what is the local

WAL-MART EFFECT?

By Michael J. Hicks, Ph.D.

(Picture courtesy of Wal-Mart, Inc.)

Wal-Mart's ubiquitous presence has subjected the retailer to considerable attention over its effect on local economic activity. Wal-Mart's home office (pictured here) is located in Bentonville, Arkansas, the home of the first store in 1962.

INTRODUCTION

In March 2004, as a debate raged in the Chicago City Council over the permitting of a Wal-Mart on the West Side, three researchers at the University of Illinois – Chicago's Center for Urban Economic Development released a study predicting a negative economic impact of Wal-Mart in the region. Almost two years later, the store finally opened (after a 32 to 15 vote on the City Council) and was swamped by almost 4,000 applicants for its 300 jobs. This followed closely on the heels of the opening of a Southside Chicago store (in Evergreen Park), which saw roughly 25,000 applicants for 325 jobs. As former Clinton Administration economist Jason Furman has noted, this makes Wal-Mart more selective than the most elite universities in the nation. It also raises questions about Wal-Mart focused research and its impact on policy.

Clearly, Wal-Mart could be an attractive employment location and still reduce net employment in Chicago, as the UIC study essentially assumed. However, the UIC study is notable in that its estimates of job losses are just about the opposite of the only two available econometric studies at the time, which each estimated short run net employment gains of roughly 50 and 55 jobs each.[i] How much this UIC study informed local decision makers is unnecessary speculation, but it is certain that these types of studies are often the only mechanism for policy makers to assess objectively the potential impacts of development options. Further, it is clear that whatever economic models say about working conditions at Wal-Mart, potential workers view these conditions as an improvement over existing options. And, no self respecting economic developer would summarily oppose an employer which attracts such employee interest.

As this vignette illustrates, understanding Wal-Mart's impact is difficult. The ubiquitous nature of Wal-Mart stores – either the traditional big-box or the newer super centers – raises considerable questions over what Wal-Mart's presence means to local communities. Unfortunately, it is difficult for even

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AN ANALYSIS OF THE RESEARCH

This article reviews the existing research on Wal-Mart's local impact on overall employment, wages, retail structure, prices, sprawl, and local taxes and expenditures. In these areas there are few impacts that are common to all communities. Instead, the impact is likely to vary dramatically based upon local wage structure, retail productivity, and clustering. The article describes what are appropriate study designs and argues that there is need for more local evaluation of Wal-Mart, with a more sophisticated approach to the analysis of local impacts than is commonly employed.

an earnest observer to cut through the rhetoric and claims to understand what Wal-Mart's impact is likely to mean to a community. The reason is simple. There is little focused empirical research (there are two peer reviewed empirical economic papers and three more forthcoming), and a rash of consultant studies, reports from advocacy groups, and even an engaging suite of books designed to inform, persuade or just plain entertain the reader.

Wal-Mart's distribution system is a major source of its productivity growth. In addition to its innovative use of information technology, the strategic positioning of distribution centers and the advantages of scale at the individual stores make Wal-Mart the 'low cost' leader in retail.

(Picture courtesy of Wal-Mart, Inc.)

Wal-Mart's famous claim of 'low prices' extends to competing retailers. This provides benefits to both Wal-Mart shoppers and consumers who shop exclusively at other competing stores.

This article explains clearly what the best research says about Wal-Mart's impact on local economies. It focuses on jobs, wages, retail and wholesale structure, prices, poverty, entrepreneurship, sprawl, and public finance. The article focuses on local impacts, leaving national and global issues for another day. It begins by describing some of the common errors that occur in analyzing Wal-Mart's impact and how any study of similar design is likely to misinform the reader. The studies were selected from the relatively small set of papers that are peer reviewed or undergoing peer review. This type of work is almost exclusively performed by university affiliated researchers (economists and geographers) who are judged by the quality of their research, not their findings. The article also provides some hints on what to watch for when reading a study on Wal-Mart and ends with a summary of findings.

