How The World Does Digital: The Impact Of Payments On Digital Transformation — insights from 15,000 consumers across 11 countries

offers an overview of the current state of the global digital transformation, according to the ConnectedEconomy™ Index. The CE Index provides an objective benchmark for how and at what pace the digital transformation of countries and their economies are progressing and illustrates why some countries and economies are leading or lagging. It presents the framework and the metrics for this exciting journey and the progression of the global — digital-inclusive — GDP.
The PYMNTS ConnectedEconomy™ Index (CE Index) benchmarks the progress of the world's digital transformation quarterly across the 11 countries in our study and individually within the countries we are tracking.

This first-of-its-kind global research endeavor uses in-depth surveys to examine consumer engagement in 37 key activities across the 10 broad categories — the pillars of the ConnectedEconomy™ — that represent their daily routines and consistently measure the progress of consumer engagement over time.

The CE Index uses data collected from 15,599 individuals across 11 countries between April 7, 2022, and May 9, 2022, and includes how and how often consumers engage in 37 different activities, the purchases they made and the payment methods they used. The countries are the United States, the EU-5 (France, Germany, Italy, the Netherlands and Spain), the United Kingdom, Brazil, Australia, Japan and Singapore, which together account for 50% of the global GDP.

PYMNTS' analysis of the roughly 2.4 million data points resulting from this survey creates a unique CE Index score for each country and an average CE Index ranking across all 11 countries in our study. The CE Index measures how much progress each country has made in its digital transformation journey. A 100 is a perfect score, meaning that every person in a country uses digital methods to engage in each of the 37 activities we measure daily, and can be thought of as the culmination of the global digital transformation.

<table>
<thead>
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<th>Page</th>
<th>Section</th>
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</thead>
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The state of the digital economy in Q2 2022

The ConnectedEconomy™ Index measures the digital transformation of roughly 15,000 consumers in 11 countries that represent 50% of the global GDP. Digital transformation is defined as the number of people who use digital methods to engage in any activity, the number of digital activities in which they engage and how frequently they engage. Quarterly surveys record the changes in 37 routine digital activities over time, and those changes help determine the pace at which a country has digitally transformed its economy, along with the opportunities to improve digital engagement. The ConnectedEconomy™ Index score is the ultimate measure of the digital transformation of each country, individually and collectively across the sample.

In Q1, we learned that we’ve made some progress — but we have a long way to go. On a scale of zero to 100, these 11 countries are about one-quarter of the way to a world in which all consumers use connected devices, technology and payments in some way to access and/or complete the 37 routine digital activities we monitor. The good news for business leaders and entrepreneurs is that there are many opportunities to continue to digitally engage consumers all over the world.

<table>
<thead>
<tr>
<th>Country</th>
<th>Population</th>
<th>Millennials and Gen Z</th>
<th>Smartphone ownership</th>
<th>Internet access</th>
<th>Higher education</th>
<th>Connected Economy™ Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>United States</strong></td>
<td>332.4M</td>
<td>31.3%</td>
<td>80.0%</td>
<td>90.8%</td>
<td>32.3%</td>
<td>30.8</td>
</tr>
<tr>
<td><strong>Brazil</strong></td>
<td>214.0M</td>
<td>39.3%</td>
<td>89.2%</td>
<td>73.9%</td>
<td>46.6%</td>
<td>32.6</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td>125.9M</td>
<td>26.1%</td>
<td>82.2%</td>
<td>92.7%</td>
<td>23.6%</td>
<td>12.7</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>84.4M</td>
<td>27.9%</td>
<td>89.6%</td>
<td>89.8%</td>
<td>27.0%</td>
<td>26.0</td>
</tr>
<tr>
<td><strong>France</strong></td>
<td>65.6M</td>
<td>29.9%</td>
<td>88.7%</td>
<td>83.3%</td>
<td>34.5%</td>
<td>24.3</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>60.2M</td>
<td>26.4%</td>
<td>90.1%</td>
<td>76.1%</td>
<td>15.9%</td>
<td>23.3</td>
</tr>
<tr>
<td><strong>United Kingdom</strong></td>
<td>68.7M</td>
<td>31.1%</td>
<td>88.1%</td>
<td>94.8%</td>
<td>29.1%</td>
<td>30.8</td>
</tr>
<tr>
<td><strong>Spain</strong></td>
<td>46.8M</td>
<td>32.9%</td>
<td>93.2%</td>
<td>93.2%</td>
<td>38.9%</td>
<td>31.8</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td>26.1M</td>
<td>23.7%</td>
<td>87.3%</td>
<td>86.5%</td>
<td>27.4%</td>
<td>27.3</td>
</tr>
<tr>
<td><strong>Netherlands</strong></td>
<td>17.2M</td>
<td>32.7%</td>
<td>82.0%</td>
<td>91.3%</td>
<td>34.0%</td>
<td>27.4</td>
</tr>
<tr>
<td><strong>Singapore</strong></td>
<td>6.0M</td>
<td>18.6%</td>
<td>89.1%</td>
<td>88.9%</td>
<td>32.5%</td>
<td>34.1</td>
</tr>
</tbody>
</table>

