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## Urban Planning and Land Use

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**To:** City Planning Commission

**From:** City Staff

**Date:** February 8, 2016

**Re:** **Proposed Ordinance Amendment definitions and a new provision to Section 27-593(a), Planning and Development of Kansas City, Kansas Code of Ordinances, requiring a special use permit for small, discount dollar retail stores.**

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### GENERAL INFORMATION

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This is a request of staff from the Board of Commissioners to prepare and process the following:

- Ordinance amendment to require a special use permit for small, discount dollar retail stores
- New definition for “dollar retail store”

**Purpose:** To better regulate the total number and proximity of dollar stores

**Advertisement:** Wyandotte Echo – December 17, 2015

**Public Hearing:** February 8, 2016

**Public Opposition:** None expressed to date.

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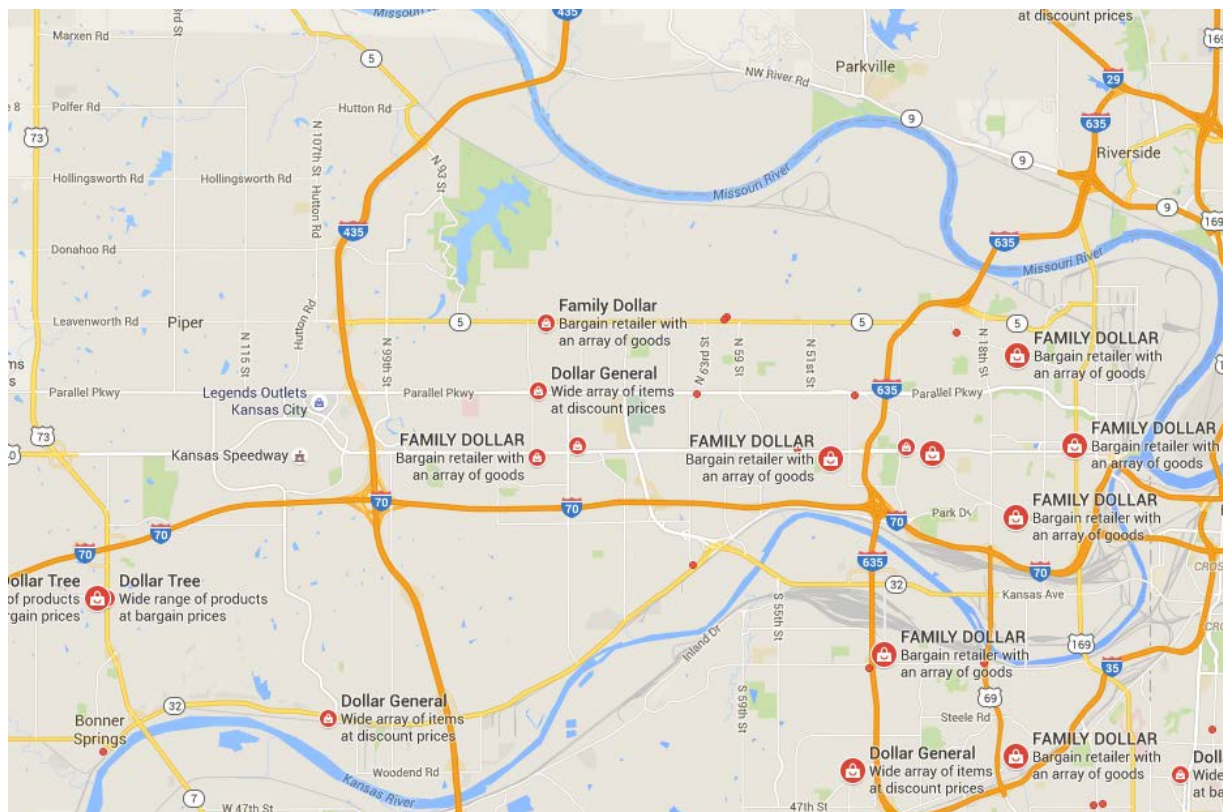
## PROPOSAL

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This ordinance recognizes that dollar retail stores may serve needs that are not being served by other businesses in the neighborhood. However, the proliferation of dollar retail stores in close proximity to each other can negatively impact the character of the neighborhood. The following guidelines are meant to preserve the character of each neighborhood while still allowing dollar retail stores to operate under certain conditions.

Currently, a high number of dollar retail stores exist, with many in close proximity to each other. In the proposed ordinance, the separation requirement of 10,000 feet was determined after considering current location patterns and pedestrian and transit access.

Existing dollar retail stores in Wyandotte County:



Dollar Stores an issue to be addressed based on the following conclusions:

WHEREAS a significant number of Dollar Stores are already in operation in Wyandotte County;  
and  
WHEREAS many of the Dollar Stores are currently in operation in close proximity to one another; and  
WHEREAS Dollar Store structures are difficult to repurpose after the store closes and can become a blight on the community; and  
WHEREAS there is a tendency of Dollar Stores to proliferate in low-income areas; and

WHEREAS there is a correlation between negative health indicators and the presence of Dollar Stores in communities; and

WHEREAS it is recognized that Dollar Stores may be the only convenient source of food and dry goods for people in communities underserved by traditional grocery stores; and

WHEREAS it is necessary to continue to allow the presence of Dollar Stores, but to regulate them; and

WHEREAS such regulations are necessary to preserve property values, prevent blight, and protect the health and welfare of the citizens of Wyandotte County; and

WHEREAS such regulations will promote the efficient use of land and resources in Wyandotte County; and

WHEREAS the Board of Commissioners has directed the planning department to research and draft an ordinance regulating Dollar Stores;

Therefore staff proposes the following ordinance modifications to achieve the goals of the community:

#### **Sec. 27-340. – Definitions.**

Dollar retail store means a store with a wide variety of merchandise for sale for five dollars or less, limited fresh produce, and buildings of less than 15,000 square feet. Examples include but are not limited to Family Dollar, Dollar General, Dollar Tree, 99 Cent Deals, Five Below, dime stores, or 5 & dime stores.

#### **Sec. 27-593. - Allowable special uses.**

(b) The following uses are permitted only on approval of a special use permit regardless of the zoning district of the proposed location:

(21) Dollar retail stores only in C-2 general business district, C-3 commercial district, M-1 light industrial and industrial park district, M-2 general industrial district, and M-3 heavy industrial district subject to the following criteria:

##### a. Separation Requirements

1. No dollar retail store shall be located within 10,000 feet of any other dollar store or within 200 feet of any property used primarily for a single-family residence, a two-family residence, a town home, or any apartment building. The separation distances shall be measured from property line of the dollar retail store to the property line of the property containing the residential use. This separation provision shall not apply to any dollar store that can demonstrate to the Unified Government that they were in operation at the location requested in the license application prior to the effective date of this article, and that they have operated continuously under the same business name since that time.

##### b. Signage

1. Following all permanent sign requirements under section 27-727.
- c. Façade, Landscaping, and Screening
  1. All commercial design guidelines must be met for all facades including, but not limited to, the creation of quality development with respect to site planning, architectural design and landscaping.
  2. Commercial uses in industrial districts shall be subject to commercial design guidelines.

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## EXHIBITS

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1. Impact of Chain Stores, April 18, 2000
2. As Dollar Stores Proliferate, Opponents Worry for Small Towns, March 20, 2012
3. Food Environment and Child Obesity, 2015
4. 4 Reasons Shopping at Dollar Stores Costs More, May 8, 2015
5. What Dollar Stores Reveal About America, February 7, 2012
6. UG to Look at Limiting Number of Dollar Stores, May 22, 2015

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## STAFF COMMENTS AND SUGGESTIONS

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Staff recommends that the City Planning Commission approve the text amendment.

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## REVIEW OF INFORMATION AND SCHEDULE

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Action	Planning Commission	Unified Government Commission
Public Hearing	February 8, 2016	February 25, 2016

**STAFF CONTACT:**            **Zach Tusinger**                    **ztusinger@wycokck.org**

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## MOTIONS

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I move the Kansas City, Kansas City Planning Commission **RECOMMEND APPROVAL** of this ordinance amendment to the Unified Government Board of Commissioners as meeting all the requirements of the City code and being in the interest of the public health, safety and welfare subject to such modifications as are necessary to resolve to the satisfaction of City Staff all comments contained in the Staff Report; and the following additional requirements of the Kansas City, Kansas City Planning Commission:


1. \_\_\_\_\_;
2. \_\_\_\_\_; And

3. \_\_\_\_\_.

**OR**

I move the Kansas City, Kansas City Planning Commission **RECOMMEND DENIAL** of this ordinance amendment, as it is not in compliance with the City Ordinances and as it will not promote the public health, safety and welfare of the City of Kansas City, Kansas; and other such reasons that have been mentioned.

## Exhibit1




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Local Self-Reliance**

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INDEPENDENT BUSINESS

ARTICLE, RESOURCE

## The Impact of Chain Stores on Community

Stacy Mitchell | 2 Comments | Apr 18, 2000

*A speech by ILSR's Stacy Mitchell delivered at the annual conference of the American Planning Association, April 2000*

Chain store proliferation has weakened local economies, eroded community character, and impoverished civic and cultural life. Moreover, consolidation has reduced competition and may harm consumers over the long-term. Contrary to conventional wisdom, the decline of independent businesses is not inevitable, nor is it simply the result of free market forces. Rather, public policy has played a major role, particularly through tax incentives and other development subsidies that give national chains a significant advantage. Meanwhile, a growing number of communities are taking a different approach. They are adopting land use rules that deter chain stores and actively encourage local ownership.

Let me begin by reading something that Jane Jacobs wrote in her book, *The Death and Life of Great American Cities*, about the relationship between locally owned businesses and community. Community is one of those words so overused that we rarely pause to consider its meaning. For Jacobs, what constitutes community is not any one particular thing, but rather the many small interactions that occur in our everyday lives.

"It grows," she writes, "out of people stopping by the bar for a beer, getting advice from the grocer and giving advice to the newsstand man, comparing opinions with other customers at the bakery and nodding hello to the two boys drinking pop on the stoop . . . hearing about a job from the hardware man and borrowing a dollar from the druggist . . .

"Most of it is ostensibly utterly trivial, but the sum is not trivial at all. The sum of such casual, public contact at the local level . . . most of it fortuitous, most of it associated with errands . . . is a feeling for the public identity of people, a web of public respect and trust, and a resource in time of personal or neighborhood need. The absence of this trust is a disaster to a city street."<sup>1</sup>

What Jacobs describes here could be an urban neighborhood or a small town. Its defining feature—and indeed the very foundation of this close-knit community—is a vibrant local retail economy. It is a place of small stores and sidewalks; a place where public and private space overlaps; and a place where we buy goods and services from businesses owned by our neighbors.

Such places are increasingly rare. Small-scale, pedestrian streets are giving way to massive, impersonal shopping centers. Street life has suffered, as our daily errands revolve increasingly around stores accessible only by car. Locally owned businesses are disappearing, displaced by national chains that have limited ties and no long-term commitment to the community.

The loss of locally owned stores and the pace of retail consolidation is staggering. 11,000 independent pharmacies have closed since 1990. Independent bookstores have fallen from 58 percent of book sales in 1972 to just 17 percent today. Local hardware dealers are on the decline, while two companies have captured 30 percent of the market. Blockbuster rents one out of three videos nationwide. Five firms control one-third of the grocery market, up from 19 percent just five years ago. A single firm, Wal-Mart, now accounts for 7 percent of all consumer spending.<sup>2</sup>

If the current trends continue, independent retailers might soon be a thing of the past. But, in the midst of this unprecedented expansion by national retail corporations, another trend is underway: a growing number of communities are rejecting chain stores.



Last summer, residents of Ashland, Virginia mounted a spirited campaign to block a proposed Wal-Mart. In October, the Planning Commission voted unanimously to reject the store. In Chelsea, Michigan, residents organized a picnic to protest plans for a Rite Aid drugstore. The event drew a crowd of 1100 people. Rite Aid quickly backed down. Similar events are occurring across the country.

