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Volume Title: Consumer Buying Intentions and Purchase Probability:
An Experiment in Survey Design

Volume Author/Editor: F. Thomas Juster

Volume Publisher: NBER

Volume ISBN: 0-87014-413-8

Volume URL: <http://www.nber.org/books/just66-2>

Publication Date: 1966

Chapter Title: Appendix A: Basic Data

Chapter Author: F. Thomas Juster

Chapter URL: <http://www.nber.org/chapters/c1537>

Chapter pages in book: (p. 41 - 53)

Appendix A: Basic Data



TABLE A-1

Distribution of Responses to Savings Study Survey of Durable Goods Purchase Probabilities

Plan-O-Meter Reading	Commodity										All
	House	Car	TV	Refrigerator	Freezer	Washing Machine	Clothes Dryer	Air Conditioner	Range		
10 (certain)	2	2	0	0	0	1	0	0	0	0	5
9	0	0	0	0	0	0	0	0	0	0	0
8	1	0	0	0	1	0	0	0	0	0	2
7	0	0	1	0	0	0	0	1	1	1	3
6	1	0	0	1	0	0	0	0	0	1	3
5 (50-50)	3	5	2	4	0	2	2	2	1	1	21
4	0	2	2	2	0	1	0	1	1	1	9
3	0	0	0	0	1	1	0	0	0	0	2
2	1	1	3	0	1	2	1	0	1	1	10
1	0	0	0	0	0	1	0	0	0	0	1
0 (no plans at all)	89	87	89	90	94	89	94	93	92	817	817
Total	97	97	97	97	97	97	97	97	97	873	873
Purchases ^a	4	14	6	2	0	6	3	5	4	44	44
Nonzero readings	8	10	8	7	3	8	3	4	5	56	56

Source: Robert A. Fiskie, "A Quantitative Measure of Consumer Buying Intentions" (unpublished), University of Illinois.

^aDuring the six months following the survey.

TABLE A-2

Proportions of Households Reporting Indicated Scale Values for the Probability That They Will Purchase Within the Next Six Months, Detroit Sample

Probability Scale	New and Used Automobiles	Kitchen Range	Refrigerator or Freezer	Washing Machine	Clothes Dryer	Room Air Conditioner	Television Set	Dishwasher
0 or n.a.	69.8	88.5	88.0	81.8	89.1	89.6	83.3	93.7
1	9.4	3.6	5.2	6.2	5.7	5.7	5.2	4.2
2	1.6	0.5	0.5	1.6	0.5	1.6	1.6	0
3	0	0.5	1.6	0.5	1.0	0	0.5	0
4	1.0	0.5	0	1.0	1.0	0.5	0.5	0.5
5	4.7	2.1	3.1	5.2	0.5	2.6	4.2	0
6	0.5	0	0	0.5	0.5	0	1.0	0
7	0.5	1.6	0.5	0.5	0	0	1.0	0
8	2.1	0	0	0.5	0	0	0.5	1.0
9	4.7	2.1	1.0	1.6	1.6	0	1.0	0.5
10	5.7	0.5	0	0.5	0	0	1.0	0
Probability scale								
Zero	69.8	88.5	88.0	81.8	89.1	89.6	83.3	93.7
Nonzero	30.2	11.5	12.0	18.2	10.9	10.4	16.7	6.3
Intentions class ^a								
Nonintenders	80.8	n.a.	94.6	91.4	96.5	98.2	92.3	98.5
Intenders	19.2	n.a.	5.4	8.6	3.5	1.8	7.7	1.5

Source: Probability scale data from tables accompanying comments by James C. Byrnes, U.S. Bureau of the Census, March 9, 1964, unpublished.

^aIntentions data from *Consumer Buying Indicators*, Series P-65, No. 5, February 28, 1964. I have taken the relevant intender categories and adjusted them upward to reflect the fact that the Detroit sample was a relatively high-income group. The adjustment factors are based on the frequency of plans for the \$7,500-\$9,999 group relative to the population as a whole. For automobiles, the data were adjusted for October 1963 (*ibid.*, Table 1) by a factor of 1.42; for household durables, October 1963 data (*ibid.*, Table 3) were adjusted by a factor of 1.50. The latter adjustment takes into account the fact that the data of Table 3 do not include those households reporting "don't know" which I would not classify as nonintenders.

