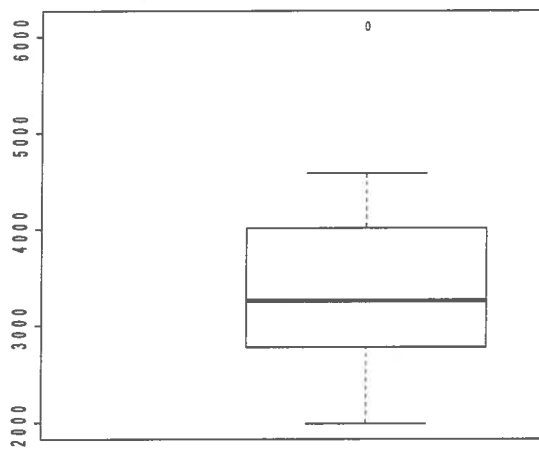
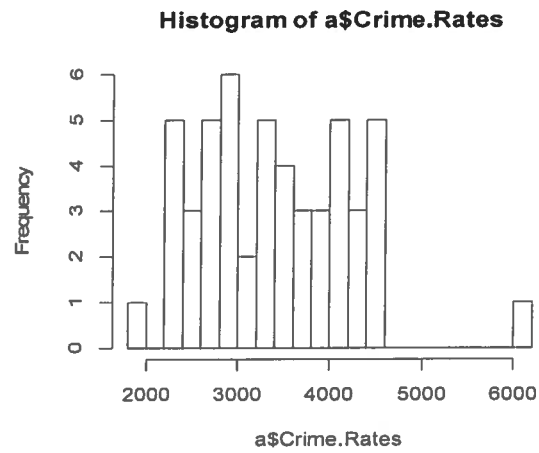