Indeed, over the past two years, dozens, or perhaps hundreds, of neighborhood groups have sprung up to protect their hometown businesses. In Lake Placid, New York, a group known as the Residents for Responsible Growth is working with neighboring towns to form a regional response to chain store expansion. In Flagstaff, Arizona, it was the arrival of a Barnes & Noble and a Home Depot that prompted residents to form the Friends of Flagstaff's Future. In Northfield, Minnesota, the Citizens for Responsible Development is working to defend the town's historic Main Street and local shops.

## CONSUMERS

The debate over chain stores is often characterized as a struggle between our hearts and wallets. We may mourn the loss of the corner drugstore, a fixture in the neighborhood for three generations, or the local independent bookstore, but ultimately we believe that, as consumers, we are better off. We tend to take as self-evident the chain stores' claims that they bring us lower prices and wider selection.

Over the long term, however, consumers are best served when there are numerous competitors in the market. The big retail corporations, like Home Depot, Toys R Us, and Best Buy, are known in the industry as "category killers." The name is significant. These businesses do not intend to compete with local stores; they aim to be the only game in town.

Typically, a chain store will enter a new market sporting deep discounts. Many chains employ loss leaders to attract customers. Wal-Mart has been known to sell gallons of milk for 25 cents or to price entire departments below its own acquisition costs. This sets up a battle that local merchants cannot win. If they don't match the chain's prices, they risk losing customers. If they do match the chain's prices, they will lose money on every sale. While a chain can afford to operate a new outlet at a loss indefinitely, it's only a matter of time before the local business will be forced to close.

Once the chain has eliminated the local competition, prices tend to rise. In Virginia, a survey of several Wal-Mart stores statewide found prices varied by as much as 25 percent. The researchers concluded that prices rose in markets where the retailer faced little competition. A similar conclusion was reached in a survey of Home Depot. Prices were as much as 10 percent higher in Atlanta compared to the more competitive market in Greensboro, North Carolina.<sup>4</sup>

As for wider selection, consumers should be especially wary of the claims made by chain stores. Independent merchants are usually the first to sell products made by small companies. By contrast, most national chains refuse to do business with small and mid-sized companies. They prefer to deal only with large manufacturers. The result is that small manufacturers—even those that make innovative products, publish great books, or distribute ground-breaking films—are having an increasingly difficult time reaching consumers.<sup>4</sup>

Consider the impact of this on book publishing. Borders Books and Barnes & Noble certainly stock a large number of titles under one roof, but these are virtually the same titles found in each of their 2,000 stores. Although local bookstores tend to be smaller, collectively they stock—and promote—far more titles than either of the chains. They take risks on unknown authors and small publishers. A number of best-selling writers, including Barbara Kingsolver and Amy Tan, contend that, without independent booksellers, their first books would have gone quietly out of print.

## LOCAL ECONOMIES

Even if chain stores do save us a few dollars now and again, it comes at a great cost. Chain stores contribute far less to the local economy than independent businesses.

Developers often present new chain store developments as major additions to the local economy. They note the growth in retail sales and shopping options. They tally up the number of new jobs and the added tax revenue that the development will bring.

What is often overlooked is the other side of the balance sheet. Unlike new manufacturing facilities, which do create real economic growth, new retail stores simply shift consumer spending from one area of town to another. A new big box store can only be successful at the expense of existing businesses.

A study in Iowa, for example, found that new Wal-Mart stores derive on average of 84 percent of their sales from existing businesses within the community.<sup>4</sup> Similar conclusions have been reached in studies of big box development in Massachusetts, Maine, Vermont, New York, California, and Virginia.

What all of the studies find is that very little of the sales generated by a new retail store represent new retail spending. Instead these developments simply shift economic activity from one part of town to another. The end result is not economic development, but rather economic displacement.

One study in Greenfield, Massachusetts concluded that a proposed Wal-Mart store would cost existing businesses \$35 million in sales. The 177 jobs expected to be gained by the Wal-Mart would be offset by the loss of 148 jobs at other businesses.<sup>4</sup> A similar study in Saint Albans, Vermont found that a new Wal-Mart would derive 76 percent of its sales from local businesses. Many of these stores would be forced to close, leading to a significant net decline in total retail employment and property tax revenue.<sup>5</sup>

Trading locally owned businesses for chain stores also entails the loss of significant secondary economic benefits.

Local stores keep profits circulating within the local economy. They also support a variety of other local businesses. They create opportunities for service providers, like accountants and printers. They do business with the community bank. They advertise through independent radio stations and other local media outlets. They purchase goods from local or regional distributors. In this way, a dollar spent at a locally owned businesses sends a ripple of economic benefits through the community.

By contrast, chain stores typically centralize these functions at their head offices. They keep local investment and spending to a minimum. They bank with big national banks. They bypass local radio stations in favor of national advertising. In this way, much of a dollar spent at a chain store leaves the community immediately.

Small, independent stores also create economic diversity and stability. Because they are locally owned, these stores are firmly rooted in the community. They are unlikely to move and will do their best to weather economic hard times.

Chain stores, by contrast, tend to be fair-weather friends. They are highly mobile and will abandon a location if profit margins do not meet their expectations. The worst case scenario is when a big box store builds on the edge of town, destroys the central business district, and, then a few years later, decides that it too will close its doors. The town is left with a dead Main Street and nothing to show for it. Nationwide, there are more than 300 empty Wal-Marts.<sup>6</sup> It's very difficult to find a tenant for these single-purpose buildings and they often remain vacant for many years.

A community that loses its local businesses to national chains also risks losing other economic development opportunities. New technologies have enabled many companies to operate virtually anywhere. When these companies consider location options, towns with a vibrant commercial core and a unique character are often at the top of the list.

## COMMUNITY

From an economic perspective, there is much to suggest that chain stores may not be our best value. But perhaps more significant than any of the economic considerations are the qualitative benefits of local ownership. Locally owned businesses build strong communities. They provide a foundation for the web of connections and trust that Jane Jacobs believed so essential to a healthy neighborhood.

There are several reasons for this. The first is that independent stores tend to be located in humanly-scaled, pedestrian-oriented shopping districts, as opposed to the sprawling, isolated experience of a chain store parking lot.

The second reason is that local stores create a sense of place and community identity. They reflect the local culture. They give neighborhoods their distinct flavor. They are often a source of community pride and an attraction to visitors.

Chain stores, by contrast, are sapping communities of their character and individuality. Even the most famous American cities are losing their unique appeal. Kmart, Costco, and Home Depot are building in Manhattan. Fifth Avenue is home to Starbucks and The Gap. These same stores can be found on Michigan Avenue in Chicago, Market Street in San Francisco, and thousands of other locations worldwide.

The arrival of chain stores may also entail the destruction of important local landmarks. An 1876 Friends Meeting house in Richmond, Indiana, for example, was demolished for a CVS drugstore. In Nashville, the Jacksonian Apartments, eligible for the National Register of Historic Places, were torn down for a Walgreen drugstore.<sup>7</sup>



The third way that independent businesses strengthen community is through their contributions to civic and cultural life. Local merchants are more than providers of goods and services. They often take a leadership role in community affairs. Many chair neighborhood organizations, host cultural events, or organize local festivals. According to the U.S. Small Business Administration, small businesses give more time and money to charitable organizations than do their large competitors.<sup>10</sup>

Because they live in the places where they do business, local merchants tend to be far more committed to the community's well-being and long-term stability than distant corporations. This commitment manifests itself in a variety of ways. In St. Paul, Minnesota, for example, the local food cooperative recently opened a new store in a low income neighborhood on a lot that had been vacant for years. As with many construction projects, the coop ran into higher than expected costs. Several independent merchants, including the local bookseller, stepped in and provided a sizable and much-needed loan. Meanwhile, Barnes & Noble and Borders Books, both of which operate stores in the city, were nowhere to be found.

Finally, the shift from local to absentee-owned stores means that business decisions are no longer made locally by members of the community. Who decides whether to close a store in a distressed neighborhood, stock a controversial book, sell produce from local farms, pay a living wage, or contribute to a local charity? In the case of chain stores, these decisions occur in distant boardrooms, where the values of the local community carry little or no weight.

This loss of local decision-making and the growing power of a small number of large corporations has implications for democracy. In 1952, Senator Hubert Humphrey asked, "Do we want an America where the economic market place is filled with a few Frankensteins and giants? Or do we want an America where there are thousands upon thousands of small entrepreneurs, independent businessmen, and landholders who can stand on their own feet and talk back to their Government or to anyone else?"<sup>11</sup>

## NEW RULES

There are tremendous benefits to choosing the latter path. Our ability to do so will depend not only on the decisions we make as consumers, but on the decisions we make as citizens. The actions of policymakers, and, in particular, planners, are critical to reviving the homegrown economy and ensuring that local businesses continue to be a vital part of our communities.

Many contend that public policy should have no role in shaping the retail economy. This is, after all, a free market.

But public policy is never neutral, and has, in fact, played a major role in the expansion of national chain stores. In many ways, public policy has undermined local retailers by giving large retail corporations unfair advantages.

Examples can be found at all levels of government. Congress, for instance, has exempted retailers like Amazon.com and Barnes & Noble from collecting sales tax on internet sales. This effectively gives these companies a 6 to 8 percent price advantage over local stores.

At the city and state level, tax incentives and other kinds of subsidies are routinely made available to chain stores. In Wisconsin, nearly \$20 million was provided a few years ago for a distribution center for Target stores. The city of Rochester, Minnesota spent \$3 million attracting a Barnes & Noble. Long Beach, California waived \$6 million in taxes for a development that included Kmart. In Florida, Walgreens has requested \$4.5 million in state and county tax breaks for the construction of a new warehouse.<sup>12</sup>

Similar examples can be found all over the country. Even if your hometown does not provide such subsidies, the chains that expand there are able to do so in part because of public funding they've received elsewhere. Rarely are tax breaks and subsidies given to locally owned businesses. Instead, they often see their tax dollars used to subsidize a competitor.

In other cases, city governments have evicted local businesses to make room for chain store developments. A proposal currently under consideration in Pittsburgh would level 60 buildings and remove 125, mostly locally owned, businesses to make way for a shopping center that will house some three dozen chain stores. The beneficiaries of this plan include The Gap, Borders Books, and FAO Schwartz.<sup>13</sup>

Under these circumstances, even the most competitive, efficient, and popular independent businesses are struggling to stay afloat.

What these examples make clear is that the loss of independent businesses is not inevitable. Rather than undermining the local economy, many communities are taking a different approach. They have made sustaining humanly scaled, unique homegrown businesses a primary focus of planning and economic development decisions.

They are adopting a variety of land use rules that deter chain stores and foster local ownership. Many have restricted the physical size of new stores. Others allow new retail development only if it meets specific criteria defined by the community. Some have banned uniformity, by prohibiting "formula" businesses. Others have barred new retail development outside of the town's central business district. (Examples of these policies, including the full text of the local ordinance, can be found on the New Rules web site, created by the Institute for Local Self-Reliance, at <http://www.ilsr.org>.)

By designing policies that put community first, local businesses can once again become a key component in a dynamic retail economy and a vibrant community.

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## NOTES

1. Jane Jacobs, *The Death and Life of Great American Cities*, New York: Random House, 1961.

2. National Community Pharmacists Association; American Booksellers Association; Ace Hardware Corporation; Video Software Dealers Association; "Five Hundred Largest U.S. Corporations," *Fortune*, April 2000.

3. Elizabeth Humstone and Thomas Muller, "Impact of Wal-Mart on Northwestern Vermont," prepared for the Preservation Trust of Vermont, the Vermont Natural Resources Council, and Williston Citizens for Responsible Growth, 1995; Chris Rouch, "Home Depot using predatory pricing tactics, critics say," *Atlanta Journal & Constitution*, March 18, 1995, p. 1B.

4. Lionel Diaz, Senior Vice President, Manufacturers' Agents National Association, Testimony before the Committee on Small Business, U.S. House of Representatives, August 10, 1994.

5. Thomas Muller and Elizabeth Humstone, "What Happened When Wal-Mart Came to Town? A Report on Three Iowa Communities with a Statistical Analysis of Seven Iowa Counties," Washington: National Trust for Historic Preservation, 1996.

6. Land Use, Inc. and RKG Associates, "Greenfield, Massachusetts: Fiscal and Economic Impact Assessment of the Proposed Wal-Mart Development," 1993.