Source: PYMNTS
Additional data drawn from the World Bank’s Development Indicators and UNdata
In Q2, we observe that consumers still encounter friction when using digital methods to access activities or make purchases — and that remains an impediment to increasing digital engagement. This is particularly true in sectors that represent key drivers of gross domestic product (GDP) such as healthcare, buying food at grocery stores or restaurants and making retail purchases. We also observe that, with one exception, consumers living in countries where smartphone penetration is high have more access to digital-first methods of transacting and are more digitally engaged — and their country rankings reflect that. Japan is the exception to that rule, largely because so few of those over the age of 50 use digital methods to engage in any activity.

Q2 2022 HIGHLIGHTS

01 More digital engagement drove the ConnectedEconomy™ Index score higher by 1.2% quarter over quarter.

Overall, we observe that digital engagement is higher for the average consumer across the countries we studied. The use of digital methods across the 37 daily activities tracked in this study increased by 1.2% in the three months between January and April. In addition, the growth of the Index was faster, overall, than the increase in global GDP for the same period.

02 Consumers’ use of digital methods to pay for things increased by 3 percent.

The routine activities we measure include both transactional and nontransactional activities. Nineteen of the 37 routine activities tracked are related to making a purchase of some kind — booking and paying for a trip, paying a bill, ordering food from a restaurant and so on. The digital transformation of those activities increased by 2.7% with the greatest increase in travel-related activities, including airfare purchases, hotels/rentals and local transportation.

03 Brazil moved into second place in Q2, displacing Spain and the U.K.

Brazil moved up two spots in the 11-country ranking to take second place, which boosted that country’s overall Index score by 8.2%. Brazil’s strong performance was underpinned by increased digital engagement of consumers living there in digital travel and mobility tools and growing intensity in the use of digital methods to buy groceries online and make retail and restaurant purchases, all of which saw increases of more than 10% in Q2.
Engagement in one digital activity leads to engagement in related activities.

We find that consumers who participate by using digital methods for one activity are also more likely to use digital methods to transact or access activities with similar characteristics in adjacent sectors. This degree of interconnectedness serves as an important on-ramp to the greater digital engagement of a country’s population overall. In Q2, the measure of interconnection between activities grew for any pair of activity groups considered, such as travel and food purchases, entertainment and social interactions.

Mobile wallets go omnichannel

Consumers’ use of mobile wallets in-store increased 9% in Q2 2022 across all 11 countries, with domestic wallets becoming more widely accepted by merchants. We observed the greatest increase in in-store digital wallet usage in Brazil, Japan and the United Kingdom, with digital engagement growing more than 15% quarter over quarter.

ADDITIONAL Q2 DETAIL:

The ConnectedEconomy™ Index score increased 1.2% quarter over quarter.

Consumers’ digital transformation across the 11 countries in our study increased from 27.1 in Q1 to 27.4 in Q2, a 1.2% increase over this period as more consumers used digital methods to conduct more of their daily activities and did so more frequently. This movement represents a significant quarter-over-quarter change for these 11 countries that account for 50% of the world’s GDP.

