October 2009

Trends in Cigarette Prices, Promotions, and Sales in Florida: Retail Scanner Data

Topical Report

Prepared for

Florida Department of Health
Bureau of Tobacco Prevention Program
4052 Bald Cypress Way, Bin C-23
Tallahassee, FL 32399-1743

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RTI Project Number 0212005.001.001.008

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INTRODUCTION

This report is an initial look at trends in cigarette prices, sales, and retail promotions in Florida and the remainder of the United States using retail scanner data from The Nielsen Company collected in supermarkets and convenience stores. Cigarette prices and sales are basic measures tracked by most state tobacco control programs and the Centers for Disease Control and Prevention's Office on Smoking and Health. Aggregate cigarette sales is an important measure of smoking in the population (Starr, et al., 2005), and higher cigarette prices and excise taxes are associated with lower cigarette consumption (USDHHS, 2000). Retail advertising and promotion for cigarettes are important because the tobacco industry spent $12.5 billion on cigarette marketing in 2006, of which 81 percent ($10.1 billion) was spent on advertising, promotions, and price discounts for wholesalers and retailers (FTC, 2009). By comparison, the alcohol industry spent approximately $3 billion on advertising in 2005, one-quarter of which was for television advertisements (FTC, 2008).

Traditionally, the tobacco control community has relied on *The Tax Burden on Tobacco* (Orzechowski and Walker, 2008), self-reported consumption and prices from surveys of smokers, or administrative data on tax-paid removals from warehouses for information on prices and sales. There are no publicly available sources of data on retail cigarette advertising and promotions at the state level. In Florida, RTI is working to design and field a Retail Advertising Tracking Study to collect information on the extent of advertising for cigarettes in retail outlets across the state.

Scanner data represent a potentially useful alternative, or supplement, to these usual sources of information. Scanner data have the advantage of being timely, in that they are usually available within two weeks of the end of the time period of interest; they provide a high frequency of data, often weekly or quarterly; they are available from a variety of retail outlets; and they provide consistent information at a very granular level of observation, the individual cigarette variety. Scanner data do have some disadvantages, however. They are expensive to obtain and cumbersome to work with; they are the proprietary property of Nielsen, so sharing them with community partners, for example, is difficult; they are available only for specific, pre-defined geographies that may not be meaningful for surveillance or evaluation; and the precise methodology employed by Nielsen for generating the market-level data from the individual store observations is not disclosed. Nonetheless, scanner data, if appropriately handled and interpreted, can be useful for uncovering relationships and trends that would be difficult to obtain otherwise.

DATA AND METHODS

About ScanTrack™ Data

ScanTrack™ retail scanner data from the Nielsen Company (Nielsen) is collected at the store checkout register when a smoker purchases cigarettes. A computer reads the universal product code (i.e., the UPC or bar code) printed on the package when the checkout clerk scans the cigarettes. The UPC is looked up in a database that resides on a server at the store and the price, type of cigarettes, and any promotional information is recorded. This information is transmitted to Nielsen, which combines the store's data with that from other similar stores. Nielsen then uses proprietary statistical methods to project aggregate sales, prices, and promotional activity for all similar stores in the market area.