7. Elizabeth Humstone and Thomas Muller, "Impact of Wal-Mart on Northwestern Vermont," prepared for the Preservation Trust of Vermont, the Vermont Natural Resources Council, and Williston Citizens for Responsible Growth, 1995.

8. "The Portable Wal-Mart," *Sprawl-Busters Alert*, April 1999.

9. *Better Models for Chain Stores*, Washington: National Trust for Historic Preservation, 2000; Suzi Parker, "On Main Street America, it's charm versus chains," *The Christian Science Monitor*, July 19, 1999.

10. Patricia A. Frishkoff and Alicja M. Kostecka, "Business Contributions to Community Service," U.S. Small Business Administration, 1991.

11. Quoted in Michael Sandel, *Democracy's Discontent: America in Search of a Public Philosophy*, Cambridge: Harvard University, 1996, p. 243.

12. "Wisconsin's Tax Increment Finance Law: Lending a Hand to Blighted Areas or Turning Cornfields into Parking Lots?" 1,000 Friends of Wisconsin, October 1999; Douglas P. Shuit, "The Retail Wags the Dog: As cities vie for the big sales tax producers that can help keep budgets afloat, legislation is being considered to save them from themselves," *Los Angeles Times*, July 17, 1998, p. B2; Paul Owers, "Walgreen Incentives Could Top \$4 Million," *The Palm Beach Post*, January 21, 2000, p. 1D.

13. Tom Barnes, "Eminent Domain Debate Heats Up," *Pittsburgh Post-Gazette*, March 2, 2000, p. B1.

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Stacy Mitchell is a researcher for the Institute for Local Self-Reliance (ILSR), a national nonprofit organization advancing community-oriented economic development through research and educational activities.



## Exhibit 2

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### As Dollar Stores Proliferate, Opponents Worry For Small Towns

03/20/12 7:50AM By [Steve Zind](#)



MP3

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VPR/ Steve Zind.

Dollar General and Family Dollar both have plans to expand the number of stores in Vermont this year. Opponents say the stores are a bigger threat to small towns than big box stores.

(Host) Two national dollar store chains have plans to expand the number of their Vermont stores in the coming year, but they're running into some local resistance.

Opponents say the proliferation of dollar stores poses a greater threat to the economy and character of many more towns than big box stores.

VPR's Steve Zind reports.

(Zind) With its vibrant village and distinctive stone architecture the Windsor County town of [Chester](#) has a charm that translates into dollars. The shops and boutiques that line Main Street thrive on tourism.

But there's one sign of economic growth that some residents aren't so happy about.

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Dollar General, the large national retailer wants to build a store at the edge of the village. At 9,100 square feet, it would be by far the largest retailer in Chester.

Shawn Cunningham is with the group Smart Growth Chester

*(Cunningham) "It's out of scale, it's not with the character of the town and we're concerned about the businesses in town because there are a number of businesses this would compete with unfairly. It's like asking a bantamweight to crawl into the ring with a heavyweight."*

(Zind) Cunningham's group is urging the town's Development Review Board to reject Dollar General's application.

Cunningham argues that the national chain brings little to the town's economy in jobs or revenue.

Dollar General hopes to build several stores in Vermont this year in addition to the 15 it already has.

Another large national chain, Family Dollar wants to add at least seven stores to the nine it already has in Vermont.

Across the country, business is booming for dollar stores. Joshua Braverman is a spokesman for Family Dollar.

*(Braverman) "We are definitely in a growth mode and are looking forward to providing the value and convenience that we provide in our stores to more communities around the country."*

(Zind) Braverman says Family Dollar's core customers are single women heads of household who earn less than \$40,000 a year. But he says that demographic is expanding and creating more opportunities for the company to build new stores.

Many dollar stores are located in strip development or stand-alone buildings outside of towns. Those outliers are the ones that concern Paul Bruhn of the Preservation Trust of Vermont.

*(Bruhn) "We understand that there are people in Vermont that need that kind of shopping experience. Our concerns are much more around location. Most of the dollar stores are located in sprawl locations that has the effect of undermining out downtown and village centers."*

(Zind) Bruhn says he has nothing against dollar stores if they're reasonably sized and in town.

Gayle Aertker is senior vice-president of store development for Dollar General which is based in Tennessee. It's the largest of the national dollar store chains.

Aertker says the Dollar general prefers to erect its own stand-alone buildings, or locate stores in strip developments. Both options tend to put stores outside of village centers.

And Aertker says the 9,100 square foot store proposed for Chester is the smallest size that works for the company.



*(Aertker) "It is a balance of making sure that we have all the basic merchandise in our store that makes a Dollar General a profitable store. So, no, we're not building smaller stores today."*

(Zind) Aertker says her company brings jobs to communities and supports local non-profits.

In Randolph, there's a locally owned downtown variety store called Belmain's. It competes with two dollar stores just outside of the village.

Belmain's manager Penny Young says some customers shop with her out of loyalty to a locally owned business. She says the dollar stores haven't had an impact on Belmain's.

*(Young) "We felt no big change as far as our customer base and how busy we were."*

(Zind) But Young says sprawl has had an effect on Belmain's. Her business took a hit when Randolph's only supermarket moved from the village to a strip development outside of town.

There are many arguments for controlling sprawl in addition to concerns about the vitality of downtowns. Traffic headaches and infrastructure costs figure into the sprawl equation.

Dollar stores also raise aesthetic concerns. They're considered small box stores and the buildings have a generic look. A letter writer to the Herald of Randolph opined that "nothing says 'armpit' like a dollar store at the edge of town."

But one person's eyesore is someone else's shopping opportunity. Bristol lawyer James Dumont says what's important is that towns have the tools to make their own decisions on managing growth.

Dumont is working with opponents of three dollar stores planned for Vermont.

*(Dumont) "You could write a zoning ordinance or town plan or both that has architectural standards in it so that we are not perpetuating the homogenization of America in Vermont, so when you drive into a Vermont town it looks like a Vermont town, it doesn't look like a suburb in Connecticut or New Jersey."*

(Zind) The problem, Dumont says, is that most Vermont towns don't have plans or ordinances that are clear and concrete enough to hold up to a court challenge.

*(Dumont) "Most people are not aware that the Supreme Court has laid out some really strict standards for what needs to be in a town plan. A lot of people get into this process thinking the town plan will protect them and it doesn't."*

(Zind) Dumont says there are limits to what a town plan can dictate, and one gray area is whether they can be used to protect local businesses from the impact of national chains.

But opponents like those in Chester say protecting locally owned businesses is important because they provide more and better jobs and give a community its identity.

For VPR News, I'm Steve Zind.

Read the latest select board minutes from Chester at [VPR's Public Post](#).

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17 Comments Vermont Public Radio

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Northern New England Villages • 4 years ago

While this Dollar General is being built on a green site, their MO in other places has been to tear down a building (often historic) for their building site. See the ongoing saga over the Wheaton-Alexander House in Winchester, New Hampshire for instance: <http://northernnewenglandvilla...>

1 | 0 | Reply | Share



Delchi • 4 years ago

The logic will be lost on people until they lose their jobs and have no choice but to buy at the \$1 store because they can't afford anything else. You can love little folky home feeling stores until the day you die - but if you can't afford to shop there you just can't afford it.

1 | 0 | Reply | Share



J • 4 years ago

Why would somebody drive 8 miles each way to save a couple of dollars when according to the IRS it costs over .50 cents a mile to operate a car. It would cost somebody over \$8.00 to go to the store in Springfield and send petro dollars to OPEC.

Chester isn't a tourist trap theme park owned by a few people trying to make money off the tourist trade. It's a town of over 3,000 people who all have rights including the people trying to sell a piece of property.

Using the logic some people have automobiles and gasoline stations should have never been allowed in town because they would hurt stables and blacksmiths. Yet here we have somebody saying jump in the car and drive to another town.

1 | 0 | Reply | Share



Susan H. • 4 years ago

The point I was trying to make is that many people are shopping in Springfield and Walpole already and would combine a trip to one of these dollar stores with other errands, Dr appointments, work etc. So perhaps the same store in the next town over may not be a wise choice for a new location.

1 | 0 | Reply | Share



Susan H. • 4 years ago

What the article does not mention is that there is a Dollar General and I believe also a Family dollar (or other similar store) just 8 miles away in Springfield. In addition there is a new Family Dollar in Walpole, NH. If people want to shop at these stores they can when they go on errands to these other shopping locales for residents of Chester. But why put local businesses of Chester at risk for a national chain where most of the profits will never go back into the community. Will they be able to compete with their own stores so close together? Will Chester end up with a huge 9100 sq ft store sitting empty in a year or so?

1 | 0 | Reply | Share



## Exhibit 3

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### RESEARCH

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# Food environment and childhood obesity: the effect of dollar stores



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## Abstract

In this paper we examine the effect of dollar stores on children's Body Mass Index (BMI). We use a dataset compiled by the Arkansas Center for Health Improvement that reflects a BMI screening program for public school children in the state of Arkansas. We combine propensity score matching with difference-in-differences methods to deal with time-invariant as well time-varying unobserved factors. We find no evidence that the presence of dollar stores within a reasonably close proximity of the child's residence increases BMI. In fact, we see an increase in BMI when dollar stores leave a child's neighborhood. Given the proliferation of dollar stores in rural and low-income urban areas, the question of whether dollar stores are contributing to high rates of childhood obesity is policy relevant. However, our results provide some evidence that exposure to dollar stores is not a causal factor.

**JEL Classification Numbers:** D10, I10, C31, C33, R10

**Keywords:** Childhood obesity, Food-at-home, Propensity score matching, Difference-in-differences

## Introduction

At present, nearly 35 percent of young Americans aged 6 to 19 are overweight and 19 percent are obese [1]. This is up from just over 4 percent in the 1960s [2]. In Arkansas, the problem is more pronounced. Twenty one percent of Arkansas schoolchildren are obese and many more are at risk of obesity [3]. In fact, only 60 percent of Arkansas schoolchildren have a healthy weight status. The childhood obesity problem has caught the attention of policy makers at all levels of government and has become a front-burner issue for concerned community and business leaders. Proposals to address childhood obesity are often aimed at augmenting features of the environment by improving access to healthy foods in or around the home and school, reducing accessibility and exposure to unhealthy food, and/or providing more opportunities for exercise and vigorous play. For example, many of the strategies proposed by the Institute of Medicine [4] to address obesity emphasize the built environment, the commercial food environment, and the food distribution system. Similarly, Frieden et al. [5] call for

neighborhood policy interventions to encourage healthy food choices. Specifically, they advocate for changes that increase the likelihood that healthy foods will be chosen by default. Goldberg and Gunasti [6] provide recommendations aimed at the food marketing system both in terms of promotional messaging and in terms of product design, pricing, and distribution.

