Middlemen as Information Intermediaries: Evidence from Used Car Markets

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Akerlof's "The Market for Lemons"

"Both the *American Economic Review* and the *Review of Economic Studies* rejected the paper for "triviality", while the reviewers for *Journal of Political Economy* rejected it as incorrect, arguing that, if this paper were correct, then no goods could be traded." (Wikipedia)

This paper:

- Intermediation is a big part of the economy. Overall, little empirics.

- Pinning down informational stories is hard. Here: leverage inter-temporal dimension of a lemons market.

- Great data, many new facts.

- Model is parsimonious (in a good way) and yet generates a lot of predictions that bear out in the data.

- There is still a lot to be learned about auto markets...

Model Summary:

Setup

- Car quality initially H, quality shock degrades them to L.

- Buyers valuations $U_t^H, \ U_t^L = 0$

- Quality shock arrival rate increases with age.

- Sellers privately observe the quality.

- Sellers meet dealers α or bilaterally $(1 - \alpha)$

- Dealers can learn quality through test, only sell H.

- Buyers engage in Bertrand competition.

Model Summary:

Predictions:

$$b_t = \frac{(1-\alpha)\cdot q_t}{\alpha\cdot(1-q_t)+(1-\alpha)} \cdot U_t^H, \quad p_t = U_t^H$$

- Fraction of dealer sales declines with car age.

- Dealer's percentage premium increases.

- Dealer's $-premium is hump-shaped.

- Dealer transacted cars are less likely resold

Main Comment:

What is the correct dealer price?

- Finance and Insurance.

- Trade in value.

Table 2: Predicted Effects on Price and Loan Outcomes

	Log Price		Log Finance Charges		Log Total Price	
Subvented	0.204***	0.203***	-0.310***	-0.309***	0.192***	0.191***
	(0.0137)	(0.0137)	(0.0205)	(0.0205)	(0.0128)	(0.0128)
FICO	0.000805***	0.000803***	-0.00220***	-0.00220***	0.000503***	0.000500***
	(0.0000114)	(0.0000114)	(0.0000171)	(0.0000171)	(0.0000107)	(0.0000107)
Log m. Income	0.0965***	0.0960***	0.0513***	0.0515***	0.0921***	0.0915***
	(0.000790)	(0.000790)	(0.00118)	(0.00118)	(0.000736)	(0.000736)
Loan Term	0.0127***	0.0128***	0.0394***	0.0393***	0.0148***	0.0150***
	(0.0000412)	(0.0000416)	(0.0000616)	(0.0000623)	(0.0000384)	(0.0000388)
New Car	0.430***	0.431***	0.00424***	0.00393**	0.391***	0.392***
	(0.00107)	(0.00107)	(0.00160)	(0.00160)	(0.000999)	(0.000999)
Nonannual LT		-0.0206***		0.00739***		-0.0206***
		(0.00116)		(0.00174)		(0.00109)

