The Effect of Disenrollment from Medicaid on Employment, Insurance Coverage, and Health Care Utilization*

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DRAFT: October 2017

Abstract

This study examines the effect of a Medicaid disenrollment on employment, sources of health insurance coverage, health, and health care utilization of childless adults using longitudinal data from the 2004 Panel of the Survey of Income and Program Participation. In July 2005, TennCare, the Tennessee Medicaid program, disenrolled approximately 300,000 adults following a change in eligibility rules. Following the change in rules, the fraction of childless adults in Tennessee covered by Medicaid fell by almost 7 percentage points while uninsured rates increased by roughly 5 percentage points. There is no evidence of an increase in employment rates among childless adults following disenrollment though there is some evidence of a decrease in part-time employment and an increase in work-preventing disabilities. Self-reported health and access to medical care worsened as hospitalization rates, doctor visits, and dentist visits all declined. At the same time, there were increases in the use of free or public clinics, the use of the emergency room, and out-of-pocket medical expenses. The results suggest that undoing the expansion of Medicaid eligibility to childless adults that occurred under the ACA would likely reduce health insurance coverage, reduce health care access, and worsen health but will not lead to increases in employment.

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* Draft prepared for the IZA Workshop "Health and Labor Markets" held on November 3-4, 2017 at IZA, Bonn, Germany. This work benefited from the research assistance of Julie Ryan, Dan Kinber, and Alex Rosenberg. Contact: td495@georgetown.edu.

I. Introduction

The 2010 Affordable Care Act (ACA) led to substantial increases in the percentage of Americans with health insurance coverage. In large part, this increase in health insurance coverage was the result of an increase in Medicaid coverage. The ACA gave states the option of increasing eligibility to all individuals up to 133% of the Federal Poverty Line (FPL) and states that expanded eligibility were eligible for an increased level of Federal funding for their newly eligible populations. The expansion in Medicaid eligibility under the ACA primarily affected adults and in particular adults without dependent children as these individuals were typically only covered at low levels of income prior to the ACA.

As of July 2017, Medicaid and CHIP covered more than 74 million low-income adults and children, an increase of over 17 million since implementation of the 2010 Affordable Care Act (ACA, CMS 2017) with most of this increase coming from adults. However, the Medicaid expansion under the ACA has been controversial. In 2017, several bills were debated in Congress that would have eliminated the "enhanced" Federal funding for expansion populations, changed the Federal funding formula to one in which states were given a "per-capita" allotment, and reduced the growth rate in Federal Medicaid contributions to one below the expected growth in Medical spending. The combination of these changes led most analysts to predict that Medicaid enrollment to be reduced and eligibility among childless adults to be eliminated or scaled back.

There is substantial research showing that Medicaid eligibility can improve access to health care among childless adults (e.g., Finkelstein et al., 2012; Sommers et al., 2017; DeLeire et al., 2013; Burns et al., 2014). There is also evidence that Medicaid expansion can improve health (e.g, Finkelstein et al.,

2012) and reduce mortality (Sommers et al., 2012; Currie and Gruber 1996), though sometimes findings are mixed (Baicker et al. 2013; Kaestner et al. 2016).

There is considerable debate over whether Medicaid and in particular the ACA Medicaid expansion affects the labor supply of recipients and their family members. For example, the CBO (2014) estimated that the provisions of the ACA would lead to a 1.5 to 2.0 percent reduction in labor supply. Part of this effect, according to the CBO, is due to the expected impact of Medicaid on labor supply of adults, particularly childless adults.

A growing number of studies have examined the impact of Medicaid eligibility on the labor supply of childless adults, as states have only recently begun extending coverage to this population. Baicker et al. (2014) examined the impact of the extension Medicaid coverage to poor adults on the employment of recipients through the Oregon Health Insurance Experiment and found modest reductions in employment, of 1.6 percentage points, that are not statistically different from zero. Dague, DeLeire, and Leininger (2017) examined the effect of an imposition of an enrollment cap on low-income childless adults for a public insurance program in Wisconsin and found that it led to a 5-percentage point increase in both employment and earnings. In a study closely related to this one, Garthwaite, Gross, and Notowidigdo (2014) examined eligibility contractions in Tennessee's program (TennCare), which had been available to childless adults until July 2005, and find both large reductions in Medicaid coverage and large increases in employment rates among childless adults in Tennessee following this contraction.

Because the size of the labor supply disincentive effects of public insurance likely vary with the economic environment, it is important to obtain a variety of estimates. This is especially true given the divergent results found in the three recent papers discussed above (Garthwaite, Gross, and Notowidigdo, 2014; Baicker et al., 2014; Dague, DeLeire, and Leininger, 2017). Learning about the

likely labor market effects of the ACA on low-income childless adults is also of critical policy importance (CBO 2014).

In this paper, I examine the effects of an eligibility contraction that occurred when Tennessee discontinued its expansion of TennCare in 2005. This examination contributes in the literature in two ways. First, while most previous studies (with two exceptions, which I discuss below) have examined the effects of expansions in Medicaid eligibility, in this paper I examine the impact of a disenrollment. Knowing the effects of Medicaid disenrollment on an adult population is relevant in today's policy environment.

Three previous studies that I am aware of have also examined the TennCare contraction in 2005. One study, discussed above, is Garthwaite, Gross, and Notowidigdo (2014) who used March Supplements to the Current Population Survey (CPS) to examine the effect of this eligibility contraction on employment rates among childless adults in Tennessee. Tello-Trillo (2016) used data from the Behavior Risk Factor Surveillance System (BRFSS) and the National Health Interview System to examine the impact of the Medicaid disenrollment on access to care and self-reported health. Ghosh and Simon (2015) used the state-impatient databases and found that the TennCare contraction decreased the share of hospitalizations covered by Medicaid, increased the share of hospitalizations for which the patient was uninsured, and increased uninsured hospitalizations originating from emergency room visits.

As the data sets used in all of these studies are repeated cross-sections. Thus the second contribution of my study is to use individual-level panel data to examine the impact of the Medicaid disenrollment on rates health insurance coverage, employment outcomes, and health and health care access outcomes.

In particular, I use the 2004 Panel of the Survey of Income and Program Participation (SIPP). The use of the SIPP over repeated cross sections such as the CPS or the BRFSS has a few advantages. The first is that the SIPP is a panel

survey, which enables me to both replicate the cross-state and cross-time difference-in-differences design used in previous work as well as follow over time the experiences of those individuals who experienced disenrollment from the TennCare program in July 2005. Second, the SIPP contains a number of outcomes related to health care utilization that are not present in the CPS.

Admittedly, these advantages are small and, as both surveys are products of the U.S. statistical agencies and are designed to be representative at either the national or state level, one would expect to find similar results when using a similar design in the two surveys.

I find that following the change in rules that reduced Medicaid eligibility in Tennessee in July 2005, the fraction of childless adults in Tennesse covered by Medicaid fell by 7 percentage points while uninsured rates increased by 5 percentage points. There is no evidence of an increase in employment rates following disenrollment though some evidence of a decrease in part-time employment and an increase in work-preventing disabilities. Self-reported health and access to medical care worsened as hospitalization rates, doctor visits, and dentist visits all declines. At the same time, there were increases in the use of free clinics and the emergency room, and out-of-pocket medical expenses increased.

In terms of the effects of the TennCare disenrollment on health insurance coverage, my results are consistent with those found in the previous literature generally and with the two studies that previously examined Tennessee. Similarly, the results showing reduced access to health care, worse self-reported health, and higher out-of-pocket medical spending is both consistent with the previous literature generally and with that found in Tello-Trillo (2016). While the previous literature of the effect of Medicaid on labor supply has been mixed, my results are in stark contrast with those found by Garthwaite, Gross, and Notowidigdo (2014) in that I find no evidence that the TennCare disenrollment led to an increase in employment.

