

Feature Testing - Income per capita & S0102 data

Parv

2022-10-19

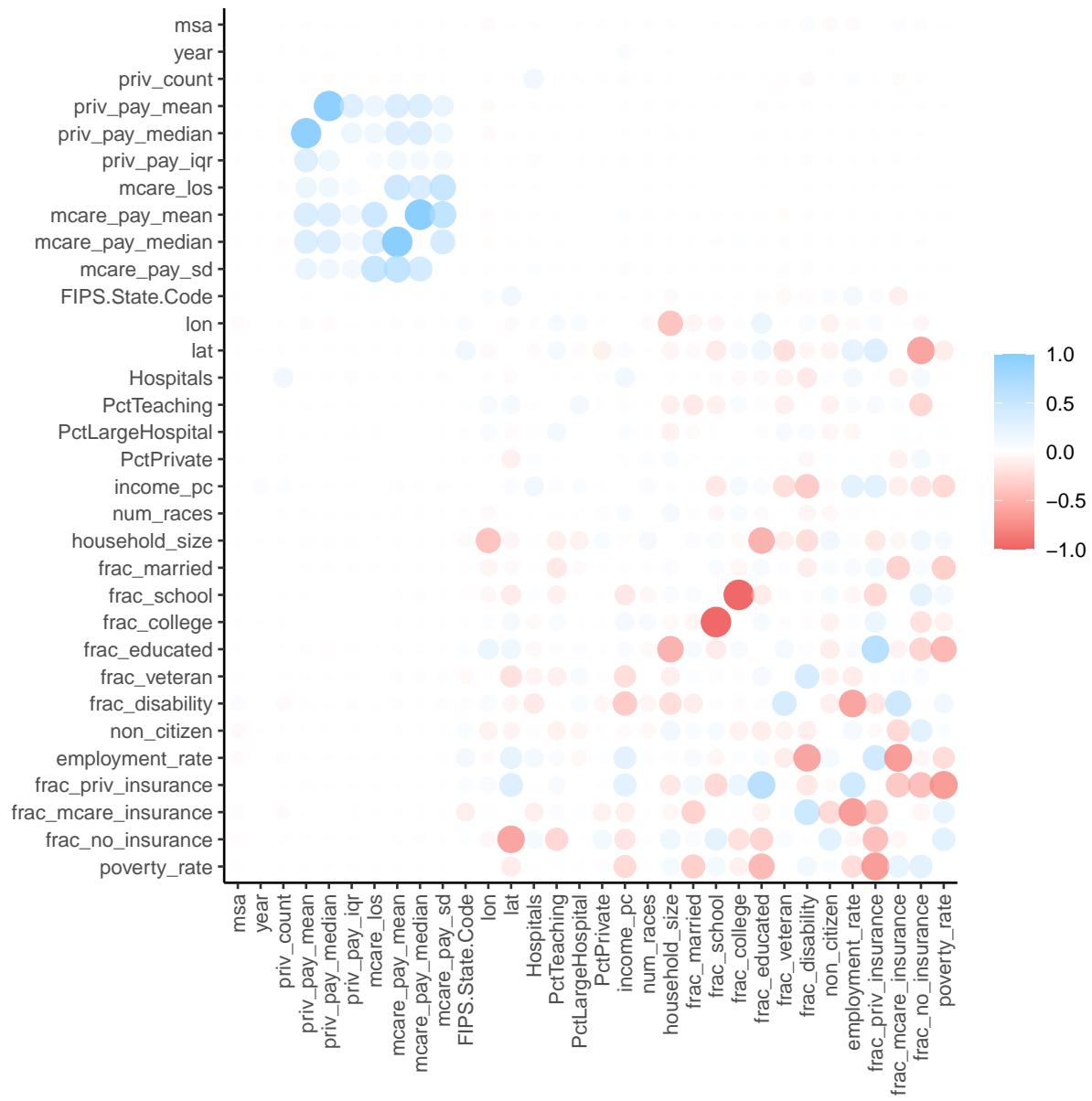
```
## -- Attaching packages ----- tidyverse 1.3.1 --

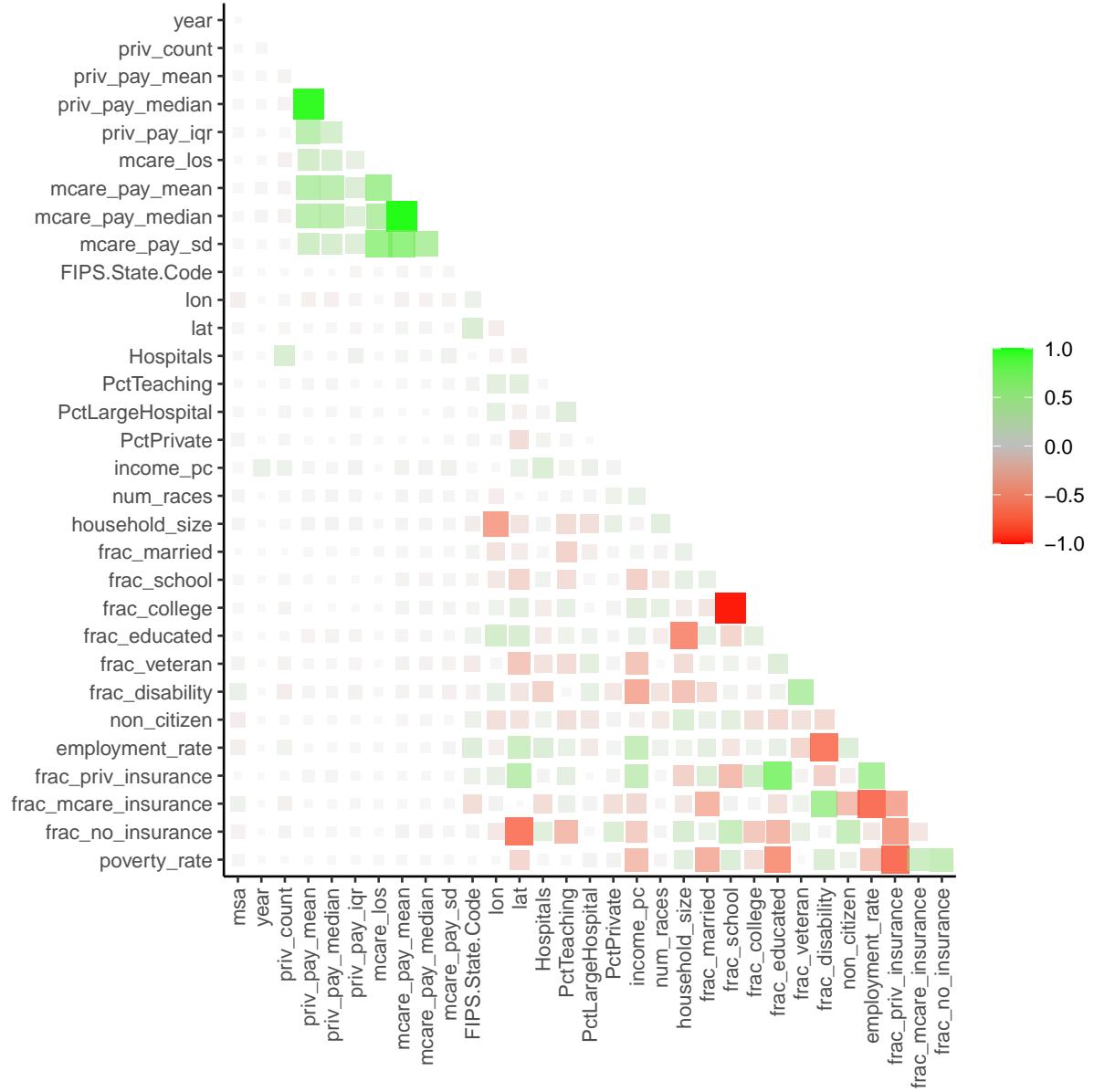
## v ggplot2 3.3.5     v purrr    0.3.4
## v tibble   3.1.2     v dplyr    1.0.7
## v tidyverse 1.1.3     v stringr  1.4.0
## v readr    1.4.0     vforcats  0.5.1

## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()   masks stats::lag()

## Warning: package 'corrr' was built under R version 4.1.3
```

