

The Distributional Impact of Inflation: Tax Incidence and Financial Strategies of Argentine Households*

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Abstract

We examine different channels through which inflation weighs on income distribution, and how households adapt financial strategies in response. We provide new estimates of the incidence of the inflation tax by income quintile of households' income for 2017-2024, estimating money demand functions using micro data from Argentina's latest national survey of household expenditure. We explore how inflation tax incidence may be related to households' financial strategies, particularly decisions on indebtedness, employing quarterly data from Argentina's permanent household survey. Our results show that inflation tax incidence on low-income households rises from around 1% to 8% of income as monthly inflation accelerates from 2% in the first quarter of 2017 to 25% in late 2023; and that such incidence triples that of higher income households. Lower inflation during 2024 involved gains of around 6 p.p. of income for first-quintile households and of 1,5 p.p. for fifth-quintile households. We find that poorer households tend to react to the inflation tax by borrowing from family members or friends, while better-off households can access financial services that allow them to pay in instalments, thus shielding against inflation. In-family borrowing becomes more significant as inflation accelerates. We find little evidence to link inflation tax incidence to bank borrowing or use of savings to finance current spending.

JEL classification codes: D14, D31, E31, H22

Keywords: inflation, income distribution, household surveys, financial strategies

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I. Introduction

Fiscal imbalances and monetary financing of the Treasury—with the central bank printing money to cover government deficits— have been pervasive throughout the Argentine experience, leading to high inflation. In recent years, as inflation accelerated from annual rates of 24,8% a year in late 2017 to 211% in late 2023, the causes and consequences of high inflation have been in the foreground once again. One of the most pressing concerns is the regressive nature of inflation, i.e. its disproportionate impact on lower income individuals and households.

In this note, we examine different ways through which inflation weighs on distribution, focusing on the inflation tax. Our contribution is twofold. First, we provide new estimates of the incidence of the inflation tax by income quintile of households' income, using micro data from Argentina's latest National Survey of Household Expenditure (*Encuesta Nacional de Gasto de los Hogares*). We estimate money demand based on that data and use it to gauge how inflation tax incidence on households changes over time. In the second place, we explore how such incidence influences households' financial strategies, especially those related to indebtedness, using data from the Permanent Household Survey (*Encuesta Permanente de Hogares*). Among other measures, we estimate whether households' likelihood of borrowing increases as inflation weighs more on their income.

Inflation weighs on income distribution through different channels (BCRA, 2025). Poorer households are more exposed to inflation as they tend to use more cash and are less able to diversify their portfolio toward inflation-protected assets. Their consumption is more intensive in goods, which makes them more vulnerable to the impact of foreign exchange depreciation, and in general, to any inflationary shock that propagates through the adjustment of tradable goods prices vis-à-vis non tradable ones. Such vulnerability is made worse as their consumption basket is also more intensive in food items. In the labour market, poorer households are more exposed to inflation through lagging wage adjustments in the informal sector. Finally, as inflationary financing of the Treasury typically crowds out private credit, inflation negatively impacts access to credit, which tends to be lower for poorer households and small and medium sized companies.

The global surge in inflation after the pandemic has led to renewed interest in the distributional impact of inflation. This interest dovetails with recent analytical developments on the relationship between household heterogeneity and monetary policy (Dong et al. 2025). International studies on the distributional impact of inflation can be grouped into three main approaches, according to the type of data used and the distributive variable under analysis.

One group of studies examines the relationship between inflation and income inequality using aggregate indicators, such as the Gini coefficient or quintile ratios. Albanesi (2007), Aparicio and Araujo (2011), and Binder (2019), study the link between both variables for a wide set of developed and developing countries. In a variant of this approach Süßmuth and Wieschemeyer (2022) analyze the impact of inflation on the progressivity of the U.S. tax system. In general, these studies find that high and volatile inflation tends to increase inequality; in some cases, the sign of the relationship may be reversed when lower-income households are the most indebted or when the lack of full indexation of taxes introduces greater fiscal progressivity.

A second strand of literature focuses on the impact of inflation on household consumption baskets, using household expenditure survey microdata to estimate effective inflation as experienced by each social group. Examples include Ciambezi and Pietropaoli (2024) for Italy; Basso et al. (2023) for Spain; and Amores et al. (2024) for the Eurozone. These studies

find that inflation tends to be higher for poorer households because they allocate a larger share of their spending to basic goods (food, energy, rent) whose prices usually rise faster, at least at the beginning of an inflationary shock.

A third line of research estimates the incidence of the inflation tax, that is, the loss of purchasing power of households' financial holdings expressed as a percentage of their income. These papers use data on financial assets from household surveys or, alternatively, estimates of household money demand: Erosa and Ventura (2002) look at US households, Attanasio et al. (2002) at Italian ones, Ferreira et al. (2023) at Spanish ones, and Chafwehe et al. (2024) at those of the Euro Area (the latter two papers also take the second approach, measuring impact on consumption baskets during the recent inflation surge). They generally find that the inflation tax is regressive, since low-income households hold a higher share of their wealth in cash or non-interest-bearing liquid assets, while high-income groups protect themselves with interest-bearing or indexed financial assets.

In Argentina, inflation and distribution are linked in a context of successive macroeconomic crises that have led to financial market underdevelopment and currency substitution, which feed back on each other. They also limit the power of conventional monetary policy to influence inflation expectations. Unsurprisingly, seigniorage and inflation have been recurrent themes in the literature (Canavese and Heymann, 1991; Kiguel and Neumeyer, 1989). While most studies have focused on macroeconomic repercussions, a few have dealt with inflationary financing's weight on portfolio decisions (Burdisso et al., 2012; Chagalj and Gomez, 2014; Tanzi, 2025). Households adopt "defensive strategies", typically resorting to foreign currency as store of value.

The inflation tax has been found to impact disproportionately more on Argentina's poorest. Along the second strand of literature mentioned above, Satorre (2012) uses the 2004–2005 National Household Expenditure Survey (ENGHO), and Panigo et al. (2017), rely on the 2012–2013 ENGHO to measure how accelerating inflation weighs more on poorer households; Cesar et al. (2024) use data from the latest ENGHO (2017–18) and estimate the impact of exchange rate depreciation on households' consumption baskets. In turn, a couple of studies follow the third approach, assessing inflation tax incidence: Canavese et al. (1999) and Capello et al. (2015) estimate money demand functions for the entire economy and then apply them to household income by decile or quintile. In these estimations, the coefficient of the real income variable being less than one implies a lower proportional use of money as household income rises and is the main source of inequality in relation to inflation. Canavese et al. (1999) calculate inflation tax incidence by quintile for the 1980s and 1990s, while Capello et al. (2015) update this approach using a different money demand to estimate the inflation tax incidence by deciles for the period 1993–2014. Both studies find that the inflation tax is regressive, although with varying degrees of intensity (see Annex VI).

In this paper, we estimate inflation tax incidence using money demand based on individual household data, instead of aggregate time series analysis. We also extend the analysis to recent years, covering 2017–2024 (inflation acceleration until 2023, deceleration since 2024). We go on to link inflation tax incidence on households to their financial strategies, profiting from the related questions included in the permanent household survey. Such information has been exploited by very few studies: Denes et al. (2011) empirically analyzed financial strategies, but not their relation to the impact of inflation as is our case. In turn, Blanco et al. (2022) examine the impact of macroeconomic volatility on earnings, but without specific reference to financial strategies at the household level. To the best of our knowledge, this paper is the first measurement of inflation tax incidence and its link to financial strategies based on household level data in Argentina (and also the first money demand estimation based on granular data). While our results are specific to our country, they can add to the growing body of evidence for developing economies, especially at a time

when the global debate on inflation and its impact is prescient; during the Brazilian presidency of the G20 in 2024, for instance, the distributional impact of inflation was one of the topics analyzed by the Framework Working Group.

The rest of the paper is organized as follows. Section II reviews the main features of the monetary policy transmission channel in Argentina, and how they relate to inflation and distribution. Section III describes the distributional impact of inflation. Section IV analyzes the inflation tax and presents the econometric model used to gauge tax incidence on households. Section V links inflation tax incidence with households' financial strategies. Section VI concludes.

II. Inflation and the transmission mechanism of monetary policy

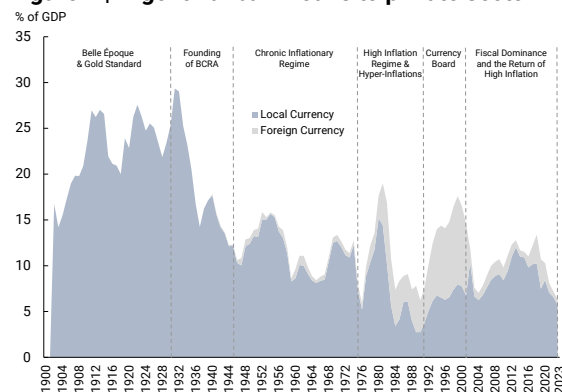
In emerging markets and developing economies, the traditional channels through which monetary policy operates are usually different or less powerful than in advanced economies. This is typically due to financial market underdevelopment, low credibility and –hence– pervasive currency substitution (BIS, 2008; Frankel, 2010).

Argentina is a case in point. With shallow financial markets—characterized by low liquidity, limited access to credit, and an underdeveloped banking sector— and a monetary regime with low credibility, the interest rate has reduced effectiveness to influence aggregate demand. The interest rate channel, which works affecting borrowing, consumption and investment, has little impact due to the lack of credit availability.

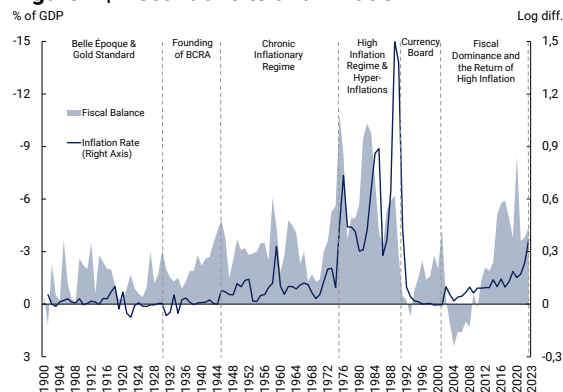
Likewise, decades of high inflation mean that the banking sector is largely transactional and short-term (Figure 1). Deposits and credits' maturities are hardly longer than six months, long-term credit like mortgages is unheard of, while the capital market is similarly small and with short-term instruments. This way, the transmission channel from short rates to long rates, asset prices and consumption and investment decisions is basically absent.

Exchange rate swings can have direct and immediate effects on inflation expectations, as depreciation tends to push up import prices, and so to higher overall price levels. Moreover, currency devaluation can lead to increased uncertainty, exacerbating inflationary pressures and potentially destabilizing financial markets.

