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OF CHANGE

CRYPTOCURRENCIES AND THE FUTURE OF MONEY

## Money and Trust in Mexico

Content

I. BACKGROUND

As official legal tender in Mexico, Canada and the United States until the mid-1800s, the Mexican Peso is one of the oldest currencies in North America. Today, Mexico's currency is the 15th most traded in the world, and is the the most traded of all Latin American countries[1]. This reflects the strength of both the Mexican economy and it's currency.

The current denomination of the Mexican Peso comes from 1993, when, after the high inflation of the late 80s, president Carlos Gortari stripped three zeros from the Peso creating the Nuevo Peso (New Peso). In 1996, the word Nuevo (new) was removed and the currency was once again named Peso (without changing its denomination).

Although Mexico faced periods of high inflation during the mid-90s, with almost 35 % of annual inflation in 1995 and 1996, this can't be compared with the hyperinflation of other Latin American countries (Argentina and Brazil) during the 90s. Therefore, we can say that, overall, since the implementation of the New Peso in 1993, Mexico's currency has been fairly stable, helping to boost the country's economic development in the 21st century.

Money Supply in Mexico
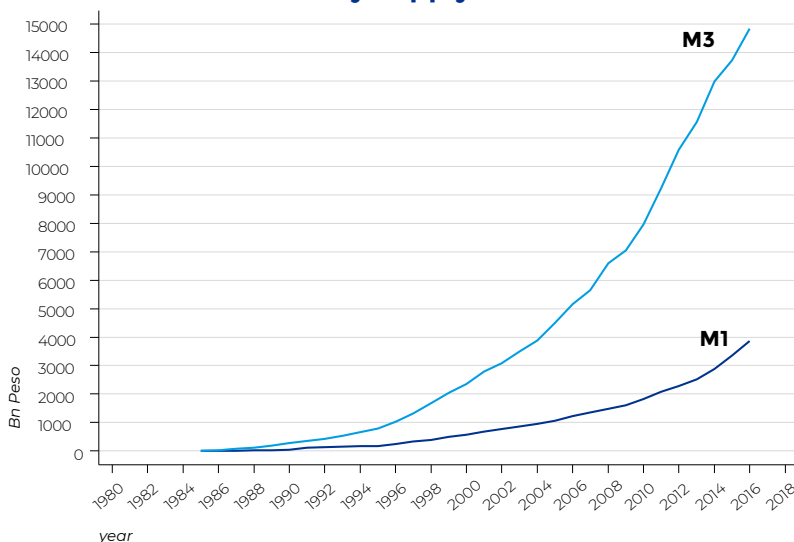
## Consumer Prices in Mexico
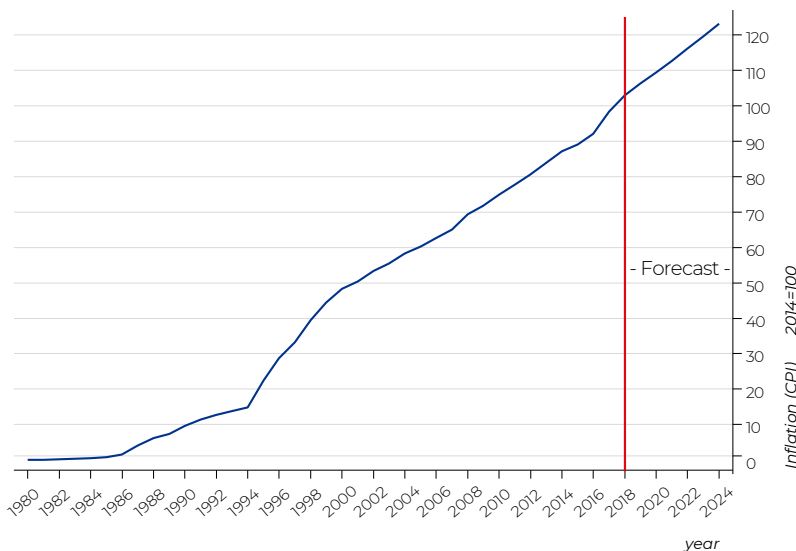
DATA SOURCE: IMF International Finance Statistics (left) and IMF World Economic Outlook (right)

1   According to the BIS Triennial Central Bank Survey. Available at: https://www.bis.org/statistics/rpfx19_fx.pdf

II. CURRENT USAGE OF MONEY IN MEXICO

The evidence from the usage of different types of money in Mexico suggest that, like it's Latin American neighbors, Mexico is a highly financialized economy. Nevertheless, in contrast to the other Latin American countries (like Brazil), Mexicans still use significantly more cash than other methods of payment. According to the results of our survey, 86.2% of Mexicans use cash at daily or weekly frequencies. This number is significantly larger than the that of those who use credit cards (61.9%) or debit cards (70%) at the same frequencies. The share of Mexicans that use online payment companies is in line with other countries in our sample[2], with about a third of the population (35.1%) using these technologies at daily or weekly frequencies.

Frequency of usage

Daily   Monthly
Weekly   Never
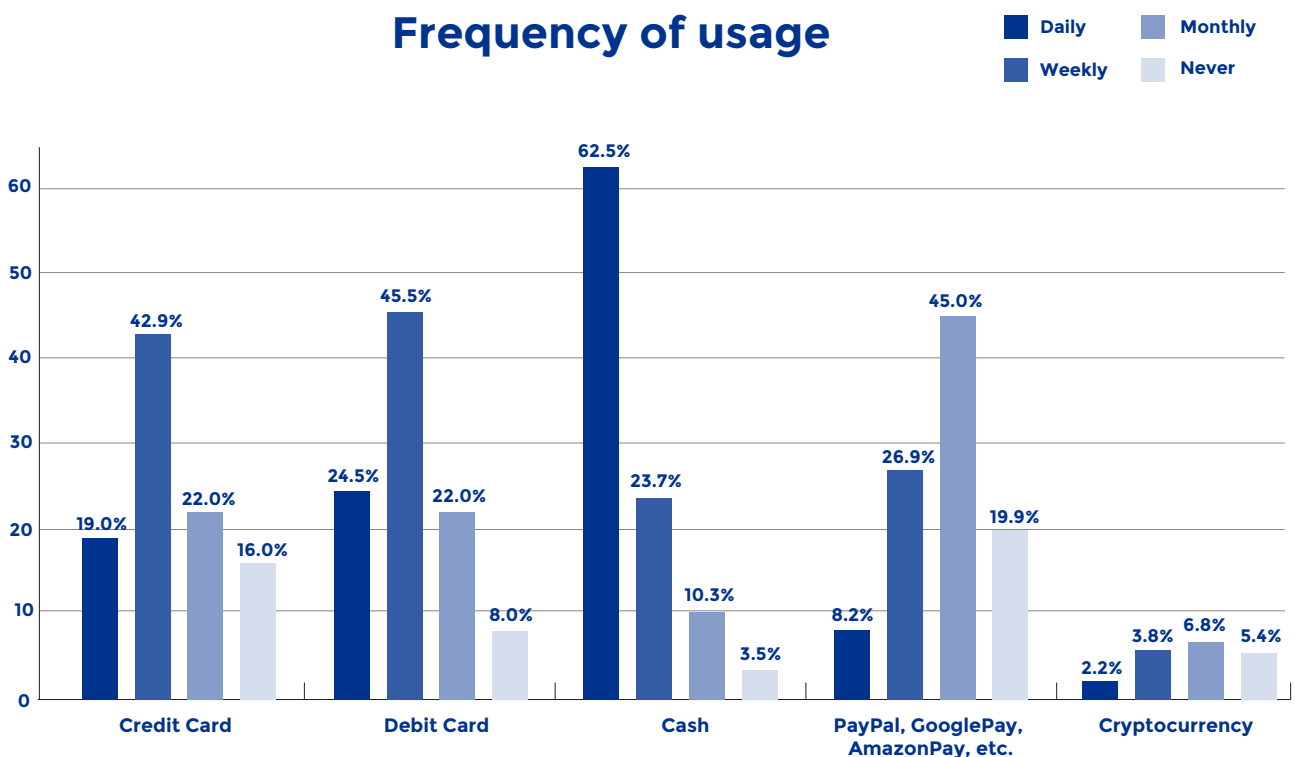
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