Ambitious and comprehensive interventions are clearly needed to reduce the incidence of childhood obesity. However, concerns have been expressed that existing research is inadequate to guide policy interventions. For example, Story et al. [7] acknowledge that the systematic study of interactions between features of the environment, policy interventions, and nutrition outcomes is a relatively new field of study. As such, it lacks well established models and faces numerous challenges in terms of measurement of environmental attributes and empirical design. Researchers attempting to investigate the link between environmental attributes and obesity face important challenges. First, the environmental features of interest are likely to be endogenously determined with rates of obesity. For instance, food stores would be expected to consider consumer demand when making choices about the location of stores, but consumers with stronger demand for unhealthy foods may be making

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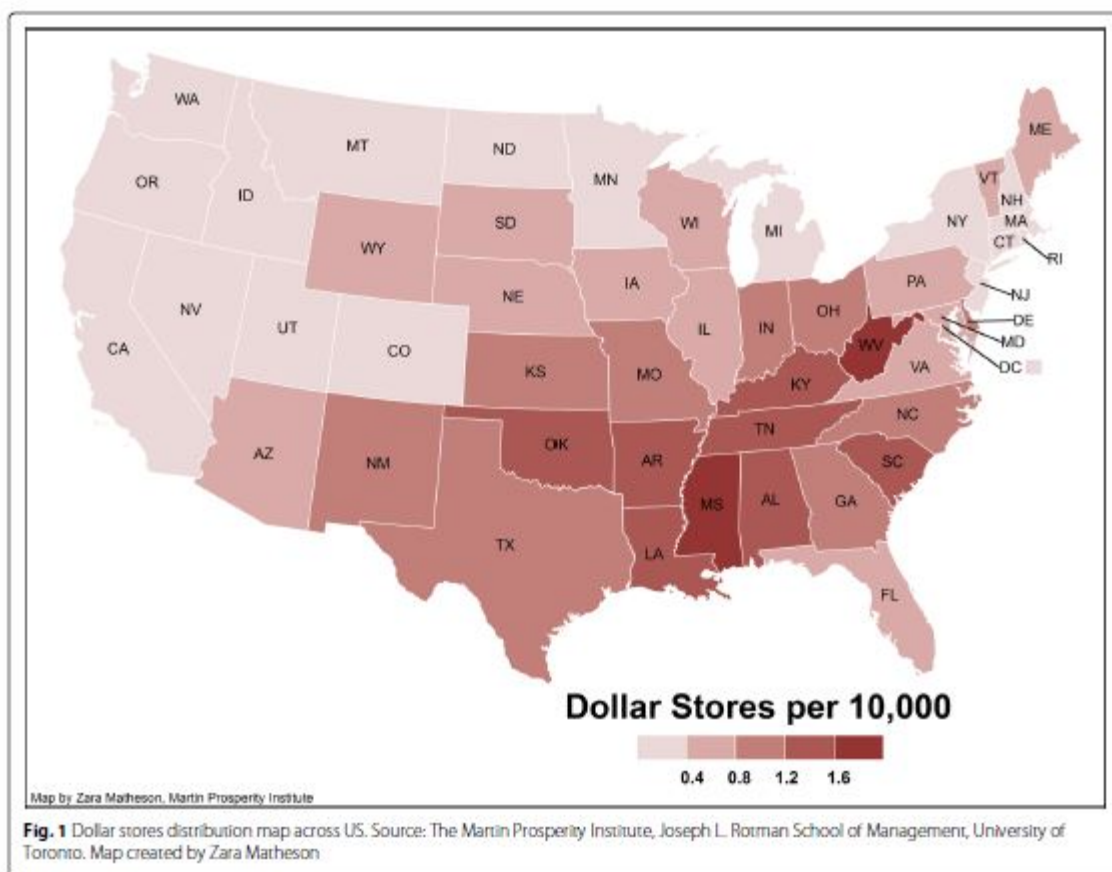
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lifestyle choices that otherwise place them at a higher risk of obesity [8]. Neighborhood choice is also not randomly assigned [9]. Thus, if health-conscious individuals self-select into neighborhoods that are conducive to healthy diets or active lifestyles, the statistical association between neighborhood features and obesity is suspect. Second, the impact of environmental features may be context specific. For example, in one context a new food store may meaningfully expand healthy food options for residents and facilitate healthy dietary choices. In another, the increased competition that results from the additional store may have the opposite effect by lowering prices on less healthy foods [10]. For these reasons, it is not surprising that it has been difficult to draw clear conclusions from correlational studies on the relations between features of the environment and weight outcomes.

The aim of this article is to examine the role of dollar stores. Dollar stores are an unstudied feature of the built environment that may impact childhood obesity, especially in predominantly rural states such as Arkansas.

In comparison to supermarkets, dollar stores provide a very narrow range of food items, but at price points much lower than convenience stores and often lower than supermarket prices. A recent inventory of Arkansas dollar stores found very limited offerings of healthier (e.g., lower-sodium) product formulations and limited offerings of fresh fruits and vegetables [11].

Dollar stores have been growing markedly throughout the United States but this growth has not been uniform. Figure 1 [12] shows dollar stores distribution across US. The mid South is one region where dollar stores are becoming prominent features of the retail environment. Natunewicz [13] provides counts, by state, for the four leading dollar store retailers. A simple adjustment of these data by population reveals that Arkansas, Mississippi, and Louisiana each have more than 140 dollar stores per million residents. This compares to only 14 stores per million residents in California and 37 stores per million residents in New York State. Even in Texas, dollar store density is considerably smaller at 86 stores per million res-





idents. Dollar stores are not only a rural phenomenon. These stores are also growing in urban areas, albeit in less desirable neighborhoods [13].

As a result, a larger fraction of the household budget has been shifted toward dollar stores and the trend is not confined to less affluent households. Even among households with an income of at least \$75,000, 28 % now spend more in the dollar channel [14]. According to one industry report, the dollar (and variety) store industry capitalized on the recession to attract more middle class consumers making it a \$62bn business that has seen a 3.5 % annual growth in the period 2009–2014 [15]. The dollar store channel has seen the largest year-over-year share increase in shopping visits (as compared to the brick-and-mortar market overall), likely driven in part by new store openings, where in one recent retail quarter (May 2014 – July 2014) shopping visits were up 14 % with a particular increase in the 16–24 age group [16].

Given the significant increase in the number of dollar stores, our objective in this study is to examine how access to these types of stores influences weight outcomes of children. Our empirical strategy involves a difference in differences (DiD) framework coupled with propensity score matching. The National Research Council [17] has called for strong quasi-experiments that couple observational data with one or more empirical identification strategies to improve understanding of the factors that may be responsible for the growth in obesity rates. Our focus is on childhood obesity outcomes among early elementary schoolchildren in Arkansas. Arkansas provides an ideal context within which to conduct this research. As already noted, it has one of the highest childhood obesity rates in the country. However, the state has been taking active steps to address this problem and has assembled unique panel datasets of childhood Body Mass Index (BMI) screenings that can be used to assess the impact of environmental features such as dollar stores.

## Background

Arkansas was the first state to require BMI measurements for all public schoolchildren. The Arkansas General Assembly passed Act 1220 of 2003, which established a formal Child Health Advisory Committee (CHAC) and mandated BMI screenings for public schoolchildren. Our data on weight outcomes are from the Arkansas BMI dataset for 2004 through 2010. These data are maintained through legislative mandate at the Arkansas Center for Health Improvement (ACHI) [18]. The data contain age-gender specific z-scores and are based on height and weight measurements taken by trained personnel within the public schools. Weight and height of school children were measured yearly in all grades beginning with the 2003–2004 school year but in 2007 this was

changed to measurement only of children in even grades. Hence, the dataset we use is an unbalanced panel which contains information for schoolchildren from 2004 to 2010.

Dollar store location data were obtained from Dun and Bradstreet (D&B) for the period 2004 through 2010. To ensure that BMI screenings in any given year were matched correctly to the locations of dollar stores as they existed in that year, we obtained archival data showing the location of dollar stores as of December of the year in question. ACHI personnel geocoded student addresses within the BMI dataset and linked them geographically to the D&B data on dollar store locations. The final dataset contains measures of the food environment around the children's home and schools such as number of fast food restaurants, dollar stores, convenience stores and grocery stores within a certain radius of the child's home.

ACHI personnel also matched the BMI screenings to neighborhood demographic characteristics from the 2009 American Community Survey (ACS) block-group summary file. The 2009 ACS reflects an average over the 2005–2009 period and so is centered on the 2004 to 2010 period covered by the BMI data we use here. The ACS data provide information on socioeconomic characteristics of the census block group where the student lives as well as information on neighborhood characteristics such as the proportion of population by race, income level, education, and work status.

## Methods

In this study we examine the effect of access to dollar stores (DS) on children's BMI. To determine whether children and their guardians have easy access to dollar stores, we created binary measures of whether a dollar store is in close proximity to the child's residence. For this reason we adopted one of the measures that the Economic Research Service (ERS) of the US Department of Agriculture (USDA) uses to define food desert areas i.e., distance to the nearest store, taking into account that the definition applies differently to urban and rural areas.<sup>1</sup> Therefore, a child was considered exposed to a DS (i.e., has easy access to the store) if there was at least one store within a one-mile radius from the child's residence in an urban area or one store within a ten-mile radius of the child's residence in a rural area. Otherwise, the child was considered non-exposed (i.e., did not have easy access to a DS).

For reasons that will become apparent momentarily, we only use cohorts of students that we observe for a full five-year period. Given that the dataset we use extends through 2010, this implies that our sample includes three different age cohorts i.e., 2004 to 2008, 2005 to 2009 and 2006 to 2010.<sup>2</sup> We also limit our analysis to school children



who were kindergarten in their first year of their respective age cohort. Thus, by construction, the kindergarten cohort is observed up to the 4th grade. We focus specifically on children in early elementary grades because their diets are more likely to be dictated by the adults in their lives and so any DS effects would most likely be felt in these young children. For children at later elementary grades, a number of other confounding factors could potentially be contributing to their weight. Nevertheless, this could also be an interesting topic for future investigation. The cohorts used in the analysis are depicted in Table 1.

To examine the effect of ease of access to a DS, we use the panel difference-in-differences (DiD) method. DiD estimation is a common approach in program and policy evaluations [19] and it has become a common strategy to estimate effects of programs that could impact nutrition, weight, or health outcomes [20, 21]. Given the four year subsamples with the cohorts exhibited in Table 1, we are able to examine two-year exposure to DS (i.e., ease of access) or two-year non-exposure to DS. Thus, we define the first two years of each age cohort as period 1 and the last two years of each cohort as period 2. We use two years for each period so that there is adequate time for any effect of the food environment to manifest itself. Table 1 marks period 1 with the '✓' symbol and period 2 with the '✓' symbol. The table also exhibits the grade level at which we observe each age cohort during each year. We then define two different treatments that we examine separately in the analysis. Our first treatment includes children that were exposed (i.e., had ease of access) to a DS in period 2 but were not exposed to a DS in period 1. Our control group in this case includes children that were not exposed to a DS in both periods. Our second treatment includes children that were not exposed to a DS in period 2 but were exposed to a DS in period 1. Our control group in this case includes children who were exposed to a DS in both periods. Treatments and control groups are depicted in Table 2 where we define by 'E' exposure (i.e., having at least one store within the radial distances described above) and by 'N' non-exposure. Treatment 1 will be referred to as the

'Exposed' treatment and treatment 2 as the 'Non-exposed' treatment.

Exposure or non-exposure to a particular DS in period 2 may have been due to one of two rival explanations. If the child resides in the same location during period 1 and period 2, then exposure and non-exposure can be attributed to the fact that a DS opened or closed, respectively, within a radius distance from the child's residence. On the other hand, if the child has moved to a different residence in period 2, then exposure (non-exposure) can be attributed to the child moving from an area without (with) a DS to an area with (without) this type of store. Thus, in addition to performing our analysis for the full sample, we repeat the analysis for two subsamples: (a) the 'Movers' which are defined as children that moved in a different residence in period 2 and (b) the 'Stayers' which are defined as children that did not move to a new residence in period 2.

Although the use of DiD is appealing due to its simplicity, the validity of a DiD estimate hinges upon the possible endogeneity of the intervention itself [22]. An additional assumption requires that in the absence of the treatment, the average outcomes for the treated and control groups would have followed parallel paths over time [23]. This latter assumption, known as common time effects (see for example Blundell et al. [24]), would be unattainable if, for example, pre-treatment characteristics associated with the dynamics of the outcome variable are unbalanced between the treated and control groups.

To alleviate concerns regarding the comparability of the treatment and control groups and to limit model dependence [25, 26], we use propensity score matching technique prior to running our panel DiD models. Heckman et al. [27] concluded that matching helps control for heterogeneity in initial conditions and also controls for unobserved determinants of participation. Blundell and Dias [28] also show that combining propensity score matching with DiD (MDiD) can be advantageous and has the potential to improve the quality of non-experimental evaluation results significantly. This is because DiD deals with time-invariant unobserved factors, while matching rebalances

**Table 1** Cohorts used in the study

	Years						
	2004	2005	2006	2007	2008	2009	2010
2004 cohort	✓ K	✓ 1 <sup>st</sup> grade	✓ 2 <sup>nd</sup> grade		✓ 4 <sup>th</sup> grade		
2005 cohort		✓ K	✓ 1 <sup>st</sup> grade	✓ 2 <sup>nd</sup> grade		✓ 4 <sup>th</sup> grade	
2006 cohort			✓ K	✓ 1 <sup>st</sup> grade	✓ 2 <sup>nd</sup> grade		✓ 4 <sup>th</sup> grade



**Table 2** Treated and control groups by age cohorts

			Years						
			2004	2005	2006	2007	2008	2009	2010
2004 cohort	Treatment 1	Treated	N	N	E		E		
		Control	N	N	N		N		
	Treatment 2	Treated	E	E	N		N		
		Control	E	E	E		E		
2005 cohort	Treatment 1	Treated		N	N	E		E	
		Control		N	N	N		N	
	Treatment 2	Treated		E	E	N		N	
		Control		E	E	E		E	
2006 cohort	Treatment 1	Treated			N	N	E		E
		Control			N	N	N		N
	Treatment 2	Treated			E	E	N		N
		Control			E	E	E		E

Notes: E exposed, that is, there is at least one dollar store within a one mile radius (10 mile radius if child resides in a rural area), N non-exposed, that is, there is no dollar store within a one mile radius (10 mile radius if child resides in a rural area)

the sample to deal with time-varying unobserved factors [20]. Thus, the MDiD combines the advantages of both methods.