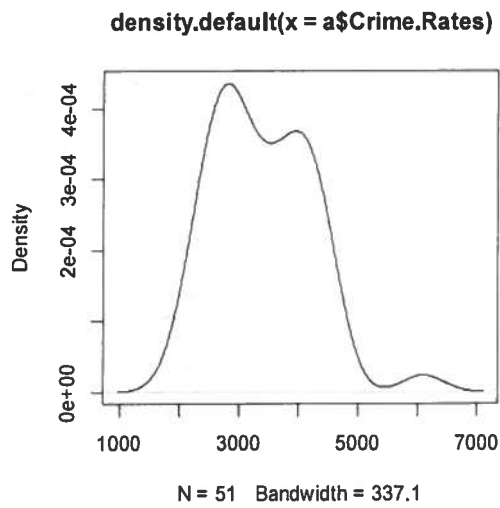
Figure 1 Dot plot of State Crime Rates



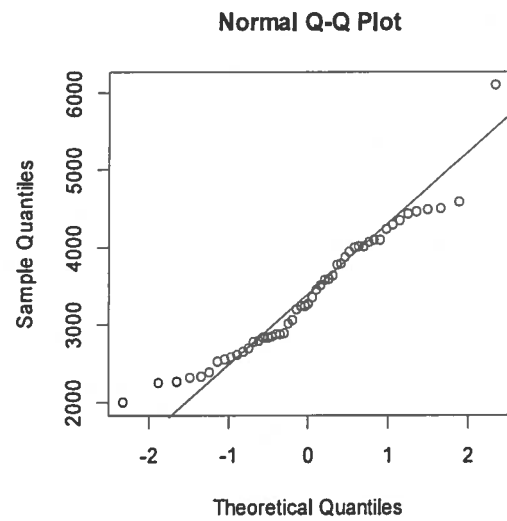
A



B

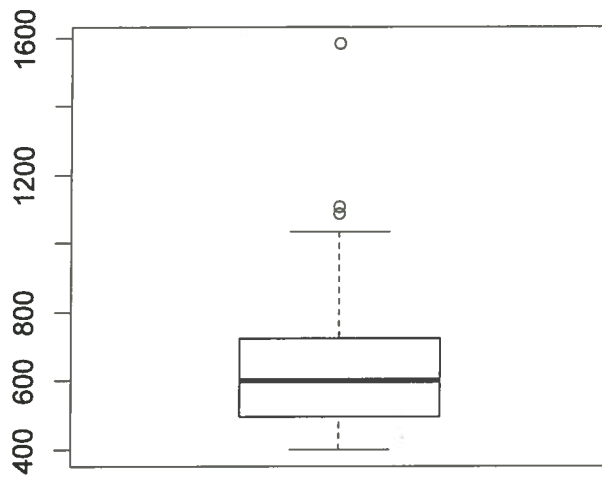


C

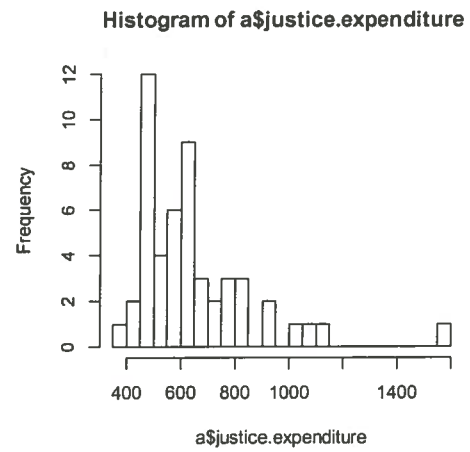


D

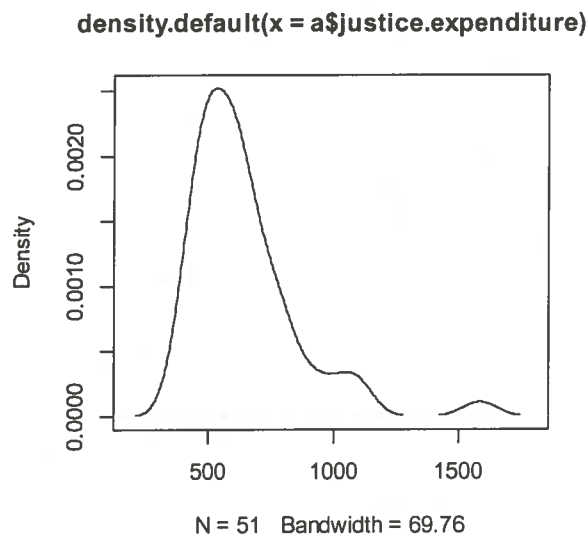
Figure 2: (A) Box Plot of Crime Rates; (B) Histogram of Crime Rates; (C) Kernel Density of Crime Rates; (D) Normal Q-Q Plot of Crime Rates.



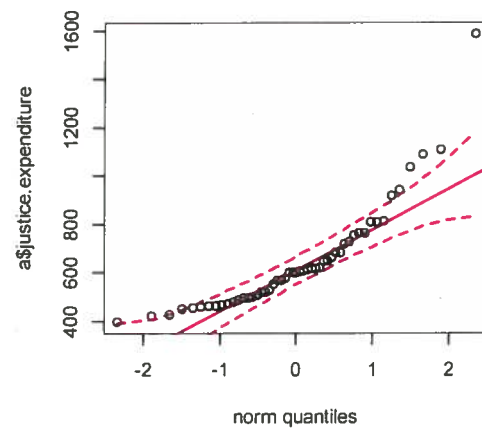
A



B



C



D

Figure 7: (A) Box Plot of Justice Expenditure per capita; (B) Histogram of Justice Expenditure per capita; (C) Kernel Density of Justice Expenditure P per capita; (D) Q-Q Plot of Justice Expenditure per capita.

Table 1: Mean, Median, Standard Deviation, Minimum and Maximum of Variables

Variables	Mean	Median	S.D.	Minimum	Maximum
Crime rates	3393	3261	822	1989	6101
Population	6019736	4314113	6780646	544270	36961664
Unemployment rates	8.461	8.100	1.946	4.100	13.400
GDP per capita	42499	40141	16939	28078	147193
Justice expenditure per capita	644.4	600.0	216.9	396.7	1585.0

Table 2: The modified data set including crime rates, states, regions, population_c, unemployment rates_c, GDP per capita_c, and justice expenditure per capita_c.