A vicious cycle has reinforced currency substitution. Fiscal imbalances and monetary financing of the Treasury have been pervasive throughout the Argentine experience, leading to high inflation (Figure 2) (Buera and Nicolini, 2019). The historical narrative exceeds the scope of this note, but the experience with chronic inflation from the mid-1940s to the mid-1970s, high inflation and hyperinflation in the 1980s, shifted money demand away from local currency and into the US dollar. The currency board regime (1991-2001) was successful in bringing down inflation, but following its demise, fiscal dominance returned, and ultimately led to inflation acceleration (Basco et al., 2014).

Figure 1 | Argentina: bank loans to private sector

Source: based on data from BCRA and INDEC.

Figure 2 | Fiscal deficits and inflation

In response to inflation, households and businesses seek to protect their wealth by substituting foreign currencies or tangible assets outside the financial system for local currency (Calvo and Végh, 1992; Levy-Yeyati and Ize, 1998). This increases the rate of currency substitution, further weakening the domestic currency and undermining the effectiveness of traditional monetary policy channels.

The combination of fiscal imbalances, high inflation, and limited access to financial markets has created an environment where low financial intermediation and crowding out of private credit have become significant concerns. Crowding out has also been due to the central bank's effort to mop up excess liquidity; by issuing its own instruments to sterilize money supply at ever increasing rates, it diverted banks' resources away from credit (in a context where high inflation and recession had already weakened credit demand). The availability of credit to the private sector became more constrained, stunting the growth of small and medium-sized businesses and reducing the overall dynamism of the economy. Since end-2023, the Central Bank has taken very significant steps to overcome this situation, and inflation has fallen sharply.

III. Inflation and distribution

In Argentina, the most pressing concerns about the distributional effects of monetary policy is the regressive nature of inflation. Inflation is a hidden tax which affects the poorest disproportionately; it weighs more on households that cannot hedge against it; and high inflation entails a shortening of planning horizons that weighs on financial markets, where terms are substantially reduced -hence curtailing longer term credit supply (Heymann and Leijonhufvud, 1995).

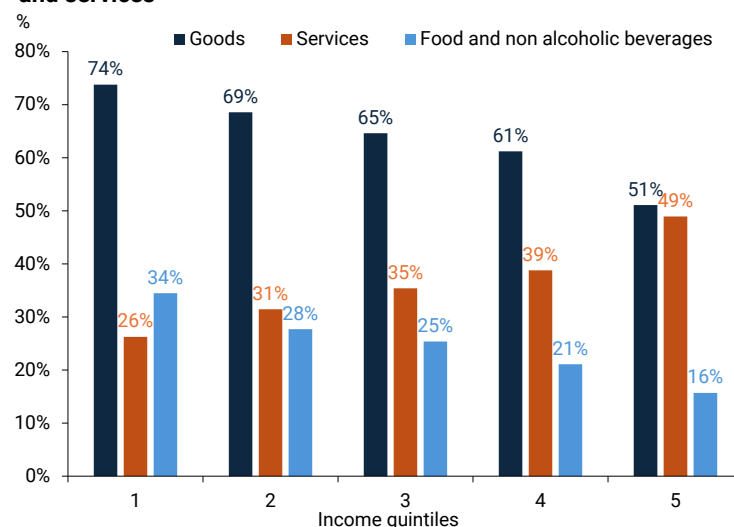
Inflation acts as a hidden tax, affecting households that lack access to financial markets or foreign assets (Easterly and Fischer, 2001); and with a higher share of tradable goods such as food in their consumption basket (Caisl et al., 2023). Poorer households tend to hold a larger share of their wealth in cash, which loses value as inflation rises. Without the ability to hedge against inflation through assets like real estate, foreign currency, or stocks, the purchasing power of low-income households erodes rapidly. This worsens income inequality and deepens poverty, making inflation management an essential tool for promoting social equity.

In contrast, wealthier individuals and households, who typically have greater access to financial instruments and the ability to diversify their assets, can better protect themselves

from inflation. For example, they may hold foreign currency or invest in inflation-resistant assets, thus shielding themselves from the worst effects of price increases.

The link between fiscal imbalances, monetary financing, foreign exchange depreciation and inflation also weighs on distribution. As the local currency depreciates, poorer households -with higher local cash holdings- lose more. And as the FX depreciation passes through to consumer prices, poorer households suffer twice: a) the cost of tradable goods rises, placing additional pressure on them, particularly through the impact of food prices, which carry greater weight in the consumption basket than in higher-income households (who also consume more services); b) they are less able to shield against rising inflation (Figure 3). This is made worse in an environment where monetary policy credibility is low, and hence FX depreciations are quickly passed through in full to local prices.

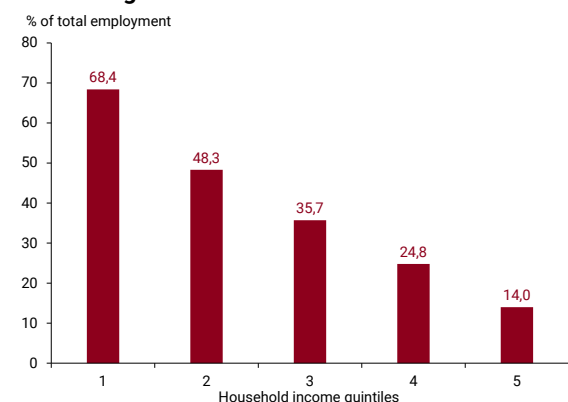
Figure 3 | Percentage of household spending allocated to goods and services



Source: based on data from INDEC (Household Expenditure Survey 2017-18).

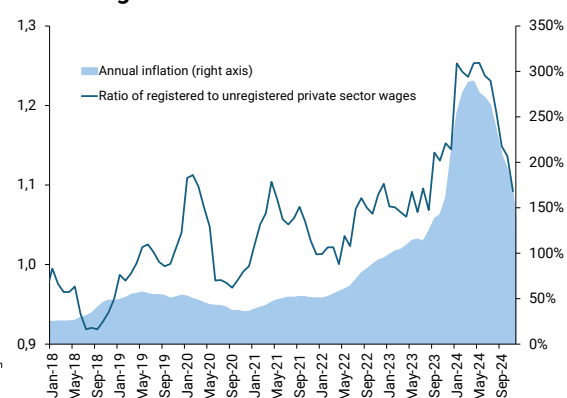
Poorer households tend to work more in the informal sector, whereas better off households tend to work in the formal sector (Figure 4). Hence, the latter enjoy not only pensions and other social protection, but also some sort of wage adjustment linked to labour unions' negotiations; the latter, participating more in the informal market, tend to see their real wages lagging as inflation accelerates. Indeed, the ratio of registered to unregistered private sector wages is positively correlated to inflation (Figure 5). In contrast, formal workers' earnings seem to have become less unequal as inflation increased (Blanco et al. 2021).

Figure 4 | Share of unregistered wage earners in total wage earners



Source: based on data from INDEC.

Figure 5 | Ratio of registered to unregistered private sector wages



Finally, as inflation mounts, financial decisions' horizons are shortened. This in turns weighs on credit supply. Currency substitution linked to high inflation means that intermediation in local currency is low; but as horizons shorten, it also takes place in ever shorter terms. This curtails access to credit for households: for instance, there is virtually no mortgage credit to speak of, so households must rely on their own savings to buy a house. This also means that investment, especially by SMEs, is largely self-financed.

Hence, a high inflation regime increases inequality both directly and indirectly. There is a direct effect on households that are less able to hedge against inflation and FX swings. But there are also indirect effects, such as real wage losses in informal sectors and lower access to long-term credit. In the following section, we turn to the first of these channels, namely the incidence of the inflation tax.

IV. The inflation tax

The inflation tax (figure 6) is defined following the change in real resources obtained by the government by issuing money. The latter can be decomposed into the change in real money holdings in a given period and the loss of purchasing power of money holdings from the previous period. That is, total signoreage can be defined as the amount of real resources the government can obtain by issuing money:

$$\frac{\Delta M_t}{P_t} = \frac{M_t}{P_t} - \frac{M_{t-1}}{P_t} = m_t - m_{t-1} \frac{P_{t-1}}{P_t}$$

Where M_t is a monetary aggregate (from cash by the public to M3) and P_t is the general price level of period t . This expression can be rewritten as:

$$\frac{\Delta M_t}{P_t} = (m_t - m_{t-1}) + m_{t-1} \left(1 - \frac{P_{t-1}}{P_t} \right)$$

Considering the definition of inflation as the rate of change in the general price level, we obtain the following definition of total seigniorage:

$$\frac{\Delta M_t}{P_t} = (m_t - m_{t-1}) + m_{t-1} \left(\frac{\pi_t}{1 + \pi_t} \right) \quad (1)$$

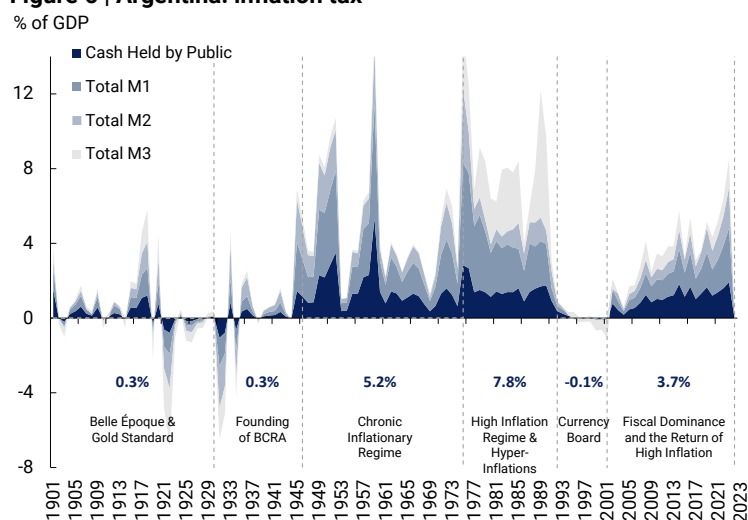
Where the first term captures the change in real money holdings (akin to the change in money demand) or “pure” seigniorage, and the second term the inflation tax proper, ie. the increase in nominal money holdings necessary to maintain real money holdings in the face of inflation. Thought of as a tax, $\frac{\pi_t}{1 + \pi_t}$ is the tax rate and m_{t-1} is the tax base on which the former is applied. While equation 1 is presented here as an accounting identity, it can be derived as part of the solution to a standard cash-in-advance money demand model. Figure 3 shows the evolution of the inflation tax measured as per equation 1 for four different monetary aggregates in Argentine pesos: cash held by the public, M1 (cash plus current accounts), M2 (cash plus current and savings accounts), M3 (cash plus current and savings accounts, plus time deposits).¹ It should be noted that only in the case of cash can we speak

¹ In the M3 monetary aggregate, the term deposits (TD_t) earn an interest rate (i_t). In this case, the total seigniorage is calculated using the following formula:

$$\frac{\Delta TD_t}{P_t} = \left(\frac{TD_t}{P_t} - \frac{TD_{t-1}}{P_{t-1}} \right) + \frac{TD_{t-1}}{P_{t-1}} \left(\frac{\pi_t - i_t}{1 + \pi_t} \right) = (td_t - td_{t-1}) + td_{t-1} \left(\frac{\pi_t - i_t}{1 + \pi_t} \right)$$

of resources fully appropriated by the government, since in the case of broader aggregates, part of the inflation tax collection accrues to the issuers of inside money (financial institutions).

