Working Paper: Economic Implications of Foster Care Children

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Introduction

Foster care programs have built important foundations for many children without access to their biological families. It has become a standard safety net for children that have experienced abuse and neglect in their homes. Recently, however, multiple studies have shown an increased risk of poor outcomes for children in foster care programs. Increased probability of poor school adjustment, delinquent behavior, drug use, and health-risking sexual behaviors has been linked to foster care children (Courtney & Dworsky, 2006; Jonson-Reid & Barth, 2000). A study by University of Chicago concluded that children in foster care have significantly higher rates of arrests by the age of 19 then children without a history in foster care (34.4% vs. 2.8%) (Cusick and Courtney, 2007). Some believe that the foster care programs have been a financial burden on the governmental welfare. However, the economic associations of these foster care programs or the negative effects of the programs have not been thoroughly examined. This paper will analyze economic links to the foster care programs using economic indicators, including GDP, unemployment rates, and other important variables. Panel data will be used to collect the information and will be analyzed using the fixed effects model.

Literature Review

There have been many studies to determine the effects of foster care programs. Joseph Doyle of MIT found that placing children into care decreases the likelihood that they will be employed and reduces their earnings (Doyle 2006). Another study found that nearly 20 percent of young prison inmates and 28 percent of homeless individuals spent some time in foster care as a youth (Martha Burt et al. 1999). A retrospective British study that used a cohort in the 1970s and 1980s compared the outcomes of children who had and had not been placed in a foster care

program. They found significant differences in not only crime-related fields but also in financial and health statuses. The investigators in the study stated,

> "Men with a history of public care were less likely to attain high social class and more likely to have been homeless, have a conviction, have psychological morbidity, and be in poor general health. … [They] were more likely to be unemployed and less likely to attain a higher degree." (Viner and Taylor, 2005)

They did make it clear that some of the correlations were not significantly significant. They did not indicate whether the "poor general health" of the men who used to be in foster care programs occurred due to negative effects after they left the foster care program or during the program. The environment in the foster care house could have influenced their dietary habits and physical activity. On the other hand, it could be that once the foster care children leave the program and engage in delinquent behavior, they become less likely to eat healthy or perform adequate physical activity. The may also be less likely to apply for jobs or enroll in advanced schooling such as college or even technical schools.

Newton (2006) studied a cohort group that was put into foster care programs. Newton found that foster care programs can create problem behaviors for children in as short as a 12-month period. Increasingly self-defeating behaviors may also be apparent. This could affect the children's drive to do well in school and get a well-paying job. The work ethic of someone with this type of behavior is probably very poor.

Cook (2002) conducted a study that recorded the outcomes of foster care children 2-5 years after being discharged from the foster care programs. Cook found that the education levels, young parenthood, and the use of public assistance was more similar to 18- to 24-year-olds living below the poverty level than 18- to 24-year-olds in the general population. This showed the lack

of living skills training of children in foster care programs. This lack of training could put a burden on the economy.

A Michigan State University study found similar results to Cook's findings. Students who were previously enrolled in foster care programs are much more likely to drop out of college than low-income, first generation students who had never been in foster care (Collins, 2004). Interestingly, the results were the same even after they controlled for gender and race differences.

Adlaf and Zdanowicz (1999) found that former foster care participants are more likely to report using illegal substances and drugs than those without a history in foster care. They concluded that it can significantly affect their ability to effectively search for a job and become employed.

Barth and Blackwell (1998) found that race could affect the outcome of foster care children. They findings showed that Hispanic foster youth are worse off than Caucasian youth because they receive fewer support services. In fact, Hispanic foster youth have higher death rates while in care than Hispanic children in the general population. However, there have been opposing findings. In a more recent study, Lu (2004) found that the outcomes of Hispanic foster care youth were very similar to Caucasian youth in terms of being placed at home and reunified with family. Furthermore, Lenz-Rashid (2004) found that Hispanic foster care youth had significantly higher wages than Hispanic youth from the general population. This shows that the economic associations of foster care programs and youth is unclear and shows the need for additional studies.

