

## A Appendix (Not For Publication)

### A.1 Additional Robustness around Finance and Insurance Profits.

We try two separate versions of the dependent variable for our analysis. The first, Dealer Margin 1, is also termed vehicle gross in our database. According to the documentation given by the data provider, Vehicle Gross is “The dollar profit that the retailer makes on the vehicle and on factory and dealer-installed accessories and options, contracted for at the time of sale.” In further notes, the documentation explains that Vehicle Gross includes holdback, and can include the profit made on items that are installed after delivery. This measure of profit does not include potential profits from the financing arrangement contracted between the dealer’s financing arm and the customer. This is the dependent variable presented in our main text. Our second dependent variable adds Service Contract Income to Vehicle Gross. According to the documentation given by the data provider, Service Contract Income is “The retailer commission (profit) made on the sale of a Service Contract.” It is the difference between the Service Contract Premium charged to the customer and its cost to the dealer, and is usually sold by the dealers Finance and Insurance Department. To ensure that finance and lease arrangements do not influence our results, due to potentially different profit generation processes in the Finance and Insurance department, we also drop all observations which were financed or leased. These three alternative specifications are presented across two Tables: 14 and 15. We find that including these extra measures of profit does not alter the qualitative results presented in the main text. The trends reflected in gender and age persist.

### A.2 State Level Education, Labor Force Participation, and Internet Use Indicators.

Our preferred explanation for the variation in dealer margins across age and gender relates to differences in education, labor force participation and internet use across these groups. Directly testing this hypothesis is difficult, however. The sample of actual buyers in our data has no information on these socio-economic characteristics. Therefore, we construct state-wide averages of these characteristics for most cohorts in our sample and examine whether the inclusion of these helps explain the observed age-gender patterns.

Our data sources are the following

1. **Education data.** Obtained through the American Community Survey (ACS). Gender-age-state-year observations are available from the raw ACS PUMS (public use micro-data samples) files for the years 2000-2012. From the raw files we compile educational attainment measure of fraction with college degree or more.
2. **Labor Force and Employment data.** We use the Current Population Survey (CPS) for the US to compile “fraction in the labor force” for each cohort, by state and year.
3. **Internet Use data.** Is also from the CPS, which has a supplement on computer use. We compile the fraction of people accessing the internet in any location by gender and year cohorts for each state and year possible.

We include these three variables in our regressions. These results are presented in the second column of Table 8 alongside our preferred specification. Note that we cannot run the same regression as in Column 1 with these socioeconomic variables for two reasons. First, we compare the likelihood of being in the labor force at a fixed age for every cohort. This is because, for women, labor force participation declines with age for every cohort, and therefore a comparison of cohorts at different ages would be misleading. We chose the 25-30 year age group as our benchmark since women’s labor force participation is the highest in these ages. This requires us to drop cohorts aged under 25 in Column 2 of Table 8. Further, we do not include the relevant socio-economic variables for cohorts aged 70 and older in our sample, because historical data for this cohort when they were aged 25-30 is not comparable to that of subsequent cohorts due to changes in the Census definition of labor force participation.

Comparing the coefficients across Columns 1 and 2 of Table 8 reveals that the divergence between women and men in older cohorts remains striking. Older women still seem to be paying substantially more for the same vehicle than younger women and men, even after accounting for their relative education and work patterns in each state. Further, while both genders experience higher dealer margins as they age, female customers generate significantly higher margins than men of the same age. In other words, our results cannot be fully explained by including cohort-state-time differences in education, labor force participation, and internet use.

It is possible that this suggests our hypothesis about education, labor force participation, and internet use impacting dealer margins is spurious. However, we believe it is equally likely that data aggregation, and the high labor mobility of the American population implies that cohort level indicators do not capture the variation of these variables in our sample. Specifically, new car buyers in a given state-year are unlikely to be representative of the sampling in ACS and CPS. Second, labor force participation and education data gathered by sampling in a particular state-year might not reflect the average consumer from that cohort in our sample many years later. This could be particularly exacerbated by the possibility that educated people tend to move more than uneducated people.

Table 8: Regression of Dealer Margin: Including State-Demographics

	(1)	(2)		
Age < 25 Female	-23.0 <sup>a</sup>	(3.3)		
Age 25-30 Male	-27.7 <sup>a</sup>	(3.2)		
Age 25-30 Female	-32.5 <sup>a</sup>	(3.5)	-15.5 <sup>a</sup>	(4.3)
Age 30-35 Male	-44.2 <sup>a</sup>	(3.8)	-23.7 <sup>a</sup>	(2.3)
Age 30-35 Female	-17.9 <sup>a</sup>	(3.7)	-3.9	(4.2)
Age 35-40 Male	-36.5 <sup>a</sup>	(4.0)	-15.9 <sup>a</sup>	(2.2)
Age 35-40 Female	8.6 <sup>b</sup>	(3.9)	25.1 <sup>a</sup>	(4.1)
Age 40-45 Male	-31.3 <sup>a</sup>	(3.6)	-9.0 <sup>a</sup>	(2.2)
Age 40-45 Female	34.1 <sup>a</sup>	(3.7)	54.9 <sup>a</sup>	(4.0)
Age 45-50 Male	-21.3 <sup>a</sup>	(3.5)	0.6	(2.2)
Age 45-50 Female	56.7 <sup>a</sup>	(3.7)	79.3 <sup>a</sup>	(4.3)
Age 50-55 Male	-5.4	(3.5)	13.7 <sup>a</sup>	(2.5)
Age 50-55 Female	76.1 <sup>a</sup>	(3.8)	99.8 <sup>a</sup>	(4.9)
Age 55-60 Male	24.5 <sup>a</sup>	(3.6)	43.1 <sup>a</sup>	(2.8)
Age 55-60 Female	99.5 <sup>a</sup>	(4.0)	130.7 <sup>a</sup>	(6.5)
Age 60-65 Male	40.3 <sup>a</sup>	(3.6)	70.7 <sup>a</sup>	(3.1)
Age 60-65 Female	121.9 <sup>a</sup>	(4.2)	167.2 <sup>a</sup>	(8.4)
Age 65-70 Male	75.1 <sup>a</sup>	(4.0)	116.3 <sup>a</sup>	(3.8)
Age 65-70 Female	150.3 <sup>a</sup>	(5.0)	211.2 <sup>a</sup>	(9.6)
Age > 70 Male	146.8 <sup>a</sup>	(4.5)		
Age > 70 Female	199.0 <sup>a</sup>	(5.5)		
Financed Indicator	135.8 <sup>a</sup>	(3.3)	141.8 <sup>a</sup>	(1.0)
Leased Indicator	194.5 <sup>a</sup>	(8.1)	201.2 <sup>a</sup>	(1.4)
Sat or Sun FE	17.1 <sup>a</sup>	(1.3)	20.6 <sup>a</sup>	(0.9)
End of Month FE	-84.8 <sup>a</sup>	(1.5)	-85.6 <sup>a</sup>	(0.9)
End of Year FE	-24.6 <sup>a</sup>	(3.7)	-25.6 <sup>a</sup>	(3.2)
Bachelors or More			132.6 <sup>a</sup>	(16.6)
Labor force			7.0	(18.6)
Internet Use			68.8 <sup>a</sup>	(10.7)
Constant	81.6	(50.4)	18.7	(17.9)
R <sup>2</sup>	0.264		0.270	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . All regressions include year\*month and model\*model-year\*trim\*state FEs. Robust standard errors clustered by model\*model-year in parentheses.

### A.3 Additional Summary Tables

In Table 9 we list the number of observations across states. States are sorted from those with the highest number of observations to the lowest number.