MEASUREMENT AND MIS-MEASUREMENT OF WAL-MART'S IMPACT

Ken Stone of Iowa State University conducted the earliest of the Wal-Mart studies in the late 1980's. This study (and several other subsequent analyses) examined retail flows on small towns before and after Wal-Mart's entrance. This early research was largely responsible for the widespread belief that Wal-Mart entrance into a community led to a loss of "mom and pop" stores and a reduction in retail employment. Unfortunately, this study suffered from a major flaw. It simply failed to account for the factors affecting the retail sector in Iowa that were unrelated to Wal-Mart. For example, from 1983 to 1989 Iowa's population declined a whopping 3.4 percent, a drop equaled only by a few states during the Great Depression. While this study found that Wal-Mart had remarkable impacts on retail employment in Iowa, the poor study design simply makes its conclusions on Wal-Mart's impacts, in the word of one leading economist today "not useful." However, Ken Stone's research on Wal-Mart did three very important things that must be acknowledged.

First, Stone focuses attention on market wide impacts of individual firms. This was, at the time, an uncommon feature of economic analysis that is growing in importance. Second, Stone recognized that much of Wal-Mart's impact is likely to be very localized changes in the location of retail firms (such as location just outside a small town). Finally, Stone offered advice to competing retail firms, which provided all the truly relevant insights that have since emerged in a rash of books and such lofty publications as the *Harvard Business Review*. Stone suggested that when faced with a new local Wal-Mart, incumbent firms should provide differing goods or services, to include more specialized product lines and more personalized service. Despite the inability of Stone's work to speak forcefully about Wal-Mart's impact, his early research set the stage for many following studies.

The 1990's saw a spate of management and business journal articles on Wal-Mart. Most followed Ken Stone's lead in examining gross flows of workers, firms, and retail sales, but many did take into account existing trends or other factors which might affect the estimate of Wal-Mart's impacts on the local economy. These studies offered split findings. While a modest majority of the peer reviewed studies find positive impacts of Wal-Mart on employment and sales, more than a few find that Wal-Mart reduces employment, wages, and retail sales.[ii]

Unfortunately, a second technical concern materialized during the 1990's – the possibility that Wal-Mart was not choosing its locations without regard to potential retail growth. This condition suffers the unfortunate handle of 'endogeneity', which in essence means that any estimate of Wal-Mart's impact that does not take into account the possibility that it is making location and timing decisions without regard to potential retail growth will bias the findings. For example, if Wal-Mart enters a retail market it expects to grow, and it is right, then Wal-Mart will be seen to have a positive impact. If Wal-Mart is choosing a county in which it expects lagging retail sales or wages (say a rural area), then it will be correlated with economic declines.

Thus, by the turn of the century, all studies of Wal-Mart were plagued by two potential problems: failure to account for other factors that might influence a region's economy and the possibility that Wal-Mart was choosing its locations that would bias a subsequent study. Thus, it is the research since 2000 which addresses these problems that really speaks to Wal-Mart's impact. Researchers have taken two different approaches to the problem, which more or less emerged within just a few years of each other.

One approach is to specifically test whether or not Wal-Mart's entrance within a county is correlated with predicted economic growth (in retail, wage, etc.). Several researchers, including this author and the largest economic study of Wal-Mart, used this method and were able to forcefully reject statistical 'endogeneity' in Wal-Mart's entrance decision.[iii]

A second approach is to construct a statistical model which corrects for 'endogeneity' in Wal-Mart's entrance decision. This is a challenging prospect, as the researcher has to find data that might be correlated with Wal-Mart's entrance decision but which displays other statistical properties that cannot always be confirmed. Thus, this is not a simple statistical test but also one in which the qualitative aspects of the model matter deeply. Not surprisingly, these types of studies are highly contentious. Three main methods of correcting for this problem have been used. The first method was the use of the announced entrance date, which accounts for possible 'interim' economic changes to the local economy that materialize between Wal-Mart's announced opening and actual opening. The second method uses the timing and distance from Bentonville, Arkansas (the first Wal-Mart location), to isolate Wal-Mart's impact. The third method, recently introduced by this author, uses a measurement of local market size to explain Wal-Mart's entrance decision. This method is used to account for a prime location decision criterion.