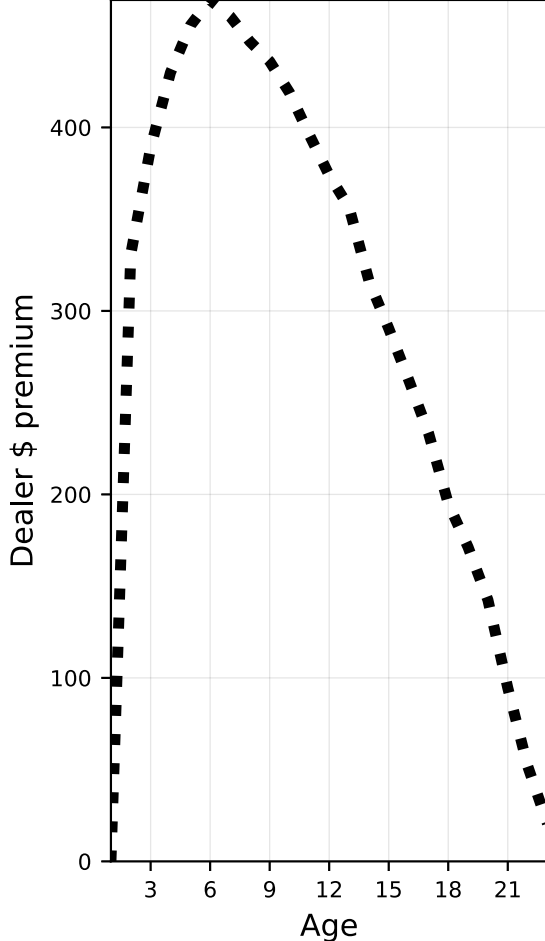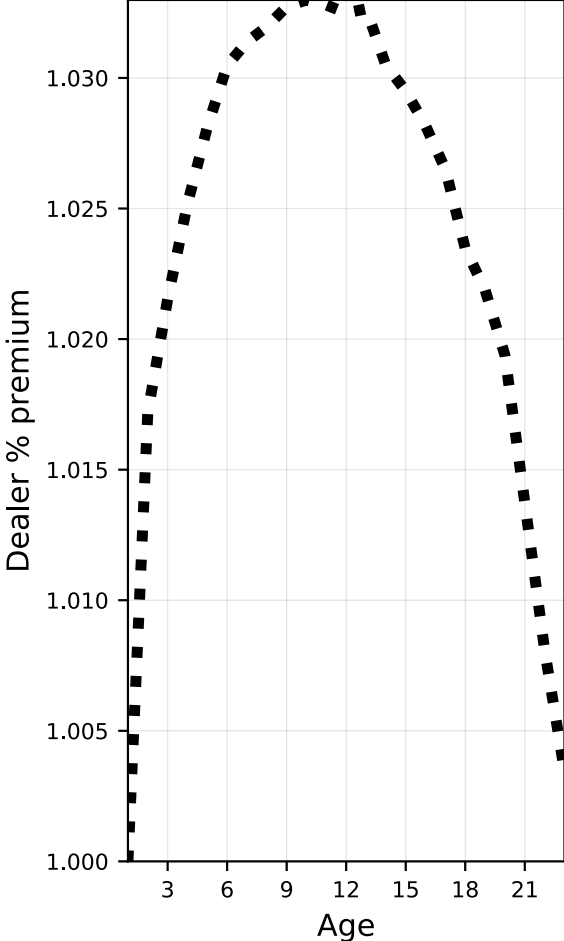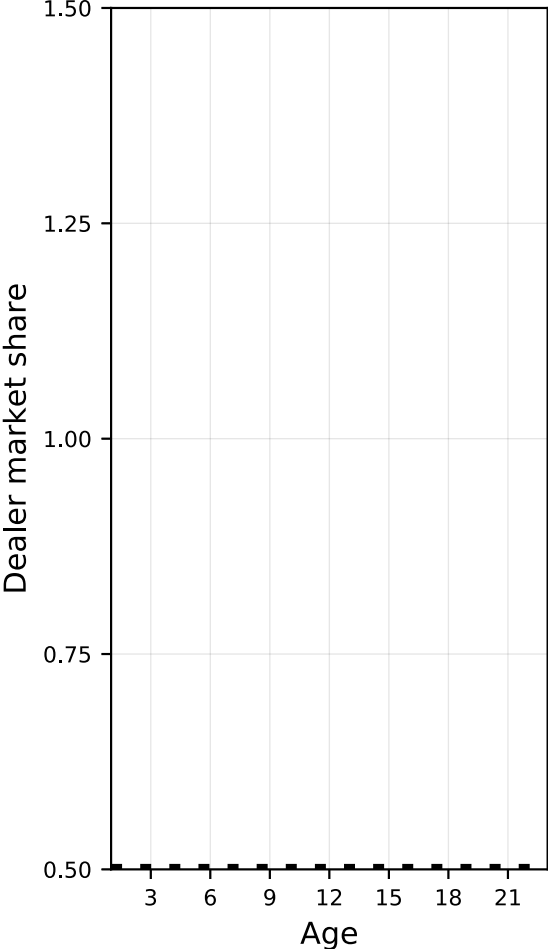Note: Bank, month, model, and zip code fixed effects also included, but not shown.