In Table 10 we summarize our main variables of interest by the ten states with the highest number of observations in the dataset. The bottom row presents summary statistics for this subset of states, not the entire dataset. The state with most observations is California. It is also the state with the highest median vehicle price (at \$26,284), dealer margin (at \$1,512), and proportion of male customers (at 65.2%). In California, the median vehicle stays on a dealer's lots for 24 days, and the median customer is 44 years old. The smallest state amongst the top ten is Massachusetts, and the state with the lowest median vehicle price and dealer margin is Ohio. Here the median vehicle sold for \$23,376 and generated a median dealer margin of \$930.

In Table 11 we present the distribution of vehicle purchases by age-gender groupings across each vehicle segment.

In Table 12 we summarize our main variables of interest by major manufacturer.

<b>State</b>	No.	Column %	Cumul %
California	1,578,726	16.6	16.6
Florida	1,080,350	11.4	28.0
Texas	1,045,433	11.0	39.0
New Jersey	443,149	4.7	43.7
New York	427,217	4.5	48.2
Pennsylvania	416,015	4.4	52.6
Ohio	404,459	4.3	56.8
Maryland	345,112	3.6	60.5
Illinois	338,737	3.6	64.0
Massachusetts	326,589	3.4	67.5
Arizona	285,363	3.0	70.5
Georgia	267,238	2.8	73.3
Minnesota	255,669	2.7	76.0
Michigan	211,025	2.2	78.2
Virginia	206,877	2.2	80.4
Washington	189,975	2.0	82.4
North Carolina	156,426	1.6	84.0
Colorado	151,700	1.6	85.6
Oregon	149,597	1.6	87.2
Indiana	144,546	1.5	88.7
Missouri	137,651	1.4	90.2
Tennessee	120,721	1.3	91.4
Nevada	98,155	1.0	92.5
Louisiana	91,043	1.0	93.4
Oklahoma	87,797	0.9	94.3
New Hampshire	54,208	0.6	94.9
Delaware	39,610	0.4	95.3
Wisconsin	39,567	0.4	95.8
South Carolina	38,386	0.4	96.2
Kansas	36,850	0.4	96.5
Utah	36,532	0.4	96.9
Connecticut	34,960	0.4	97.3
Kentucky	31,607	0.3	97.6
Arkansas	30,289	0.3	98.0
New Mexico	27,657	0.3	98.2
Alabama	24,244	0.3	98.5
West Virginia	18,998	0.2	98.7
Iowa	16,811	0.2	98.9
Mississippi	16,066	0.2	99.0
Hawaii	15,473	0.2	99.2
Maine	13,520	0.1	99.3
District of Columbia	11,624	0.1	99.5
Rhode Island	10,583	0.1	99.6
Vermont	9,354	0.1	99.7
South Dakota	6,140	0.1	99.7
Idaho	5,675	0.1	99.8
North Dakota	4,974	0.1	99.9
Nebraska	4,781	0.1	99.9
Wyoming	4,192	0.0	100.0
Montana	2,731	0.0	100.0
Alaska	1,802	0.0	100.0
<b>Total</b>	<b>9,496,204</b>	<b>100.0</b>	

Source: Authors' Calculations

Table 9: Observations across States.

State	Mean						Median			
	Male Cust	Female Cust	Veh Price	Dealer Marg	Turn Days	Cust Age	Veh Price	Dealer Marg	Turn Days	Cust Age
California (n=1,578,726)	65.2%	34.8%	\$28,418	\$1,365	52.4	44.7	\$26,284	\$1,135	24	44
Florida (n=1,080,350)	62.0%	38.0%	\$26,848	\$1,162	57.3	48.4	\$24,994	\$935	29	47
Illinois (n=338,737)	64.7%	35.3%	\$26,152	\$1,179	63.9	45.4	\$24,660	\$981	32	45
Maryland (n=345,112)	59.7%	40.3%	\$26,508	\$1,195	55.9	46.0	\$24,674	\$991	26	45
Massachusetts (n=326,589)	58.0%	42.0%	\$26,642	\$1,168	54.4	46.0	\$24,697	\$968	24	45
New Jersey (n=443,149)	60.2%	39.8%	\$27,565	\$1,150	53.6	46.6	\$25,775	\$956	25	46
New York (n=427,217)	61.4%	38.6%	\$27,090	\$1,246	56.3	46.6	\$25,349	\$1,054	27	46
Ohio (n=404,459)	58.2%	41.8%	\$24,759	\$1,059	57.3	46.6	\$23,376	\$930	26	46
Pennsylvania (n=416,015)	62.6%	37.4%	\$25,646	\$1,195	61.6	46.1	\$24,300	\$1,028	29	46
Texas (n=1,045,433)	64.2%	35.8%	\$27,305	\$1,201	62.5	44.7	\$25,785	\$1,003	32	44
Total (n=6,405,787)	62.6%	37.4%	\$27,100	\$1,222	57.0	46.0	\$25,273	\$1,013	27	45

Source: Authors' Calculations.

Ten states listed in this table cumulatively comprise 67.5% of all observations in our data.

Table 10: Summary Statistics for Ten States with Highest Number of Observations.

Table 11: Segment Purchases by Age and Gender

	Compact	Luxury	Midsize	Pickup	SUV	Sporty	Van
< 25 Male	78263	12521	45942	74183	41133	25184	2422
< 25 Female	105221	11016	60421	20027	52675	20648	1902
25-30 Male	73938	28458	73674	107654	115325	24234	17455
25-30 Female	73379	21292	73544	27871	103383	13985	10655
30-35 Male	70842	42213	82126	141256	191618	23220	54782
30-35 Female	57494	25227	65770	34117	131892	11932	27716
35-40 Male	74385	49845	85534	167838	228375	24616	72950
35-40 Female	60975	26631	65658	39959	142651	14228	33866
40-45 Male	94237	55426	98200	190965	244539	30864	66435
40-45 Female	80935	31957	81731	46923	152357	19963	30002
45-50 Male	109396	60828	113993	186950	230971	36370	46414
45-50 Female	92409	35981	95556	45347	146533	21218	21200
50-55 Male	100975	61001	116034	161133	202615	32809	33087
50-55 Female	83224	35418	93528	35483	125620	16714	16102
55-60 Male	74377	57472	105065	134046	171560	25333	29033
55-60 Female	61759	29932	78299	24260	93103	10282	14694
60-65 Male	46007	41936	78172	88947	110759	13787	27040
60-65 Female	39906	20049	55875	14079	52692	5229	12424
65-70 Male	30103	30372	61747	52814	65965	6902	24019
65-70 Female	26169	13721	40855	7944	27216	2788	8889
> 70 Male	52884	53150	131473	50618	69497	7769	35928
> 70 Female	45738	23911	77038	8338	26041	3976	10003

