

# Does Wal-Mart Cause an Increase in Anti-Poverty Program Expenditures?

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**JEL Classification:** R11, R51, H71

**Abstract:** As the largest private sector employer in the United States, Wal-Mart experiences considerable scrutiny over its influence on a number of regional fiscal and economic issues. These include its impact on the local retail market structure, land use patterns, local fiscal conditions and general business practices. Criticism of Wal-Mart's business practices include, but are not limited to its anti-unionization efforts, sale of imported goods, wage and compensation structure and the use of Federal and state anti-poverty transfers by its employees. In this paper I evaluate the concerns regarding the role of Wal-Mart in changing expenditures on Federal and state anti-poverty transfers in the United States. Using a panel of the conterminous 48 states, correcting for time and spatial autocorrelation and local government mix and policy changes, I find the number of Wal-Marts, and their employment share in the retail sector have no impact on Foodstamps expenditures. Expenditures on AFDC/TANF are unaffected by Wal-Mart in the test using the number of stores to represent Wal-Mart's presence. In the retail employment share, the impact is negative, with a 1 percent increase in Wal-Mart's share reduced AFDC/TANF expenditures by 3.3 percent. I find that Wal-Mart does increase Medicaid expenditures by roughly \$898 per worker, which is consistent with other studies of the Medicaid costs per low wage worker across the United States.

**Disclosure:** The author of this study owns no stock in Wal-Mart or any related firm (other than that held by the mutual fund companies Vanguard and TIAA-CREF). I have performed no paid consulting services from any retail firm, its developers, local governments or related entities since 2002 (though I continue to field frequent questions on my earlier research). I have received no honoraria related to Wal-Mart research (other than travel costs paid by the Federal Reserve Bank of Richmond in 2001). In short, except for roughly \$1,500 purchases of diapers annually since 1999 I have no financial relationship with Wal-Mart or any affiliate that I am aware of.

**The views expressed in this paper are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense or the U.S. Government**

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## **Introduction**

As the largest private sector employer in the United States, Wal-Mart experiences considerable scrutiny over its influence on a number of regional fiscal and economic issues. These include its impact on the local retail market structure, land use patterns, local fiscal conditions and general business practices. Criticism of Wal-Mart's business practices include, but are not limited to its anti-unionization efforts, sale of imported goods, wage and compensation structure and the use of Federal and state anti-poverty transfers by its employees.

In this paper I evaluate the latter concerns regarding the role of Wal-Mart in changing expenditures on Federal and state anti-poverty transfers in the United States. I begin by reviewing the literature on fiscal and commercial economic impacts of Wal-Mart. This is followed by a description of the Medicaid, Foodstamps and Aid to Families of Dependent Children (AFDC) and Temporary Assistance to Needy Families (TANF). I then construct an empirical model of Wal-Mart's impact on Medicaid, Foodstamps and AFDC/TANF expenditures. I end with a discussion of my findings, and conclusions.

## **Studies of Wal-Mart**

Empirical evaluations of Wal-Mart impact on local economies began with Ken Stone's [1988] study of the impact of Wal-Mart on small towns and communities in Iowa. Stone offers mixed evidence of the impact, noting increased retail sales in cities with Wal-Mart (though the net effect is smaller than the gross effect of a new store). He finds the impact fades over time, and that Wal-Mart stores locating outside small towns reduced retail employment and businesses within the small towns, even if the overall impact was positive. Stone found in these (and later studies) mixed impacts on associated retail.<sup>1</sup> These studies suffer the inevitable problems with case studies in that they fail to control for pre-existing or coincident factors which may affect the results.

Keon, Robb and Franz [1989] and Ozment and Martin [1990] examined the impact of Wal-Mart on the structure of retail markets. Both studies report some modest positive impacts on wages, employment and number of businesses within counties with Wal-Mart stores, with the

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<sup>1</sup> See Stone (1989, 1995, 1997) these papers restate many of the same findings, but with further analysis of the cause and the interim changes to the state of the literature. Also see Stone, Artz and Myles, 2002. These studies also offer both policy guidance and recommendations for retailers coexisting with Wal-Mart.

latter emphasizing the possibility that Wal-Mart chose faster growing counties as potential new store sites distorts the results. This endogeneity concern continues to plague analysis of Wal-Mart entrance.

