

1997 PRODUCT RECALLS: QUANTIFICATION AND ANALYSIS

The present study categorizes consumer product recalls into six categories, and a final, miscellaneous grouping. The six main recall categories are: 1) children's products; 2) motor vehicles; 3) appliances and tools; 4) perishables; 5) furniture/computer; and 6) sports and recreation.

Based upon previous use of this typology (Gibson, 1997; Gibson, 1998), we extend these recall analyses by quantifying the same categories, and seeking the same monthly and seasonal correlations. In addition, the present study also compares the incidence of government-ordered vs. relatively voluntary recalls.

1997 recall amounts and patterns differ little from the 1996 quantification. Recalls occur frequently; there were 2,447 recalls in 1997 (an average of 6.70 each day, or almost 47 per week). Some months see relatively little recall activity compared to others, and there appears to be a modified seasonal variable at work. The incidence of government-ordered recalls compared to voluntary recalls varies from recall category to category; there is no apparent pattern.

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Product recalls of consumer goods in the United States tend to reflect certain qualitative and quantitative patterns. They generally involve relatively serious product problems, likely to result in serious consumer injury or death if recall warnings are not heeded. They occur often; at last five times a day, on average, in 1996 (Gibson, 1998, 773). And, they seem to occur more often at some times of the year than others, in what has been termed a "modified seasonal" variable (Gibson, 1998; 774-5).

In 1997, American recalls overall did not vary much from these typical tendencies. Comparisons between 1996 and 1997 reveals consistent similarities between the two years. However, a series of four unusually widely publicized 1997 recall events may change the recall regulatory environment for years to come.

The year 1997 began with two bizarre product recalls, one relatively unpublicized and another, far better known situation. In January, the state of Maryland recalled 78 special license plates featuring the Confederate flag, taking them from the Sons of Confederate Veterans after Black political leaders in Maryland complained ("Maryland Recalls...", 1997, A-3). That same month, the nationally-publicized "hair-eating doll" recall occurred.

Mattel voluntarily recalled 500,000 "Cabbage Patch Kids Snacktime Kids" dolls on January 6 because, as Consumer Reports put it, "When doll simulates chewing action, child's hair or fingers could get caught in child's mouth" (1997, 45). The Associated Press noted "about 100 reports of children getting their hair and fingers caught in the dolls mouths" on January 7 ("Mattel to Reimburse...", 1997, D-5). Syndicated newspaper humor columnist Dave Barry joked about the recall in his popular nationally-published column, joining late night talk show hosts Jay Leno and David Letterman in a comic salute to this national event.

As summer turned to fall, another sensational recall caught national attention. Los

Angeles Superior Court Judge Robert H. O'Brien "ordered the publishers of Playgirl magazine to recall its August issue because it contains nude photographs of [Brad] Pitt and his former girlfriend, lawyers for both sides said" (O'Neill, 1997, B-3). The Associated Press added that "The photos show Pitt and [Gwyneth] Paltrow, who at one time had been engaged, frolicking in the nude outside a hotel bungalow on a Caribbean island two years ago" ("Playgirl Told...", 1997, A-3).

Two serious recall events transpired in September and October, as the Hudson beef recall and the Redux and Pondamin weight loss drug recall claimed public attention and media interest. Unlike the alleged man-eating doll and the prurient Pitt photographs, these recalls involved consumer death and injury caused by a product. The FDA recalled Redux, and Pondamin, on September 15, after separate studies conducted by the Mayo Clinic and the FDA discovered that "after taking the pills, about a third were newly diagnosed with valve damage" (Neergaard, 1997; A-1, A-8).

American Home Products Corporation, marketer of the diet drugs, disputed the FDA's medical claims and recall action; on October 31, The Wall Street Journal reported that "doctors at 21 other medical centers across the country say they're finding a far lower incidence of valve problems. The doctors performed tests on nearly 750 patients after the recall of Redux and Pondimin was announced, and they found possible valve leaks in just

57 of them--a rate of only 8%" (Langreth and Johannes, 1997, B-1).

It appears, in hindsight, that American Home Products Corporation may have been justified in its skepticism regarding this recall. The New England Journal of Medicine reported on three recent studies; the consensus was that the FDA had overestimated the risk posed by the diet drugs ("Redux May Be...", 1998, A-6).

