MasterCard

compendium

Exclusive insights from **MasterCard Advisors**

Measuring progress toward a cashless society

Author: Hugh Thomas
Contributors: Amit Jain, Michael Angus

Problem

Even though the world's population has access to multiple payment options, cash still accounts for 85% of all consumer transactions throughout the world.

Solution

MasterCard Advisors created a global study that showcases cash usage and the conditions that lead toward cashlessness.

There are several reasons not to like cash, but ours remains a cash-based world. The "Cashless Journey" project was undertaken to track progress towards cashless economies. The results are sometimes surprising. The journey is usually a gradual trek toward electronic payments shaped by local factors.

Cash accounts for about 85% of global consumer transactions **(1)**. This remains true even as much of the world's population is acquiring access to a multitude of non-cash options for making payments.

The burden of cash usage on national economies is substantial, representing as much as 1.5% of GDP **(2)**. Heavy cash usage may also be an indicator of other economic problems.

The "Cashless Journey" study measures nations' progress toward more modern, efficient electronic payment mechanisms by looking at the current share of cash versus non-cash payments for consumers (Share), how this Share has shifted in the past five years (Trajectory) and whether conditions exist for cash payments to move to electronic (Readiness).

Cash accounts for about 85% of global consumer transactions

1 **Share of cashless payments.** Electronic payments have made substantial inroads among consumers in some developed countries. Many of these markets have been building the infrastructure for cashlessness for a long time. Affordable and broadly available financial products, a vibrant and competitive merchant marketplace, a transparent and productive business environment — all of these are strongly correlated with progress toward cashlessness.

But even in the most cashless countries on Earth, like France and the Netherlands, cash still accounts for 40% or more of all consumer transactions. In many emerging markets, the cashless share of consumer transactions is effectively negligible **(Figure 1)**.

Meanwhile, in most countries the cashless journey has only just begun.

The persistence of cash is surprising given its inconveniences and the risks of carrying it around. Electronic payments, in contrast, are proven to boost economic growth while advancing financial inclusion. For those reasons, countries are working to make payment systems less dependent on cash. By several measures, they're making progress.

Looking across the 33 countries in the study, shares of cash versus non-cash fall into four categories which we refer to as: **inception, transitioning, tipping point** and **advanced**. Each is an indicator of progress along the road to going cashless **(Figure 1)**.

Most **inception** countries are developing nations where cash accounts for 90% or more of all consumer transactions. This is owed largely to low financial inclusion rates and the absence of a broadly available cashless infrastructure. In countries like Italy and Greece, however, the preference for cash is driven more by cultural factors.

The **transitioning** category includes a mix of developed and developing nations, where cash transactions account for between 80–90% of consumer payments. The reasons for heavy cash use in this category vary in

An important distinction

MasterCard Advisors' "Cashless Journey" study looks at all consumer payments, including those that happen beyond retail point of sale. This is an important consideration to underscore, as by including non-retail payment categories, like housing and bill payment, the total number of transactions becomes larger, while cash share becomes smaller. As in nearly all developed countries, the vast majority of non-retail payments are done by cashless methods. So, while cash typically accounts for the majority of retail payments in shops, when these other consumer payments (e.g. wire transfers to buy a car, direct debits to pay mortgage) are included, cash share of total volume of payments is reduced.

The persistence of cash is surprising given its inconveniences and risks

interesting ways. In Japan, the predisposition to cash appears to be cultural, helped by the country's saturated ATM network. Not too long ago, Brazil and China would have fallen into the inception category. Now their growing middle classes are stimulating the uptake of new banking and payment services. In Spain, high cash usage has much to do with that country's sluggish economy resulting from ongoing effects of the 2008 financial crisis.

Countries in the **tipping point** category have arrived at a moment where all the factors appear to be in place for a substantial move away from cash. The question is whether people will make the choice to change. With the cashless share ranging between 29–45% in tipping point countries, cash transactions persist in greater volume than we see among nations with similar infrastructures. This may have to do with a lack of cashless solutions for high value/low volume transactions. In other cases, cultural factors and the local economics of cashless payments conspire to keep cash in the lead.