Later studies (Barnes and Connell, 1996; Ketchum and Hughes, 1997) examined Wal-Marts impact while attempting to control for pre-existing conditions in regions. Both studies examined retail sales and employment growth, and found no evidence of increases in the number of retail firms. Barnes and McConnell found a modest decline in the number of specialty retail stores at the county level. Other studies repeat many of these findings (see Hornbeck, 1994; McGee and Gresham, 1995; Artz, 1999; Artz and McConnon, 2001; Stone, Artz and Myles, 2002; and Mehta, Baimann and Persky 2004). Each of these studies suffers some common weaknesses. Absence of convincing controls for underlying economic conditions, potential concern over selection bias and failure to make statistical comparisons of impacts serves to weaken many of the conclusions of these studies. The absence of econometric analysis of the issue failed to remove ambiguity from the literature on Wal-Mart.

An econometric study (Hicks and Wilburn, 2001) tested a panel of county level data in West Virginia from 1988 through 2000, analyzing the impact of Wal-Mart's presence on retail industry structure, wages and employment. The time-space recursive model analyzed both within and adjoining county impacts of Wal-Mart. This study found that the entrance of a Wal-Mart store led to a modest increase in the number of retail establishments, a permanent retail employment increase of roughly 54 workers and no impact on retail wages. They tested the endogeneity of the Wal-Mart entrance decision by testing entrance on contemporaneous and lagged growth variables. This is similar to the technique employed by Franklin [2001] who examined the Wal-Mart Supercenter impacts on the structure of grocery stores in metropolitan areas. Both studies concluded empirically that Wal-Mart entrance decisions are independent of regional growth conditions. Also, these researchers offered anecdotal evidence that Wal-Mart is largely unconcerned with local economic conditions when making decisions to open new locations. However, this approach has been criticized (Curs, State and Visser, 2004) for failure to employ an instrumental variable method to account for endogeneity. Also, criticism of the

widespread validity of the findings due the choice of West Virginia as a study region has been offered.<sup>2</sup>

Basker, 2005 performed a similar analysis of a much larger sample of U.S. counties. This analysis used an instrumental variable method to control for endogeneity. This study reports that following an initial increase in retail employment, the three year impact drops to a roughly 55 worker increase, accompanied by a small reduction in the number of small retail firms. Basker also found very modest impacts of Wal-Mart entrance on adjoining counties. Villareal [2005] notes the remarkable similarity of these employment findings to those of Hicks and Wilburn [2001].

The effective criticism of Basker's study focuses on the impact of censoring the sample (elimination of counties with employment levels below 1,500 in 1964, without positive employment growth and without a Wal-Mart prior to 1977) which eliminated the most important regions in terms of policy consideration (Goetz and Swaminathan, 2004). This latter criticism is also raises the specter of selection bias problems in the study as earlier research (Graff, 1998) which identified a specific expansion pattern for Wal-Mart Supercenters in mid-sized towns (which may well have been censored by Basker). Further, failure to control for interstate fiscal differences may offer a different endogeneity concern as states with high levels of local financing may actively seek Wal-Mart stores (Wassmer, 2002). The absence of a correction for spatial autocorrelation in the model leads to concern over bias in the estimation.

Despite the criticisms of both Hicks and Wilburn [2001] and Basker [2005] the similarity of results suggest that claims of the critics regarding Wal-Mart's employment and wage impacts at the county level would fail to enjoy much significant empirical support.

Goetz and Swaminatham [2004] estimate the impact of Wal-Mart on county wide poverty. The authors estimated poverty rates in two time periods, thus permitting a much richer choice of explanatory variables than are typically employed in more dynamic time series models.<sup>3</sup> Employing a two stage estimation technique, which should account for some endogeneity concerns, the authors found that a new Wal-Mart, entering a county between 1987 and 1998 had a marginal impact of 0.2 percent on the county poverty rate, and that stores that

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<sup>2</sup> See [www.preservationist.net/sprawl](http://www.preservationist.net/sprawl) for a remarkably balanced review by an advocacy group of this and other studies.

<sup>3</sup> The choice of the two time period model permitted the use of more detailed (but less frequently collected) Census and USDA data on poverty and regional population characteristics.

existed prior to 1987 increased the poverty rate by just under half that amount. There two major concerns with this study. First, the magnitude of the poverty impact of Wal-Mart estimated by these authors is quite small, and this is not discussed. Second, the claim that the poverty result implies an externality of exchange at Wal-Mart is, I believe, on very shaky theoretical ground.

While the externality argument is a convenient method of explaining possible policy interventions, it is more likely that Wal-Marts behavior is better explained as a public policy result rather than a market failure.<sup>4</sup> Importantly, neither weakness impugns the empirical results, only the potential policy interventions which may be inferred from their findings. Aside from this criticism, Goetz and Swaminathan [2004] offer an important study in that while acknowledging earlier research has found little of the criticism of Wal-Mart to enjoy empirical support.