Crime rates	States	Regions	Population_c	Unemployment rates_c	GDP per capita_c	Justice expenditure_C
6101	District of Columbia	south	low	middle	high	high
4584	South Carolina	south	middle	high	low	low
4506	Texas	south	high	middle	middle	middle
4486	Louisiana	south	middle	low	middle	middle
4453	Florida	south	high	high	middle	middle
4433	Tennessee	south	middle	high	middle	middle
4346	New Mexico	west	middle	low	middle	middle
4291	Arkansas	south	middle	middle	low	low
4230	Alabama	south	middle	middle	low	low
4101	Georgia	south	high	middle	middle	middle
4093	Oklahoma	south	middle	low	middle	middle
4068	North Carolina	south	high	high	middle	middle
4016	Washington	west	middle	middle	middle	middle
4015	Arizona	west	middle	middle	middle	high
3999	Delaware	south	low	middle	high	high
3943	Hawaii	west	low	middle	middle	middle
3863	Missouri	midwest	middle	middle	middle	middle
3788	Maryland	south	middle	middle	middle	high
3769	Nevada	west	middle	high	middle	high
3632	Kansas	midwest	middle	middle	middle	middle
3593	Ohio	midwest	high	middle	middle	middle
3574	Alaska	west	low	middle	high	high
3510	Utah	west	middle	middle	middle	middle
3446	Indiana	midwest	middle	high	middle	low
3349	Michigan	midwest	high	high	low	middle
3261	Oregon	west	middle	high	middle	middle
3245	Mississippi	south	middle	middle	low	low
3234	Illinois	midwest	high	middle	middle	middle
3204	California	west	high	high	middle	high

3057	Nebraska	midwest	middle	low	middle	middle
3009	Colorado	west	middle	middle	high	middle
2889	Minnesota	midwest	middle	middle	middle	middle
2871	Rhode Island	northeast	low	high	middle	middle
2871	Wisconsin	midwest	middle	middle	middle	middle
2845	West Virginia	south	middle	middle	low	low
2837	Wyoming	west	low	low	high	high
2833	Montana	west	low	low	low	middle
2786	Massachusetts	northeast	middle	middle	high	middle
2780	Kentucky	south	middle	middle	low	low
2692	Virginia	south	middle	middle	high	middle
2649	Connecticut	northeast	middle	middle	high	middle
2612	Iowa	midwest	middle	low	middle	low
2581	Pennsylvania	northeast	high	middle	middle	middle
2549	Vermont	northeast	low	middle	middle	middle
2525	Maine	northeast	middle	middle	low	low
2387	New Jersey	northeast	middle	middle	high	high
2334	New Hampshire	northeast	middle	low	middle	middle
2316	New York	northeast	high	middle	high	high
2266	Idaho	west	middle	middle	low	middle
2247	North Dakota	midwest	low	low	middle	low
1989	South Dakota	midwest	low	low	middle	middle