As it would be expected, cryptocurrencies are the least used method of payments in Mexico. Our survey results indicate that only about 6% of Mexicans use cryptocurrencies at the daily or weekly frequencies. This number is similar to other countries excluding Brazil, which has a significantly higher share of people using cryptocurrencies at these frequencies.
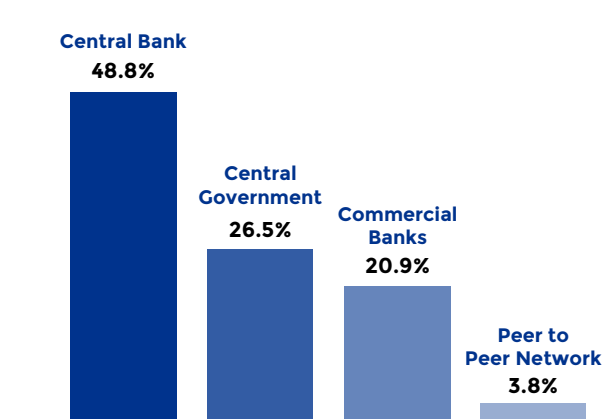
2   Sample includes Argentina, Brazil, France, Germany, Mexico, Spain, UK, USA.

## III. KNOWLEDGE OF AND TRUST IN MONEY IN MEXICO

The results from our survey indicate that, amongst all the Latin American countries that we have considered in our study (Argentina, Brazil and Mexico), Mexicans are the ones that have the most accurate understanding of central bank independence. When asked who is responsible for creating and managing money in their country, almost fifty percent of respondents (48.8%) gave the central bank as an answer. The central government and commercial banks were the second and third most voted institutions, with 26.5% and 20.9%, respectively. Only 3.8% of respondents believed that money is created and managed by peer-to-peer networks.

When asked who should create and manage money in Mexico, the distribution of the answers across the different options was very similar to the previous question, indicating that Mexicans are, on aggregate level, fairly satisfied with the way money is being created and managed in the country.

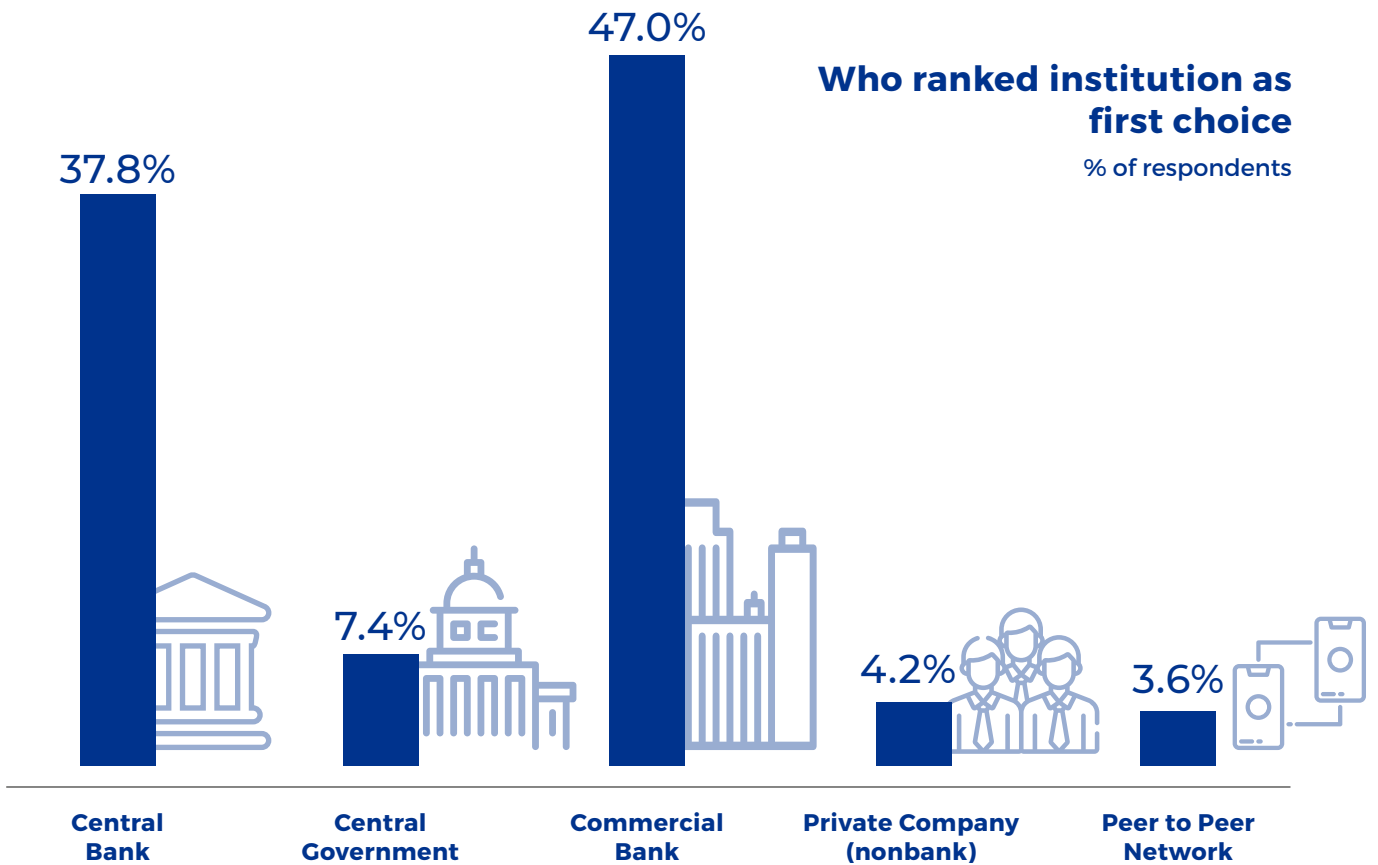### Who creates & manages money in Mexico?

Central Bank 48.8%
Central Government 26.5%
Commercial Banks 20.9%
Peer to Peer Network 3.8%

Who should create & manage money in Mexico?