One criticism of the preceding studies is the emphasis on empirics over theory. The earliest of the studies reviewed above employed descriptive models of the chain of events surrounding Wal-Mart entrance. Both Hicks and Wilburn [2001] and Basker [2005] attribute firm level productivity differentials to explain their results. And, the former authors conclude that protection of local incumbent rents is the source of much of the local disfavor targeting Wal-Mart. Konishi [1999] provides a model of retail concentration which concludes that common consumer demand characteristics can result in concentrated retail markets through a market-size effect. The first venture into formal theory regarding Wal-Mart specifically is offered by Curs, Stater and Visser [2004, 2005] who offer a location model which provides testable hypotheses for land rents for big-box retailers which includes relative location of existing commerce and transportation costs. Hopefully this research will yield compelling empirics in the coming months.

Despite almost two decades of research, the criticism of Wal-Mart and its putative economic and fiscal impacts far outweighs the level of scholarly scrutiny applied to it. A number of advocacy group reports focus on Wal-Marts fiscal impacts. Among these are the Shils Report [1997], an extensive criticism of Wal-Mart described corporate social welfare through a number of anecdotal experiences in local funding issues mostly related to property and sales taxes. Mattera and Purinton [2004] compiled a very long list of examples of Wal-Mart

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<sup>4</sup> Indeed, as this outcome is the result of the intended severance of TANF and Medicaid eligibility, it may be viewed as a successful public policy outcome.

employing local tax incentives (tax increment financing, infrastructure grants, property tax abatement, etc.) to support growth. In a similar strain LeFavre and Hicks [2005] offer a broader theoretical and empirical critique of the role of incentives and economic growth in Michigan, with empirics regarding incentives to wholesale distribution centers (among others) as part of Michigan's MEGA Incentive Program.

The first important study to raise the point of Wal-Mart's employee's reliance on Medicaid was offered by Dube and Jacobs [2004]. These authors describe the potential for Wal-Mart's workers to rely on government assistance by simulating individual worker use of such programs. This simulation model provides much needed evidence of a public finance concerns, but does not provide unassailable evidence that Wal-Mart practices differ systematically from other similar firms. These authors use data from a court case in which Wal-Mart was compelled to release wage data. From these data the authors apply California take-up rates for a variety of public assistance instruments to estimate the difference between Wal-Mart and other retail firms in the state.<sup>5</sup>

Carlson [2005] offers a similar analysis of the government subsidization of Wal-Mart through a variety of transfer instruments in Oregon. This extensive analysis provides estimates of total subsidization of Wal-Mart using representative firm models on 2001 data. As with any study of its type it fails to provide controls. However, this study is as in-depth an analysis of the state level fiscal considerations surrounding the Wal-Mart debate as is available. This is even more remarkable when compared to a 2004 report to Congress (Miller, 2004) which repeats, in some concise detail, all the arguments against Wal-Mart while sidestepping a mention of the considerable theory or evidence to the contrary.<sup>6</sup> These papers inquire whether or not Wal-Mart workers use anti-poverty transfer payments (.e.g Foodstamps, TANF, Medicaid, etc.) at rates that differ from the retail industry in general. The AFL-CIO compiled a list of States in which Wal-Mart has been named as having employees receiving Medicaid (or similar state programs). Using data from this list, I find that in the 10 states where actual numbers of take rates are

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<sup>5</sup> See *Dukes et. al. v Wal-Mart, Inc.* and Drogin, 2003.

<sup>6</sup> This is all the more remarkable given that Carlson's work is an undergraduate honors thesis (which ought to serve as the model for these endeavors) Unfortunately, there would be much value in Miller were it even to offer even a hint of balance (as my findings will later suggest).

known, Wal-Mart employees use Medicaid at rates from 2.3 percent in Washington State to 24.9 percent in Tennessee’s beleaguered TennCare program. See Table 1.

**Table 1, Estimates Wal-Mart Employees and Medicaid Expenditures**

State	Wal-Mart Employees Receiving Medicaid	Medicaid Costs (per worker)	Source
Arizona	9.6%		Arizona Daily Star (confirmed by authors calculations)
Arkansas	8.8%		AFL-CIO (reporting data from Arkansas Human Services Department)
Connecticut	8.9% (Huskey A-B)	\$586 per worker*	AFL-CIO reporting data from State
Florida	13.25%		Orlando Business Journal April 2005
Iowa	4.78%		Associated Press, Aug 2005
Massachusetts	6.9% of	\$246 per worker*	AFL-CIO reporting data from State
Ohio		\$651 per worker†	Hicks, 2005
Oregon		\$311 per worker†	Carlson, 2005
Tennessee	24.9% (TennCare)		Memphis Commercial Appeal and Authors calculations
Washington	2.3%		AFL-CIO reporting data from Washington Health Care Authority
West Virginia	3.6% of		AFL-CIO reporting data from State
Wisconsin	4.31(BadgerCare)	\$174 per worker*	AFL-CIO reporting data from State

\*Data reported from direct expenditures, † Data estimated from study

The only industry wide average I have found for the Trade sector (both retail and wholesale) is 11.8 percent in Nevada (Waddoups, 2004). Shore-Sheppard, Buchmuller and Jensen [2000], note high levels of low income workers receiving Medicaid in a micro-data study.