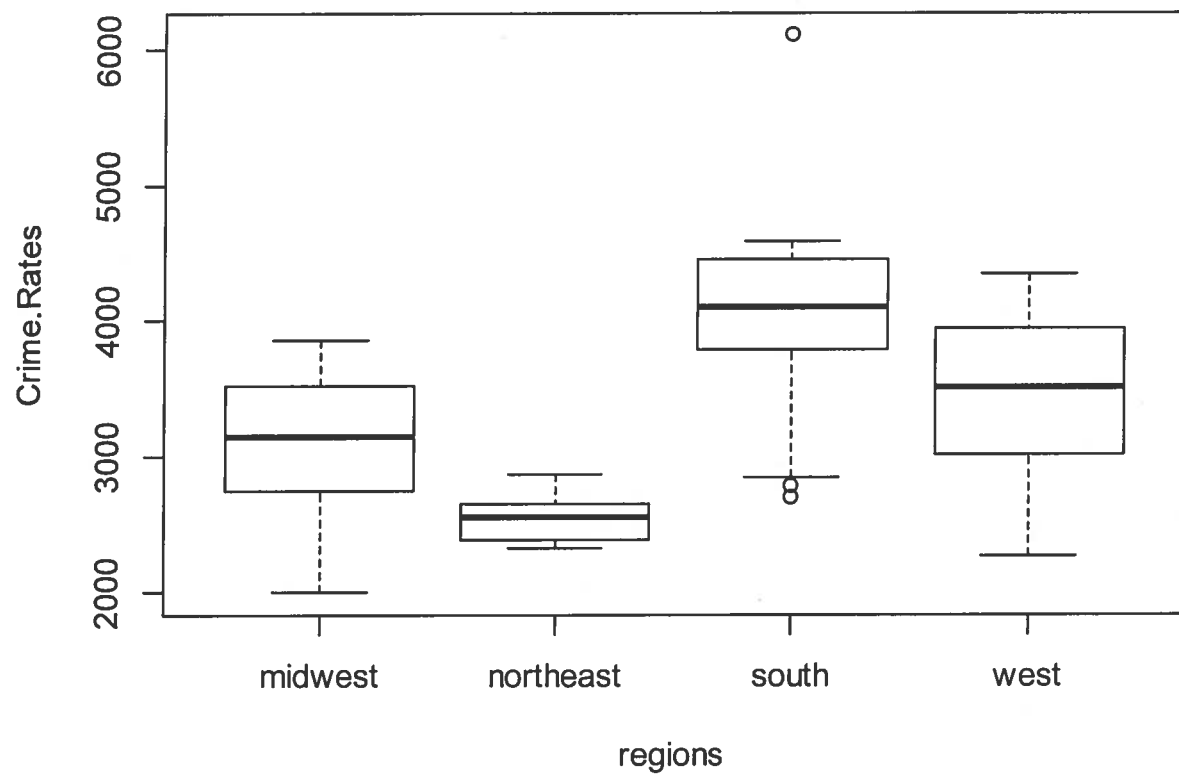


Figure 8: Relationship between Crime rates and regions.

Appendix Tables and Figures

Table 1: Summary Statistics on Variables (before adjusting for Census Tract area)

Variable	N	Mean	St. Dev.	Min	Max
Number of Parks	797	5.182	8.549	0	64
Number of Crimes	797	416.163	324.688	1	3,412
Number of People	797	3,419.412	1,728.702	176	15,740
Percent White	797	0.447	0.337	0.000	0.990
Median Household Income	797	48,443.170	24,038.860	9,550	155,500

Table 2: Summary Statistics on Variables (after adjusting for Census Tract area)

Variable	N	Mean	St. Dev.	Min	Max
Park Density	797	19.943	33.800	0.000	216.446
Crime Density	797	2,125.171	1,740.261	0.728	19,003.770
Population Density	797	18,294.350	20,214.770	400.920	484,992.400
Percent White	797	0.447	0.337	0.000	0.990
Median Household Income	797	48,443.170	24,038.860	9,550	155,500

Table 3: F-test Results On Null Hypothesis of No Variation Between Groups

By-Group	F Stat.	p.value	DF Num.	DF Den.
Park Group	12.0842	< 0.0001	3.000	340.06
Population Group	75.466	< 0.0001	3.000	439.566
Race Group	36.1638	< 0.0001	3.000	419.528
Income Group	66.1655	< 0.0001	3.000	435.536