Figure 6 | Argentina: inflation tax



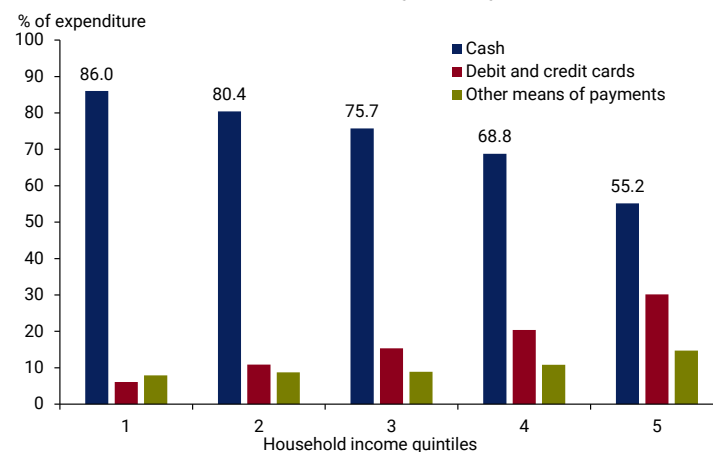
Source: based on data from BCRA and INDEC.

IV.1 Inflation tax incidence: a back-of-the-envelope approach

In order to estimate the incidence of the inflation tax on households by their level of income, we measure how much cash households use to pay for their spending, and so to what extent they are exposed to inflation. Exposure to inflation is due here only to cash holdings; but households can be partially exposed through other financial assets and liabilities.

We consider data from the Permanent Household Survey (EPH) of the third quarter of 2024. This is the main regular household survey in Argentina, comprising around 26.000 households from urban conglomerates across the country and conducted by the National Statistical Institute (INDEC); see Annex I.a for details. We group household income by quintiles of per capita household income. We then consider how much each quintile spends as a share of income, as reported in the National Household Expenditure Survey (2017-18), a specific survey on household consumption patterns (which is an input to the consumption basket in the CPI; see Annex Ib). From that spending, we calculate how much is spent using cash (also as reported in the national survey of household spending, 2017/18). The latter shows substantial variability across income quintiles: while households in the first quintile of per capita income use cash for 86% of their expenditure, those in the fifth quintile just use it for over 50% of their spending, covering the rest with other means of payment (Figure 7).

Figure 7 | Consumption means of payment by income quintiles

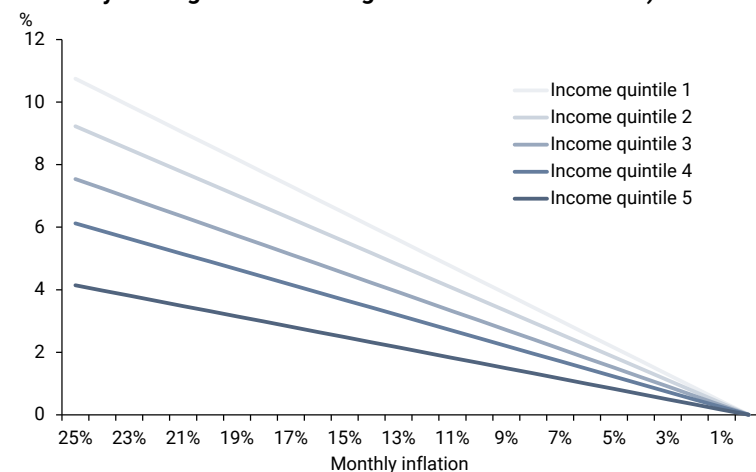


Source: based on data from INDEC.

With the means of payment figures, we indirectly estimate money demand by quintile, by assuming that cash is spent uniformly throughout the month; they go from full holdings to zero by the end of the month, as expected in a Baumol-Tobin money demand model. We apply the definition of inflation tax (equation 1) to this estimate of money demand to obtain inflation tax incidence. See Annex II for details.

Inflation tax incidence for households in the lowest quintile of the income distribution is over 10% of household income 2,2 times higher than for those in the highest quintile (Figure 8). Moreover, as monthly inflation decreased from 25,5% (December 2023) to 2,7% (December 2024), poorer households gained between 7 and 8 percentage points of income in terms of lower inflation tax incidence. This compares to gains of about 3-4 p.p. for wealthier households.

Figure 8 | Inflation tax incidence – static analysis (loss of purchasing power of money holdings as % of average total household income)



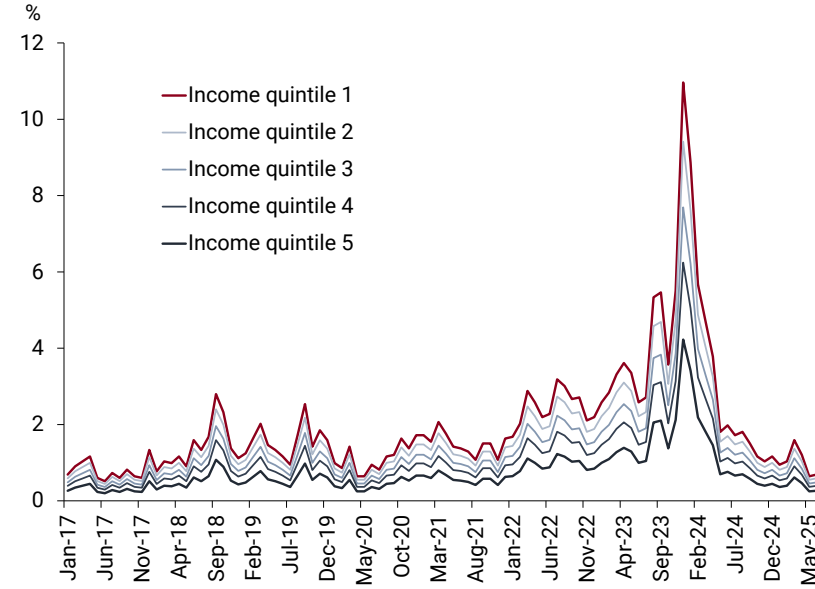
Source: based on data from INDEC (Household Expenditure Survey 2017-18).

These estimates are comparable to those of previous studies on the issue -indeed, one of the contributions of this note to estimate inflation tax incidence during the high inflation period of 2019-2023. Our estimates compare to those of Canavese et al. (1999), which for the 1980s estimate short term inflation tax incidence at figures that range from 5 to 10% of income in the first quintile during inflation accelerations (from 1980 to 1985), which climb to over 20% of income during hyperinflation. In turn, Capello et al. (2015) estimate inflation tax incidence (based on money demand estimates for 1993-2013 and inflation by quintiles as

estimated using the 2013/14 National Expenditure Survey) at around 15% of income of the first quintile.

We also look at the evolution of inflation tax incidence as inflation moved from around 25% y-o-y in 2017 to over 200% in 2023 (figure 9). For the poorest households, such incidence went from under 2% in come in 2017-18 to between 2 and 4% in 2019-2022, and jumped sharply to over 10% as inflation accelerated in 2023. Remarkably, inflation tax incidence went very quickly back to under 2% as disinflation progressed from 2024 onwards.

Figure 9 | Inflation tax incidence- static analysis (loss of purchasing power of money holdings as % of average total household income)



Source: based on data from INDEC (Household Expenditure Survey 2017-18).

IV. 2. Inflation tax: econometric analysis

We can improve on the previous, back-of-the-envelope estimates, by profiting from the household-level information contained in the National Household Expenditure Survey (ENGHO; see Annex III for descriptive statistics). This allows us to estimate a money demand function. As households respond on their use of cash, we can link it to their income level (transactions variable), which is also reported in the survey (see figure III.a in Annex III). The opportunity cost variable is more challenging. In high inflation periods in Argentina, inflation has been found to be the opportunity cost of holding money, rather than interest rates (Ahumada and Garegnani, 2002; Canavese et al., 1999). We use inflation data from the market expectations' survey collected by the Central Bank of Argentina (*Relevamiento de Expectativas de Mercado*, REM). Alternatively, we could take each household consumption basket and impute the change in item prices as contained in the consumer price index data; however, as we are estimating a money demand function that we want to take to out-of-sample household data, this would not be a feasible approach at this point. We thus estimate a Cagan-type money demand function, following Canavese et al. (1999):

$$\text{Log } m_{it}^{pc} = \beta_0 + \beta_1 \text{Log } y_{it}^{pc} + \beta_2 \pi_t^e + e_{it} \quad (2)$$

Where y_{it}^{pc} is household i average per capita real income in quarter t , and π_t^e is the expected inflation tax in quarter t (average expected 12-month inflation over the three months of quarter t). The ENGHO includes observations from five different quarters: the first quarter of 2017, and the four quarters of 2018; real money holdings are expressed in average prices of the fourth quarter of 2018, and income is also expressed in prices of that period.

Real balance holdings are positively associated with income, as expected; but the elasticity is lower than one, closer to a Baumol-type money demand function than to unitary elasticity as implied by a quantity-theoretical money demand (Table 1). In turn, inflation acts as an opportunity cost indeed, showing a negative relation with money holdings. These findings are robust to including income quintile dummies and regional dummies, as well as including household characteristics; in all cases, the income elasticity is around 0,5 and the opportunity cost elasticity close to 0,02 (see Annex IV).

Table 1. Money demand estimation – National household expenditure survey data (2017-18)

Dependent variable: Log real cash per capita	
Log real income per capita	0,546***
Expected inflation	-0,002*
Cons	2,997***
Observations	21.523
R2	0,334
Robust standard errors in brackets (White)	
* p<0.10, ** p<0.05, *** p<0.01	

We compare the expenditure in cash as reported in the ENGH0 with the one based on our money demand function. Estimated expenditure in cash decreases as income increases, and is roughly comparable to the data averages by quintile (figures IV.a and IV.b in Annex IV). These estimates allow us to gauge tax incidence following the steps described in section III.1. We apply the estimated coefficients of money demand function (2) to the quarterly data of the Permanent Household Survey (*Encuesta Permanente de Hogares*, EPH; see Annex V for descriptive statistics). Households inform per capita income, so we can retrieve transactional money demand estimates; while we use expected inflation from the REM to estimate the second term of equation (2). In each case, we compute quarterly averages of monthly data.