However, matching estimators hinge upon a significant assumption, the Conditional Independence Assumption (CIA), which requires that selection is on observables only. However, with MDiD there is scope for an unobserved determinant of participation as long as this can be represented by separable individual/time specific components in the error term. Blundell and Dias [28] show that CIA in MDiD can be replaced with a different assumption that only assumes that "...controls have evolved from a pre- to a post-programme period in the same way treatments would have done had they not been treated". This occurs both in the observable component of the model and in an unobservable time trend. In addition, if the impact of the treatment is heterogeneous with respect to observable characteristics, we must guarantee that the distribution of the relevant observable characteristics is the same across periods and assignment to treatment for the evaluation to make sense. Blundell et al. [29] show how propensity score matching can ensure that the composition of the samples being compared is kept constant with respect to key determinants of outcomes before they apply a DiD estimator.

In our MDiD method, we first perform propensity score matching with the aim of balancing the distribution of observable characteristics between treated and control observations. We then apply DiD on the balanced sample. Matching is performed on the first year of BMI measurement of each cohort and propensity scores are estimated

separately for each age cohort depicted in Table 1. The control variables for the PSM model include children's gender, age (in months), race (Black/African-American, Hispanic/Latino or Native; White/Asian is the excluded category), language spoken at home (dummy if Spanish is spoken at home), an urban residence location dummy, dummies for free and reduced lunch participation (as proxies for income) as well as census-block group characteristics that capture neighborhood effects.<sup>3</sup> Most importantly, the PSM model controls for relative distance of competing types of stores as well as number of competing stores within the given radius between neighborhood income and retail density.<sup>4</sup> Although some of the variables above could be endogenous to the treatment, Lechner [30] showed that this would not matter as long as the usual formulation of the CIA holds.

Matching was performed with four different matching estimators that differ on how strict the matching process is: (1) two nearest neighbors without a caliper, (2) five nearest neighbors without a caliper, (3) two nearest neighbors with a caliper set at 1/4 of the standard deviation of the estimated propensity score, and (4) five nearest neighbors with a caliper set at 1/4 of the standard deviation of the estimated propensity score.<sup>5</sup> After matching we estimate fixed and random effects DiD models using the matched samples. In terms of notation, the DiD estimate comes from a (random effects) model of the form:

$$BMI_{it} = b_0 + b_1 Period_{it} + b_2 Treat_i + b_3 Period_{it} \times Treat_i + \gamma X_{it} + u_i + \varepsilon_{it} \quad (1)$$



where *Period* is a dummy for the last two years where we observe each child (Period 2), *Treat* is a treatment dummy and *X* is a vector of controls as discussed above. The dependent variable is the Body Mass Index which has been calculated as a ratio  $(weight(lb)/(height(in))^2) \times 703$  and then converted to age-gender specific z-scores according to the Centers for Disease Control and Prevention guidelines [31]. Appropriate modifications to equation 1 are in place for the fixed effects counterpart.

## Results

### Balancing tests

Before examining the results, it is important to take a look at the performance of the matching estimators and the distribution of observable covariates (balancing) of the matched data. Table 5 in the Appendix shows results from balancing tests arranged in separate panels for 'Movers & Stayers', 'Movers' and 'Stayers'. Results from all four matching estimators are reported in each panel. Although matching is performed for each age cohort separately, we report balancing tests after we pool together the matched observations from all age cohorts given that the DiD estimates come from the pooled age cohorts. Nothing changes, however, when we perform the balancing tests for each age cohort separately.

For each matching estimator and treatment (Exposed and Non-exposed) two *p*-values are reported in vertical orientation. The upper *p*-value corresponds to a likelihood-ratio (LR) test of the joint significance of all the regressors before matching. The lower *p*-value corresponds to a LR test of the joint significance of all the regressors after matching. A small *p*-value before matching (rows labeled as BM) indicates that the distribution of observables is not balanced between treated and control units, while a large *p*-value after matching (rows labeled as AM) indicates that balance has been achieved.

It is apparent across all panels of Table 5 in the Appendix that in all cases the distribution of covariates before matching was not balanced to begin with. After matching, balance has been achieved in most cases. There are only a couple of exceptions and these are marked with gray in Table 5 in the Appendix. The two exceptions concern exclusively the five nearest neighbor estimator. Therefore, caution is needed when interpreting results for this specific matching estimator.

Additional columns in Table 5 in the Appendix show mean standardized percent of absolute bias before and after matching.<sup>6</sup> As depicted in the table, mean standardized percent absolute bias is generally higher before matching and lower after matching (even for the two cases of the five nearest neighbor estimator for which a good

balance was not achieved). In general, a lower mean percent absolute bias is a sign that matching was able to reduce differences of observables between treated and control units.

Two additional columns in Table 5 in the Appendix show the number of treated and control observations before matching as well as the number of treated and control observations that are left after matching. To get a closer look at how exactly the matching worked in each case, Table 6 in the Appendix shows the number of observations that were dropped and retained after matching per cohort, treatment and matching estimator.<sup>7</sup> More detailed information for the unmatched samples are provided in Table 7 in the Appendix. Interpretation of this table is similar to the other tables in the Appendix as described above.

### Estimation results

Results are presented in Table 3. Table 3 is subdivided into three panels (Movers & Stayers, Movers, Stayers) and results from all four matching estimators are reported in each panel. Each panel also provides baseline estimates from fixed and random effects regressions on the full sample of all control and treatment groups against which the DiD estimates can be compared. The DiD estimates for the unmatched samples (before we perform matching) are also reported in Table 3 is the coefficient estimate for the interaction term  $b_3$  in estimate for the interaction term  $b_3$  in Eq. 1. Standard errors in the table are robust standard errors. Bootstrapped standard errors, as suggested by Bertrand et al. [32], were calculated as well but these only differ at the third decimal place.

The first obvious result is that dollar stores have a positive effect on BMI. This effect is statistically significant, however, only for the full 'Movers & Stayers' sample. The DiD estimates from the two nearest neighbor matching show that in terms of magnitude the effect is about 5/100 of a standard deviation. We do not observe a statistically significant effect when we split the sample between 'Movers' and 'Stayers'. However, if one observes closely the magnitude of the DiD estimates for these subsamples, it is obvious that the DiD estimate for the full sample is almost entirely driven by the 'Stayers' group. This is because for the 'Movers' subsample we get an estimate close to zero, while for the 'Stayers' subsample the DiD estimates are close to 6/100 of a standard deviation.

The positive effect for the non-exposed treatment implies that when the child moves from a food environment with a dollar store to a food environment without a dollar store, BMI increases on average by 5/100 of a standard deviation. Given that, as discussed above, the effect seems to be totally driven



**Table 3** Panel, DiD and MDiD estimated effects

		Movers & Stayers				Movers only				Stayers only			
		Effect	SE	p-value	N	Effect	SE	p-value	N	Effect	SE	p-value	N
NM	Panel FE	-0.009	0.014	0.523	99644	-0.010	0.017	0.547	13888	-0.014	0.026	0.593	85756
	Panel RE	0.012	0.010	0.246	99644	-0.007	0.016	0.673	13888	0.028**	0.014	0.043	85756
	Non-Exp. FE	0.005	0.020	0.783	70204	0.017	0.025	0.483	10148	0.061	0.040	0.120	60056
	Non-Exp. RE	0.011	0.019	0.581	70204	0.018	0.025	0.476	10148	0.061	0.040	0.123	60056
	Exp. FE	0.004	0.022	0.845	29440	-0.013	0.035	0.716	3740	0.046	0.035	0.188	25700
	Exp. RE	-0.003	0.021	0.895	29440	-0.018	0.034	0.592	3740	0.049	0.035	0.165	25700
2NN-nc	Non-Exp. FE	0.055**	0.025	0.025	7452	0.013	0.030	0.669	4612	0.061	0.047	0.198	1916
	Non-Exp. RE	0.053**	0.024	0.029	7452	0.014	0.030	0.632	4612	0.060	0.048	0.208	1916
	Exp. FE	0.007	0.026	0.775	7148	-0.052	0.038	0.171	3088	0.017	0.044	0.707	2264
	Exp. RE	0.002	0.026	0.927	7148	-0.055	0.038	0.147	3088	0.018	0.044	0.687	2264
5NN-nc	Non-Exp. FE	0.038**	0.022	0.087	13368	0.024	0.027	0.373	6820	0.050	0.043	0.244	3352
	Non-Exp. RE	0.040**	0.022	0.067	13368	0.024	0.027	0.373	6820	0.051	0.043	0.241	3352
	Exp. FE	0.004	0.023	0.879	11736	-0.026	0.035	0.464	3524	0.046	0.039	0.240	3832
	Exp. RE	-0.001	0.023	0.956	11736	-0.031	0.035	0.376	3524	0.050	0.039	0.204	3832
2NN-1/4c	Non-Exp. FE	0.052**	0.025	0.036	7428	0.008	0.030	0.798	4584	0.054	0.051	0.291	1788
	Non-Exp. RE	0.050**	0.024	0.041	7428	0.009	0.030	0.752	4584	0.052	0.051	0.306	1788
	Exp. FE	0.005	0.026	0.844	7088	-0.051	0.038	0.183	3056	0.011	0.045	0.800	2188
	Exp. RE	0.000	0.026	0.991	7088	-0.054	0.038	0.153	3056	0.012	0.045	0.794	2188
5NN-1/4c	Non-Exp. FE	0.034	0.022	0.126	13336	0.020	0.027	0.460	6796	0.044	0.047	0.350	3184
	Non-Exp. RE	0.036	0.022	0.097	13336	0.020	0.026	0.458	6796	0.044	0.047	0.350	3184
	Exp. FE	0.001	0.024	0.977	11672	-0.025	0.036	0.487	3492	0.036	0.040	0.368	3744
	Exp. RE	-0.004	0.023	0.849	11672	-0.031	0.035	0.384	3492	0.039	0.040	0.326	3744

Notes: NM = no matching, 2NN-nc = 2 Nearest Neighbors-no caliper, 5NN-nc = 5 Nearest Neighbors-no caliper, 2NN-1/4c = 2 Nearest Neighbors-caliper equal to 1/4 of the SD of the estimated propensity score, 5NN-1/4c = 5 Nearest Neighbors-caliper equal to 1/4 of the SD of the estimated propensity score  
Standard errors are robust standard errors

\*[\*\*][\*\*\*] Statistically significant at the 10 % (5 %) [1 %] level

by 'Stayers', this effect could as well be due to a dollar store shutting down in the proximity of a child's residence.

Both our matching and DiD models include variables of economic development (e.g., number of convenience and grocery stores, proportion of the population with income below poverty etc.) to account for the effect of broad changes that occur with economic development in an attempt to disentangle their effects from the pure effect of dollar stores. However, given that these potential confounders are likely endogenous, one may worry about spillover bias.<sup>8</sup> To rule out an effect of neighborhood deterioration we also estimate effects from models that omit the economic development variables. Results are shown in Table 4. Consistent with our previous results, we find a positive and statistically significant effect for the 'Stayers' subsample in the non-exposed treatment. Thus, endogenous economic development is likely not a factor adversely affecting our results and we can be more confident that the positive effect on BMI of a

dollar store shutting down in a neighborhood is a clean effect.