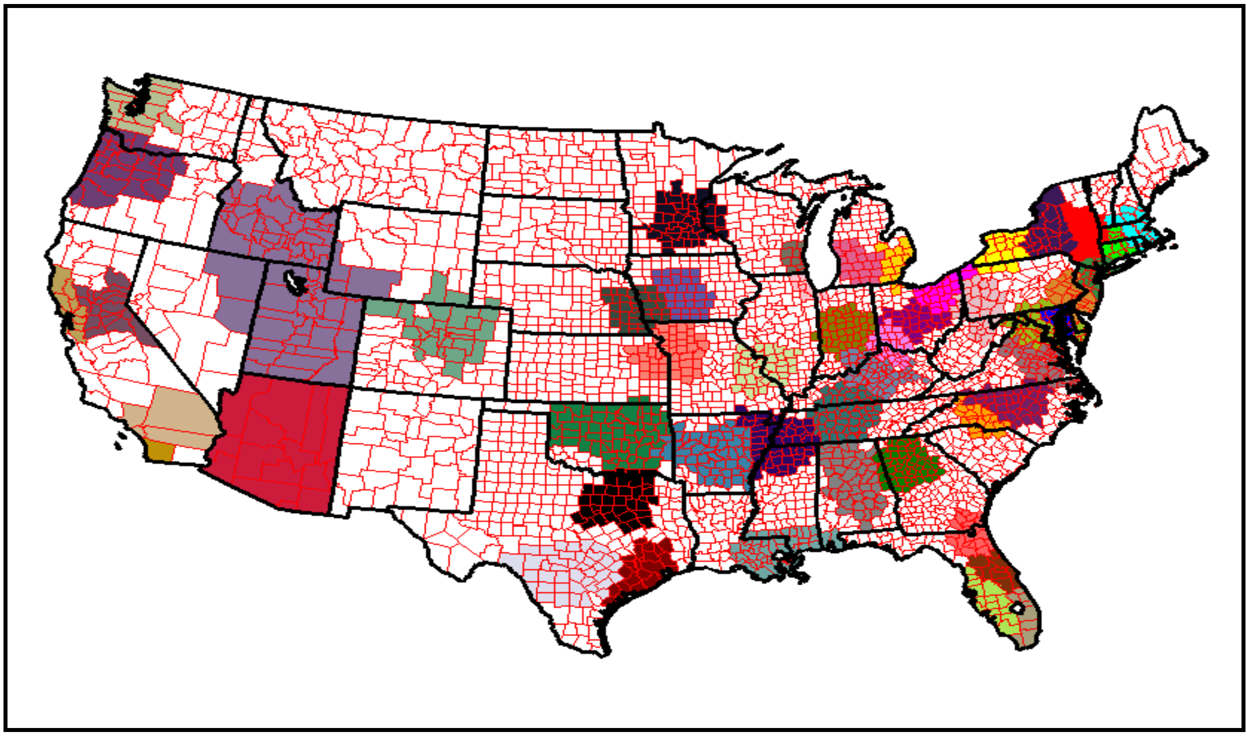
Nielsen collects data in four retail channels: Supermarkets, convenience stores, drug stores, and mass merchandisers. Supermarkets are defined as large food stores that have a minimum of $2 million in sales per year (about $5,500 a day). Convenience stores include standalone convenience stores and convenience with gas combinations. However, 40 to 50 percent of convenience stores do not have scanner systems of sufficient robustness to support data collection and transmission that meets Nielsen's technical standards. Therefore, Nielsen supplements scanner data with in-store audits to produce price and sales estimates. Drug stores include chain pharmacies and independently owned drug stores with a minimum of $1 million in sales a year. Mass merchandisers are characterized by competitively priced items, primarily apparel and home goods, in a departmentalized format. Mass merchandisers tend to range from 10,000 to 160,000 square feet in a single level structure. The Mass universe includes Target and K-mart Supercenters but excludes Wal-Mart and Sam's Club. Because data from each retail channel must be purchased separately, RTI currently only has data from supermarkets (quarterly, 1994 – 2008), and convenience stores (weekly, 2008).

In addition to data on cigarettes, Nielsen collects data on other tobacco categories as well, including smokeless tobacco, loose tobacco (including roll-your-own cigarette and pipe tobacco), and cigars (including little cigars). Data are reported at the UPC level, and includes dollar sales, unit sales, promotional information, and information on the type and packaging of the cigarettes. For example, the following item appears in the data: MB LT M 85 BX P 20 CT. This item is a single pack (P) of 20 (20 CT) Marlboro Lights (MB LT), menthol (M), in a hard-pack box (BX), of standard 85mm length (85). Measures reported for this item include the UPC, promotions, dollar sales, unit sales, and percent of total store sales accounted for by this UPC. These measures are reported weekly, by market area and retail channel.

Nielsen does not report data for individual stores, or even store chains. Instead, data is aggregated to the market level. Nielsen defines 54 market areas in the United States, 52 non-overlapping market areas, one additional market area representing the remainder of the U.S., and one market area for the total U.S. The 52 markets, shown in Figure 1, are collections of counties centered on a metropolitan area. The average number of counties in a market is 30 (range 1 – 79). In 2008, the markets covered approximately 78% of the U.S. population.

Data for some retail channels is not available in all of the market areas. Supermarket data is available for all 54 markets, but convenience store data is only available for a subset of 25 selected market areas.