For average monthly inflation of 2% in the first quarter of 2017, the inflation tax incidence on households in the first quintile is 0,9% of per capita income, some three times higher than that in the fifth quintile. Estimates for the first quarter of 2017 from EPH data are comparable to those obtained from the ENGH0 data. This is to be expected as this applies to roughly similar macroeconomic situation. As monthly inflation accelerates to 16% on average in the fourth quarter of 2023, tax incidence on the poorest households climbs to almost 5% of per capita income. As inflation reaches a peak of 25% monthly (December 2023), tax incidence in the first income quintile is almost 8% of income. A year later, such incidence was reduced to less than 2% of income. As inflation accelerated, incidence appears to have remained roughly stable across households; the interquintile ratio is around 3%.

Table 2 | Inflation tax incidence- econometric analysis (loss of purchasing power of money holdings as % of average total household income). Incidence by income quintile, selected quarters

1 quarter 2017		
	Money demand (% of income)	Loss of purchasing power (% of income)
Quintile 1	42%	0,9%
Quintile 2	31%	0,6%
Quintile 3	26%	0,5%
Quintile 4	21%	0,4%
Quintile 5	15%	0,3%

4 quarter 2023			
	Money demand (% of income)	Loss of purchasing power (% of income)	Loss of purchasing power (% of income) with dec-23 inflation
Quintile 1	30%	4,9%	7,5%
Quintile 2	23%	3,5%	5,7%
Quintile 3	19%	3,0%	4,8%
Quintile 4	16%	2,5%	4,0%
Quintile 5	11%	1,9%	2,7%

3 quarter 2024		
	Money demand (% of income)	Loss of purchasing power (% of income)
Quintile 1	43%	1,8%
Quintile 2	32%	1,3%
Quintile 3	27%	1,1%
Quintile 4	22%	0,9%
Quintile 5	15%	0,6%

One finding that stands out is the relatively higher incidence of the inflation tax on the first income quintile compared to the second one; interquintile differences range between 0,1 and 0,6p.p. from the second quintile upward, but between the first and second quintile they range between 0,3 and 1,8 p.p. These appears related to much higher reporting of low incomes in the first quintile, especially those closer to zero, in relation to reported spending. This gives rise to relatively higher estimates of inflation tax incidence. Whether this is due to underreporting remains an open question. Recent estimates for Argentina suggest underreporting in the EPH can reach 100% of income in the lowest percentile of the income distribution, and 250% in the highest percentile (Albina et al., 2024).

Figure 10 | Inflation tax incidence- econometric analysis (loss of purchasing power of money holdings as % of average total household income). First quarter 2017- third quarter 2024

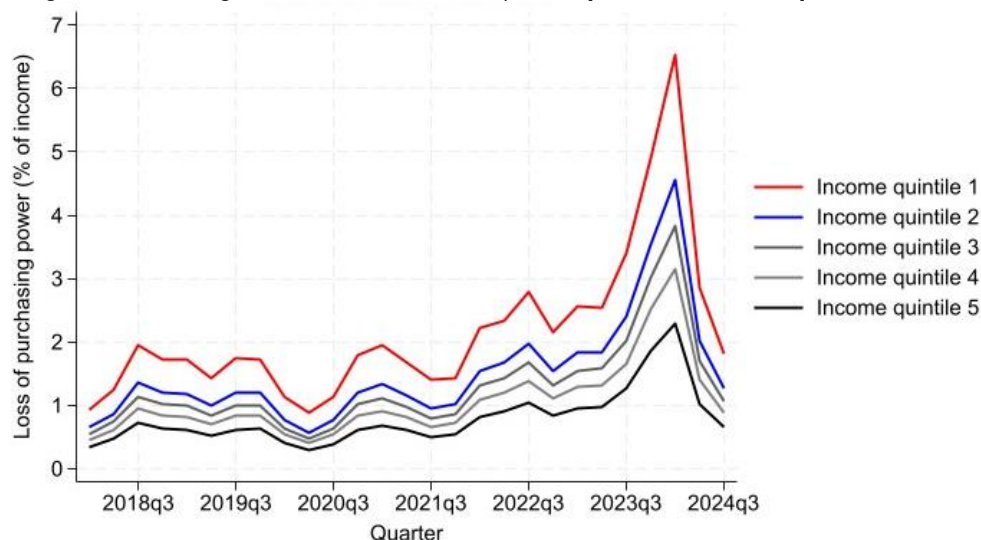
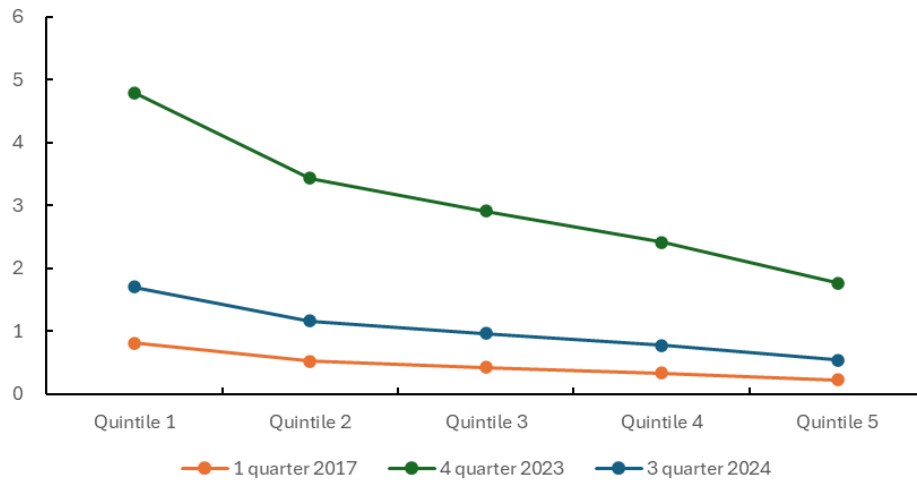


Figure 11. Inflation tax incidence. Based on money demand estimates and National Household survey data. IQ 2017, IVQ 2023, IIIQ 2024



Did inflation tax incidence take a toll on behaviour? This is to be expected of any tax, and inflation is no exception (Henriksen and Kydland, 2010). The following section takes a preliminary look at the issue in the case of Argentina.

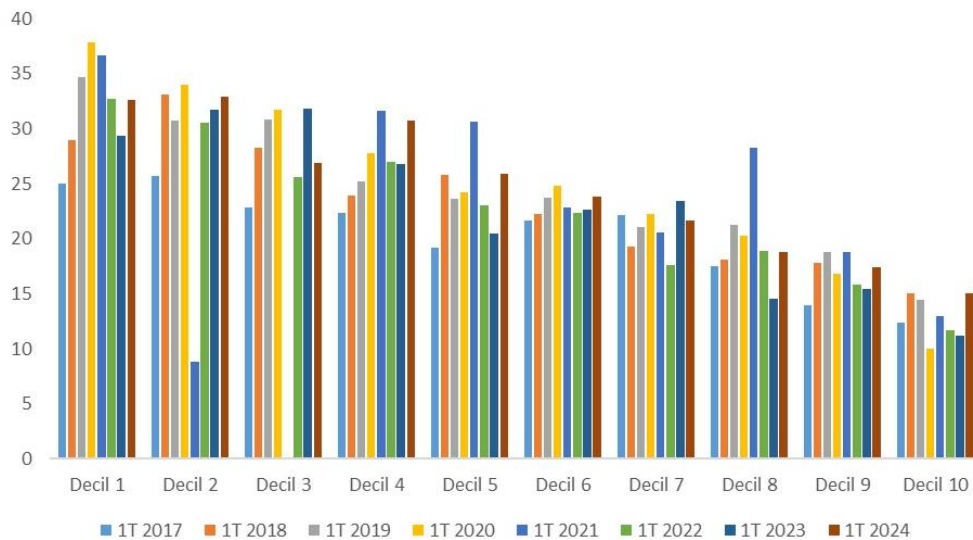
V. Households' financial strategies

The permanent household survey includes a number of questions on financial strategies. We aim at determining whether they are associated with inflation. The questions include the following: whether in the last three months the household has had to:

- a) spend their savings;
- b) borrow from family or friends;
- c) borrow from banks or financial institutions;
- d) buy goods in installments;
- e) sell any of their belongings.

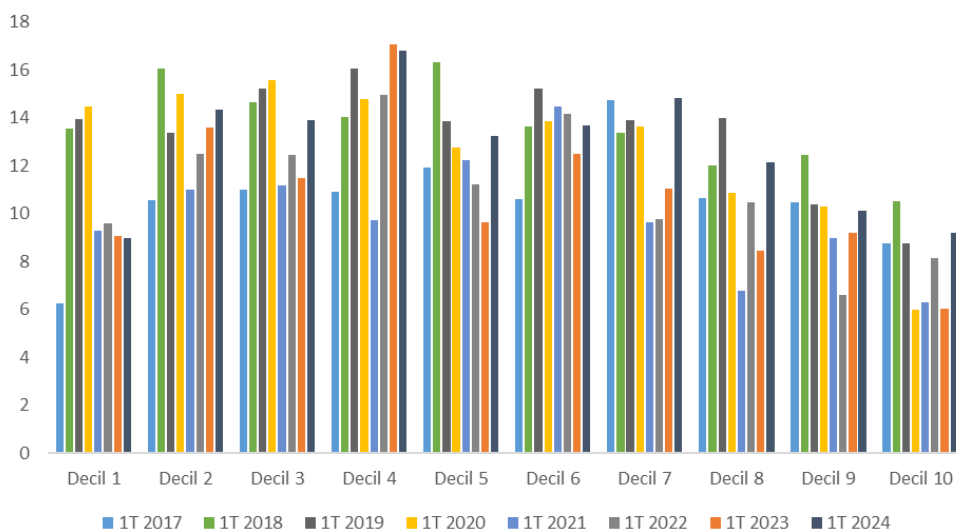
We first look at indebtedness decisions as represented by questions b) and c), and rank households by deciles of per capita household income (Figure 12). In the first quarters of the last seven years, we find that: more households borrowed; households of the lowest deciles tended to borrow more (a higher share of households of lower deciles responded that they had resorted to external financing). While the average household 25 to 35% of households in the first and second deciles borrowed from family, only 10-15% of those in the upper deciles did so.

Figure 12 | Households that borrow from family or friends (% of households)



Source: based on data from INDEC.

