

Application of the Tourist Test to Colombian Merchants

Arango-Arango, Betancourt-García, Bernal-Restrepo

Discussion by Diego Scalise

Bank of Italy

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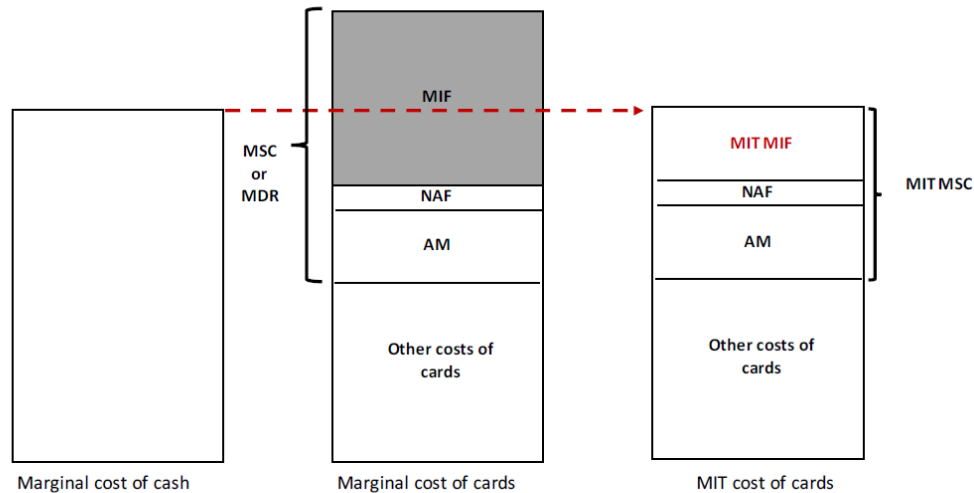
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Short summary

In Colombia more than half of merchants accepting cards use dissuasive strategies to incentivize cash payments (e.g., cash discounts and minimum transaction limits for cards).

Authors measure the degree of mismatch between market and optimal merchant service costs (MSC) that acquirers charge to merchants, using the “Tourist/Merchant Indifference Test” (MIT) (Rochet & Tirole, 2011: MSC making merchants indifferent between being paid in cash or cards in the context of a sporadic consumer like a tourist is also socially optimal)

Figure 2. Definitions of the Merchant Indifference Test



Note: MIF: merchant interchange fee; NAF: network access fee; AM: acquirer margin; MSC: merchant service charge; MIT: merchant indifference test.

Source: Fung et al. (2018) and ECDGC (2015).

Based on a merchant cost survey performed by the Colombian central bank in 2018Q4 (AA & BG, 2020), apply two alternative methodologies:

- accounting/arithmetic estimation of the MIT MSC based on the variable costs as stated by participants
- econometric approximation based on the estimation of cost functions for each payment instrument

Main findings

- At retail transaction size, the marginal cost of cash is lower than those of either debit or credit cards, implying a negative MIT MSC
⇒ merchants would prefer cash rather than cards at any positive MSC
- For higher transaction values MIT MSC varies from “up to 0.22%” to “up to 0.86%” (in a counterfactual medium-term horizon with a less cash dependent retail sector the MIT MSC would be “up to 0.40%”)

These figures are considerably lower than the average MSC charged by the industry.

Additional evidence & policy implications

MIT MSC varies substantially depending on the payment cost structure of merchants (e.g., scale of payment volumes and values processed, relative participation of cash and card payments in their sales, average transaction value)

Table 3. Distribution between fixed and variables costs per payment instrument

	Fixed costs	Acquiring fees	Processing costs	Opportunity costs	Fraud/counterfeiting/robbery losses
All merchants					
Cash	43,60%	0,00%	55,67%	0,08%	0,65%
Debit card	50,43%	30,70%	18,87%	0,00%	0,00%
Credit card	49,55%	34,92%	15,53%	0,00%	0,00%
Micro merchants					
Cash	43,49%	0,00%	55,71%	0,09%	0,71%
Debit card	51,57%	28,48%	19,95%	0,00%	0,00%
Credit card	53,73%	29,54%	16,73%	0,00%	0,00%
Small merchants					
Cash	44,63%	0,00%	54,99%	0,05%	0,34%
Debit card	46,83%	39,74%	13,43%	0,00%	0,00%
Credit card	34,96%	54,18%	10,86%	0,00%	0,00%
Medium and large merchants					
Cash	42,56%	0,00%	57,14%	0,14%	0,17%
Debit card	35,93%	50,06%	14,01%	0,00%	0,00%
Credit card	31,31%	55,89%	12,80%	0,00%	0,00%

Given such dispersion, a **regulation based on an average price cap** would allow the card industry to accommodate different MSC depending on merchants' cost structures

Discussion 1/3

Many strengths

- Very detailed merchant-level data
- Comprehensive evaluation by transaction size and merchant category
- Very clear representation of the results
- Reasonable results (estimated “optimal” level for capping fees in a future with less cash compatible with other level set in other advanced economies, i.e. *EU Interchange Fee Regulation*)

Discussion 2/3

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A few weaknesses

- Low goodness-of-fit in the regression analysis
- No strong controls for possible geographic and economic sector effects
- Not clear, at least to me, results on MIT MIF

Discussion 3/3

Suggestions

- More controls (e.g., fixed effects) \Rightarrow more robust estimates
 - reduce possible omitted variable bias
 - (also) improve goodness-of-fit
- Simultaneous estimation for cash and cards (SURE?)
- Panel estimation, whenever possible
- Indicators of payment habits/substitution between payment instruments capturing (to a certain extent) consumers' preferences

Thanks!

Diego Scalise

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