

Wal-Mart and Social Capital

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Economists increasingly recognize that markets exist within social and cultural contexts, and that these contexts affect how resources are allocated to competing ends. The social economics literature views individuals as both affected by and affecting the environment in which they live (e.g., Barrett 2005; Durlauf and Young 2001). Contributors to this literature recognize that utility and happiness are relative concepts that depend on levels achieved by peers (Layard 2005), and acknowledge that both utility and happiness can increase with levels of social interaction (Kahneman and Krueger 2006). Further, “because social organization is typically characterized by multiple equilibria, small changes in economic conditions can lead to dramatic changes in the behavior of and membership in [social] groups and networks” (Barrett 2005, p.10).

A far-reaching economic change is the recent rise of big-box retailing, led by Wal-Mart Corp. (Fishman 2006). While the chain’s adverse impact on mom-and-pop type retail outlets has been well-documented (Stone 1997, Irwin and Clark 2006), the second-round effects of such store closings on local social capital or civic capacity have not been studied. For example, economic developers lament the fact that community civic capacity declines when locally-owned banks go out of business or are taken over by national corporations. Yet systematic evaluation of this phenomenon has remained elusive, because of the difficulty of measuring local social capital.

Advances in the consistent measurement of county-level social capital (Rupasingha, Goetz and Freshwater 2006) now make it possible to examine rigorously the impact of big-box chains on the civic capacity of all rural and urban US counties. Previous studies have implemented the concept using trust, social norms or networks, following Putnam’s (2000) seminal work, *Bowling Alone*. These studies use cross-country comparisons based on individual-level data (the World Value Surveys, Knack and Keefer 1997), state-level data in the U.S., (the General Social Survey, Glaeser, Laibson and Sacerdote 2002) or data collected in individual-level surveys in specific contexts (Narayan and Prichett 1999).

In this article, we identify for the first time the independent effect of Wal-Mart stores on social capital at the U.S. county-level during the 1990s. We propose a conceptual model of the processes leading to changes in social capital and hypothesize that big-box corporations, in which innovative business processes and management functions are handled out of centralized headquarters, or outsourced to Asia, depress social capital stocks in local communities. This compounds the adverse effects of losing local philanthropic capacity, reinvestment of surpluses (rents) and community-specific knowledge or capital.

Questions surrounding social capital are hardly trivial for economists. That social capital stocks matter for economic growth and poverty reduction is documented in an expanding literature (Knack and Keefer 1997, Rupasingha, Goetz and Freshwater 2002, Rupasin-

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gha and Goetz 2003, and Goetz and Swaminathan 2006; see also, however, Schmid 2003), although definitional and measurement issues remain. Skinner and Staiger (2005) argue that social capital stocks may explain state-level differences in the adoption of tractors and hybrid corn. This explanation contradicts Griliches' (1957) argument that profitability and incentives alone matter in technology adoption.

We find that social capital stocks as measured by the density of social capital-generating establishments and various measures of civic participation (defined below) were lower both in communities in which new Wal-Mart stores were built and in communities that already had a Wal-Mart store at the beginning of the 1990s decade. This finding adds an important new dimension to the analysis of community-wide impacts of the chain, and one more externality that needs to be considered when weighing its benefits.

Conceptual Framework

The most visible and direct impact of Wal-Mart is usually the disappearance of small, locally-owned mom-and-pop type stores (Stone 1997). In fact, Wal-Mart's current PR campaign focuses on helping small local businesses -- even those with which it ostensibly competes. Although new retail activity may emerge in the vicinity of a Wal-Mart, benefiting from the additional traffic generated, the balance of evidence suggests a net loss in the types of home-grown stores that have long existed in the community. Embedded in these stores and their owners are important social relationships, norms and trust that were built up over time. Sociologists refer to these storeowners as part of the local leadership class (Tolbert, Lyson and Irwin 1998). Recognizing the possibility of negative social capital, we propose that on net these leaders not only have the best public interest of the community in mind, but that they also understand the interpersonal dynamics of its members and their various networks. Thus, they can head off conflict and know how to get individuals to cooperate when a local problem requires group action.