Figure 13 | Households that borrow from banks/financial institutions (% households)

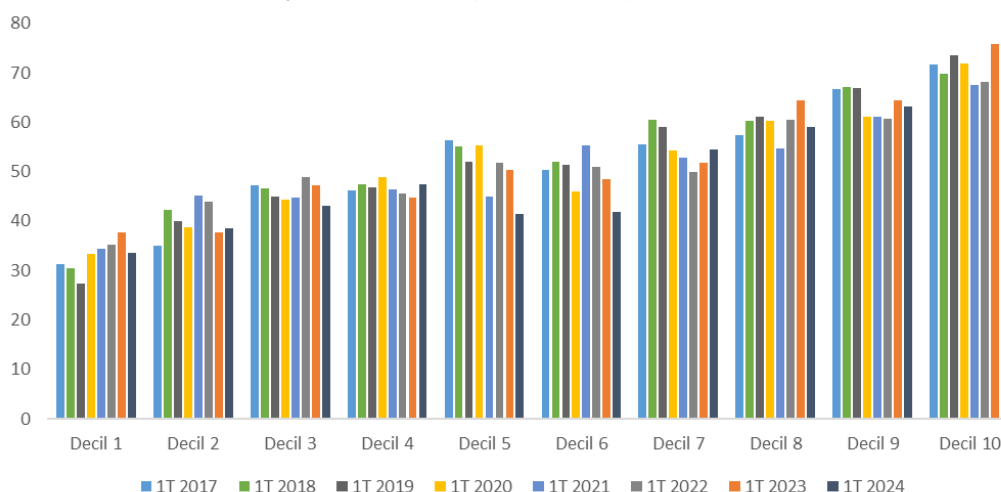


Source: based on data from INDEC.

Differences in external borrowing across deciles are linked to informal rather than formal borrowing. On average for the whole sample (first quarter of 2017- fourth quarter of 2024), 27% of households in the first decile borrowed from family and friends, while only 6% of households in the tenth decile did so. Instead, on average, 11% of households in the first decile borrow from banks, comparable to 9% in the tenth decile (Figure 13).

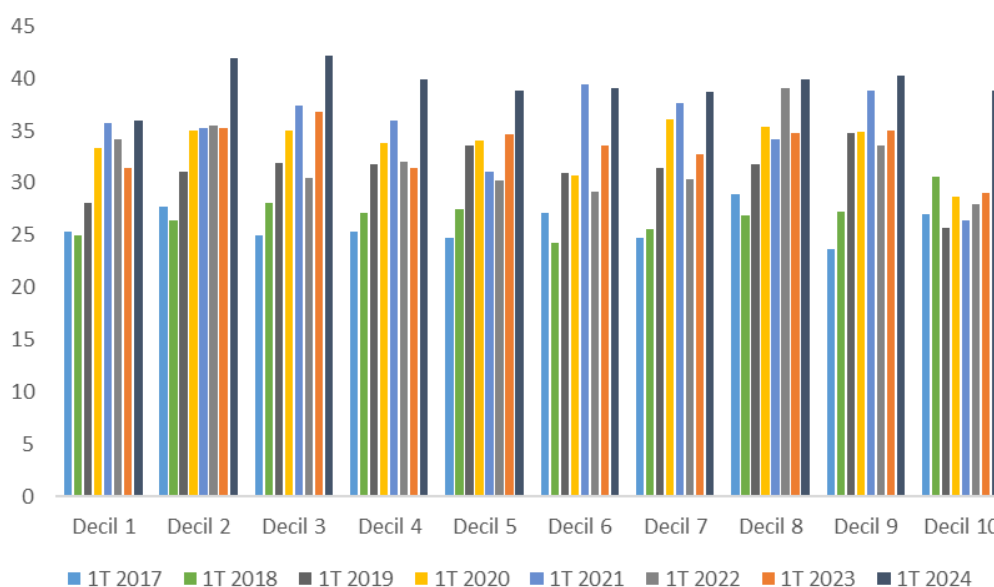
Regarding other household financial strategies, we find differences across income deciles in purchases in installments, but not so much in the use of their own savings. On average for the whole sampling period, almost 70% of households in the tenth decile buy in installments, a share that falls by around half in the first decile (Figure 12). This could be due to higher use of credit cards by wealthier households, profiting from different measures promoted by the government over the years to buy local goods in installments (Ahora 12 plans). Instead, around 30% of households resort to their own savings (a figure that ranges from 29% to 34% by deciles; Figure 14).

Figure 14 | Households that buy in installments (% households)



Source: based on data from INDEC.

Figure 15 | Households that use their own savings (% households)



Source: based on data from INDEC.

We aim to analyze to what extent households' financial strategies have changed in reaction to the differential impact of inflation. As a first descriptive approach, we look at the change in those strategies as inflation accelerated: in our sample, the lowest inflation occurred in 2017, while the highest figures were recorded in late 2023 and early 2024. When comparing both periods, we find that households in the lowest income decile tended to resort more to borrowing from family, friends or institutions; to buy in installments; and to consume out of their own savings (i.e. the first decile shows the highest increase in the share of households adopting such strategies; Table 3). The biggest differences in responses across deciles are found in borrowing from banks, where the share of first decile households increased 12% between 2017 and 2023-24, but it actually decreased 13% in the tenth decile; and in buying in installments, with first-decile households increasing their share by 16% and tenth-decile ones decreasing it by 1%. This is of course a merely descriptive first approach; but it is nonetheless consistent with the view that those more affected by the inflation tax resorted to a larger extent to financial strategies to cope with its adverse impact.

Table 3 | Changes in financial strategies. Average changes of households resorting to borrowing, buying in installments, consuming their savings.

Average change 2023–2024 vs 2017

	Family loans	Bank loans	Installment loans	Savings consumption
Decile 1	31%	12%	16%	48%
Decile 2	29%	15%	-3%	45%
Decile 3	23%	26%	-2%	37%
Decile 4	16%	20%	-1%	47%
Decile 5	25%	16%	-9%	57%
Decile 6	23%	3%	-5%	48%
Decile 7	9%	4%	-4%	52%
Decile 8	-8%	7%	5%	44%
Decile 9	25%	-1%	-3%	58%
Decile 10	14%	-13%	-1%	36%

Source: based on data from INDEC.

V.1 Financial strategies and inflation: econometric estimates

We can take a deeper dive into tax incidence and financial strategies of households by linking the household-level estimates obtained in section III.2 with financial behaviour as described above. We first look at the correlation between tax incidence and financial strategies at different points in time (table 4). There is a positive correlation between inflation tax incidence and borrowing from family and friends, which increases as inflation accelerates from the first quarter of 2017 and the fourth quarter of 2023. Conversely, there is a negative correlation between inflation tax incidence and paying in instalments; while the correlation with the use of savings is basically zero, and there is a very small positive correlation between incidence and borrowing from banks.

Table 4. Inflation tax incidence and financial strategies: correlations, selected quarters

1 quarter 2017					
	Income incidence	Use of savings	In family borrowing	Banks borrowing	Paying in instalments
Income incidence	1,0000				
Use of savings	0,0040	1,0000			
In family borrowing	0,1017***	0,2352***	1,0000		
Banks borrowing	-0,0300***	0,1173***	0,1128***	1,0000	
Paying in instalments	-0,2147***	0,0866***	0,0208**	0,1252***	1,0000
4 quarter 2023					
	Income incidence	Use of savings	In family borrowing	Banks borrowing	Paying in instalments
Income incidence	1,0000				
Use of savings	0,0035	1,0000			
In family borrowing	0,1447***	0,2527***	1,0000		
Banks borrowing	-0,0133	0,1097***	0,1217***	1,0000	
Paying in instalments	-0,198***	0,1239***	0,0713***	0,1255***	1,0000

3 quarter 2024					
	Income incidence	Use of savings	In family borrowing	Banks borrowing	Paying in instalments
Income incidence	1,0000				
Use of savings	0,0028	1,0000			
In family borrowing	0,1441***	0,4246***	1,0000		
Banks borrowing	0,0407***	0,3470***	0,4289***	1,0000	
Paying in instalments	-0,1494***	0,2764***	0,2576***	0,3442***	1,0000

Note: asterisks indicate 1%***, 5% (**) and 10% statistical significance.

As household decisions are reported as binary variables in the permanent household survey, we estimate probit models of the probability of resorting to a certain strategy as a function of inflation tax incidence, controlling by per capita household income. For the first quarter of 2017, only the coefficient for paying in instalments is negative and statistically significant (at the 1% level); as inflation tax incidence decreases at the household level, the probability of paying in instalments is higher (table 5). We take this as confirming that higher income households have more access to means of shielding themselves from inflation. At the same time, in-family and bank borrowing are only significant at a 10% level, while there is no statistical relationship with the use of savings. In keeping with correlations, higher inflation tax incidence increases the likelihood of in-family borrowing but decreases that of borrowing from banks. The latter is consistent, once again, with the hypothesis on higher-income households being more able to protect themselves from inflation through (formal) financial means.

Table 5. Inflation tax incidence and financial strategies. Probit models. First quarter 2017

Dependent variable:	In-family borrowing	Use of savings	Bank borrowing	Paying in instalments
Inflation tax incidence	0,1709*	0,0891	-0,4610*	-0,9013***
Income per capita	-0,00002***	-0,0069	-0,0208*	0,00001***
Cons	-1,0508***	-0,7244***	-0,9066***	0,4038***
Observations	14.021	14.021	14.021	14.021
Pseudo R2	0,0207	0,0002	0,0030	0,0402

Robust standard errors in brackets (White)

* p<0.10, ** p<0.05, *** p<0.01

What happens in a higher inflation environment? in the fourth quarter of 2023, both borrowing from family and friends and paying in instalments become substantially more significant (now at the 1% level), while keeping their positive and negative association to inflation tax incidence on households (table 6). The coefficient on the use of savings remains statistically insignificant, while the one on bank borrowing loses significance. By our estimates, inflation tax incidence increases the probability of poorer households borrowing from family and friends by 0,15 to 0,23 (depending on actual incidence), while those figures range from 0,06 to 0,12 for higher income households (figure 15).