Central Bank 53.3%
Central Government 22.8%
Commercial Banks 18.3%
Peer to Peer Network 5.6%
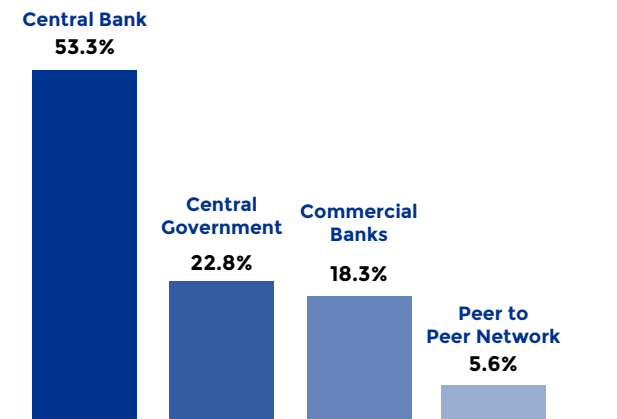
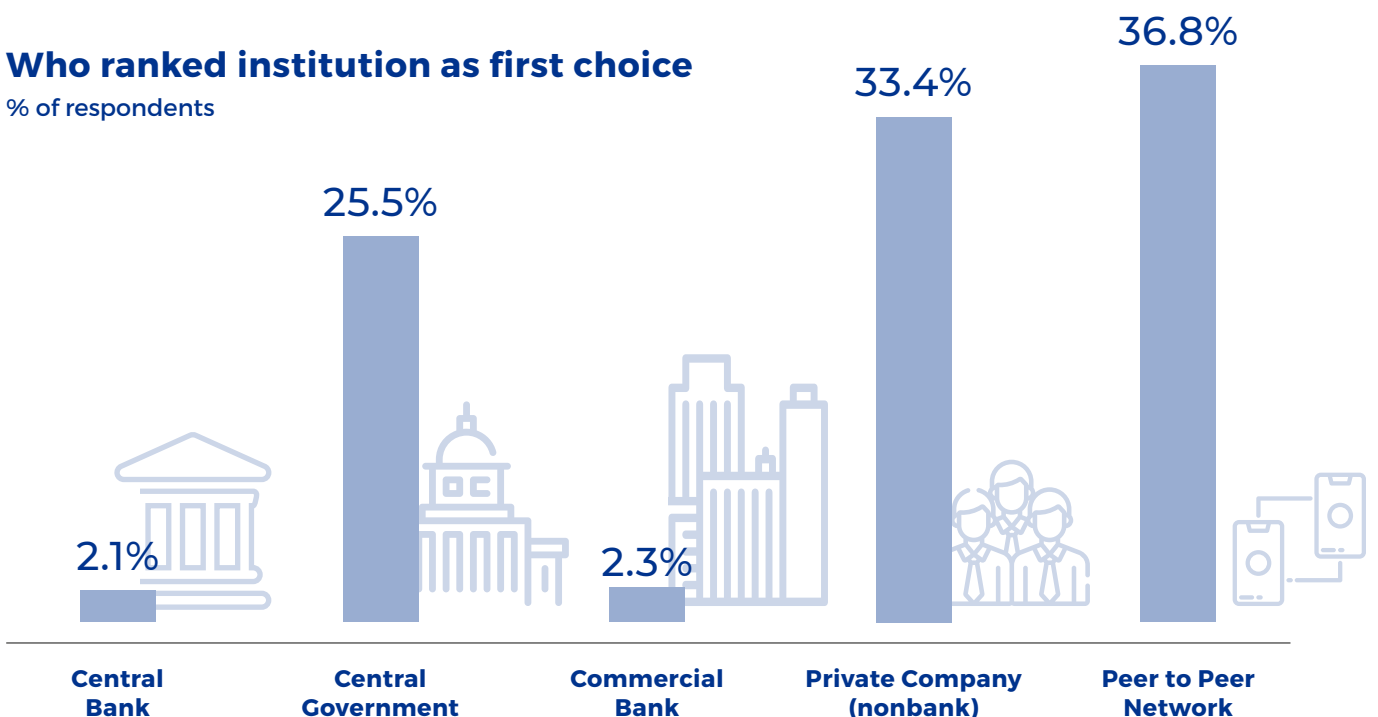**SOURCE:** IE Survey 'Cryptocurrencies and The Future of Money'

"How would you rank these institutions in terms of how much you trust them to create and manage money in your country?"

This section presents the results from our survey regarding what Mexicans have answered when they were asked to rank different institutions in terms of how much do they trust them to create and manage money. Although the general ordering of these preferences follows is similar to those found in the previous question (where they were asked 'Who Should Create & Manage Money in Mexico'), there seems to be a curious inconsistency when it comes to trust in commercial banks. In the previous question, which gave exclusive options, only 18.3% of Mexicans defended that commercial banks should be responsible for creating and managing money. Nevertheless, when asked to attribute levels of trust to different institutions to perform the same task, commercial banks ended up as being the institutions with the highest level of trust (together with the central bank). One of the reasons for this might be that commercial banks are the "second-best" option for a significant number of Mexicans, hence giving them a very high level of trust even though they are the first option to just 18.3% of Mexicans in our sample.

Who ranked institution as first choice
% of respondents

37.8% — Central Bank
7.4% — Central Government
47.0% — Commercial Bank
4.2% — Private Company (nonbank)
**3.6%** — Peer to Peer Network

The central government falls well behind the central bank and commercial banks with only 7.4% of respondents ranking them as their first choice when it comes to creating and managing money in Mexico. The distribution of trust in the central government to create and manage money in Mexico is more concentrated in intermediate levels of trust than in other Latin American countries (Argentina and Brazil). This low level of trust in the central government to create and manage money is similar amongst all countries in Latin America but is, by far, the lowest in Mexico.

In terms of least preferred institutions for creating and managing money, peer-to-peer networks and private (nonbank) institutions appear to have little support amongst Mexicans with under 5% of respondents ranking these as a first choice and over 30% ranking them as least preferred.

Who ranked institution as first choice
% of respondents

2.1% — Central Bank
25.5% — Central Government
2.3% — Commercial Bank
33.4% — Private Company (nonbank)
36.8% — Peer to Peer Network

**SOURCE:** IE Survey 'Cryptocurrencies and The Future of Money'

Being an important commercial partner to the US, the 2008 crisis had a significant impact on Mexico's economy resulting in a contraction of more than 5% of the GDP in 2009. Possibly attributable to this sizable economic downturn, when asked if they believed that government has taken meaningful steps by regulating the banking sector since 2008 to prevent another financial crisis, the most common response given by Mexicans was no (42%). From the remaining 58% in our sample, 35% answered that the government has taken meaningful steps while 24% said they didn't know.

Government has taken meaningful steps by regulating the banking sector since 2008 to prevent another financial crisis

42%

35%

24%

- No
- Yes
- Don't know
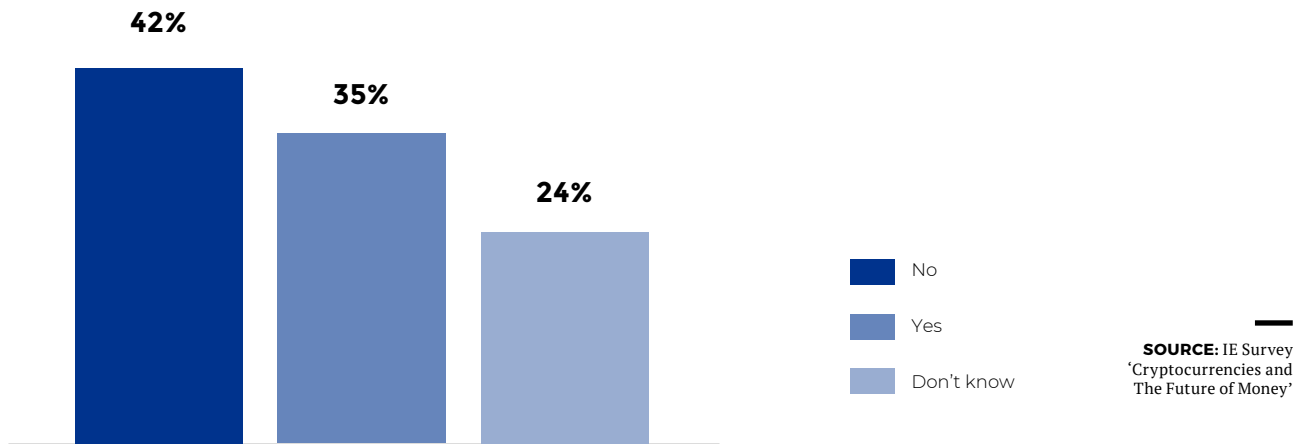
When asked why the government has not taken such meaningful actions, the responses of Mexicans were mainly concentrated around two options. In the most common answer, 43% believe that government does not have enough expertise to make the right reforms. Another 35% of Mexicans answered that that this is an important issue for voters but there is too much influence on government for any meaningful changes to happen. Of the remaining options, 5% said this is not an import issue for the voters, 12% defended that no reform is needed and 5% believe in some other reason.