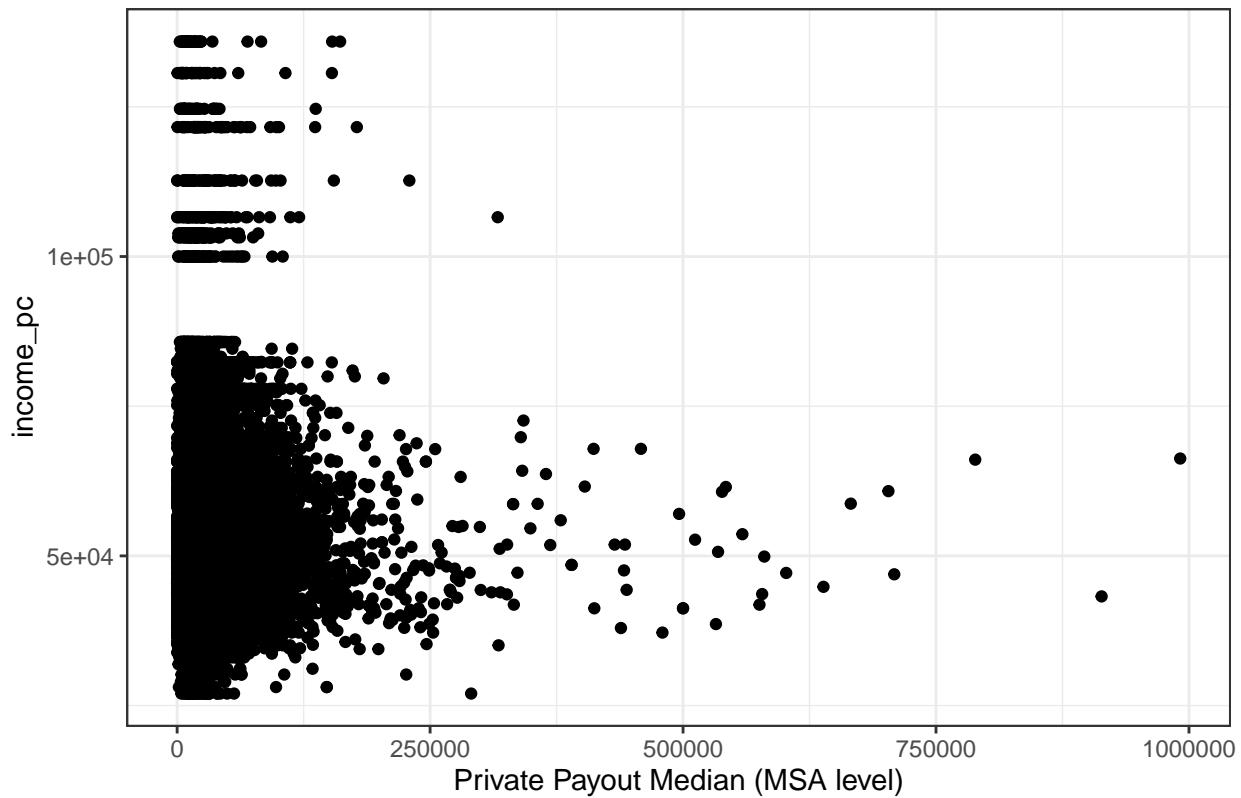
Correlations



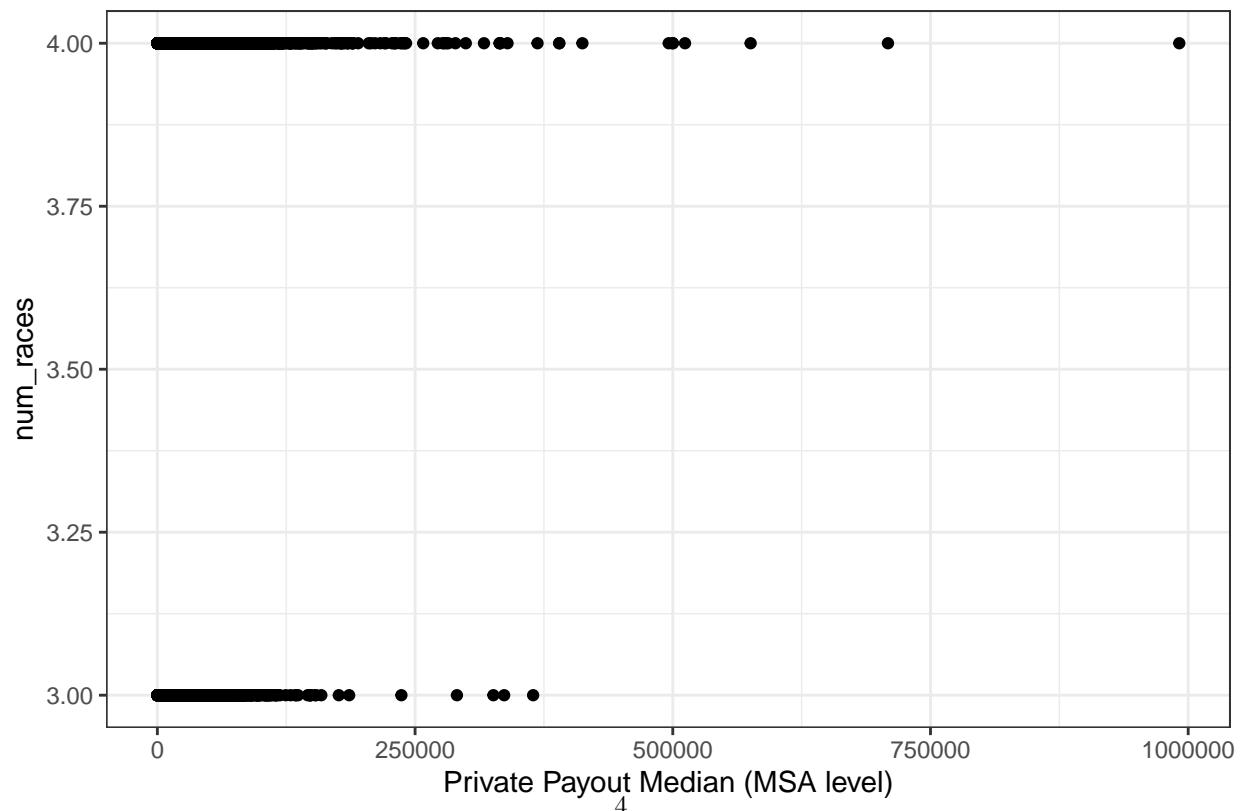


Scatterplots

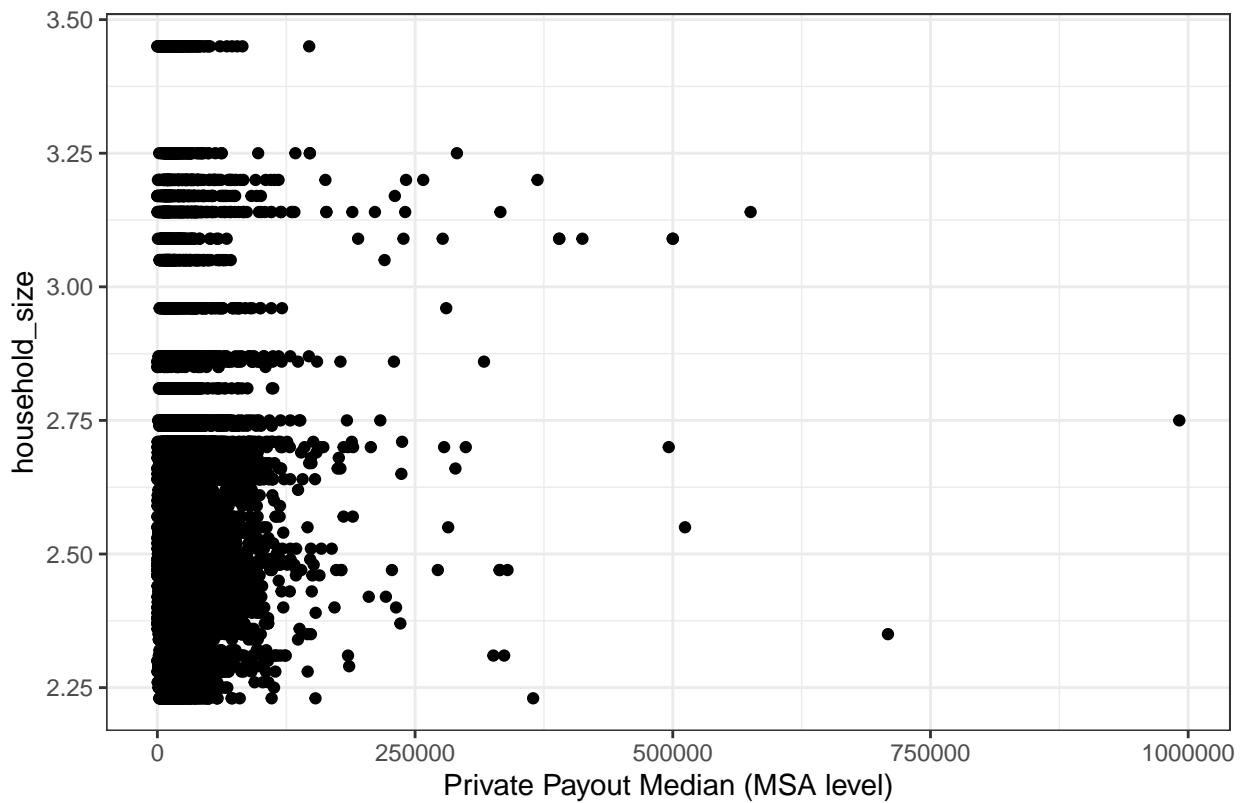
Scatter plot of Private Payout Median (MSA level) Vs income_pc



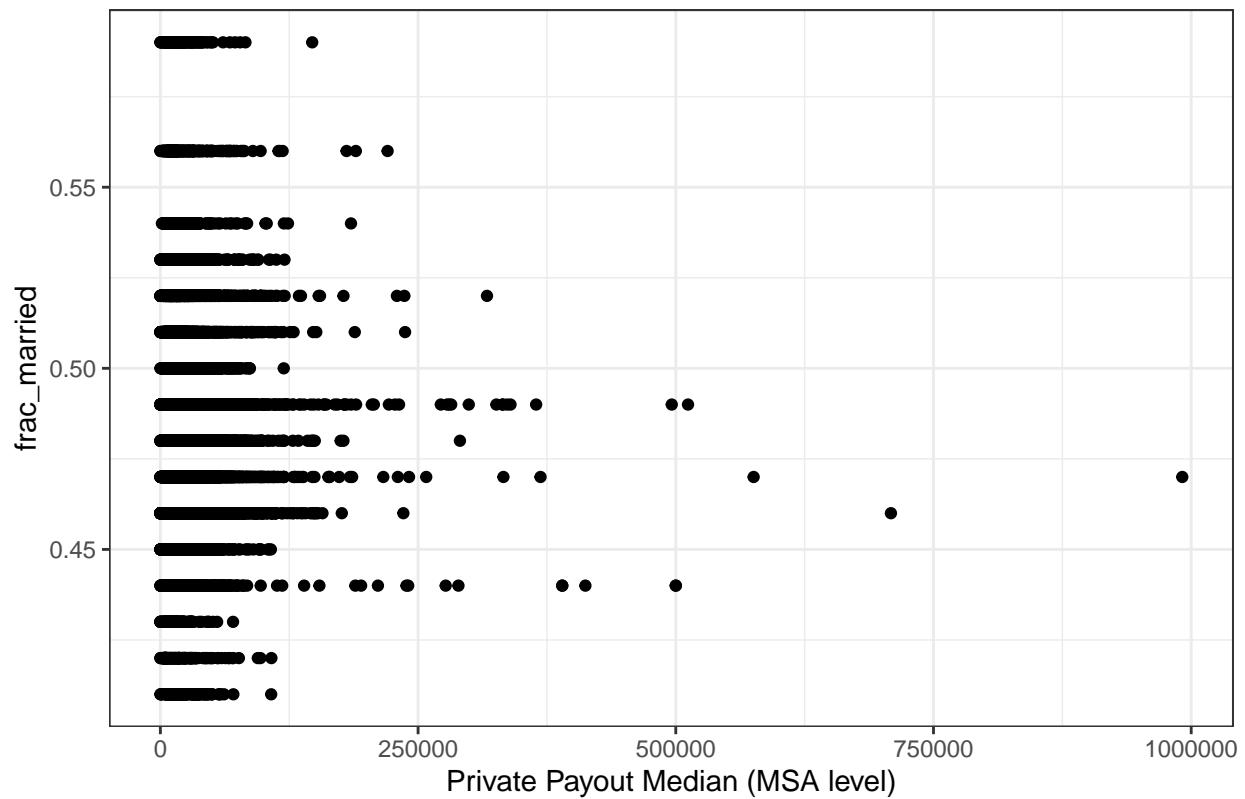
Scatter plot of Private Payout Median (MSA level) Vs num_races



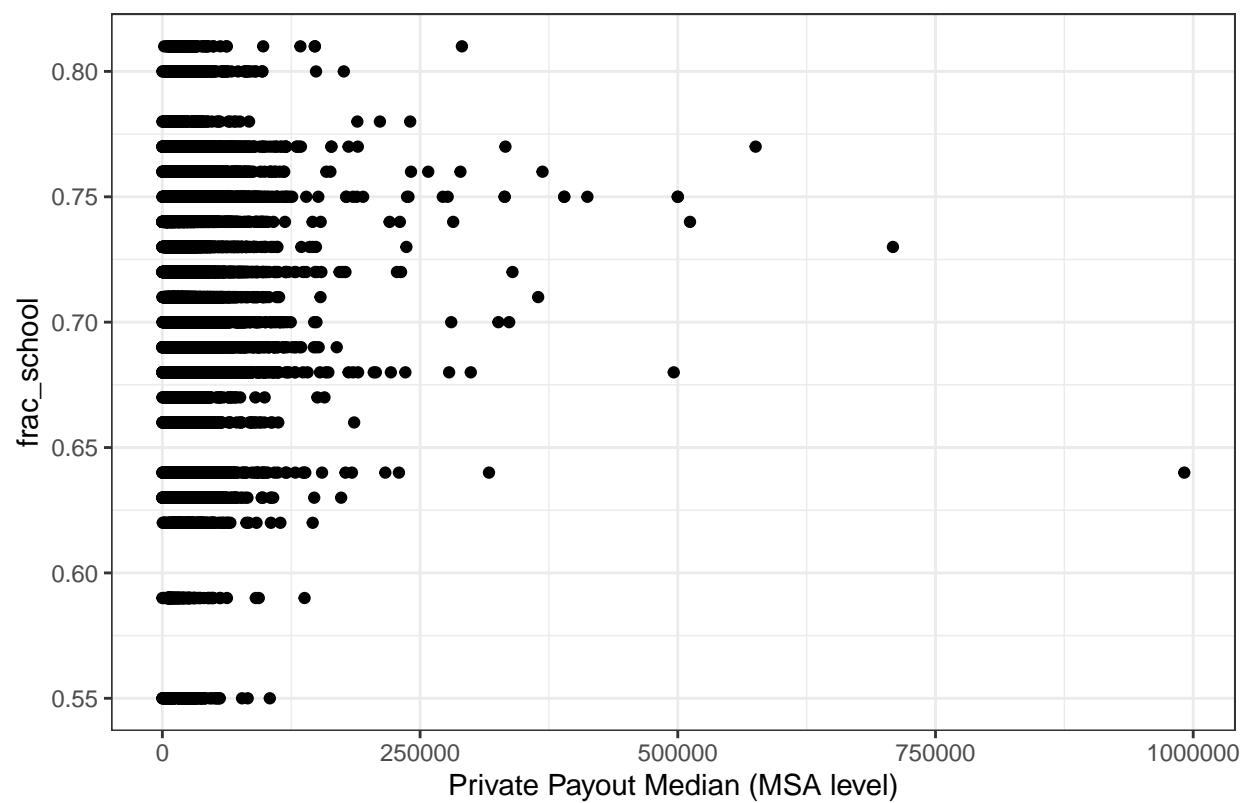
Scatter plot of Private Payout Median (MSA level) Vs household_size