This increase in the Index score in Q2 when looking at all countries as a whole is explained by an increase in the number of consumers engaging in connected experiences rather than the frequency of such interactions. Total participation from Q1 2022 to Q2 2022 increased from 82.9% to 83.7%. This represents a nearly one percentage point increase in the number of people who conducted at least one routine digital activity in the last month. The number of digital activities in which a consumer engages every month grew 2%, from 15.5 in Q1 to 15.9 in Q2. The frequency of engagement also remained in line with Q1 levels: An average 3.7 of these digital activities were carried out daily, virtually unchanged from the first quarter.
To put this growth into perspective, consider that the International Monetary Fund (IMF) expects these countries’ economies as a group to see an increase in GDP of 3.3% in 2022, which is equivalent to 0.8% quarterly growth — well below the 1.2% growth of the CE Index.¹ We expect the subset of digital activities tracked by the CE Index will outpace the growth of the economies as a whole by 1.6% throughout the remainder of 2022 given the sustained growth seen in Q2 as more consumers become more comfortable and confident conducting a larger portion of their daily activities online.

Measuring the digital transformation

The ConnectedEconomy™ Index score is the ultimate measure of digital transformation on a scale of 0 to 100. The higher the Index score a country earns, the closer it is toward realizing its economy’s full potential.

Digital transformation is the progress of a population, ages 18 and older, to move away from doing things in only a physical environment to conducting them using devices that are connected to the internet. We measure this by looking at how digitally engaged consumers are in 37 routine activities across three key dimensions.

PARTICIPATION
How many consumers perform at least one activity using digital methods at least once per month. This is calculated using the percentage of adults who use digital technology to do something at least once per month.

ENGAGEMENT
How many digital activities in which consumers participate. This is measured by the number of activities that consumers perform using digital methods.

RECURRANCE
How often those consumers use digital methods to conduct said activities. This is measured by the average number of times per month these adults engage in these activities only.

The ConnectedEconomy™ (CE) Index measures the progress of the digital transformation of the global economy on a scale of 0 to 100 based on the evolution of these three elements. Survey respondents are asked questions about their use of digital methods to engage in 37 activities across 10 categories that represent their daily routines. The CE Index uses an algorithmic model to calculate a score based on how many people living in a country participate in any digital activity, how many digital activities they engage with and how often they use digital methods to engage in one or more of these digital activities.
Accessing or transacting?

The Index measures digital engagement within two different sets of digital activities: those that are “purpose built” for making a purchase, or transactional activities, and those that help consumers access a variety of content or services, or access activities.

ACCESS ACTIVITIES

Eighteen of the activities that the ConnectedEconomy™ Index measures are categorized as access activities. Examples of access activities include watching movies or listening to music, visiting a healthcare provider, interacting with friends and family on social networks or checking a bank account. Digital engagement within those activities is measured by how many people use digital methods to engage with these activities, how many they engage with and how frequently they do so.

TRANSACTIONAL ACTIVITIES

Nineteen of the activities that the ConnectedEconomy™ Index measures are categorized as transactional activities. These activities are those that are purpose built for paying for something. Examples of transactional activities are booking travel, paying for retail or grocery purchases, ordering food from a restaurant, paying a doctor or paying bills.

Today, more consumers engage digitally with access activities. For instance, seven times more consumers are engaged daily in watching videos than shopping on a marketplace, and five times more consumers check their social media feeds daily than order food from delivery aggregators.
More consumers used digital methods to make a purchase in Q2.

Digital transformation increased in 16 of the 19 activities that are related to making purchases, representing a 2.7% increase from Q1 to Q2. Some of the greatest increase in engagement was seen in travel and travel-related activities, including commuting, as more of the workforce returned to offices. We also witnessed sharp increases in consumers’ usage of digital retail (7%) and grocery subscription services (8%), voice-enabled payments (6%), virtual therapy (11%) and telemedicine sessions (3%) in Q2 2022.
We also observed an increase of 16% in the digital transformation of consumers across all 11 countries in booking airfare and accommodations online, including the use of homesharing platforms such as Airbnb and Homestay, in Q2.