Each of these methods has some potential drawbacks and has suffered some criticism. However, in a recent paper, this author compared all three methods in a single state (Maryland) and found all three methods provided nearly identical results. However, for Maryland there was some weak evidence that Wal-Mart was systematically making entrance decisions. This argues for the use of the more sophisticated but unfortunately more contentious statistical techniques.

Sadly, with the exception of the comparative study, there is nothing like a consensus of the impact of Wal-Mart. However, it is useful to understand what economic theory would argue are the potential impacts of Wal-Mart entering a market.

Income Effect: Economists call the income effect the impact on the quantity of goods purchased (holding constant the mix of goods) when the price for one good drops. The substitution effect measures the change in the quantity of goods when we permit the mix of goods to adjust, holding constant the real income changes that accompany a price change.

Clustering Effect: Economists have long noted that firms often locate proximally to benefit from some available natural resource or access to common labor markets, transportation or technologies. This happens in retail, but may also be caused by lowering consumers' search costs. On the manufacturing side, think carpets in north Georgia, autos in Detroit, and furniture in western North Carolina. For retail, think malls and automobile dealer clusters.

Productivity Effect: The overall economy grows through two mechanisms. The first is access to more inputs (more workers, new natural resources, more machinery). The second is growth in the intensity of the production process, so workers produce more goods and services with the same number of inputs. Increasing productivity of labor is often achieved by worker training, better and more available machinery, and more recently the widespread adoption of information technology. Worker productivity is really the sole source of per capita economic growth or standards of living. The first type of economic growth just increases the overall size of a region's economy, not individual standards of living.

WHAT DOES THEORY SAY?

The theoretical treatment of Wal-Mart by all of these studies has been simple. The reason is that the potential impacts are fairly run-of-the-mill economics. Economic theory can speak to both general retail trends (such as the declining share of retail as a share of the total economy since the Great Depression) and to the differences in local economies that may be spawned by Wal-Mart. These trends are likely to occur whether or not Wal-Mart enters a market. What is of interest here is the difference between what would have happened if Wal-Mart entered a market as compared to its absence. For reasons of space it is better to leave general retail trends for another day.

What has been notably absent is the acknowledgement that the way markets respond to Wal-Mart might vary dramatically by location. This doesn't mean that economists haven't recognized such facets as urban and rural differences, merely that in most instances the geography of the studies has included several states and rural and urban areas, and largely different time periods over all of which Wal-Mart's entrance decision and impact may vary.[iv] Understanding how the change in consumer demand follows Wal-Mart's entrance may help explain some of the divergent results. There are three stylized descriptions of Wal-Mart effects that may occur during retail market adjustment periods.

First, if Wal-Mart enters a market and significantly lowers prices, both for goods sold directly from the store and across competitors (one area in which the research is in agreement), consumers will experience an income effect for retail goods.[v] This means that the reduction in overall prices acts as a *de facto* income boost. Under this scenario, it is indeed plausible that consumer demand for retail goods would rise, leading to higher net employment and incomes in the retail sectors. This is the 'income effect'.

Second, if Wal-Mart enters a market attracting clusters of retail firms, then there could be considerable cross-county shopping and an observed increase in net employment, wages, and firms in a Wal-Mart county. This effect would likely dominate among early Wal-Marts with a dissipating impact as the retailer becomes more saturated (in adjoining counties). A prediction in this case would be that surrounding counties lose retail employment as the migration to clusters occurs. This is the 'clustering effect'.[vi]

Third, Wal-Mart's much noted increase in labor productivity should lead to lower retail employment (as fewer workers produce more goods and service). However, theory strongly suggests the effect of increased productivity is higher wages. Indeed, the positive link between productivity and wages is a largely settled matter among economists. This is the 'productivity effect'.

The result of these three potential theories is that researchers looking at different times and locations may well find different results due not to methodological discrepancies but through actual variations in the adjustment mechanism to Wal-Mart. Thus the choice of location and timing of the sample period may play a critical role in the estimation results of Wal-Mart's impact on labor markets. Further, the decision criterion for opening a new store (the endogeneity question) almost certainly varies across regions and time; hence it is useful to isolate analysis to smaller geographic periods.