Figure 1: Number of Crimes Per Square Mile of Census Tract

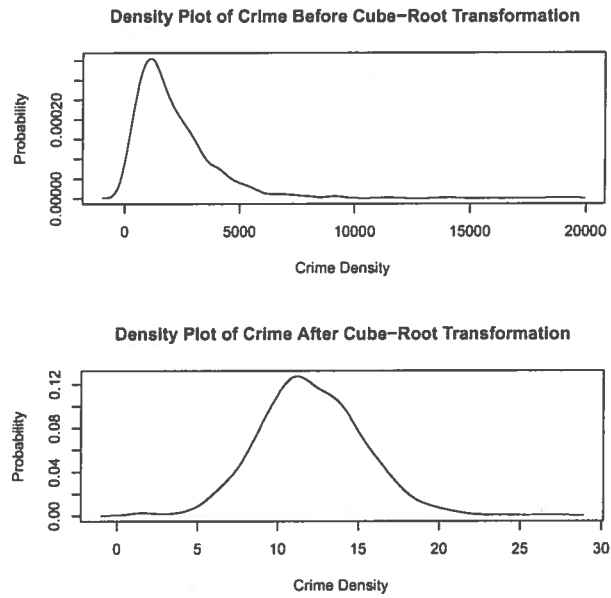
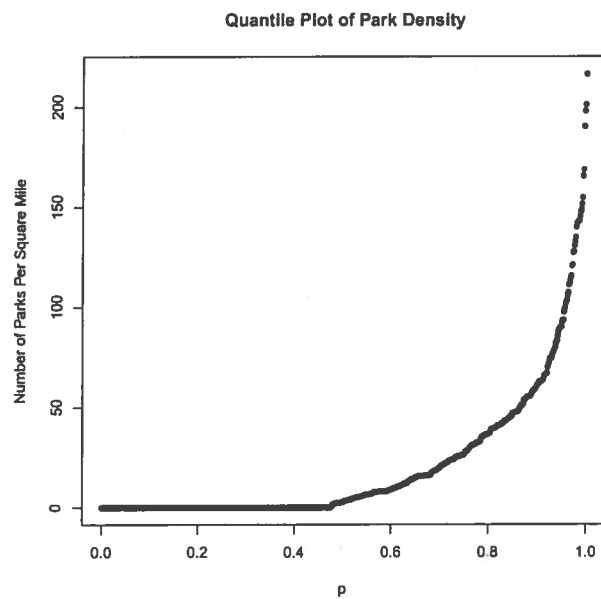
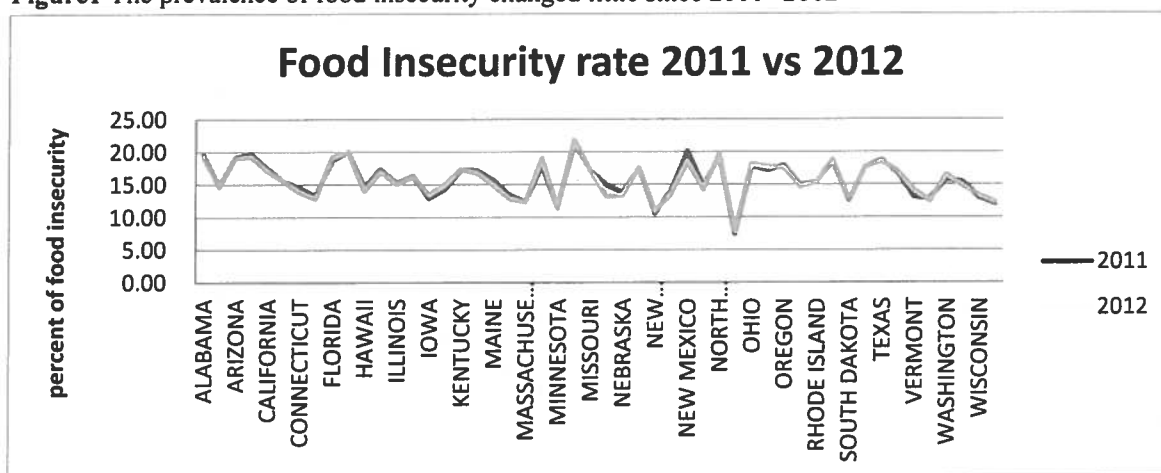