Figure 1. ScanTrack Markets, United States

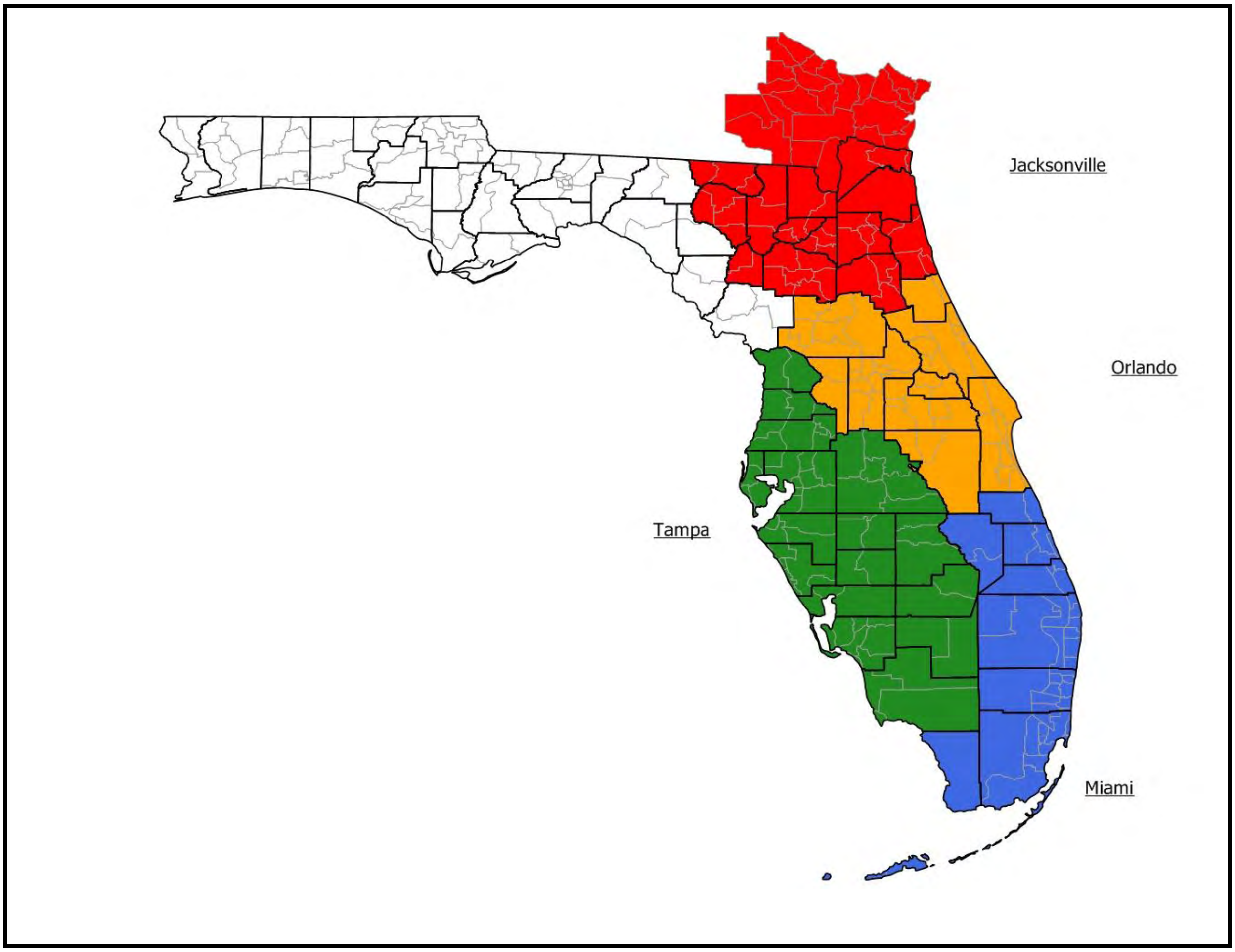


Florida has four market areas (Jacksonville, Miami, Tampa, and Orlando), shown in Figure 2, of which three (Miami, Tampa, and Orland) are covered by convenience stores. In 2008, the four markets in Florida covered 93 percent of Florida's population, while the three markets with convenience store data covered 82 percent.

Data Used in this Report

RTI does not license the full suite of Nielsen ScanTrack™ data. We currently have access to cigarette data from supermarkets, quarterly, from 1994 through 2008, and weekly in 2008; and cigarette data from convenience stores weekly in 2008.

