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MATERIAL PROVIDED IN RESPONSE TO UPS/USPS-T5-23 (HUNTER)

United States Postal Service

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BRPW Blow-Up Factors

General.

This document explains how the blow-up factors used in the BRPW for the non-automated office panel are constructed. The BRPW statistical system and methodology is documented in library reference USPS-LR-I-26/R2000-1.

Construction of Factors.

For the FY 1998 period, the BRPW utilizes five independently selected non-automated office panels to supplement the automated office data obtained from the PERMIT System. Under the BRPW methodology, a non-automated office panel corresponds to a targeted indicia and mail class or subclass combination. The five targeted mail categories are: permit imprint FCM and Priority Mail, Periodicals, permit imprint Standard Mail (A), postage affixed FCM & Standard Mail (A), and permit imprint Bound Printed Matter. For the FY 1998 period, a sixth panel comprised of automated offices, adjusted for residual non-automated office activity, is used for the permit imprint Parcel Post mail category.

For each targeted population, a frame of post offices is constructed from a census of non-automated office census conducted for a recent postal quarter or year. Only offices reporting non-zero revenue for the targeted mail category are retained in the frame. Except for the permit imprint Parcel Post panel, the frame is partitioned into a minimum of four strata. A random sample of offices is then selected within each stratum subject to minimum and maximum overall size constraints. The overall size for a panel is based on administrative workload and targeted precision considerations, and is allocated to the strata using Neyman allocation.

The blow-ups are developed by inverting the sampling fractions. A sampling fraction is the ratio of the sample size to the population size (count) for a stratum. Since it is known that the automated office coverage is significant (approximately 99 percent) for the permit imprint Parcel Post category, a panel is not needed for this mail category. However, to account for related residual non-automated office activity, the ratio of total revenue (automated and non-automated offices) to automated office only revenue obtained from a recent census is applied to the automated office distribution of revenue and volume obtained for the FY 1998 period. For the FY 1998 period, the ratio of 1.0092075 obtained from a PQ2, FY1997, census is used.

The summary reports provided in Appendix A identify the sample (NHSAMP) and strata population (NH) sizes required to construct the blow-up factors used in the BRPW for the FY 1998 period. The total sample size and population count for each panel are also provided.

TB REVENUES - BY STRATUM

OBS	STRATUM	NH	NHSAMP	BLOWUP	RP	RM	RS
1	1.1	1276	1276	1.00	716292329.10	1737042604.74	209191098.10
2	1.8	286	286	1.00	21832542.93	212694728.19	7573181.92
3	1.9	118	118	1.00	3373401.15	82020875.13	4082028.26
4	2.1	48	6	8.00	9064831.79	25623302.03	818738.80
5	2.2	452	4	113.00	12813391.28	146040124.90	362797.92
6	2.3	1951	4	487.75	13306764.92	304966964.03	847475.77
7	2.4	6264	4	1566.00	5353368.24	278778006.30	596091.85
		=====	=====		=====	=====	=====
		10395	1698		782036629.41	2787166605.32	223471412.62

ALLOCATION OF SAMPLE SIZE N TO STRATA
(POPULATION STANDARD DEVIATION AND VARIANCE SHOWN)

OBS	SUBGROUP	NH	RAUX	MEANH	SH	VAR	NHSAMPD	NHSAMP
1	1	158	51573777.23	326416.31	292315.14	85448140211.13	7	7
2	2	1257	84639321.96	67334.39	26717.25	713811524.85	5	5
3	3	4483	76023619.76	16958.20	7852.29	61658423.51	6	6
4	4	14288	34752524.00	2432.29	2409.25	5804478.21	6	6
		====	====			====	====	====
		20186	246989242.95			86229414637.70	24	24

