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Professional Opinion of a Recent & **Second Study** by the
Center for Urban Research and Learning of
Loyola University Chicago
Concerning the Impact of Chicago's West Side Wal-Mart

OPINION UPDATE

(Please see our website for the original forty-four page MG opinion released in 2008.)

January 12, 2010

Prepared for
Wal-Mart Stores Inc.



Overview

Mari Gallagher Research & Consulting Group was retained by Wal-Mart Stores Inc. to develop a Professional Opinion (the Opinion) on a report entitled *The Impact of an Urban Wal-Mart Store on Area Businesses: An interim-evaluation of one Chicago neighborhood's experience* by authors Julie L. Davis, David F. Merriman, Lucia Samayoa, Brian Flanagan, Ron Baiman, and Joe Persky of the Center for Urban Research and Learning of Loyola University Chicago¹ (the Loyola report). The version available for this review was marked "last revised April 15, 2008."

The original forty-four page MG opinion of the 2008 Loyola report is available at www.mari gallagher.com.

Loyola recently provided an update to their 2008 report with a similar title and the date of December 2009. **MG was retained again by Wal-Mart to provide a brief summarized update of our Opinion of this second 2009 Loyola report (this document).**

We emphasize that we are neither "pro" nor "anti" Wal-Mart but, rather, a neutral third-party research firm. We do not conduct advocacy or any type of political work.

Summary Opinion of the December 2009 Loyola Report

Most of our original criticisms of the Loyola report continue to be serious issues in this second version; key methodological flaws were not addressed. In this Opinion Update, we focus on only two key concerns for the sake of brevity.

First, the most important finding advanced by the Loyola report is that there is essentially no change in community jobs as a result of Wal-Mart opening and operating a store on Chicago's West Side. We believe that this is an inaccurate finding based on the evidence provided.

In the body of the Loyola report, the research team estimates job losses resulting from Wal-Mart's entry by looking only at firms that exited. They acknowledge that firms have entered since Wal-Mart's arrival, but this is buried in the Appendix, and not included in their job calculation. To put it in very simple terms, understanding if and how Wal-Mart impacted community jobs requires the following calculation at minimum:

Businesses that entered and those jobs gained	MINUS	Businesses that closed and those jobs lost	EQUALS	Net job loss or gain
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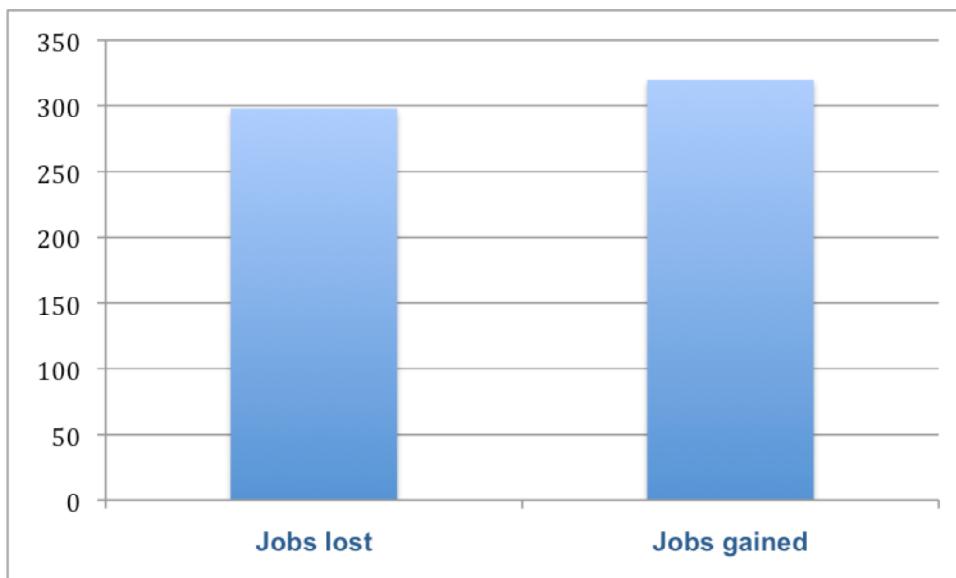
But, instead, the foundation of Loyola's calculation is:

Just the new regular Wal-Mart jobs	MINUS	Businesses that closed and those jobs lost	EQUALS	Net job loss or gain
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In short, the Loyola report concludes:

$$\begin{array}{lcl} \text{The roughly 320 regular Wal-Mart jobs that were created} & \text{MINUS} & \text{The 298 jobs that were lost} \\ & & \text{EQUALS} \\ & & \text{22 jobs gained which Loyola calls "a wash"} \end{array}$$