At the same time that these diet drugs were being recalled, the Hudson Food Incorporated was facing a devastating beef recall. Originally begun as a voluntary recall of 20,000 pounds of ground beef on June 4, Hudson eventually recalled 25 million pounds of ground beef under FDA supervision (Glanton, 1997, D-7). By August 22, some Hudson facilities were beginning to cease operations and close their doors ("Hamburger Recall...", 1997, A-3).

The present study seeks to advance our understanding of product recalls, by quantifying the incidence of 1997 recalls in seven categories; 1) children's products, 2) motor vehicles, 3) appliances and tools, 4) perishables, 5) office, furniture, and computer goods, 6) sports and recreation items, and 7) miscellaneous. In addition, we will search for monthly and seasonal trends in recall frequency, and compare governmental vs. voluntary recalls. Relying primarily on regulatory agency data, and supplemented by Consumer Union publications and computer searches of periodicals, this paper presents the clearest, most comprehensive picture available of the state of product recalls in the U. S. in 1997.

QUANTIFICATION OF 1997 RECALLS

Using Gibson's (1997) typology of the categories of product recalls, it is possible to ascertain the number of recalls of any one type, to appreciate trends in recall frequency and/or timing, and to make intra-category and inter-category comparisons. In this section, we will quantify the occurrence of recalls in each of the seven categories of recall. There

were 2,447 recalls in 1997; that amounts to 6.70 per day, or 46.90 each week

Children's Products

There are typically many recalls each year of children's products. 1997 was no exception, as there were at least 83 recalls of children's items, involving more than 17 million product units; the year before that, there were 88 such recalls. Sixty of these recalls were governmentally-directed, while another 23 were classified as voluntary. See Table One.

One reason for the large number of children's product recalls is that people are protective of children, and are careful to check products. In addition, there is a large number of sub-categories of children's products subject to being recalled. In the 1996 study, we posited 13 children's product sub-categories; this year there were 23, as reflected in Table One.

TABLE ONE

1997 CHILDREN'S PRODUCT RECALLS

PRODUCT TYPE	GOV'T RECALLS	NON-GOV'T	TOTALS
1) Books	0	1; 34,000 units	1;34,000 units
2) Rattles	0	1; 60,000 units	1;60,000 units
3) Car Seats	8; 382, 985 units	5; 1,307,856 units	13;1,690,851 units
4) Cribs	5; 399,056 units	1; 267,000 units	6;425,056 units
5) Stuffed Toys	3; 16,835 units	0	3; 16,835 units
6) Wooden Toys	4;104,300 units	1; 14,000 units	5;118,300 units
7) Water Toys	1;5,000 units	0	1;5,000 units
8) Toys (general)	3;47,147 units	2;93,000 units	5; 140,147 units
9) Swings	2;480,000 units	0	2;480,000 units
10) Clothes	4;57,000 units	0	4;57,000 units
11) Furniture	4;344,900 units	2;100,000 units	6;455,900 units
12) Sports	1;40,000 units	2;140,000 units	3;144,000 units
13) Infant Carriers	3;587,600 units	0	3;587,600 units
14) Strollers	2;172,000 units	0	2;172,000 units
15) Pacifiers	1;13,000 units	0	1;13,000 units
16) Jewelry	2;70,000 units	1;211,000 units	3;281,000 units
17) Dolls	3;640,000 units	0	3;640,000 units
18) Playpens	2;1,218,000 units	4;533,100 units	6;1,771,100 units
19) Food	1;5,000 units	1;?	2;5,000
20) Toy Vehicles	4;1,137,400 units	0	4;1,137,400 units
21) Infant Monitors	1;25,000 units	1;990,000 units	2;1,015,000 units
22) Fast Food Toys	2;995,000 units	0	2;995,000 units
23) Miscellaneous	4;589,700 units	1;40,000	5;629,700 units
	60; 7,376,993 units	23; 9,754,689 units	83; 17,131,682 units

Motor Vehicles

Motor vehicles, like children's products, are frequently recalled. In fact, these are the second and third-most frequently occurring types of recalls, after perishables. In 1997, there were approximately 300 motor vehicle recalls; an increase from the 284 motor vehicle recalls the year before. There were 258 governmentally-conducted recalls of motor vehicles in 1997, compared to 42 such recalls not involving a government agency.