Data and Methods

The data used for this paper was obtained primarily from the Bureau of Labor Statistics and the United States Department of Health and Human Services. Minimum wage rates and unemployment rates were obtained from the Bureau of Labor Statistics and the foster care data was obtained by United States Department of Health and Human Services website. Schooling data was obtained from the Annie E. Casey Foundation. Gross Domestic Product (GDP) data were obtained from the Bureau of Economic Analysis, United States Department of Commerce. All of the data used for this study were collected annually from 2002-2010 for each US state and the District of Columbia. The variables selected were used in a panel data analysis in a fixed effect model.

The foster care data used in this study measured the rate of children from ages <1-17 in foster care program. The variable used in this study for this measurement was called FC. The rate of children was per 1,000. In the United States, the majority of the foster care children enter the program from ages 1-5 and 11-15. Children can legally enter and remain the program until the age of 18. Children can exit the foster care program earlier if they can be safely reunited with their family or if permanent placement, such as adoption, can be arranged.

The unemployment rate is a significant economic indicator that can be influenced by foster care programs. The variable used in this study for this measurement was called UN. Unemployment rates should increase if the rate of foster care children program increases. One of the most common reasons that children are placed in foster programs is due to the incarceration of their parents. If the parents cannot provide safety or basic necessities for their children, the government intervenes and removes the children from the dangerous environment and enrolls them into a foster care program. Once the parents are incarcerated, it becomes very difficult to

find another job after they are released. On the demand side of the job market, employers will be less prone to hire someone with a criminal record. The criminal stigma may signal that the applicant is dishonest or unreliable. Furthermore, employers may be liable for damage caused by their employees with criminal records under certain negligent hiring laws (Grogger, 1995). The majority of people entering prison was fully employed for at least one year prior to incarceration (Geller, 2006). If ex-convicts are unable to find a job after prison, the unemployment rate should decrease. In fact, Geller's study found that chances of employment decrease as well as wages after being released from prison. However, not all of the effects on imprisonment are clearly detrimental. Some studies indicate that inmates that participate in educational workshops and work programs can cause them to intensely reflect on their situation and leave their criminal lifestyle (Edin, Nelson, and Paranal 2004). By the time that the inmates are released, they may have developed a strong resolve to become successful without crime and improve not only their lives, but also the lives of their family members. This new confidence and drive could decrease unemployment rates of the ex-convicts.

Nonetheless, increases in FC should be associated with increases in unemployment rates. Only a small portion of inmates may completely reform while a much larger portion is likely to commit another crime. Furthermore, as foster care children near the working age of 16, they may not be immediately hired due to possible emotional issues that were explained previously in this paper. Employers may find certain personality or work ethic issues during the interview and will be less prone to hire the job applicant. The unsuccessful attempts of a foster care child to get a job may increase the unemployment rate.

Schooling is an important indicator for economic growth because it develops human capital which is essential for the growth of the America's modern economy. Education allows

individuals to acquire skills and additional training which helps to advance the economy. A lack of education is not only an indicator of future employment difficulties but also a gateway for opportunities in crime and other illegal activities. The data used in this study measured the percentage of teens from ages 16-19 not in school and not high school graduates. The variable used in this study for this measurement was called SC. SC should increase as the rate of children in foster care programs increase. As mentioned earlier, foster care programs can negatively affect the behavior of children and make them more likely perform poorly in school. Those in foster care programs may be less likely to listen to their temporary guardians about getting good grades and engaging in safe after-school activities than those living with their actual parents and families in a stable environment. Emotional distress of the foster children triggered by the separation from their parents may cause children to lose focus in school and not value the future as highly as children not in out-of-home placement. This distress and unmanaged pressure can lead children to drop out of high school with no intention of enrolling in another school in the future. Therefore, FC should have a positive correlation with SC.