The literature described above has provided fairly conclusive analysis of the commercial impacts of Wal-Mart. When controlling for other factors, there is strong counter evidence to the argument that Wal-Mart causes net employment decline, mixed evidence of a reduction in the number of firms, and no evidence that Wal-Mart reduces retail wages.<sup>7</sup> However, scholarly research into Wal-Mart’s impact is much needed in a number of areas that bear important insights on land use patterns and the optimal structure of public expenditures for poverty amelioration and health.<sup>8</sup>

The expansion of the literature, though uneven does suggest that analysis of the local fiscal impacts, both revenue and expenditure be more fully evaluated. In addition to the research discussed above policy concerns over Wal-Mart’s fiscal impact are emerging. Calls for a “Wal-

<sup>7</sup> Even the harsh critics of Wal-Mart (Dube and Jacobs, 2004) compare estimates of Wal-Mart wages against regional averages and unionized retail firms to impute costs.

<sup>8</sup> Indeed, it might well be argued that analysis of labor markets would provide more fruitful policy than simply targeting a firm that has been successful in changing retail markets (see Reich, 2005).

Mart Tax” to be levied on firms based upon their share of workers receiving Medicaid have been sufficiently robust that 18 states are at least making efforts to collect data on Medicaid participation by employees.<sup>9</sup> The following sections describe estimates of Wal-Mart im[pact on anti-poverty program financing.

## **A Discussion of Anti-Poverty Programs**

The three major anti-poverty programs I evaluate in this study are AFDC/TANF, Foodstamps and Medicaid. Understanding the potential role Wal-Mart plays in each of these is important in evaluating existing policy or formulating effective policy response in light of changing retail structure. I take them in turn, in increasing complexity in their relationship to Wal-Mart.

The *1935 Social Security Act* created *Aid to Dependent Children*, which was renamed *Aid to Families with Dependent Children* (AFDC) in 1962, and then to *Temporary Assistance to Needy Families* (TANF) as part of the 1996 *Personal Responsibility and Work Opportunity Reconciliation Act* (PRWORA). This suite of related legislation has always supported children in poor, non-working families (or those not receiving other support). Following a peak enrollment in the early 1980’s, the program dropped throughout the 1990’s experiencing only modest growth in the most recent recession. The questions that can be evaluated are whether Wal-Mart contributed to AFDC/TANF expenditures at the state level. The mechanism for this change is either through increasing labor force participation through entry level job opportunities, or net job destruction. I note that Wal-Mart’s expansive growth occurred mostly during a period of rapid decline in caseloads of AFDC and TANF, with increases in the labor force participation rate of the most likely category of recipients (women with children in their 20’s and 30’s). One concern arises, in that state and Federal governments jointly establish payment rates for families. Thus, total expenditures imperfectly reflect the number of cases across states.

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<sup>9</sup> See [www.goodjobsfirst.org](http://www.goodjobsfirst.org) for a frequently updated list of these states. In May 2005, Maryland’s Governor Ehrlich vetoed SB 790/HB 1284, the Fair Share Health Care Fund Act, which required selected firms to pay at least 8% of total employee expenses in health care related activities. This legislation was clearly targeting Wal-Mart stores in Maryland. (though it certainly could effect others). A detailed examination of state policies effecting Supercenter development was also produced for the California Governors Office of Planning and Research (Clanton, and Duffy, 2004).

The Foodstamp program, created in 1964, and adjusted in 1977, provides supplementary income through the purchase of vouchers by poor families. As with AFDC/TANF, states control some eligibility guidelines so expenditures do not translate directly into comparisons of caseloads across states. Also, like AFDC/TANF, the impact of Wal-Mart is clearly whether or not its influence on the retail sector changes poverty expenditures. Foodstamp eligibility begins with those receiving AFDC/TANF, and extends to the working poor on an income adjusted scale. Thus, even if Wal-Mart were to hire recent welfare leavers, these workers may still be eligible for Foodstamps depending on family income and size. Thus, evaluating the role Wal-Mart plays in AFDC/TANF and Foodstamp expenditures is relatively straightforward. Medicaid, the focus of most criticism of Wal-Mart presents a greater analytical challenge.