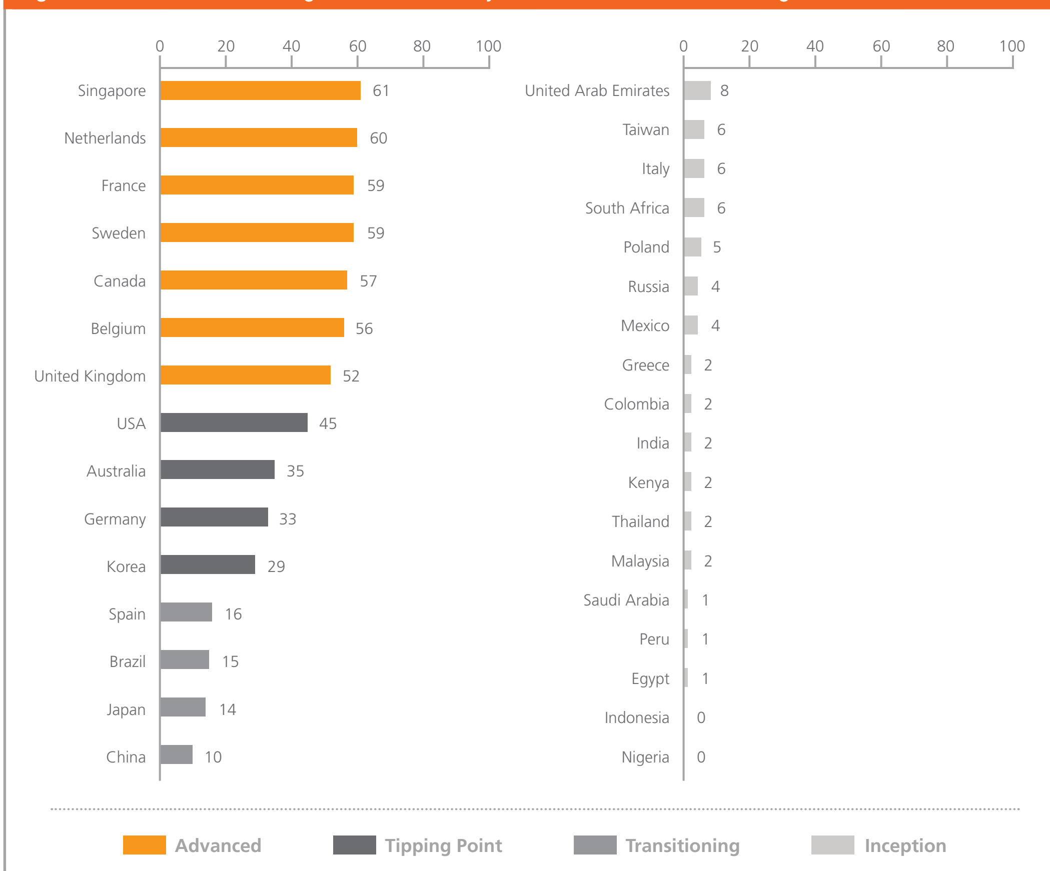
Countries where non-cash solutions are widely available and taken up by the vast majority of the population we refer to as **advanced**. In these countries, nearly everyone has at least a debit card and merchant acceptance is nearly ubiquitous. In these places, the benefits of paying cashlessly are well understood, and growth in cashless share is coming from point solutions for smaller remaining pockets of cash usage.

2 **Trajectory of cashless payments.** Trajectory indicates how cashless share of consumer payments has grown the five most recent years for which data is available. The results are indexed across all countries on a scale of 1–100 **(Figure 2)**.

With respect to the **inception** countries, the most interesting trajectory is in Kenya, where innovative payments solutions are bringing new participants at all income levels into the electronic payments ecosystem. The United Arab Emirates and South Africa are also seeing strong trajectories, driven mainly by financial-inclusion initiatives. Poland is showing growth in trajectory based largely on the rapid expansion of credit and debit.

Among **transitioning** countries, China has by far the strongest trajectory. China's growth can be attributed to rapid urbanization and a strong government push to replace cash with electronic payments.