Manufacturer	Mean						Median			
	Male Cust	Female Cust	Veh Price	Dealer Marg	Turn Days	Cust Age	Veh Price	Dealer Marg	Turn Days	Cust Age
BMW (1%)	64.0%	36.0%	\$42,102	\$2,129	30.9	44.1	\$40,782	\$2,006	11	44
Chrysler (11%)	67.1%	32.9%	\$27,028	\$1,053	78.7	45.8	\$26,605	\$901	48	45
Ford (15%)	70.3%	29.7%	\$27,707	\$1,189	76.2	46.4	\$26,928	\$1,038	45	45
General Motors (19%)	68.5%	31.5%	\$29,205	\$1,321	70.2	47.4	\$27,894	\$1,156	38	46
Honda (12%)	57.8%	42.2%	\$23,705	\$1,326	35.0	44.3	\$22,556	\$1,094	16	44
Hyundai (3%)	52.9%	47.1%	\$18,398	\$664	63.3	47.1	\$18,402	\$532	40	47
Isuzu (0%)	57.7%	42.3%	\$24,315	\$1,106	130.3	42.8	\$24,100	\$880	99	42
Jaguar (0%)	61.3%	38.7%	\$43,740	\$1,913	68.3	53.2	\$40,016	\$1,654	36	53
Kia (1%)	53.6%	46.4%	\$19,036	\$755	78.3	45.2	\$19,239	\$609	51	44
Land Rover (0%)	68.1%	31.9%	\$50,150	\$2,513	52.0	42.2	\$48,145	\$2,311	24	41
Mazda (2%)	59.2%	40.8%	\$21,422	\$817	71.7	41.6	\$21,137	\$681	40	41
Mercedes-Benz (1%)	62.4%	37.6%	\$51,027	\$1,632	37.6	48.5	\$48,600	\$1,356	15	48
Mitsubishi (1%)	53.3%	46.7%	\$23,086	\$1,192	87.6	40.9	\$22,241	\$955	50	41
Nissan (8%)	60.8%	39.2%	\$26,031	\$1,187	52.6	43.0	\$25,200	\$953	28	42
Porsche (0%)	77.2%	22.8%	\$59,615	\$3,169	78.0	45.8	\$56,118	\$3,228	41	45
Saab (0%)	61.8%	38.2%	\$32,116	\$1,244	67.4	44.2	\$31,300	\$1,180	37	44
Subaru (1%)	57.1%	42.9%	\$24,092	\$1,071	60.8	47.7	\$23,612	\$951	33	48
Suzuki (0%)	53.9%	46.1%	\$18,374	\$871	94.2	45.3	\$17,300	\$727	60	45
Toyota (14%)	58.7%	41.3%	\$25,601	\$1,203	29.5	47.6	\$24,181	\$931	13	47
Volkswagen (2%)	56.2%	43.8%	\$26,822	\$1,254	56.9	41.9	\$23,996	\$1,085	28	41
Volvo (0%)	58.5%	41.5%	\$35,235	\$1,038	48.3	46.0	\$35,246	\$786	24	45
Total (100%)	63.3%	36.7%	\$27,071	\$1,215	58.8	45.9	\$25,384	\$1,010	28	45

Source: Authors' Calculations

Table 12: Summary Statistics for Manufacturers.

## A.4 Additional Regression Results

Table 13: Regression of Dealer Margin: Compacts, SUVs, Vans, Domestic

	Compacts		SUVs		Vans		Domestic	
Age < 25 Female	-36.0 <sup>a</sup>	(3.6)	-28.0 <sup>a</sup>	(7.3)	17.4	(34.7)	-18.7 <sup>a</sup>	(5.2)
Age 25-30 Male	-15.4 <sup>a</sup>	(4.8)	-44.4 <sup>a</sup>	(7.1)	-61.2 <sup>b</sup>	(27.9)	-14.3 <sup>a</sup>	(4.9)
Age 25-30 Female	-20.6 <sup>a</sup>	(4.7)	-46.2 <sup>a</sup>	(7.5)	-60.4 <sup>b</sup>	(24.6)	-19.6 <sup>a</sup>	(5.6)
Age 30-35 Male	-31.3 <sup>a</sup>	(5.3)	-56.4 <sup>a</sup>	(7.3)	-106.3 <sup>a</sup>	(26.8)	-28.0 <sup>a</sup>	(5.8)
Age 30-35 Female	-6.3	(5.7)	-28.6 <sup>a</sup>	(7.5)	-57.2 <sup>b</sup>	(27.7)	-0.7	(5.7)
Age 35-40 Male	-20.7 <sup>a</sup>	(5.3)	-47.4 <sup>a</sup>	(7.3)	-96.0 <sup>a</sup>	(26.6)	-18.5 <sup>a</sup>	(6.0)
Age 35-40 Female	18.9 <sup>a</sup>	(5.8)	-4.9	(7.6)	-43.5	(26.6)	20.9 <sup>a</sup>	(6.0)
Age 40-45 Male	-31.8 <sup>a</sup>	(5.6)	-36.8 <sup>a</sup>	(7.4)	-94.7 <sup>a</sup>	(25.4)	-21.7 <sup>a</sup>	(5.5)
Age 40-45 Female	26.1 <sup>a</sup>	(5.5)	34.9 <sup>a</sup>	(7.4)	-23.7	(26.9)	42.5 <sup>a</sup>	(5.6)
Age 45-50 Male	-40.7 <sup>a</sup>	(6.4)	-17.8 <sup>a</sup>	(6.8)	-61.3 <sup>b</sup>	(24.9)	-14.1 <sup>a</sup>	(5.1)
Age 45-50 Female	31.4 <sup>a</sup>	(5.6)	67.4 <sup>a</sup>	(7.5)	24.4	(24.2)	61.7 <sup>a</sup>	(5.5)
Age 50-55 Male	-34.1 <sup>a</sup>	(6.1)	8.5	(7.0)	-29.7	(25.9)	4.8	(4.8)
Age 50-55 Female	45.2 <sup>a</sup>	(5.9)	89.1 <sup>a</sup>	(7.4)	65.3 <sup>b</sup>	(26.9)	81.2 <sup>a</sup>	(5.3)
Age 55-60 Male	-8.6	(6.3)	37.8 <sup>a</sup>	(7.7)	-5.4	(25.9)	32.5 <sup>a</sup>	(5.2)
Age 55-60 Female	66.5 <sup>a</sup>	(6.2)	116.8 <sup>a</sup>	(7.8)	91.1 <sup>a</sup>	(26.8)	98.6 <sup>a</sup>	(5.8)
Age 60-65 Male	19.0 <sup>a</sup>	(6.2)	60.0 <sup>a</sup>	(7.7)	26.8	(26.2)	42.3 <sup>a</sup>	(5.0)
Age 60-65 Female	90.6 <sup>a</sup>	(6.5)	146.6 <sup>a</sup>	(8.1)	133.7 <sup>a</sup>	(27.5)	122.6 <sup>a</sup>	(6.3)
Age 65-70 Male	52.1 <sup>a</sup>	(5.8)	100.6 <sup>a</sup>	(9.0)	66.2 <sup>b</sup>	(27.2)	71.1 <sup>a</sup>	(5.6)
Age 65-70 Female	102.9 <sup>a</sup>	(8.7)	182.7 <sup>a</sup>	(10.2)	166.4 <sup>a</sup>	(29.9)	156.2 <sup>a</sup>	(7.1)
Age > 70 Male	114.6 <sup>a</sup>	(6.8)	183.2 <sup>a</sup>	(9.0)	137.4 <sup>a</sup>	(25.6)	142.3 <sup>a</sup>	(5.8)
Age > 70 Female	129.1 <sup>a</sup>	(6.9)	240.3 <sup>a</sup>	(11.6)	250.3 <sup>a</sup>	(30.0)	213.5 <sup>a</sup>	(7.9)
Financed Indicator	134.2 <sup>a</sup>	(7.3)	134.1 <sup>a</sup>	(5.0)	127.5 <sup>a</sup>	(11.7)	123.1 <sup>a</sup>	(4.0)
Leased Indicator	267.8 <sup>a</sup>	(19.1)	171.0 <sup>a</sup>	(13.6)	244.9 <sup>a</sup>	(26.3)	173.9 <sup>a</sup>	(8.9)
Sat or Sun FE	6.4 <sup>b</sup>	(2.7)	21.0 <sup>a</sup>	(2.6)	10.7 <sup>b</sup>	(4.8)	10.5 <sup>a</sup>	(1.9)
End of Month FE	-52.7 <sup>a</sup>	(2.4)	-94.6 <sup>a</sup>	(2.7)	-88.6 <sup>a</sup>	(5.2)	-80.1 <sup>a</sup>	(2.2)
End of Year FE	-31.3 <sup>a</sup>	(7.9)	-13.0 <sup>c</sup>	(6.7)	-47.3 <sup>b</sup>	(19.5)	-24.0 <sup>a</sup>	(5.0)
Constant	190.8 <sup>a</sup>	(67.2)	13.6	(93.4)	123.6	(220.1)	374.3 <sup>a</sup>	(55.2)
R <sup>2</sup>	0.260		0.263		0.341		0.173	
Obs	1532616		2726520		597018		4458653	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . All regressions include year\*month and model\*model-year\*trim\*state FEs. Robust standard errors clustered by model\*model-year in parentheses.