A central component of the War on Poverty was healthcare for the poor and aged (in *The 1967 Social Security Amendments*). The Medicaid program today provides assistance to a variety of recipients, the poor, disabled and aged. The primary elements of Medicaid from inception through the mid-1990's was as the healthcare component of welfare (then known as *Aid to Families with Dependent Children*) and *Supplemental Security Income*. Medicaid experienced its greatest transformation as part of the 1996 PRWORA in which the traditional linkage between welfare and Medicaid was severed, permitting the working poor to participate in Medicaid. The preservation of Medicaid for the working poor was a necessary concession to liberal lawmakers, and was part of re-worked bill that had twice been vetoed by President Clinton.<sup>10</sup>

The liberal arguments in support of extending Medicaid support to the working poor are fourfold: Federal matching funds make state payments less onerous, PRWORA would likely lead to increases in the number of working poor, coverage promotes work as it is a benefits bridge to private sector employment, and it would provide the same level of access to poor working families as is available to those receiving traditional welfare payments (Guyer and Mann, 1998).

Today Medicaid is administered by states, with a variety of implementation plans, all of which are required to meet minimum established guidelines. Federal matching rates that vary by state depending upon per capita income. From 1996 through 1999 a dramatic decline in welfare roles associated with both the economic expansion and PROWRA accompanied modest growth in Medicaid expenditures by Federal and state governments (Hicks and Boyer, 1999). However,

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<sup>10</sup> See Jencks, 2002.

from 2000 through 2003 Medicaid experienced unprecedented growth at almost 11 percent per year. This growth was primarily caused by the increase in low wage workers and the reversal in the decline of welfare caseloads which accompanied the economic downturn. This expansion in costs came at a particularly bad time for states, the majority of which suffered from very elastic tax revenue sources. Thus, the economic downturn reduced revenues while increasing expenditures – a very predictable combination of events.

During this time, considerable scrutiny of business practices focused the attention of a number of organizations to look more closely at firms which employed large numbers of low wage workers. The giant retailer Wal-Mart, among others, as well as the construction industry came under fire for employing workers who were either not eligible for employer based health insurance or chose not to take advantage of plans (see Waddoup, 2004).

Another concern over the expansion of Medicaid eligibility involved Medicaid's role in crowding out employer based health insurance for low income workers. Shore-Sheppard, Buchmuller and Jensen [2000], effectively isolated the impact of the Medicaid on firm and employee behavior. While confirming earlier research (see Cutler and Gruber, 1996) which found that firms hiring large numbers of low wage workers were less likely to offer insurance, they found no increase in the probability that these firms would offer insurance due to Medicaid eligibility changes affecting their workforce. However, the authors do not rule out the possibility that firms might make eligibility more difficult to motivate workers to drop coverage. The authors did find a small drop in the probability firms would offer family coverage, as the proportion of Medicaid eligible workers increased. These authors also estimated employee response to Medicaid eligibility finding that the take rate for employee based health insurance dropped as the proportion of Medicaid eligible workers increased. This is a similar argument offered by Becker and Posner [2004] as a counter argument to the critiques of Wal-Mart. Their argument is simply that Medicaid eligible workers experience a real income increase by choosing Medicaid in lieu of standard employer based health insurance for which premiums and co-pays are required. It is thus a utility maximizing decision by workers under the current law.

Fox [2005] surveyed Tennessee firms finding that only 52 percent of retailer and 53 percent of wholesale firms offered employee based health insurance. This study reports that roughly 65 percent of large firms (with more than 100 employees) offered health insurance to all their employees, while 30 percent offered insurance to only a portion of their employees. Firms

surveyed in this study also report that cost and the share of part-time employees accounted for roughly 60 percent of those firms not providing insurance. Not surprisingly, the average salary of the firm's workforce played a large role in the firm's decision to offer insurance. At average incomes below \$25,000 over 60 percent of firms offered no health insurance (with lower income levels seeing this proportion rise to over ninety percent). At all income levels over \$25,000 the majority of firms surveyed offered some employees insurance, but even at income levels averaging over \$55,000 one in five firms offered no health insurance. Fox [2005] offers an interesting insight into the employer based health insurance rates in Tennessee, a state which is probably facing the most daunting of the Medicaid related problems (with its partially eponymous TennCare program).

Importantly, I have been unable to locate a study which evaluates the relationship between changes in the structure of low wage work (especially as it relates to the strong criticism of Wal-Mart) and Medicaid expenditures. This study is an attempt to fill this gap.