Figure 1: Estimated Percentage of Consumer Payment Transactions Done Using Non-Cash Methods*



Source: MasterCard Advisors analysis, 2013 | BIS CPSS, 2011 | McKinsey Global Payments Map, 2008 | World Bank, 2011
*Non-cash methods include checks and electronic payments (e.g. cards, ACH)

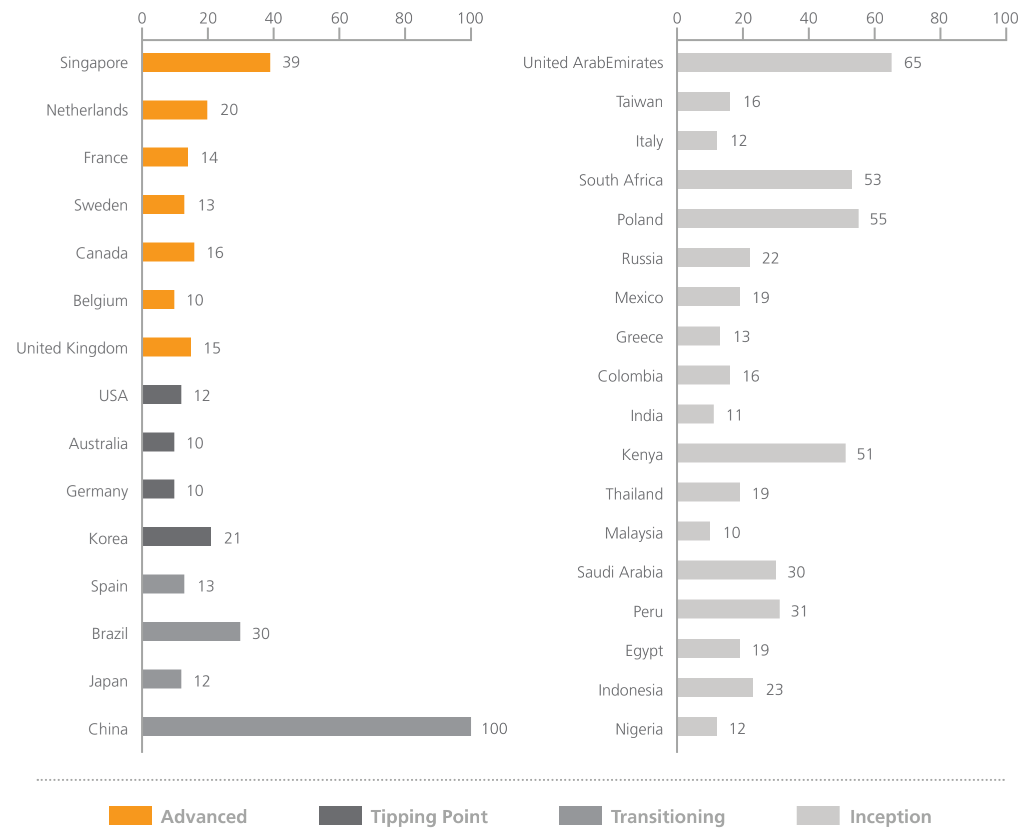
Countries in the **tipping point** category have mature payments markets and entrenched consumer habits. In the absence of disruptive new products, substantial share shift over a five-year period is unlikely. The exception may be South Korea, where accelerated share shift appears to be coming from a broader uptake of debit card solutions.

In the **advanced** category, developed nations like Belgium, France and Canada have been slowly shrinking their smaller pockets of cash use for the last five years. Further reductions can be expected, though in progressively smaller increments and over longer periods of time. Providers are beginning to address the long tail of smaller one-off payment locales in these countries that a growing number of cashless payment products has yet to reach. Unless disruptive new technologies emerge, further share shift among the advanced countries is expected to happen slowly.

Figure 2

Trajectory Score for Growth of Cashless Payments

Figure 2: Trajectory Score for Growth of Cashless Payments*



Source: MasterCard Advisors analysis, 2013 I BIS CPSS, 2011 I McKinsey Global Payments Map, 2008 I World Bank, 2011
*Non-cash methods include checks and electronic payments (e.g. cards, ACH)

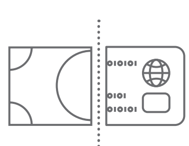
Figure 3

Pre-requisites for Going Cashless

Figure 3: Pre-requisites for Going Cashless

1 Access to financial services

Measures of the availability and affordability of financial services and whether people use bank accounts and electronic payment products.