The divergent results for employment across studies using different Census surveys suggests that the reliability of the estimates in either study could be questioned. At a minimum, this indicates that there is a substantial amount of uncertainty over what the impact of the TennCare disenrollment was on employment and health coverage outcomes. However, in my view, since the results in this study based on the SIPP more closely align with the modest labor supply effects found in Dague et al. (2017) and in Baicker et al. (2014), it seems more likely that the TennCare disenrollment led to at best modestly sized increases in employment.

II. Background

In 1994, Tennessee created a novel public health insurance expansion that included all individuals, regardless of income or family structure, that were either "uninsured" or "uninsurable." Thus, TennCare covered both higher income individuals as well as childless adults. By comparison, most states at this time did not cover childless adults at income levels near or above the Federal Poverty Level.

In a policy reversal in 2005, following the election of a new Governor, TennCare stopped covering adults over the age of 19 who didn't qualify for traditional Medicaid, effectively disenrolling higher income adults, including most childless adults, between the ages of 19 and 65. This disenrollment led to a reduction in program rolls of over 170,00 childless adults between July 2005 and September 2005 (Gartwaite et al., 2014).

III. Data

The data source for this paper is the 2004 panel of the Survey of Income and Program Participation (SIPP), a product of the U.S. Census Bureau. The

2004 SIPP collects data on sources of income, employment, and sources of insurance coverage for a representative sample of households monthly for a period spanning October 2003 through December 2007. In addition to data collected in the "core survey" which is administered every wave, periodically additional data is collected in "Topical Modules." For example, I use data from Topical Modules administered during waves 3 and 6 which both collected data on self-reported health and health care utilization. These two topical modules were administered from July 2004 through December 2004 and from July 2005 through December 2005 respectively.

Approximately 60,000 households were interviewed in the 2004 panel of the SIPP. We restrict our sample to those households residing in Tennessee or in other states in the Southern Census region (Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, District of Columbia, West Virginia, Alabama, Kentucky, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas). I further restrict the sample to childless adults aged 18 to 64 and keep only individuals with both observations in at least waves 1-6 of the survey, to ensure that outcomes are observed both prior to and following the July 2005 TennCare disenrollment. In sum, my sample consists of 421,637 person-month observations on 20,565 unique individuals. For our health and health access outcomes, which come from a more limited set of months from the Topical Modules, my sample consists of 61,562 person-month observations from 13,544 unique individuals.

Tables 1 and 2 reports summary statistics on our health insurance and employment variables and on our Health variables respectively. These statistics are reported for the sample overall and separately for Tennessee versus other Southern states and separately for the months prior to July 2005 and following July 2005.

IV. Methods

I estimate individual level fixed effects models of the following form:

(1) $$Y_{it} = \beta_0 + \beta_1 Post_{it} + \beta_2 TN_{it} + \beta_3 Post{\times}TN_{it} + \varphi_i + \varepsilon_{it}$$

where:

Y_{it} is the outcome (source of health insurance coverage, employment, health, or medical care access) for individual i in month t,

$Post_{it}$ is an indicator for months beginning in July 2005,

TN_{it} is an indicator for whether the individual resides in Tennessee, and

φ_i is an individual fixed effect.

I also estimate a related model in which we allow for an "implementation" period, July 2005 through September 2005.

(2) $$Y_{it} = \beta_0 + \beta_1 Post_{it} + \beta_2 Imp_{it} + \beta_3 TN_{it} + \beta_4 Post{\times}TN_{it} + \beta_5 Imp{\times}TN_{it} + \varphi_i + \varepsilon_{it}$$

where:

Imp_{it} is an indicator for months between July 2005 and September 2005, and

$Post_{it}$ is an indicator for months beginning in October 2005.

Finally, for the outcomes based on the "core" survey for which we have a sufficient number of months, we also estimate a flexible model in which we allow for a full set of month indicators and Tennessee x month interactions.

(3) $$Y_{it} = \beta_0 + \sum \beta_j Month_{it} + \beta_3 TN_{it} + \sum \gamma_j Month{\times}TN_{it} + \varphi_i + \varepsilon_{it}$$

where:

$Month_{it}$ is a set of monthly indicator variables for months between February 2004 and December 2007.

I cluster all standard errors at the state level. I also, for comparison, estimate models without the individual level fixed effects but with a set of demographic variables. These results are available upon request.

V. Results

In this section, I report the results of our individual fixed effects models of the effect of the TennCare disenrollment on health insurance coverage, employment, and health and healthcare access outcomes.

A. Health Insurance Coverage Outcomes

I consider four health insurance outcomes: Medicaid, Uninsured, Private Insurance, and Medicare. Individuals covered by private insurance can include those covered by their own group policy, another's group policy, or a non-group policy. We both report estimates of equations (1) and (2) in Table 3 and display graphical results based on estimates of equation (3).

The results show that changes in TennCare eligibility rules led to a large decline in Medicaid enrollment among childless adults in Tennessee relative to other Southern states and that this disenrollment resulted in a loss of insurance coverage, as few individuals transitioned into other sources of coverage.

Figure 1 displays the estimated shares of childless adults, aged 18 to 64, in Tennessee and in other Southern states enrolled in Medicaid in each month from January 2004 through July 2007. The shaded area in the figure represents the months July 2005 through September 2005. July 2005 represents the beginning of the "post period" in our main models and September 2005 represents the beginning of the "post period" in our models that allow for an implementation

period. As evident in the figure, there was a large, roughly 7-percentage point decline in Medicaid enrollment among childless adults in Tennessee beginning in July 2005 and no decline in other Southern states.

Figure 2 reports the estimated shares of childless adults without any source of health insurance coverage in Tennessee and in other Southern states. The share of childless adults who were uninsured in Tennessee increased roughly 5 percentage points beginning in July 2005. As with Medicaid, there was no decline in the share that were uninsured in other Southern states.

Figures 3 and 4 show the estimated shares of childless adults in Tennessee and in other Southern states with any form of private health insurance and with Medicare, respectively. Childless adults in Tennessee did not see an increase in private insurance initially following the July 2005 disenrollment from TennCare, but there was a small increase the share covered by private insurance in mid 2007.[1] By contrast, the share of childless adults covered by Medicare increased by a small amount beginning in July 2005. As all of the individuals in our sample are between the ages of 18 and 64, the individuals gaining Medicare coverage are likely doing so through disability. Since the increase in Medicare coverage appears to begin immediately following July 2005, it is possible that many were dually eligible for Medicaid and Medicare.

Table 3 presents the results of our estimates of the fixed effects models described by equations (1) and (2). For each outcome, the first column set the post-period to begin in July 2005, while the second column sets the post-period to begin in October 2005 and allows for an implementation period from July-September 2005. Following the TennCare disenrollment, the share of childless adults covered by Medicaid fell by 6.5 to 6.9 percentage points, and the uninsured

[1] Figures showing the separate contributions of private own group coverage, private coverage through another's group policy, and private non-group coverage are presented in the Appendix.

rate increased by 4.7 to 5.0 percentage points. The difference was the result of small increases in the share with private insurance and with Medicare coverage.

B. Employment Outcomes

Next, I consider four binary employment outcomes: an indicator for whether the individual had a job at least one week during the month, whether the individual worked fulltime (worked more than 35 hours), whether the individual worked part-time (worked less than 35 hours), and whether the individual reports a work-preventing disability. The results show that changes in TennCare eligibility rules did not lead to any economically or statistically meaningful increase in employment among childless adults in Tennessee relative to other Southern states. There is some indication of a reduction in part-time work and increase in reported disabilities, however.

