Time is Money:
How Digital Remittances Save Valuable Time for Americans and their Families around the World
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Executive Summary

Hundreds of millions of people send and receive international remittances every year. Over 258 million people currently live outside their country of birth. This number is up from 173 million in the year 2000. Sending money back home to family is a part of the social contract many of these migrants make when they leave in search of a better life. Unfortunately, the process for sending and receiving remittances remains archaic and ultimately costs migrants and their families millions of hours and billions of dollars every year.

When we think about the cost of remittances, we often focus on the fees that providers charge to send remittances. But, the time spent on the process of sending a remittance is equally problematic. Senders and recipients of remittances often have to travel to a physical store to send or pickup a remittance. They also often have to stand in long lines and can be turned away due to the store closing or not having sufficient cash on hand to satisfy demand. Senders and receivers then have to travel back home, or elsewhere, to utilize the money. This entire process can take a significant amount of time, and that time is incredibly valuable.

Most remittance senders and recipients are working individuals. Their time has a value that has been set by the market at an hourly wage. We can use that hourly wage to estimate the cost of lost time. We call this estimate the time-cost.

This is the first study to measure the time-costs associated with sending and receiving remittances. We fielded two surveys in 2017 to gather our data. We surveyed over 500 people in Mexico who have received some form of a remittance over the past year and over 500 people in the US who have sent a remittance in order to understand how much time it takes to send and receive a traditional remittance. We then compared that with data and estimates from the Xoom mobile-based deposit to account service to understand the time-cost savings of digital remittances. Here are the key findings from our research.
On the sending side of the remittance:

People who use traditional remittances spend on average **30 minutes** standing in line and walking to and from a remittance sending location. Over the course of a lifetime, that is **over 10 days spent** just trying to send money.

- In aggregate, Americans spend nearly **300 million hours** standing in line and walking to and from a remittance sending location.

- Moreover, since almost all remittance senders work and the median hourly wage in the US for first generation immigrants is $19.76 we can calculate the lost monetary value from people spending time picking up their remittances at nearly **$6 billion** in aggregate.

- A typical digital remittance [meaning using Xoom deposit to account] takes **approximately 3 minutes**.

- That is **27 minutes saved** on average every time someone sends a remittance, around **10 days** given back to that person over the course of their life, nearly **300 million hours** and over **$5 billion** in time-cost in aggregate that could be put to better use.

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**30 min** On average spent per transaction

**10 days** Spent over the course of a lifetime
On the receiving side of the remittance:

People who use traditional remittances spend on average **41 minutes** standing in line and walking to and from a remittance pickup location. Over the course of a lifetime, that is **over 15 days spent** just trying to access cash.

- In aggregate, Mexicans spend over **100 million hours** standing in line and walking to and from a remittance pick up location.
- Moreover, since 66% of remittance recipients work and the hourly wage in Mexico is $6.80 we can calculate the lost monetary value from people spending time picking up their remittances at **$462 million** in aggregate.
- A typical digital remittance [meaning using Xoom and deposit to account is available to a recipient in **less than 1 minute**.
- That is **40 minutes saved** on average every time someone receives a remittance in Mexico, **15 days** given back to that person over the course of their life, nearly 100 million hours and nearly $450 million in time-cost in aggregate that could be put to better use.
We know from previous research that technology has transformed the fee costs associated with remittances. This study proves that technology is transforming every aspect of the remittances industry and returning all of that lost time back into the hands of individuals and families around the world.

The future for remittances will no doubt be driven by technology, but for now, most remittances continue to be sent through traditional channels. That means that millions of hours will continue to be wasted on unnecessary lines, paperwork, and procedures.

There are three fundamental elements that if achieved would enable digital remittances to reach their full potential:

I. **Universal Identity**

Remittance providers are required by regulation to identify their customers. The World Bank reports that there are currently 800 million people without any formal identity documents.