2 Macro-economic and cultural factors

Measures the factors impacting preference for cash, such as ease of doing business and size of informal economy.

3 Merchant scale and competition

Measures indicating the potential for uptake of new payment solutions by large scale merchants. Measures the intensity of local competition.

4 Technology and infrastructure

Measures of access to and uptake of new technology as well as innovation. Also measures the quality of infrastructure.

Source: MasterCard Advisors analysis, 2013

3 **Readiness for cashless payments.** Certain factors are correlated to consumer cash usage and provide a measure of the degree to which conditions exist for a move away from cash. The factors comprising the score for readiness fall into four broad categories of nearly equal weight, as shown in **Figure 3**. While it may seem counter-intuitive that many of the inception markets showing nearly negligible share of cashless transactions also show strong scores for readiness **(Figure 4)**, in many of these cases change in infrastructure and financial inclusion have happened relatively recently, suggesting many of these markets may be poised for substantial growth.

With their strong scores for trajectory and readiness, our findings suggest that **inception** countries like United Arab Emirates and Saudi Arabia will continue to shift share at a rapid pace. This will be driven largely by government mandates to move benefits payments and worker salaries to cashless solutions. Kenya's readiness score, considered alongside its rapid recent trajectory toward cashlessness, indicates that innovation can trump traditional barriers to going cashless.

In the **transitioning** category, Spain and China are standouts. Spain's score for readiness suggests it should already be doing better than it is. China's score implies that its recent explosive growth in cashless payments has come in spite of lacking many of the pre-conditions for greater cashlessness. Japan is also a standout for having both a high readiness score and a low cashless share.

Countries in both the **tipping point** and **advanced** categories exhibit the macro-economic factors to go cashless. Among these 11 countries, we find vast differences in share scores despite apparently similar levels of macro-economic readiness to go cashless. Germany's score for readiness, for example, is only five points less than the Netherlands' and yet its cashless share is a little more than half that of the Netherlands'. In such cases, it is clear that other factors are at play beyond macro-economics.

Conclusion

The ways we pay for things has been changing more in the past 15 years than in the previous 150, and nearly every innovation we have seen has taken share away from cash. Yet despite this progress, cash today remains the most commonly used method of payment when looked at from a global perspective. In many ways, the global cashless journey is still just getting underway.

Figure 4

Readiness Scores Indicating Presence of Macro-Economic Pre-requisites for Going Cashless

Figure 4: Readiness Scores Indicating Presence of Macro-Economic Pre-requisites for Going Cashless

Source: MasterCard Advisors analysis, 2013 | BIS CPSS, 2011 | McKinsey Global Payments Map, 2008 | World Bank, 2011

Government focus and technological innovation can create shortcuts to going cashless

Countries that we've described here as **inception** are at the outset of their journey. They can benefit from undertaking the traditional path to cashless, but should also watch for innovative shortcuts. Some **transitioning** countries are quickly shifting share away from cash, while others have stalled in their progress and may require renewed focus. Many **tipping point** countries remain cash-intensive for cultural reasons. Here, the focus needs to be on educating consumers on the benefits of going cashless. Finally, countries in our **advanced** group have got there through years of investment, for example in infrastructure, technology, financial inclusion and education. There, continued progress will come from innovation — building new solutions for payments that once could only be done using cash.

In observing the many paths that countries are taking to get closer to cashless, we have come to realize that local circumstances dictate both the path of the journey and the destination. There is a traditional path to going cashless, but experience is showing that government focus and technological innovation can create shortcuts and may also change what the final destination looks like. Kenya is unlikely to take the same path to cashlessness as Sweden, and its final destination will likely look different as well.

SOURCES

1. MasterCard Advisors analysis, 2013; BIS CPSS, 2011; McKinsey Global Payments Map, 2008
2. 2013 studies by Tufts University, Fletcher School and Steinbeis University Research Center for Financial Services