Figure 2. ScanTrack Markets, Florida



RESULTS

Prices

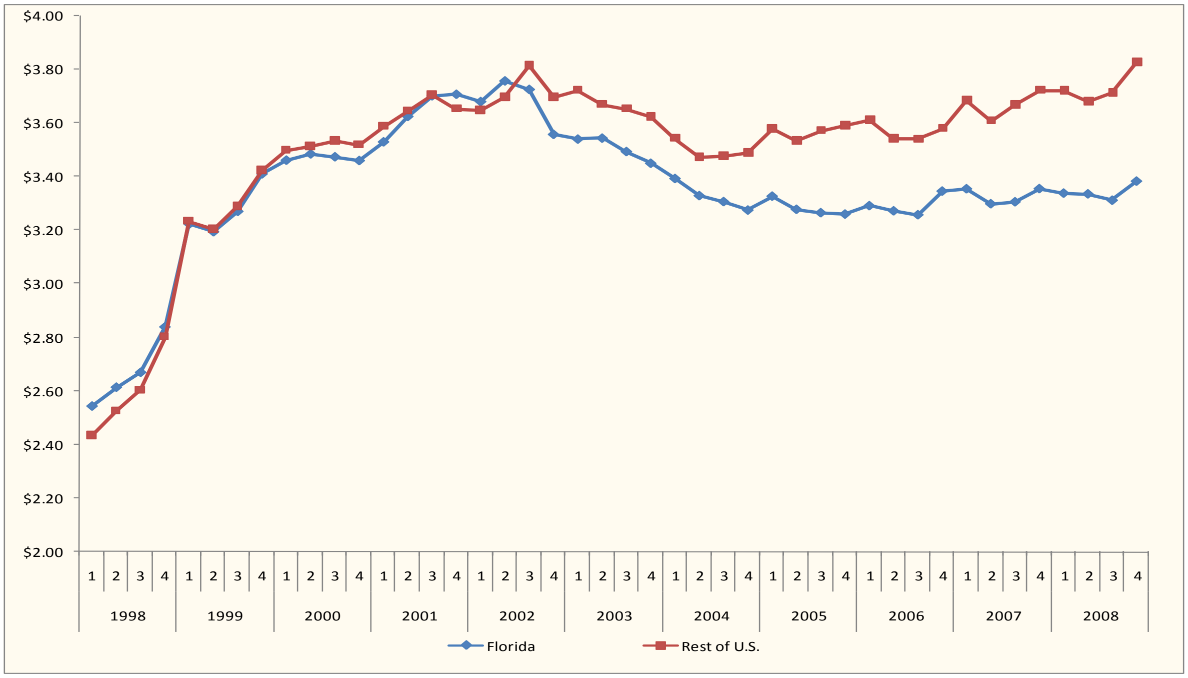
The state excise tax on cigarettes affects the price paid for cigarettes by smokers. Florida's cigarette excise tax has stayed constant at 33.9¢ per pack since 1990. Between 1990 and 2008, inflation has eroded the value of the tax by 38%, as shown in Figure 3, to 21¢ in 1990 dollars. Meanwhile, the average cigarette tax in the rest of the United States today is $1.19 per pack, almost 80¢ in 1990 dollars, or about 4 times higher than the cigarette tax today in Florida.

Figure 3. Cigarette Tax Per Pack in 1990 Dollars, Florida and Remaining U.S. States, Quarterly 1998-2008

Note: Tax values have been adjusted for inflation (1990 dollars).

Figure 4 shows the average price per pack of cigarettes in Florida supermarkets and the remaining U.S. The average price per pack has increased more slowly in Florida compared to the rest of the U.S. The chart shows the steep increase in cigarette prices that followed the 1998 Master Settlement Agreement between the states and the major tobacco companies. After that, average prices continued to climb until 2002, after which they entered a period of decline during 2003 and 2004. Beginning in 2005, average prices began to climb again as more states enacted cigarette tax increases and tobacco companies raised prices to wholesalers, which were passed on to consumers.