Table 6. Inflation tax incidence and financial strategies Fourth quarter 2023

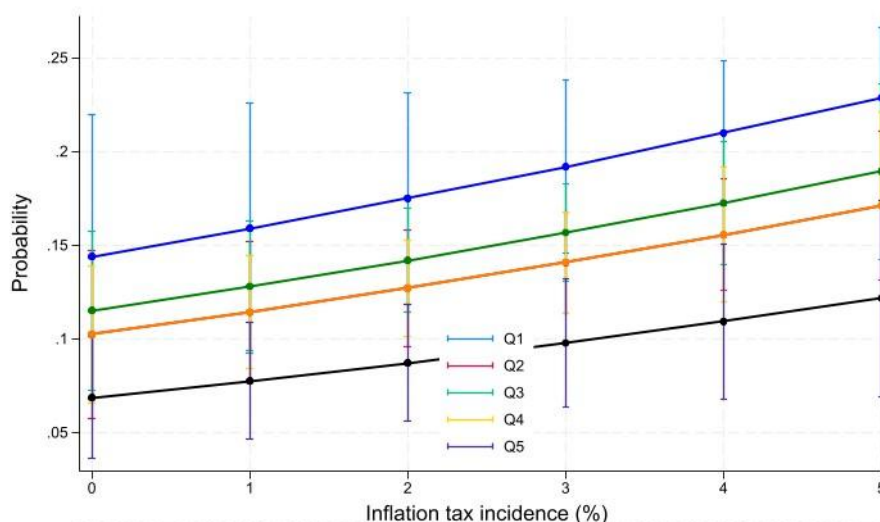
Dependent variable:	In-family borrowing	Use of savings	Bank borrowing	Paying in instalments
Inflation tax incidence	0,1123***	-0,0177	-0,053	-0,2168***
Income per capita	-0,0063***	-0,0018	-0,0026	-0,0017
Cons	-1,2663***	-0,2714***	-0,9059***	0,6233***
Observations	12.631	12.631	12.631	12.631
Pseudo R2	0,0256	0,0004	0,0011	0,0316

Robust standard errors in brackets (White)

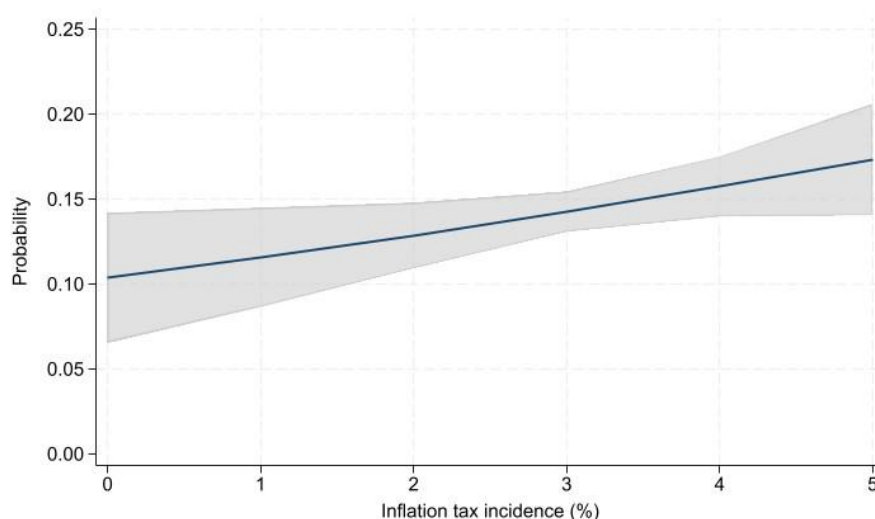
* p<0.10, ** p<0.05, *** p<0.01

Figure 15. In-family borrowing and inflation tax incidence by quintile. Marginal effect estimates from probit model – IV quarter 2023

(a) Marginal effects by tax incidence and income quintile



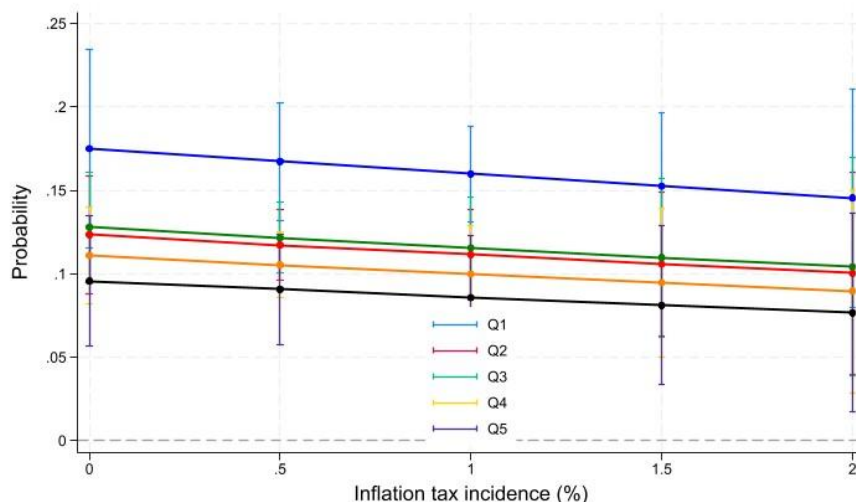
(b) Marginal effects by tax incidence



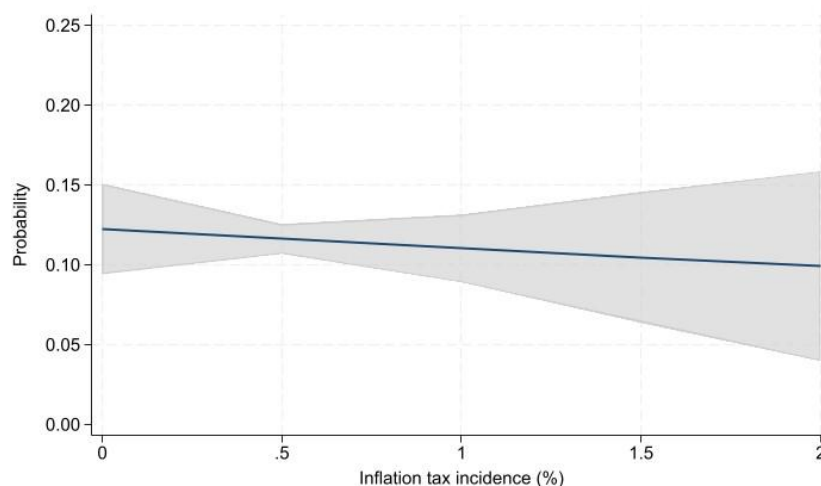
At this point, we only compare estimated probabilities of borrowing from family members and other financial strategies in periods of lower and higher inflation, across lower and higher income households. Our findings suggest higher tax incidence goes together with higher chances of family borrowing and lower chances of paying in instalments, and that the former that both strategies become more relevant in a very high inflation environment (compare the estimates in figures 15 -high inflation- and 16 -lower inflation-). These findings also point to different coping strategies for households according to their income. Lower income households are more likely to resort to informal means such as borrowing from family and friends, while higher income households will typically use means such as credit cards to pay in instalments (financial services for which they have much more direct access than poorer households).

Figure 16. In family borrowing and inflation tax incidence. Marginal effect estimates from probit models, I quarter 2017

(a) Marginal effects by tax incidence and income quintile



(b) Marginal effects by tax incidence



V.2 Financial strategies – robustness checks

The preceding findings are robust to including additional characteristics of household members, in particular of the household head (the one recognized as such by other members): age, gender, maximum level of education attained, occupation status (employed, unemployed, inactive). We continue to find that use of savings and bank borrowing are statistically insignificant, while in-family borrowing becomes significant in a high inflation environment (fourth quarter of 2023; Table 7 a). Paying in instalments is significantly linked to inflation tax incidence in both 2017 and 2023 (relatively low and high inflation periods, respectively).

Table 7. Inflation tax incidence and financial strategies. Probit models. Selected quarters**a) Fourth quarter 2023**

Dependent variable:	In-family borrowing	Use of savings	Bank borrowing	Paying in instalments
Inflation tax incidence	0,0775***	-0,0118	-0,0477	-0,1856***
Income per capita	-0,0078***	-0,0023*	-0,0018	-0,0015
Age	-0,0111***	-0,002	0,0016	-0,0021
Gender	0,2123***	-0,0124	0,0852	0,0281
Education level	-0,0584***	-0,0165	0,0009	0,0957***
Ocupation	-0,0959***	-0,0349	0,0091	-0,0692**
Cons	-0,5389***	-0,1672	-1,1657***	0,3607**
Observations	12.462	12.631	12.462	12.462
Pseudo R2	0,050	0,002	0,002	0,045

Robust standard errors in brackets (White)

* p<0.10, ** p<0.05, *** p<0.01

b) First quarter 2017

Dependent variable:	In-family borrowing	Use of savings	Bank borrowing	Paying in instalments
Inflation tax incidence	0,088	0,1295	-0,4654	-0,8816***
Income per capita	-0,00002***	0,0059	-0,00001*	0,00001*
Age	-0,0109***	-0,0043***	-0,0034*	-0,0019***
Gender	0,1347***	-0,0928**	-0,0478	-0,0578
Education level	-0,0246	-0,0486***	0,0119	0,1009***
Ocupation	-0,0292	0,0038	-0,0292	-0,0922***
Cons	-0,6421***	-0,5531***	-0,6386**	0,4450***
Observations	13.810	13.810	13.810	13.810
Pseudo R2	0,042	0,007	0,006	0,059

Robust standard errors in brackets (White)

* p<0.10, ** p<0.05, *** p<0.01

Our results are not due to seasonal factors since regressions run for the first quarter of 2024 yield comparable readings.

VI. Concluding remarks

In this note, we explore the distributional impact of inflation in Argentina. Our contribution is twofold:

a) We provide new estimates of the incidence of the inflation tax at the household level on a national scale, based on micro data, for 2017-2024.

b) We explore how inflation tax incidence is linked to changes in households' financial strategies (particularly indebtedness), using data from the permanent household survey.

a) Inflation tax incidence estimates are derived from a money demand function estimated employing data from the latest national household spending survey (2017-18). Estimating a money demand function based on household income and expected inflation allows us to gauge tax incidence using quarterly data from the permanent household survey from 2017 to 2024. As the tax rate (inflation) increases, the tax base (money demand) erodes; inflation

losses are lower by some 2 p.p. of household income than those that assume a constant tax base.

Our estimates suggest that at the peak of monthly inflation in December 2023 (25%), inflation tax incidence reached almost 8% of monthly income of households in the first quintile of the income distribution. Inflation weighed around three times more in poorer households than in higher income ones. Our estimates also suggest that inflation acceleration did not necessarily entail a more uneven incidence across households. As inflation decelerated during 2024, this involved gains of round 6 p.p. of income for first-quintile households and of 1,5 p.p. for fifth-quintile households.

b) Our analysis of financial strategies based on responses to the permanent household survey suggest that poorer households tend to react to the inflation tax by borrowing from family members or friends, while better off households can access financial services that allow them to pay in instalments, thus shielding against inflation. Our estimates indicate that inflation tax incidence increases the probability of poorer households borrowing from family and friends by 0,15 to 0,23 (depending on actual incidence). We find little evidence to link inflation tax incidence to bank borrowing or use of own resources to finance current spending. We also find that in-family borrowing becomes more significant in a period of inflation acceleration.

It should be noted that we measure the inflation tax as that paid by currency holders, but we do not include broader forms of money whose returns can help partially offset such tax incidence, including holdings of foreign currency. For instance, evidence suggests a wider usage of digital wallets as inflation accelerated; their liquid balances accrue interest daily, typically higher than that of sight deposits. Likewise, we do not factor in the real gains associated with debt holdings being exposed to inflation. In a highly transactional financial system, with credit to GDP systematically below 10% during the sample period, this is not a prime concern; nonetheless, it remains a limitation to the analysis.

As households face different consumption baskets, so do their associated price indices; it could be argued that inflation tax incidence should factor this in. However, when we measure consume price ratios for different income quintiles based on their consumption baskets (distinguishing by main items in the CPI), differences between the first and the fifth income quintile amount to up to 4% at the peak of monthly inflation, but are generally around 1 and 2% during most of the period under study (Annex VII). Hence, this should not significantly alter our results.

