

Interchange Fees, Market Failure, and Remedies

Richard Schmalensee, MIT

I'm going to try something novel that those of you with gray hair may remember. I'm going to do this without PowerPoint. We will try using simply words.

David asked me to take maybe not a Swiss approach, in terms of neutrality, but to take a look at the literature and try to start off with some of its main themes. I think what I'm going to say isn't fundamentally controversial, at least among economists, but it may be in a broader context. I want to make three basic points.

First point, the interchange fee is not an ordinary price, and this is not an ordinary price regulation issue.

Second, the reasons why the market-determined interchange fee might depart from the socially-optimal fee are complicated and subtle, so that doing regulation so that doing regulation right would be very hard. And as addendum, there are at least some reasons to think that the difference between market-determined and socially optimal fees are not large.

And finally, my third point, proposed short-cut approaches to regulation lack robust theoretical support and they lack support in the literature.

The Interchange Fee Is Not an Ordinary Price

So, let me start with the first of these points. The interchange fee is not an ordinary price. This is not an ordinary price regulation problem like electricity or telecommunications, where the focus is on controlling monopoly power.

Payment networks may indeed have market power, and I wouldn't want to take issue with that hypothesis, but interchange regulation is not about limiting power, since interchange is not what the network puts in its pocket. It's what it passes through to issuers.

The literature is clear: the function of interchange is to shift cost between the issuing and acquiring sides of a system, to balance the system so as to maximize its value, not to extract that value.

So, two observations to illustrate this, first, interchange as we think of it is not an intrinsic feature of payment systems. Think about Diners Club in the early days. Think about American Express now. The system, American Express let's say, has contracts with issuing banks, doesn't always do its own acquiring. So, it has contracts with merchant processors. There's no interchange. There are fees on one side, payments on the other side. American Express makes money. Visa and MasterCard could organize the same way. I've never understood why they retain interchange. It's such an obvious target, but there's no reason for contracts to be structured as they are structured.

Second observation, in their early days, it's easy to think of these payment systems as colossi, but in fact, they were small. Many failed. Paying with Plastic, a book everyone should own, has a number of examples of payment systems started in the United States in the '50s that failed. So, for today's payment systems early on it would be hard to say they had market power. Most of those failures had significant interchange fees, or more precisely, had merchant-pay models. One way or another – whether like Diners Club, they didn't have fees, or like MasterCard, they did – all of those systems had merchant-pay business models when they didn't have market power. So, it's not about the market power of the system.

Market Determined Interchange Fees May Not be Socially Optimal

My second point is that the economic literature on interchange, which is now a large literature, does not say that market-determined interchange fees are socially optimal. It's very hard to find a paper that says that. What it does say is that the reasons why they are not optimal are diverse, are complicated, are subtle, so that imposing the optimal fee by regulation is in principle very complicated. There's little reason based on what little we know to think that the difference between market-determined and socially optimal interchange fees is large, but I would not assert there is no difference.

The ways in which things can go wrong here are complicated, as I said, but there is a nice summary done by a group of U.S. Federal Reserve economists in mid-2009. Their survey, which I commend to you, concludes that, "In theory, privately-set interchange fees can be either too high or too low relative to the efficient interchange fee, depending on a number of factors..."

They go on to list the factors that appear in various models. One problem, for instance, is that payment systems maximize their value by focusing on the marginal consumer and the marginal merchant, while social welfare maximization focuses on the average consumer and the average merchant. That's a reason why the interchange fee might not be optimal. Of course, it's also the reason why firms with market power, as Mike Spence taught us years ago, don't select optimal product quality, because they focus on the marginal, not the average. Most people don't suggest regulating the product quality of all firms with some market power, but it's the same kind of rationale.

Even in simple models, the socially optimal interchange fee depends on a number of difficult-to-observe functions and parameters: the competitive behavior of issuers & acquirers, the demand functions of consumers & merchants, the extent of

strategic behavior by merchants, how merchants differ, how consumers differ and on and on.

To my knowledge, nobody ever has ever tried to do the empirical analysis that the theory says would be necessary to produce a credible estimate of the difference between the market-determined and socially-optimal interchange fees. There are at least three reasons to think that the difference is relatively small. I don't want to lean too hard on these, but I do want to mention them.