Virtually all research on Wal-Mart to date focuses on existing mom-and-pop retailers, ignoring the elaborate but less visible supporting industry within communities that serves these retailers. This industry includes firms in the legal, accounting, transportation, warehousing, logistics, financial, publishing and advertising sectors that work closely with the retailers. In particular, local lawyers, accountants and bankers provide essential support services for the mom-and-pop stores, and these individuals typically are community leaders. With the arrival of Wal-Mart, and the attendant reduction in the demand for their services, they leave the community to pursue opportunities elsewhere. In the process, the social capital they embody is destroyed, and their entrepreneurial skills and other forms of location-specific human capital are forever lost to the community.

Local stores may commission the design and creation of flyers for insertion into local newspapers and they may take out ads. Wal-Mart does not follow this practice. With local advertising revenues drying up, compounding the effect of the Internet, local newspapers become unprofitable, eliminating a source of livelihood for local opinion leaders. Wholesale jobs, often higher-paying than retail jobs, disappear as local stores no longer require services of local wholesalers, and local transport, logistics and storage firms. Thus, a reverse multiplier works its way through the community.

Social interaction among local entrepreneurs represents an important venue for sustaining and enhancing embedded social capital. As shoppers drive to the outskirts where Wal-

Mart is located to buy goods and services, downtown stores close and local coffee shops see their customer base dry up. Opportunities for dialogue and interaction among local citizens may be reduced. Likewise, local entrepreneurs may have fewer opportunities to sell innovative new products. Wal-Mart in fact has created a lottery for entrepreneurs. Those who succeed and get their products onto the stores' shelves hit the jackpot, at least in the short-term, until the chain imposes its annual price cutting discipline (Fishman 2006). Others are cut out of the market as they are unable to garner shelf space because local stores have disappeared.

Wal-Mart does not employ the services of these local firms that form the backbone of local social capital. Instead, the chain's enormous efficiency lies in its ability to concentrate back office and supporting functions in one place, Bentonville, AR, as well as in offshoring them to China or India. Given the global reach of Wal-Mart's supply chain, not doing so would be irrational.

Model and Data

Our primary dependent variable is the county-level measure of social capital developed in Rupasingha, Goetz and Freshwater (2006). This variable is the first principal component of five variables, including the number of social capital-generating associations per 10,000 residents (civic organizations, bowling alleys, golf courses, fitness centers, sports organizations, religious organizations, political organizations, labor organizations, business organizations and professional organizations); voter turnout in the 2000 presidential election; number of tax exempt non-profit organizations per 10,000; and participation in the decennial Census in 2000. The latter variable captures a sense of belonging to the nation, whereas the former represents both local and national allegiance, depending on how important local as opposed to national issues are in bringing voters to the polls. Following Tolbert, Lyson and Irwin (1998), we also use church adherence to measure local civic engagement. We present regression results for each of the separate components as well. Table 1 provides definitions and summary statistics.

Our statistical equations are based on a model of household utility maximization that includes income as a measure of the opportunity cost of time facing decisionmakers. This model is derived in detail in Rupasingha, Goetz and Freshwater (2006). The model predicts a different response to the civic task of filling out a Census form (which can be done in the convenience of the home and then mailed in, and which occurs only once every decade) and visiting a polling station every two years, for example.

Regressors include, with expected signs in parentheses, educational attainment (+), ethnic diversity (-), inequality (-), female labor force participation (+), rural (+)/urban (-) stratification, home ownership (+), age (+,-) with a quadratic effect, family households (+) and households with children (+), migration behavior (+ for lack of migration, i.e., "stayer" percentages), and employment in manufacturing (+), agriculture (+) and professionals (+). These variables are measured in 1990, with a ten-year lag relative to the year in which our dependent variables are measured to reduce endogeneity bias. Rupasingha, Goetz and Freshwater (2006) treat education and income inequality as subject to reverse causality and therefore obtain instruments for these variables from a set of auxiliary regressions. We follow the same procedure here.