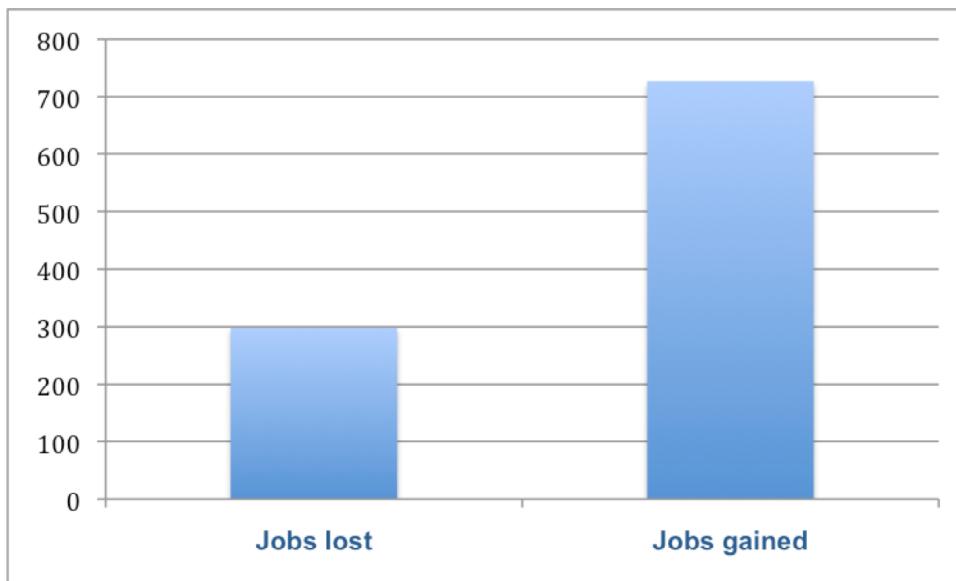
If we were to create a chart for this Loyola finding, it would look like this:



However, based on Loyola's own figures in the Appendix where they use D & B data – which often do not capture small “mom and pop” business and also were not updated from Loyola's 2008 report version – the Loyola team themselves estimated 406 new business entrants or firms that compete with Wal-Mart. Again, the jobs that these firms provide are not included in the above Loyola calculation. To see why the Loyola conclusion is misleading, let's assume that the 406 new competing firms each offer one new job. It is likely that many of these firms indeed offer *more* than one job. Mernard's, for example, is one of the new entrants, competes with Wal-Mart on some product lines, and offers more than one job. Nonetheless, let's suppose that there is one new job per entrant, which equals 406 new jobs in the study after Wal-Mart moved in. **If we were to add these jobs to the Loyola calculation, we would find:**

$$\begin{array}{lcl} \text{The roughly 320 regular Wal-Mart jobs that were created plus 406 jobs created by other competing entrants totals 726 jobs} & \text{MINUS} & \text{The 298 jobs that were lost} \\ & & \text{EQUALS} \\ & & \text{428 jobs gained} \end{array}$$

If we were to create a chart for this revised example, it would look like this:



We emphasize that we are not stating that this *is the* job gain, but, rather, that the Loyola report excluded a key component (*competing firm entrants*) and that, if included, it is reasonable to assume that, using the Loyola approach, the job gain would be at least this much. If studying the success of heart transplants, we would need to look at patients that lived as well as died. If studying the personal effects of gambling, we would need to look at winners as well as losers. And when studying the impact of a retailer on competing community jobs, we must look at competing jobs gained as well as competing jobs lost. It's that simple.

Furthermore, one could easily argue that *all new business entrants and related new jobs* in the study area should be accounted for, at least to some degree, in the calculation. In addition to Menard's, new entrants include Aldi's, Chase Bank, Bank of America, CVS, Conway's, American Kid, O & W Auto Parts, and J-Bees.

There are many reasons why stores go in and out of business. Markets are in constant movement, and when markets revitalize, they churn. Where there is churning, impact needs to be measured carefully. The Loyola authors themselves state that there is "considerable uncertainty" attached to their finding, yet they nonetheless put forth few or no qualifications elsewhere in the report or at media venues where the report is featured.

Second, the Loyola report evaluates the impact of Wal-Mart's arrival using a linear regression. This is a bit more complicated to explain to a general audience. In short, we developed Figure #1 (scroll down to end of document) to show synthetic data (indicated

by the asterisks) and a regression line (the solid black line) that represents the best fit to the data if no account is taken of a break in the pattern in late 2006.

There are three ways to account for a break in a linear regression, which we outline here:

OPTION #1

Allow the *level* of sales to change but not the *rate of growth* as shown by the dashed blue line in Figure #1; or

OPTION #2

Allow the *rate of growth* of sales to change but not the *level* as shown by the dashed red line in Figure #1; or

OPTION #3

Allow both the *level* of sales and the *rate of growth of sales* to change as shown by the dashed black line in Figure #1.

The current version of the Loyola report (December 2009) used Option #2.

The previous version of the Loyola report (April 2008) used Option #1.