## Discussion and Conclusions

The growth of dollar stores is a matter of interest to those seeking to address unacceptably high rates of childhood obesity. These stores tend to target smaller communities and lower income areas within urban population centers, areas where children would otherwise be at greater risk for obesity. No other known study, however, has examined the effect of dollar stores on childhood obesity. Our main goal in this paper is to determine whether access to dollar stores is a significant driver of childhood obesity. This is an interesting and important research topic since there is a perception that dollar stores typically do not offer healthier food alternatives compared to the traditional supermarkets. In this study, we are able to measure access to dollar stores around children's actual residences and control for other attributes of the food environment (i.e., other types of food stores). Our

**Table 4** Panel, DiD and MDiD estimated effects (without economic development variables)

		Movers & Stayers				Movers only				Stayers only			
		Effect	SE	p-value	N	Effect	SE	p-value	N	Effect	SE	p-value	N
NM	Panel FE	-0.009	0.014	0.530	99644	-0.010	0.017	0.533	13888	-0.014	0.026	0.597	85756
	Panel RE	0.019*	0.010	0.069	99644	-0.005	0.016	0.739	13888	0.040***	0.014	0.004	85756
	Non-Exp, FE	0.006	0.020	0.769	70204	0.018	0.024	0.454	10148	0.061	0.041	0.133	60056
	Non-Exp, RE	0.007	0.020	0.708	70204	0.017	0.024	0.482	10148	0.061	0.041	0.137	60056
	Exp, FE	0.005	0.023	0.834	29440	-0.015	0.033	0.659	3740	0.047	0.035	0.181	25700
	Exp, RE	-0.003	0.022	0.872	29440	-0.019	0.033	0.560	3740	0.050	0.035	0.156	25700
2NN-nc	Non-Exp, FE	0.023	0.025	0.355	7516	0.045	0.030	0.134	4768	0.094**	0.046	0.043	2160
	Non-Exp, RE	0.022	0.025	0.375	7516	0.045	0.030	0.132	4768	0.092**	0.046	0.046	2160
	Exp, FE	0.017	0.024	0.491	7404	-0.014	0.035	0.679	3316	0.020	0.041	0.632	2492
	Exp, RE	0.015	0.024	0.534	7404	-0.017	0.035	0.617	3316	0.021	0.041	0.616	2492
5NN-nc	Non-Exp, FE	0.015	0.022	0.481	14084	0.030	0.026	0.240	7336	0.077*	0.044	0.077	4128
	Non-Exp, RE	0.016	0.022	0.465	14084	0.028	0.026	0.276	7336	0.076*	0.044	0.080	4128
	Exp, FE	0.003	0.024	0.907	12596	-0.015	0.035	0.662	3680	0.022	0.039	0.569	4628
	Exp, RE	-0.001	0.023	0.965	12596	-0.018	0.035	0.595	3680	0.024	0.039	0.537	4628
2NN-1/4c	Non-Exp, FE	0.023	0.025	0.359	7512	0.043	0.029	0.135	4748	0.094**	0.048	0.049	2148
	Non-Exp, RE	0.022	0.025	0.376	7512	0.044	0.029	0.132	4748	0.093*	0.048	0.052	2148
	Exp, FE	0.016	0.026	0.543	7392	-0.014	0.035	0.679	3316	0.020	0.041	0.632	2492
	Exp, RE	0.014	0.026	0.588	7392	-0.017	0.035	0.617	3316	0.021	0.041	0.616	2492
5NN-1/4c	Non-Exp, FE	0.016	0.023	0.476	14068	0.030	0.027	0.263	7296	0.078*	0.043	0.071	4092
	Non-Exp, RE	0.017	0.023	0.463	14068	0.028	0.027	0.298	7296	0.077*	0.043	0.074	4092
	Exp, FE	0.002	0.023	0.938	12584	-0.015	0.035	0.662	3680	0.020	0.038	0.593	4604
	Exp, RE	-0.002	0.023	0.926	12584	-0.018	0.035	0.595	3680	0.022	0.038	0.559	4604

Notes: NM = no matching, 2NN-nc = 2 Nearest Neighbors-no caliper, 5NN-nc = 5 Nearest Neighbors-no caliper, 2NN-1/4c = 2 Nearest Neighbors-caliper equal to 1/4 of the SD of the estimated propensity score, 5NN-1/4c = 5 Nearest Neighbors-caliper equal to 1/4 of the SD of the estimated propensity score  
Standard errors are robust standard errors

\*(\*) [\*\*\*] Statistically significant at the 10 % (5 %) [1 %] level

focus on the state of Arkansas is also noteworthy since it has one of the highest childhood obesity rates in the US. Additionally, Arkansas was the first state to legislatively mandate the measurement and collection of BMI for every public school student starting in 2004 and so these data provide a unique opportunity to study child weight status and potential factors that impact BMI.

Using a unique panel data and difference in differences estimation with unmatched and matched children, we find no evidence that the presence of dollar stores within a reasonably close proximity to the child's residence can increase body mass index. In fact, we see an increase in BMI z-score when dollar stores leave a child's neighborhood. However, this finding is based on a small number of individuals for whom a dollar store exited their neighborhood, a rare phenomenon in the period we study. One should also keep in mind that our results concern very specific age cohorts. In addition, we restricted our analysis

to children in early elementary grades because the diets of these children are more likely to still be dictated by the adults in their lives. In older children, several other competing factors may be at play which could confound any attempt to identify the separate effect of dollar stores on health and diet.

While dollar stores lack the breadth of healthy food options typically found in supermarkets, our results suggest that they are not a contributor to the childhood obesity problem. As noted above, the emergence of dollar stores as a common retail format is a recent phenomenon. It could be that these stores and their food inventories reflect existing preferences of the populations they serve. Thus, although dollar stores are more prominent in states like Arkansas, with high rates of obesity, they could be a symptomatic as opposed to a causal factor. Our results are consistent with this argument. Alternatively, it could be that dollar stores may actually play some role in facilitating healthy food consumption behaviors.



Stambuck [11] inventoried several Arkansas dollar stores. The inventory revealed a dearth of fresh foods, especially fruits and vegetables, and very few low-sodium or reduced fat options. However these stores did provide healthy staple items such as dried beans, rice, and oatmeal. Many of the food items in dollar stores are packaged in a manner for at-home consumption. Hence, when residents have ready access to dollar stores, they may be in a better position to procure supplies for at-home meals. These meals, even if not perfectly balanced, are likely to be healthier and lower-calorie than the fare found on fast-food value menus.

Community leaders and public health professionals interested in childhood obesity would be wise to recognize that dollar stores are now prominent features of the food environment facing residents in many rural and lower income urban communities. As discussed earlier, many people now consider dollar stores as their neighborhood supermarkets. Dollar stores are especially dense in regions of the country where childhood obesity rates are the highest. The question of how dollar stores could contribute to dietary health should be considered in efforts to combat childhood obesity. For instance, educational interventions targeting children and their parents could emphasize ways to shop wisely at dollar stores to source nutritious food items. Community initiatives could also be developed that could further entice dollar stores to carry healthy foods. This would likely require cooperation between the store owners and the entire community. Moreover, as dollar stores continue to expand their food offerings, health on a budget may be a yet-to-be exploited marketing angle for this growing retail format.

#### Endnotes

<sup>1</sup>A quick overview of food access measures and definitions can be found at <http://www.ers.usda.gov/data-products/food-access-research-atlas/about-the-atlas.aspx>.

<sup>2</sup>Recall that the periodicity of assessments was changed from all grades to even grades only, beginning in 2007 so that each age cohort was observed four times (with gaps) during this five-year period.

<sup>3</sup>These include the proportion of block group residents that are African-American, Hispanic/Latino, that have completed high school, some college, or have attained a college degree. Block group measures also include proportion of the population with income below poverty, the median household income, the median age of residential housing stock, and the proportion of residential units that are vacant. We also include the proportion of single-parent families, working mothers, residents with no vehicles, and of residents using public transportation. Millimet and Tchernis [33] showed that

over-specifying the model used to estimate the propensity score is always the best strategy, considering the penalty associated with under-specification. The rationale for including a control for language spoken at home, in addition to controls for race and ethnicity, is that recent immigrant families often have low socioeconomic status and may have different dietary behaviors than the population at large.

<sup>4</sup>To make this statement clear, the model where the dependent variable is whether a dollar store is within a given radius (ten miles for rural areas and one mile for urban areas) from a child's residence includes four additional covariates: (a) the log of the ratio of distance to a convenience store over distance to a dollar store (b) the log of the ratio of distance to a grocery store over distance to a dollar store (c) number of convenience stores within a ten (one) mile radius when the child resides in a rural (urban) area (d) number of grocery stores within a ten (one) mile radius when the child resides in a rural (urban) area.

<sup>5</sup>The caliper width of 1/4, has been widely suggested in the PSM literature since Rosenbaum and Rubin [34]. Rosenbaum and Rubin [34] based this rule on results from Cochran and Rubin [35] that indicated that a caliper width of 1/4 of the standard deviation of the estimated propensity score would remove at least 90 % of the bias in a normally distributed covariate.

<sup>6</sup>Mean standardized percent absolute bias is the mean absolute bias of the percent difference of the sample means in the treated and non-treated sub-samples as a percentage of the square root of the average of the sample variances in the treated and non-treated groups [34]. The percent bias is first calculated for each covariate separately and then the absolute values are averaged across all covariates and reported in Table 5 in the Appendix.

<sup>7</sup>There is a 1:1 correspondence between Table 5 and Table 6 in the Appendix. To illustrate this, consider the non-exposed treatment that was matched with the 2 nearest neighbor (without caliper) matching estimator. Table 6 in the Appendix indicates that 423, 963 and 477 (Total = 1863) observations were retained after matching for the age cohorts 2004, 2005 and 2006, respectively. The number of retained observations corresponds to the sum of treated and control units (660 + 1203) in the respective rows and columns of Table 5 in the Appendix.

<sup>8</sup>It has been shown that high-poverty neighborhoods have lower retail employment density for retail overall as well as several other types of retail, such as supermarkets, drugstores, food service and laundry [36]. On the other hand, neighborhoods that experience income upgrading see larger gains in retail employment.

#### Appendix

**Table 5** Balancing tests

		Movers & Stayers				Movers				Stayers			
		p-value	Mean % bias	N treated	N control	p-value	Mean % bias	N treated	N control	p-value	Mean % bias	N treated	N control
2 NN-nc	Non-Exp	BM < 0.001	8.37	660	16891	0.034	5.08	473	2064	< 0.001	17.65	187	14827
		AM 0.999	2.51	660	1203	0.995	3.58	472	681	0.978	4.77	186	292
	BM	< 0.001	13.19	684	6676	< 0.001	10.80	463	469	< 0.001	17.37	221	6204
	Exp	AM 0.975	2.83	684	1103	0.582	6.58	463	309	0.830	7.50	221	345
5NN-nc	Non-Exp	BM < 0.001	8.37	660	16891	0.034	5.08	473	2064	< 0.001	17.65	187	14827
		AM 1.000	2.24	660	2682	0.978	3.24	472	1233	0.860	6.93	187	651
	BM	< 0.001	13.19	684	6676	< 0.001	10.80	463	469	< 0.001	17.37	221	6204
	Exp	AM 0.243	5.13	684	2250	0.001	8.77	463	418	0.799	7.38	221	737
2 NN-1/4c	Non-Exp	BM < 0.001	8.37	660	16891	0.034	5.08	473	2064	< 0.001	17.65	187	14827
		AM 0.996	2.63	657	1200	0.997	3.62	468	678	0.997	4.34	161	285
	BM	< 0.001	13.19	684	6676	< 0.001	10.80	463	469	< 0.001	17.37	221	6204
	Exp	AM 0.993	2.49	673	1099	0.709	6.25	455	309	0.992	5.85	209	338
5NN-1/4c	Non-Exp	BM < 0.001	8.37	660	16891	0.034	5.08	473	2064	< 0.001	17.65	187	14827
		AM 1.000	2.29	657	2677	0.993	3.10	468	1231	0.993	4.73	162	634
	BM	< 0.001	13.19	684	6676	< 0.001	10.80	463	469	< 0.001	17.37	221	6204
	Exp	AM 0.425	4.68	673	2245	0.004	8.44	455	418	0.982	5.55	209	727

