

FS 3.3 Water bill perception in Brazil: Do households get it right?

Key Takeaways

- Water service providers often use prices to manage demand; however, consumers commonly have misperceptions about how much they pay for their water.
- In Brazil, bill misperception is more common among those who perceive their tap water as having poor quality.
- Water bill awareness can be increased among customers by improving and communicating water quality and educating customers about tariffs.

In economics, prices are considered one of the main drivers of consumer demand; if prices are high, consumers will use less of a product, and if prices are low for a product, consumers will tend to consume more. In theory, this relationship allows water utilities to use prices as a tool for managing piped water demand; however, the effectiveness of this tool depends on customers knowing how much they are spending. If customers are not aware of their water prices, these will not influence their water-use patterns.



Some studies have examined the factors contributing to bill misperception in Europe and the U.S. but no analysis focuses on Latin America and the Caribbean countries (LAC), and factors that may be relevant for the region, such as persistent water quality issues, have not been previously considered. A recent working paper by the InterAmerican Development (IADB) is the first study to focus on bill misperception in a LAC country. The paper, entitled “Water Bill Perception in Brazil: do households get it right?”, explores how perception of water quality influences bill misperception using 2019 survey data on bill and quality perceptions in Brazilian households. This case study is of particular interest because more than half of the Brazilian population lives in areas with medium to extremely high-water risk when considering water quality, quantity, and regulatory components (Libra et al., 2022), and piped water in the country often contains contaminants in concentrations that exceeds the limits set by national regulations (Berendonk Handam et al., 2020).



Among other household characteristics, survey respondents were asked:

1. How much their last water bill was. Then, they were voluntarily requested to provide their last water bill. Bill misperception, i.e., the ratio of perceived water bill to actual water bill, was computed for the 48% of survey respondents who provided the bill.
2. How they would rate the quality of water based on taste. During the interview, water samples were taken to measure chlorine levels as an objective measure for drinking water organoleptics.

The results show that households who report their water bill are generally well-informed. But, after controlling for the selection bias caused by survey respondents providing their bills voluntarily, people tend to overestimate the amount they pay for water. This degree of misperception is affected by water quality, as those who perceived their water quality to be poor were even more likely to overestimate their water bills. Households with individual meters are more likely to provide their bill; however, they tend to have higher levels of bill misperception when compared with those that provide their bill and are not metered. This is likely because the household has bills that vary from month to month instead of the fixed monthly charge paid by non-metered customers. Metering is an important tool for utilities that allows to bill customers based on consumption; however, more education about tariff structures may be necessary to help customers understand bill fluctuation.

Based on the results of this publication, there are two main actions that policymakers can take to reduce levels of bill misperception:

1. Ensure that piped water meets water quality standards and communicate water quality standards, especially in poor neighborhoods that tend to be more frequently affected by low-quality water service.
2. Increase the number of households with individual water meters while improving consumers' knowledge of water tariffs through educational campaigns.

For more information on the data, analysis, and conclusions of this study, see the IDB working paper “Water-Bill Perception in Brazil: Do households get it right?”.



Sources: 1. Libra, Collaer, Datshkovsky, Pérez-Urdiales, (2022). Technical Note: Scarcity in the land of plenty, IDB-TN-2411. Washington DC: Inter-American Development Bank. 2. Berendonk Handam, Albuquerque dos Santos, Almeida de Moraes Neto, Leal Alencar, Ferraz Ignacio, Sotero-Martins, (2020). Drinking water quality in Brazilian urban slums. Revista Ambiente & Água, 15 (3).

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