### A Model of Transfer Payments and Wal-Mart

The basic ordinary least squares model for the first test takes the form:

$$\begin{aligned}
 Y_{i,t} = & \alpha_1 + \beta_1 WM_{i,t} + \beta_2 PCI_{i,t} + \beta_3 PROWRA + \beta_4 EITC + \beta_5 (\text{Retail Share})_{i,t} + \dots \\
 & + \beta_6 (\text{Local Gov't Share})_{i,t} + \beta_7 REC + \beta_8 NAICS + \beta_9 \text{Trend} + \dots \\
 & + \delta_i (\overline{W}Y_{i,t}) + \beta_{10} \theta_{i,t} + \mu_{i,t}; \quad \mu_{i,t} \square i.i.d.N(0, \sigma^2)
 \end{aligned}$$

#### Equation 1

Where the dependent variable Y, changes with the test to be performed, and  $\alpha_1$  is an intercept. The variables WM are presence count variables for Wal-Mart and Wal-Mart Superstores (neighborhood stores and Sam's clubs are not included in this analysis). An alternative specification offers the employment share of the retail sector represented by Wal-Mart (estimating 300 employees per store). The subscripts  $i$ , are for each county and  $j$ , the sum of these variables in adjacent counties in time  $t$ . The spatial autocorrelation scalar  $\delta$  is estimated on the  $n \times n$  first order contiguity matrix W for county  $j$ .

$$\bar{W} = \begin{bmatrix} c_{1,j} & 0 & 0 \\ 0 & \ddots & 0 \\ 0 & 0 & c_{n,j} \end{bmatrix}$$

**Equation 2**

Where  $c_{i,j}$  to  $c_{n,j}$  are the adjoining states. Thus, the  $WY_{i,j}$  is the weighted value of  $Y$  in state  $j$  in period  $t$ , or the correction for contemporaneous spatial autocorrelation (see Hicks and Wilburn, 2001). I test this model on the 48 conterminous United States. The value  $WY_{i,j}$  captures the degree to which  $Y$  in state  $i$  is affected by  $Y$  in  $j$  adjoining states. Real per capita income, the share of retail employment of total employment and the local share of non-Federal government employment are the remaining regionally measured variables in the model. The  $\theta$  is the first order autoregressive element. The Recession dummy variable, PROWRA, EITC, NAICS data and trend value complete the model. Recession data were coded to account for a recession for each year in which the NBER series included a recessionary quarter. PROWRA and NAICS dummies counted from the year of the legislation/transion. The Local Share variable is designed to control for state level differences in fiscal structure. As noted by Wassmer [2002] the local share of revenues may influence the location of ‘big-box’ retail stores. The local share of total non-Federal government employment proxies the share of local dependency on local taxes.

The model is executed on data from 1978 through 2003. None of these series appear to contain a unit root, so estimation was performed on the levels in each case.<sup>11</sup> Also, all dollar values are in real terms of 2003 dollars using the Consumer Price Index, All Urban Consumers series.

Endogeneity in Wal-Mart’s choice of entrance location and time are not a concern at the state level. Earlier MSA and county level analysis (Franklin, 2001; Hicks and Wilburn, 2001) provide separate tests for endogeneity by attempting to model actual entrance of Supercenters and Wal-Marts as a function of demographic and economic variables. Both studies found that location and timing were unaffected by local economic conditions. Further, there is considerable anecdotal evidence that Wal-Mart has been making location decisions independent

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<sup>11</sup> Unit root tests are available from the author.

of local economic conditions.<sup>12</sup> Since this model is performed at the State level (a much higher level of aggregation than any other model, I assume the endogeneity of Wal-Mart's entrance decision is playing no role in these data.<sup>13</sup> Finally, I employ a semi-log specification for ease of interpretation. Table 2 illustrates summary statistics for the variables employed in this analysis.

**Table 2, Selected Summary Statistics (State level variables)**

	<b>Mean</b>	<b>Median</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Std. Dev.</b>
Foodstamps	428,000,000	271,000,000	3,110,000,000	10,769,176	485,000,000
Medicaid	2,950,000,000	1,370,000,000	42,100,000,000	34,865,794	4,750,000,000
AFDC/TANF	514,000,000	195,000,000	7,940,000,000	5,458,259	1,030,000,000
Wal-Mart	24.7	9.0	238.0	0.0	36.0
PCI	26,800	26,000	49,700	16,100	5,100
Retail Share	0.19	0.20	0.27	0.03	0.03
Local Gov't Share	0.69	0.69	1.00*	0.42	0.08

\*Washington, D.C. has no state government.

The estimation results of Wal-Mart on AFDC/TANF, Medicaid and Foodstamps are offered in Table 3.