Table 14: Regression of Dealer Margin: Foreign, Service Contracts, High-selling

	Foreign		Svc. Contract		High Selling	
Age < 25 Female	-27.3 <sup>a</sup>	(4.2)	-34.5 <sup>a</sup>	(3.9)	-22.4 <sup>a</sup>	(4.4)
Age 25-30 Male	-40.0 <sup>a</sup>	(3.7)	-47.7 <sup>a</sup>	(3.7)	-24.1 <sup>a</sup>	(4.2)
Age 25-30 Female	-42.8 <sup>a</sup>	(4.1)	-51.3 <sup>a</sup>	(4.0)	-27.3 <sup>a</sup>	(4.7)
Age 30-35 Male	-59.2 <sup>a</sup>	(4.3)	-78.4 <sup>a</sup>	(4.4)	-37.2 <sup>a</sup>	(5.1)
Age 30-35 Female	-31.3 <sup>a</sup>	(4.5)	-38.3 <sup>a</sup>	(4.3)	-9.6 <sup>b</sup>	(4.8)
Age 35-40 Male	-53.6 <sup>a</sup>	(4.4)	-75.7 <sup>a</sup>	(4.6)	-28.9 <sup>a</sup>	(5.5)
Age 35-40 Female	-1.5	(4.7)	-7.8 <sup>c</sup>	(4.5)	14.6 <sup>a</sup>	(5.3)
Age 40-45 Male	-39.5 <sup>a</sup>	(4.3)	-68.7 <sup>a</sup>	(4.3)	-29.2 <sup>a</sup>	(5.0)
Age 40-45 Female	27.0 <sup>a</sup>	(4.5)	25.8 <sup>a</sup>	(4.2)	42.3 <sup>a</sup>	(4.8)
Age 45-50 Male	-27.0 <sup>a</sup>	(4.7)	-53.2 <sup>a</sup>	(4.2)	-24.1 <sup>a</sup>	(4.7)
Age 45-50 Female	52.4 <sup>a</sup>	(4.7)	57.5 <sup>a</sup>	(4.4)	58.5 <sup>a</sup>	(5.0)
Age 50-55 Male	-13.7 <sup>a</sup>	(4.7)	-31.9 <sup>a</sup>	(4.2)	-11.0 <sup>b</sup>	(4.6)
Age 50-55 Female	71.9 <sup>a</sup>	(5.0)	82.4 <sup>a</sup>	(4.5)	77.4 <sup>a</sup>	(5.0)
Age 55-60 Male	18.5 <sup>a</sup>	(4.9)	2.1	(4.3)	19.8 <sup>a</sup>	(4.9)
Age 55-60 Female	99.6 <sup>a</sup>	(5.4)	109.1 <sup>a</sup>	(4.8)	101.8 <sup>a</sup>	(5.4)
Age 60-65 Male	41.1 <sup>a</sup>	(5.1)	20.9 <sup>a</sup>	(4.3)	39.7 <sup>a</sup>	(4.5)
Age 60-65 Female	121.3 <sup>a</sup>	(5.5)	133.5 <sup>a</sup>	(5.0)	124.9 <sup>a</sup>	(5.5)
Age 65-70 Male	83.2 <sup>a</sup>	(5.8)	59.6 <sup>a</sup>	(4.6)	79.8 <sup>a</sup>	(5.1)
Age 65-70 Female	146.3 <sup>a</sup>	(6.9)	162.2 <sup>a</sup>	(6.0)	147.1 <sup>a</sup>	(6.7)
Age > 70 Male	155.4 <sup>a</sup>	(6.7)	122.5 <sup>a</sup>	(5.1)	152.8 <sup>a</sup>	(6.2)
Age > 70 Female	186.4 <sup>a</sup>	(7.4)	192.5 <sup>a</sup>	(6.4)	186.6 <sup>a</sup>	(7.4)
Financed Indicator	143.6 <sup>a</sup>	(4.7)	293.0 <sup>a</sup>	(4.6)	156.6 <sup>a</sup>	(4.6)
Leased Indicator	210.1 <sup>a</sup>	(11.3)	196.9 <sup>a</sup>	(9.1)	281.2 <sup>a</sup>	(10.4)
Sat or Sun FE	22.6 <sup>a</sup>	(1.8)	38.4 <sup>a</sup>	(1.5)	15.7 <sup>a</sup>	(1.8)
End of Month FE	-89.7 <sup>a</sup>	(2.1)	-93.0 <sup>a</sup>	(1.6)	-80.9 <sup>a</sup>	(2.1)
End of Year FE	-22.2 <sup>a</sup>	(5.1)	-27.0 <sup>a</sup>	(4.0)	-30.1 <sup>a</sup>	(5.0)
Constant	-190.6 <sup>b</sup>	(74.2)	210.0 <sup>a</sup>	(51.9)	167.6 <sup>b</sup>	(74.0)
R <sup>2</sup>	0.340		0.241		0.192	
Obs	5037551		9496204		5369989	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . All regressions include year\*month and model\*model-year\*trim\*state FEs. Robust standard errors clustered by model\*model-year in parentheses.