The number of workers earning minimum wage could be associated by foster care children rates. Since minimum wage rates varies in state in the US, this study uses the annual average of the percent of employed wage and salary workers paid hourly rates with earnings at or below the prevailing Federal minimum wage. The variable used in this study for this measurement was called MW. The presence of workers being paid below the Federal minimum wage does not mean that the Fair Labor Standards Act is violated because there are many exclusions and exemptions to the minimum wage laws, especially for young workers and students. In fact, Federal law states “minimum wage of $4.25 per hour applies to young workers under the age of 20 during their first 90 consecutive calendar days of employment with an

employer, as long as their work does not displace other workers" (US Dept. of Labor). As the rate of foster care children increase, MW should also increase. As more and more foster care children, enter the job market at a young age, they will most likely be hired as a minimum wage earning (or lower) worker due to the poor set of skills. If foster care children are less likely to attend college or technical school, they will not be able to augment their skill set and be qualified for higher paying jobs. They will probably remain employed as low-waged workers for their entire career. However, if they do remain with same business or establishment for a number of years, their experience and on-the-job training could promote them to the next level. In fact, Mincer (1962) concluded that on-the-job training can comprise up to half of a worker's human capital. Yet, in current times, job applicants with college and professional degrees are ubiquitous. It is less likely employers will promote a worker without formal education than a worker with an advance degree and minimal job experience and training. As a result, the rate of children in foster care programs should be positively correlated with MW.

The GDP could also have an association with the rate of foster care children. Since all of the previously mentioned variables (unemployment, minimum wage rates, etc.) have traditionally been related to GDP, foster care children rates could be linked to GDP as well. There could be confounding unobservable variables that form a correlation between GDP and FC. Therefore, this study uses panel data analysis to examine the relationship.

Compared to pure cross-sectional and time-series data, panel data are better able identify and measure effects that may not be direct or clearly detectable (Ben-Porath, 1973). Panel data allow more variability and less collinearity among the variables than time-series studies and, hence, increasing efficiency. Furthermore, panel data are better suited to study the dynamics of adjustment than cross-sectional data. For example, cross-sectional data can estimate poverty in a population at a given point in time, while panel data can estimate what portion of the population

is in poverty in one period remain in poverty in another period. Moulton (1986) also concludes that panel data controls for individual heterogeneity while time series and cross-section studies do not and may produce bias results.

After the data is collected, it will be put in a data analysis and statistical software called SAS. Regressions will involve models with FC is the independent variable and the other previously mentioned economic indicators as the dependent variables. Finally, a regression will be created that uses GDP as the dependent variable to determine the effects on the other variables on the economy.

Due to the 2008 economic recession, the data collected from 2008-2010 may be significantly skewed from the data collected from 2002-2008. Certainly, the unemployment rate and change in GDP may be affected by the recession. A dummy variable called "d" was created to account for change. The dummy variable was equated to 1 if the year was greater than 2007 and equated to 0 if the year was not greater than 2007. This will provide more accurate results and will help determine if the economic recession had a significant effect on the variables used in this study.

This study will use the fixed effects model. The data will be tested for fixed effects using an F-test. The Hausman Test for random effects will also be used to ensure that fixed effects estimation is more appropriate than random effects estimation. The Hausman specification test examines if the individual effects are uncorrelated with the other regressions in the model (Hausman, 1978). The Hausman test determines the null hypothesis that all of the coefficients estimated by the random effects estimator are the same as those of the consistent fixed effect estimator. If the p-value is significant, fixed effects should be used instead of random effects. If not, then random effects can be used.

Usually in panel data studies, heteroskadisticity can arise and skew the results. In this study heteroskadisticity consistent measure estimation will be used for each regression to eliminate this problem. Since the variables used are all direct or indirect economic indicators, the variables may influence each other and create the problem of multicollinearity. The study will conduct a test to determine if multicollinearity is present and significant.