Figure 5 displays the estimated shares of childless adults that were employed in each month from January 2004 through July 2007 in Tennessee and in other Southern states. The employment rate in Tennessee is consistently roughly 3 percentage points lower that the employment rate in other Southern states. Other than the level difference, both employment rates track each other closely and there is no noticeable change in the employment rate of childless adults in Tennessee around the time of TennCare disenrollment, July 2005.

Figures 6 and 7 display the estimated shared of childless adults in Tennessee and in other Southern states that is employed fulltime and that is employed part-time, respectively. While there is little change in these shares immediately following July 2005, there is some visual support suggesting that there was a shift from part-time to fulltime employment beginning in mid-2006.

Figure 8 displays the estimated shares of childless adults in Tennessee and in other Southern states that report having a work-preventing disability. Again,

there is little change in this share immediately following July 2005, but some visual support suggesting that there was an increase in disabilities in mid-2006.

Table 4 presents the results of our fixed effects models for employment outcomes. Following the TennCare disenrollment, the share of childless adults employed fell a statistically insignificant 0.4 percentage points. While the estimated increase in the share working fulltime is positive (0.5 percentage points), it too is not statistically different from zero. The estimated increase in the share working part-time, however, is a statistically meaningful -0.9 percentage points. Finally, the estimate of the increase in the share reporting a work-preventing disability is 0.3 percentage points (which is about a 1.6 percent effect).

C. Health and Health Care Access

When we turn to health and health care outcomes, we only have data from Topical Modules 3 and 6 and thus only have data for the months July 2004 through December 2004 and July 2005 through December 2005. Fortunately, these span the date that TennCare disenrollment began (July 2005). Unfortunately, the "post-period" is truncated relative to the number of months available from the "core" survey. The outcomes I examine include: a binary indicator of whether the individual self-reports their health to be "excellent or very good," an indicator of having had a hospitalization in the past 12 months, number of days spent in the hospital, number of doctor visits, number of dentist visits, an indicator for any visits to a free clinic or public health department, and indicator for any emergency room visits, and total dollars spent out-of-pocket on medical care.

Table 5 reports the results of equations (1) and (2) for our health and health care access related outcomes. The results suggest that the health of

childless adults worsened and that they experienced a changing pattern of healthcare utilization.

In particular, self-reported "excellent/very good" health fell between 3.6 to 3.9 percentage points (depending upon specification), suggesting that the perceived health of childless adults worsened following Medicaid disenrollment. Hospitalization rates fell 1.8 to 2.1 percentage points, and hospital days fell a statistically insignificant 2.8 to 5.5 percentage points. The number of visits to the doctor decreased by 0.65 to 0.67 visits and the number of visits to the dentist decreased by 0.21 visits. These results are consistent with Medicaid coverage increasing access to medical care including preventive care such as dentist visits. However, as there is little evidence of a change in hospital days, it also suggests that individuals with major acute illnesses have been less affected.

The decline in access was partially offset by an increase in the share that received medical care in a free clinic or public health facility (1.6 to 1.9 percentage point increase) and by an increase in the share that received care in an emergency room (0.7 to 0.8 percentage point increase).

Finally, Medicaid does not only increase access to medical care, it also protects individuals from the financial risk associated with the use of medical care. Consistent with the idea that the loss of Medicaid would increase financial exposure, we see an increase in out-of-pocket medical spending of about $36 to $42 dollars (about a 7 - 8% increase).

VI. Triple Differences

Two previous studies of the 2005 TennCare disenrollment used both a differences-in-differences design similar to one I employ in this paper and a triple difference design in which adults with children were used as an additional control for adults without children (Garthwaite et al, 2014; Tello-Trillo 2016). In this

section, I explore whether a triple-difference specification is an appropriate design to analyze the impact of the TennCare disenrollment using data in the SIPP.

Table 6 reports the results of a triple difference specification for the outcomes "Medicaid" and "Uninsured". The results indicate that both adults with children and adults without children in Tennessee experienced declining Medicaid coverage rates following July 2005. Adults with children saw a decline of 5.9 percentage points and adults without children saw a decline of 6.9 percentage points. While the decline in Medicaid coverage among childless adults is statistically larger than the decline among parents, this difference may not be economically meaningful.

Childless adults and parents experienced near identical percentage point increases in the share uninsured following July 2005, with parents seeing a 5.5 percentage point increase in the uninsured rate and childless adults seeing a 5.0 percentage point increase.

Similar conclusions can be drawn from Figures 9 and 10, which show the estimated trends in the shares covered by Medicaid and Uninsured in Tennessee and in other Southern states. The shares among both parents and childless adults were fairly stable over the entire time period, while childless adults and parents in Tennessee had similar percentage point decreases in the shares covered by Medicaid and similar percentage point increases in the shares uninsured.

Because the "treatment" appears to be nearly the same for parents as for childless adults, when using data from the SIPP, I do not consider the triple difference specification to be appropriate in this context.

VII. Discussion and Conclusion

In this paper, I examine the effects of an eligibility contraction that occurred when Tennessee discontinued its expansion of TennCare in 2005. I find

that following the change in rules that reduced Medicaid eligibility in Tennessee in July 2005, the fraction of childless adults in Tennessee covered by Medicaid fell by 7 percentage points while uninsured rates increased by 5 percentage points. There is no evidence of an increase in employment rates following disenrollment though some evidence of a decrease in part-time employment and an increase in work-preventing disabilities. Self-reported health and access to medical care worsened as hospitalization rates, doctor visits, and dentist visits all declines. At the same time, there were increases in the use of free clinics and the emergency room, and out-of-pocket medical expenses increased.

In terms of the effects of the TennCare disenrollment on health insurance coverage, my results are consistent with those found in the previous literature generally and with the two studies that previously examined Tennessee. Similarly, the results showing reduced access to health care, worse self-reported health, and higher out-of-pocket medical spending is both consistent with the previous literature generally and with that found in Tello-Trillo (2016) and Ghosh and Simon (2015). While the previous literature of the effect of Medicaid on labor supply has been mixed, my results are in stark contrast with those found by Garthwaite, Gross, and Notowidigdo (2014) in that I find no evidence that the TennCare disenrollment led to an increase in employment.

Recent policy discussions in Congress have involved changes to the Federal financing of Medicaid that likely would have resulted in substantial numbers of individuals, in particular childless adults, losing Medicaid coverage (CBO 2017). This findings of this study suggest that such a disenrollment would lead to a substantial increase in the uninsured rate, worsening health and access to health care, increased financial exposure of medical risk among former recipients, and no increased in employment. The results on health insurance coverage and health care access are consistent with the majority of the literature of the effects of Medicaid expansion (Sommers et al., 2017). However, these results are in

contrast to a previous study of the impact of TennCare on employment that used a different Census data product—the Current Population Survey.

The divergent results for employment across studies using different Census surveys suggests that the reliability of the estimates of the effect of TennCare on employment in either study could be questioned. At a minimum, the results presented in this paper indicate that there is a substantial amount of uncertainty over what the impact of the TennCare disenrollment was on employment outcomes. However, in my view, since the results in this study more closely align with the modest labor supply effects found in Dague et al. (2017) and in Baicker et al. (2014), it seems likely that the TennCare disenrollment led to either no change in employment of childless adults or, at most, modestly sized increases in employment.