Table 15: Regression of Dealer Margin: No Trades, No financing, no leases

	No Tradeins		No Financing		No Leases	
Age < 25 Female	-29.2 <sup>a</sup>	(4.2)	-20.0 <sup>a</sup>	(5.5)	-25.3 <sup>a</sup>	(3.6)
Age 25-30 Male	-40.9 <sup>a</sup>	(4.4)	-53.2 <sup>a</sup>	(5.3)	-24.6 <sup>a</sup>	(3.4)
Age 25-30 Female	-42.9 <sup>a</sup>	(4.8)	-47.7 <sup>a</sup>	(5.7)	-32.6 <sup>a</sup>	(3.8)
Age 30-35 Male	-62.2 <sup>a</sup>	(4.9)	-70.4 <sup>a</sup>	(5.5)	-42.6 <sup>a</sup>	(4.1)
Age 30-35 Female	-29.9 <sup>a</sup>	(5.0)	-49.3 <sup>a</sup>	(5.6)	-14.0 <sup>a</sup>	(4.0)
Age 35-40 Male	-56.2 <sup>a</sup>	(5.0)	-66.0 <sup>a</sup>	(5.3)	-35.3 <sup>a</sup>	(4.2)
Age 35-40 Female	-7.6	(4.9)	-19.6 <sup>a</sup>	(5.7)	9.1 <sup>b</sup>	(4.0)
Age 40-45 Male	-58.3 <sup>a</sup>	(4.4)	-51.0 <sup>a</sup>	(5.3)	-33.1 <sup>a</sup>	(3.9)
Age 40-45 Female	11.5 <sup>b</sup>	(4.6)	12.2 <sup>b</sup>	(5.5)	31.3 <sup>a</sup>	(3.7)
Age 45-50 Male	-57.4 <sup>a</sup>	(4.3)	-32.1 <sup>a</sup>	(5.2)	-25.7 <sup>a</sup>	(3.7)
Age 45-50 Female	22.7 <sup>a</sup>	(4.6)	37.2 <sup>a</sup>	(5.3)	53.3 <sup>a</sup>	(3.8)
Age 50-55 Male	-51.5 <sup>a</sup>	(4.4)	-16.9 <sup>a</sup>	(5.2)	-10.2 <sup>a</sup>	(3.5)
Age 50-55 Female	33.5 <sup>a</sup>	(4.6)	56.5 <sup>a</sup>	(5.5)	72.0 <sup>a</sup>	(3.9)
Age 55-60 Male	-32.5 <sup>a</sup>	(4.4)	12.4 <sup>b</sup>	(5.4)	21.2 <sup>a</sup>	(3.7)
Age 55-60 Female	45.7 <sup>a</sup>	(5.1)	78.9 <sup>a</sup>	(6.0)	94.7 <sup>a</sup>	(4.1)
Age 60-65 Male	-22.7 <sup>a</sup>	(4.6)	28.1 <sup>a</sup>	(5.5)	34.9 <sup>a</sup>	(3.7)
Age 60-65 Female	58.9 <sup>a</sup>	(5.2)	101.2 <sup>a</sup>	(6.1)	119.8 <sup>a</sup>	(4.4)
Age 65-70 Male	4.8	(5.0)	56.9 <sup>a</sup>	(6.1)	70.6 <sup>a</sup>	(4.1)
Age 65-70 Female	80.2 <sup>a</sup>	(6.4)	131.0 <sup>a</sup>	(7.2)	147.9 <sup>a</sup>	(5.1)
Age > 70 Male	43.5 <sup>a</sup>	(4.9)	138.1 <sup>a</sup>	(6.4)	148.3 <sup>a</sup>	(4.5)
Age > 70 Female	105.5 <sup>a</sup>	(6.3)	188.5 <sup>a</sup>	(7.4)	202.5 <sup>a</sup>	(5.5)
Financed Indicator	155.4 <sup>a</sup>	(4.1)			140.5 <sup>a</sup>	(3.2)
Leased Indicator	264.2 <sup>a</sup>	(9.5)	195.6 <sup>a</sup>	(8.9)		
Sat or Sun FE	9.7 <sup>a</sup>	(1.6)	22.9 <sup>a</sup>	(2.0)	7.9 <sup>a</sup>	(1.3)
End of Month FE	-81.6 <sup>a</sup>	(1.7)	-83.6 <sup>a</sup>	(1.9)	-82.4 <sup>a</sup>	(1.6)
End of Year FE	-33.5 <sup>a</sup>	(4.4)	-17.4 <sup>a</sup>	(5.5)	-31.0 <sup>a</sup>	(3.9)
Constant	-64.5	(58.2)	-46.2	(63.7)	69.0	(53.0)
R <sup>2</sup>	0.306		0.329		0.265	
Obs	5136841		3583585		7925372	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . All regressions include year\*month and model\*model-year\*trim\*state FEs. Robust standard errors clustered by model\*model-year in parentheses.

Table 16: Regression of Dealer Margin: California, Texas, Florida

	California		Texas		Florida	
Age < 25 Female	3.8	(8.0)	-31.4 <sup>a</sup>	(9.7)	-29.3 <sup>a</sup>	(9.5)
Age 25-30 Male	-23.1 <sup>a</sup>	(7.3)	-56.9 <sup>a</sup>	(9.5)	-9.4	(8.2)
Age 25-30 Female	-31.1 <sup>a</sup>	(7.9)	-53.3 <sup>a</sup>	(10.1)	-36.7 <sup>a</sup>	(8.8)
Age 30-35 Male	-42.8 <sup>a</sup>	(7.7)	-83.7 <sup>a</sup>	(9.5)	-18.0 <sup>b</sup>	(8.3)
Age 30-35 Female	-20.9 <sup>b</sup>	(9.0)	-42.3 <sup>a</sup>	(10.0)	-3.0	(8.9)
Age 35-40 Male	-32.7 <sup>a</sup>	(7.7)	-78.2 <sup>a</sup>	(10.1)	-13.6	(8.8)
Age 35-40 Female	26.0 <sup>a</sup>	(8.3)	-3.7	(10.2)	6.2	(9.2)
Age 40-45 Male	-29.2 <sup>a</sup>	(7.1)	-74.2 <sup>a</sup>	(9.1)	-0.6	(8.9)
Age 40-45 Female	57.0 <sup>a</sup>	(8.1)	23.5 <sup>b</sup>	(9.5)	42.7 <sup>a</sup>	(8.7)
Age 45-50 Male	-20.4 <sup>a</sup>	(7.5)	-51.2 <sup>a</sup>	(8.9)	7.6	(8.1)
Age 45-50 Female	78.2 <sup>a</sup>	(8.0)	59.4 <sup>a</sup>	(9.6)	56.8 <sup>a</sup>	(8.7)
Age 50-55 Male	-9.6	(7.3)	-28.2 <sup>a</sup>	(8.4)	22.1 <sup>a</sup>	(8.2)
Age 50-55 Female	104.4 <sup>a</sup>	(8.7)	88.6 <sup>a</sup>	(9.5)	80.7 <sup>a</sup>	(8.8)
Age 55-60 Male	26.9 <sup>a</sup>	(7.8)	11.0	(8.6)	46.0 <sup>a</sup>	(8.5)
Age 55-60 Female	139.1 <sup>a</sup>	(9.3)	130.3 <sup>a</sup>	(10.0)	105.3 <sup>a</sup>	(9.9)
Age 60-65 Male	49.8 <sup>a</sup>	(8.2)	20.3 <sup>b</sup>	(9.6)	61.2 <sup>a</sup>	(9.3)
Age 60-65 Female	154.8 <sup>a</sup>	(10.2)	149.2 <sup>a</sup>	(11.8)	140.1 <sup>a</sup>	(10.9)
Age 65-70 Male	99.5 <sup>a</sup>	(8.9)	78.6 <sup>a</sup>	(10.5)	102.6 <sup>a</sup>	(10.3)
Age 65-70 Female	191.3 <sup>a</sup>	(12.0)	199.7 <sup>a</sup>	(13.7)	157.1 <sup>a</sup>	(11.6)
Age > 70 Male	185.1 <sup>a</sup>	(8.8)	135.6 <sup>a</sup>	(9.9)	175.6 <sup>a</sup>	(11.0)
Age > 70 Female	245.2 <sup>a</sup>	(10.6)	234.8 <sup>a</sup>	(13.3)	220.8 <sup>a</sup>	(11.6)
Financed Indicator	194.4 <sup>a</sup>	(6.2)	346.9 <sup>a</sup>	(7.3)	120.9 <sup>a</sup>	(5.3)
Leased Indicator	235.7 <sup>a</sup>	(14.3)	257.6 <sup>a</sup>	(17.0)	151.5 <sup>a</sup>	(14.8)
Sat or Sun FE	39.3 <sup>a</sup>	(3.2)	28.2 <sup>a</sup>	(3.5)	17.7 <sup>a</sup>	(3.5)
End of Month FE	-100.4 <sup>a</sup>	(3.0)	-103.7 <sup>a</sup>	(3.8)	-92.9 <sup>a</sup>	(3.2)
End of Year FE	-19.9 <sup>b</sup>	(8.9)	-35.5 <sup>a</sup>	(10.0)	-0.9	(10.3)
Constant	-232.9 <sup>a</sup>	(81.7)	259.5 <sup>a</sup>	(58.2)	-47.8	(60.0)
R <sup>2</sup>	0.249		0.185		0.227	
Obs	1578726		1045433		1080350	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . All regressions include year\*month and model\*model-year\*trim\*state FEs. Robust standard errors clustered by model\*model-year in parentheses.

