Intercept comparisons

Logically, zero of some counting characteristic, be it zero jobs or zero people or whatever, will result in zero ridership. Thus, there may be some value in removing the intercept from the various regression methods.

For two regression types, Poisson with identity link and linear least squares, here is a comparison of regression both with and without intercepts. The addition of features occurs in the same way as the last regression analysis. The data has been modified somewhat as the 60net characteristics are removed.

Regression Type	Num of Features	Summed Station Error	MAPE	System Error
Poisson - no Int	1	0.0138	-0.1805	0.4143
	5	0.0367	0.0742	0.4404
	10	-0.1393	-0.0142	0.2282
	15	-0.4344	-0.2405	0.1340
	20	-2.7023	-1.5092	-2.1554
	25	-0.0957	-0.0891	0.4922
Poisson	1	0.3585	-0.2884	0.8173
	5	0.3861	-0.0193	0.8113
	10	0.3993	-0.0084	0.8571
	15	0.3939	0.0803	0.8297
	20	0.3945	0.0304	0.8985
	25	0.3714	0.0811	0.8388
Lst Sq - no Int	1	0.3896	0.0262	0.7868
	5	0.4221	0.1068	0.883
	10	0.4073	0.1042	0.8620
	15	0.3633	0.0815	0.8130
	20	0.3326	-0.0103	0.8076
	25	0.3372	0.0755	0.8484
Lst Sq	1	0.4017	-0.1184	0.8810
	5	0.3617	0.1579	0.7909
	10	0.3346	0.1336	0.8034
	15	0.3905	0.0878	0.8318
	20	0.3785	0.0812	0.8691
	25	0.3379	0.0257	0.8076

Least squares regression is not very much different depending on whether an intercept has been added. Poisson regression with no intercept, on the other hand, does not work very well.