Table 1. Variables, Definitions and Descriptive Statistics

| Variable | Explanation | Mean | SD |
|------------------------------|---|----------|---------|
| <i>Dependent Variables</i> | | | |
| <i>SKI</i> | Social capital index, 1997 (Rupasingha et al. 2006) | -4.8E-16 | 1.3E+00 |
| <i>ASSN97</i> | Associations per 10,000 people for 1997 | 13.10 | 6.06 |
| <i>PVOTE00</i> | Percent eligible voting in 2000 presidential election | 53.70 | 10.16 |
| <i>NCCS</i> | Tax-exempt non-profits per 10,000, NCCS, 1997 | 5.92 | 4.70 |
| <i>CENSUS00</i> | Response rate to 2000 Census of Population | 62.46 | 8.80 |
| <i>ADH2000</i> | Per capita church adherence (Glenmary Res. 2000) | 53.20 | 18.28 |
| <i>Independent Variables</i> | | | |
| <i>PRELUC90</i> | Percent population 12+ yrs educ. 1990 (predicted) | 69.55 | 9.33 |
| <i>ETHNIC90</i> | Ethnic fractionalization index 1990 | 0.18 | 0.17 |
| <i>PRINEQ89</i> | Mean income/median income 1989 (predicted) | 1.46 | 0.13 |
| <i>FEMLAB90</i> | Female labor force participation rate 1990 | 0.93 | 0.03 |
| <i>URBAN</i> | Urban counties (0,1) 1993 | 0.26 | 0.44 |
| <i>RURAL</i> | Rural counties (0,1) 1993 | 0.42 | 0.49 |
| <i>OWNHOU90</i> | Percent owner-occupied houses 1990 | 72.78 | 7.49 |
| <i>MEDAGE90</i> | Median age 1990 | 34.42 | 3.59 |
| <i>FAMHH90</i> | Percent family households 1990 | 76.07 | 18.52 |
| <i>STAY90</i> | Percent same county as in 1985 | 0.75 | 0.07 |
| <i>BLACK90</i> | Percent African-Americans 1990 | 8.50 | 14.29 |
| <i>MEDINC89</i> | Median income 1989 | 28243 | 6919 |
| <i>FAMCH90</i> | Percent family households with children 1990 | 38.75 | 4.98 |
| <i>MANEMP90</i> | Percent manufacturing employment 1990 | 18.54 | 10.54 |
| <i>AGR90</i> | Pct. agriculture, forestry, & fishing employmt. 1990 | 10.56 | 9.60 |
| <i>PROFEM90</i> | Percent professional employment 1990 | 21.39 | 4.99 |
| <i>PCWAL87</i> | Number of Wal-Mart™ stores per 10,000, 1987 | 0.10 | 0.21 |
| <i>PRDWAL98</i> | Change in Wal-Mart™ stores, 1987-98 (predicted) | 0.58 | 0.81 |

Into this model we introduce the number of Wal-Mart stores in 1987 (the beginning of the decade) and the predicted change in the number of stores during the 1990s decade (up to 1998), as dictated by our data availability. We use the predicted value from the Wal-Mart location equation described in Goetz and Swaminathan (2006) as an instrument. The instrumented values correct for endogeneity bias in that Wal-Mart avoids counties where social capital -- and resistance to the retailer -- are high. Our null hypothesis is that the stores have no effect, whereas the alternative is that they depress social capital stocks through the processes described above.