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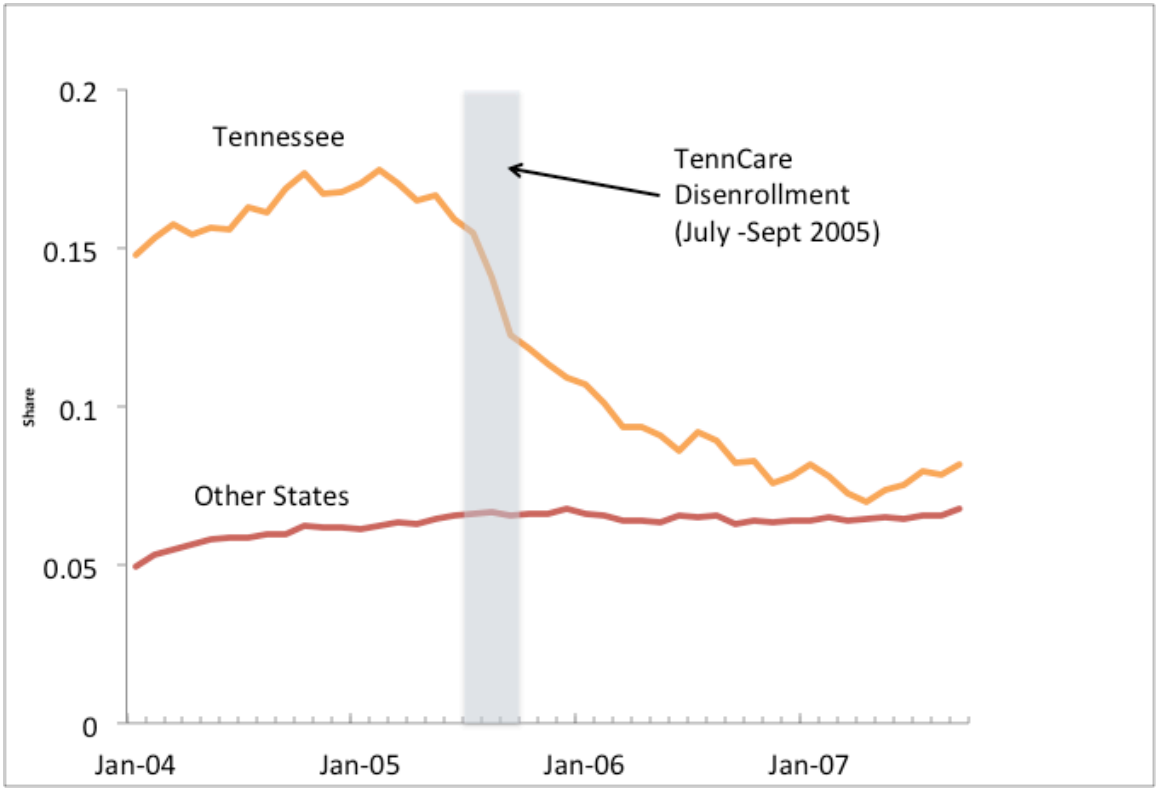
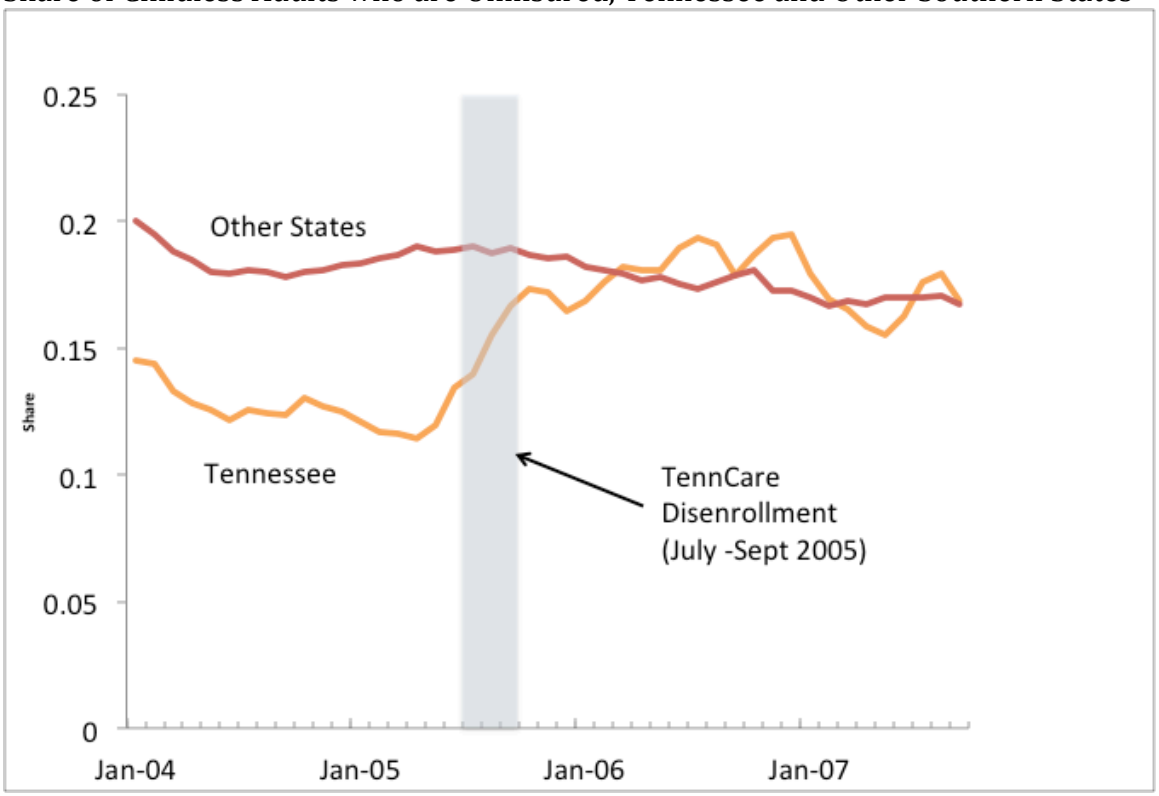
Figure 1.
Share of Childless Adults with Medicaid Coverage, Tennessee and Other Southern States



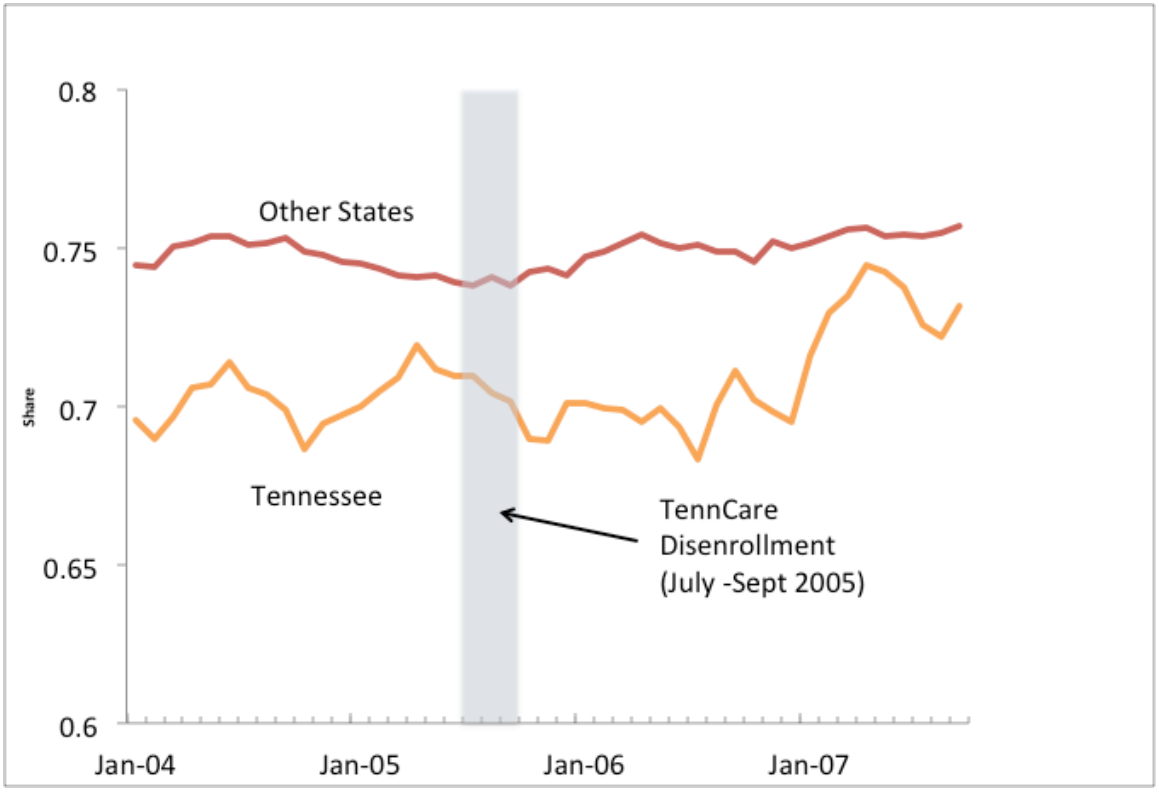
Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 2.
Share of Childless Adults who are Uninsured, Tennessee and Other Southern States