Table 17: Regression of Dealer Margin: Pos Margins, Model-Cycle, Days to Turn, City FEs

	Pos. Margins		Model-Cycle		Days To Turn		City-State FEs	
Age < 25 Female	-24.5 <sup>a</sup>	(3.4)	-23.0 <sup>a</sup>	(3.3)	-22.9 <sup>a</sup>	(3.4)	-20.2 <sup>a</sup>	(3.3)
Age 25-30 Male	-23.9 <sup>a</sup>	(3.3)	-27.7 <sup>a</sup>	(3.2)	-27.5 <sup>a</sup>	(3.2)	-25.7 <sup>a</sup>	(3.0)
Age 25-30 Female	-28.2 <sup>a</sup>	(3.7)	-32.5 <sup>a</sup>	(3.5)	-32.9 <sup>a</sup>	(3.5)	-31.6 <sup>a</sup>	(3.2)
Age 30-35 Male	-40.8 <sup>a</sup>	(4.0)	-44.2 <sup>a</sup>	(3.8)	-44.3 <sup>a</sup>	(3.8)	-36.3 <sup>a</sup>	(2.9)
Age 30-35 Female	-14.6 <sup>a</sup>	(4.0)	-17.9 <sup>a</sup>	(3.7)	-17.8 <sup>a</sup>	(3.8)	-15.9 <sup>a</sup>	(3.1)
Age 35-40 Male	-36.7 <sup>a</sup>	(4.1)	-36.5 <sup>a</sup>	(4.0)	-36.5 <sup>a</sup>	(4.0)	-26.0 <sup>a</sup>	(2.8)
Age 35-40 Female	6.7 <sup>c</sup>	(4.1)	8.6 <sup>b</sup>	(3.9)	8.8 <sup>b</sup>	(3.9)	13.6 <sup>a</sup>	(3.1)
Age 40-45 Male	-34.7 <sup>a</sup>	(3.9)	-31.2 <sup>a</sup>	(3.6)	-31.8 <sup>a</sup>	(3.6)	-19.3 <sup>a</sup>	(2.8)
Age 40-45 Female	26.8 <sup>a</sup>	(3.8)	34.1 <sup>a</sup>	(3.7)	34.3 <sup>a</sup>	(3.7)	42.4 <sup>a</sup>	(3.0)
Age 45-50 Male	-27.3 <sup>a</sup>	(3.8)	-21.3 <sup>a</sup>	(3.5)	-21.8 <sup>a</sup>	(3.6)	-9.6 <sup>a</sup>	(2.8)
Age 45-50 Female	43.3 <sup>a</sup>	(3.8)	56.7 <sup>a</sup>	(3.7)	56.5 <sup>a</sup>	(3.7)	62.7 <sup>a</sup>	(3.0)
Age 50-55 Male	-15.0 <sup>a</sup>	(3.7)	-5.3	(3.5)	-5.9 <sup>c</sup>	(3.5)	4.1	(2.8)
Age 50-55 Female	60.0 <sup>a</sup>	(3.9)	76.1 <sup>a</sup>	(3.8)	75.3 <sup>a</sup>	(3.8)	82.4 <sup>a</sup>	(3.1)
Age 55-60 Male	7.8 <sup>b</sup>	(3.7)	24.6 <sup>a</sup>	(3.6)	23.3 <sup>a</sup>	(3.7)	29.6 <sup>a</sup>	(2.9)
Age 55-60 Female	77.7 <sup>a</sup>	(4.1)	99.5 <sup>a</sup>	(4.0)	98.9 <sup>a</sup>	(4.1)	103.1 <sup>a</sup>	(3.3)
Age 60-65 Male	21.9 <sup>a</sup>	(3.7)	40.4 <sup>a</sup>	(3.6)	38.4 <sup>a</sup>	(3.6)	43.8 <sup>a</sup>	(3.1)
Age 60-65 Female	97.6 <sup>a</sup>	(4.4)	122.0 <sup>a</sup>	(4.2)	122.2 <sup>a</sup>	(4.3)	121.8 <sup>a</sup>	(3.7)
Age 65-70 Male	53.2 <sup>a</sup>	(4.0)	75.2 <sup>a</sup>	(4.0)	74.3 <sup>a</sup>	(4.0)	75.0 <sup>a</sup>	(3.4)
Age 65-70 Female	121.9 <sup>a</sup>	(5.0)	150.4 <sup>a</sup>	(5.0)	150.0 <sup>a</sup>	(5.1)	144.4 <sup>a</sup>	(4.3)
Age > 70 Male	116.3 <sup>a</sup>	(4.2)	146.9 <sup>a</sup>	(4.5)	146.7 <sup>a</sup>	(4.5)	145.9 <sup>a</sup>	(3.2)
Age > 70 Female	163.9 <sup>a</sup>	(5.6)	199.1 <sup>a</sup>	(5.5)	199.1 <sup>a</sup>	(5.6)	194.2 <sup>a</sup>	(3.7)
Financed Indicator	152.7 <sup>a</sup>	(3.2)	135.8 <sup>a</sup>	(3.3)	138.3 <sup>a</sup>	(3.2)	129.5 <sup>a</sup>	(1.1)
Leased Indicator	220.1 <sup>a</sup>	(7.9)	194.3 <sup>a</sup>	(8.1)	197.6 <sup>a</sup>	(8.1)	196.9 <sup>a</sup>	(1.4)
Sat or Sun FE	28.8 <sup>a</sup>	(1.2)	17.2 <sup>a</sup>	(1.3)	19.9 <sup>a</sup>	(1.4)	22.3 <sup>a</sup>	(0.9)
End of Month FE	-67.0 <sup>a</sup>	(1.3)	-56.9 <sup>a</sup>	(1.6)	-84.5 <sup>a</sup>	(1.5)	-86.0 <sup>a</sup>	(1.0)
End of Year FE	-20.5 <sup>a</sup>	(3.4)	-23.5 <sup>a</sup>	(3.7)	-22.6 <sup>a</sup>	(3.7)	-21.8 <sup>a</sup>	(3.4)
Model-Cycle Time			-1.9 <sup>a</sup>	(0.1)				
R <sup>2</sup>	0.282		0.264		0.265		0.277	
Obs	8199586		9496204		9212811		7122663	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . All regressions include year\*month and model\*model-year\*trim\*state FEs. Robust standard errors clustered by model\*model-year in parentheses.