<sup>12</sup> In 2001 and 2002 the author has had extensive discussions with several local developers who are retained by Wal-Mart to develop potential properties. In each case, the developers clearly stated that the choice of county and location within county are wholly independent of economic growth (and while it seems unfathomable, these developers are largely ignorant of population and regional economic dynamics). These findings are also supported by Franklin [2001] Graff [1998] and Goetz and Swaminatham [2004].

<sup>13</sup> I also tested an instrumental variable approach, using 2SLS estimates with a lead Wal-Mart entrance as the instrument. This approach is similar to Basker [2005] and yields nearly identical estimates of Wal-Mart's impact.

**Table 3, Panel Regression Results, Wal-Mart and Transfer Payments 1978-2003**

	<u>Foodstamps</u>		<u>Medicaid</u>		<u>AFDC/TANF</u>	
	WM Stores	WM Retail Share	WM Stores	WM Retail Share	WM Stores	WM Retail Share
C	3.541758 (0.21)	2.567472 (0.12)	10.92311 (2.03)	11.06931 (1.13)	-15.455 (-0.64)	-12.5905 (-0.66)
Wal-Mart Per Capita Income	0.000488 (0.63)	0.21228 (0.40)	0.002301 (2.27)	1.519575 (2.07)	0.000125 (0.12)	-3.37704 (-2.30)
PRWORA	-0.03251 (-5.32)	-0.0327 (-5.32)	0.009632 (1.55)	0.009049 (1.49)	-0.00496 (-0.74)	-0.00564 (-0.85)
EITC	-0.00314 (-0.74)	-0.00305 (0.73)	-0.02869 (-5.07)	-0.02776 (-5.63)	-0.11599 (-4.52)	-0.11652 (-4.64)
RECESSION	0.013378 (2.17)	0.01381 (2.29)	0.124894 (5.46)	0.124777 (5.43)	0.061113 (5.31)	0.064918 (5.55)
Retail Share Local Gov't Share	0.003877 (0.57)	0.003883 (0.57)	-0.31112 (-0.26)	-0.08642 (-0.07)	0.014201 (1.05)	0.013606 (1.00)
NAICS	-0.4288 (-0.58)	-0.39493 (-0.55)	-0.82162 (-1.46)	-0.79466 (-1.43)	2.755023 (1.44)	2.162241 (1.21)
TREND	-0.10405 (-0.30)	-0.10898 (-0.31)	0.006552 (0.59)	0.006599 (0.59)	-1.42547 (-2.27)	-1.49693 (-2.34)
$\Phi$ (Spatial Autocorrelation)	-0.0262 (-0.55)	-0.02741 (-0.58)	0.014132 (0.18)	0.005548 (0.07)	0.13035 (1.02)	0.137367 (1.11)
$\delta$ (Time Autocorrelation)	0.011688 (0.13)	0.017361 (0.17)	0.010855 (0.24)	0.016557 (0.23)	0.184447 (1.34)	0.177165 (1.55)
Adjusted R <sup>2</sup>	0.793887 (18.8)	0.793214 (18.75)	0.35623 (3.88)	0.362731 (3.78)	0.30287 (2.42)	0.304644 (2.45)
D-W	0.99412 (240.60)	0.994789 (273.81)	0.987968 (426.18)	0.991313 (493.16)	0.990783 (193.14)	0.990188 (214.99)
	0.99	0.99	0.99	0.99	0.98	0.98
	1.27	1.27	2.34	2.33	2.46	2.46

These results point to a number of interesting issues unrelated to Wal-Mart. First, per capital income is negatively correlated with Foodstamps expenditures at the state level, while Medicaid is weakly positively correlated with per capita income (with AFDC/TANF unaffected). This is not unexpected since state level variability in the administration of Foodstamps is very limited (and is directly tied to income and family size) while Medicaid coverage varies significantly by state. Apparently more affluent states dedicate more money to Medicaid, even though the Federal match is lower, a finding confirmed by analysis performed for the US Department of Health and Human Services (DHHS, 2004).

The share of state income contributed by the retail sector has weak impacts, leading to higher Medicaid expenditures, but lower AFDC/TANF expenditures. This is evidence, albeit very tentative, that the retail sector is absorbing the working poor who are also using Medicaid (as predicted by Ku and Coughlin, 1997).