Results

Our linear regression results reported in table 2 are robust to the inclusion of the Wal-Mart treatment effect and generally consistent with the findings of Rupasingha, Goetz and Freshwater (2006). The first equation has the principal component measure of social capi-

tal as the dependent variable. Counties with more-highly educated populations, greater ethnic homogeneity, more females in the labor force and that are rural have greater levels of social capital stocks than communities not meeting these characteristics. Greater shares of non-movers (residents who lived in the same county within the last five years), African-Americans and shares employed in agriculture as well as professional activities likewise have greater stocks of social capital. Income inequality is statistically significant at the 5 % level but does not have the expected sign, indicating that greater income inequality was associated with more social capital. Median household income, the ratio of family households to total households, families with children and owner-occupied housing each have no effects statistically in this equation. Age exhibits an inverted-U effect, suggesting social capital rises with age of the population to a certain point and then declines. Social capital is lower in counties with younger and older populations, suggesting that these age groups are less inclined to participate in civic activities.

Table 2. Factors Affecting Social Capital Levels in U.S. Counties: Estimation Results

| Variable | Social Capital Index (see text) | Associa- tions per 10,000 | Presidential Voting, 2000 election | Non-profits per 10,000 | Census Participa- tion | Church Adherence, per capita |
|-------------------------|--|---------------------------------|---|---------------------------|------------------------------|------------------------------------|
| Constant | 21.778*** | -82.20*** | -59.46*** | -45.67*** | 18.40 | -93.67*** |
| <i>PREDUC90</i> | 0.097*** | 0.190*** | 0.790*** | 0.224*** | 0.005 | -0.544*** |
| <i>ETHNIC90</i> | -1.333*** | -0.796 | -13.52*** | -2.133*** | -12.89*** | 32.17*** |
| <i>PRINEQ89</i> | 0.567* | -2.145* | 3.604** | 9.956*** | -13.59*** | -3.057 |
| <i>FEMLAB90</i> | 4.355*** | 34.62*** | -21.88*** | 7.778 | 31.34*** | 115.0*** |
| <i>URBAN90</i> | -0.058 | -0.704*** | 1.116*** | -1.447*** | 3.498*** | 2.910*** |
| <i>RURAL90</i> | 0.205*** | 0.879*** | 1.122*** | 0.728*** | -0.807*** | 4.008*** |
| <i>OWNHOU90</i> | -0.005 | -0.094*** | 0.421*** | -0.116*** | -0.243*** | -0.100* |
| <i>MEDAGE90</i> | 0.228*** | 1.510*** | 1.248*** | 0.827*** | -0.128 | -4.457*** |
| <i>AGESQ90</i> | -0.002*** | -0.015*** | -0.012** | -0.009*** | -0.001 | 0.056*** |
| <i>FAMHH90</i> | 0.003 | 0.055*** | -0.052*** | -0.045*** | 0.142*** | 0.471*** |
| <i>STAY90</i> | 6.162*** | 22.75*** | 22.85*** | 14.96*** | 19.78*** | 95.847*** |
| <i>BLACK90</i> | 0.011*** | 0.038*** | 0.170*** | -0.012 | 0.027 | -0.362*** |
| <i>MEDINC89</i> | -1E-05 | -0.001*** | -0.001** | 2.E-05 | 0.0004*** | 0.001*** |
| <i>FAMCHI90</i> | 0.006 | 0.143*** | -0.061 | -0.053 | 0.301*** | 0.986*** |
| <i>MANEMP90</i> | 0.005 | -0.005 | 0.061*** | -0.020 | 0.168*** | -0.226*** |
| <i>AGR90</i> | 0.010** | -0.011 | 0.304*** | -0.100*** | 0.094*** | 0.052 |
| <i>PROFEM90</i> | 0.034*** | 0.114*** | 0.114*** | 0.064* | 0.296*** | 0.059 |
| <i>PCWAL87</i> | -0.130** | 0.083 | -2.313*** | -1.058*** | 2.046*** | 6.114*** |
| <i>PRDWAL98</i> | -0.198*** | -0.875*** | -0.641** | -0.527*** | 0.080 | -3.916*** |
| Adjusted R ² | 0.61 | 0.41 | 0.56 | 0.39 | 0.50 | 0.48 |

Note: Statistical significance levels are as follows: *= ten percent, **=five percent and ***=one percent or lower. The sample size is $n = 2,978$ counties.