Notes: Non-exp = non exposed, Exp exposed, BM = Before matching, AM = After matching, 2NN-nc = 2 Nearest Neighbors-no caliper, 5NN-nc = 5 Nearest Neighbors-no caliper, 2NN-1/4c = 2 Nearest Neighbors-caliper equal to 1/4 of the SD of the estimated propensity score, 5NN-1/4c = 5 Nearest Neighbors-caliper equal to 1/4 of the SD of the estimated propensity score, Mean % [bias] = mean standardized % absolute bias, N treat = N of observations in the treated group, N ctrl = N of observations in the control group

Mean standardized % absolute bias is the mean absolute bias of the % difference of the sample means in the treated and non-treated sub-samples as a percentage of the square root of the average of the sample variances in the treated and non-treated groups [34]

p-values are the p-values from a likelihood-ratio test of the joint significance of all the regressors (before and after matching)



**Table 6** Number of observations Dropped and Retained per cohort and matching estimator

			2004 cohort		2005 cohort		2006 cohort	
			Dropped	Retained	Dropped	Retained	Dropped	Retained
Movers & Stayers	2NN-nc	Non-exp	5114	423	5031	963	5543	477
		Exp	1675	620	1853	752	2045	415
	5NN-nc	Non-exp	4728	809	4347	1647	5134	886
		Exp	1318	977	1372	1233	1736	724
	2NN-1/4c	Non-exp	5114	423	5033	961	5547	473
		Exp	1677	618	1859	746	2052	408
	5NN-1/4c	Non-exp	4729	808	4349	1645	5139	881
		Exp	1320	975	1378	1227	1744	716
	2NN-nc	Non-exp	442	337	485	483	457	333
		Exp	51	259	72	290	40	223
Movers	5NN-nc	Non-exp	281	498	262	706	289	501
		Exp	11	299	24	338	19	244
	2NN-1/4c	Non-exp	444	335	488	480	459	331
		Exp	51	259	74	288	46	217
	5NN-1/4c	Non-exp	283	496	264	704	291	499
		Exp	11	299	26	336	25	238
Stayers	2NN-nc	Non-exp	4737	21	4643	383	5155	75
		Exp	1772	213	1935	308	2152	45
	5NN-nc	Non-exp	4726	32	4367	659	5083	147
		Exp	1638	347	1707	536	2122	75
	2NN-1/4c	Non-exp	4750	8	4657	369	5160	70
		Exp	1176	209	1937	306	2165	32
	5NN-1/4c	Non-exp	4744	14	4381	645	5093	137
		Exp	1642	343	1709	534	2138	59

Notes: Non-exp = non exposed, Exp = exposed, 2NN-nc = 2 Nearest Neighbors-no caliper, 5NN-nc = 5 Nearest Neighbors-no caliper, 2NN-1/4c = 2 Nearest Neighbors-caliper equal to 1/4 of the SD of the estimated propensity score, 5NN-1/4c = 5 Nearest Neighbors-caliper equal to 1/4 of the SD of the estimated propensity score

**Table 7** Balancing tests for the unmatched data

		Fixed effects		Random effects		N	
		p-value	Mean % [bias]	p-value	Mean % [bias]	Treated	Control
Movers & Stayers	Non-exp	< 0.001	12.31	< 0.001	10.85	2640	67564
	Exp	< 0.001	12.90	< 0.001	11.68	2736	26704
Movers	Non-exp	< 0.001	17.33	< 0.001	13.65	1892	8256
	Exp	< 0.001	16.03	< 0.001	13.85	1852	1888
Stayers	Non-exp	< 0.001	6.46	< 0.001	7.97	748	59308
	Exp	< 0.001	9.15	< 0.001	10.21	884	24816

Notes: Non-exp = non exposed, Exp = exposed, Mean % [bias] mean standardized % absolute bias, Treated = N in the treated group, Control = N in the control group  
Mean standardized bias is the % difference of the sample means in the treated and non-treated sub-samples as a percentage of the square root of the average of the sample variances in the treated and non-treated groups [34]  
p-values are the p-values from a likelihood-ratio test of the joint significance of all the regressors

**Table 8** Descriptive statistics for the Exposed and Non-exposed treatments

	Exposed			Non exposed		
	Mean treated	Mean control	p-value	Mean treated	Mean control	p-value
Low income	0.370	0.271	< 0.001	0.367	0.372	0.74
Female	0.528	0.481	< 0.001	0.542	0.491	< 0.001
Age (in months)	91.522	91.604	0.89	91.503	91.469	0.95
Urban	0.787	0.832	< 0.001	0.723	0.503	< 0.001
Black/African-American	0.252	0.190	< 0.001	0.264	0.218	< 0.001
Hispanic/Latino	0.059	0.056	0.68	0.077	0.089	0.18
Native	0.003	0.004	0.43	0.003	0.004	0.56
Spanish language	0.048	0.045	0.59	0.063	0.074	0.19
Free lunch	0.454	0.299	< 0.001	0.495	0.433	< 0.001
Reduced lunch	0.106	0.091	0.09	0.089	0.103	0.14
% no vehicle	0.071	0.054	< 0.001	0.067	0.070	0.25
% public transport	0.006	0.004	0.01	0.007	0.005	< 0.001
% high-school	0.338	0.320	< 0.001	0.354	0.370	< 0.001
% some college	0.274	0.276	0.46	0.271	0.270	0.65
% more than college	0.201	0.248	< 0.001	0.178	0.157	< 0.001
% Hispanic/Latino	0.059	0.047	< 0.001	0.068	0.064	0.27
% Black/African-American	0.202	0.160	< 0.001	0.180	0.175	0.53
% single-parent families	0.288	0.234	< 0.001	0.276	0.270	0.40
% income below poverty	0.182	0.151	< 0.001	0.183	0.186	0.50
Median income (in thousands of \$)	40.839	48.642	< 0.001	40.920	40.133	0.09
% working mother	0.272	0.225	< 0.001	0.268	0.256	0.08
Median home value (in thousands of \$)	104.57	127.67	< 0.001	100.56	97.03	0.01
Median age of residential housing stock	1979.20	1981.10	< 0.001	1978.80	1978.80	0.98
% vacant residential units	0.116	0.114	0.56	0.132	0.122	< 0.001

Notes: p-value is the p-value from a t-test of equality of means between treated and control

#### Competing interests

The authors declare that they have no competing interests.

#### Authors' contributions

ACD, RMN, HLR, MRT conceived of the study, and participated in its design. ACD, RMN, MRT carried out the econometric analysis. ACD, RMN, HLR, MRT drafted the manuscript. All authors read and approved the final manuscript.

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## Exhibit 4



# 4 Reasons Shopping at Dollar Stores Costs More

[TOBIAS SAMUEL \(HTTP://MONEYNATION.COM/AUTHOR/TOBIAS/\)](http://moneynation.com/author/tobias/) x MAY 8, 2015

[SAVING \(HTTP://MONEYNATION.COM/SAVING/\)](http://moneynation.com/saving/)

Dollar stores are everywhere, which makes them an easy place to shop. They promise cheap. And they often do have lots of cheap stuff. But that doesn't mean that they won't cost people struggling to make ends meet more in the long run. Here are four reasons shopping at a dollar store actually costs struggling consumers more.

## 1. Dollar stores might not actually have the cheapest price

[http://i2.wp.com/moneynation.com/wp-content/uploads/2015/05/shutterstock\\_247587535.jpg](http://i2.wp.com/moneynation.com/wp-content/uploads/2015/05/shutterstock_247587535.jpg) Quite often struggling shoppers don't realize the prices at a dollar store aren't the lowest around. Dollar stores count on the proliferation of cheaper items filling the store to create an impression that everything is cheap. But those same items at other stores may be the same price or even cheaper, it's just that a regular store might have a wider set of items for sale.

That \$1 bottle of off-brand soda might actually be 80 cents at a regular grocery store. Dollar stores are known for higher prices on items like soda, canned goods and pasta. All things that are fairly common staples among people trying to make every calorie count. It takes time to comparison shop and shoppers with little money and long hours might not have time to do that. That puts them at an information disadvantage that dollar stores count on.



## 2. Cheap build quality



[http://i2.wp.com/moneynation.com/wp-content/uploads/2015/05/shutterstock\\_1130096.jpg](http://i2.wp.com/moneynation.com/wp-content/uploads/2015/05/shutterstock_1130096.jpg)A set of chairs or a book shelf at a dollar store will be an inexpensive purchase compared to something

snagged at a furniture store. But the cheap nature of the materials inside mean the item will need to be replaced sooner. The constant need to replace cheap items in the long run costs more. Items often come without warranties or the backing of companies that support the quality of the item built.

### 3. Limited choices

<http://i0.wp.com/moneynation.com/wp->



[content/uploads/2015/05/shutterstock\\_169060700.jpg](#)) Unlike a big retail box store, the neighborhood dollar store has a limited selection of items. If a consumer needs something specific to feed or clothe their family there's a chance a dollar store may not have it. That forces disadvantaged consumers to spend time looking around cheaper stores for that item to see if they can still find it, before looking at more expensive locations. That eats up time, something that people who make less often have to 'spend' as they might not have the money.



Dollar stores tend to have processed food that lasts on their shelves. Lots of sugar, lots of refined carbs. Some frozen food. All of this adds up to a limited selection that might not be all that healthy. There aren't bananas for sale at the dollar store, or oranges. That adds to unhealthy diets, which adds to health expenses and issues further on down the roads. A secret tax on those who make the dollar store their main avenue for food, particularly if the dollar store is the only store in their neighborhood.

## **4. Dollar stores take money out of the community**

Almost half of every dollar that is spent at a local business stays in that community, moving along to other local businesses and keeping jobs and investment local. Non-local businesses suck money out of a community and only leave about 14% of the money behind (they do have to hire some local workers, after all). While shopping at a dollar store doesn't lift money directly out of pockets, in the long term, it reduces local investment. That has secondary effects in the long term, as without local business getting local dollars, they eventually die. This reduces the number of jobs in an area, which reduces the amount of money available, and contributes to a decaying spiral.

There are clearly some things that are obviously cheaper at a dollar store. They make sense to buy. Particularly seasonal items on sale that are out of season. But the benefit goes to shoppers who have the time to comparison shop and know for sure that they are saving. Shoppers with time and patience. Things disadvantaged shoppers don't have. Obviously shoppers who desperately need to save money can't be faulted for trying their best to save. But it's easy to see how these factors that dollar stores

depend on to make good money back at corporate headquarters further disadvantage both the communities they're in and the people who need to shop there, all for the benefit of companies that are based elsewhere.

#### **Sources:**

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10 Items That Are More Expensive at the Dollar Store – [BargainBabe.com \(http://bargainbabe.com/10-items-expensive-dollar-store/\)](http://bargainbabe.com/10-items-expensive-dollar-store/)

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## Exhibit 5



# What Dollar Store Locations Reveal About America

Surprising data on who's shopping at the discount chains.

RICHARD FLORIDA | [@Richard\\_Florida](#) | Feb 7, 2012 | [24 Comments](#)



Reuters

"We are awakening to a dollar-store economy," proclaimed [The New York Times Magazine](#) this past summer.

Long popular among the poor, the Great Recession has been a boon to dollar stores, bringing in a whole new wave of customers. "Same-store sales, a key measure of a retailer's health, spiked at the three large, publicly traded chains

in this year's first quarter - all were up by at least 5 percent," the *Times* article noted.