Figure 4. Average Price per Pack of Cigarettes in Supermarkets, Florida and Remaining U.S., Quarterly 1998-2008

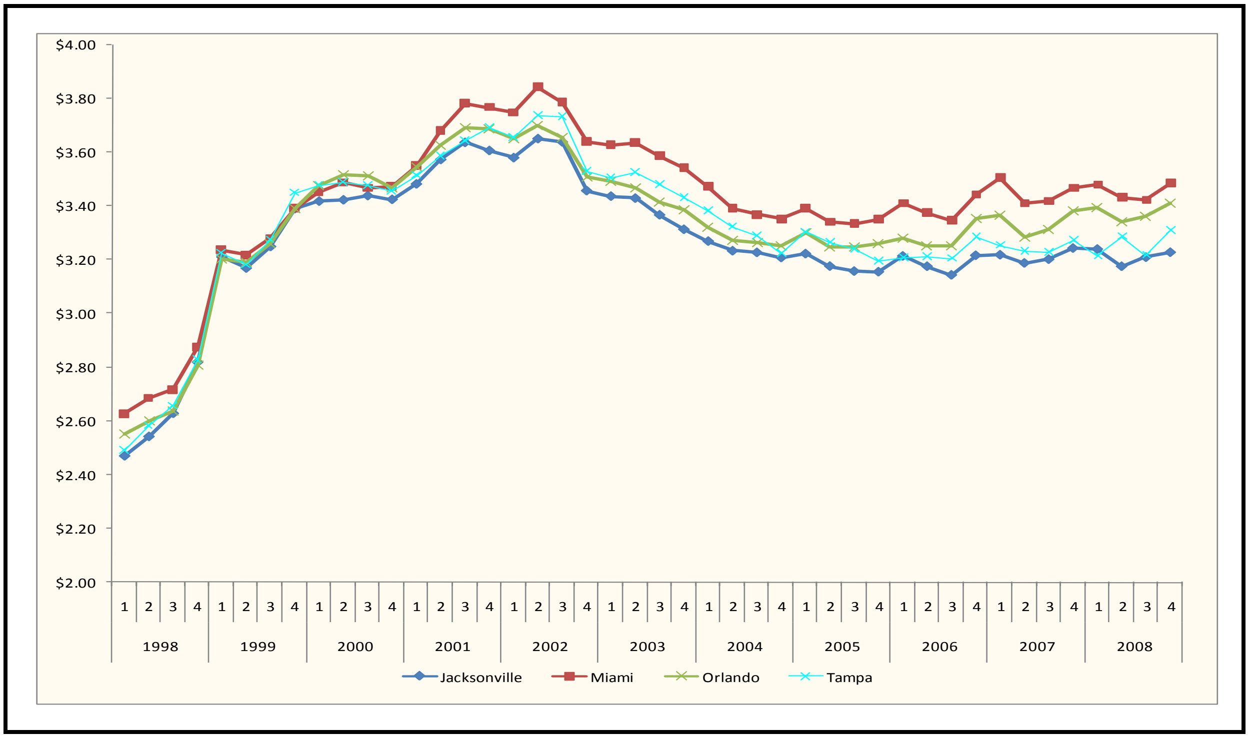


Note: All prices have been adjusted for inflation (2008 dollars).

Figure 5 shows the price trend in supermarkets for the four Nielsen markets in Florida. The price trends across the markets follow the same general path over time, but beginning in 2001 they start to diverge with Miami having the highest prices ($3.49 per pack in Q4-2008) and Jacksonville the lowest ($3.23 per pack in Q4-2008).