TABLE A-3

Proportions of Households Reporting Indicated Scale Values for the Probability That They Will Purchase Within the Next Twelve Months, Detroit Sample

Probability Scale	New and Used Automobiles	Kitchen Range	Refrigerator or Freezer	Washing Machine	Clothes Dryer	Room Air Conditioner	Television Set	Dishwasher
0 or n.a.	52.1	81.2	82.3	75.0	85.9	87.5	77.1	92.7
1	8.8	3.6	4.2	5.7	4.7	5.2	3.6	4.2
2	3.6	1.6	1.6	2.6	1.0	1.0	1.6	0
3	1.0	0	0.5	1.0	0.5	0.5	1.6	0
4	1.6	1.0	0.5	0.5	2.1	0.5	2.1	0.5
5	10.4	5.2	6.8	8.8	2.1	3.1	5.2	1.0
6	2.1	0.5	0	1.0	0.5	1.0	0	0.5
7	2.1	1.0	1.0	1.0	0	0	0.5	0
8	3.1	1.6	2.1	1.0	0	0	3.1	0
9	6.2	3.6	1.0	2.1	3.1	0.5	3.6	1.0
10	8.8	0.5	0	1.0	0	0.5	1.6	0
Probability scale								
Zero	52.1	81.2	82.3	75.0	85.9	87.5	77.1	92.7
Nonzero	47.9	18.8	17.7	25.0	14.1	12.5	22.9	7.3
Intentions class								
Nonintenders	60.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Intenders	39.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Same as Table A-2.

TABLE A-4

Proportions of Households Reporting Indicated Scale Values for the Probability That They Will Purchase Within the Next Two Years, Detroit Sample

Probability Scale	New and Used Automobiles	Kitchen Range	Refrigerator or Freezer	Washing Machine	Clothes Dryer	Room Air Conditioner	Television Set	Dishwasher
0 or n.a.	29.7	76.6	75.0	68.7	81.2	85.9	69.3	90.6
1	5.2	4.2	4.7	6.2	7.3	6.2	4.2	5.2
2	0.5	1.6	1.6	0.5	0	1.0	0.5	0
3	2.1	1.0	2.6	0.5	1.0	1.0	1.6	1.0
4	3.1	0	0.5	1.0	1.6	0.5	0.5	0.5
5	18.7	5.2	5.7	7.8	1.6	2.6	8.3	1.0
6	1.0	1.0	0.5	1.6	0.5	0	1.0	0
7	2.1	1.6	1.0	1.6	0.5	1.0	0	0
8	4.7	2.1	2.6	1.6	1.0	1.0	4.2	0
9	12.5	2.6	4.2	5.7	2.6	0	4.2	1.0
10	20.3	4.2	1.6	4.7	2.6	0.5	6.2	0.5
Probability scale								
Zero	29.7	76.6	75.0	68.7	81.2	85.9	69.3	90.6
Nonzero	70.3	23.4	25.0	31.3	18.8	14.1	30.7	9.4
Intentions class								
Nonintenders	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Intenders	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Same as Table A-2.

TABLE A-5
Purchase Rates for Automobiles Within Probability Classes,
Detroit Experiment

Probability Scale (6 months)	Number of Respondents	Number of Purchases ^a (6 months)	Purchase Rate (6 months)
10	11	9	.82
9	9	6	.67
8			
7	6	5	.83
6			
5	9	4	.44
4			
3			
2	23	5	.22
1			
0	122	10	.08
Total ^b	180	39	.22

Source: James C. Byrnes, "An Experiment in the Measurement of Consumer Intentions to Purchase," American Statistical Association, 1964 *Proceedings of the Business and Economic Statistics Section*, Washington, n.d., Table 8, p. 277.

^aIncludes three cases of multiple purchases.

^bThe total here is less than in Tables A-4 -- A-6, because some respondents did not answer the question.

TABLE A-6
*Classification of Respondents According to Buying Intentions Survey and
 Experimental Probability Survey, July 1964*

Purchase Probability Scale Value	Intentions to Buy Within Six Months, Twelve-Month Purchase Probability			Intentions to Buy Within Six Months, Twenty-Four-Month Purchase Probability			No Total							
	Definite	Probable	Maybe	Definite	Probable	Maybe								
0	1	1	1	3	6	402	414	1	1	1	2	6	383	394
1				1		7	8				1		10	11
2						9	9						11	12
3						4	4						8	8
4						4	4						2	2
5													2	2
6						1	1						3	3
7						2	2						4	4
8						2	2						1	1
9						2	2						2	2
10						1	2						6	7
n.a.						3	3						5	5
Total	2	1	1	4	6	437	451	2	1	1	4	6	437	451
Mean	.50	.025	.025	.044	.025	.050	.051	.50	.025	.025	.088	.025	.069	.070

A. Air Conditioners

(continued)

TABLE A-6 (concluded)