That increase in digital transformation also prompted more consumers to use a variety of local transportation and mobility apps, where we noted a 15% increase in the use of apps to book and pay for train, bus and taxi rides and a 12% increase in the use of apps to book micromobility rides.

16%
How much the average consumer’s use of airfare apps and websites increased quarter over quarter.
Understanding the pillars of the ConnectedEconomy™

The PYMNTS ConnectedEconomy™ framework organizes consumers’ daily routines into 10 categories — “pillars” — and the 37 activities they perform to complete them. Our hypothesis is that how consumers all over the world will use connected devices, payments and new technologies to work, live, bank, pay and be paid, have fun, shop, eat, stay healthy, connect with others and move from point A to point B will determine the depth, breadth and speed of the world’s digital transformation.

THE 10 PILLARS of the ConnectedEconomy™

- BANK
- BE WELL
- COMMUNICATE
- EAT
- HAVE FUN
- LIVE
- MOVE
- PAY
- SHOP
- WORK

ConnectedEconomy™ Enablers

Enablers use a combination of technology, payments and connected devices to simplify how consumers and businesses engage within each of these 10 pillars and, more importantly, use them to connect with multiple activities across other pillars. Together, this becomes the blueprint for measuring the digital engagement of consumers across multiple activities and tracking the digital transformation of the ConnectedEconomy™.
More digital engagement in any one activity, leads to an increase in digital engagement in similar or adjacent activities.

In Q2 we found that many of the consumers who increased their use of digital methods to book travel or assist with commuting also made more online retail, restaurant and grocery purchases.

For example, in Q2, 79% of consumers who placed grocery and restaurant orders online (the eat pillar) also used travel- and commute-related sites and apps, representing 404 million consumers across the 11 countries in our study: 296 million of them are buying groceries online, and 379 million are placing restaurant orders online.

If consumers’ use of travel- and commute-related apps were to increase by 10%, then we would also see a corresponding 6.7% increase in online grocery shopping and a 6.3% increase in digital restaurant orders.
Consumers across all 11 countries increased their use of mobile wallets in-store.

We find that the use of mobile wallets to pay for purchases made in brick-and-mortar establishments increased by 9% in Q2 2022 and decreased 1% for online transactions. We observed the greatest increase of in-store digital wallet use in Brazil, Japan and the U.K., increasing over 15% quarter over quarter. U.K. mobile wallet growth was largely driven by an increase in use of Big Tech wallets, such as Apple Pay, while native wallet usage was the principal driver for the increase in digital engagement with mobile wallets in Brazil and Japan.

Use of PayPal for in-store transactions increased 10% in Q2 2022, with the bulk of this increase driven by Germany. This marks the second consecutive quarter in which consumer engagement with the PayPal mobile wallet in Germany was greater than it was in any other country.
**Figure 5A**
*Growth of digital wallet use*
Share of in-store transactions made with digital wallets, by country

- **Whole sample:**
  - Q2 2022: 15.5%
  - Q1 2022: 16.9%

- **Germany:**
  - Q2 2022: 21.8%
  - Q1 2022: 21.4%

- **Japan:**
  - Q2 2022: 18.6%
  - Q1 2022: 18.0%

- **U.K.:**
  - Q2 2022: 20.0%
  - Q1 2022: 18.0%

- **Italy:**
  - Q2 2022: 18.7%
  - Q1 2022: 18.0%

- **Singapore:**
  - Q2 2022: 22.0%
  - Q1 2022: 18.0%

- **Brazil:**
  - Q2 2022: 17.4%
  - Q1 2022: 14.6%

- **Australia:**
  - Q2 2022: 16.3%
  - Q1 2022: 14.3%

- **U.S.:**
  - Q2 2022: 15.0%
  - Q1 2022: 14.3%

- **Netherlands:**
  - Q2 2022: 11.3%
  - Q1 2022: 13.8%

- **Spain:**
  - Q2 2022: 11.9%
  - Q1 2022: 13.8%

- **France:**
  - Q2 2022: 10.3%
  - Q1 2022: 9.3%

***Source:** PYMNTS
*N = 15,599: Complete responses, fielded April 7, 2022 - May 9, 2022*

Additional information drawn from the World Bank’s Development Indicators and UNdata