Thus, economists studying Wal-Mart's impact on labor markets in particular have not arrived at a consensus. This should be troubling for policymakers who often struggle to make sense of research that is written primarily for other researchers (meaning it is filled with what Paul Krugman calls upside down Greek letter economics). There are reviews of these studies that purport to offer a review of these studies. Some, like those prepared by the Ohio State University extension service and the Brennan Center for Justice selectively review scholarship, while those prepared for a recent conference at the Center for American Progress are more balanced (or at least sufficiently narrow as to avoid contradictory arguments).

In truth, serious research reports evidence, in different places and times, that Wal-Mart either increases or decreases retail employment, either increases or decreases retail wages or increases or decreases other retail firms. Indeed, the only study

Table 1. Modern Studies of Wal-Mart's Impact on Labor Markets

Author	Study Design	Findings
Hicks and Wilburn, 2001	Time space recursive panel model of 55 WV counties, 1988-2000, annual data	Increase in employment by roughly 54 retail jobs, small increase in number of firms, no wage impact.
Basker, 2005	IV panel of 1700 larger US counties, 1977-2000	Increase in employment by roughly 50 retail jobs, partially offset by loss of 10 wholesale jobs, and small (1-3) reduction in retail firms.
Hicks, 2005c	A panel of 8 Pennsylvania counties with a Wal-Mart entrance in 2002. Estimate of labor market impacts using Quarterly Workforce indicators	A roughly 50 worker net increase in retail sector and a $0.50 per hour increase in new hire wages.
Global Insight, 2005	Structural model of all US counties, 1969-2003	Increase in employment, decrease in nominal wages.
Neumark, Zhang and Ciccarella, 2005	IV Panel of all US counties, 1977-1995. Estimate of retail wage and employment, and total earnings and employment at the county level	Decline in retail employment of 2-4%, evidence of retail wage decrease, increase in overall employment, but decrease in overall real wages.
Dube, Eidlin and Lester [2005]	IV of selected US counties, 1992-2000	Finds wage decrease in Urban retail markets following Wal-Mart entrance, and possible wage increase in rural areas.
Hicks [2006]	Compares each method on data from Maryland, 1988-2003	Finds no difference across instrumental variable methods, retail employment declines of between 0 and 414 jobs and retail wage increases as high as $1.95 per hour.

which suggests any agreement in method across these is the comparative study of methods on Maryland. This study (which has not yet been subjected to peer review) is evidence that among the modern studies, it is location and timing, not methodology which generates differences in the results. (See Table 1.)

The sum of all these findings may be a suggestion which would be unsurprising to local economic developers: There is no 'nationwide' impact of Wal-Mart. The local labor market impacts are going to be affected by the existing competitiveness of the retail sector and whether or not there are changes to local retail clusters. The same is true in grocery store markets when a Super Center opens. This means that, at the county level, Wal-Mart's impact will be heavily influenced by the existing economic conditions, and studies that fail to account for these factors and treat smaller geographic regions will yield different results.

What might a local community expect to happen to labor markets when Wal-Mart comes to town? The short answer is that unless there's a single easily measurable impact (like a productivity increase) then there's no single answer. What's likely to occur is some combination of factors such as a retail productivity increase (meaning fewer, but modestly higher paid workers) combined with some retail clustering (meaning more, but likely modestly lower paid workers). The net effect employment effect will be determined by which of these effects dominates.

This suggests that economic developers and other policy makers interested in understanding Wal-Mart's impact should think hard about how academic studies influence their decision making. What might be the impact of Wal-Mart in areas other than local labor markets? Happily, researchers have not isolated their analyses to labor markets only. They have also focused on retail prices, entrepreneurship, sprawl, and fiscal effects.