A number of improvements and extensions are in order. Regarding point a), we plan to include alternative money demand specifications to test whether the Cagan-type money demand function we currently employ is the most suitable one (especially regarding the opportunity cost variable). We can also improve on the inflation variable by computing inflation at the household level, since the consumption basket is available from the ENGHO. While this would make an out-of-sample extension less feasible, we could gain by providing more accurate in-sample estimates of inflation tax incidence. Indeed, a projected extension is to estimate money demand with the data included in the fifth quarters covered in the ENGHO, thus being able to exploit household characteristics within the sample; as inflation accelerated during the period that the ENGHO data were collected, we could gauge in-sample money demand responses using a pseudo-panel.

Regarding point b), so far we are only comparing the likelihood of financial strategies at two points in time (with low and high inflation); we should profit from the variability of inflation across our sample to have a better assessment of the link between inflation tax incidence and household strategies. Furthermore, we can refine the analysis to better gauge impact of

inflation tax incidence rather than mere statistical association. Endogeneity of financial strategies cannot be ruled out and so should be controlled for accordingly (e.g.: tax incidence for higher income households is smaller as they actually have access to financial services that allow them to hedge against inflation).

Finally, a separate project could contemplate broader household responses, over and above financial strategies. Assessing labour supply decisions in response to inflation would be a natural follow-up to our analysis.

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Annex I.

a. Permanent Household Survey (EPH)

The Permanent Household Survey (EPH) is a national program for the systematic and continuous production of social indicators conducted by the National Institute of Statistics and Censuses (INDEC) in coordination with provincial statistics offices. Its objective is to collect information on the sociodemographic and socioeconomic characteristics of the population.

It began in 1973 with two annual rounds (in May and October). Since 2003, the EPH has become a continuous survey that produces quarterly data. The EPH – Total Urbano extends the coverage of the continuous EPH in the 31 main urban agglomerates during the third quarter of each year. This extension incorporates private dwellings from urban areas with 2,000 or more inhabitants not included in the continuous survey, covering all provinces except Tierra del Fuego, Antarctica and South Atlantic Islands, and the Autonomous City of Buenos Aires.

The survey is based on a probabilistic, stratified sample with two selection stages for the 31 urban agglomerates and a third stage for the urban extension corresponding to the selection of localities within each province. The total sample size is approximately 26,000 households.

The EPH uses two questionnaires: one for households, collecting information on housing characteristics, living conditions, organization, and coping strategies; and another for individuals, covering personal characteristics, employment conditions, and income. For this study, the *strategies module* is particularly relevant, as it asks how household members have managed over the past three months—specifically whether they have had to spend their savings, borrow money from relatives or friends, take loans from banks or financial institutions, or buy goods on credit, in installments, or using credit cards or store tabs.

b. National Household Expenditure Survey (ENGHo)

The Household Expenditure Survey (ENGHo) is conducted by Argentina's National Institute of Statistics and Censuses (INDEC) and aims to collect information on the living conditions of the population from the perspective of income distribution and access to goods and services produced by society. It has broad national coverage, ensuring the participation of all provinces. The survey is typically carried out every ten years on average. The most recent edition, ENGHo 2017–2018, was conducted nationwide, covering urban areas with 2,000 or more inhabitants between November 2017 and November 2018. It was based on a probabilistic, multistage, and stratified sample of 44,914 private households distributed over 52 weeks of data collection.

The main variables studied in the survey are those related to households' current expenditures and income (both current and non-current). It also collects information on housing characteristics (type of dwelling, available services, water supply, electricity, etc.), predominant construction materials, tenure status, and housing conditions. Additionally, it gathers sociodemographic and labor characteristics of household members—household composition, marital status, education, health, employment, transportation habits, and eating-out practices.

The survey also captures household consumption derived from in-kind transfers of goods and services provided by the public sector or nonprofit institutions, such as food, medicine, medical consultations and tests, hospitalizations, and other goods and services. The 2017–2018 edition also included a specific module on household energy consumption.

For this study, the most relevant information used to determine households' money demand came from the question related to the payment method used, such as cash; debit card; credit card; credit, store account, or payment book; bank transfer; online banking, or automatic debit; and other means (including prepaid or reloadable cards, or withdrawals from the workplace).

Annex II

							Monthly inflation		Monthly inflation	
							25.0%		2.0%	
Average household income quintiles	Average household income (pesos)	Household expenditure as % of income	Monthly household expenditure (pesos)	% of expenditure paid in cash	Use of cash during the month (pesos)	Monthly average cash holdings (pesos)	Purchasing power loss (pesos)	As % of household income	Purchasing power loss (pesos)	As % of household income
1	318,411	100%	318,411	86.0	273,860	136,930	34,232	10.8	2,739	0.9
2	629,587	92%	578,150	80.4	464,866	232,433	58,108	9.2	4,649	0.7
3	926,983	80%	738,305	75.7	559,229	279,615	69,904	7.5	5,592	0.6
4	1,377,553	71%	980,744	68.8	674,656	337,328	84,332	6.1	6,747	0.5
5	2,832,502	60%	1,701,744	55.2	938,536	469,268	117,317	4.1	9,385	0.3
				Quintile 1/quintile 5 ratio				2.6	2.6	

Annex III. National Survey on Household Expenditure (ENGHO), 2017-18. Descriptive statistics – household level

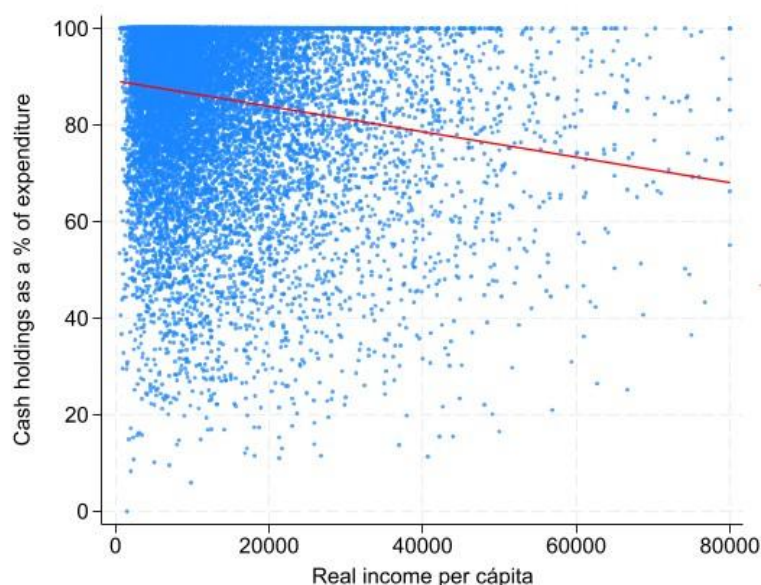
		Mean	Standard deviation
Real income per capita	Quintile 1	3.572	1.289
	Quintile 2	7.230	985
	Quintile 3	10.900	1.213
	Quintile 4	16.778	2.342
	Quintile 5	38.267	41.213
	Total	15.346	22.175
Real expenditure per capita	Quintile 1	4.432	3.516
	Quintile 2	7.015	5.097
	Quintile 3	9.301	6.051
	Quintile 4	13.399	7.649
	Quintile 5	24.877	17.078
	Total	11.805	11.679
Real cash expenditure per capita	Quintile 1	3.808	2.992
	Quintile 2	5.762	3.840
	Quintile 3	7.212	4.591
	Quintile 4	9.684	6.106
	Quintile 5	13.961	10.436
	Total	8.085	7.105

Note. Nominal variables correspond to five points in time (the first quarter of 2017 and the four quarter of 2018) and are deflated using the CPI (INDEC) at IV-quarter 2018 prices.

	# obs	# obs represented
Quintile 1	4.927	2.528.777
Quintile 2	4.456	2.528.857
Quintile 3	4.046	2.527.237
Quintile 4	4.055	2.529.940
Quintile 5	4.063	2.527.714
Total	21.547	12.642.525

Note. Observations correspond to the number of households. Represented observations are equal to the number of households multiplied by an expansion factor that indicates how many actual households in the population are represented by the sample.

Figure III.a. Expenditure using cash (as % of expenditure) and household real income. ENGHO, 2017-18



Annex IV. Money demand function estimates – ENGHo data

Table IV. a. Money demand model including household characteristics

	Dependent variable: Log real cash per capita
Log real income per capita	0,558***
Expected inflation	-0,002
Age	-0,048***
Gender	0,018
Education level	0,001
Ocupation	0,018**
Cons	3,728***
Observations	21.523
R2	0,3380
Robust standard errors in brackets (White)	
* p<0.10, ** p<0.05, *** p<0.01	

Table IV. b. Money demand model including regional and income quintile dummies

	Dependent variable: Log real cash per capita
Log real income per capita	0,421***
Expected inflation	-0,005***
Quintil	
2	0,086***
3	0,156***
4	0,259***
5	0,287***
Region	
2	0,121***
3	-0,003
4	-0,194***
5	0,045**
6	-0,223***
Cons	4,053***
Observations	21.523
R2	0,354
Robust standard errors in brackets (White)	
* p<0.10, ** p<0.05, *** p<0.01	

Figure IV.a. Money demand estimates and per capita household income, ENGHO data (2017-18)