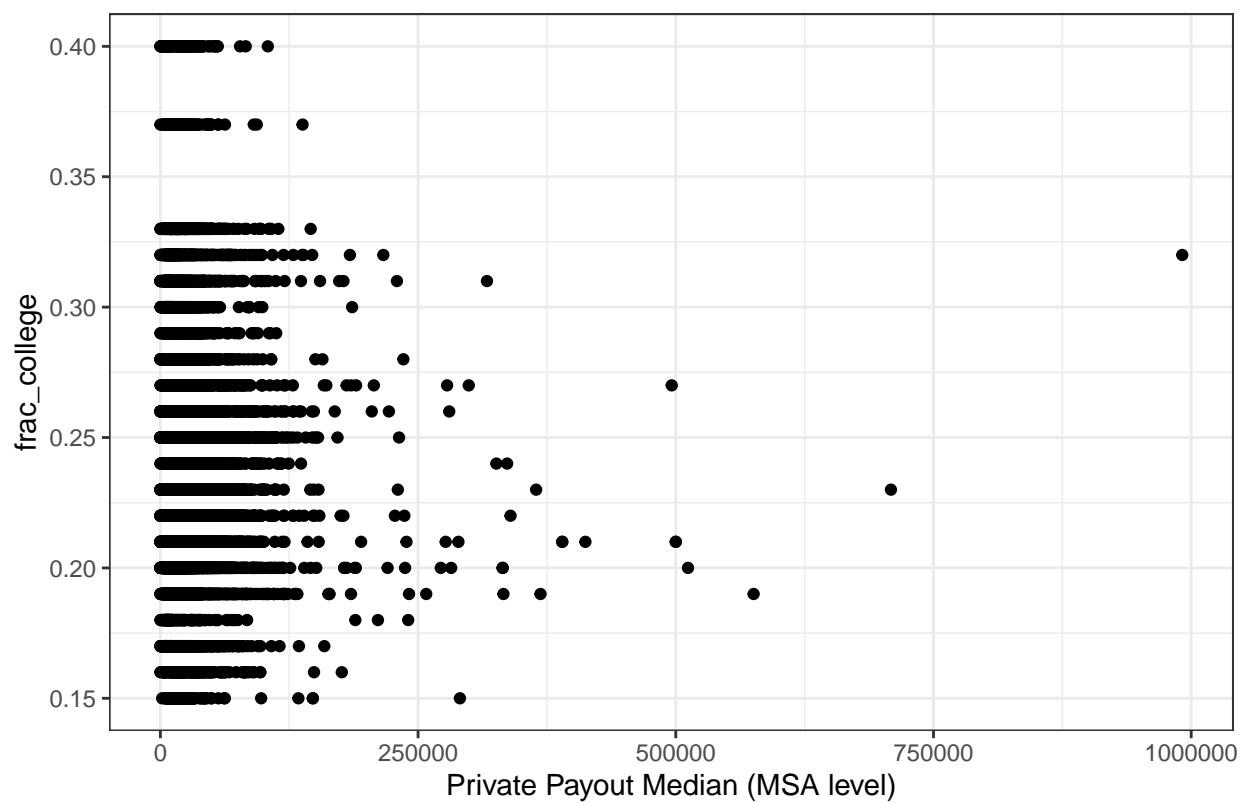
Scatter plot of Private Payout Median (MSA level) Vs frac_married



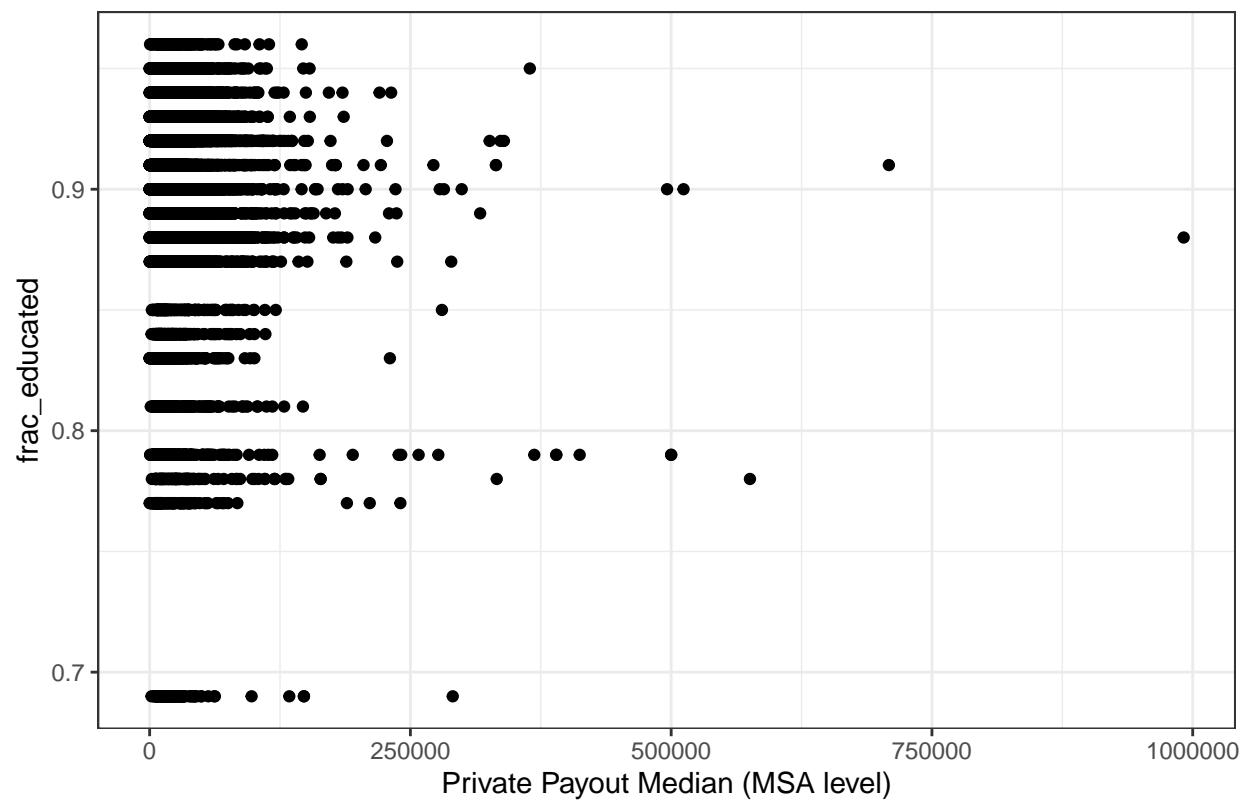
Scatter plot of Private Payout Median (MSA level) Vs frac_school



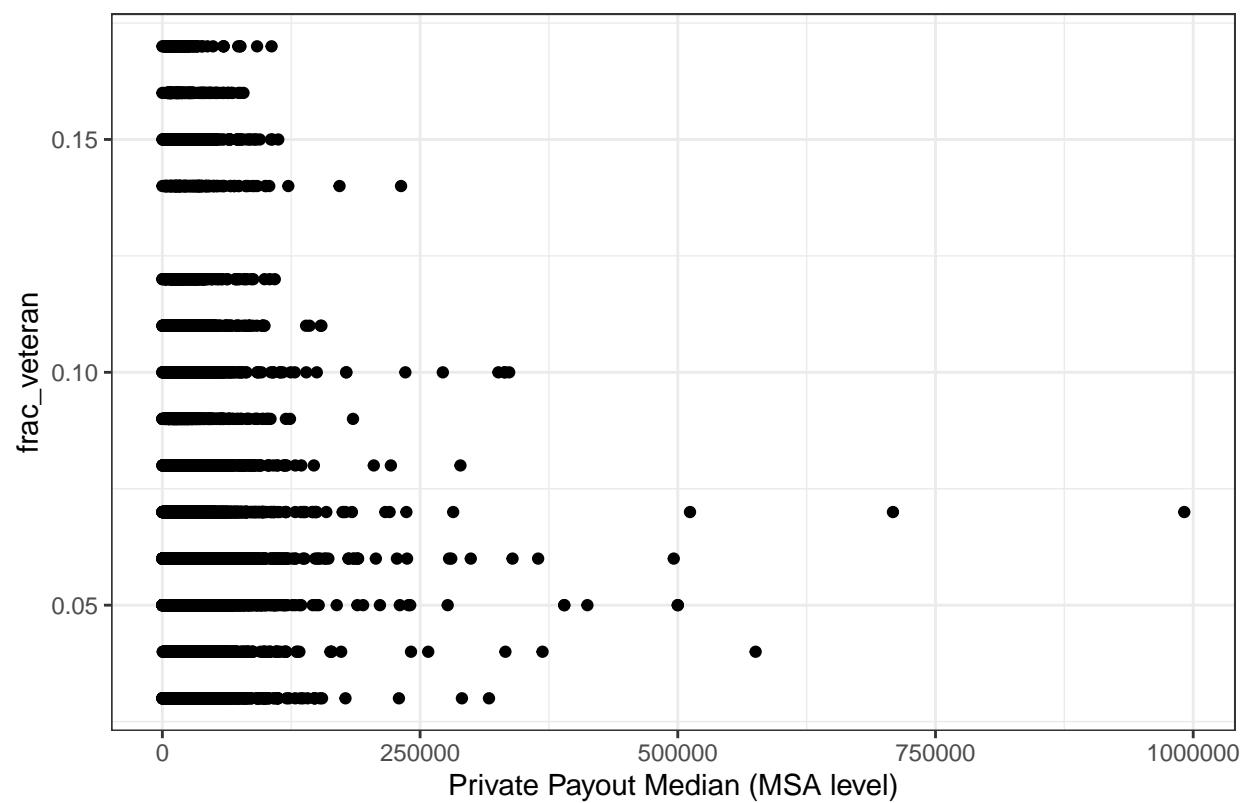
Scatter plot of Private Payout Median (MSA level) Vs frac_college