Why no meaningful steps have been taken

35%

43%

5%

12%

5%

- It is an important issue for voters but there is too much influence on government (via lobbying, etc.) for any meaningful changes to happen
- Government does not have enough expertise to make the right reforms
- It's not an important issue for voters
- No reform is needed, as financial crises are inevitable regardless of government policy
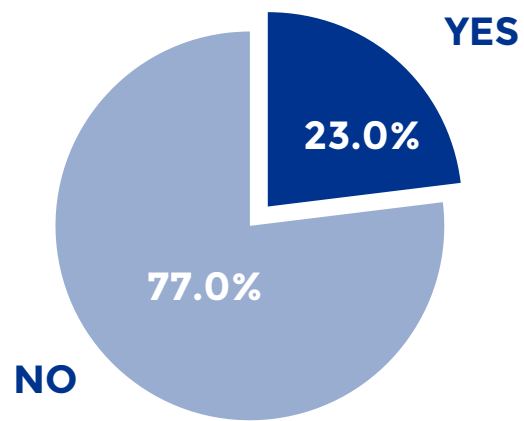- Others
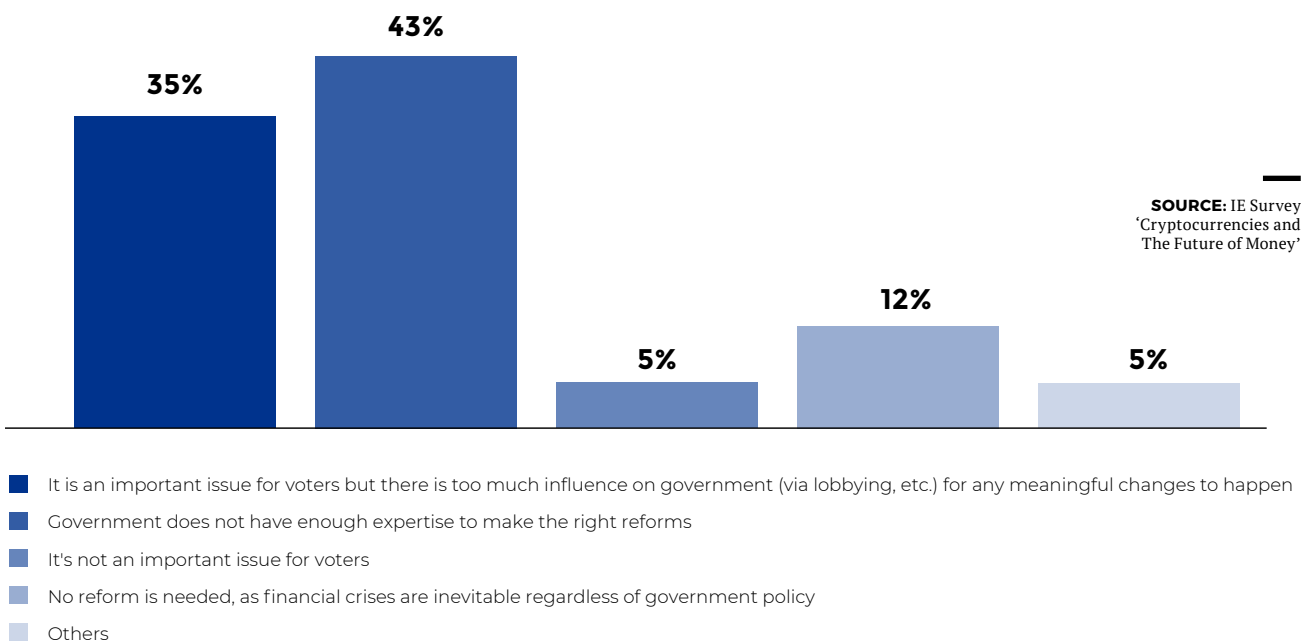
IV. ATTITUDES TOWARD CRYPTOCURRENCIES IN MEXICO

According to the results of a 2019 Statista Global Consumer Survey[3], Mexico is amongst the countries where cryptocurrencies have been relatively well accepted by the population. The country ranks sixth in terms of cryptocurrency adoption worldwide, with 12% of respondents saying they use or own cryptocurrencies.

The results from our survey are similar to those found by Statistica, albeit with a significantly higher percentage of people claiming to own cryptocurrencies. When asked if they have heard of cryptocurrency, 79.6% of Mexicans in our sample responded positively. Regarding ownership, 23% of Mexicans in our sample said they own some cryptocurrency. While the number of Mexicans that said they own cryptocurrency in our survey is significantly larger than the one found by Statista Global Consumer Survey, the order of the countries is the same.

Have you heard of cryptocurrency?

NO
20,4%
79.6%
YES
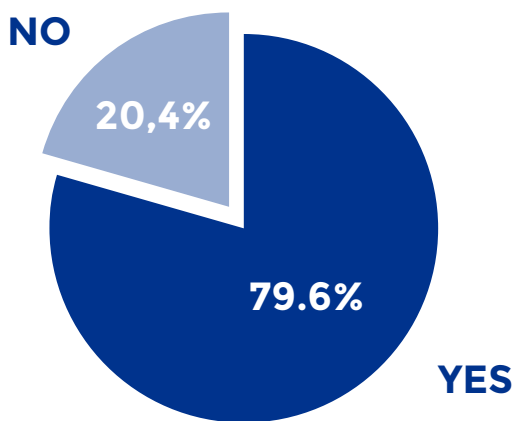
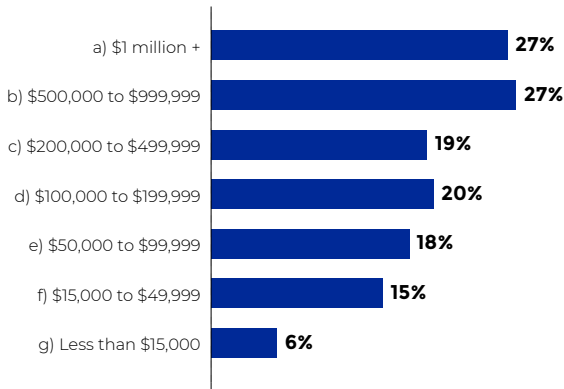**Do you own any cryptocurrency?**

YES
23.0%
77.0%
NO

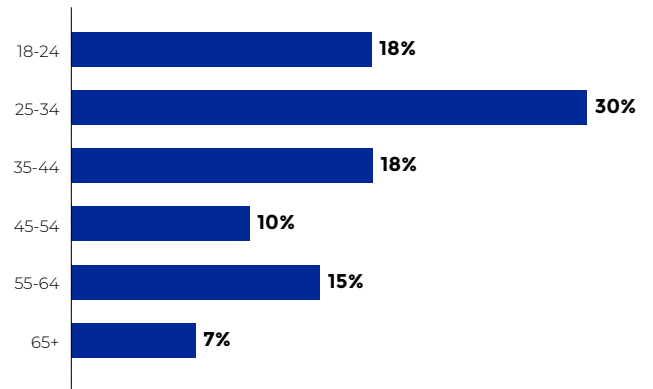**SOURCE:** IE Survey 'Cryptocurrencies and The Future of Money'

