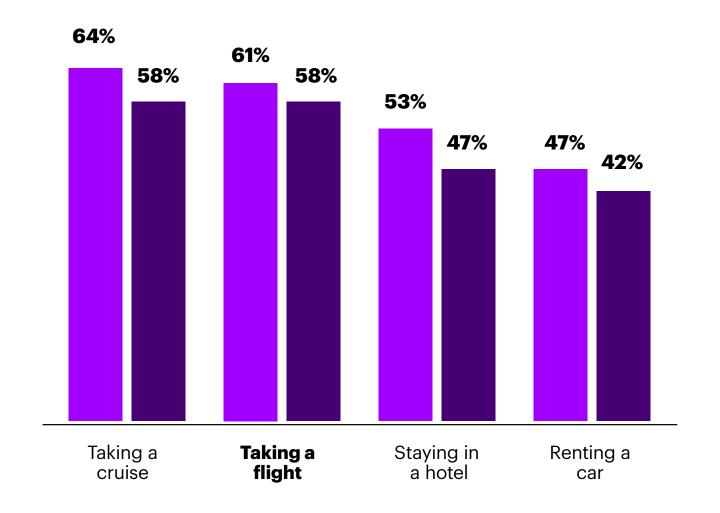
In our June 2020 COVID-19 Consumer Research, 58% of respondents claimed they would be uncomfortable taking a flight. This was down just slightly from 61% in April (Figure 8).

In September 2020, global airline traffic was still down 47% compared to September 2019.¹⁹ Our model indicates that if the continued slump in air travel persists, for example due to a prolonged decline in business travel, then the industry will be redefined, with up to US\$318 billion of annual value flowing to different industries and ecosystems (Figure 9).

Figure 8 Thanks, but no thanks

The thought of flying continues to make most people uncomfortable.

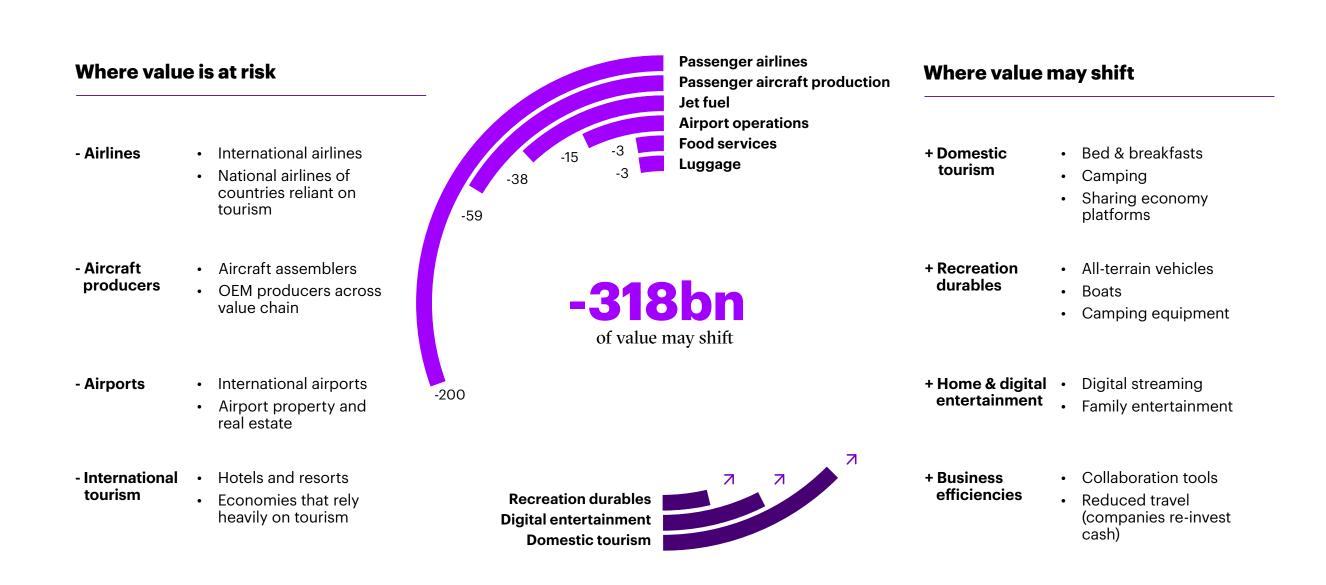




Source: Accenture COVID-19 Consumer Research, 2020.