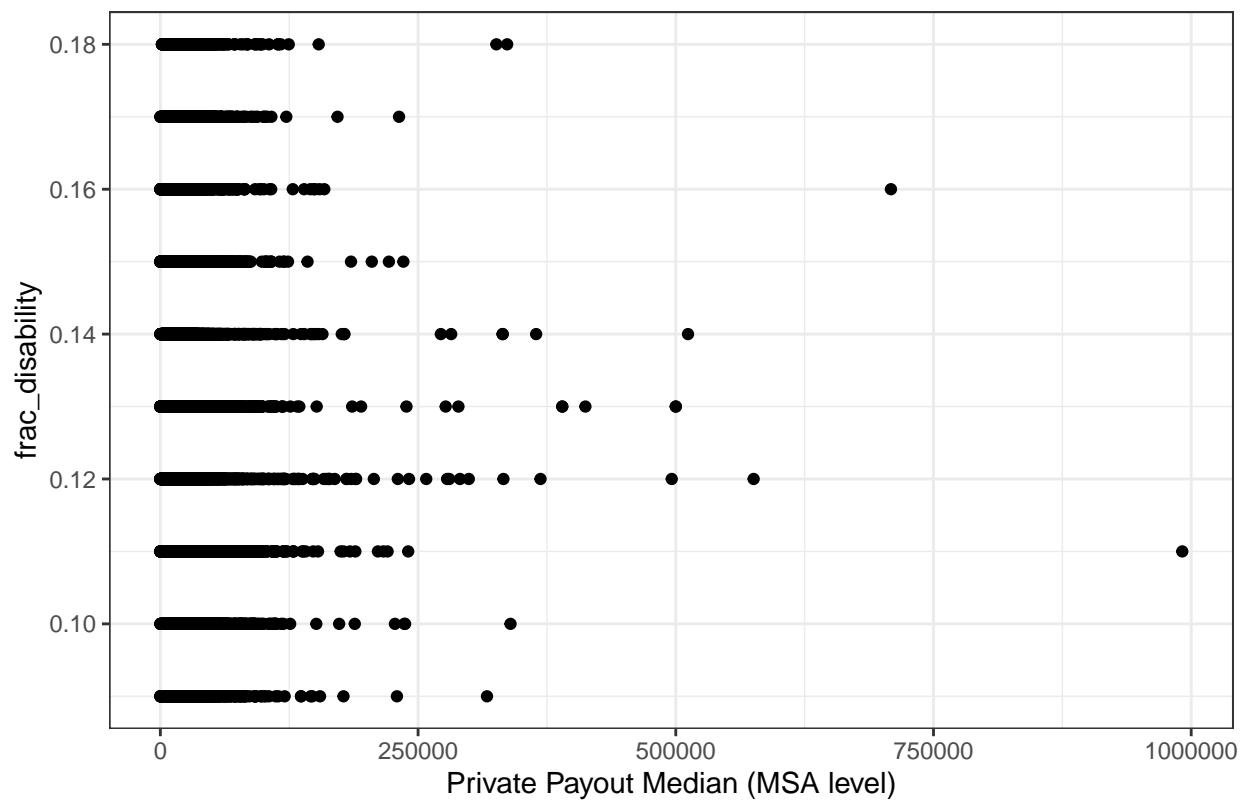
Scatter plot of Private Payout Median (MSA level) Vs frac_educated



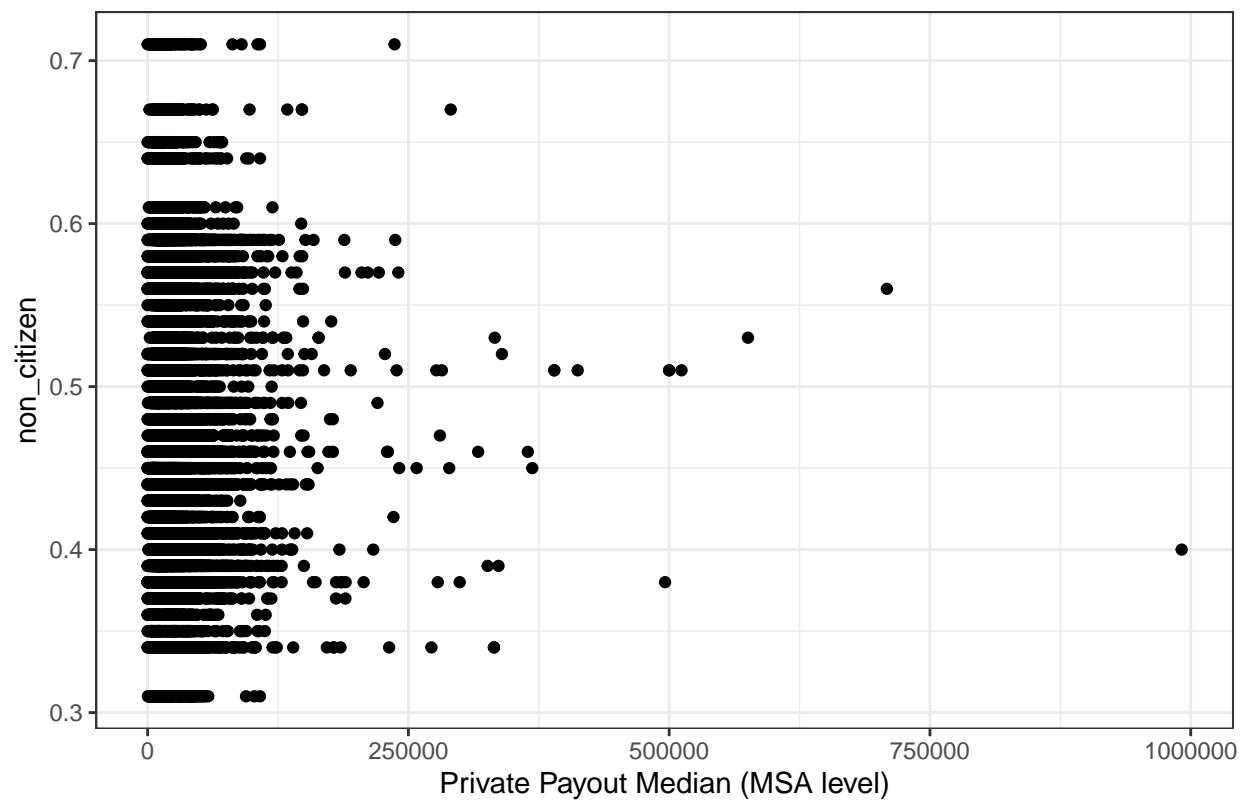
Scatter plot of Private Payout Median (MSA level) Vs frac_veteran



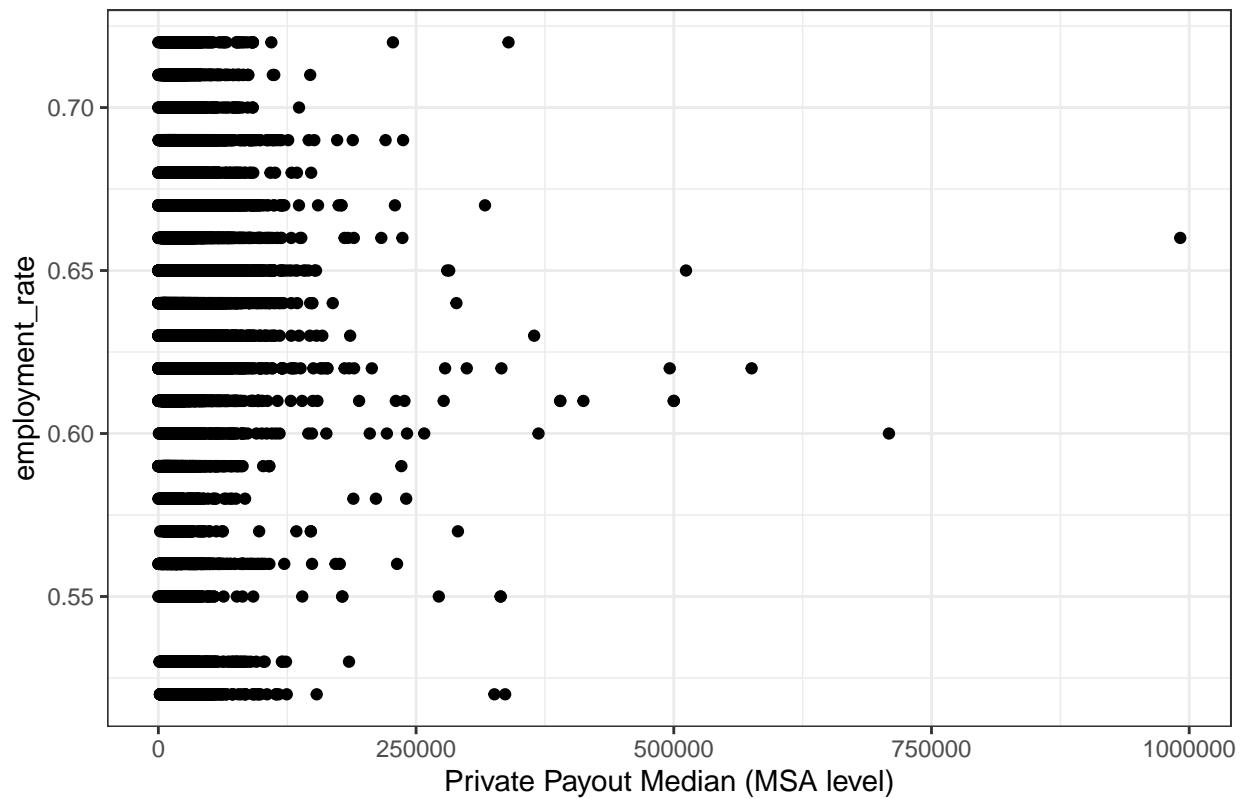
Scatter plot of Private Payout Median (MSA level) Vs frac_disability



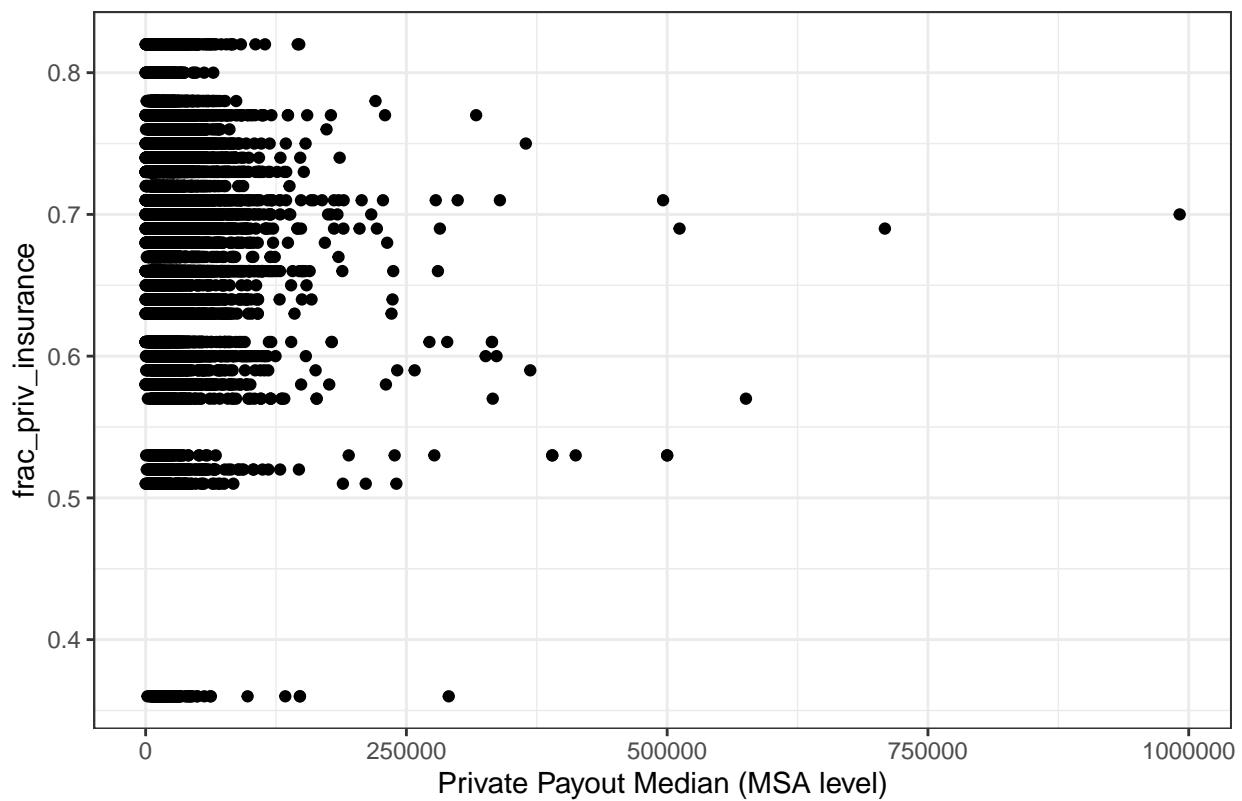
Scatter plot of Private Payout Median (MSA level) Vs non_citizen