In terms of how ownership of cryptocurrency is distributed across different levels of income, age, education and gender, the results follow a similar pattern of other countries. We can see from the figures below that there appears to be a slightly higher levels of ownership amongst those with higher income and education levels. These ownership levels across income and education, however, are much more evenly distributed in Latin America countries than ownership levels in Europe and the US. Age also seems to be an important dimension with respect to the ownership of cryptocurrency, with younger generations (especially those between the ages of 25-34) being more likely to own these currencies than the older ones. Finally, as it generally is the case for assets and currencies that involve more risk, the ownership of cryptocurrency is significantly higher amongst males than females.
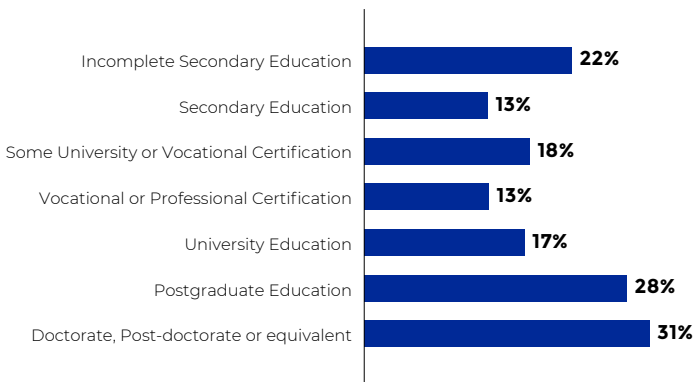
3   Available at: https://www.statista.com/chart/18345/crypto-currency-adoption/
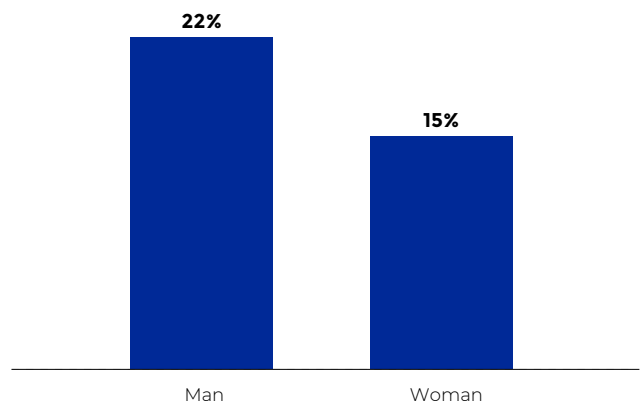
Ownership of cryptocurrency by income

- a) $1 million + — **27%**
- b) $500,000 to $999,999 — **27%**
- c) $200,000 to $499,999 — **19%**
- d) $100,000 to $199,999 — **20%**
- e) $50,000 to $99,999 — **18%**
- f) $15,000 to $49,999 — **15%**
- g) Less than $15,000 — **6%**

Ownership of cryptocurrency by age

- 18-24 — **18%**
- 25-34 — **30%**
- 35-44 — **18%**
- 45-54 — **10%**
- 55-64 — **15%**
- 65+ — **7%**

Ownership of cryptocurrency by education

- Incomplete Secondary Education — **22%**
- Secondary Education — **13%**
- Some University or Vocational Certification — **18%**
- Vocational or Professional Certification — **13%**
- University Education — **17%**
- Postgraduate Education — **28%**
- Doctorate, Post-doctorate or equivalent — **31%**

Ownership of cryptocurrency by gender

- Man — **22%**
- Woman — **15%**

SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

For those who do own cryptocurrency, the results for Mexico presents a promising characteristic. As in other countries, when asked why those who own cryptocurrencies do so, the most common answer was that they own it as an investment (53.1 %). Nevertheless, Mexico has the highest percentage of people in our sample that own cryptocurrencies for purchases purposes (24.9 %). This is promising because it shows that not only is Mexico a country with one of the highest percentage of population owning cryptocurrencies in our sample, but a significant number of Mexicans are actually using them as currencies rather than as a speculative investment.

Why do you own cryptocurrency?

- **53.1%** Investment
- **24.9%** Purchases
- **22.0%** Both
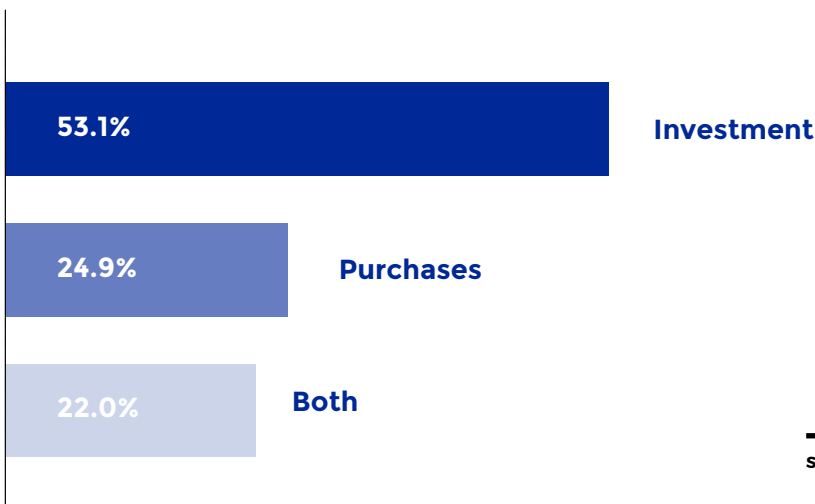
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

Looking at the justification for those who don't own cryptocurrencies we can see another unique characteristic of the Latin American countries in our sample. While in the developed markets (US, UK, Germany and Spain) the most common reason for not owning cryptocurrency is a belief that they are too risky, in Latin American countries (Argentina, Mexico and Brazil) the most common reason, by far, is that they don't own cryptocurrencies because they don't know how to buy them. This suggests that Latin Americans are more open to cryptocurrencies, not only in terms of having a higher percentage of people who own them, but also in terms of people's desire to own them.

From the above discussion, we know that about 77 % of Mexican residents do not own cryptocurrencies. We also found that, of this 77 %, about 55 % do not own cryptocurrencies simply because they do not know how to buy them. When taken together, this implies that approximately 65 % of Mexicans either own cryptocurrencies or only (or mostly) don't do so because they don't know how to buy them. This indicates a high degree openness of Mexicans to cryptocurrencies. In fact, this number is very similar in other Latin American countries (Argentina and Brazil), indicating the openness amongst the region to these types of currencies.

It is worth mentioning that still a significant share of the Mexicans who don't own cryptocurrencies in our sample have answered that they do not own these currencies because they believe they are too risky (22.4 %), they are not useful for purchases (19.8 %) or they see no advantage over existing money (15 %).

Why do you not own cryptocurrency?