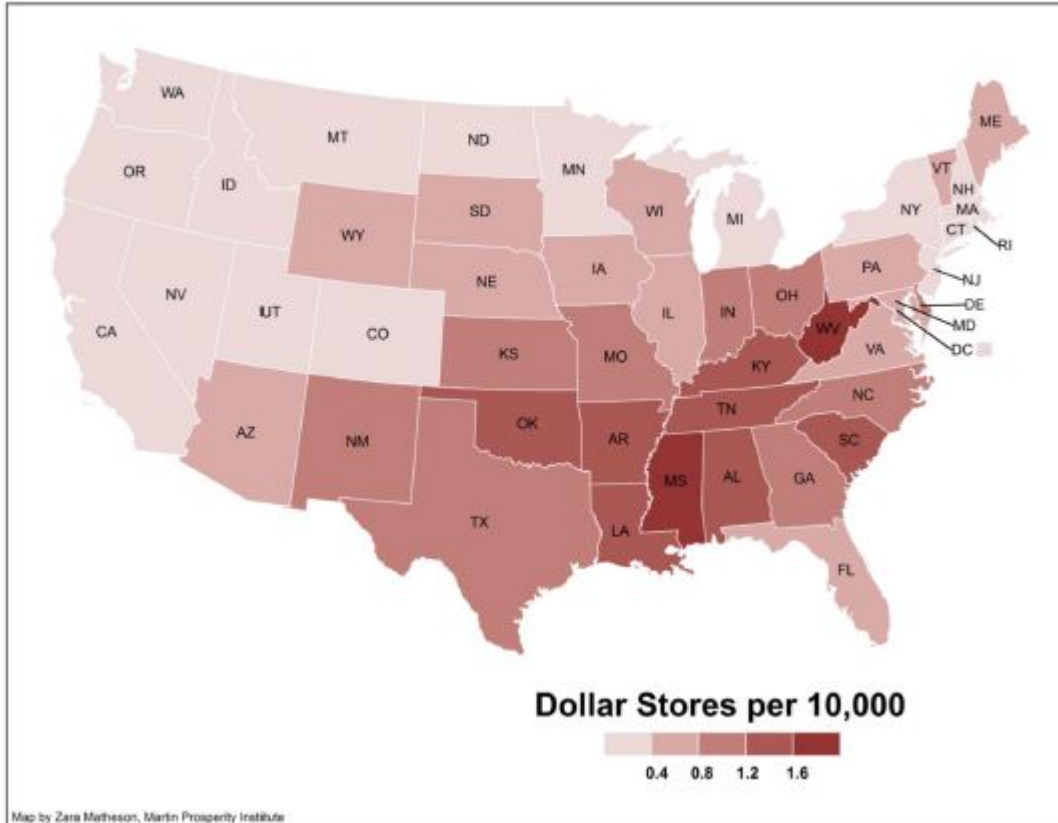
Dollar stores have been proliferating in cities in recent years. A couple of weeks ago, Dollar General announced plans to [create 6,000 new jobs and build 625 new stores](#); Family Dollar will open 300 new branches.

It's not poverty that's driving the boom, but anxiety. Though 42 percent of the stores' customer base earns less than \$30,000 per year, Dollar General notes that 22 percent earn \$70,000 or more. Much has been written about how post-crash consumers are dialing back their spending, paying down their debts and increasing their savings - a "new normal" in which conspicuous frugality replaces conspicuous consumption.

But what of the geography of dollar stores: What does their location tell us about the evolving economic geography and the geographic disparities at work across America?

[MPI](#) alum and UCLA urban planning graduate student Patrick Adler has been assembling data on the geography of dollar-stores for some time, collecting and collating information on the number of chain dollar-stores across the continental United States and tracking their density on a per population basis. The data below comes originally from a [Colliers report](#) on the dollar-store economy.



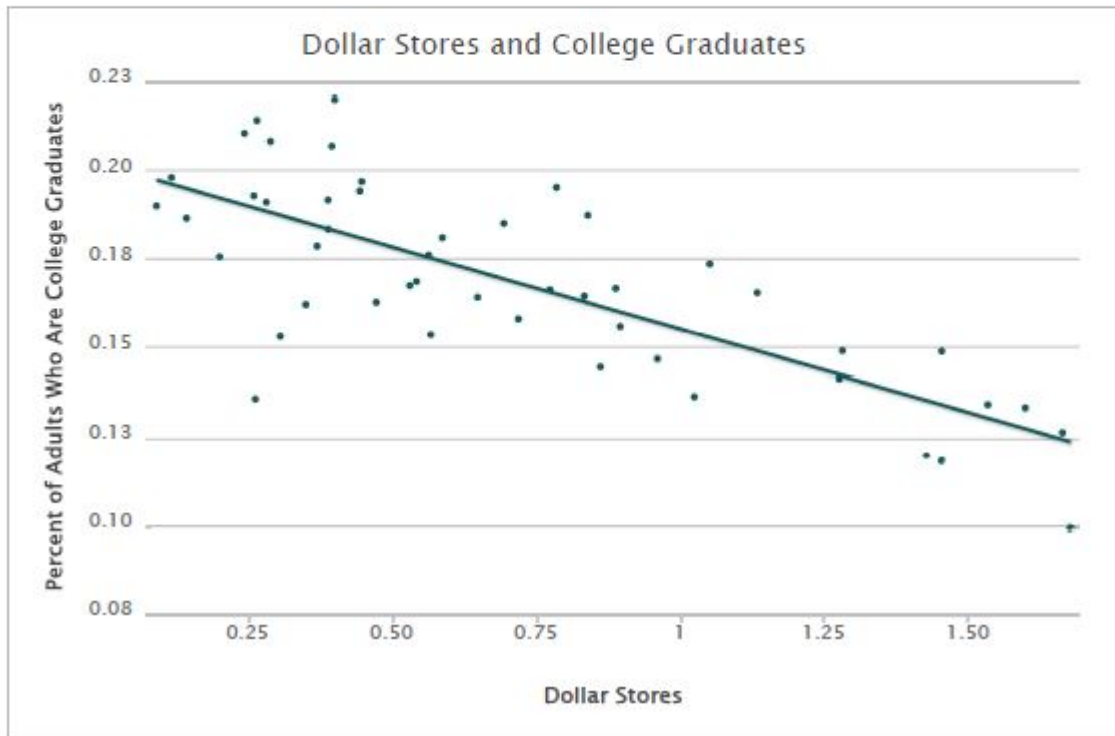


The map above by MPI's Zara Matheson shows the distribution of dollar stores per 10,000 people. West Virginia, Mississippi, Alabama and Louisiana have the largest concentrations of dollar stores.\* Indeed, something like a "dollar store belt" can be discerned, stretching from Ohio and Indiana in the north, through Kentucky and Tennessee to the Gulf Coast.

What conditions do their locations reflect? To get a better sense of this, my colleague Charlotta Mellander ran correlations against a variety of economic and demographic factors. Correlation, of course, is not causation. Though the associations she found are highly suggestive, other factors we didn't consider might be equally or more important. That said, the geography of the dollar store economy provides a powerful lens into the fault lines of income, class and race.

Let's start with class. Dollar stores may be increasing their share of [high-income customers](#), but they are overwhelmingly concentrated in low income

states. The correlation between dollar stores and median income is significant and negative (-.57). The correlation between dollar stores and the poverty rate is .41. They are concentrated in blue-collar working class states (.68).



Dollar stores are concentrated in states with lower levels of education or human capital. The correlation is again significant and negative, even greater than for income (-.77).

The geography of dollar stores also tracks to the country's political divide. Dollar stores are positively correlated with the share of voters who backed McCain (.52) and negatively associated with Obama voters (-.47).





Obesity, smoking and crime also come into the picture. They are positively associated with the percentage of adults whose body mass index is greater than 30 (.72) and the percentage that smoke (.6). Dollar stores states are also positively associated with property crime (.34), especially burglary (.54), and violent crime (.3), especially murder and manslaughter (.49).

The geography of dollar stores also reflects overall living standards and levels of happiness or subjective well-being. Not surprisingly, states with more dollar-stores have lower levels of each (with a correlation of -.32 for living standards and -.56 to happiness).



Religion too plays a role. Dollar stores are positively and significantly associated with the percent of people who say religion plays an important role in their daily life (.71).

The geography of dollar stores follows the same cleavages of income, class and race that are increasingly dividing Americans. Though some affluent shoppers might enjoy searching for bargains in their cluttered aisles, dollar stores are overwhelmingly the retail choice of the economically left behind.

*\* An earlier version of this article listed Virginia, not West Virginia.*

## About the Author



Richard Florida is the co-founder and editor at large of *CityLab* and a senior editor at *The Atlantic*. He is the director of the Martin Prosperity Institute at the University of Toronto and a professor of global research at New York University. [MORE](#)

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## Exhibit 6

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### UG to look at limiting number of dollar stores in community

Posted on May 22, 2015 by Info Wyandotte in Business, Kansas City Kansas, News, Wyandotte County // 0 Comments



A Dollar General Store is near 53rd and State Avenue in Kansas City, Kan.

Will it be the beginning of the end for the ubiquitous dollar stores in Wyandotte County?

The stores have popped up all over the county in the past decade or two. In some cases, they were almost the only new buildings built in some areas during the recent recession.

Some dollar stores are replacing other stores that have exited neighborhoods. A recent quick informal count turned up at least 20 of the dollar stores in Wyandotte County.

In a Unified Government Administration and Human Services Standing Committee discussion Monday night, UG Planning Director Rob Richardson noted the significant increase in dollar stores in the community. In some respects it is nice, while some people think the stores present other issues to the community, he said.

The planning department wants to study the issue and potentially limit the number of new dollar stores in the community, he said. According to UG documents, the issue was brought forward by Mayor Mark Holland. The issue also had been raised at an earlier meeting by commissioners.

"They need to clean their act up, from one end of town to another," said Commissioner Mike Kane, referring to dollar stores. He cited one store on the east side of the community that could be cleaner. Another commissioner had mentioned a dollar store in the Argentine area as needing a cleaner parking lot area during another UG public meeting.

Commissioner Jane Philbrook said some of the dollar stores have a tendency to be in areas where people don't have a chance to get healthy foods, and can only get prepackaged food at the dollar stores. "That's not really doing our community justice," she said.

Sometimes the dollar stores are popping up in areas where grocery stores are moving out. Richardson noted that there is one dollar store going in at a former grocery store near 46th and Parallel Parkway.

He cited a recent national news article that discussed a merger between two of the dollar store chains. Commissioners previously had wondered what might happen if there was a merger of

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the two chains, and two of the former competitors' stores were close to each other. Would there be closings of many dollar stores around town if there is a merger?

A merger between Family Dollar and Dollar Tree was discussed last January, and according to news articles this week, Dollar Tree is proposing to buy Family Dollar for \$8.5 billion. However, news reports also stated Dollar Tree is expected to sell 330 Family Dollar stores it owns in preparation for the merger to comply with a directive. Dollar General earlier tried to buy Family Dollar, but that transaction did not go through, according to news reports. If the Dollar Tree-Family Dollar merger is approved, the new company would have the largest dollar store operation in the nation, according to news reports.

In Wyandotte County, the informal count found more Dollar General stores, about 11, compared with around nine Family Dollar and two Dollar Tree stores.

Commissioners Harold Johnson and Melissa Bynum agreed that although there might be a need for some limitations on the dollar stores, the stores also might be serving a need that is not served by anyone else in some neighborhoods. Commissioner Bynum said she had not been in favor of losing a hamburger restaurant that was torn down to make way for a dollar store at 81st and Leavenworth Road, but since it has been built, she has been one of its customers.

Richardson said a new policy would not be an outright ban on the stores. However, it might mean certain portions of the community might not get any more dollar stores, he added.

The planning department will be studying how to regulate the stores, perhaps using special use permits, and possibly limiting the total number of dollar stores within the community or separation by distance.

Dollar stores, however, are nothing new to Wyandotte County and the nation. Sixty or so years ago, they used to be called five-and-dime or five-and-ten-cent stores. Woolworth's and TG&Y were long-time former retail presences in the community as the forerunners of today's dollar stores, and were often found in strip malls or with other retail stores in business districts.

As they do today, the stores offered a variety of items, some at a discount, and are sometimes called variety stores. Many items are offered at a discount, while other items might be at the same price or slightly above other retail prices.

The UG committee on Monday authorized the planning staff to go ahead with its study of amending the zoning code for dollar stores. This would not affect existing dollar stores, according to the UG agenda information, but might affect future dollar stores and thrift stores in the community.



A Family Dollar store is located near 81st and Leavenworth Road in Kansas City, Kan., near a former hamburger restaurant.

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One Dollar General store is located near 81st and Parallel Parkway.



A Dollar Tree store is located in Wyandotte Plaza, a strip mall at 78th and State Avenue. It is in a newly renovated space.



This Family Dollar store is located near 63rd Drive and Parallel Parkway.



A Family Dollar store is near 12th and Central in Kansas City, Kan.



A Dollar General store is located within a strip mall at 2801 S. 47th, Kansas City, Kan.

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