Table 18: Regression of Dealer Margin: The Canadian Market

	Canada		Can. + Dealer FEs	
Age < 25 Female	-115.3 <sup>a</sup>	(13.7)	-101.3 <sup>a</sup>	(13.0)
Age 25-30 Male	-26.7 <sup>b</sup>	(12.8)	-19.6	(12.1)
Age 25-30 Female	-82.1 <sup>a</sup>	(13.1)	-67.3 <sup>a</sup>	(12.4)
Age 30-35 Male	-49.3 <sup>a</sup>	(12.4)	-43.5 <sup>a</sup>	(11.8)
Age 30-35 Female	-61.8 <sup>a</sup>	(13.2)	-53.4 <sup>a</sup>	(12.5)
Age 35-40 Male	-44.1 <sup>a</sup>	(12.2)	-33.0 <sup>a</sup>	(11.6)
Age 35-40 Female	-26.7 <sup>b</sup>	(13.1)	-16.3	(12.4)
Age 40-45 Male	-31.8 <sup>a</sup>	(12.0)	-20.4 <sup>c</sup>	(11.3)
Age 40-45 Female	7.8	(12.6)	17.2	(11.9)
Age 45-50 Male	-13.5	(11.9)	-4.7	(11.2)
Age 45-50 Female	38.5 <sup>a</sup>	(12.4)	48.2 <sup>a</sup>	(11.8)
Age 50-55 Male	4.3	(12.0)	13.9	(11.4)
Age 50-55 Female	51.5 <sup>a</sup>	(12.7)	64.4 <sup>a</sup>	(12.0)
Age 55-60 Male	-2.3	(12.4)	16.4	(11.7)
Age 55-60 Female	65.9 <sup>a</sup>	(13.3)	85.4 <sup>a</sup>	(12.6)
Age 60-65 Male	-3.3	(13.1)	10.9	(12.5)
Age 60-65 Female	57.2 <sup>a</sup>	(14.7)	77.8 <sup>a</sup>	(14.0)
Age 65-70 Male	25.9 <sup>c</sup>	(14.2)	39.5 <sup>a</sup>	(13.5)
Age 65-70 Female	66.2 <sup>a</sup>	(16.7)	80.3 <sup>a</sup>	(15.8)
Age > 70 Male	63.0 <sup>a</sup>	(13.3)	80.7 <sup>a</sup>	(12.6)
Age > 70 Female	112.2 <sup>a</sup>	(15.8)	131.8 <sup>a</sup>	(15.0)
Financed Indicator	180.9 <sup>a</sup>	(5.8)	207.7 <sup>a</sup>	(5.5)
Leased Indicator	198.7 <sup>a</sup>	(5.7)	236.0 <sup>a</sup>	(5.5)
Sat or Sun FE	23.1 <sup>a</sup>	(5.5)	11.0 <sup>b</sup>	(5.2)
End of Month FE	-60.9 <sup>a</sup>	(4.0)	-53.4 <sup>a</sup>	(3.8)
End of Year FE	-93.6 <sup>a</sup>	(16.2)	-91.6 <sup>a</sup>	(15.3)
Constant	2432.0 <sup>a</sup>	(27.7)	3254.9 <sup>a</sup>	(715.6)
R <sup>2</sup>	0.264		0.341	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . All regressions include year\*month and model\*model-year\*trim\*province FEs. Robust standard errors clustered by model\*model-year in parentheses. N=510,866.

Table 19: Regression of Dealer Margin: Dealer Competition

	(1)		(2)	
Rivals=0	-42.1 <sup>a</sup>	(1.6)	-43.9 <sup>a</sup>	(1.6)
Rivals=1	-64.3 <sup>a</sup>	(1.7)	-67.9 <sup>a</sup>	(1.7)
Rivals=2	-94.1 <sup>a</sup>	(1.8)	-98.2 <sup>a</sup>	(1.8)
Rivals=3	-64.0 <sup>a</sup>	(1.9)	-68.1 <sup>a</sup>	(1.9)
Rivals=4	-70.4 <sup>a</sup>	(2.2)	-75.6 <sup>a</sup>	(2.2)
Rivals=5	-108.0 <sup>a</sup>	(2.3)	-114.5 <sup>a</sup>	(2.3)
Rivals=6	-108.3 <sup>a</sup>	(2.6)	-114.4 <sup>a</sup>	(2.6)
Rivals=7	-64.8 <sup>a</sup>	(2.9)	-71.2 <sup>a</sup>	(2.9)
Rivals=8	-202.3 <sup>a</sup>	(3.5)	-208.1 <sup>a</sup>	(3.5)
Rivals=9	-143.3 <sup>a</sup>	(3.3)	-150.6 <sup>a</sup>	(3.3)
Financed Indicator	135.5 <sup>a</sup>	(0.9)	111.8 <sup>a</sup>	(0.9)
Leased Indicator	197.0 <sup>a</sup>	(1.3)	173.5 <sup>a</sup>	(1.2)
Sat or Sun FE	17.9 <sup>a</sup>	(0.8)	14.0 <sup>a</sup>	(0.8)
End of Month FE	-84.6 <sup>a</sup>	(0.9)	-84.2 <sup>a</sup>	(0.9)
End of Year FE	-24.5 <sup>a</sup>	(3.0)	-23.8 <sup>a</sup>	(3.0)
R <sup>2</sup>	0.265		0.263	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . Column 1 contains demographic variables. All regressions include year\*month and model\*model-year\*trim\*state FEs. Robust standard errors clustered by model\*model-year in parentheses. N=8,272,131.

Table 20: Regression of Dealer Margin as a Fraction of Vehicle Cost

	(1)		(2)		(3)	
Age < 25 Female	-0.235 <sup>a</sup>	(0.031)	-0.187 <sup>a</sup>	(0.018)	-0.157 <sup>a</sup>	(0.015)
Age 25-30 Male	-0.211 <sup>a</sup>	(0.030)	-0.151 <sup>a</sup>	(0.014)	-0.143 <sup>a</sup>	(0.013)
Age 25-30 Female	-0.297 <sup>a</sup>	(0.035)	-0.189 <sup>a</sup>	(0.017)	-0.162 <sup>a</sup>	(0.014)
Age 30-35 Male	-0.273 <sup>a</sup>	(0.063)	-0.227 <sup>a</sup>	(0.017)	-0.214 <sup>a</sup>	(0.014)
Age 30-35 Female	-0.237 <sup>a</sup>	(0.057)	-0.123 <sup>a</sup>	(0.018)	-0.099 <sup>a</sup>	(0.015)
Age 35-40 Male	-0.239 <sup>a</sup>	(0.072)	-0.205 <sup>a</sup>	(0.017)	-0.192 <sup>a</sup>	(0.015)
Age 35-40 Female	-0.120 <sup>c</sup>	(0.062)	-0.018	(0.017)	0.005	(0.015)
Age 40-45 Male	-0.245 <sup>a</sup>	(0.061)	-0.195 <sup>a</sup>	(0.016)	-0.179 <sup>a</sup>	(0.014)
Age 40-45 Female	-0.022	(0.055)	0.080 <sup>a</sup>	(0.017)	0.105 <sup>a</sup>	(0.015)
Age 45-50 Male	-0.246 <sup>a</sup>	(0.048)	-0.169 <sup>a</sup>	(0.018)	-0.150 <sup>a</sup>	(0.015)
Age 45-50 Female	0.050	(0.046)	0.170 <sup>a</sup>	(0.018)	0.196 <sup>a</sup>	(0.015)
Age 50-55 Male	-0.208 <sup>a</sup>	(0.043)	-0.106 <sup>a</sup>	(0.018)	-0.088 <sup>a</sup>	(0.015)
Age 50-55 Female	0.112 <sup>b</sup>	(0.046)	0.255 <sup>a</sup>	(0.019)	0.280 <sup>a</sup>	(0.016)
Age 55-60 Male	-0.126 <sup>a</sup>	(0.046)	0.015	(0.018)	0.035 <sup>b</sup>	(0.015)
Age 55-60 Female	0.170 <sup>a</sup>	(0.049)	0.355 <sup>a</sup>	(0.019)	0.382 <sup>a</sup>	(0.017)
Age 60-65 Male	-0.081	(0.051)	0.096 <sup>a</sup>	(0.017)	0.116 <sup>a</sup>	(0.015)
Age 60-65 Female	0.222 <sup>a</sup>	(0.052)	0.457 <sup>a</sup>	(0.020)	0.487 <sup>a</sup>	(0.017)
Age 65-70 Male	0.001	(0.055)	0.255 <sup>a</sup>	(0.018)	0.279 <sup>a</sup>	(0.016)
Age 65-70 Female	0.295 <sup>a</sup>	(0.053)	0.587 <sup>a</sup>	(0.022)	0.617 <sup>a</sup>	(0.021)
Age > 70 Male	0.233 <sup>a</sup>	(0.056)	0.592 <sup>a</sup>	(0.020)	0.622 <sup>a</sup>	(0.019)
Age > 70 Female	0.431 <sup>a</sup>	(0.053)	0.807 <sup>a</sup>	(0.023)	0.849 <sup>a</sup>	(0.021)
Financed Indicator	0.290 <sup>a</sup>	(0.053)	0.595 <sup>a</sup>	(0.017)	0.600 <sup>a</sup>	(0.017)
Leased Indicator	0.483 <sup>a</sup>	(0.075)	0.871 <sup>a</sup>	(0.039)	0.887 <sup>a</sup>	(0.039)
Sat or Sun FE	0.031 <sup>a</sup>	(0.010)	0.060 <sup>a</sup>	(0.006)	0.066 <sup>a</sup>	(0.006)
End of Month FE	-0.344 <sup>a</sup>	(0.008)	-0.339 <sup>a</sup>	(0.005)	-0.337 <sup>a</sup>	(0.006)
End of Year FE	-0.130 <sup>a</sup>	(0.018)	-0.088 <sup>a</sup>	(0.014)	-0.085 <sup>a</sup>	(0.014)
Constant	4.230 <sup>a</sup>	(0.100)	0.793 <sup>a</sup>	(0.193)	0.686 <sup>a</sup>	(0.197)
R <sup>2</sup>	0.018		0.148		0.162	