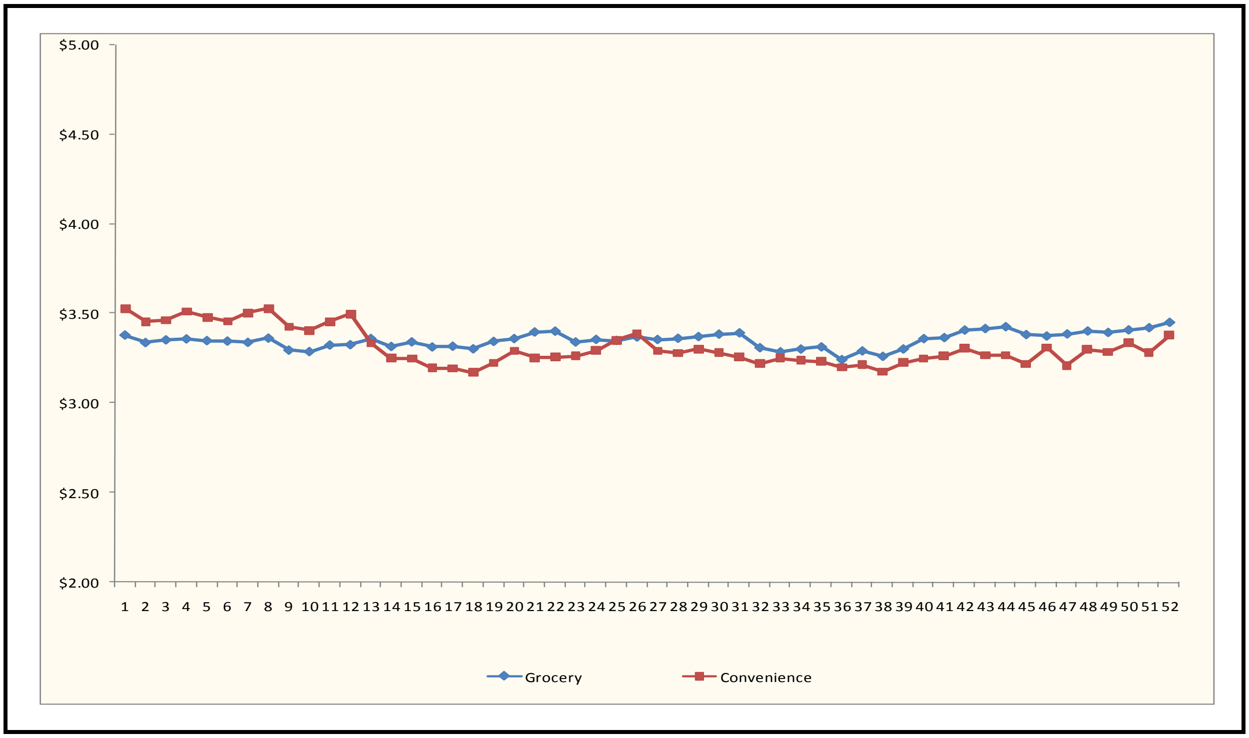
Figure 6 suggests that cigarette prices in Florida supermarkets and Florida convenience stores are similar, while Figure 7 shows that cigarette prices in Florida convenience stores are substantially less than cigarette prices in convenience stores in the remaining U.S. Therefore, bases on Figures 4 and 7, Florida has generally lower cigarette prices in both supermarkets and convenience stores compared to the rest of the U.S., likely a result of the lower than average cigarette excise tax.

Figure 5. Average Price Per Pack of Cigarettes in Supermarkets by Market Area, Florida, Quarterly 1998-2008



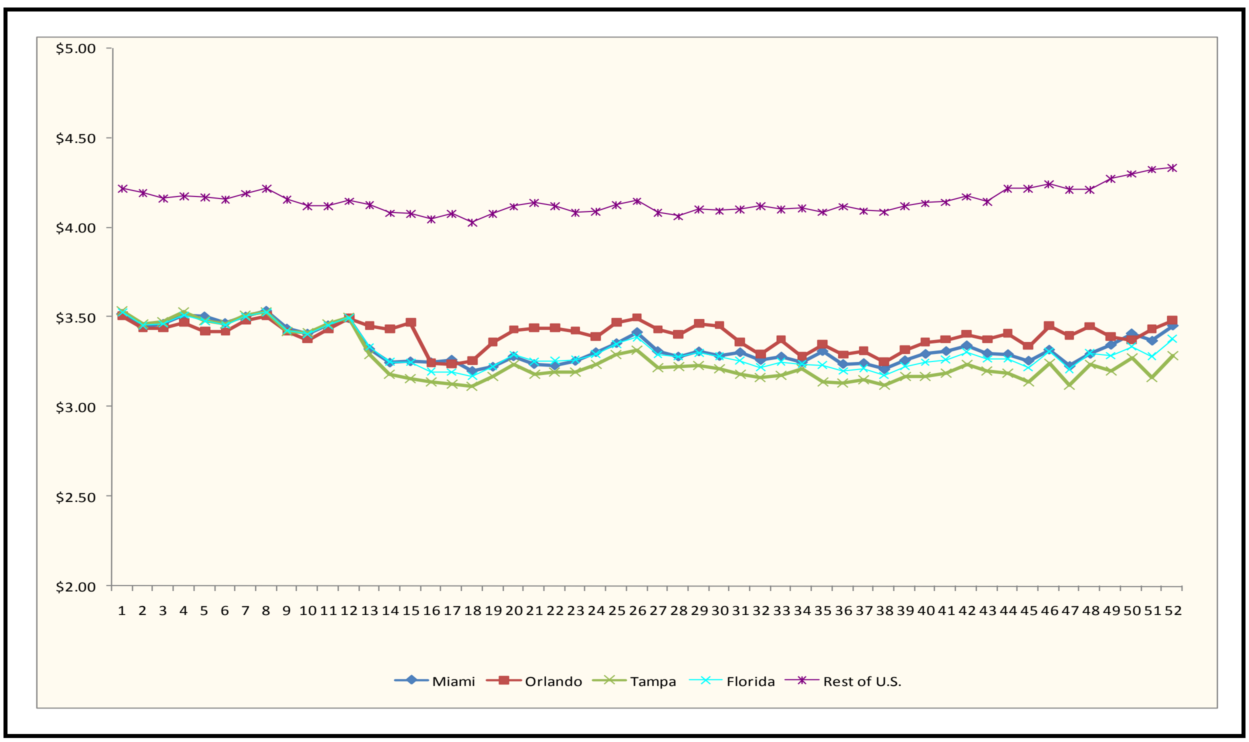
Note: All prices have been adjusted for inflation (2008 dollars).