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**Figure 5B**
*Growth of digital wallet use*
Share of online transactions made with digital wallets, by country

- **Whole sample:**
  - Q2 2022: 31.0%
  - Q1 2022: 31.3%

- **Germany:**
  - Q2 2022: 49.9%
  - Q1 2022: 43.9%

- **Italy:**
  - Q2 2022: 41.3%
  - Q1 2022: 42.1%

- **U.K.:**
  - Q2 2022: 33.5%
  - Q1 2022: 33.8%

- **U.S.:**
  - Q2 2022: 32.2%
  - Q1 2022: 30.4%

- **Singapore:**
  - Q2 2022: 33.5%
  - Q1 2022: 30.1%

- **Japan:**
  - Q2 2022: 28.4%
  - Q1 2022: 29.9%

- **Australia:**
  - Q2 2022: 28.4%
  - Q1 2022: 29.6%

- **Spain:**
  - Q2 2022: 25.2%
  - Q1 2022: 26.6%

- **Brazil:**
  - Q2 2022: 25.8%
  - Q1 2022: 25.2%

- **France:**
  - Q2 2022: 25.6%
  - Q1 2022: 23.7%

- **Netherlands:**
  - Q2 2022: 19.2%
  - Q1 2022: 21.9%

***Source:** PYMNTS
*N = 15,599: Complete responses, fielded April 7, 2022 - May 9, 2022*

Additional information drawn from the World Bank’s Development Indicators and UNdata
DEEP DIVE:

How Brazil found its way to second place in Q2 2022

The digital transformation of Brazil’s economy increased by 8.2% in Q2, marking the greatest quarter over quarter increase seen in any of the 11 countries in our study. That represented an increase in their Index score from 30.1 in Q1 to 32.6 in Q2. This quarter-over-quarter increase, if it holds, would move Brazil into the top spot by Q4 2022.

A big driver of digital transformation was the celebration of the first in-person Carnival in two years — celebrations that drove consumers to big cities, incentivizing spend in travel accommodation, as well as food and retail spend.²

Rio de Janeiro alone sees its population grow by 2 million during these festivities.

These festivities sparked a wave of domestic travel and commerce, coinciding with an increase in domestic demand for a wide variety of digital and digitally enabled transactions. Brazilian consumers’ use of travel sites, apps and aggregators increased 14% quarter over quarter in Q2 2022, for example, and their appetite for transactional activities — from digital marketplace purchases to online grocery orders to homesharing and beyond — increased 11%. This is a higher growth rate than was seen in any other country and is almost four times the 11-country average growth rate of 2.9%.

8.2%

The quarter-over-quarter acceleration of Brazil’s digital transformation.

Brazil in Q2 is a great case study of the power of the interconnectedness of digital activities. When travelers, foreign and domestic, booked their travel for Carnival they also increased their use of digital methods to make purchases online, for which we observed a 14% increase in digital engagement. Online ordering at restaurants increased 11% over that same period, as did the use of digital methods to connect to social media channels and content platforms for information essential to planning their experiences (6.3%) while there.

It is true that festivities and holiday seasons generally come together with higher consumer willingness to spend — an indication that Q2 growth may have been extraordinary for Brazil. It, in fact, quadruples the growth for the second-most growing country, but the lesson from the period is that digital behavior is a rising tide that lifts all boats, with the extent of these interconnections growing stronger as the digital infrastructure extends to more activities.

At the other end of the spectrum, we see Japan’s digital progress slide. The average Japanese consumer engages in an average of eight different digital activities each month, with participation concentrated in social engagement (52%), entertainment (46%) and banking (44%). Consumers in this country are the least likely to engage digitally for retail shopping, and Japanese consumers still rely on cash for a wide range of transactions. This is an indication that synergies also have a potential drag effect: Consumers who are unlikely to rely on digital tools to engage in any activity are less prone to try digital means to engage in adjacent interactions.

Figure 6A
Explaining Brazil’s great leap forward
Variation in CE Index scores between Q1 2022 and Q2 2022, by country
In addition to shopping more online and making more digital purchases, Brazilian consumers' use of online travel sites, dating apps, aggregators and virtual therapy sessions increased 6.3% between Q1 2022 and Q2 2022.