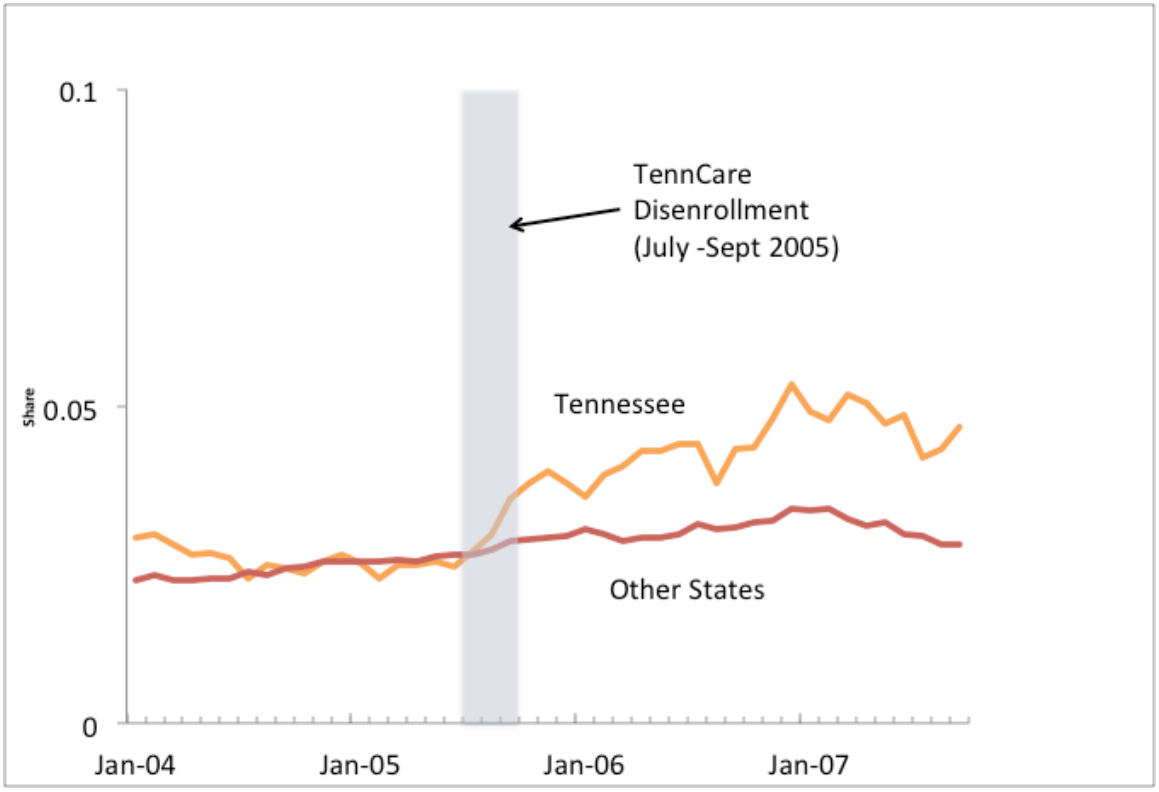
Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 3.
Share of Childless Adults with Private Insurance, Tennessee and Other Southern States



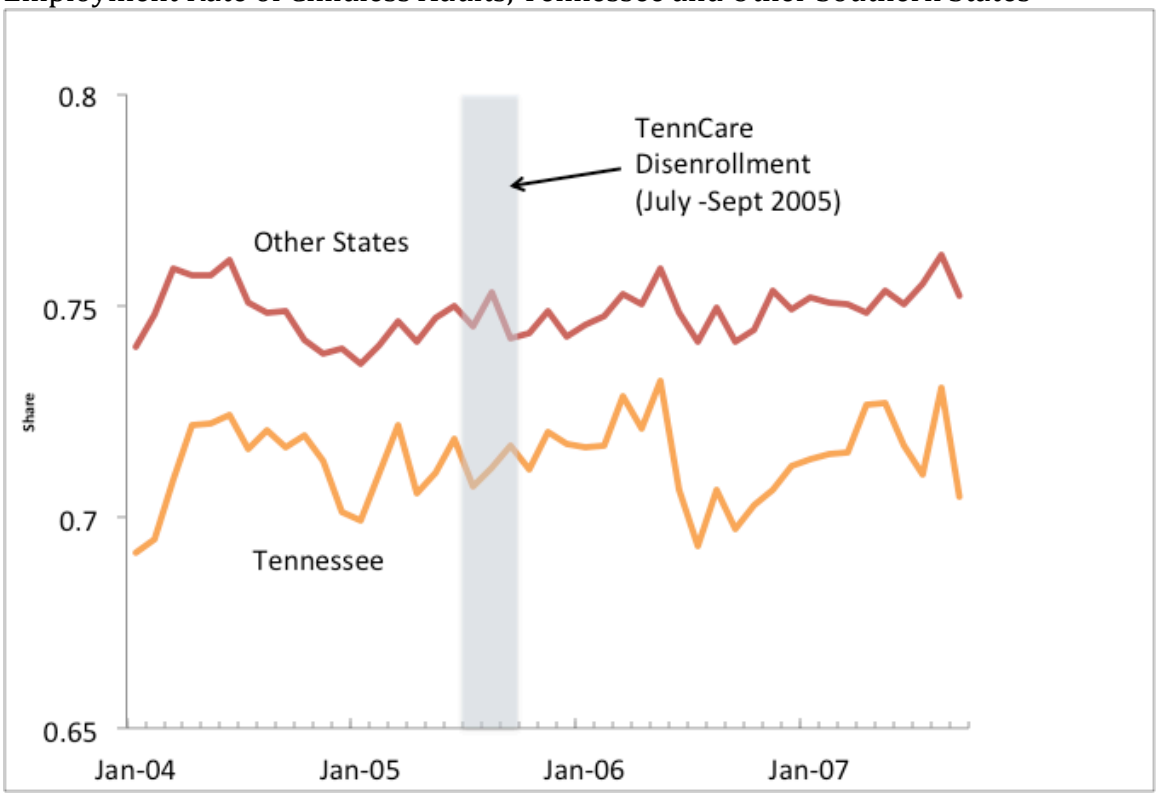
Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 4.
Share of Childless Adults with Medicare Coverage, Tennessee and Other Southern States