Main Comment:

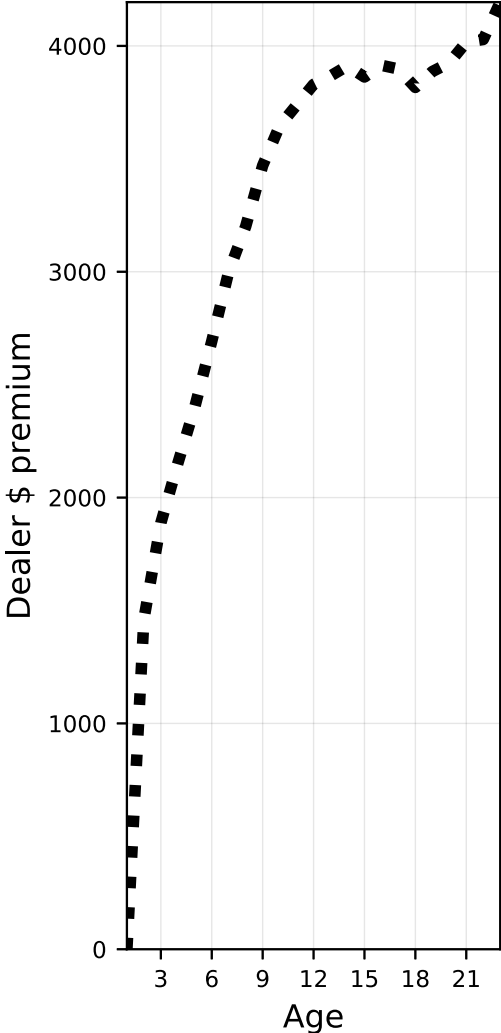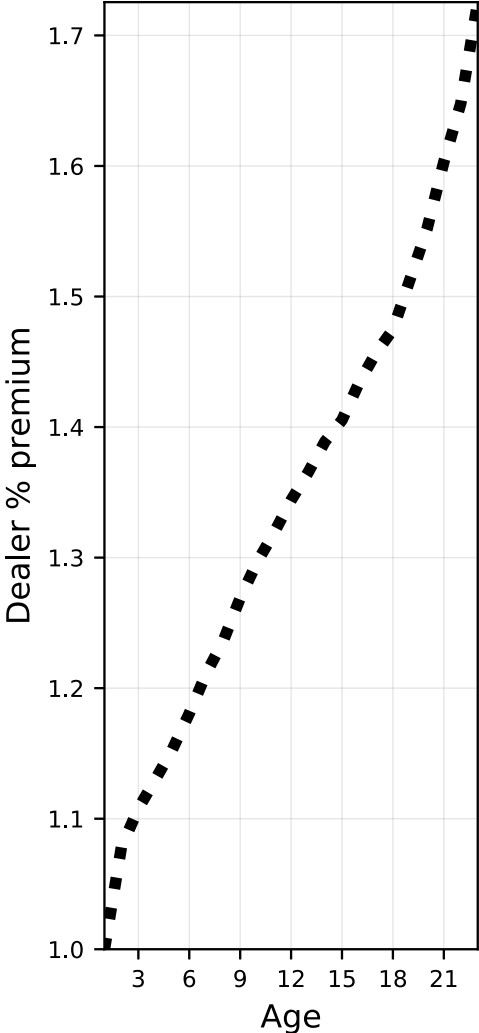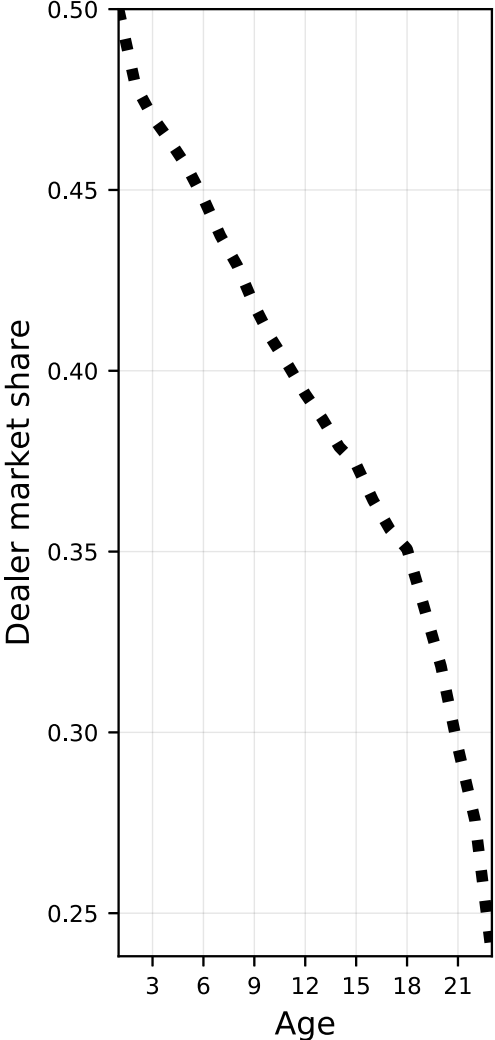**The other parts of dealers' business, add/recover value?**