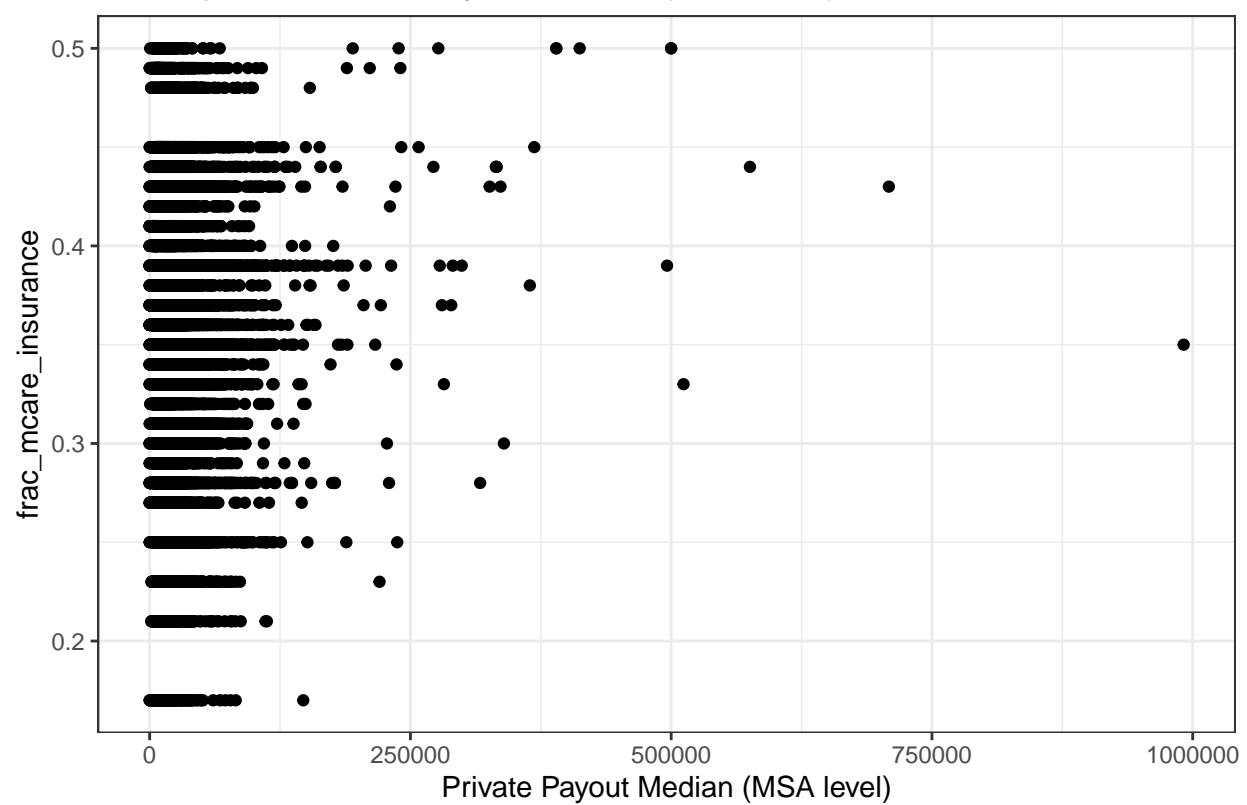
Scatter plot of Private Payout Median (MSA level) Vs employment_rate



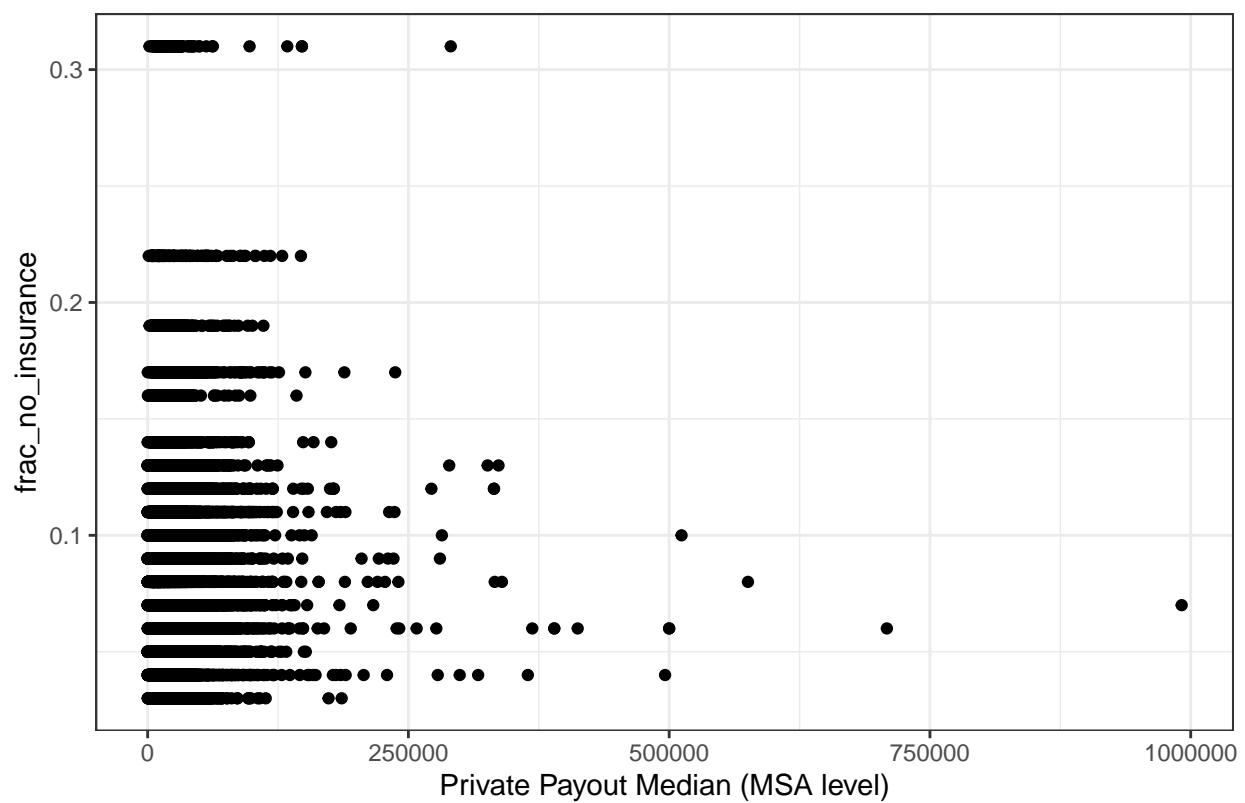
Scatter plot of Private Payout Median (MSA level) Vs frac_priv_insurance



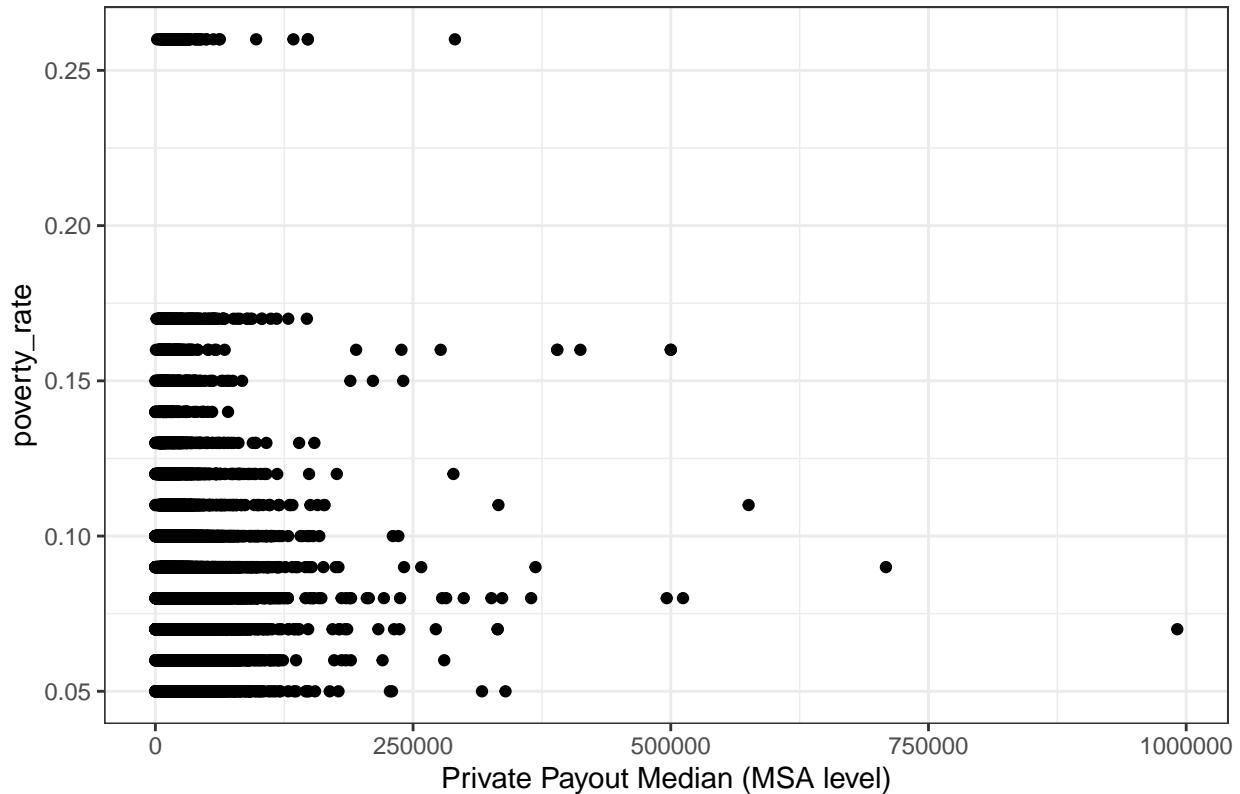
Scatter plot of Private Payout Median (MSA level) Vs frac_mc care_insurance



Scatter plot of Private Payout Median (MSA level) Vs frac_no_insurance



Scatter plot of Private Payout Median (MSA level) Vs poverty_rate



LinReg Coefficients

```
##
## Call:
## lm(formula = priv_pay_median ~ ., data = df %>% select(-c(Urban)))
##
## Residuals:
##      Min       1Q     Median       3Q      Max
## -256856   -1874      30     2100  148260
##
## Coefficients: (134 not defined because of singularities)
##             Estimate Std. Error
## (Intercept) -5.433e+05  4.957e+05
## msa          -2.552e-02  7.240e-02
## year          2.676e+02  2.476e+02
## siteOutpatient -1.429e+03 3.524e+02
## groupant_cerv_fusion  1.320e+03 5.412e+02
## groupant_tls_fusion  3.570e+03 8.098e+02
## groupbariatric    7.658e+02 5.459e+02
## groupbreast_reconstruction -5.015e+02 5.351e+02
## groupbsp         1.111e+03 7.868e+02
## groupbunionectomy -1.927e+02 6.379e+02
## groupcardiac_ablation  3.281e+03 5.939e+02
## groupcardiac_ablation_additional_discrete 3.015e+03 7.384e+02
```