Figure 9 The big shift away from air travel

Changing consumer preferences may cause up to US\$318 billion of annual value to migrate from airline ecosystems to other types of leisure-oriented ecosystems.



Where will the money go?

Although business travel may decline, workers will still have vacation days and cash to spend on leisure, and value is likely to migrate to sectors like domestic tourism, digital entertainment, and outdoor recreation. For instance, visits to US national parks increased significantly last summer and we saw increased purchases in camping and boating equipment, and other outdoor durables. Value is also likely to shift within companies, as firms invest the savings from reduced business travel elsewhere.

The potential shift in value has implications beyond airlines. For example, aircraft manufacturers may have to adapt to new demand for smaller-body aircraft in the future, and hotel chains may now put greater emphasis on domestic tourism and "sharing economy" facilities. Many countries that rely heavily on tourism, such as Croatia, Iceland, or the Maldives, may have to rethink how they attract international tourists, or where their future competitiveness lies.

Trend O3 Savvy, sustainable consumption is sustained

As the economic downturn persists, several international statistics agencies are warning of "consumer scarring," where there is greater permanency to consumer behavioral shifts.²⁰ More than 20 million workers in the United States have lost their jobs as either a direct or indirect result of the crisis.²¹ The impact: Spending has already decreased by over US\$1.7 trillion.²²

The big value shift

Trend 03: Savvy, sustainable consumption is sustained

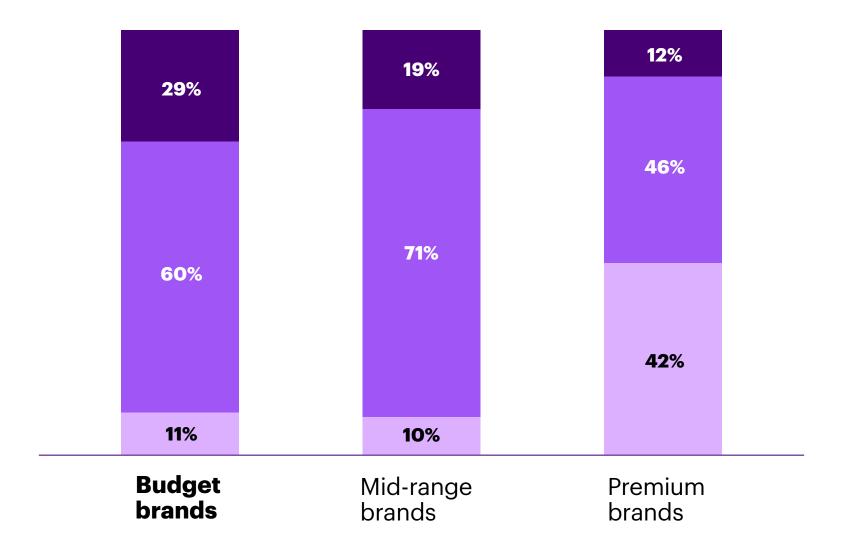
Consumers are saving more money than usual, with savings rates as part of income in the second and third quarter of 2020 increasing by 6.8% in Europe and 13.3% in the United States, compared to the same period last year.^{23, 24} In addition, they are looking for bargains.²⁵

Our monthly COVID-19 Consumer Research confirms that 29% of respondents expect to spend more on budget brands, and 42% of respondents expect to spend less on premium brands (Figure 10).²⁶

Figure 10 Less is more

Budget brands are becoming more popular.

Same Decree



Source: Accenture COVID-19 Consumer Research, June 2020.

Figure 11 The big loss for discretionary spending

Changing shopping preferences may cause consumer-facing brands to lose up to US\$687 billion of value annually. \checkmark

Where will the money go?

The first two trends—consumers avoiding public spaces and consumers flying less—described shifts that will redistribute economic value. Reduced consumer spending on the other hand may extract up to US\$687 billion in annual value from consumer-facing industries (Figure 11). For example, in the short term spending may reduce due to labor-market headwinds, while in the long-term people adversely affected by the crisis may have a higher propensity to save for a "rainy day."

For many consumer-facing companies, these trends create new risks as they shrink addressable market sizes. Companies that offer budget or value brands are likely to benefit.