Not unexpectedly, the 1996 welfare reform (PRWORA) led to reductions in both Medicaid and TANF expenditures, while the advent of the 1991 EITC changes are correlated

with increases in each of the programs. No state level impact on expenditures during recessions was noted, though reducing the sampled period from 1995 through 2003, recessionary increases in Medicaid appear in the estimation. This suggests that the post PRWORA pool of working poor may be more likely to experience recession related movement into TANF than the much larger number of recipients of AFDC prior to 1996. The NAICS transition seems to not have significantly influenced the data, and the impact of the trend is muted, while autocorrelation, both spatially and temporally are important contributors to variation of each of the variables.

The number of Wal-Marts, and their employment share in the retail sector have no impact on Foodstamps expenditures. Expenditures on AFDC/TANF are unaffected by Wal-Mart in the test using the number of stores to represent Wal-Mart's presence. In the retail employment share, the impact is negative, with a 1 percent increase in Wal-Mart's share reduced AFDC/TANF expenditures by 3.3 percent. The mean Wal-Mart retail employment share in 2003 was 4.5 percent, with a maximum of 13.2 percent. This is more tentative evidence that the retail sector (and Wal-Mart in particular are absorbing AFDC/TANF recipients into the labor market). However, this absorption of low wage workers does not, as I have noted, end public assistance. Many of these workers will be eligible for, and are taking advantage of Medicaid. I find that a new Wal-Mart in a store will increase Medicaid expenditures by more than 2/10ths of a percent. While the specification using the retail market share of Wal-Mart suggests that a one percent increase in Wal-Mart's market share will increase Medicaid expenditures by a little more than 1.5 percent.

The magnitudes of these impacts are telling. Using the number of Wal-Marts for Medicaid, I find that the average state is spending roughly \$898 per Wal-Mart worker in Medicaid expenditures. This is remarkably similar to an Urban Institute [1997] analysis of Medicaid expenditures per worker averaging just over \$1,000 for acute care (the bulk of expenditures experienced by the working poor).<sup>14</sup> It is also consistent with the per low-wage worker cost of Medicaid data illustrated in Table 1.

Interpreting this finding with the reported findings above requires additional understanding of Wal-Mart in the context of the retail sector and Medicaid eligibility. Wal-Mart stores account for a remarkably small share of retail employment for a firm which is probably the

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<sup>14</sup> The retail market share values are more difficult to interpret. The point estimates suggest that doubling Wal-Mart's market share by one percentage point would decrease Foodstamps expenditures by just under \$40 per Wal-Mart worker, while increasing Medicaid costs by more than \$220 per worker.

largest private employer in more than a quarter of US counties. Also Wal-Mart, a discount merchandiser probably has a wage and employee mix similar to Target, Ames and Dollar General Store. This labor force is heavily dominated by low wage, low skill workers in competitive labor markets. This is consistent with the findings reported in this paper.

Also, the retail industry is noted for casual workers. These are the young, elderly or those seeking part time flexible employment (and those not requiring health care benefits perhaps due to existing coverage). Interestingly, growth in part-time employment in the retail sector have reversed course in recent decades dropping from an early 1980's high of over 25 percent (completing a post-WW II trend), dropping to roughly 20 percent today.

These findings support the rather unsurprising conclusion that Wal-Mart is a retail store that depends upon typical low skilled retail employees. Hence, they are likely to account for Medicaid use rates similar to other low skilled (hence low paid) workers in general. The only surprise is the hullabaloo regarding publicly sponsored health care adoption rates by the working poor.

## **Summary and Conclusions**

This study reports findings of earlier research regarding the impact of Wal-Mart on commercial economic activity and public expenditures. I particularly note recent criticism of Wal-Mart employees using Medicaid and other anti-poverty transfer payments. It is in part due to this criticism that this research was undertaken. It is important to understand though that the 1996 *Personal Responsibility and Work Opportunity Reconciliation Act* was specifically designed to make available Medicaid for low wage workers not on TANF. Whether or not this was a wise policy decision is separable from a discussion as to its effectiveness in achieving its stated goals. It appears, from the results presented here, that at least some proportion of low wage workers are availing themselves of these payments.

Criticism of an individual company for employing a large number of low wage workers, when labor markets are competitive, seems trivial. So too is criticism of a company for availing its workers to take advantage of a government program when the government itself is criticized by many of these same advocates for failing to adequately advertise its programs. Similarly, it would seem inappropriate, or at least fruitless, to criticize workers who might choose Medicaid over employer based health insurance if it results in net improvements in purchasing power.

Finally, the answer to the question posed by the title of this paper is yes. It is clear from earlier studies, and analysis presented in this paper, that Wal-Mart workers tend to cause states to expend Medicaid resources at about the same rate as other low paid workers. Thus, each new Wal-Mart worker is causing the average state to expend just under \$900 a year in Medicaid benefits. However, whether or not this is the result of bad poverty amelioration or labor market policy is far from clear.

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