TABLE TWO

1997 MOTOR VEHICLE RECALLS

MONTH	GOV'T RECALLS	NON-GOV'T RECALLS	TOTALS
January	10; 44,701 units	9; 232,681 units	19; 277,382 units
February	20; 987,076 units	2; 236,731 units	22; 1,223,807 units
March	29; 1,462,018 units	4; 466,904 units	33; 1,928,922 units
April	29; 1,109,588 units	2; 357,000 units	31; 1,467,388
May	19; 950,504 units	4; 29,228 units	23; 1,239,732 units
June	20; 841,174 units	7; 871,596 units	27; 1,712,770 units
July	10; 49,924 units	2; 1,620,889 units	12; 1,670,813 units
August	20; 616,951 units	3; 502,345 units	23; 1,119,296 units
September	25; 1,490,232 units	1; 1,100,000 units	26; 2,590,232 units
October	25; 2,361,007 units	3; 1,935,000 units	28; 4,296,907 units
November	35; 1,961,091 units	1; 340,000 units	36; 2,301,091 units
December	16; 350,329 units	4; 1,507,855 units	20; 1,858,184 units
	258; 12,225,096 units	42; 9,460,829 units	300; 21,685,925 units

Appliances and Tools

There were not as many individual recall campaigns of appliances or tools, but several of them involved substantial numbers of products. In fact, although there were only 58 appliance and tool recalls (47 by the government, eleven voluntary), compared to 83 children's products and 300 motor vehicle, six million fewer children's product units and motor vehicles were recalled. Nearly 45 million product units of appliances and tools were recalled, compared to 17,131,682 children's product units and 21,685,925 motor vehicle items. 1997 appliance and tool recall data is presented in Table Three.

TABLE THREE

1997 APPLIANCE AND TOOL RECALLS

PRODUCT TYPE	GOV'T RECALLS	NON-GOV'T RECALLS	TOTALS
1) Kitchen			
Appliances	10; 386,122 units	2; 357,500 units	12; 743,622 units
2) Appliances	17; 42,877,300 units	6; 31,000 units	23; 42,908,300 units

3) Tools	20; 1,136,210 units	3; 58,000 units	23; 1,194,210 units
	47; 44,399,632 units	11; 445,000 units	58; 44,844,632 units

Perishables

By far the most numerous type of product recall, there were 1946 perishables recalls in 1997. In 1996, there were just over 1,400 perishable recalls, involving more than 1.7 billion product units. There was a greater number of such recalls in 1997, but a substantially smaller number of units was recalled. The government acted directly in 1935 of the 1997 recalls, while another eleven were voluntary.

In 1997, there were 296 recalls of foods, 223 of medicine, thirteen of clothing, and 1,017 of biologicals, to cite four of the seven sub-categories. See Table Four.

TABLE FOUR

1997 PERISHABLE RECALLS

	Food	Medicine	Biologics	Cosmetics	Veterinary	Technology	Clothes	Total
JAN	20	20	65	3	3	28	1	140
FEB	22	28	59	0	5	26	1	141
MAR	21	9	67	0	0	27	4	128
APR	28	25	104	0	2	56	0	215
MAY	16	11	99	0	2	43	2	173
JUNE	29	16	76	1	1	27	2	152
JULY	29	25	88	0	1	30	0	173
AUG	22	13	85	1	2	50	0	173
SEPT	33	19	86	1	2	15	1	157
OCT	35	28	89	1	1	26	0	180
NOV	23	15	77	0	0	25	0	140
DEC	18	14	122	0	0	18	1	173
	296	223	1017	7	19	371	13	1946

Office/Computer/Furniture

This was the least frequently recalled type of product in 1997, compared to the other five main categories. There were only 11 such recalls, of 12, 789, 500 product units. Six of these recalls were ordered by a government agency, while the other five were not.

See Table Five.