Brazil was not the only country in which we witnessed simultaneous increases — or decreases — in transactional and access activities. Consumers in Japan and Italy also participated in both and exhibited sharp decreases in access and transactional activity in Q2 2022. Japanese consumers' participation in access activities dropped 12% and their engagement in transactional activities dropped 8.5% quarter over quarter.

**Figure 6B**
Explaining Brazil's great leap forward
Breakdown of the increase in the Index score for Brazil, by pillar

<table>
<thead>
<tr>
<th>Category</th>
<th>Increase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eat (grocery orders)</td>
<td>15.3%</td>
</tr>
<tr>
<td>Shop</td>
<td>14.3%</td>
</tr>
<tr>
<td>Travel</td>
<td>13.8%</td>
</tr>
<tr>
<td>Live</td>
<td>13.8%</td>
</tr>
<tr>
<td>Eat (restaurant orders)</td>
<td>12.0%</td>
</tr>
<tr>
<td>Be well</td>
<td>8.6%</td>
</tr>
<tr>
<td>Communicate</td>
<td>4.9%</td>
</tr>
<tr>
<td>Have fun</td>
<td>3.6%</td>
</tr>
<tr>
<td>Work</td>
<td>3.0%</td>
</tr>
<tr>
<td>Bank</td>
<td>2.3%</td>
</tr>
</tbody>
</table>

Source: PYMNTS
N = 15,599: Complete responses, fielded April 7, 2022 - May 9, 2022
Additional information drawn from the World Bank’s Development Indicators and UN data
### Figure 7A
Digital transformation’s progress among countries

Variation in transactional CE Index scores between Q1 and Q2, by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Change in CE Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole sample</td>
<td>0.0%</td>
</tr>
<tr>
<td>Brazil</td>
<td>6.3%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3.9%</td>
</tr>
<tr>
<td>France</td>
<td>2.3%</td>
</tr>
<tr>
<td>Spain</td>
<td>1.6%</td>
</tr>
<tr>
<td>U.S.</td>
<td>1.5%</td>
</tr>
<tr>
<td>U.K.</td>
<td>0.5%</td>
</tr>
<tr>
<td>Germany</td>
<td>-1.4%</td>
</tr>
<tr>
<td>Australia</td>
<td>-1.8%</td>
</tr>
<tr>
<td>Singapore</td>
<td>-2.2%</td>
</tr>
<tr>
<td>Italy</td>
<td>-4.9%</td>
</tr>
<tr>
<td>Japan</td>
<td>-11.7%</td>
</tr>
</tbody>
</table>

Source: PYMNTS
N = 15,599: Complete responses, fielded April 7, 2022 - May 9, 2022
Additional information drawn from the World Bank’s Development Indicators and UNdata

### Figure 7B
Digital transformation’s progress among countries

Variation in access activities CE Index scores between Q1 and Q2, by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Change in CE Index Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole sample</td>
<td>2.9%</td>
</tr>
<tr>
<td>Brazil</td>
<td>11.0%</td>
</tr>
<tr>
<td>U.S.</td>
<td>4.2%</td>
</tr>
<tr>
<td>France</td>
<td>2.0%</td>
</tr>
<tr>
<td>Germany</td>
<td>1.4%</td>
</tr>
<tr>
<td>Australia</td>
<td>1.3%</td>
</tr>
<tr>
<td>U.K.</td>
<td>-2.7%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>-3.5%</td>
</tr>
<tr>
<td>Spain</td>
<td>-3.9%</td>
</tr>
<tr>
<td>Italy</td>
<td>-3.9%</td>
</tr>
<tr>
<td>Singapore</td>
<td>-4.3%</td>
</tr>
<tr>
<td>Japan</td>
<td>-8.5%</td>
</tr>
</tbody>
</table>