II. **Universal Financial Inclusion**

Transaction accounts are essential for digital remittances to be delivered in a safe and efficient manner. Currently there are nearly 2 billion people around the world without access to formal transaction accounts.

III. **Universal Internet Penetration**

The Internet is an open platform upon which innovative software providers can offer tailored remittance applications that can be offered at scale. There are currently 3.5 billion people yet to connect to the Internet.
Many of those who are currently without formal identity, financial accounts, and/or Internet access are those that would benefit the most from digital remittances as they often live in remote areas with few options. If we are able to achieve the goals of universal financial inclusion, Internet penetration, and formal identification, we can see time savings far greater than what is estimated in this report.
Introduction

Every day millions of Americans engage in a ritual that simply makes no sense in today’s technology-driven age.

They travel miles to a storefront, bodega, or bank during normal business hours and they fill out a tedious paper form. This form asks for the same information every time, but despite filling out the form in the past, it can often be blank the next time. They then stand in lines that sometimes go out the door, particularly if it is near the end of a workday. When they finally reach the front, they hand over a stack of cash and are handed a receipt. They then trust that the money will be delivered to their family member on the other side of the world. They oftentimes have to wait a significant period of time before they receive confirmation that their family member on the other side of the world received the money. This is the process for sending a remittance, a low-value, cross-border, person-to-person payment that is typically sent between family members on a regular basis.¹

Over 258 million people currently live outside their country of birth.² This number is up from 173 million in the year 2000. The US foreign born population currently numbers over 40 million, up from under 10 million in 1970.³ Many of these migrants are pursuing opportunity, while others are escaping challenging situations. Regardless of the reason for migration, a part of the social contract many of these migrants have is to send money back to loved ones in their home countries. A study of Latino migrants to the US, for example, found that two-thirds of them send remittances.⁴

Millions of people around the world receive these remittances and undergo an even more painful, time-consuming process. They travel miles to a storefront, bodega, or bank often on foot rather than in a car. They also have to fill out tedious paperwork every time they pick up money. Their lines can be far longer than those in the US. When they reach the front of the line, they may be told that there is no more cash on hand and that they have to return another day. If they are able to pick up the cash, they then have to walk home carrying a large sum of money, making them a prime target for theft.

² Over 258 million people currently live outside their country of birth. This number is up from 173 million in the year 2000. The US foreign born population currently numbers over 40 million, up from under 10 million in 1970. Many of these migrants are pursuing opportunity, while others are escaping challenging situations. Regardless of the reason for migration, a part of the social contract many of these migrants have is to send money back to loved ones in their home countries. A study of Latino migrants to the US, for example, found that two-thirds of them send remittances.
There have been efforts to understand the time costs associated with other types of payments. BCG released a study in 2011, which estimated that mobile financial services produce a savings of 1% of income due to reduced travel and wait time in Pakistan, Bangladesh, India, Malaysia, and Serbia. A study from the Reserve Bank of Kansas City looks at a number of studies from around the world that have used surveys of merchants and consumers to try and understand the time costs associated with payment methods such as cash, check, and card. A PayPal study from 2016 utilized a survey to understand time costs as part of an overall estimate on the costs associated with charities accepting charitable donations. A pilot program in Niger found that switching government payments from cash to mobile payments saved recipients 20 hours in travel and wait times over the course of 5 months. This is the first study to attempt to quantify the time costs associated with remittances.

Remittances can be used to stimulate economic activity in the migrant’s country of origin. They can be a lifeline payment to families that otherwise could not afford food, healthcare, or education. The localized payments that remittances enable form the underlying economic activity that can then be built upon to enable credit to flow, taxes to be collected, and services to be delivered. They can also be used for investments in local businesses. Moreover, remittance income can be used to demonstrate eligibility for credit within a local economy.

Remittances also have positive macro-economic effects. There is a positive correlation between increased remittances and enhanced financial sector development including enhanced deposits and credit. When other foreign direct investment types are cut off due to crises in a particular country, remittance flows become an even more important source of external finance.