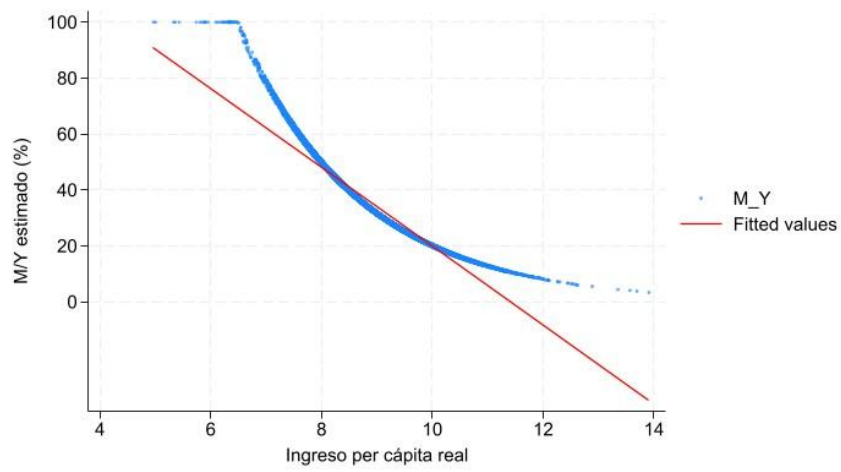
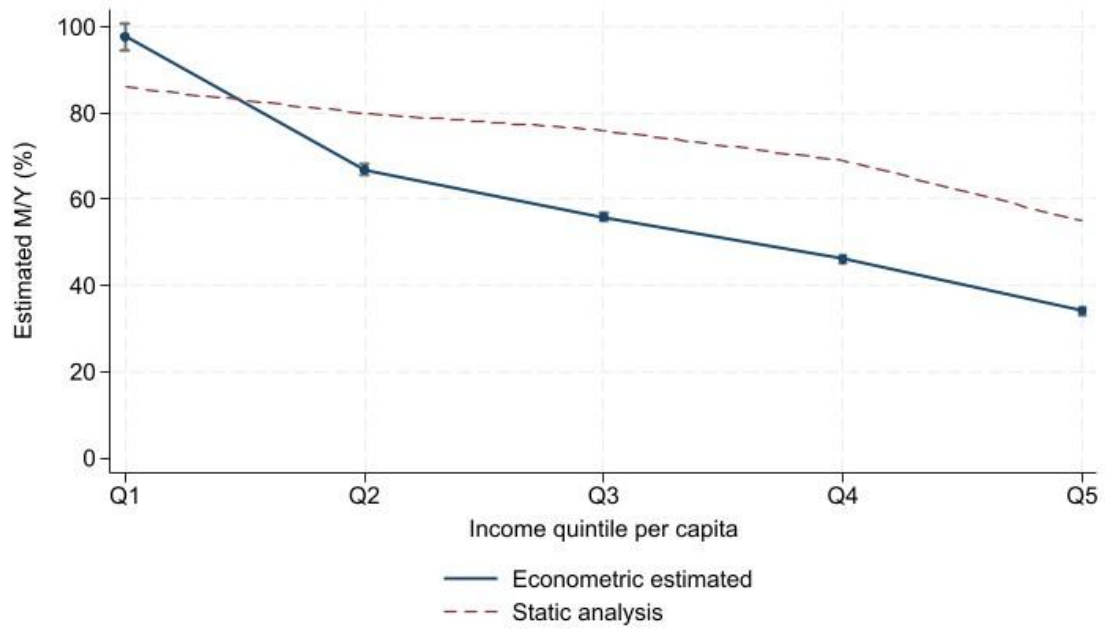


Figure IV.b. Money demand estimates and income quintiles, ENGHO data (2017-18)



Annex V. Permanent Household survey (EPH). Descriptive statistics for selected quarters.

1 Quarter 2017				
		Real income per capita	Money demand to income (%)	Tax incidence to income
Mean	Quintile 1	4.468	45,1	0,92%
	Quintile 2	9.087	30,7	0,62%
	Quintile 3	13.359	25,8	0,52%
	Quintile 4	20.587	21,3	0,43%
	Quintile 5	42.172	16,0	0,32%
Standard error	Quintile 1	1.947	15,5	31,4%
	Quintile 2	1.012	1,6	3,2%
	Quintile 3	1.482	1,3	2,6%
	Quintile 4	2.969	1,4	2,8%
	Quintile 5	22.257	2,3	4,7%
Min	Quintile 1	0	34,2	0,69%
	Quintile 2	7.139	28,2	0,57%
	Quintile 3	10.872	23,5	0,48%
	Quintile 4	16.321	19,0	0,39%
	Quintile 5	25.882	3,9	0,08%
Max	Quintile 1	7.127	253,5	5,1%
	Quintile 2	10.863	34,2	0,7%
	Quintile 3	16.295	28,2	0,6%
	Quintile 4	25.865	23,5	0,5%
	Quintile 5	862.152	19,0	0,4%

Note. Nominal variables are deflated using the CPI (INDEC) at IV-quarter 2018 prices.

1 quarter 2017					
	Age	Sex	Education	Occupation	
Mean	Quintile 1	47	1	2	3
	Quintile 2	54	1	3	2
	Quintile 3	54	1	3	2
	Quintile 4	53	1	3	2
	Quintile 5	51	1	3	2
Standard error	Quintile 1	14	0	1	5
	Quintile 2	17	0	1	2
	Quintile 3	17	0	1	2
	Quintile 4	18	0	1	2
	Quintile 5	17	0	1	3
Min	Quintile 1	17	1	1	1
	Quintile 2	18	1	1	1
	Quintile 3	17	1	1	1
	Quintile 4	18	1	1	1
	Quintile 5	19	1	1	1
Max	Quintile 1	93	2	5	123
	Quintile 2	98	2	5	23
	Quintile 3	100	2	5	23
	Quintile 4	98	2	5	13
	Quintile 5	102	2	5	12

	# obs	# obs represented
Quintile 1	3.133	1.779.511
Quintile 2	2.854	1.770.956
Quintile 3	2.941	1.779.096
Quintile 4	2.893	1.801.780
Quintile 5	2.305	1.744.287
Total	14.126	8.875.630

Note. Observations correspond to the number of households. Represented observations are equal to the number of households multiplied by an expansion factor

4 Quarter 2023				
		Real income per capita	Money demand to income (%)	Tax incidence to income (%)
Mean	Quintile 1	3.489	31,5	4,89%
	Quintile 2	6.542	22,8	3,54%
	Quintile 3	9.293	19,4	3,01%
	Quintile 4	13.871	16,2	2,52%
	Quintile 5	30.288	12,0	1,86%
Standard error	Quintile 1	1.260	8,4	129,9%
	Quintile 2	730	1,2	18,2%
	Quintile 3	1.013	0,9	14,7%
	Quintile 4	1.720	0,9	13,8%
	Quintile 5	18.946	1,9	29,8%
Min	Quintile 1	0	25,1	3,89%
	Quintile 2	5.246	21,1	3,27%
	Quintile 3	7.707	17,7	2,75%
	Quintile 4	11.241	14,4	2,24%
	Quintile 5	17.727	1,0	0,16%
Max	Quintile 1	5.245	189,7	29,5%
	Quintile 2	7.690	25,1	3,9%
	Quintile 3	11.231	21,0	3,3%
	Quintile 4	17.707	17,7	2,8%
	Quintile 5	6.146.749	14,4	2,2%

4 quarter 2023					
		Age	Sex	Education	Occupation
Mean	Quintile 1	47		2	3
	Quintile 2	54		1	3
	Quintile 3	54		1	3
	Quintile 4	52		1	3
	Quintile 5	48		1	3
Standard error	Quintile 1	14		1	1
	Quintile 2	17		0	1
	Quintile 3	18		0	1
	Quintile 4	17		0	1
	Quintile 5	16		0	2
Min	Quintile 1	16		1	1
	Quintile 2	18		1	1
	Quintile 3	18		1	1
	Quintile 4	15		1	1
	Quintile 5	18		1	1
Max	Quintile 1	100		2	5
	Quintile 2	97		2	5
	Quintile 3	102		2	5
	Quintile 4	98		2	5
	Quintile 5	95		2	5

3 Quarter 2024				
		Real income per capita	Money demand to income (%)	Tax incidence to income (%)
Mean	Quintile 1	3.729	46,3	1,80%
	Quintile 2	7.233	32,4	1,26%
	Quintile 3	10.570	27,2	1,06%
	Quintile 4	16.416	22,4	0,87%
	Quintile 5	35.305	16,5	0,64%
Standard error	Quintile 1	1.410	18,8	73,4%
	Quintile 2	844	1,7	6,8%
	Quintile 3	1.115	1,3	5,0%
	Quintile 4	2.505	1,5	6,0%
	Quintile 5	17.880	2,5	9,9%
Min	Quintile 1	0	35,8	1,40%
	Quintile 2	5.736	29,5	1,15%
	Quintile 3	8.812	24,9	0,97%
	Quintile 4	12.811	19,9	0,78%
	Quintile 5	20.880	5,9	0,23%
Max	Quintile 1	5.731	302,5	11,8%
	Quintile 2	8.805	35,8	1,4%
	Quintile 3	12.808	29,5	1,1%
	Quintile 4	20.841	24,9	1,0%
	Quintile 5	307.949	19,9	0,8%

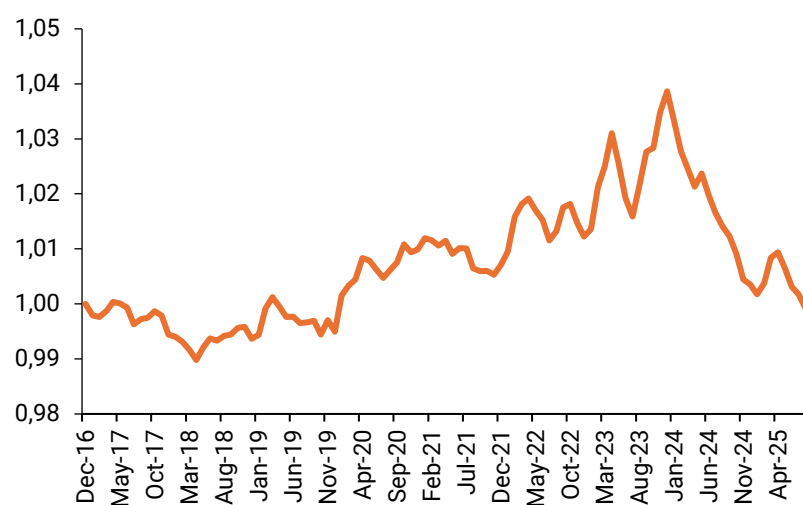
	Mean	Median	Sd	Min	Max
Inflation (monthly)	5,18%	3,90%	3,45%	1,73%	15,53%
Expected inflation (12 month)	68,40%	49,80%	50,28%	17,80%	213,00%

Annex VI

Inflation tax incidence estimations in selected papers about Argentina

	Inflation rate			Inflation tax incidence (quintiles)								
	Average	Maximum	Minimum	Average			Maximum			Minimum		
				Q1	Q5	Q1/Q5 ratio	Q1	Q5	Q1/Q5 ratio	Q1	Q5	Q1/Q5 ratio
Canavese et al. (1999)	63,9% qoq	466,1% qoq	7,7% qoq	6,9	3,5	2,0	11,8	8,5	1,4	1,0	0,6	1,8
	1980-1990	Q1 1990	Q4 1985									
Capello et al. (2015)	27% yoy	-	-	17,5	3,7	4,7	-	-	-	-	-	-
	Dec-13											

Annex VII. Inflation by household income quintile: CPI ratio, quintile 1/quintile5



Annex VIII. Data description and sources

Variable	Description	Source
Ingpch	Household per capita income	ENGho (INDEC)
qinpch_t	Household per capita income quintile	ENGho (INDEC)
fp_contado	Total consumption expenditure paid in cash	ENGho (INDEC)
Age	Years old	EPH (INDEC)
Sex	Equal 1 if man	EPH (INDEC)
Education	Educational level achieved	EPH (INDEC)
Ocupation	Equal 1 if occupied	EPH (INDEC)
Expected inflation	YoY variation for the next 12 months	REM (BCRA)
CPI	Consumer price index	INDEC