Results

The panel data analysis showed several significant findings. Data showed that the unemployment rate is negatively correlated with rate of foster care children, which had a coefficient of -0.22 (Table 1). The minimum wage is also negatively associated with the rate of foster care children, which had a coefficient of -0.078. Both the schooling variable and GDP is positively correlated with the rate of foster care children but were not significant. The dummy variable was significant in each of the one-to-one models. In fact, it showed that it had the opposite for the dependent variables in all of the models except for GDP=FC (Table 1d)

The F-test to determine if there were no fixed effects was significant at the 1 percent level in each one-to-one model (Table 1). The Hausman test for random effects was also significant for each of the models except for the GDP=FC model. Models UN=FC and MW=FC were significant at the 1 percent level.

The panel data were used to create a regression using fixed one-way estimates in which GDP was the dependent variable. In this fixed one-way regression, unemployment rate and the percentage of teens from ages 16-19 not in school and not high school graduates were negatively correlated at a 1 percent and 5 percent significant level, respectively (Table 2a). The rate of foster care children was also negatively correlated with GDP at a 10% significance level. The percentage of workers earning minimum wage rate was the only positively associated variable

with GDP (1% significance). However, only the minimum wage rate was significant, which was at a 1 percent level. The intercept of the regression was 7.11. The coefficient of determination (R^2) was 0.367. The dummy variable was significant at a 1% level and had a coefficient of -1.85 (Table 2a). The final equation was

$$GDP = -0.147FC - 0.605UN + 0.586MW - 17.7SC + 7.11$$

Data analysis showed multicollinearity between variables UN & MW and FC & MW (Table 3). There were also some state effects that were highly significant (Table 4). Table 4 shows the cross section result of just one variable, UN. Several cross sectional variables showed state effects at the 1% significance level including CS2, CS5, CS8, and CS9 (Table 4).

Discussion

The data analysis revealed some surprising findings. Although the hypothesis predicted that the unemployment rate and minimum wage rate was positively correlated with the rate of foster care children, data indicated that both variables were negatively correlated. Unemployment rates may have decreased as FC increased simply because the inability of foster care children to get jobs was overstated. The elevated emotional distress of foster care children that studies have found may not have translated into the job market. Employers might not be able to easily recognize any emotional problems in an interview. This is especially the case if the interview is brief and not comprehensive. Furthermore, for those who were imprisoned and were forced to send their children into foster care programs may have developed a much stronger resolve to turn their lives around. The educational and work programs in prison may have improved significantly over the past few years and caused inmates to leave prison with a new sense of determination to get a job and take care of their families.

Usually, teens from ages 16-18 have minimum wage paying jobs during high school or even the beginning years of college, which would increase the variable MW. However, if some children are entered in foster care programs, they may be more prone to engage in illegal activities and make money through those illegal activities, which would reduce their need to get a job. As a result, a portion of the young workers making minimum wage will be eliminated. This could explain why MW was negatively correlated with the rate of foster care children.

The percentage of teens from ages 16-19 not in school and not high school graduates was positively correlated with FC, which was expected. Being in foster care programs could affect children's attitude toward school and lead them to illegal activities or non-productive activities. However, the findings of the SC=FC and GDP=FC models were not significant.

The significance of the dummy variables in the one-to-one models showed that recession may have helped to increase unemployment rates and the percentage of people making minimum wage. This makes sense because many people were laid off during the recession and could not find any other work. Many educated professionals that were laid off were forced to take low-skilled jobs such as McDonalds cooks so that they could support their families. The recession also influenced FC to have a negative association with SC and GDP during 2008-2010. Since there were very few employers were hiring, students could have been more focused on performing well in school because employment was not a viable option.

The F-test for no fixed effects was significant in all one-to-one fixed one-way models: UN=FC, MW=FC, SC=FC, GDP=FC. This means that there are group effects, or time effects, or both. The tests were highly significant. In the same models, the p-value of the Hausman test for no random effects was significant which confirmed that fixed effects model was the correct model to use.