LOWER PRICES (THROUGH PRODUCTIVITY AND COMPETITIVE PRESSURE)

One area in which even Wal-Mart's severest critics agree is that Wal-Mart's prices are indeed lower. Ironically, the earliest critics of Wal-Mart contended that the low price claim was a fallacy, that Wal-Mart simply advertised loss leaders. Since that claim has been dropped, it is indeed interesting to see what the research says about actual retail prices.

Two sets of researchers, one at MIT and the USDA (Jerry Hausman and Ephraim Leibtag) the other Emek Basker (from the University of Missouri), used two different data sources to estimate the role Wal-Mart played on influencing local prices. Interestingly, the MIT researchers were targeting the Bureau of Labor Statistics for over estimating inflation, going so far as to offer the provocative title of "CPI Bias from Supercenters: Does the BLS Know that Wal-Mart Exists?" What these authors found, using retail scanner data, was that in a number of product areas, Wal-Mart's prices were dramatically lower than other retail stores. This was attributed by some critics as simply the result of lower quality goods. To this response, the authors produced a second study that identified identical goods (primarily food) which were substantially lower cost (as much as 25 percent lower). In all, these two economists concluded that due to failure to account for Wal-Mart, the BLS is consistently overstating inflation by as much as 15 percent a year.

Emek Basker looked at a smaller set of prices from the well known ACCRA local price data, finding that Wal-Mart produced as much as a 6 percent long run price reduction on selected goods. Interestingly, the impact is not just on Wal-Mart stores, but almost certainly (based on the study design) more widespread than just at Wal-Mart – arguing that Wal-Mart is causing competitors to cut prices. Happily, at least in one area, Wal-Mart's impact is pretty conclusive. It not only charges lower prices, but causes competitors to do so as well.

ENTREPRENEURSHIP

No economic developer has failed to hear the claim that Wal-Mart affects local firms. Yet, research on this matter largely suggests little impact. Two previously mentioned studies (Hicks and Wilburn, 2001 and Basker, 2005) find either very modest two to three business increases or losses respectively, and that is over several years. Both find positive impacts on retail sub-sectors not competing directly with Wal-Mart. So the overall impact is uncertain and subject to the same caveats as the labor market studies. By far the most extensive study is by two economists at West Virginia University's Entrepreneurship Center. Using a carefully crafted analysis of Wal-Mart's impact on small businesses (including entrepreneurial type firms), they find the entrance and presence of a Wal-Mart has no statistically significant effect on small business growth, or the relative size and profitability of the small business sector in the US (Sobel and Dean, 2006).

WAL-MART, EQUITY AND SPRAWL

Despite considerable popular rhetoric about Wal-Mart's impact on individuals, little research (except perhaps the evidence of lower prices) speaks directly to the effect of Wal-Mart on the distribution of income across racial or gender lines. Of course, the pay disparity between Wal-Mart's managers and its lowest paid employees has received plenty of attention (if not useful analysis).

One interesting study, which is soon to be published in the *Review of Regional Studies*, estimated

Wal-Mart's impact on the black/white wage and unemployment gap in Alabama's counties. Using 1980 and 1990 Census data matched to Wal-Mart opening dates, the study found that while there was no income convergence between the two groups, black workers experienced significantly lower unemployment rates relative to whites. The authors attribute this to increased labor market competition within the Wal-Mart counties.[vii]

Another study at Pennsylvania State University estimated the impact of Wal-Mart on local poverty rates, finding that counties with Wal-Marts actually experienced a smaller poverty reduction than those without Wal-Marts. Using Basker's data, this study performed a similar statistical correction for endogeneity. Two concerns about this study emerge. First, the sample was limited to only about half of US counties (the bigger and more affluent ones) and second, the presence of significant data errors in Wal-Mart's entrance dates weakens the conclusions. However, the conclusions themselves (that Wal-Mart kept a half dozen individuals below the poverty line in each of the urban counties it enters) are thought provoking, even at such a small impact.