We do not know why different options were used at different times. In any event, neither Loyola report (2008 or 2009) uses Option #3, which, in this case, provides the best fit to the data in our hypothetical example. In this example, sales could actually be higher shortly after Wal-Mart's entry even if the estimated "Wal-Mart effect" in regressions like those in Table 8 in this report (using Option #2) or Table 7 in the original report (using Option #1) is negative.

Although the data in our Figure #1 is contrived to provide an example, as we do not have access to Loyola's raw data, the regression results based on our synthetic data are the same as those in Loyola's Table 8: sales growth is positive when no account is taken of Wal-Mart's arrival, and if Option #2 is used – allowing the rate of growth of sales to change after Wal-Mart's entry but not the level of sales – it appears as though Wal-Mart's arrival leads to a sharp reduction in the growth of sales (after the break, the red dashed regression line is flatter than it was before the break).

The regression results based on our synthetic data (Figure #1) are also the same as those in Loyola's Table 7 in the original (April 2008) version of the study where Option #1 above allows the level of sales to change after Wal-Mart's entry but not the rate of growth of sales. In this case, it appears as though Wal-Mart's arrival leads to a sharp reduction in the level of sales (after the break, the blue dashed regression line is always below where it was before the break).

In general, Option #3 is the preferred way to analyze the data: if it can be shown that only the level or only the rate of growth is affected by Wal-Mart's entry, then it is

sensible to move to Option #1 or Option #2. But the Loyola Study has proceeded in this version without demonstrating that Option #3 is not the correct way to analyze the data.

We recognize that this is a difficult and seemingly arcane point, but it is important because, to restate, Option #3 is the best fit to the data. We provided feedback on this methodological shortfall in our original Opinion, which is perhaps why the Loyola authors switched from Option #2 to Option #1, but that did not solve the problem. If the authors have reasons to believe that Option #3 is inappropriate, they should present evidence before proceeding to Option #2 or Option #1.

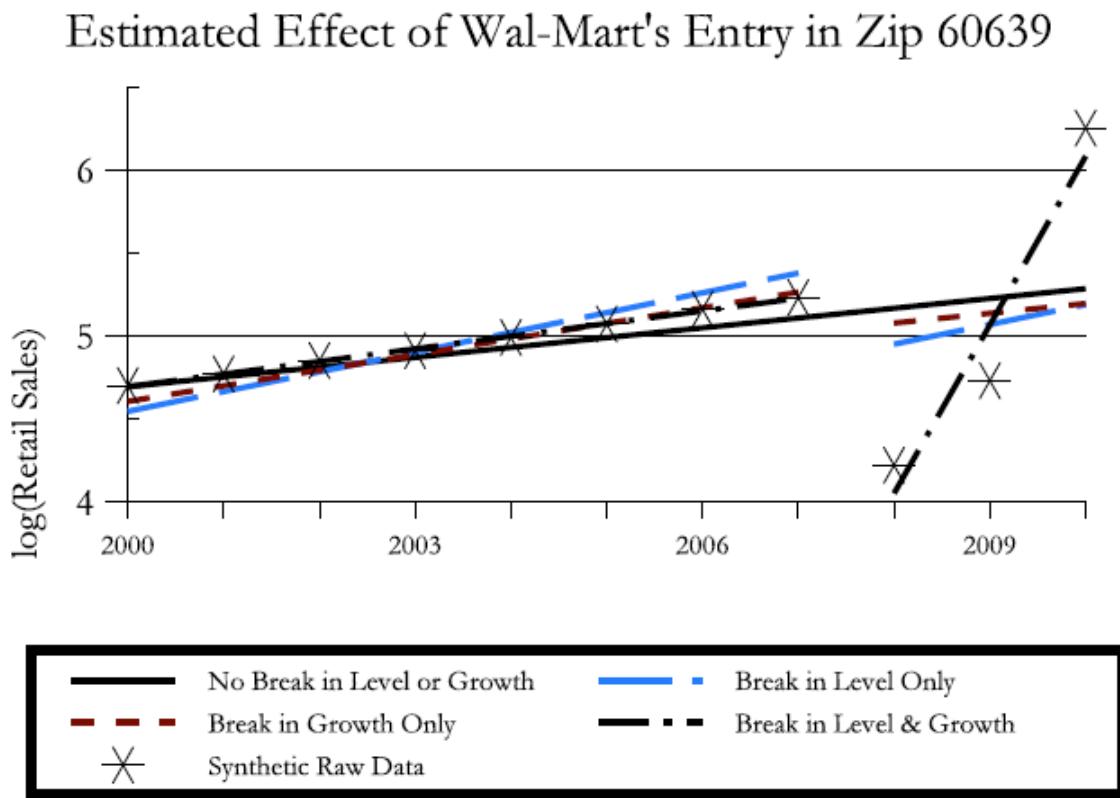


Figure 1

¹ The study was funded by the Woods Fund of Chicago and Loyola University Chicago.