In the GDP regression from the panel data of the fixed one-way estimates, MW was surprisingly positive correlated with GDP. Ordinarily, if there are more people that are hired for minimum wage jobs, it is usually because that more people are becoming educated and attend college and graduate school to obtained advanced and professional degrees. The higher average of education status of Americans, the higher the GDP can potentially increase because new ideas and technology can lead to growth of the economy. However, this is not the case with this dataset. This may be due to an increase in low-skilled businesses such as fast food and manufacturing which may increase the number of people earning at or below minimum wage levels.

Unemployment rates and the percentage of teens from ages 16-19 not in school and not high school graduates were negatively correlated with GDP, which was expected. The rate of children in foster care was negatively associated with GDP at a 10% significance level. This was surprising because theory predicts a positive correlation between GDP and FC. GDP excludes nonmonetary services such as unpaid housework and childcare. Parents usually do this work that is not taken into account by the GDP since there is no monetary exchange. However, if a parent becomes incarcerated, dependent on drugs, or very ill, the government removes the children and enrolls them in a foster care program because of the inability of the parent to take care of the children financially and emotionally. This causes monetary exchange since foster care parents are paid to take care of the children. As a result, GDP should increase as the rate of foster care children increases. However, this was not the case. Since the R^2 was only .367, a large portion of the variability is not explained.

The data analysis indicated that state effects were highly significant. This makes the results more useful because it can help capture any omitted variables that the panel data is

supposed to capture. To solve the multicollinearity problem between UN & MW and FC & MW, a variable may be omitted to determine if the problem is solved. However, since important data could be lost, a different estimation technique will probably be used such as ridge regression or principal component method to eliminate the minor multicollinearity problem. This study will use these variations when more data is collected for longer period of time.

Conclusion

This study found that unemployed rate was significantly negatively associated with the rate of children in foster care programs from 2002-2010. The percentage of workers with earnings at or below minimum wage was negatively correlated with the rate of foster care children. No significant association between the rate of foster care children and the percentage of teens from ages 16-19 not in school and not high school graduates could be found. However, the multiple regression model that used the change in GDP as the dependent variable showed that there may be a negative correlation between the rate of foster care children and GDO. A larger data set is needed to make strong connections between foster care and GDP. If one were to do so, it is imperative that the researcher accounts for the 2008 global recession and any other recessions or economic phenomena that may affect the variables used in the study. Data may be skewed during this time period and may cause inaccuracies if compared with other years without correcting for the recession. This study can be improved by including more economic indicators to provide a comprehensive economic outlook. It would be interesting to look the relationship of the rate of foster care children and the government expenditure on federal welfare programs or public assistance programs to see if foster care children are prone to receiving aid from the government or other charitable organizations.

Appendix

Table 1. (a-d) Fixed One Way Estimate Results of Model Equations

a) UN=FC

F Test for No Fixed Effects

Num DF	Den DF	F Value	Pr > F
50	406	7.16	<.0001

Variable	DF	Estimate	Error	t Value	Pr > |t|
Intercept	1	6.93381	0.5822	11.91	<.0001
FC	1	-0.22614	0.0631	-3.59	0.0004
d	1	2.322894	0.1748	13.29	<.000

b) MW=FC

F Test for No Fixed Effects

Num DF	Den DF	F Value	Pr > F
50	406	7.58	<.0001

Variable	DF	Estimate	Error	t Value	Pr > |t|
Intercept	1	3.248186	0.5481	5.93	<.0001
FC	1	-0.07803	0.0532	-1.47	0.1434
d	1	1.953384	0.1460	13.37	<.0001

c) SC=FC

F Test for No Fixed Effects

Num DF	Den DF	F Value	Pr > F
50	406	23.03	<.0001

Variable	DF	Estimate	Error	t Value	Pr > |t|
Intercept	1	0.080365	0.00620	12.96	<.0001
FC	1	0.000493	0.000706	0.70	0.4858
d	1	-0.01161	0.00130	-8.92	<.0001

d) GDP=FC

F Test for No Fixed Effects

Num DF	Den DF	F Value	Pr > F
50	406	1.38	0.0511

Variable	DF	Estimate	Error	t Value	Pr > |t|
Intercept	1	3.390979	1.1170	3.04	0.0026
FC	1	-0.06549	0.0870	-0.75	0.4522
d	1	-1.90908	0.2278	-8.38	<.0001