A reduction in consumer spend could also trigger significant ripple effects across the global retail industry, which is responsible for approximately US\$6 trillion in economic value. If there is a sustained decline in demand, this could create harmful second-order effects in areas such as warehousing, wholesale trade, and numerous other retail-related sectors (Figure 12).

However, there is some upside—some early indications reflect possible improvements for certain areas of the retail sector. For example, Amazon Prime Day saw a 21% increase over last year.²⁷ These aspects point to the importance for businesses to adapt fast enough from a digital capability, workforce agility, and cost perspective.

The recession will pass, and consumers will return to spending. However, longer term, it is critical for businesses to recognize the changing set of factors that are increasingly driving consumer purchase decisions. Before the

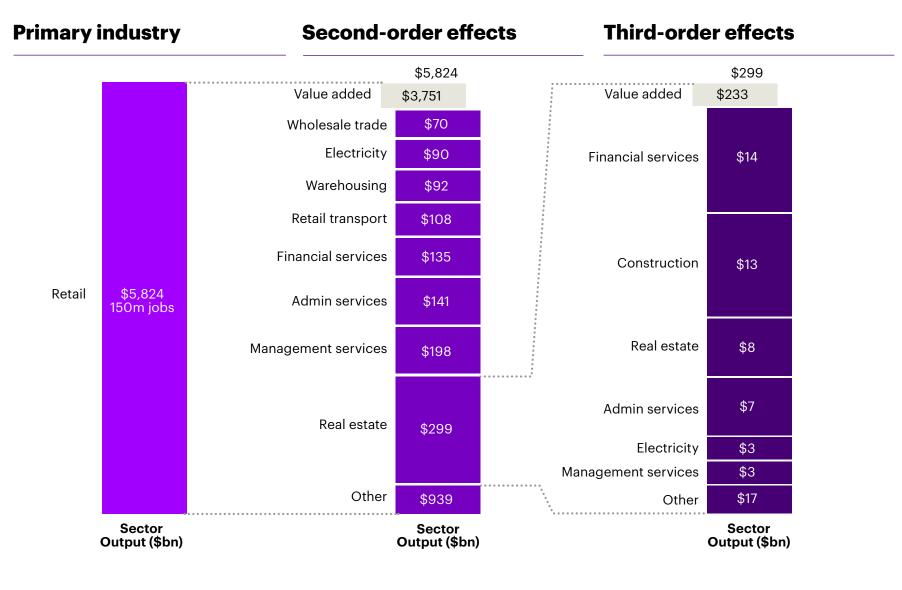
pandemic, we saw growing demand for sustainable and ethical choices. During the crisis, in certain categories the focus on "brands with purpose" has continued. As the economy moves through this crisis, we expect responsible consumption to persist as a long-term trend and key influencer of future success. Companies that keep sustainability and purpose central as they make their shifts will position themselves well for market share gain and long-term growth.

Transport Where value is at risk Where value may shift Leisure **Restaurants and hotels** Miscellaneous goods - Premium Non-core + Basic goods Core necessities goods & discretionary Health care services spends **Budget-friendly** Leisure offerings Home cooking Culture & Bars and clubs + Groceries recreation and baking Restaurants Budget brands Sporting events and concerts of value may be los -134 Hardware stores - Health & Health + DIY: Home well-being & garden Garden centers Beauty Raw materials Accessories Affordable vacations - International Hotels and resorts + Domestic Household furnishing tourism tourism Domestic tourist hubs Economies that rely heavily on tourism

Sources: OECD, BEA, IMF, National statistics bureaus, Accenture Strategy analysis, 2020. Countries included in analysis: Australia, France, Germany, Italy, Spain, United Kingdom, United States accounting for ~45% of global GDP. Forecasting assumptions: 2022 savings rate increase of 5% as a result of consumer behavior shift. Impacts to GDP, inflation, interest rates and real wage growth are held constant in order to identify direct impact of changes in household saving rates on the economy. Assumed average changes of consumer behavior on spending assumptions: Clothing & Footwear (-10%); Health (-5%); Transport (-15%); Recreation & Culture (-15%); Education (-5%); Restaurants & Hotels (-15%); Miscellaneous Goods & Services (-5%). Positive figures are illustrative.