PQ1-FY95 2C CENSUS REVENUES - BY STRATUM

OBS	STRATUM	NH	NHSAMP	BLOWUP	RI	RC	RN	RR	RF	RU	R
1	1.1	1223	1223	1.00	10288036.24	2507763.62	66790416.08	309370621.18	16818370.27	190981.75	405966189.14
2	1.8	338	338	1.00	672807.88	52366.05	781172.16	3964258.11	174944.10	1537314.35	7182862.65
3	1.9	102	102	1.00	87486.82	35121.31	125822.06	418021.94	11822.22	429599.98	1108774.33
4	2.1	94	5	18.80	1161261.87	0.00	26996.78	847468.76	7016.73	0.00	2042744.14
5	2.2	403	4	100.75	1726741.11	0.00	131285.79	2132101.51	19461.95	0.00	4009590.36
6	2.3	979	4	244.75	1863868.79	0.00	207248.14	3297186.30	43001.88	0.00	5411305.11
7	2.4	1784	4	446.00	1444586.64	0.00	187854.88	3370841.82	40619.88	0.00	5043903.22
8	2.5	2642	4	660.50	536160.20	0.00	285730.01	3444195.35	90814.22	338624.16	4695523.94
9	3.0	201	4	50.25	384104.75	162402.39	777079.13	1004625.16	68073.06	0.00	2396284.49
		====	====	====	====	====	====	====	====	====	====
		7766	1688	1524.05	18165054.30	2757653.37	69313605.03	327850220.13	17274124.31	2496520.24	437857177.38

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PQ1-FV95 3C TB REVENUES - BY STRATUM

OBS	STRATUM	NH	NHSAMP	BLOWUP	RN	RR	R
1	1.1	1383	1383	1.00	223490070.70	2042006098.19	2265496168.89
2	1.8	286	286	1.00	8629285.23	70767640.78	79396926.01
3	1.9	11	11	1.00	126264.73	1434507.90	1560772.63
4	2.1	89	5	17.80	2600079.34	21154086.22	23754165.56
5	2.2	551	4	137.75	6768362.32	31558588.03	38326950.35
6	2.3	1506	4	376.50	8296718.46	31052322.45	39349040.91
7	2.4	3737	4	934.25	6758245.55	22486896.12	29245141.67
8	2.5	12662	4	3165.50	3489387.29	6826825.12	10318212.41
		=====	=====		=====	=====	=====
		20225	1701		260158413.62	2227286964.81	2487445378.43

PQ2-97 AIC-132 SURVEY SUMMARY
(UPDATED WITH 97/98 CBCIS & AIC-132)

AP9-98 CBCIS FRAME	SOURCE	_FREQ_	(A) SURV PPOST	(B) SURV DBMC	SURV ALL CATS	SURV AIC-132 (RESP)	AIC-132 (NONAUTO)	AIC-132 (AUTO+NONAUTO)	97/98 AIC132 PQ-AVE
C)	0 ADD FROM SURVEY	5	32,191	0	144,160	27,254	.	.	167,534
	0 FRAME AUTO	8	2,630	15,944	0	0	217,341	354,343	117,938
	0 FRAME CNTRCT	127	0	0	17,808	2,682	.	.	610
	0 FRAME MANUAL	7,291	476,937	715,618	12,594,844	15,597,633	25,359,909	25,359,909	23,828,589
0 NEW 98PQ AIC132	402	.	.	.	.	.	.	1,137,367	
D)	1 ADD CBCIS UPDATE	83	.	.	.	.	.	.	1,075,140
	1 FRAME AUTO	1,718	23,056,536	110,130,482	3,051,008	6,050,188	23,156,225	434,240,957	501,654,224
	1 FRAME MANUAL	164	142,221	328,659	4,054,253	4,283,143	6,870,821	6,870,821	11,782,313
	1 MAILER SHIFT	1	44,846	1,330,054	1,420,300	1,420,300	1,420,300	1,420,300	1,512
		9,799	23,755,361	112,520,737	21,282,373	27,381,200	57,024,595	468,246,330	539,765,228

$$\text{Blow up} = \frac{[(C,A) + (C,B) + (D,A) + (D,B)]}{[(D,A) + (D,B)]}$$

$$= 1.009208$$

ALLOCATION OF SAMPLE SIZE

OBS	SUBGROUP	NH	VH	NHSAMP	REV	SH
1	1	11	232788048070	5	3275456.75	132798.56
2	2	38	350859384007	4	2083329.94	32958.34
3	3	278	387441265550	4	1735404.77	4510.61
4	4	1942	100432718180	8	1139693.54	462.52
		====	=====	=====	=====	
		2269	1.0715214E12	21	8233884.95	