Much of the economic research on remittances has focused on the monetary value that they deliver as well as their high monetary service costs. This study takes a very different approach and attempts to understand one of the broader economic impacts of remittances, namely time.
This study is based upon surveys conducted in the US and Mexico to understand the time-costs associated with sending and receiving remittances. The survey was run online in the US and in person survey in Mexico. There were greater than 500 responses for each of the surveys. The data from Xoom comes from timestamps that are collected when a user sends a remittance as well as estimates about the use of the application for the first time and subsequent uses.

Respondents range from young to established

Many of the findings in this report reflected the findings of past research. The annual UN report on migrations demonstrates that the large majority (74%) of migrants are of working age (20-64 years old). The survey conducted for this report found that the 2016 median household income for those sending remittances at a storefront was about $50,000, similar to US government statistics on median household income.

Receivers of remittances surveyed in this study were also representative of the broader demographic. In the survey presented in this report, nearly 50-50 male to female response ratio and aligned with government statistics on the Mexican population with 73% of respondents coming from urban areas and 26% coming from rural areas of the country.
Also, 98% of respondents reported having less than 20,000 pesos in monthly household income, which is representative of income levels in Mexico, where average monthly household income is 13,239 pesos.

**Average monthly household income: 13,239 pesos**

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Remittances
Many commentators on remittances have noted the problem of long lines, in particular in cities where there is a high concentration of migrants. The store fronts that remittances are sent through are often only open during set business hours. Moreover, because a majority of migrants work during business hours, the time during which they can send remittances is limited, leading to long lines at the open and close of business. Also, remittance senders traveling to these storefronts can be prime victims for crime because of the large amount of cash they are carrying.

Digital solutions are available to use 24 hours a day. They can also be accessed from anywhere there is a connection. And, they can be sent from the comfort and safety of a remittance sender’s home.

The survey research presented in this report demonstrates the tremendous time-cost benefits that accrue to senders of remittances when they choose to use a digital channel. It was very surprising to see how much time millions of Americans spend on time walking to remittance locations, standing in line, and walking home.

People who use traditional remittances spend on average 30 minutes standing in line and walking to and from a remittance sending location. The survey presented in this report found that over 50% of migrants send a remittance once per month, and this is largely in line with past research studies. Over the course of a lifetime, that is over 10 days spent just trying to send money. In aggregate, Americans spend nearly 300 million hours standing in line and walking to and from a remittance sending location. Moreover, since almost all remittance senders work and the median hourly wage in the US for first generation immigrants is $19.76 we can calculate the lost monetary value from people spending time picking up their remittances at over $5 billion in aggregate.
A typical digital remittance [meaning using Xoom deposit to account] takes approximately 3 minutes. That is 27 minutes saved on average every time someone sends a remittance, around 10 days given back to that person over the course of their life, nearly 300 million hours and over $5 billion in time-cost in aggregate that could be put to better use. These hours could be used to generate money for working American families, on local community activities, or simply quality time with family.

The Receiving Side of the Remittances

Remittances often serve as lifeline payments to family members who receive them, but they can also be investments or simply additional family support. About 10% of respondents to the survey in this report said they were using the remittance as a loan. Research has demonstrated that remittances are typically received on a monthly basis, and the survey commissioned for this report found similarly that 58% of respondents receive remittances at least once a month. Remittance receipts are also a major part of the economy in many countries around the world. The World Bank reports that remittances make up more than 10% of GDP in some 30 developing countries.

The survey we ran in Mexico of remittance recipients was highly representative. We had respondents from every age group, a near 50-50 male to female ratio, and an urban-rural split (73%-27%) that is nearly equivalent to statistics published by the Mexican government (80%-20%). The average income of our respondents was also quite close to the reported average monthly household income in Mexico of 13,891 pesos.