Figure 12 Ripple effects

Retail and its ecosystem created significant value in 2019, but much of that is uncertain in 2020. →



Sources: OECD, ILO, Accenture Strategy analysis, 2020. Notes: Primary industry sector output equates to the total gross value add and intermediate consumption globally (US\$bn). Second- and third-order industries are the total intermediate consumption related to the proceeding sector globally (US\$bn).

The big value shift

Prepare to shift

The current pandemic could potentially redistribute trillions of dollars in value between industries and their ecosystems if even small changes in consumer behaviors become permanent.

To prepare for this value shift, companies should assess where there will be new pockets of value in the economy. The following questions can be used to help identify and capture this value, and anticipate the impact of second- and third-order effects:

Are we truly consumer obsessed?

In an uncertain economy, being able to understand consumers faster and better than competitors becomes the biggest competitive advantage. While businesses today may collect vast amounts of data, what's really important is to translate this data into insight-driven decisions. This requires strong analytics capabilities stemming from data collection, to aggregation, to insight generation—allowing businesses to conduct "dynamic demand sensing" and shift operations in real time. Travel companies, for example, need to gather data on the entire traveler experience to craft a personalized service that augments that customers' overall ecosystem experience. Translating data into better service at every touchpoint of the customer journey will be a key differentiator in the long term.

Are we rethinking our industry's value structure?

The pandemic has the potential to fragment demand and profit pools, causing many industries to restructure significantly. By following the data, businesses can anticipate and get ahead of looming changes to their industry value structures, and where they create value and profit. For example, people working from home more could shift coffee demand from downtown areas to local neighborhood baristas. This has

implications for real estate, retail channels, and the types of products consumers buy. Businesses should start to think about what these value structure shifts mean for their strategy.

Is our business model still relevant?

eCommerce and direct-to-consumer models were already increasing in importance prior to the pandemic, and these trends have accelerated as more people shop online and socialize closer to home. Companies need to ensure that their business models stay relevant and cost effective. We are seeing many traditional brick-and-mortar businesses—such as eateries—ramp up home delivery as people spend more time at home. These shifts in business models will create new challenges companies need to solve for, such as providing last-mile delivery at a cost-effective rate while keeping environmental implications in mind.

Do we have modularity and flexibility built into our operating model?

More than ever, agile operating models will ensure companies have the ability to respond swiftly to market changes and adapt to new ways of working. This means having the flexibility to turn data-generated insights into organizational change and a focus on built-in modularity and adaptiveness—including in the supply chain—to scale up and down as consumer demand

changes. In addition, the pandemic has shown that many skills, such as digital, will grow in importance while others diminish. Companies must focus on new-skilling workers as they target growth in changed industries. For example, retailers pivoting their sales staff from physical department stores to online channels, or companies enabling their contact center workers to work from home.

Are we leveraging our capabilities and ecosystem effectively?

As value is redistributed, certain capabilities will become more essential and others less so. To create long-term strategic success, companies must be able to identify and access necessary capabilities. Ultimately, leveraging the wider ecosystem expands a company's ability to align to shifts in consumer behaviors. Since the pandemic, for example, many businesses are using their ecosystems to access "bolt-on" eCommerce or direct-to-consumer channel routes-enhancing the competitiveness of their portfolios. For the travel industry, companies may dispose of corporate real estate property or "stranded assets" while seeking to acquire digital firms or capabilities that allow them to engage with customers directly. As companies access these capabilities, they will need to ensure they are properly integrated across the organization to help drive real gains.

Macroeconomic insight series

The COVID-19 pandemic has been the most significant exogenous shock that we have seen in decades.

To navigate their way out of this crisis, it is imperative that business leaders re-evaluate how they think about value chains. To do so, they will need a data-driven, analytical approach to improve visibility over their interconnected value chains. This will allow businesses to truly understand the Big Value Shift and act with urgency.

The big value shift

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- 1 US\$3 trillion value calculated in constant 2010 US\$, where global GDP is US\$84.94 trillion. To arrive at the US\$3 trillion value shift—which accounts for approximately 4% of global GDP—we followed a conservative approach for assessing the three selected scenarios. There are other scenarios not included that would contribute to an even greater value shift. Source: 11 U.S. Federal Reserve, Beige Book Survey, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.
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- ²⁶ Accenture COVID-19 Consumer Research, 2020.
- ²⁷ NPD, How COVID-19 is impacting consumer spending: Holiday special coverage, 2020.