## groupcardiac ablation_linear_focal	3.083e+03	7.462e+02
## groupcardiac_ablaton_anesthesia	6.603e+03	1.793e+03
## groupcardiac_ablaton_ice	4.136e+03	7.195e+02
## groupclavicle fixation	3.404e+02	6.879e+02
## groupcolorect	-5.322e+02	5.478e+02
## groupfemoral shaft fixation	4.900e+02	6.918e+02
## groupfess	5.972e+01	6.592e+02
## grouphepat	-1.409e+04	7.197e+02
## grouphernia	-1.760e+03	5.227e+02
## grouphip_fracture_fixation	1.138e+00	6.191e+02
## grouphystect	-1.790e+02	5.261e+02
## groupintracranial_thromb	7.995e+03	8.739e+02
## groupkidney ablation	5.582e+02	9.234e+02
## grouplaac	2.797e+03	1.121e+03
## grouplap appendectomy	7.091e+01	6.363e+02
## groupliver ablation	1.485e+03	7.663e+02
## grouplung ablation	2.970e+02	2.109e+03
## groupmastectomy	-5.847e+02	5.432e+02
## groupnavigation	1.801e+03	7.761e+02
## grouporthovisc_monovisc	-2.066e+02	1.109e+03
## grouppartial shoulder arthroplasty	1.717e+03	6.610e+02
## groupppka	1.642e+03	5.818e+02
## groupppnn	1.451e+02	8.379e+02
## grouppost_cerv_fusion	7.957e+02	6.763e+02
## grouppost_tls_fusion	2.117e+03	6.340e+02
## groupprostatectomy	8.452e+02	5.438e+02
## groupprox_tibia_fixation	3.474e+02	5.600e+02
## groupproximal humerus	8.527e+02	5.487e+02
## groupradius/ulna internal fixation	4.659e+02	5.308e+02
## grouprevision_tha	1.718e+03	6.744e+02
## grouprevision_tka	3.327e+03	1.369e+03
## grouprobotic_assisted_surgery	-3.093e+02	8.939e+02
## grouprtc_slap_bank	1.514e+02	6.617e+02
## groupseptoplasty	-2.881e+02	6.362e+02
## grouptha	1.846e+03	5.578e+02
## groupthoracic	1.626e+03	6.034e+02
## grouptka	1.374e+03	5.315e+02
## grouptpa	1.252e+03	6.505e+02
## grouptsa	2.114e+03	5.966e+02
## priv_count	8.249e-01	9.845e-01
## priv_pay_mean	9.033e-01	4.063e-03
## priv_pay_iqr	-2.126e-01	4.360e-03
## mcare_los	-3.136e+02	9.015e+01
## mcare_pay_mean	9.120e-02	6.259e-02
## mcare_pay_median	1.959e-02	6.073e-02
## mcare_pay_sd	-7.792e-02	2.354e-02
## CBSA_NAMEAlbany-Schenectady-Troy, NY	5.359e+03	5.491e+03
## CBSA_NAMEAllentown-Bethlehem-Easton, PA-NJ	5.706e+03	4.313e+03
## CBSA_NAMEAtlanta-Sandy Springs-Alpharetta, GA	4.408e+03	2.807e+03
## CBSA_NAMEAugusta-Richmond County, GA-SC	3.077e+03	1.945e+03
## CBSA_NAMEAustin-Round Rock-Georgetown, TX	4.011e+03	2.728e+03
## CBSA_NAMEBakersfield, CA	4.987e+03	3.007e+03
## CBSA_NAMEBaltimore-Columbia-Towson, MD	4.477e+03	3.285e+03
## CBSA_NAMEBirmingham-Hoover, AL	2.068e+03	1.720e+03

## CBSA_NAMEBoston-Cambridge-Newton, MA-NH	4.945e+03	3.816e+03
## CBSA_NAMEBuffalo-Cheektowaga, NY	6.126e+03	6.969e+03
## CBSA_NAMECape Coral-Fort Myers, FL	4.283e+03	2.658e+03
## CBSA_NAMECharlotte-Concord-Gastonia, NC-SC	6.257e+03	2.395e+03
## CBSA_NAMEChattanooga, TN-GA	3.635e+03	1.570e+03
## CBSA_NAMEChicago-Naperville-Elgin, IL-IN-WI	6.356e+03	3.483e+03
## CBSA_NAMECleveland-Elyria, OH	4.201e+03	2.607e+03
## CBSA_NAMEColorado Springs, CO	5.500e+03	2.536e+03
## CBSA_NAMEColumbus, OH	4.556e+03	1.712e+03
## CBSA_NAMEDallas-Fort Worth-Arlington, TX	6.384e+03	2.563e+03
## CBSA_NAMEDeltona-Daytona Beach-Ormond Beach, FL	6.531e+03	3.431e+03
## CBSA_NAMEDenver-Aurora-Lakewood, CO	3.938e+03	2.047e+03
## CBSA_NAMEDes Moines-West Des Moines, IA	3.259e+03	1.990e+03
## CBSA_NAMEDetroit-Warren-Dearborn, MI	4.178e+03	2.590e+03
## CBSA_NAMEDurham-Chapel Hill, NC	3.217e+03	1.440e+03
## CBSA_NAMEEl Paso, TX	6.033e+03	2.050e+03
## CBSA_NAMEFayetteville-Springdale-Rogers, AR	5.548e+03	3.467e+03
## CBSA_NAMEFayetteville, NC	3.880e+03	2.562e+03
## CBSA_NAMEFresno, CA	6.970e+03	2.990e+03
## CBSA_NAMEGrand Rapids-Kentwood, MI	6.204e+03	3.301e+03
## CBSA_NAMEGreensboro-High Point, NC	6.209e+03	1.704e+03
## CBSA_NAMEHarrisburg-Carlisle, PA	2.697e+03	1.783e+03
## CBSA_NAMEHouston-The Woodlands-Sugar Land, TX	4.878e+03	3.279e+03
## CBSA_NAMEHuntsville, AL	3.729e+03	2.392e+03
## CBSA_NAMEJackson, MS	3.259e+03	2.250e+03
## CBSA_NAMEJacksonville, FL	4.119e+03	1.388e+03
## CBSA_NAMEKansas City, MO-KS	4.428e+03	2.740e+03
## CBSA_NAMEKnoxville, TN	4.587e+03	2.779e+03
## CBSA_NAMELakeland-Winter Haven, FL	2.551e+03	3.957e+03
## CBSA_NAMELancaster, PA	7.406e+03	2.123e+03
## CBSA_NAMELansing-East Lansing, MI	3.296e+03	2.537e+03
## CBSA_NAMELas Vegas-Henderson-Paradise, NV	3.259e+03	1.869e+03
## CBSA_NAMELittle Rock-North Little Rock-Conway, AR	2.620e+03	1.962e+03
## CBSA_NAMEMadison, WI	6.790e+03	1.847e+03
## CBSA_NAMEMcAllen-Edinburg-Mission, TX	3.096e+03	2.668e+03
## CBSA_NAMEMemphis, TN-MS-AR	3.988e+03	2.405e+03
## CBSA_NAMEMilwaukee-Waukesha, WI	5.550e+03	2.412e+03
## CBSA_NAMEMinneapolis-St. Paul-Bloomington, MN-WI	4.357e+03	3.141e+03
## CBSA_NAMEModesto, CA	7.522e+03	3.790e+03
## CBSA_NAMEMyrtle Beach-Conway-North Myrtle Beach, SC-NC	7.413e+03	3.303e+03
## CBSA_NAMENashville-Davidson--Murfreesboro--Franklin, TN	5.786e+03	2.359e+03
## CBSA_NAMENew York-Newark-Jersey City, NY-NJ-PA	7.222e+03	5.683e+03
## CBSA_NAMEOgden-Clearfield, UT	6.611e+03	2.348e+03
## CBSA_NAMEOklahoma City, OK	4.838e+03	3.352e+03
## CBSA_NAMEOmaha-Council Bluffs, NE-IA	5.731e+03	2.961e+03
## CBSA_NAMEOrlando-Kissimmee-Sanford, FL	4.802e+03	1.944e+03
## CBSA_NAMEOxnard-Thousand Oaks-Ventura, CA	6.701e+03	3.091e+03
## CBSA_NAMEPalm Bay-Melbourne-Titusville, FL	7.292e+03	2.309e+03
## CBSA_NAMEPensacola-Ferry Pass-Brent, FL	4.392e+03	4.122e+03
## CBSA_NAMEPhiladelphia-Camden-Wilmington, PA-NJ-DE-MD	3.870e+03	2.706e+03
## CBSA_NAMEPhoenix-Mesa-Chandler, AZ	5.042e+03	2.690e+03
## CBSA_NAMEPittsburgh, PA	5.998e+03	2.740e+03
## CBSA_NAMEPort St. Lucie, FL	6.304e+03	3.603e+03
## CBSA_NAMEPortland-Vancouver-Hillsboro, OR-WA	5.490e+03	2.350e+03

## CBSA_NAMEProvidence-Warwick, RI-MA	4.822e+03	1.885e+03
## CBSA_NAMEProvo-Orem, UT	6.140e+03	2.162e+03
## CBSA_NAMERaleigh-Cary, NC	5.471e+03	2.106e+03
## CBSA_NAMERichmond, VA	3.684e+03	2.979e+03
## CBSA_NAMERiverside-San Bernardino-Ontario, CA	3.468e+03	3.163e+03
## CBSA_NAMERochester, NY	4.161e+03	6.291e+03
## CBSA NAMESacramento-Roseville-Folsom, CA	4.557e+03	2.127e+03
## CBSA NAMESalt Lake City, UT	5.370e+03	2.186e+03
## CBSA NAMESan Antonio-New Braunfels, TX	4.942e+03	2.442e+03
## CBSA NAMESan Diego-Chula Vista-Carlsbad, CA	6.488e+03	3.241e+03
## CBSA NAMESan Jose-Sunnyvale-Santa Clara, CA	7.187e+03	6.152e+03
## CBSA NAMESanta Rosa-Petaluma, CA	9.067e+03	4.536e+03
## CBSA NAMESpokane-Spokane Valley, WA	6.526e+03	2.767e+03
## CBSA NAMESpringfield, MA	5.888e+03	3.404e+03
## CBSA NAMESt. Louis, MO-IL	3.635e+03	3.297e+03
## CBSA NAMEStockton, CA	7.847e+03	3.818e+03
## CBSA NAMESyracuse, NY	7.568e+03	6.708e+03
## CBSA_NAMETampa-St. Petersburg-Clearwater, FL	6.414e+03	2.193e+03
## CBSA_NAMETOledo, OH	9.854e+02	3.668e+03
## CBSA_NAMETucson, AZ	5.089e+03	2.775e+03
## CBSA_NAMETulsa, OK	6.458e+03	3.425e+03
## CBSA_NAMEUrban Honolulu, HI	6.125e+03	2.811e+03
## CBSA_NAMEVirginia Beach-Norfolk-Newport News, VA-NC	3.787e+03	3.223e+03
## CBSA_NAMEWashington-Arlington-Alexandria, DC-VA-MD-WV	5.267e+03	3.257e+03
## CBSA_NAMEWichita, KS	3.421e+03	3.629e+03
## CBSA_NAMEWinston-Salem, NC	5.825e+03	3.183e+03
## CBSA_NAMEYoungstown-Warren-Boardman, OH-PA	4.058e+03	2.991e+03
## StateArizona	NA	NA
## StateArkansas	NA	NA
## StateCalifornia	NA	NA
## StateColorado	NA	NA
## StateDelaware	2.820e+03	2.292e+03
## StateFlorida	NA	NA
## StateGeorgia	NA	NA
## StateHawaii	NA	NA
## StateIllinois	NA	NA
## StateIowa	NA	NA
## StateKansas	NA	NA
## StateMaryland	NA	NA
## StateMassachusetts	NA	NA
## StateMichigan	NA	NA
## StateMinnesota	NA	NA
## StateMississippi	NA	NA
## StateNevada	NA	NA
## StateNew Jersey	-1.640e+03	3.320e+03
## StateNew York	-1.030e+03	4.393e+03
## StateNorth Carolina	NA	NA
## StateOhio	NA	NA
## StateOklahoma	NA	NA
## StateOregon	NA	NA
## StatePennsylvania	NA	NA
## StateRhode Island	NA	NA
## StateTennessee	NA	NA
## StateTexas	NA	NA