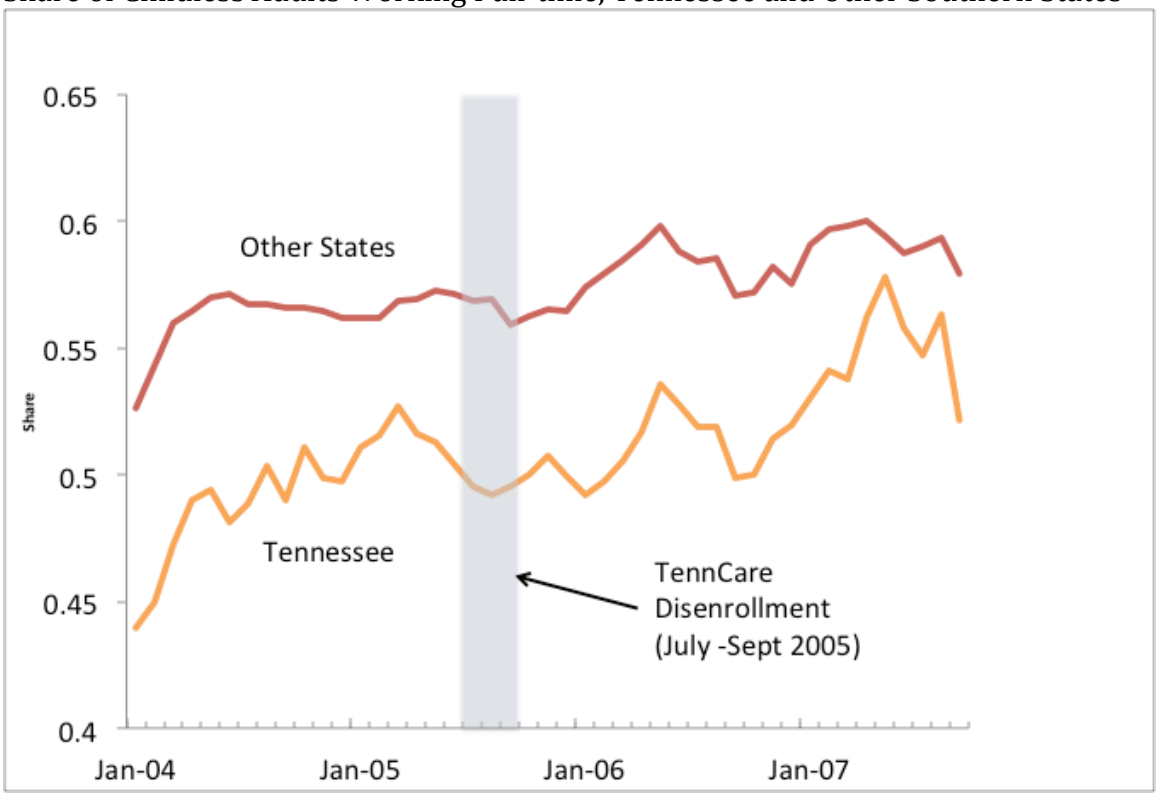
Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 5.
Employment Rate of Childless Adults, Tennessee and Other Southern States



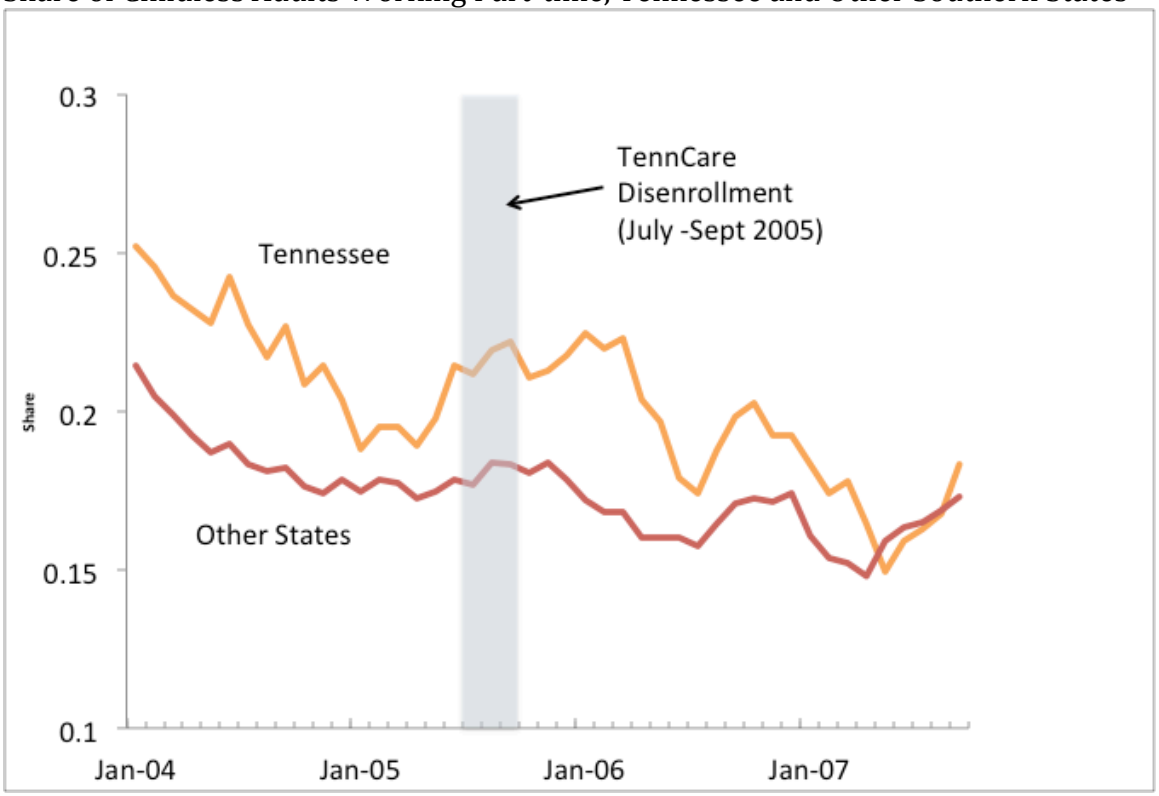
Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 6.
Share of Childless Adults Working Full-time, Tennessee and Other Southern States



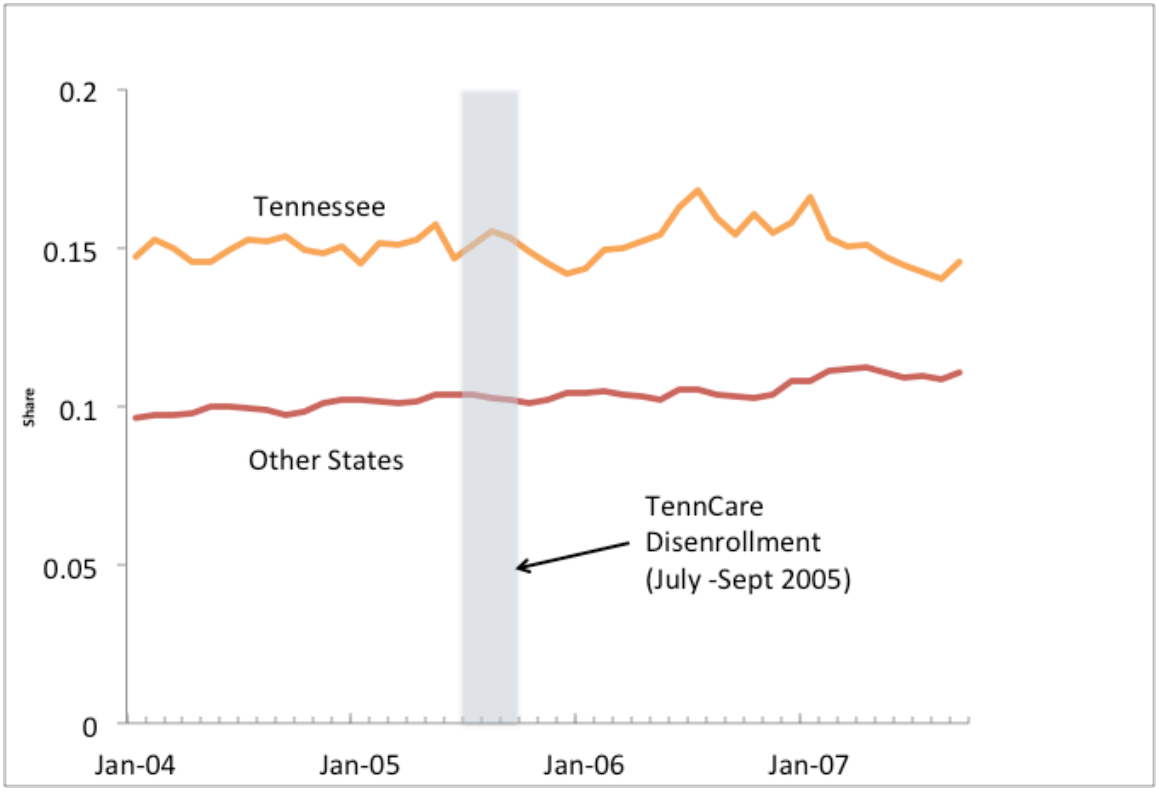
Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 7.
Share of Childless Adults Working Part-time, Tennessee and Other Southern States