Purchase Probability Scale Value	Intentions to Buy Within Six Months, Twelve-Month Purchase Probability			Intentions to Buy Within Six Months, Twenty-Four-Month Purchase Probability			Total	Definite	Probable	Maybe	Don't Know	N.A.	No	Total
	Definite	Probable	Maybe	Definite	Probable	Maybe								
0	3	4	2	2	364	375	1	3	1	2	321	328		
1					19	19	1	1			20	22		
2					10	10					19	19		
3	1	2			7	10		1			9	10		
4			1	1	3	5	1		1		8	10		
5			1	1	3	4					5	5		
6			1	1	6	7			2		6	8		
7	1	1			1	3	1				4	5		
8	1			1	1	2				1	9	10		
9	1			1	4	6	1				7	8		
10	1		2		5	8	3	2	3	1	12	21		
n.a.					2	2					5	5		
Total	0	8	7	7	4	425	451	0	8	7	4	425	451	
Mean	—	.47	.20	.50	.34	.074	.092	—	.63	.35	.46	.128	.150	

F. Washing Machine

Source: Basic Data from QSI Experimental Survey, U.S. Bureau of the Census.

TABLE A-7
Distribution of Purchase Probabilities for Specified Commodity and Time Period, QSI Experimental Survey

Commodity	Probability Scale Value											N.A.	Mean				
	Total	0	1	2	3	4	5	6	7	8	9			10			
Six-Month Probabilities																	
Automobile	451	345	29	16	14	3	10	6	6	5	11						.117
Twelve-Month Probabilities																	
Automobile	451	293	26	21	21	10	9	12	13	11	10	21	4				.185
All household durables	2,706	2,377	87	57	29	23	22	21	14	11	17	30	18				.069
Air conditioner	451	414	8	9	4	4	0	1	2	2	2	2	3				.051
Clothes dryer	451	407	11	7	3	3	4	4	2	1	2	4	3				.058
Dishwasher	451	425	4	5	-	1	6	1	-	1	2	3	3				.048
Refrigerator	451	382	18	9	7	4	3	6	3	3	3	9	4				.084
TV set	451	374	27	17	5	6	5	2	4	2	2	4	3				.074
Washing machine	451	375	19	10	10	5	4	7	3	2	6	8	2				.091
Twenty-Four-Month Probabilities																	
Automobile	451	207	28	22	31	9	20	15	15	12	25	62	5				.327
All household durables	2,706	2,174	95	99	41	38	28	30	29	36	24	80	32				.108
Air conditioner	451	394	11	12	8	2	2	3	4	1	2	7	5				.070
Clothes dryer	451	377	14	16	3	5	5	6	4	7	3	6	5				.089
Dishwasher	451	414	6	6	1	2	2	2	1	2	3	7	5				.060
Refrigerator	451	326	26	22	10	7	5	8	6	11	4	20	6				.139
TV set	451	335	16	24	9	12	9	3	9	5	4	19	6				.135
Washing machine	451	328	22	19	10	10	5	8	5	10	8	21	5				.150

Source: Basic data from QSI Experimental Survey, U.S. Bureau of the Census.

TABLE A-8
 Distribution of Twelve-Month Purchase Probabilities Among Intenders and Nonintenders,
 Specified Commodities

Commodity	Purchase Probability Scale Value											N.A.	Mean ρ	
	Total ^a	0	1	2	3	4	5	6	7	8	9			10
							<i>Intenders</i>							
Automobile	56	12	1	4	3	3	4	3	3	4	5	14		.53
All household durables	86	34	3	3	5	3	8	5	5	3	4	12	1	.38
Air conditioner	8	6	1	-	-	-	-	-	-	-	-	1		.15
Clothes dryer	6	1	1	1	-	-	1	1	-	-	-	1		.40
Dishwasher	9	-	-	1	-	-	2	1	-	1	2	2		.71
Refrigerator	16	10	-	-	1	1	-	1	-	1	-	1	1	.19
TV set	25	8	1	1	1	1	4	1	3	-	1	4		.42
Washing machine	22	9	-	-	3	1	1	1	2	1	1	3		.39
							<i>Nonintenders</i>							
Automobile	391	279	25	16	17	7	5	9	10	7	5	7	4	.13
All household durables	2,581	2,309	83	53	24	19	13	16	9	8	12	18	17	.06
Air conditioner	437	402	7	9	4	4	-	1	2	2	2	1	3	.05
Clothes dryer	437	399	9	6	3	3	3	3	2	1	2	3	3	.06
Dishwasher	433	416	4	4	-	1	4	-	-	-	-	1	3	.03
Refrigerator	431	368	18	9	6	3	3	5	3	2	3	8	3	.08
TV set	418	360	26	15	4	5	-	1	1	2	1	-	3	.06
Washing machine	425	364	19	10	7	8	3	6	1	1	4	5	2	.07

Source: Basic data from QSI Experimental Survey, U.S. Bureau of the Census.

^aA few cases were excluded in each row because there was no response to the intentions question.