## StateUtah	NA	NA
## StateVirginia	NA	NA
## StateWashington	NA	NA
## StateWisconsin	NA	NA
## FIPS.State.Code	NA	NA
## lon	NA	NA
## lat	NA	NA
## Hospitals	-6.752e+00	1.180e+01
## PctTeaching	1.695e+03	3.859e+03
## PctLargeHospital	6.428e+03	1.417e+04
## PctPrivate	1.288e+03	5.271e+03
## income_pc	-1.826e-02	8.767e-02
## num_races	NA	NA
## household_size	NA	NA
## frac_married	NA	NA
## frac_school	NA	NA
## frac_college	NA	NA
## frac_educated	NA	NA
## annual_births1,171,188	NA	NA
## annual_births1,196,562	NA	NA
## annual_births1,465,221	NA	NA
## annual_births1,573,561	NA	NA
## annual_births1,575,871	NA	NA
## annual_births1,808,878	NA	NA
## annual_births1,974,825	NA	NA
## annual_births105,272	NA	NA
## annual_births110,694	NA	NA
## annual_births112,676	NA	NA
## annual_births117,812	NA	NA
## annual_births120,289	NA	NA
## annual_births121,378	NA	NA
## annual_births130,490	NA	NA
## annual_births131,186	NA	NA
## annual_births131,391	NA	NA
## annual_births131,589	NA	NA
## annual_births131,739	NA	NA
## annual_births132,786	NA	NA
## annual_births137,062	NA	NA
## annual_births141,373	NA	NA
## annual_births142,828	NA	NA
## annual_births144,792	NA	NA
## annual_births147,478	NA	NA
## annual_births147,653	NA	NA
## annual_births149,306	NA	NA
## annual_births151,301	NA	NA
## annual_births154,324	NA	NA
## annual_births160,665	NA	NA
## annual_births166,768	NA	NA
## annual_births170,335	NA	NA
## annual_births170,379	NA	NA
## annual_births171,447	NA	NA
## annual_births173,385	NA	NA
## annual_births175,372	NA	NA
## annual_births183,176	NA	NA

## annual_births183,294	NA	NA
## annual_births187,895	NA	NA
## annual_births188,414	NA	NA
## annual_births189,110	NA	NA
## annual_births191,596	NA	NA
## annual_births192,533	NA	NA
## annual_births2,284,402	NA	NA
## annual_births204,937	NA	NA
## annual_births208,912	NA	NA
## annual_births211,861	NA	NA
## annual_births217,085	NA	NA
## annual_births218,483	NA	NA
## annual_births221,002	NA	NA
## annual_births230,593	NA	NA
## annual_births236,269	NA	NA
## annual_births239,465	NA	NA
## annual_births244,974	NA	NA
## annual_births247,146	NA	NA
## annual_births260,321	NA	NA
## annual_births260,535	NA	NA
## annual_births264,679	NA	NA
## annual_births315,279	NA	NA
## annual_births325,478	NA	NA
## annual_births327,202	NA	NA
## annual_births355,303	NA	NA
## annual_births364,582	NA	NA
## annual_births369,122	NA	NA
## annual_births380,009	NA	NA
## annual_births388,957	NA	NA
## annual_births4,668,590	NA	NA
## annual_births434,583	NA	NA
## annual_births459,168	NA	NA
## annual_births469,632	NA	NA
## annual_births506,130	NA	NA
## annual_births506,691	NA	NA
## annual_births517,202	NA	NA
## annual_births530,168	NA	NA
## annual_births551,521	NA	NA
## annual_births576,823	NA	NA
## annual_births617,728	NA	NA
## annual_births624,985	NA	NA
## annual_births642,539	NA	NA
## annual_births643,444	NA	NA
## annual_births670,108	NA	NA
## annual_births672,232	NA	NA
## annual_births673,803	NA	NA
## annual_births720,482	NA	NA
## annual_births752,085	NA	NA
## annual_births797,411	NA	NA
## annual_births865,454	NA	NA
## annual_births92,503	NA	NA
## annual_births96,690	NA	NA
## annual_births992,227	NA	NA
## frac_veteran	NA	NA

	NA	NA
## frac_disability	NA	NA
## non_citizen	NA	NA
## employment_rate	NA	NA
## frac_priv_insurance	NA	NA
## frac_mcare_insurance	NA	NA
## frac_no_insurance	NA	NA
## poverty_rate	NA	NA
##	t value Pr(> t)	
## (Intercept)	-1.096 0.273101	
## msa	-0.353 0.724460	
## year	1.081 0.279784	
## siteOutpatient	-4.055 5.04e-05 ***	
## groupant_cerv_fusion	2.439 0.014734 *	
## groupant_tls_fusion	4.409 1.05e-05 ***	
## groupbariatric	1.403 0.160685	
## groupbreast_reconstruction	-0.937 0.348658	
## groupbsp	1.412 0.157870	
## groupbunionectomy	-0.302 0.762638	
## groupcardiac_ablation	5.524 3.37e-08 ***	
## groupcardiac_ablation_additional_discrete	4.084 4.45e-05 ***	
## groupcardiac_ablation_linear_focal	4.132 3.62e-05 ***	
## groupcardiac_ablation_anesthesia	3.683 0.000232 ***	
## groupcardiac_ablation_ice	5.748 9.18e-09 ***	
## groupclavicle_fixation	0.495 0.620694	
## groupcolorect	-0.971 0.331316	
## groupfemoral_shaft_fixation	0.708 0.478784	
## groupfess	0.091 0.927818	
## grouphepat	-19.576 < 2e-16 ***	
## grouphernia	-3.367 0.000761 ***	
## grouphip_fracture_fixation	0.002 0.998533	
## grouphysterect	-0.340 0.733631	
## groupintracranial_thromb	9.148 < 2e-16 ***	
## groupkidney_ablation	0.604 0.545525	
## grouplaac	2.496 0.012584 *	
## grouplap_appendectomy	0.111 0.911265	
## groupliver_ablation	1.937 0.052737 .	
## grouplung_ablation	0.141 0.888030	
## groupmastectomy	-1.076 0.281746	
## groupnavigation	2.321 0.020308 *	
## grouporthovisc_monovisc	-0.186 0.852298	
## grouppartial_shoulder_arthroplasty	2.597 0.009414 **	
## groupppka	2.823 0.004766 **	
## grouppnn	0.173 0.862520	
## grouppost_cerv_fusion	1.177 0.239342	
## grouppost_tls_fusion	3.340 0.000841 ***	
## groupprostatectomy	1.554 0.120181	
## groupprox_tibia_fixation	0.620 0.535016	
## groupproximal_humerus	1.554 0.120202	
## groupradius/ulna_internal_fixation	0.878 0.380112	
## grouprevision_tha	2.547 0.010871 *	
## grouprevision_tka	2.430 0.015093 *	
## grouprobotic_assisted_surgery	-0.346 0.729357	
## grouprtc_slap_bank	0.229 0.818971	
## groupseptoplasty	-0.453 0.650708	

## grouptha	3.309	0.000937	***
## groupthoracic	2.695	0.007046	**
## groupcka	2.585	0.009737	**
## groupctpa	1.924	0.054390	.
## groupctsa	3.543	0.000396	***
## priv_count	0.838	0.402090	
## priv_pay_mean	222.320	< 2e-16	***
## priv_pay_iqr	-48.757	< 2e-16	***
## mcare_los	-3.479	0.000505	***
## mcare_pay_mean	1.457	0.145127	
## mcare_pay_median	0.322	0.747086	
## mcare_pay_sd	-3.311	0.000933	***
## CBSA_NAMEAlbany-Schenectady-Troy, NY	0.976	0.329099	
## CBSA_NAMEAllentown-Bethlehem-Easton, PA-NJ	1.323	0.185848	
## CBSA_NAMEAtlanta-Sandy Springs-Alpharetta, GA	1.571	0.116264	
## CBSA_NAMEAugusta-Richmond County, GA-SC	1.582	0.113625	
## CBSA_NAMEAustin-Round Rock-Georgetown, TX	1.470	0.141472	
## CBSA_NAMEBakersfield, CA	1.658	0.097263	.
## CBSA_NAMEBaltimore-Columbia-Towson, MD	1.363	0.172876	
## CBSA_NAMEBirmingham-Hoover, AL	1.202	0.229227	
## CBSA_NAMEBoston-Cambridge-Newton, MA-NH	1.296	0.195070	
## CBSA_NAMEBuffalo-Cheektowaga, NY	0.879	0.379402	
## CBSA_NAMECape Coral-Fort Myers, FL	1.611	0.107124	
## CBSA_NAMECharlotte-Concord-Gastonia, NC-SC	2.612	0.009007	**
## CBSA_NAMEChattanooga, TN-GA	2.315	0.020623	*
## CBSA_NAMEChicago-Naperville-Elgin, IL-IN-WI	1.825	0.068007	.
## CBSA_NAMECleveland-Elyria, OH	1.611	0.107134	
## CBSA_NAMEColorado Springs, CO	2.169	0.030115	*
## CBSA_NAMEColumbus, OH	2.661	0.007797	**
## CBSA_NAMEDallas-Fort Worth-Arlington, TX	2.491	0.012747	*
## CBSA_NAMEDeltona-Daytona Beach-Ormond Beach, FL	1.903	0.057015	.
## CBSA_NAMEDenver-Aurora-Lakewood, CO	1.924	0.054362	.
## CBSA_NAMEDes Moines-West Des Moines, IA	1.638	0.101490	
## CBSA_NAMEDetroit-Warren-Dearborn, MI	1.613	0.106688	
## CBSA_NAMEDurham-Chapel Hill, NC	2.234	0.025492	*
## CBSA_NAMEEl Paso, TX	2.943	0.003253	**
## CBSA_NAMEFayetteville-Springdale-Rogers, AR	1.600	0.109596	
## CBSA_NAMEFayetteville, NC	1.515	0.129913	
## CBSA_NAMEFresno, CA	2.331	0.019755	*
## CBSA_NAMEGrand Rapids-Kentwood, MI	1.880	0.060192	.
## CBSA_NAMEGreensboro-High Point, NC	3.644	0.000269	***
## CBSA_NAMEHarrisburg-Carlisle, PA	1.513	0.130300	
## CBSA_NAMEHouston-The Woodlands-Sugar Land, TX	1.488	0.136819	
## CBSA_NAMEHuntsville, AL	1.559	0.119011	
## CBSA_NAMEJackson, MS	1.448	0.147516	
## CBSA_NAMEJacksonville, FL	2.967	0.003016	**
## CBSA_NAMEKansas City, MO-KS	1.616	0.106052	
## CBSA_NAMEKnoxville, TN	1.651	0.098847	.
## CBSA_NAMELakeland-Winter Haven, FL	0.645	0.519063	
## CBSA_NAMELancaster, PA	3.489	0.000486	***
## CBSA_NAMELansing-East Lansing, MI	1.299	0.193855	
## CBSA_NAMELas Vegas-Henderson-Paradise, NV	1.743	0.081310	.
## CBSA_NAMELittle Rock-North Little Rock-Conway, AR	1.335	0.181769	
## CBSA_NAMEMadison, WI	3.675	0.000238	***