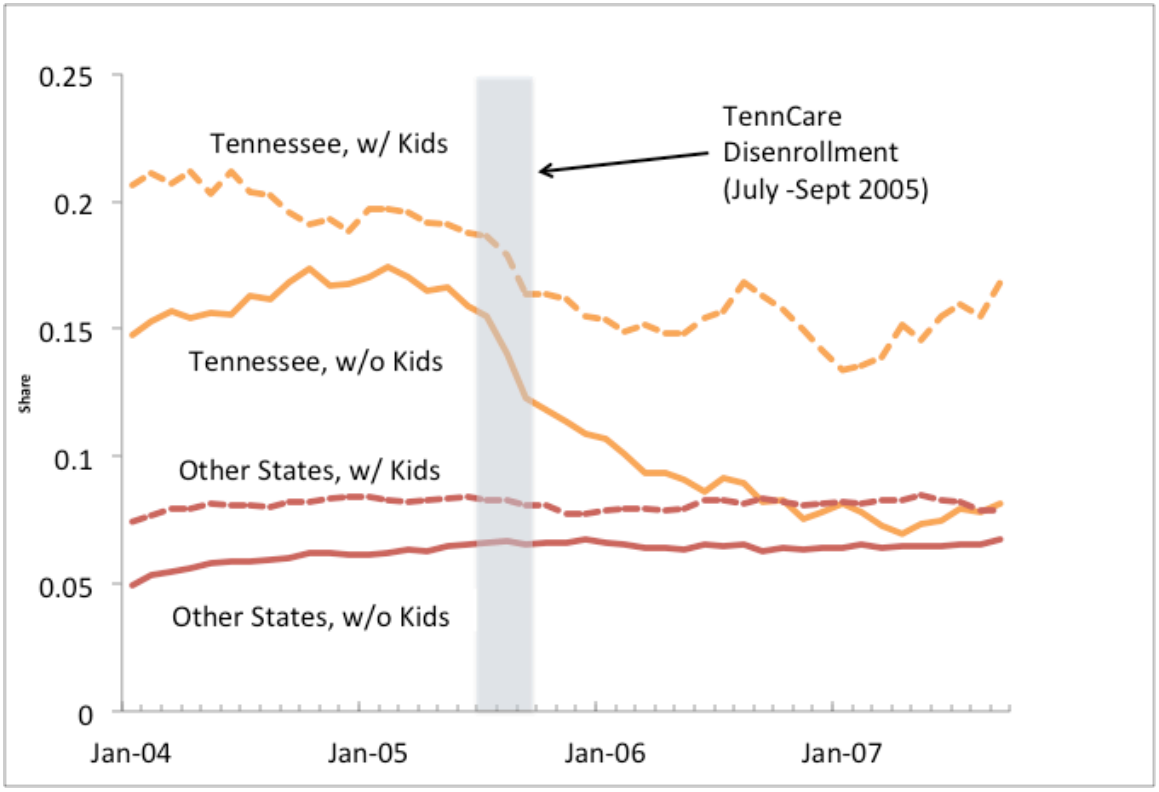
Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 8.
Share of Childless Adults with a Work-Preventing Disability, Tennessee and Other Southern States



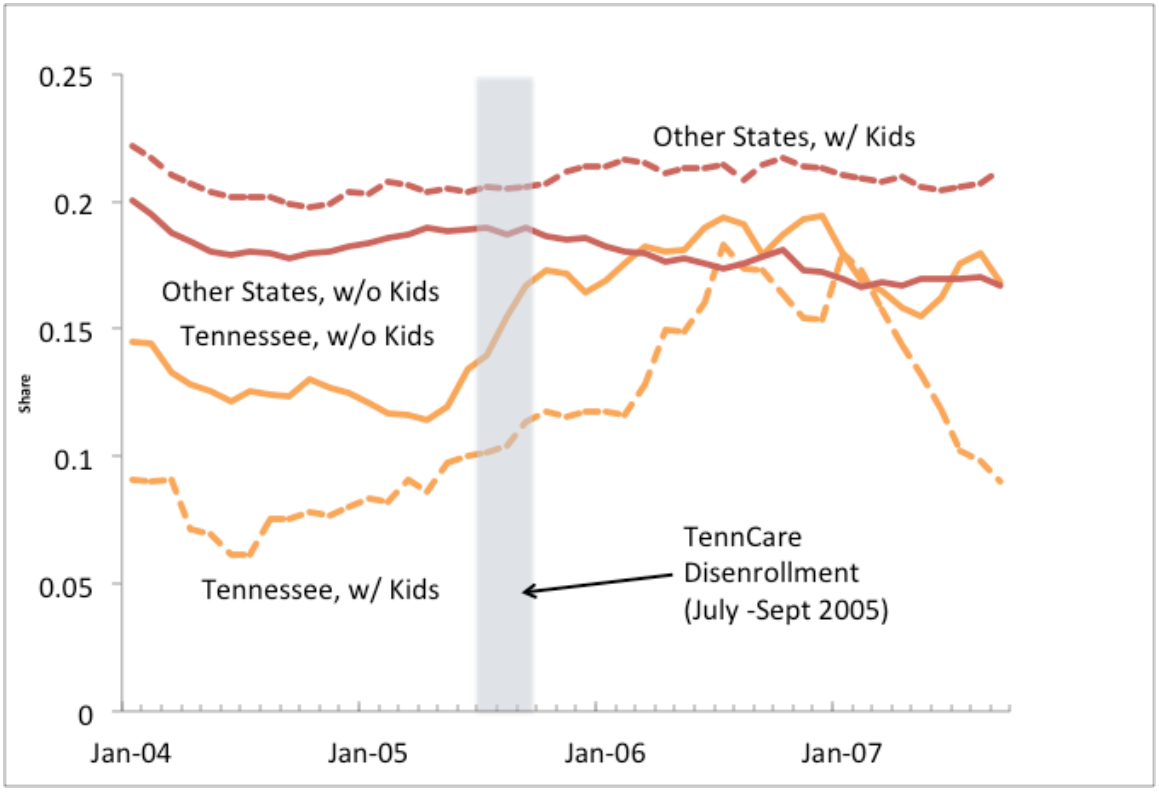
Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 9.
Shares of Childless Adults and of Parents with Medicaid Coverage, Tennessee and Other Southern States



Source: 2004 Panel of the Survey of Income and Program Participation.

Figure 10.
Shares of Childless Adults and of Parents who are Uninsured, Tennessee and Other Southern States



Source: 2004 Panel of the Survey of Income and Program Participation.

