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College of Business

QMB 6912
Capstone Project in Business Analytics

Problem Set #3

1 Data Description

Several Dealerships has gather releveant and appropriate information, and organized a dataset concerning 9,861 sales invlolving a trade-in of truck at nine dealerships. These data are contained in the file `UsedTrucks.dat`, which is available in the `Data` folder. Each Truck sale in the data set is a row, while the columns correspond to the variables whose names and definitions are the following:

Variable	Definition
`type`	sale type
`pauc`	price when sold at auction
`pret`	price when sold retail
`mileage`	odometer
`make`	make of vehicule
`year`	model year of vehicle
`damage`	an index of damage to vehicle, 1 little damage, 10 a lot
`dealer`	dealer id
`ror`	rate-of-return
`ror`	net amount given to trade-in

I have downloaded the file `UsedTrucks.dat`, loaded the data described above into R, calculated the summary statistics for these data, and finally, presented these statistics in LaTeX tables. These operations are all performed by the script `UsedTrucks_Tables.R` in the `Code` folder. The script uses an R package called `xtable` to automate the production of the tables from a data frames in R.)

I analyze the data in subsets, according to Type , calculating the summary statistics for each subset and present these statistics in the LaTeX tables that follow.

2 Summary by Type

Table **??** lists summary statistics for numeric variables in separate columns for subsamples defined by Type.

	0	1
Min. ror	1.0493	1.0999
Mean ror	1.0497	1.1000
Max. ror	1.0493	1.0999

Table 1: Summary by type

3 by makerl

Table **??** lists the frequencies of observations of each maker .

	other	dealer1	dealer2	dealer3	dealer4	dealer5	dealer6	dealer7	dealer8	dealer9
1	171	19	86	106	203	253	254	209	158	105
2	159	12	71	108	173	218	256	217	152	106
3	153	11	74	131	205	253	273	178	171	99
4	145	21	79	118	170	252	259	202	153	89
5	140	21	76	131	181	247	257	200	159	91
6	173	14	69	137	203	271	273	182	145	97
7	150	21	92	125	177	243	279	213	136	97
Totals	1091	119	547	856	1312	1737	1851	1401	1074	684

Table 2: by Dealer

4 Reel Design by Brand of Fly Reel

Table **??** lists the frequencies of observations of each brand of fly reel across two categorical variables: whether the reel is sealed and whether the reel is machined versus cast.

	Ford	Ford	Chevrolet	total
1	156	171	136	1432
2	162	144	129	1354
3	144	165	150	1436
4	153	166	156	1380
5	163	147	161	1403
6	160	156	158	1427
7	169	165	157	1429
Totals	1107	1114	1047	9861

Table 3: Brand of Used Trucks