Table 2. (a,b) Fixed One Way Estimate Results of Model Equations

a) Fixed One Way Estimates

Dependent Variable: GDP

Fit Statistics

SSE	1506.2705	DFE	403
MSE	3.7376	Root MSE	1.9333
R-Square	0.3665		

F Test for No Fixed Effects

Num DF	Den DF	F Value	Pr > F
50	403	1.81	0.0011

Variable	DF	Estimate	Error	t Value	Pr > |t|
Intercept	1	7.106865	1.4027	5.07	<.0001
FC	1	-0.14785	0.0877	-1.69	0.0927
UN	1	-0.60518	0.0983	-6.16	<.0001
MW	1	0.586488	0.0987	5.94	<.0001
SC	1	-17.7284	8.2977	-2.14	0.0332
d	1	-1.8547	0.2423	-7.65	<.0001

b) Da Silva Method Estimation

Dependent Variable: GDP

Fit Statistics

SSE	480.7404	DFE	453
MSE	1.0612	Root MSE	1.0302
R-Square	0.0869		

Variable	DF	Estimate	Error	t Value	Pr > |t|
Intercept	1	3.929742	0.7152	5.49	<.0001
FC	1	0.04105	0.0312	1.32	0.1883
UN	1	-0.4566	0.0730	-6.26	<.0001
MW	1	0.01215	0.0741	0.16	0.8698
SC	1	6.821102	4.2994	1.59	0.1133
d	1	-0.5613	0.8696	-0.65	0.5190

Table 3. Multicollinearity: Pearson Correlation Coefficients

Pearson Correlation Coefficients, N = 459
Prob > |r| under H0: Rho=0

	FC	UN	MW	SC
FC	1.00000	-0.08197 0.0794	-0.21501 <.0001	0.05160 0.2699
UN	-0.08197 0.0794	1.00000	0.47760 <.0001	0.04960 0.2890
MW	-0.21501 <.0001	0.47760 <.0001	1.00000	-0.00633 0.8924
SC	0.05160 0.2699	0.04960 0.2890	-0.00633 0.8924	1.00000

Table 4. Dependent Variable: UN (State Effects)

Fixed One Way Parameter Estimates

Variable	DF	Estimate	Error	t Value	Pr > |t|	Label
CS1	1	-0.79622	0.6082	-1.31	0.1912	Cross Sectional Effect 1
CS2	**1**	**1.868323**	**0.6484**	**2.88**	**0.0042**	**Cross Sectional Effect 2**
CS3	1	-0.24887	0.6071	-0.41	0.6821	Cross Sectional Effect 3
CS4	1	-0.71655	0.6180	-1.16	0.2470	Cross Sectional Effect 4
CS5	**1**	**1.492807**	**0.6035**	**2.47**	**0.0138**	**Cross Sectional Effect 5**
CS6	1	-0.37828	0.6009	-0.63	0.5293	Cross Sectional Effect 6
CS7	1	-0.31932	0.6003	-0.53	0.5951	Cross Sectional Effect 7
CS8	**1**	**4.497404**	**1.1084**	**4.06**	**<.0001**	**Cross Sectional Effect 8**