Table 1
Summary Statistics Health Insurance and Employment Variables

	All States	Tennessee		Other States	
	All Periods	Pre-period	Post-period	Pre-period	Post-period
Insurance Coverage					
Medicaid	0.066	0.158	0.087	0.060	0.065
Medicare	0.028	0.027	0.044	0.025	0.030
All Private	0.746	0.703	0.712	0.745	0.751
Private Group (Own)	0.480	0.448	0.462	0.478	0.486
Private Group (Other)	0.189	0.189	0.187	0.195	0.183
Non-group	0.077	0.067	0.064	0.072	0.082
Uninsured	0.179	0.131	0.176	0.187	0.175
Employment Outcomes					
Employed	0.746	0.711	0.714	0.747	0.750
Employed fulltime	0.569	0.493	0.523	0.561	0.583
Employed parttime	0.177	0.218	0.191	0.186	0.167
Work-preventing Disability	0.106	0.150	0.151	0.100	0.106
Demographics					
Male	0.514	0.516	0.531	0.509	0.516
Age 18 - 30	0.262	0.271	0.260	0.270	0.255
Age 31 - 45	0.234	0.209	0.216	0.238	0.232
Age 46 - 55	0.273	0.285	0.247	0.281	0.267
Age 56 - 64	0.231	0.234	0.277	0.211	0.246
Graduate Degree	0.087	0.079	0.079	0.084	0.091
College Degree	0.082	0.078	0.113	0.081	0.080
Some College	0.200	0.165	0.132	0.206	0.201
High School Degree	0.521	0.526	0.550	0.513	0.526
No High School Degree	0.110	0.152	0.125	0.116	0.101
White	0.696	0.853	0.838	0.688	0.685
Black	0.179	0.111	0.125	0.183	0.182
Other Race	0.028	0.024	0.028	0.028	0.028
Hispanic	0.097	0.012	0.009	0.100	0.104
Married	0.498	0.514	0.533	0.492	0.500
Number of Observations	421,637	17,555	14,023	230,219	159,840
Number of Individuals	20,565	1,397		19,168	

Notes: The post period is July 2005 - December 2007 and the pre period is October 2003 - June 2005. The sample includes adults without children between the ages of 18 and 64.

Table 2
Summary Statistics Health Variables

	All States	Tennessee		Other States	
	All Periods	Pre-period	Post-period	Pre-period	Post-period
Health Outcomes					
Excellent / Very Good Health	0.589	0.487	0.452	0.593	0.599
Any Hospitalizations	0.084	0.099	0.085	0.082	0.086
Hospital Days	0.537	0.446	0.382	0.572	0.515
Doctors Visits	4.565	5.796	5.409	4.405	4.613
Dentist Visits	1.240	1.417	1.179	1.249	1.222
Any Free Clinic	0.018	0.015	0.030	0.018	0.018
Any ER Visits	0.009	0.006	0.012	0.009	0.008
OOP Medical Spending	$496.46	$518.17	$580.41	$488.60	$498.77
Demographics					
Male	0.513	0.520	0.520	0.509	0.515
Age 18 - 30	0.251	0.244	0.218	0.254	0.251
Age 31 - 45	0.231	0.209	0.217	0.235	0.229
Age 46 - 55	0.283	0.300	0.281	0.291	0.273
Age 56 - 64	0.234	0.246	0.285	0.220	0.247
Graduate Degree	0.087	0.080	0.083	0.086	0.088
College Degree	0.078	0.077	0.076	0.077	0.079
Some College	0.211	0.176	0.166	0.215	0.210
High School Degree	0.513	0.506	0.521	0.510	0.516
No High School Degree	0.112	0.161	0.155	0.111	0.107
White	0.773	0.872	0.878	0.767	0.767
Black	0.180	0.094	0.088	0.186	0.185
Other Race	0.047	0.034	0.034	0.047	0.048
Hispanic	0.091	0.008	0.012	0.096	0.095
Married	0.491	0.553	0.571	0.484	0.490
Number of Observations	61,562	2,345	2,010	30,839	26,368
Number of Individuals	13,544	948		12,596	

Notes: The post period is July 2005 - December 2005 and the pre period is July 2004 - December 2004. The sample includes adults without children between the ages of 18 and 64.

Table 3
Individual-Level Fixed Effects Models: Health Insurance

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Medicaid		Uninsured		Private		Medicare	
Tenn X Post	-0.0645**	-0.0688**	0.0469**	0.0498**	0.0124**	0.0135**	0.0052**	0.0055**
	(0.0016)	(0.0017)	(0.0036)	(0.0038)	(0.0036)	(0.0038)	(0.0014)	(0.0015)
Tenn X Imp		-0.0319**		0.0214**		0.0101**		0.0004
		(0.0011)		(0.0032)		(0.0033)		(0.0007)
Mean of dependent variable in Tennessee in pre-period	0.158		0.131		0.703		0.027	

Notes: In columns (1), (3), (5), and (7), the post period includes July 2005 - December 2007. In columns (2), (4), (6), and (8), the implementation period includes July 2005 - September 2005 and the post period includes October 2005 - December 2007. In all columns the pre period is October 2003 - June 2005.

Table 4
Individual-Level Fixed Effects Models: Labor Market Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Employment		Full-time		Part-time		Disabled	
Tenn X Post	-0.0038	-0.0036	0.0054	0.0051	-0.0092**	-0.0086*	0.0025*	0.0027*
	(0.0028)	(0.0030)	(0.0032)	(0.0037)	(0.0036)	(0.0042)	(0.0012)	(0.0013)
Tenn X Imp		0.0012		-0.0028		0.004		0.001
		(0.0023)		(0.0050)		(0.0062)		(0.0012)
Mean of dependent variable in Tennessee in pre-period	0.711		0.493		0.523		0.150	

Notes: In columns (1), (3), (5), and (7), the post period includes July 2005 - December 2007. In columns (2), (4), (6), and (8), the implementation period includes July 2005 - September 2005 and the post period includes October 2005 - December 2007. In all columns the pre period is October 2003 - June 2005.

Table 5
Individual-Level Fixed Effects Models: Health Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Excellent/Very Good Health		Any Hospitalization		Hospital Days		Doctor Visits	
Tenn X Post	-0.0394**	-0.0357**	-0.0182**	-0.0205**	-0.0287	-0.0545	-0.6696**	-0.6534**
	(0.0074)	(0.0082)	(0.0019)	(0.0023)	(0.0684)	(0.0694)	(0.2074)	(0.2207)
Tenn X Imp		-0.0441**		-0.0185**		-0.038		-0.8565**
		(0.0076)		(0.0022)		(0.0861)		(0.1965)
Mean of dependent variable	0.487		0.099		0.446		5.796	

	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Dentist Visits		Any Free Clinic		Any ER Visits		OOP Medical Care	
Tenn X Post	-0.2096**	-0.2050**	0.0165**	0.0194**	0.0079**	0.0073**	36.14*	42.06*
	(0.0186)	(0.0218)	(0.0015)	(0.0017)	(0.0020)	(0.0022)	(17.17)	(23.89)
Tenn X Imp		-0.2305**		0.0143**		0.0100**		19.70
		(0.0158)		(0.0017)		(0.0023)		(23.76)
Mean of dependent variable	1.417		0.015		0.006		$518.17	

Notes: In columns (1), (3), (5), and (7), the post period includes July 2005 - December 2005. In columns (2), (4), (6), and (8), the implementation period includes July 2005 - September 2005 and the post period includes October 2005 - December 2005. In all columns the pre period is July 2004 - December 2004.

Table 6
Triple Difference Individual-Level Fixed Effects Models: Health Insurance Outcomes

	(1)	(2)
	Medicaid	Uninsured
Tenn X Post	-0.0588**	0.0545**
	(0.0027)	(0.0032)
Tenn X Post X No Kids	-0.0100**	-0.0047
	(0.0018)	(0.0031)
Mean of dependent variable in Tennessee in pre-period	0.158	0.131

Notes: In both columns the post period includes July 2015 - December 2017 and the pre period is October 2013 - June 2015.