TABLE FIVE

1997 OFFICE/FURNITURE/COMPUTER RECALLS

PRODUCT TYPE	GOV'T RECALLS	NON-GOV'T RECALLS	TOTALS
1) Furniture	4; 409,000 units	3; 12,077,500 units	7; 12;476,500 units
2) Computers	2; 253,000 units	2; 50,000 units	4; 303,000 units
	6; 662,000 units	5; 12,127,500 units	11; 12,779,500 units

Sports and Recreation

There were 23 recalls of sports and recreational equipment in 1997, nearly twice as many as the 12 sports and recreation recalls the year before. And, while the twelve 1996 sports and recreation recalls netted under 500,000 product units, the 1997 sports and recreation recalls involved more than 2,000,000 product units. Three of these recalls were considered voluntary, with direct government action in 23 cases. See

TABLE SIX

1997 SPORTS AND RECREATION RECALLS

# OF GOV'T RECALLS	# OF NON-GOV'T RECALLS	TOTALS
23; 2,088,700 units	3; 15,487	26; 2,104,187 units

Miscellaneous Product Recalls

In addition to the six main recall categories, there is a catch-all category, one containing all of the products not included in one of the other six. In 1997, there were at least 23 of these recalls, involving nearly 6.5 million product units; 16 miscellaneous recalls involved a government agency, while seven did not. See Table Seven.

TABLE SEVEN

1997 MISCELLANEOUS RECALLS

PRODUCT TYPE	# OF RECALLS	# OF PRODUCT UNITS
1) Holiday Lights	2	1,832,700
2) Lighters	2	898,000
3) Candles	7	3,310,460
4) Chemicals	4	12,900
5) Miscellaneous	6	304,000
	23 recalls	6,396,960 units

At this point, we have quantified the incidence of each type of recall. Table Eight presents a summary of the number of 1997 recalls, and the number of product units recalled. See Table Eight.

TABLE EIGHT

1997 RECALLS

PRODUCT TYPE	# OF RECALLS	# OF UNITS RECALLED
1) Children's Products	83	17,131,682
2) Motor Vehicles	300	21,685, 925
3) Appliances and Tools	58	44,844,632
4) Perishables	1946	388,738, 668
5) Furniture/Office/Computer	11	12,789,500
6) Sports and Recreation	26	2,104,187
7) Miscellaneous	23	6,396,960
	2447 recalls	493,691,554 units

MONTHLY AND SEASONAL RECALL TRENDS

Although complete information on each recall is not available, we do know enough about most to determine basic facts; the name of the recalled product, the date of recall, the number of units involved, and the reason for the recall are usually available. If it is possible to anticipate rather than react to recall events, it might be possible to minimize the expense and other unpleasant consequences of recall campaigns. Identifying possible monthly and seasonal trends in recall occurrences is a first step in such anticipation. The present study extends Gibson's (1998) analysis of monthly and seasonal recall tendencies, which found three distinct clusters of high-recall, moderate, and low-recall periods.

The monthly incidence of product recalls is illustrated in Table Nine.

TABLE NINE

MONTHLY INCIDENCE OF 1997 RECALLS

	CHILDREN	VEHICLES	TOOLS	PERISHABLES	OFFICE	SPORTS	MISC	TOTAL
Jan. 9	19	2	140	1	2	3		176
Feb. 1	22	5	141	1	1	3		174
Mar. 8	33	12	128	0	2	0		183
April 11	31	6	215	1	2	0		266
May 5	23	6	173	0	6	2		215
June 6	27	1	152	1	4	2		193
July 3	12	2	173	0	5	1		196
Aug. 6	23	5	173	0	0	1		208
Sept. 5	26	5	157	1	1	3		198
Oct. 11	28	9	180	2	2	1		233
Nov. 2	36	1	140	2	2	1		184
Dec. 8	20	3	173	0	0	4		208
75	300	57	1946	9	27	21		2434

Initial observation of the monthly distribution of recalls in 1997 reveals no surface patterns, only the obvious fact that some months have more recalls than others. However, just as was the case with 1996 recalls, these seemingly random monthly distributions make sense when combined into seasonal cluster patterns. See Table Ten.