22.4%	**Too risky**
15.0%	**No advantage over existing money**
19.8%	**Not useful for purchases**
55.1%	**Don't know how to buy it**
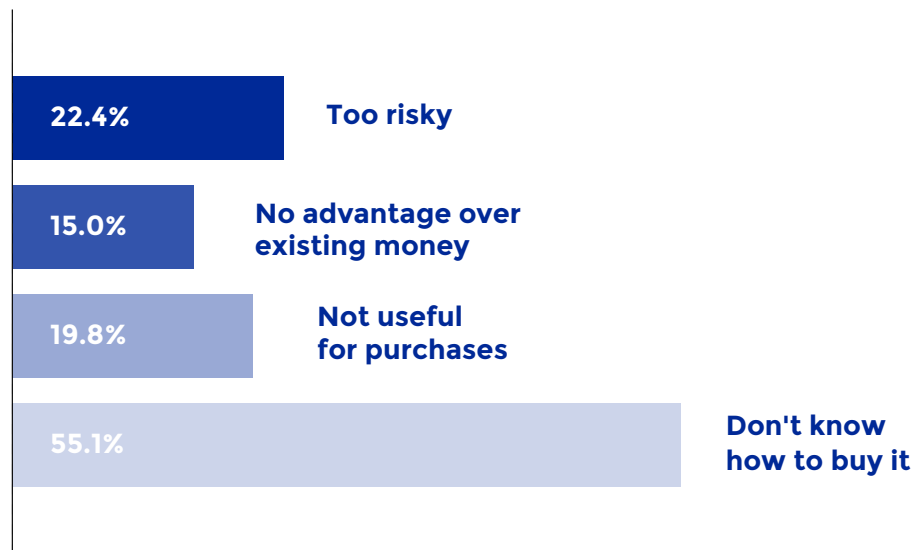
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'
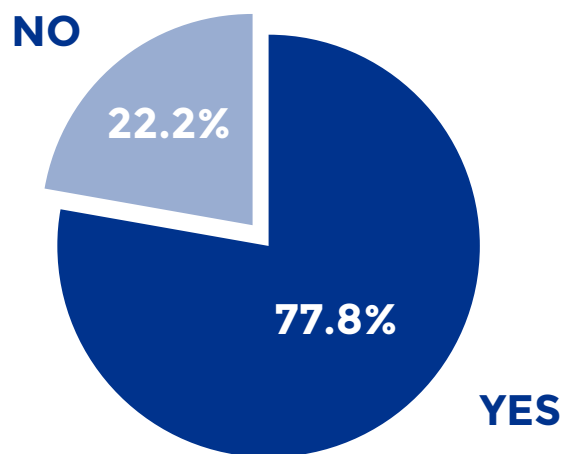
V. THE FUTURE OF CRYPTOCURRENCY IN MEXICO

In order to get a better understanding of Mexican resident's openness to a new type of digital money, we asked respondents:

Q20: "Suppose that a new cryptocurrency was designed by a private company (or group of companies) that could be used to make all of your day-to-day transactions (it is accepted by all sellers) and has a stable value over time (low inflation/deflation). This currency could also be converted to other currencies at a very small cost. Would you prefer to use this currency over your current method of payment?"

The open-mindedness of Mexicans to alternative digital currencies is reinforced by their answers to this question. Their answers follow the same pattern of the other Latin American countries in our sample (Argentina and Brazil), with 77.8% of Mexicans saying they would use such effective private currency. Possibly because of the poor experiences they had with fiat money in the 1980s and 1990s, the majority of those surveyed responded positively in Latin American countries. Although Mexico didn't face hyperinflation in the 1990s (as Argentina and Brazil), Mexicans had to deal with high inflation during the late 80s and the Mexican Peso Crisis of 1994, due to both mismanagement of government finances and political shocks.

Moreover, as it can be seen bellow, the positive answer with respect to the use of such private currency is evenly spread across levels of income, age, education and gender[4].
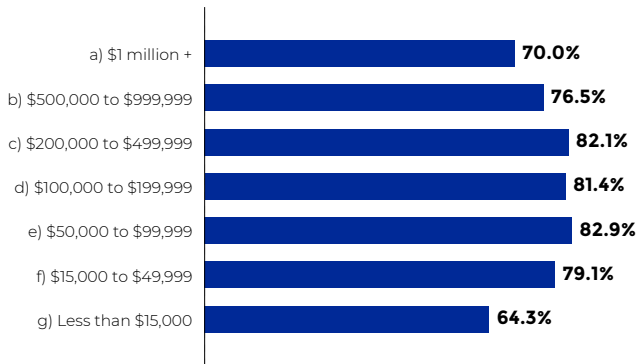
Would you use an effective private currency?

NO
22.2%

77.8%
YES

SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

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4   With a slight reduction in older groups of the population which is completely understandable to anything related to technology.
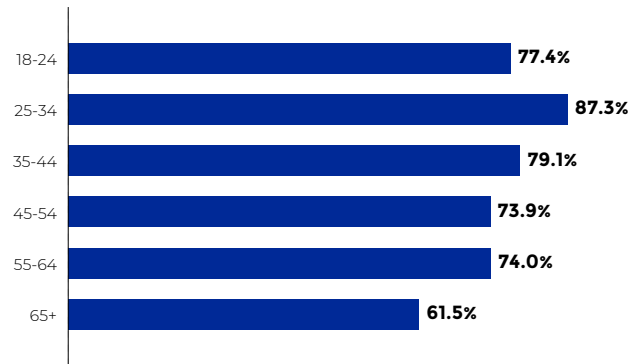
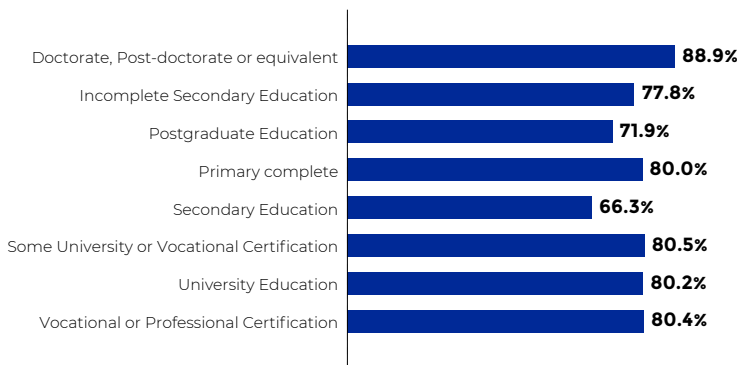## Would you use an effective private currency?
by Income

a) $1 million +	70.0%
b) $500,000 to $999,999	76.5%
c) $200,000 to $499,999	82.1%
d) $100,000 to $199,999	81.4%
e) $50,000 to $99,999	82.9%
f) $15,000 to $49,999	79.1%
g) Less than $15,000	64.3%

Would you use an effective private currency?
by Age

18-24	77.4%
25-34	87.3%
35-44	79.1%
45-54	73.9%
55-64	74.0%
65+	61.5%

Would you use an effective private currency?
by Education

Doctorate, Post-doctorate or equivalent	88.9%
Incomplete Secondary Education	77.8%
Postgraduate Education	71.9%
Primary complete	80.0%
Secondary Education	66.3%
Some University or Vocational Certification	80.5%
University Education	80.2%
Vocational or Professional Certification	80.4%

Would you use an effective private currency?
### by Gender

Man	Woman
78.0%	77.9%
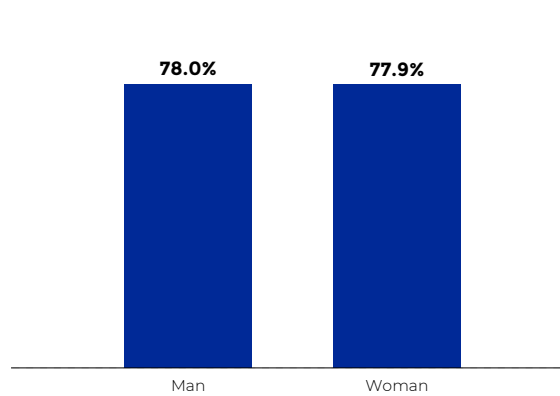
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

Amongst the 22.2 % of respondents who answered they wouldn't use the effective private currency, the most common reason was that they don't trust new currencies (47.5 %). Of the remaining 52.5 % who answered no, 32.3 % indicated that such effective private currency would offer no advantage over the existing forms of money, while 30.9 % indicated that they don't trust private companies.