First, as I said earlier, every successful payment system, as well as many that have failed, has a merchant-pays model. That is interchange shifts revenue from the acquiring side to the issuing side. Sharp cuts in interchange fees would undue that model, because most the costs in payment systems are on the issuing side. So, to say that interchange fees should be cut drastically is to say that the basic business model of every payment system is socially inappropriate. That might be true, but it's a drastic statement. I don't know how you justify making it, but without it, it's hard to justify a drastic cut in interchange.

Second, in a submission to the Federal Reserve, Emilio Calvano, who will speak this afternoon, looked at the difference between optimal and market-determined fees in a linear version of his model. In his model, the market-set fee is always too high, always above the optimal fee. But it at least in the linear case for parameter values, the difference is small between market-determined and socially optimal.

And third, in that same model, the market-set interchange is socially optimal if retailers are homogeneous. Since the networks discriminate by retailer category, so that the interchange fee is being set for roughly homogeneous businesses, that's at least suggestive that the difference is small. I'm not going to lean too hard on this, but nobody has ever done the empirical work that the theory says is necessary to assess concretely the size of that difference, if any.

Regulatory Approaches Lack Robust Support

My third point, as I said at the outset, the economic literature makes it clear that the regulatory shortcuts that have been advanced in various contexts lack robust theoretical support. To be clear, I'm not saying it's not optimal to regulate. What I'm saying is regulation done right is very hard and that the shortcuts lack support.

One shortcut, used in Australia and elsewhere and now in the U.S., is to base fees on issuers' costs – or some of them. Another is to declare interchange anathema for reasons that are fundamentally non-economic and to advocate zero interchange.

Again, the literature is unanimous that that's just inappropriate. And again, I'll quote the economists of the U.S. Federal Reserve Board, "the economic theory underlying the efficient interchange fee provides no rationale for either a strictly cost-based interchange fee or an interchange fee of zero." I think that's not controversial among economists at least.

Another shortcut, the tourist test, has more theoretical support, mainly in nice papers by Rochet-Tirole and by Zenger, but, as I will indicate in a second, that support is not robust.

This test, as many of you know just to tee-up the discussion, says that the interchange fee should be set such that a retailer would be happy accept a card from a tourist, a non-repeat customer, who could pay with cash if the card were declined. This test is generally said to call for a sharp reduction in interchange from current levels.

Now, it's worth noting at the outset that some businesses, such as fast-food vendors on major highways, in fact deal mainly with tourists and in fact sell inexpensive items such that most people could pay with cash. So, those folks presumably pass the tourist test if they accept cards, as many of them do. For them the existing interchange fee obviously passes the tourist test. It's also true that when merchants differ, socially optimal and market-set interchange fees differ. So, one would think that there's a reasonable chance that other merchants also pass the tourist test at current interchange fee levels. If you ask them, they'll tell you they don't, of course. But it's not clear that they don't.

So let me talk now about the test itself. To be a useful guide to policy, it ought to be robust. It ought to be at least approximately optimal under alternative, plausible assumptions. There are a number of models in this literature. The tourist test makes sense at least under a range of them. Price equals marginal cost is a robust prescription, not always optimal, but not a bad place to start. I don't think the tourist test passes that robustness criteria at all.

I think Emilio Calvano will have more to say this afternoon. I just want to make a couple of simple points. First, and this is really important, the test is not defined when merchants differ, when merchants have different net convenience benefits from card transactions. The test talks about the cost. When the cost differs among merchants, it's not defined. The Rochet-Tirole paper is very clear on this point. It does the optimization when merchants differ and comes to the conclusion, "when the merchant homogeneity assumption is relaxed, the price structure chosen by a monopoly platform, in the absence of regulation, is no longer systematically biased in favor of cardholders." That is to say one cannot say if it is too high or too low. That's a pretty strong statement, and it's from the original tourist test paper.

Moreover, even if one makes the assumption that all merchants have the same net convenience benefits from cards, for the tourist test to be attractive, you need – and that's a strong, implausible assumption – you need either the plainly false assumption that issuers are perfectly competitive – not just competitive but perfectly competitive – or the highly non-standard choice of consumer welfare rather than total welfare as an objective function. This is not robust.

In short, let me be clear, while there is no reason to think that the market-determined interchange fee is socially optimal – any more than to think that Microsoft produces the socially optimal Windows feature set – there is even less reason to believe that any of the methods that have been seriously proposed to regulate interchange fees will increase social welfare. Thank you.