TABLE TEN

1997 RECALL SEASONAL CLUSTER PATTERNS

CLUSTER I: High-Incidence Recall Months

April.....	266 recalls
October.....	233 recalls
May.....	215 recalls
August.....	208 recalls
December.....	208 recalls
Cluster Monthly Average:	226 recalls per month

CLUSTER II: Mid-Incidence Recall Months

June.....	193 recalls
July.....	196 recalls
September.....	198 recalls
Cluster Monthly Average:	195.66 recalls per month

CLUSTER III: Low Incidence Recall Months

January.....	176 recalls
February.....	174 recalls
March.....	183 recalls
November.....	184 recalls
Cluster Monthly Average:	177.92 recalls per month

THE GOVERNMENT ROLE IN RECALLS

To this point, we have considered the number of recalls in the main categories, and tabulated the number of individual product units recalled. Monthly recall tendencies were noted, and quasi-seasonal recall frequency variations were observed. Let us now add a final dimension to our understanding of 1997 recalls: the role of government.

Tables one through seven summarized the number of recalls in the various categories, and indicated the number of directly governmentally-induced recalls and those recalls termed purely voluntary on the part of recallers. Now we can directly compare the number of governmental vs. non-governmental recalls, looking at both the number of campaigns and number of recalled units. That comparison is provided in Table Eleven.

The results are inconsistent, although in general there are many more governmentally-induced recalls. There was rough parity between the six government office/furniture/computer recalls, and the five non-governmental recalls. But, in general, there were far more recalls initiated by the government, by a margin of 2,525 to 122.

TABLE ELEVEN

GOVERNMENTAL VS. NON-GOVERNMENTAL RECALLS

PRODUCT TYPE # OF GOV'T RECALLS # OF NON-GOV'T RECALLS

1) Children's Products	60; 7,376,993 units	23; 9,754,689 units
2) Motor Vehicles	258; 12,225,096 units	42; 9,460,829 units
3) Appliances and Tools	47; 44,399,632 units	11; 445,000 units
4) Perishables	1935; 388,233,728 units	11; 494,940 units
5) Office/Furniture/ Computer	6; 662,000 units	5; 12,027,500 units
6) Sports and Recreation	23; 2,088,700 units	3; 15, 487 units
7) Miscellaneous	16; 2,835,360 units	7; 3,561,600 units
	2,345 recalls;	102 recalls;
	457,831,509 units	35,760,045 units

These governmentally-induced recalls are produced by several regulatory agencies, most notably the Food and Drug Administration, the National Highway Traffic Safety Administration, and the Consumer Product Safety Commission. Other 1997 federal recallers included the U. S. Department of Agriculture, and the Centers for Disease Control. See Table Twelve.

TABLE TWELVE

1997 RECALLS BY GOVERNMENT AGENCY

AGENCY NAME NUMBER OF RECALLS

1) Consumer Product Safety Commission	154
2) National Highway Traffic Safety Administration	266
3) Food and Drug Administration	1896
4) U. S. Department of Agriculture	29
5) Environmental Protection Agency	1
6) Centers for Disease Control	2
	2348 recalls

CONCLUSION

It is important to advance our understanding of product recalls, in light of the gravity of the consequences of ineffective recall campaigns. It is no overstatement to suggest that product recalls are a matter of life and death; effective recalls save lives and reduce suffering, while unsuccessful campaigns may have quite different and disappointing results.

1997 recalls differed little from recall tendencies of the years before. Recalls of perishables far outnumbered the rest. There was a significant number of children's products and motor vehicle recalls, with a fewer number of appliances and tools, office, computer and furniture, and sports and recreation product recalls.

Monthly variation in recall frequency was considerable, with no apparent pattern. However, certain seasonal tendencies were identified. These quasi-seasonal 1997 recall frequency tendencies are quite similar to the 1996 recall data, and not much different than the 1995 recall profile.

Much remains to be learned about American product recalls. We know little about sub-national recalls; counties, cities, and states sometimes conduct recall activity. At the federal level, it is likely that some recall activity has escaped our attention. Thus, we must concede that our quantification of 1997 recalls is probably an understatement of the true incidence of this economic phenomenon.

Nevertheless, there is considerable value in enhancing our understanding of product recalls in the U. S. In light of the public health and economic consequences of product recall events, it is imperative that we advance our knowledge about this important business topic, with its central communication variables.

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