Figure 2: Number of Parks Per Square Mile of Census Tract



FOOD INSECURITY AND SOCIAL FACTORS

Figure1 The prevalence of food insecurity changed little since 2011~2012

FOOD INSECURITY AND SOCIAL FACTORS

Table 1 Shapiro-Wilk normality test

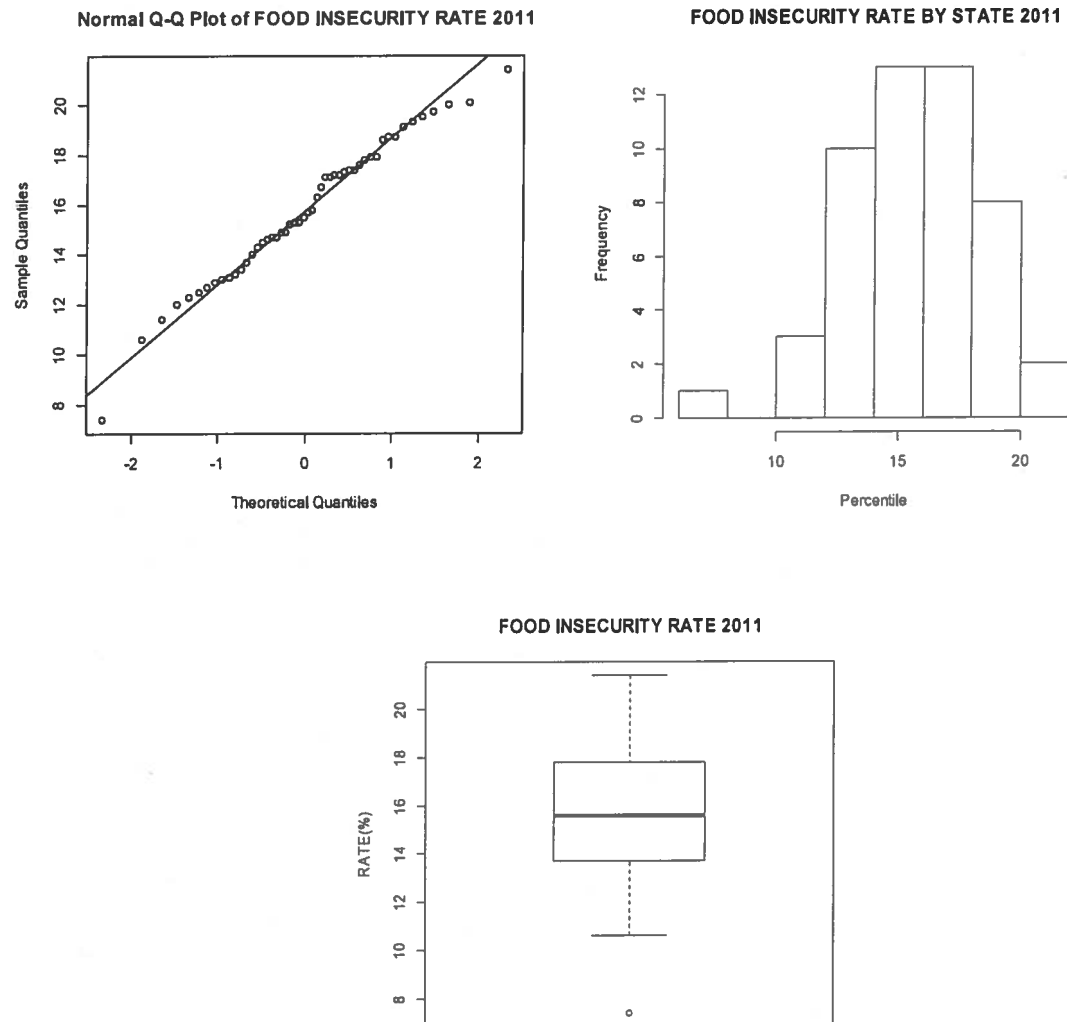
Food Insecurity 2011	W = 0.9811	p-value = 0.6007	Not significant
Food Insecurity 2012	W = 0.9758	p-value = 0.3913	Not significant