Why Not?

|	
32.3%	**No advantage over existing money**
47.5%	**Don't trust new currencies**
30.9%	**Don't trust private companies**
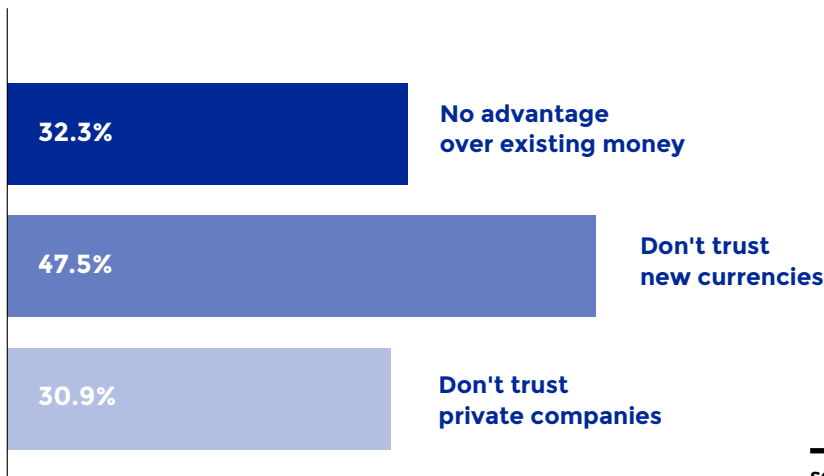
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

Despite their relatively high degree of openness to new types of money, Mexicans don't share this enthusiasm when it comes to a private currency issued by Facebook. When asked if they trust Facebook to issue a private currency, only 41.2% of the Mexicans responded positively. Although this is the highest percentage amongst all countries in our sample, it still signals that Mexicans don't trust Facebook to be become a monetary institution.

As it was the case to a generic privately issued currency, the answers to this question were fairly evenly spread across levels of income, education and gender. Respondents at the highest level of education have significantly more trust in on Facebook to issue a currency, possibly because they have a better understanding about the benefits of Libra (Facebook's currency) in comparison to other cryptocurrencies. With respect to age, we observe a significant decrease in trust on Facebook as we move towards older age groups. Finally, males are marginally more likely to trust Facebook to create and manage money (55.6% of males against 50.8% of females).
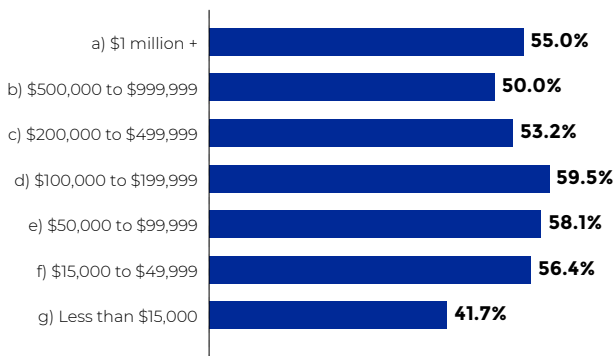
Would you use an effective private currency?

41.2% YES
58.8% NO
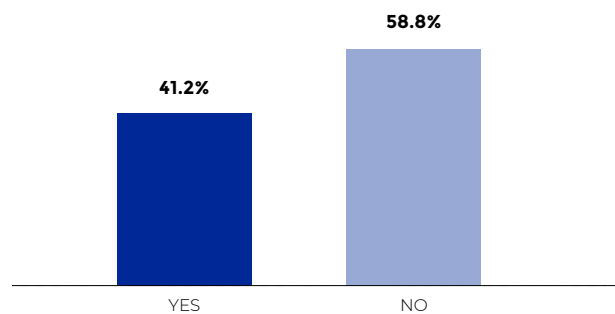
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

Trust in Facebook to issue a private currency
BY INCOME

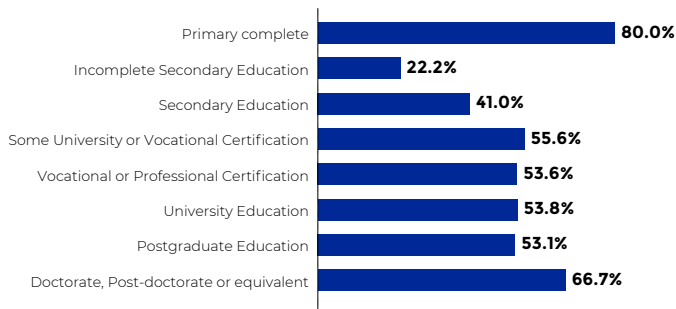|	
a) $1 million +	55.0%
b) $500,000 to $999,999	50.0%
c) $200,000 to $499,999	53.2%
d) $100,000 to $199,999	59.5%
e) $50,000 to $99,999	58.1%
f) $15,000 to $49,999	56.4%
g) Less than $15,000	41.7%

Trust in Facebook to issue a private currency
BY AGE

18-24	49.2%
25-34	60.8%
35-44	57.2%
45-54	53.6%
55-64	46.9%
65+	36.5%

Trust in Facebook to issue a private currency
BY EDUCATION

Primary complete	80.0%
Incomplete Secondary Education	22.2%
Secondary Education	41.0%
Some University or Vocational Certification	55.6%
Vocational or Professional Certification	53.6%
University Education	53.8%
Postgraduate Education	53.1%
Doctorate, Post-doctorate or equivalent	66.7%

Trust in Facebook to issue a private currency
BY GENDER

Man	55.6%
Woman	50.8%
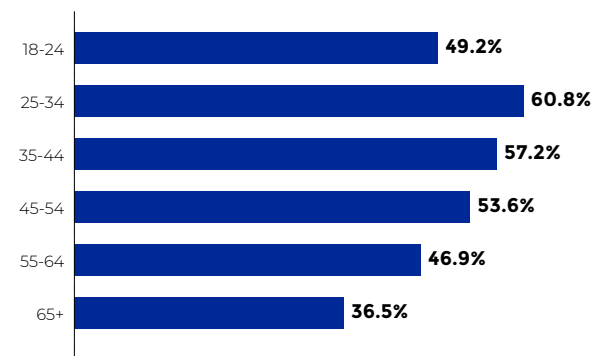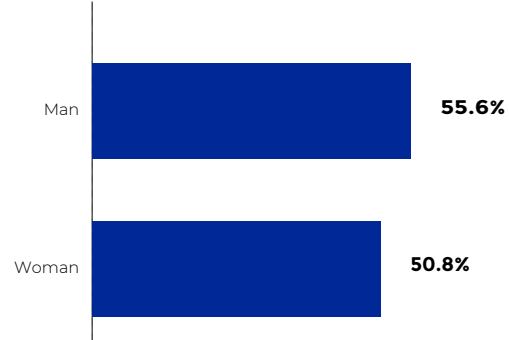
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

VI. A CONJOINT ANALYSIS OF PREFERENCES FOR MONEY IN MEXICO

While the above discussion is helpful in gaining a deeper understanding of Mexican usage, knowledge, trust of money. Understanding exactly what characteristics of money are important to Mexicans requires a systematic approach. Fortunately, a choice based conjoint analysis is an excellent way to measure the relative 'utilities' that Mexicans gain from different types of money which vary across each attribute. We can look at how each of five main attributes are valued against each other. To do this, from the sample of 1,000 adult Mexico residents, we provided each respondent with ten frames, each of which provided the respondent with a choice between three hypothetical currencies with varying attributes. For the purpose of this exercise, we characterized 'money' as having five underlying attributes:

1. **Issuer/backer** refers to who issues and/or backs that currency. This could be a central bank, a commercial bank (private sector company), or a peer-to-peer nonprofit like Bitcoin (private sector peer to peer).