The time costs of receiving traditional remittances are even more significant than the sending side. In Mexico, people who use traditional remittances spend on average 41 minutes standing in line and walking
to and from a remittance pickup location. Over the course of a lifetime, that is over 15 days spent just trying to access cash. In aggregate, Mexicans spend over 100 million hours standing in line and walking to and from a remittance pick up location. Moreover, since 66% of remittance recipients work and the hourly wage in Mexico is $6.80 we can calculate the lost monetary value from people spending time picking up their remittances at $462 million in aggregate.

A typical digital remittance [meaning using Xoom and deposit to account] is available to a recipient in less than 1 minute. That is 40 minutes saved on average every time someone receives a remittance in Mexico and 15 days given back to that person over the course of their life. If we aggregate these findings to the millions of Mexican citizens that receive remittances we estimate nearly 100 million hours and nearly $450 million in time-cost savings from switching to digital remittances. The time saved opportunity cost savings through digital remittances could be redirected into positive economic activity that could result in productivity increases for the entire economy.23

Second, many receivers of traditional remittances fear that the cash they have will be stolen. 57% of respondents said that safety was a concern for them. 56% of those who were concerned about security said that getting robbed on the way home was the largest concern while 34% said that getting robbed at the place of pickup was the largest concern. This finding supports past research, showing carrying large amounts of cash while traveling carries risks.24 Security is a major factor for both senders and receivers of remittances who want to be assured that their money will be securely transferred.

The survey revealed a few additional insights on the challenges associated with traditional remittances, that although not related to time costs are also worth noting. First, was the finding that 73% of respondents said that they had experienced problems when picking up remittances, indicating that the time costs may be even greater than estimated because challenging transactions often take more time. 58% of respondents said they had experienced a situation where no cash was available at the pickup location meaning they had to go back home and return at another time or travel to another storefront. 41% of respondents had experienced a problem with the paper work associated with a traditional remittance whether that be improper transaction number, name, or address.
The Future of Remittances

Most remittances continue to be sent through traditional channels.\textsuperscript{26} In a survey by Manuel Orozco and Nancy Castillo of Latino migrants to the US found that 50% wanted a more efficient method for sending remittances.\textsuperscript{27} The receiving side survey that was run for this report found that 52% would prefer a new way to pickup their remittance than the current situation. There is a strong interest on both sides of the transaction for more efficient and secure solutions. Digital remittances are the ideal solution for both the sending and receiving side of remittances.

For digital remittances to completely transform the future of the remittances industry, however, certain underlying factors must be in place. In order for the benefits of end-to-end digital remittances to scale, both sides of the transactions should have formal identity documents, bank accounts, and access to the Internet.

\section{Universal Identity}

There are risks associated with remittances. Namely that money will facilitate illicit activity (money laundering) or to support violent activity (terrorist financing). One of the mandates that regulators place on formal financial institutions in order to reduce the risks of remittances is to secure identification information about individuals when they sign up for an account. Yet, there are 800 million people around the world who do not have a formal identity document. These people can still receive a remittance, but it will likely involve cash payment and may involve actors outside of the formal financial system. Until these 800 million individuals are granted formal identity documents, they will continue to suffer from many of the time delays described above. Moreover, the ideal identity solution would be a digital one so that signing up for financial accounts can be done in digital form and can be verified in real-time.
II. Universal Financial Inclusion

The lack of access to a formal bank account is a major hurdle holding back digital remittances. Digital financial inclusion has been shown to reduce income inequality and help in managing expense volatility. Financial inclusion can help to cut down the number of intermediaries currently involved in the remittance process and thereby lower the costs of remittances. Remitters who use account-based transfers send on average 30% more than those using more informal channels. Another benefit of banking for remitters and receivers is government deposit insurance schemes, which help enhance trust and usage. Financial inclusion can also help in combatting financial crime because of the enhanced data available in digital remittance transactions via bank transfers. There are over 1.5 billion people around the world who lack access to a formal financial account. For them to truly benefit from digital remittances these individuals must secure access to a transaction account.