## CBSA_NAMEMcAllen-Edinburg-Mission, TX	1.160	0.245925
## CBSA_NAMEMemphis, TN-MS-AR	1.658	0.097268 .
## CBSA_NAMEMilwaukee-Waukesha, WI	2.301	0.021422 *
## CBSA_NAMEMinneapolis-St. Paul-Bloomington, MN-WI	1.387	0.165397
## CBSA_NAMEModesto, CA	1.985	0.047200 *
## CBSA_NAMEMyrtle Beach-Conway-North Myrtle Beach, SC-NC	2.244	0.024854 *
## CBSA_NAMENashville-Davidson--Murfreesboro--Franklin, TN	2.452	0.014211 *
## CBSA_NAMENew York-Newark-Jersey City, NY-NJ-PA	1.271	0.203800
## CBSA_NAMEOgden-Clearfield, UT	2.816	0.004865 **
## CBSA_NAMEOklahoma City, OK	1.443	0.148917
## CBSA_NAMEOmaha-Council Bluffs, NE-IA	1.935	0.052949 .
## CBSA_NAMEOrlando-Kissimmee-Sanford, FL	2.470	0.013528 *
## CBSA_NAMEOxnard-Thousand Oaks-Ventura, CA	2.168	0.030187 *
## CBSA_NAMEPalm Bay-Melbourne-Titusville, FL	3.159	0.001588 **
## CBSA_NAMEPensacola-Ferry Pass-Brent, FL	1.065	0.286706
## CBSA_NAMEPhiladelphia-Camden-Wilmington, PA-NJ-DE-MD	1.430	0.152652
## CBSA_NAMEPhoenix-Mesa-Chandler, AZ	1.874	0.060928 .
## CBSA_NAMEPittsburgh, PA	2.189	0.028586 *
## CBSA_NAMEPort St. Lucie, FL	1.750	0.080174 .
## CBSA_NAMEPortland-Vancouver-Hillsboro, OR-WA	2.336	0.019499 *
## CBSA_NAMEProvidence-Warwick, RI-MA	2.558	0.010547 *
## CBSA_NAMEProvo-Orem, UT	2.840	0.004520 **
## CBSA_NAMERaleigh-Cary, NC	2.597	0.009401 **
## CBSA_NAMERichmond, VA	1.236	0.216353
## CBSA_NAMERiverside-San Bernardino-Ontario, CA	1.096	0.273003
## CBSA_NAMERochester, NY	0.661	0.508304
## CBSA NAMESacramento-Roseville-Folsom, CA	2.143	0.032129 *
## CBSA NAMESalt Lake City, UT	2.457	0.014019 *
## CBSA NAMESan Antonio-New Braunfels, TX	2.024	0.043022 *
## CBSA NAMESan Diego-Chula Vista-Carlsbad, CA	2.002	0.045324 *
## CBSA NAMESan Jose-Sunnyvale-Santa Clara, CA	1.168	0.242733
## CBSA NAMESanta Rosa-Petaluma, CA	1.999	0.045619 *
## CBSA NAMESpokane-Spokane Valley, WA	2.358	0.018374 *
## CBSA NAMESpringfield, MA	1.730	0.083687 .
## CBSA NAMESt. Louis, MO-IL	1.103	0.270199
## CBSA NAMEStockton, CA	2.055	0.039862 *
## CBSA NAMESyracuse, NY	1.128	0.259218
## CBSA_NAMETampa-St. Petersburg-Clearwater, FL	2.925	0.003455 **
## CBSA_NAMETOledo, OH	0.269	0.788206
## CBSA_NAMETucson, AZ	1.834	0.066667 .
## CBSA_NAMETulsa, OK	1.886	0.059344 .
## CBSA_NAMEUrban Honolulu, HI	2.179	0.029371 *
## CBSA_NAMEVirginia Beach-Norfolk-Newport News, VA-NC	1.175	0.239934
## CBSA_NAMEWashington-Arlington-Alexandria, DC-VA-MD-WV	1.617	0.105826
## CBSA_NAMEWichita, KS	0.943	0.345882
## CBSA_NAMEWinston-Salem, NC	1.830	0.067222 .
## CBSA_NAMEMYoungstown-Warren-Boardman, OH-PA	1.357	0.174919
## StateArizona	NA	NA
## StateArkansas	NA	NA
## StateCalifornia	NA	NA
## StateColorado	NA	NA
## StateDelaware	1.230	0.218581
## StateFlorida	NA	NA
## StateGeorgia	NA	NA

## StateHawaii	NA	NA
## StateIllinois	NA	NA
## StateIowa	NA	NA
## StateKansas	NA	NA
## StateMaryland	NA	NA
## StateMassachusetts	NA	NA
## StateMichigan	NA	NA
## StateMinnesota	NA	NA
## StateMississippi	NA	NA
## StateNevada	NA	NA
## StateNew Jersey	-0.494	0.621379
## StateNew York	-0.235	0.814556
## StateNorth Carolina	NA	NA
## StateOhio	NA	NA
## StateOklahoma	NA	NA
## StateOregon	NA	NA
## StatePennsylvania	NA	NA
## StateRhode Island	NA	NA
## StateTennessee	NA	NA
## StateTexas	NA	NA
## StateUtah	NA	NA
## StateVirginia	NA	NA
## StateWashington	NA	NA
## StateWisconsin	NA	NA
## FIPS.State.Code	NA	NA
## lon	NA	NA
## lat	NA	NA
## Hospitals	-0.572	0.567274
## PctTeaching	0.439	0.660540
## PctLargeHospital	0.454	0.649978
## PctPrivate	0.244	0.806879
## income_pc	-0.208	0.834980
## num_races	NA	NA
## household_size	NA	NA
## frac_married	NA	NA
## frac_school	NA	NA
## frac_college	NA	NA
## frac_educated	NA	NA
## annual_births1,171,188	NA	NA
## annual_births1,196,562	NA	NA
## annual_births1,465,221	NA	NA
## annual_births1,573,561	NA	NA
## annual_births1,575,871	NA	NA
## annual_births1,808,878	NA	NA
## annual_births1,974,825	NA	NA
## annual_births105,272	NA	NA
## annual_births110,694	NA	NA
## annual_births112,676	NA	NA
## annual_births117,812	NA	NA
## annual_births120,289	NA	NA
## annual_births121,378	NA	NA
## annual_births130,490	NA	NA
## annual_births131,186	NA	NA
## annual_births131,391	NA	NA

## annual_births1	31,589	NA	NA
## annual_births1	31,739	NA	NA
## annual_births1	32,786	NA	NA
## annual_births1	37,062	NA	NA
## annual_births1	41,373	NA	NA
## annual_births1	42,828	NA	NA
## annual_births1	44,792	NA	NA
## annual_births1	47,478	NA	NA
## annual_births1	47,653	NA	NA
## annual_births1	49,306	NA	NA
## annual_births1	51,301	NA	NA
## annual_births1	54,324	NA	NA
## annual_births1	60,665	NA	NA
## annual_births1	66,768	NA	NA
## annual_births1	70,335	NA	NA
## annual_births1	70,379	NA	NA
## annual_births1	71,447	NA	NA
## annual_births1	73,385	NA	NA
## annual_births1	75,372	NA	NA
## annual_births1	83,176	NA	NA
## annual_births1	83,294	NA	NA
## annual_births1	87,895	NA	NA
## annual_births1	88,414	NA	NA
## annual_births1	89,110	NA	NA
## annual_births1	91,596	NA	NA
## annual_births1	92,533	NA	NA
## annual_births1	2,284,402	NA	NA
## annual_births1	204,937	NA	NA
## annual_births1	208,912	NA	NA
## annual_births1	211,861	NA	NA
## annual_births1	217,085	NA	NA
## annual_births1	218,483	NA	NA
## annual_births1	221,002	NA	NA
## annual_births1	230,593	NA	NA
## annual_births1	236,269	NA	NA
## annual_births1	239,465	NA	NA
## annual_births1	244,974	NA	NA
## annual_births1	247,146	NA	NA
## annual_births1	260,321	NA	NA
## annual_births1	260,535	NA	NA
## annual_births1	264,679	NA	NA
## annual_births1	315,279	NA	NA
## annual_births1	325,478	NA	NA
## annual_births1	327,202	NA	NA
## annual_births1	355,303	NA	NA
## annual_births1	364,582	NA	NA
## annual_births1	369,122	NA	NA
## annual_births1	380,009	NA	NA
## annual_births1	388,957	NA	NA
## annual_births1	4,668,590	NA	NA
## annual_births1	434,583	NA	NA
## annual_births1	459,168	NA	NA
## annual_births1	469,632	NA	NA
## annual_births1	506,130	NA	NA

```

## annual_births506,691 NA NA
## annual_births517,202 NA NA
## annual_births530,168 NA NA
## annual_births551,521 NA NA
## annual_births576,823 NA NA
## annual_births617,728 NA NA
## annual_births624,985 NA NA
## annual_births642,539 NA NA
## annual_births643,444 NA NA
## annual_births670,108 NA NA
## annual_births672,232 NA NA
## annual_births673,803 NA NA
## annual_births720,482 NA NA
## annual_births752,085 NA NA
## annual_births797,411 NA NA
## annual_births865,454 NA NA
## annual_births92,503 NA NA
## annual_births96,690 NA NA
## annual_births992,227 NA NA
## frac_veteran NA NA
## frac_disability NA NA
## non_citizen NA NA
## employment_rate NA NA
## frac_priv_insurance NA NA
## frac_mcare_insurance NA NA
## frac_no_insurance NA NA
## poverty_rate NA NA
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 8753 on 15306 degrees of freedom
##   (30786 observations deleted due to missingness)
## Multiple R-squared:  0.8871, Adjusted R-squared:  0.8859
## F-statistic: 780.8 on 154 and 15306 DF, p-value: < 2.2e-16

##
## Call:
## lm(formula = priv_pay_median ~ ., data = data_)
##
## Residuals:
##    Min     1Q Median     3Q    Max 
## -34614 -14316  -5456   6791  960535 
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)    
## (Intercept) 1.291e+04  3.677e+04   0.351  0.725602  
## income_pc   1.027e-01  2.675e-02   3.841  0.000123 *** 
## num_races   1.011e+03  5.162e+02   1.958  0.050226 .    
## household_size 6.822e+03  1.760e+03   3.875  0.000107 *** 
## frac_married -3.263e+03  1.196e+04  -0.273  0.784974  
## frac_school  5.024e+04  2.385e+04   2.106  0.035189 *   
## frac_college 5.654e+04  2.243e+04   2.521  0.011716 *   
## frac_educated 3.681e+03  1.373e+04   0.268  0.788578  
## frac_veteran  2.587e+03  1.169e+04   0.221  0.824860 

```

```
## frac_disability      -5.956e+04  2.268e+04  -2.627  0.008626 **  
## non_citizen         -8.708e+03  3.379e+03  -2.577  0.009979 **  
## employment_rate     -1.881e+04  1.103e+04  -1.706  0.088089 .  
## frac_priv_insurance -5.117e+04  1.647e+04  -3.107  0.001893 **  
## frac_mcare_insurance 3.456e+03  1.705e+04   0.203  0.839414  
## frac_no_insurance    8.373e+03  2.071e+04   0.404  0.686054  
## poverty_rate        -1.051e+05  1.574e+04  -6.679  2.48e-11 ***  
## ---  
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1  
##  
## Residual standard error: 26050 on 18988 degrees of freedom  
##   (27243 observations deleted due to missingness)  
## Multiple R-squared:  0.01923,   Adjusted R-squared:  0.01846  
## F-statistic: 24.83 on 15 and 18988 DF,  p-value: < 2.2e-16
```