Variable	DF	Estimate	Error	t Value	Pr > |t|	Label
CS9	**1**	**-1.81125**	**0.6215**	**-2.91**	**0.0038**	**Cross Sectional Effect 9**
CS10	1	-0.16187	0.6017	-0.27	0.7881	Cross Sectional Effect 10
CS11	1	-0.48031	0.6164	-0.78	0.4363	Cross Sectional Effect 11
CS12	**1**	**-2.46782**	**0.6383**	**-3.87**	**0.0001**	**Cross Sectional Effect 12**
CS13	**1**	**-1.86326**	**0.6013**	**-3.10**	**0.0021**	**Cross Sectional Effect 13**
CS14	**1**	**-1.71466**	**0.6315**	**-2.72**	**0.0069**	**Cross Sectional Effect 14**
CS15	1	0.540527	0.6035	0.90	0.3710	Cross Sectional Effect 15
CS16	1	0.194191	0.6004	0.32	0.7465	Cross Sectional Effect 16
CS17	1	-1.01969	0.6164	-1.65	0.0988	Cross Sectional Effect 17
CS18	1	-0.64168	0.6197	-1.04	0.3011	Cross Sectional Effect 18
CS19	1	-0.37335	0.6071	-0.61	0.5389	Cross Sectional Effect 19
CS20	1	0.811111	0.6002	1.35	0.1773	Cross Sectional Effect 20
CS21	1	-1.11706	0.6253	-1.79	0.0748	Cross Sectional Effect 21
CS22	1	-0.41881	0.6013	-0.70	0.4865	Cross Sectional Effect 22
CS23	**1**	**-1.2**	**0.6002**	**-2.00**	**0.0463**	**Cross Sectional Effect 23**
CS24	1	-0.22462	0.6006	-0.37	0.7086	Cross Sectional Effect 24
CS25	**1**	**-1.2615**	**0.6253**	**-2.02**	**0.0443**	**Cross Sectional Effect 25**
CS26	**1**	**2.501013**	**0.6028**	**4.15**	**<.0001**	**Cross Sectional Effect 26**
CS27	**1**	**-1.25228**	**0.6133**	**-2.04**	**0.0418**	**Cross Sectional Effect 27**
CS28	1	0.666024	0.6293	1.06	0.2906	Cross Sectional Effect 28
CS29	1	0.278285	0.6009	0.46	0.6435	Cross Sectional Effect 29
CS30	**1**	**-1.32361**	**0.6052**	**-2.19**	**0.0293**	**Cross Sectional Effect 30**
CS31	1	0.147213	0.6197	0.24	0.8123	Cross Sectional Effect 31
CS32	**1**	**-2.3207**	**0.6061**	**-3.83**	**0.0001**	**Cross Sectional Effect 32**
CS33	1	-0.99341	0.7022	-1.41	0.1579	Cross Sectional Effect 33
CS34	1	0.652651	0.6003	1.09	0.2776	Cross Sectional Effect 34
CS35	1	0.406686	0.6071	0.67	0.5033	Cross Sectional Effect 35
CS36	1	-0.12587	0.6538	-0.19	0.8474	Cross Sectional Effect 36
CS37	**1**	**2.360116**	**0.6511**	**3.62**	**0.0003**	**Cross Sectional Effect 37**
CS38	1	-0.31692	0.6004	-0.53	0.5979	Cross Sectional Effect 38
CS39	**1**	**1.400643**	**0.6293**	**2.23**	**0.0266**	**Cross Sectional Effect 39**
CS40	1	0.9308	0.6164	1.51	0.1318	Cross Sectional Effect 40
CS41	**1**	**-2.26326**	**0.6013**	**-3.76**	**0.0002**	**Cross Sectional Effect 41**
CS42	1	0.142924	0.6061	0.24	0.8137	Cross Sectional

Variable	DF	Estimate	Error	t Value	Pr > |t|	Label
CS43	1	-0.68372	0.6253	-1.09	0.2748	Cross Sectional Effect 43
CS44	**1**	**-1.99635**	**0.6538**	**-3.05**	**0.0024**	**Cross Sectional Effect 44**
CS45	1	-0.98055	0.6197	-1.58	0.1144	Cross Sectional Effect 45
CS46	**1**	**-2.47602**	**0.6360**	**-3.89**	**0.0001**	**Cross Sectional Effect 46**
CS47	1	0.342689	0.6360	0.54	0.5903	Cross Sectional Effect 47
CS48	1	0.482573	0.6017	0.80	0.4230	Cross Sectional Effect 48
CS49	1	-0.60152	0.6061	-0.99	0.3216	Cross Sectional Effect 49

Note:State Effect Results at 5% significance are in bold

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