Complaints about Wal-Mart's contribution to urban sprawl have been continual, even spawning a couple of anti-Wal-Mart books. Sadly, here too the rhetoric has not much matched the research findings. One researcher has found that local fiscal structure plays an important role in big box retail location decisions. In a 2002 study, Wassmer reports that locations which depend heavily upon local tax instruments to finance government services are more likely to accept a big-box retailer. One other study (as yet unpublished) finds little evidence of Wal-Mart's contribution to sprawl across about a dozen different measures in Colorado. Other than these efforts, there appears to be no empirical analyses of Wal-Mart's impact on urban sprawl. Hopefully, more work on equity impacts and sprawl are in the future for economic researchers.

WAL-MART AND PUBLIC FINANCE

When any new store comes to town, one eagerly awaited bit of information is its impact on local taxes and expenditures. Given the uncertainty about employment impacts (and obviously then, the impact on net retail sales), tax studies are likely to be equally uncertain. Obviously, in counties where retail sales rise, so too will tax receipts. In a study of Ohio counties from 1988 through 2003, local commercial property values are positively affected by a local Wal-Mart, and this can potentially increase local property tax collections by a little over 1 million annually per county. This is the only type of study that takes into account the problems with Wal-Mart's entrance decision (endogeneity) described earlier.

Also, there are typically public sector infrastructure costs associated with Wal-Mart, including cutting curbs, installing traffic lights, etc. These may also be accompanied by increased local services costs for such locally provided goods as fire and police protection. The local impact naturally depends on the net revenue and cost effect.

Another local impact is a relatively high number of tax incentives provided to Wal-Mart. An organization critical of these incentives, Good Jobs First, is highly critical of these programs to retail (or in Wal-Mart's case mostly wholesale or warehousing facilities). Economists are almost entirely unified in their assessment of tax incentives, and there are no peer reviewed empirical studies to suggest they actually influence location decisions much less meet the minimum efficacy requirements of a benefit cost analysis. At least one recent study of wholesale tax incentives (which included similar distribution centers to Wal-Marts), found no impact in Michigan.

As with Wal-Mart's impact on labor markets, there's little to suggest agreement on its net impact on local public finance. However, a number of estimates of Wal-Mart's expenditures have been offered, which are taken from state level reports of Medicaid participation by workers. There are also econometric studies of Ohio and nationwide that estimate Medicaid costs. The one national study found that Wal-Mart was associated with a roughly $900 per worker increase in total Medicaid costs (with as much as one-third of this borne by state taxes). Though the Medicaid issue is not strictly local, it does warrant discussion due to its intense debate. While Wal-Mart does appear to be correlated with higher levels of Medicaid enrollment, it is not clear whether or not this is due to a proliferation of low wage jobs. Indeed, among the possible explanations is that since Wal-Mart relies heavily upon local employment services for pre-employment screening, the increased access to information about Medicaid eligibility may well lead to higher levels of use. Whatever the cause, it is clear that Wal-Mart employees account for high levels of Medicaid use in several states. However, at least one study finds that the variability in usage across states closely tracks overall usage. Table 2 provides a roundup of Medicaid use by Wal-Mart employees in a few states

The state of the research today offers only a tantalizing clue as to Wal-Mart's potential impact on local communities. The structure and design of the dozens of existing studies render the vast majority simply unable to speak clearly to Wal-Mart's impact. The few that have attempted to address the problems inherent in estimating Wal-Mart's impact have yet to reach a consensus. However, economists are beginning to agree on a few issues.

Table 2. Estimates of 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 author's 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%	$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 author's calculations
Washington	2.3%		AFL-CIO reporting data from Washington Health Care Authority
West Virginia	3.6%		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

that have directly collected data, or had estimates performed.

WHAT TO LOOK FOR IN WAL-MART RESEARCH

Local policymakers interested in honestly evaluating Wal-Mart should carefully weigh studies on the subject. As most studies have some informational content, it is not typically what is included in a study that's a problem, but rather what is left out that generates the bias. Also, study design in general ought to be carefully weighed. Here are some suggestions about plausible courses of action.