2. **Acceptability** refers to where are able you use the currency. Is your currency accepted by all sellers of goods/services or only some sellers of goods/services (within the area in which you buy/sell goods and services)?

3. **Transaction** costs are there costs involved in making the transaction (these are commonly known as 'fees', 'premiums' or 'spreads').

4. **Price Stability** refers to the expected change in the amount of goods and/or services you can buy over the course of a month with the same amount of currency (i.e. x$ in October will be worth y$ in November)

5. **Digital/physical.** All currency that is stored outside of your personal physical possession can be considered as digital.

Each of these five attributes was assigned between two and four options shown below.

ATTRIBUTE	ATTRIBUTE CHARACTERISTIC
ISSUER/BACKER	• Central bank • Private sector commercial bank • Private Sector peer-to-peer network
ACCEPTABILITY	• All sellers accept the currency • 80 % of sellers accept the currency • 40 % of sellers accept the currency
TRANSACTION COST	• Zero • 0.1-1 % of the transaction value • 1-10 % of the transaction value
PRICE STABILITY	• Max monthly inflation/deflation of 0 % (100 = 100) • Max monthly inflation/deflation of 0–1 % (100 = 99, or 100 = 101) • Max monthly inflation/deflation of 1–10 % (100 = 90, or 100 = 110) • Max monthly inflation/deflation of 10–50 % (100 = 50 or 100 = 150)
DIGITAL/PHYSICAL	• Digital • Physical

To give an idea of what each of these frames would look like an example is provided below where respondents would be asked to choose their preferred one of the three hypothetical currencies with predefined characteristics across each of the five attributes.

	CURRENCY 1	CURRENCY 2	CURRENCY 3
MONEY ISSUER	Central Bank	Private sector corporation	Private sector peer-to-peer
LEVEL OF ACCEPTABILITY	80% of sellers accept the currency	All sellers accept the currency	40% of sellers accept the currency
COST OF TRANSACTION	Fee of between 0.1 and 1% of the transaction value	Fee of between 1 and 10% of the transaction value	Zero
PRICE STABILITY	100 (local currency) could be worth between 99 and 101 next month	100 (local currency) will be worth 100 next month	100 (local currency) could be worth between 90 and 110 next month
DIGITAL OR PHYSICAL	Digital	Digital	Physical

This gives us 30,000 (1,000 respondents with ten frames of three options) observations reflecting the preferences of Mexicans for money across our five attributes. The easiest way to interpret the results in a meaningful way is by examining the average marginal effects of each attribute choice. Effectively, these can be viewed as premiums/discounts place on specific characteristics of money. For example, we can see from the figure below that Mexicans place a significant premium on central bank issued money and are very averse to high inflation/deflation and low acceptability rates. The advantage of using a conjoint based approach is that we can directly compare different characteristics with each other. Looking at the figure below, Mexicans have a strong aversion to currencies which have limited acceptability, especially when it is below 50%. There is also a strong aversion to currencies with high inflation or deflation (above 10% a year) and a fairly strong aversion to transaction costs. Lastly, when comparing digital with physical money, Mexicans appear to have a slight preference for digital money.
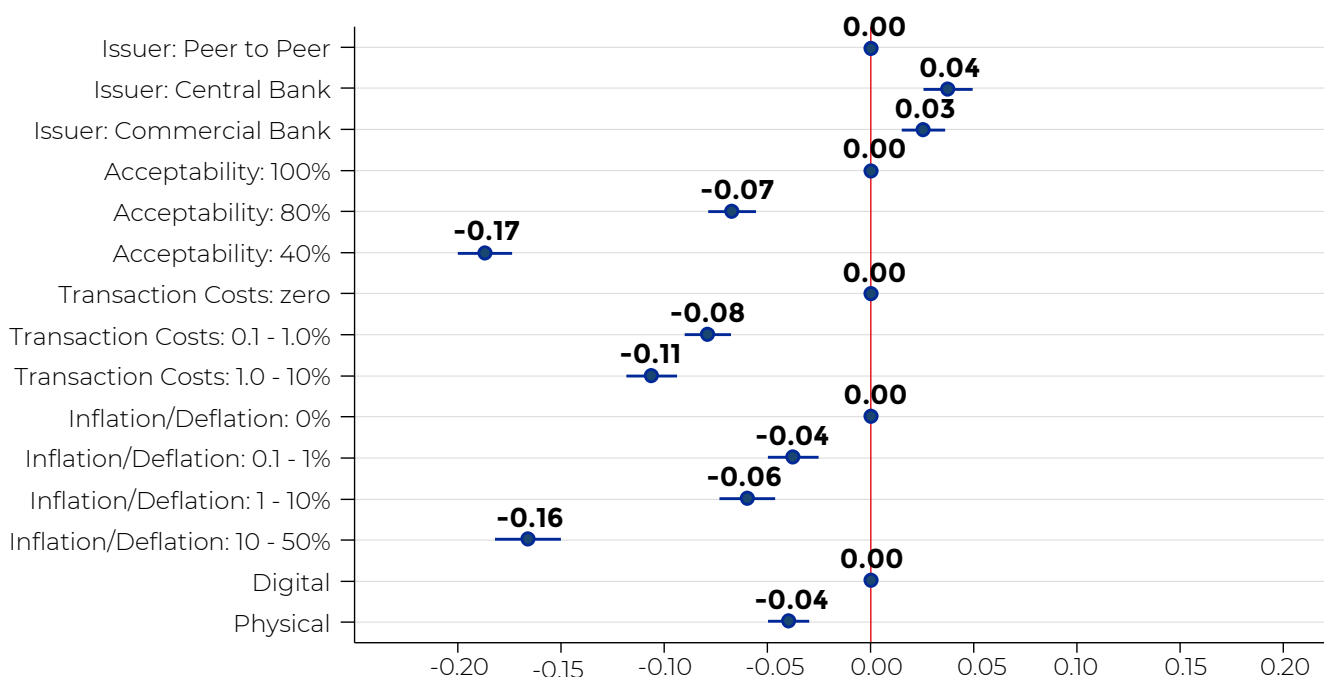
SOURCE: IE Survey 'Cryptocurrencies and The Future of Money'

The results from the conjoint survey show that the preferences of Mexicans are very similar to those of other countries. If we consider traditional forms of money (cash, credit cards and debit cards), they all fulfil dimensions that Mexicans care a lot about: acceptability, low transaction costs and, at least for the last few decades, price stability. Moreover, although the answers to the other questions indicated the openness of Mexicans to cryptocurrencies and private money, the results from the conjoint survey show that they have preferences for money issued by a trusted third part, mainly, the central bank. Finally, the results from Mexico and other Latin American countries suggest that they prefer to hold money in digital form over physical, a result that differs from European countries in our sample. It should be noted, however, that Mexican place, by far, the lowest trust premium on central bank money of all the countries in our sample. Obviously, there are many possible reasons why this can be the case, but a possible candidate is the hyperinflation faced by these countries not so long ago; once that holding cash is a poor choice in a high inflation environment.

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