<sup>c</sup>  $p < 0.1$ , <sup>b</sup>  $p < 0.05$ , <sup>a</sup>  $p < 0.01$ . All regressions include year\*month and model\*model-year\*trim\*state FEs. Robust standard errors clustered by model\*model-year in parentheses.

## A.5 Additional Figures

Figure 11: Standard Deviation of Dealer Margin Residuals

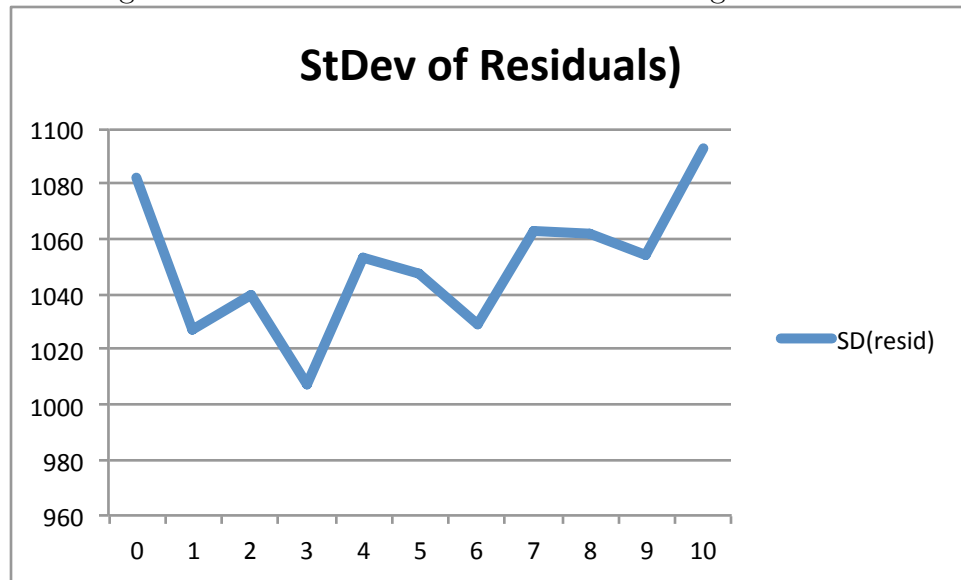


Figure 12: Dealer Margins in Homogenous States

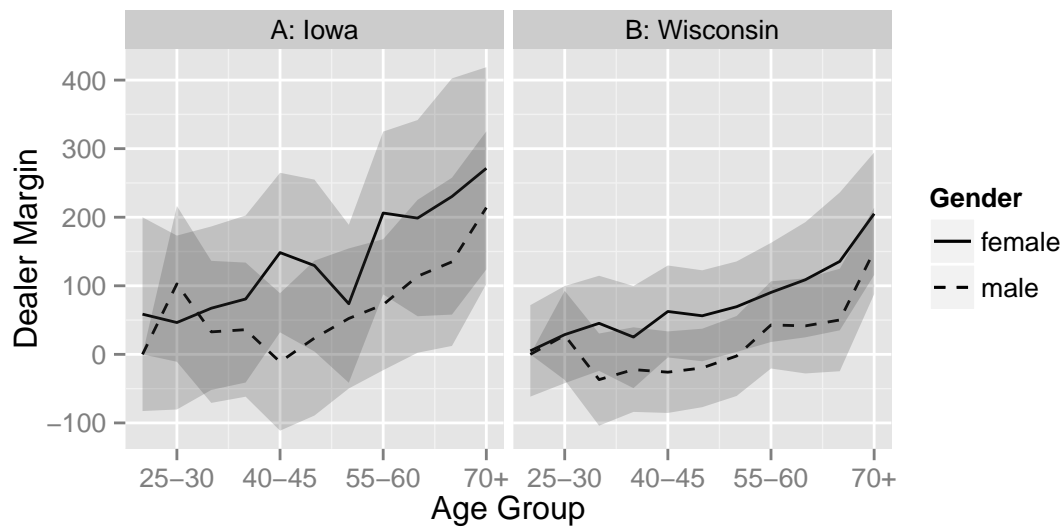
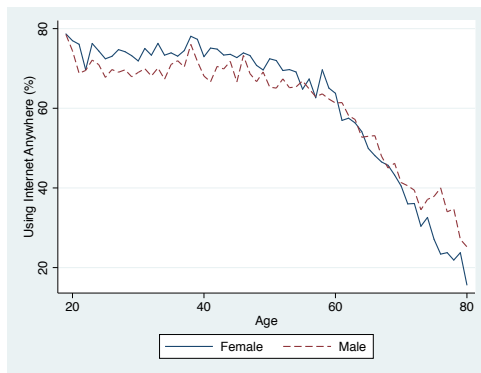




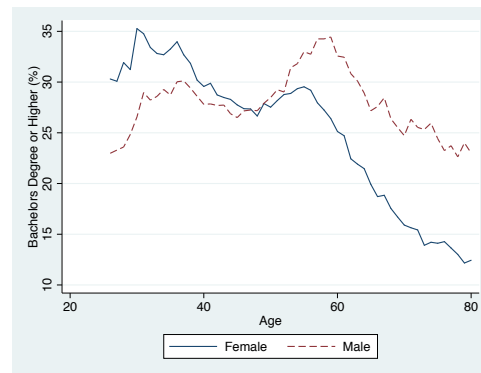
Figure 13: Internet Access and Educational Attainment by Sex and Age.

PANEL A: % OF POPULATION  
ACCESSING THE INTERNET FROM  
ANY LOCATION (2007)



Source: PUMS-CPS, University of Minnesota,  
www.ipums.org.

PANEL B: % OF POPULATION  
WITH BACHELORS DEGREE OR  
MORE (2006)



Source: PUMS-CPS, University of Minnesota,  
www.ipums.org.