FOOD INSECURITY AND SOCIAL FACTORS

Table 3 A summary of variables that determine food insecurity in 2011

Table 3	Food insecurity	Unemployment	Food stamp	StateBudget	Poverty rate
Minimum	7.4	3.5	6.1	0	8.80
1st quantile	13.78	6.525	12.4	0.425	12.35
Median	15.6	7.9	15.2	0.9	14.90
Mean	15.75	8.013	14.9	1.154	15.19
3rd quantile	17.75	9.3	17.73	1.475	17.80
Maximum	21.4	13.2	22	4.7	22.60
SD	2.988178	1.970534	3.863804	1.075935	3.300689

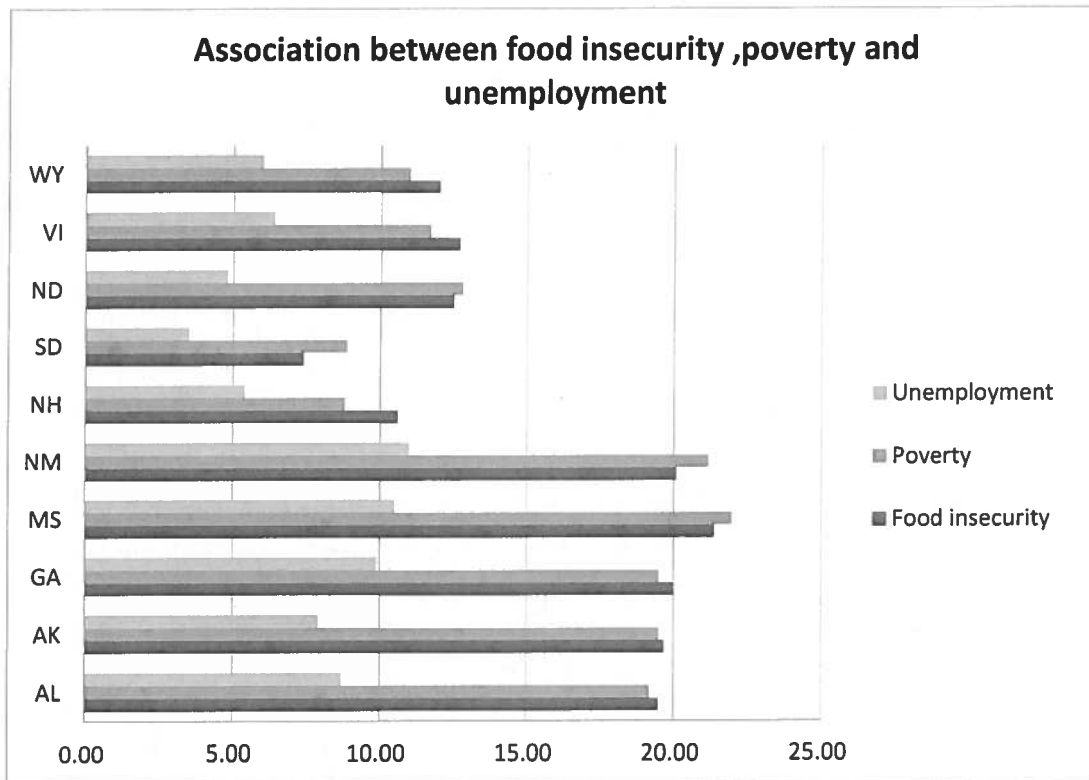
FOOD INSECURITY AND SOCIAL FACTORS

Figure 3 Normal Q-Q plot, Histogram and box-plot for food insecurity rate 2011