Another model:

- With $q(t):$ $U_{vt}^L = \delta \cdot U_{vt}^H,$ $\delta < 1,$ $\dot{q}(t) > 0,$ $\dot{U}_{vt}^H < 0$

- Dealers can restore value: $U_{vt}^{DL} = \lambda_v \cdot U_{vt}^L,$ $1 < \lambda_v < \frac{1}{\delta}$ at cost f_r.
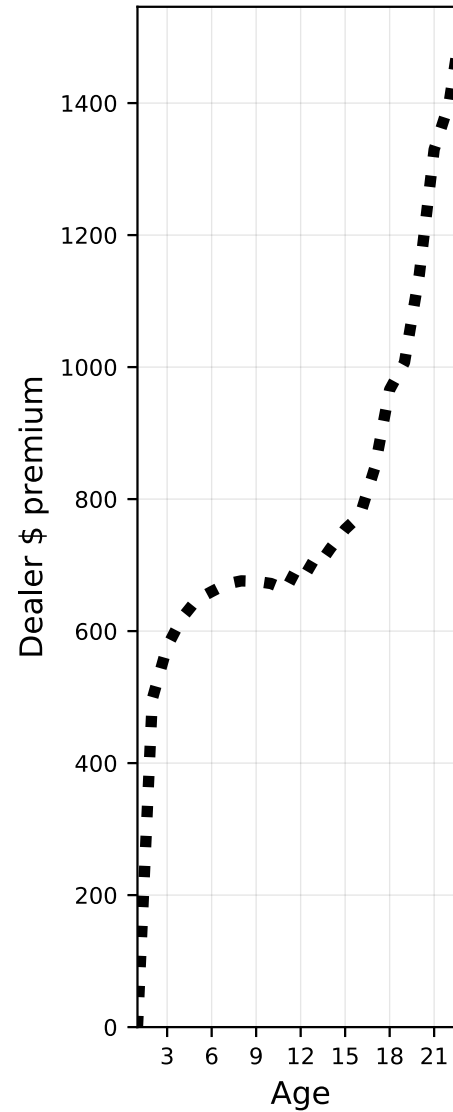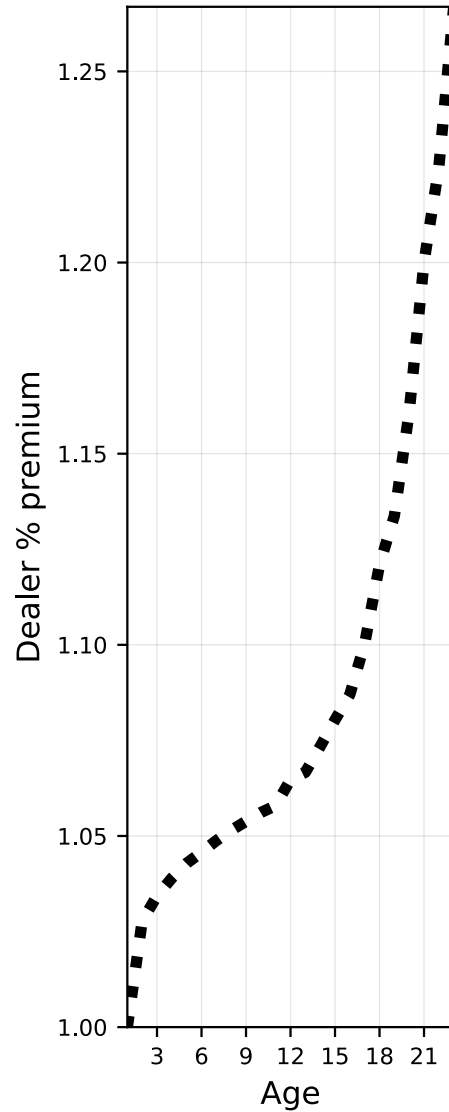