Source: PYMNTS
N = 15,599: Complete responses, fielded April 7, 2022 - May 9, 2022
Additional information drawn from the World Bank’s Development Indicators and UNdata
### Figure 7C
Digital transformation's progress among countries
Transactional CE Index scores, by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Q2 2022</th>
<th>Q1 2023</th>
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</thead>
<tbody>
<tr>
<td>Whole sample</td>
<td>28.0</td>
<td>22.4</td>
</tr>
<tr>
<td>Singapore</td>
<td>27.7</td>
<td>29.0</td>
</tr>
<tr>
<td>Brazil</td>
<td>25.4</td>
<td>25.6</td>
</tr>
<tr>
<td>Spain</td>
<td>26.6</td>
<td>26.6</td>
</tr>
<tr>
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</tr>
<tr>
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<td>19.9</td>
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<tr>
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</tr>
<tr>
<td>Japan</td>
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<td>10.4</td>
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</table>

Source: PYMNTS
N = 15,599: Complete responses, fielded April 7, 2022 - May 9, 2022
Additional information drawn from the World Bank’s Development Indicators and UNdata

### Figure 7D
Digital transformation's progress among countries
Access activities CE Index scores, by country

<table>
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<th>Country</th>
<th>Q2 2022</th>
<th>Q1 2022</th>
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<tr>
<td>Whole sample</td>
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<td>Singapore</td>
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<tr>
<td>Japan</td>
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</table>

Source: PYMNTS
N = 15,599: Complete responses, fielded April 7, 2022 - May 9, 2022
Additional information drawn from the World Bank’s Development Indicators and UNdata
Brazil’s digital transformation was propelled forward by a wave of domestic travel and travelers transacting online.

It is no coincidence that Italy and Japan were the two countries that underwent the greatest variation in CE Index scores between Q1 2022 and Q2 2022 after Brazil. Italy’s digital transformation backpedaled 5.2% quarter over quarter, and Japan’s declined 11%.

The digital transformations of countries like the U.K., Australia, the Netherlands and Germany remained largely stagnant between Q1 and Q2, by comparison. The CE Index scores of all of these countries varied less than 1% quarter over quarter.

This goes to show that getting more consumers online is only half the journey to realizing the full digital potential of the global economy. The second leg of that journey is about convincing these casual browsers to transact.
Business leaders and innovators have a willing and growing audience of consumers the world over eager to engage digitally with many of the activities that represent their day-to-day routine. In Q2, we found that consumers were 2.7% more likely to make purchases online, and when they did, took their experience and growing tech-savviness, confidence and trust to connect with other related activities.

We continue to see great potential in integrating payments into the vast majority of daily activities that, today, are largely nontransactional, and for which connected devices provide mostly access to services. These activities include messaging, interacting on social networks and streaming video and music content. These remain blue oceans of opportunity for innovators, be it messaging, social networks and/or streaming video and music.

These interconnected activities create the flywheel — the network effects that will bring even more consumers into the digital economy and inspire creative new ways for them to shop, pay, bank, move, have fun, be well, work, live, communicate and eat in an increasingly connected global economy. This is a world in which the digital and physical channels no longer compete — they are complimentary forces that will accelerate the growth of the digital economy.

The ConnectedEconomy™ Index was built using data collected from 15,599 consumers across 11 countries between April 7, 2022, and May 9, 2022. How The World Does Digital: The Impact Of Payments On Digital Transformation is the second edition in a continuing series of studies examining global consumers’ shift from an analog to a digital-first lifestyle.

The ConnectedEconomy™ Index measures consumer engagement across 37 key activities across 10 broad categories — the 10 pillars of the ConnectedEconomy™ — that represent key parts of consumers’ daily routines to track the progress of consumer engagement over time. The countries in our study include the United States, the EU-5 (France, Germany, Italy, the Netherlands and Spain), the United Kingdom, Brazil, Australia, Japan and Singapore, which together account for 50% of global GDP. Each national sample subset was census-balanced to mirror the current population in key demographic areas, allowing us to gauge the progress of digital transformation both within and between countries.
PYMNTS is where the best minds and the best content meet on the web to learn about “What's Next” in payments and commerce. Our interactive platform is reinventing the way in which companies in payments share relevant information about the initiatives that shape the future of this dynamic sector and make news. Our data and analytics team includes economists, data scientists and industry analysts who work with companies to measure and quantify the innovation that is at the cutting edge of this new world.

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