FOOD INSECURITY AND SOCIAL FACTORS

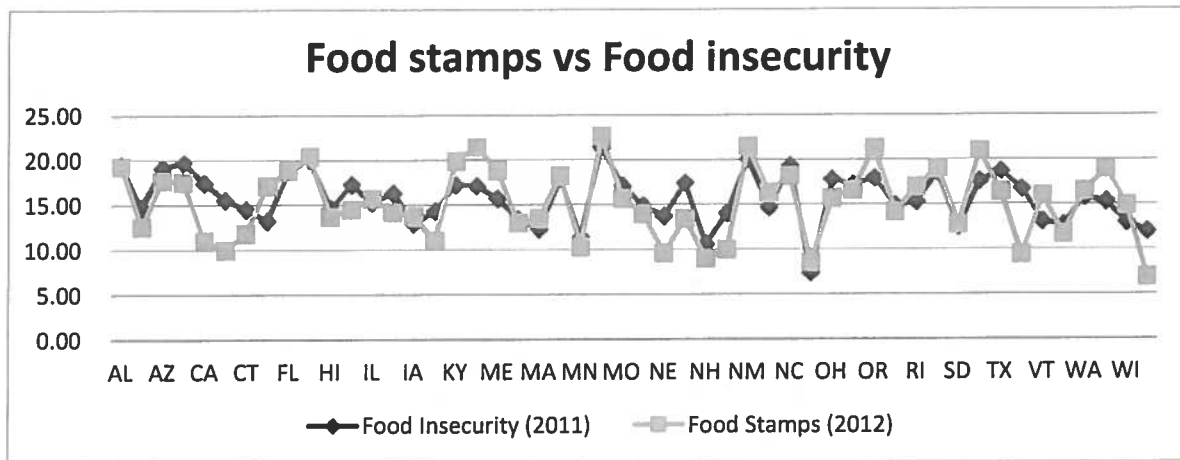
Figure 6

Commonness of food insecurity compared with poverty rate and unemployment rate by States, 2011

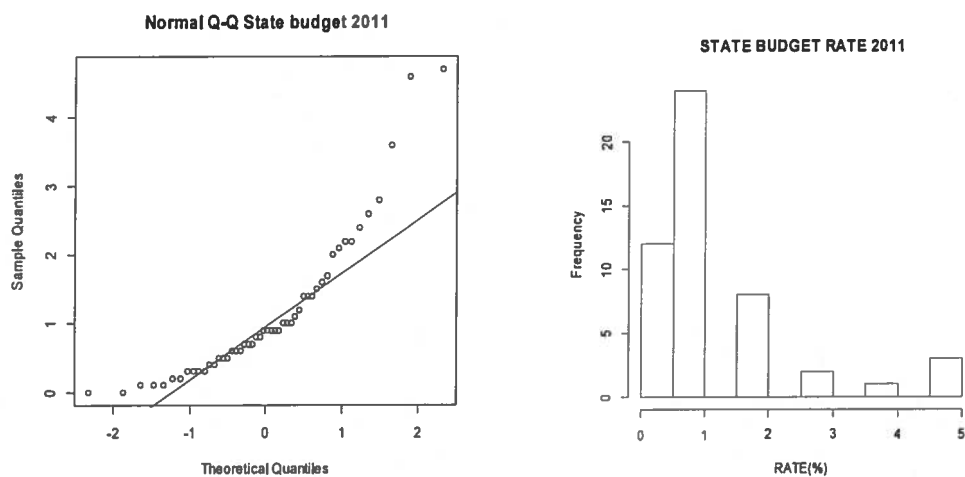


FOOD INSECURITY AND SOCIAL FACTORS

Figure 8 The line graph shows whether Food Stamps in 2010 can decrease Food Insecurity level in 2011



FOOD INSECURITY AND SOCIAL FACTORS

Figure 9 Normal Q-Q plot, Histogram for state budget for public assistance rate 2011

FOOD INSECURITY AND SOCIAL FACTORS

Figure 11 Normal Q-Q plot, Histogram for transformed state budget for public assistance rate, 2011