As for the Wal-Mart effect, both the initial number of stores and each store added per 10,000 persons during the decade reduced the overall social capital measure. The coefficient estimates are -0.130 and -0.198 , respectively, and both are statistically different from zero at the 5 % level. The relative magnitudes of these variables compare with a mean of 0.0 for the dependent variable and a standard deviation of 1.3. Thus, the effect is not large, but it is statistically significant nevertheless.

The second equation in table 2 contains the number of social capital-generating associations per 10,000 residents. Here only the addition of Wal-Marts during the 1990s exerts a statistically significant effect, not the initial number of stores in 1987. Other regressors also either change signs or become statistically indistinguishable from zero. For example, homeownership and greater median household incomes have negative effects, suggesting substitution of private for public participation in social capital-generating activities. Families with children and family household shares each have a positive effect on the dependent variable. As hypothesized, greater income inequality reduces the density of these associations significantly.

Voter turnout, column three in table 2, likewise follows an inverted-U-shaped age structure of the county's population. As was true of the two previous measures of social capital, educational attainment exerts a statistically significant effect on this form of social capital. Higher income depresses voter turnout, reflecting higher opportunity costs of time, while owner-occupied housing shares have the opposite effect. Homeowners go to the polls to protect their property values. Again Wal-Mart has the predicted effect, with both variables statistically significant at below the 5 % level, and negative. In other words, Wal-Mart's presence depresses voter turnout on election day, signifying a reduction in local social capital and civic capacity (or, in this case, activity).

In the case of tax-exempt non-profit organizations per 10,000 we again have the expected sign and statistical significance for both Wal-Mart variables at below the 1 % level. We also obtain the inverted-U familiar from the previous three equations for age. Female labor force participation has no effect here statistically. Urban areas have less of the social capital embodied in this establishment type, as do counties with proportionately more family households.

Another key social capital indicator is participation in the decennial Census. While most variables in this equation were statistically significant and had expected signs, this was not the case for urban and rural indicator variables and home ownership. Participation in the Census does not vary with age structure of county population. This equation, unexpectedly, reveals that the presence of Wal-Mart stores at the beginning of the decade increased participation rates in the 2000 census in a statistically significant manner, whereas the arrival of new stores had no effect. The last column in table 2 presents results for church adherence. Several variables have unexpected, statistically significant effects. Contrary to our hypotheses, higher adherence levels were associated with lower educational levels and higher ethnic diversity. While the effect of age in most of other social capital indicators followed an inverted-U, the opposite is observed here: church adherence is more pronounced among younger and older populations, perhaps because these age groups have more spare time to attend church regularly. The results with respect to Wal-Mart are mixed. The presence of Wal-Mart stores at the beginning of the decade increased church adherence, whereas growth in the number of stores (or new locations) decreased church adherence in a statistically significant manner.

Conclusion

Wal-Mart responds to market opportunities and by definition ignores the local externalities it creates within communities. Our results indicate that the presence of Wal-Mart depresses social capital stocks in local communities, measured here at the county-level. Based on our earlier work, these externalities represent real costs for communities in the form of reduced economic growth. Our results also indicate that community leaders should think carefully about providing infrastructure development subsidies to the chain. Given the measurable impact that social capital has on economic well-being, our findings are important. Less clear is what should or could be done about this. One policy response is to force the chain to internalize these effects in its decision-making.

Local county leaders should be made aware of the likely adverse effects of the chain on local civic capacity and social capital, and consider implementing policies and programs to help mitigate these effects. Space limitations prevent us from elaborating further, but one example is promoting local entrepreneurship through organized networks. Another is fostering regional cooperation among local firms in related industries, and the strategic development of local clusters through partnerships with universities and local community colleges.

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