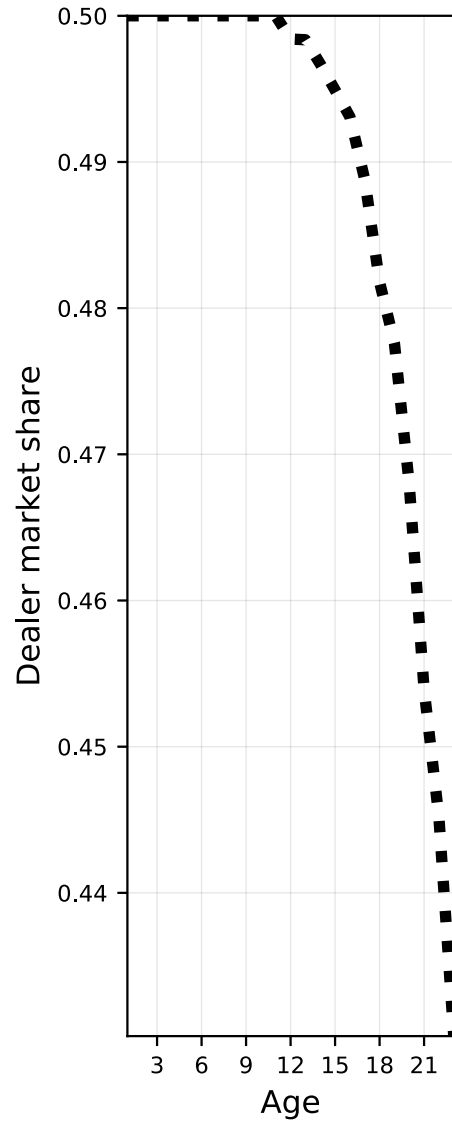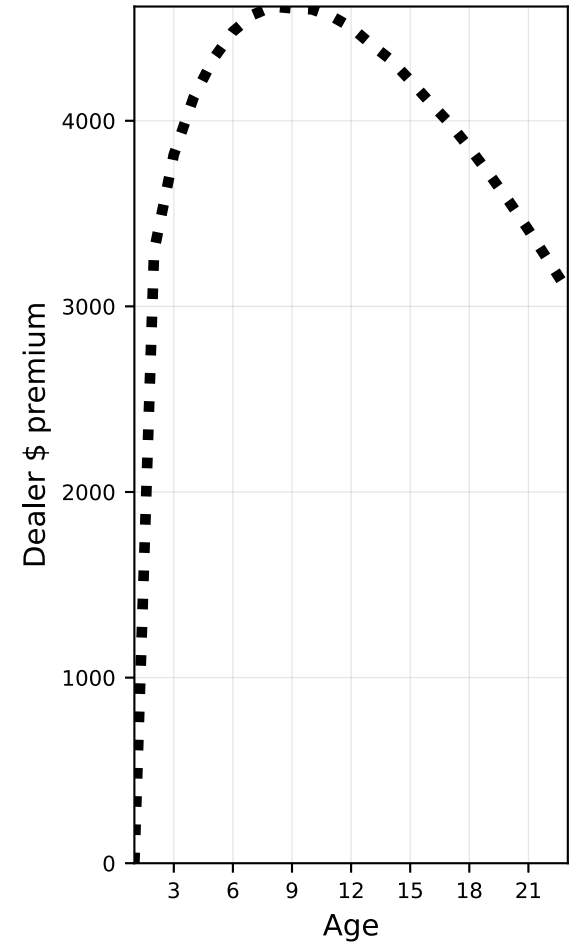
- Dealers have general fixed cost f.
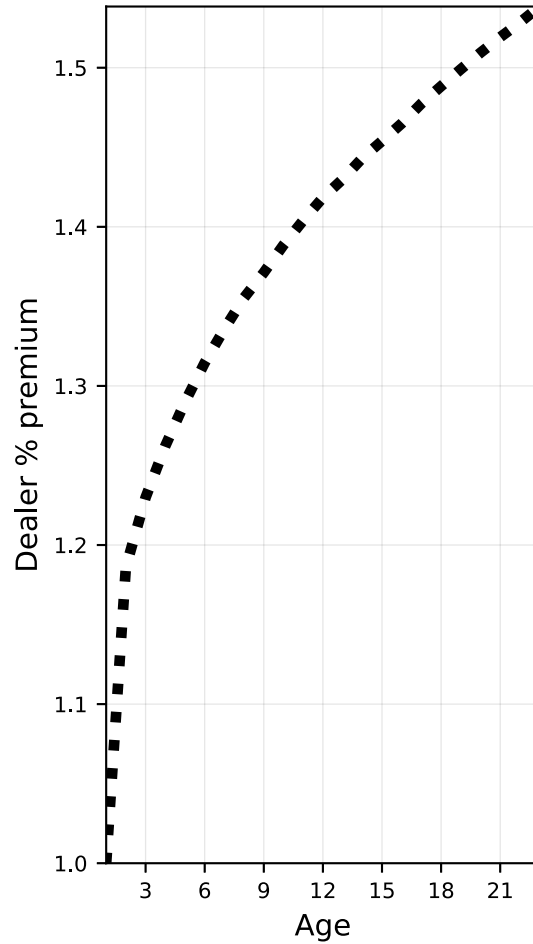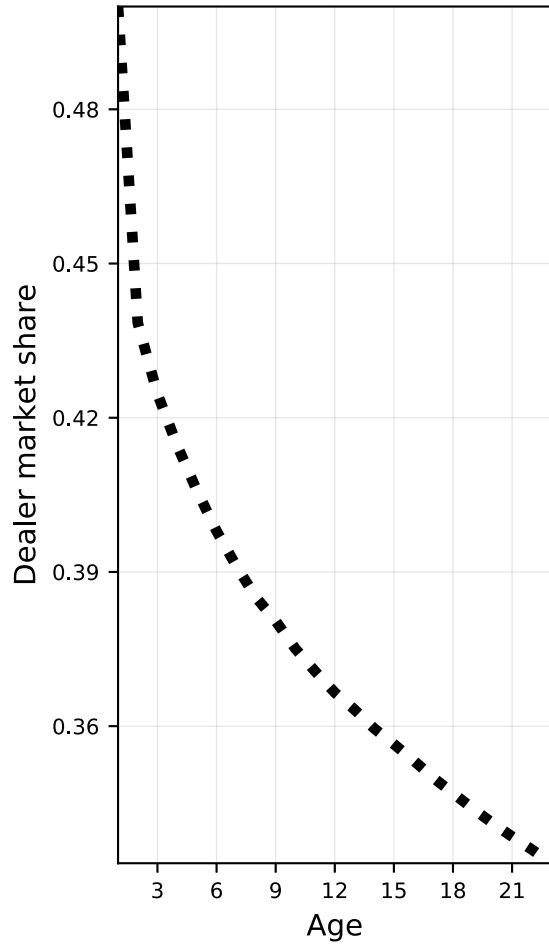
Repair cost but no fixed cost.

Fixed cost but no repair cost.

Fixed cost and repair cost.

Repair cost, discard if repair too costly.

Other Comments:

- Whom do resells go to?

- More types, depreciation effect no longer cancels out?

- Spatial controls, urban versus rural?

- Implicit guarantees in bilateral market and shady dealers.

- Age v.s. mileage?

- What about the distribution of prices?