First, studies that present unambiguous findings are a fiction. There are no clear national impacts, and local studies should carefully explain their methodology and make their data and statistics publicly available. Any study purported to be local should explain which of the effects are likely to occur: income, productivity or clustering (though they need not use these terms). These studies should be rigorous in admitting what may be uncertain (especially when describing other studies). Also, some care as to the credentials and affiliation of the authors is needed. There are fine researchers without Ph.D.s and unaffiliated with universities, but careful examination of their earlier studies might be helpful. A researcher who has always found Wal-Mart effects to be the same, without regard to local conditions, ought to be questioned.

Second, the study design ought to avoid some of the more common models used in economic development. The favored input-output model especially is sensitive to the initial assumptions. So, while it might be part of a study design, it should be supplemented with additional research. Also, in a case study approach (or a heavily non-statistical study), examples of other local impacts drawn from similar types of locations (same retail characteristics, per capita income and degree of urbanness) probably provide some of the best evidence.

Finally, willingness to submit a study to peer review is a necessary element of a good research project. The reviewers need not be Wal-Mart experts but could be on economics and finance faculty of almost any college or university. In the end, these types of processes insure a better understanding of Wal-Mart's impact.

CONCLUSION

The state of the research today offers only a tantalizing clue as to Wal-Mart's potential impact on local communities. The structure and design of the dozens of existing studies render the vast majority simply unable to speak clearly to Wal-Mart's impact. The few that have attempted to address the problems inherent in estimating Wal-Mart's impact have yet to reach a consensus. However, economists are beginning to agree on a few issues.

First, Wal-Mart's entrance in a larger urban center will have something between no impact to a perhaps small positive impact on total employment, though it might cause some job shifting between sectors. Some of this will be real while some will be simply due to the higher degree of vertical integration of Wal-Mart resulting in transition of wholesale to retail jobs in the NAICS code.

Second, rural areas could see net employment increases due to the entrance of a Wal-Mart. While this is the weakest of the consensus arguments, it is an emerging consensus (which is likely due to a reduction in retail leakages or a small local retail cluster).

Third, the evidence is pretty strong that Wal-Mart pays lower nominal wages than unionized grocery stores. Here the difference is probably not made up by the lower prices experienced by these workers due to the presence of a Wal-Mart.

Fourth, the net impact on the number of retail and related firms will be very modest (with estimates of zero, to plus or minus two to four firms). This extends across both rural and urban areas.

Lastly, retail and, in the case of Super Center, food prices drop significantly and across the county. This is pretty clear evidence that the ills of local monopoly power are being eased, not exacerbated, by Wal-Mart.

There are also a number of things about Wal-Mart that economists don't know or have not arrived at a consensus on. These are where the consensus is absent. Though individual researchers (including myself) might feel that they know the answers to some of these questions, they have not yet convinced their colleagues.

First, we don't agree on the impact of nominal wages in the retail sectors. Studies find starkly different answers in different regions, times, and model structures. Notably, even the estimates of the largest nominal retail wage reductions attributed to Wal-Mart are still offset by price reductions attributed to Wal-Mart, thus leaving retail workers actually better off in terms of purchasing power.

Second, we don't know if Wal-Mart's benefits are different (meaning worse) than other similar employers (though the emerging consensus is that there's little difference, even before Wal-Mart's recent improvement in health coverage).

Third, economists don't yet agree that Wal-Mart is causing an increase in poverty. There are some tantalizing clues (one paper and strong evidence of increased Medicaid expenditures). However, weaknesses with the paper and very plausible alternative explanations for the Medicaid expenditure increases make this an unresolved question.

Fourth, there's not much research suggesting Wal-Mart contributes to, much less causes, urban sprawl.

Finally, whether or not local governments are net fiscal beneficiaries of Wal-Mart is such a highly localized outcome (dependent on both tax and expenditure structure and incentives) that no generalized answer is possible.

Economic developers at the state and local level will inevitably be faced with questions about Wal-Mart and its local impact. And, the increased national scrutiny the company has received has generated a wellspring of popular books claiming to understand Wal-Mart. These books and the debate surrounding Wal-Mart follow closely any rumor that a new store will be opening. In the end, the only true answer on the efficacy of Wal-Mart is that the benefits and gains are largely local, and vary across locations. There is no single Wal-Mart effect.