III. Universal Internet Penetration

Mobile money solutions are starting to integrate and offer cross border transactions, but these solutions are still few in number. Moreover, these solutions have certain limitations, particularly when it comes to cross border transactions, because they are often linked to a domestic telecommunications network. Innovative work is being done in the telecom industry to provide interoperability between telecommunications providers, but the ideal solution for unlocking digital remittances is through the Internet.

Convenience and cost will be key to making online financial services succeed. Internet-based solutions lower costs by allowing for competition. The Internet is an open platform upon which a variety of applications can be created, and solutions can be tailored to the needs of specific users with particular needs. Smartphone based
services can provide added convenience that feature phone solutions simply cannot offer. Smartphones, for example, can give both senders and receivers of information real-time updates on the status of money transfers, thus injecting enhanced, and much needed, trust into remittance transactions. The smartphone can also display information in multiple languages, which could help to resolve one of the problems with traditional remittance providers, namely a language gap for migrants sending remittances. There are over 3.5 billion people around the world who do not have access to the Internet. Digital remittances will not be fully unlocked as a solution until there is universal Internet access. The public and private sectors will need to collaborate in order to achieve the three goals laid out of above. Identity can be digitized through private sector technology, but will likely continue to be issued and managed by government. The private sector will continue to offer and operate transaction accounts, but governments can incentivize the use of these accounts through delivering benefits directly into them. Finally, the private sector is continuing to build out broadband networks, but government policy related to spectrum and rights of way will be instrumental in the rollout of the Internet globally. Public-private partnership will be key in delivering universal identity, financial inclusion, and Internet access.

Only about 40% of the global population has access to the internet
Conclusion

The UN has a Sustainable Development Goal of lowering the costs of remittances to 3% by 2030. Digital remittances will no doubt help to achieve that goal.

But the time savings from digital remittances may be even more significant than the monetary savings.

This is the first ever survey to analyze the time-costs associated with traditional remittances. The survey found large time-costs associated with both the sending and receiving sides of remittances. Data and analysis from Xoom has demonstrated that the time-costs associated with digital remittances are extremely low.

Digital remittances, however, will not reach their full potential until there is universal identity, universal financial inclusion, and universal Internet penetration. It is time to make a commitment across the public and private sectors to help achieve these goals. With these elements in place, the future of digital remittances could yield massive time savings for people around the world.

The time-cost savings of digital remittances could return millions of hours to migrants and their families that could be put to far better use.
References:


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Mean Hourly Wage (All Occupations) - $23.86; source: BLS, May 2016 National Occupational Employment and Wage Estimates, United States (https://www.bls.gov/oes/current/oes_nat.htm#00-0000)
Mean hourly wage, corrected for share of immigrant workers, who earn 20% less than non-immigrant workers (US nationals).
- """"In 2016, there were 27.0 million foreign-born persons in the U.S. labor force, comprising 16.9 percent of the total""""; source: BLS, FOREIGN-BORN WORKERS: LABOR FORCE CHARACTERISTICS — 2016 (https://www.bls.gov/news.release/pdf/forbrn.pdf)
- """"In 2000, first generation immigrants earned 20 percent less than the typical non-immigrant worker""""; source: Brookings Institution, ECONOMIC MOBILITY OF IMMIGRANTS IN THE UNITED STATES (https://www.brookings.edu/wp-content/uploads/2016/06/07useconomics_haskins.pdf);
Mean hourly wage, corrected for share of non-immigrant workers, who earn 20% more than immigrant workers

Calculated using an estimate of the time it takes to sign up for a Xoom account using a mobile phone (conservative estimate at 10 minutes) as well as 11 subsequent transactions once sign up is completed (conservative estimate 2.5 minutes) averaging over the year at 3.12 minutes.


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27 Manuel Orozco, with Elisabeth Burgess, and Netta Ascoli, Is there a match among migrants, remittances and technology? September 30th, 2010


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