Figure 6. Average Price Per Pack of Cigarettes in Supermarkets and Convenience Stores, Florida, Weekly 2008



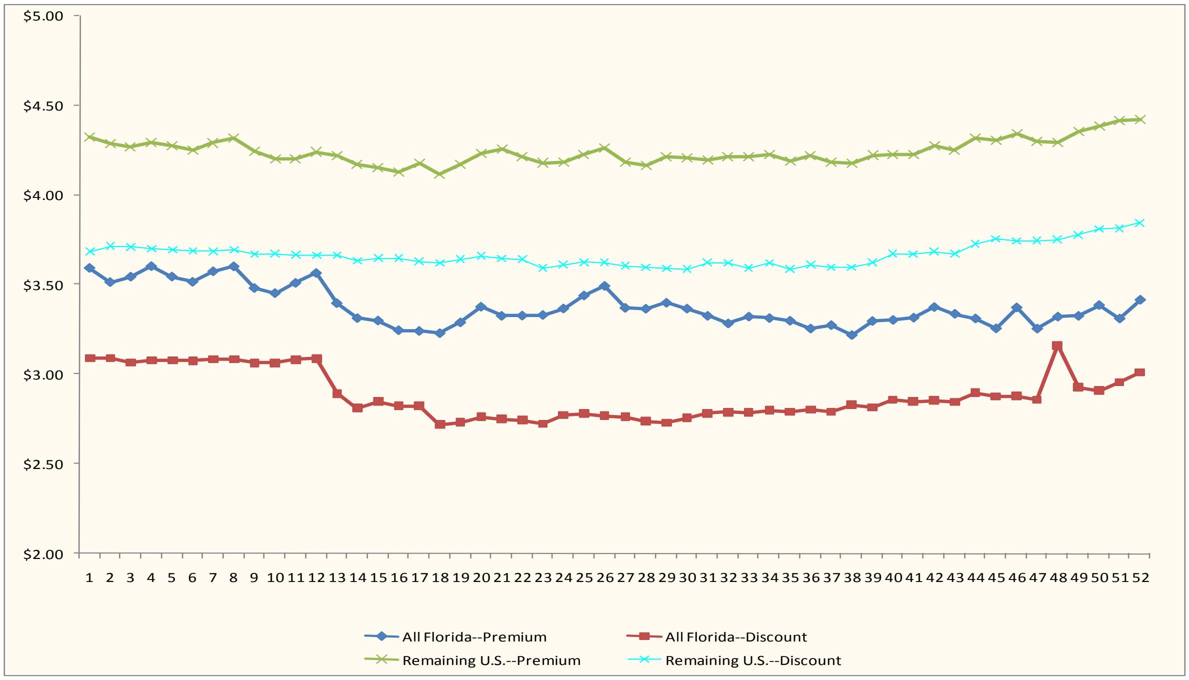
Note: All prices adjusted for inflation (2008 dollars).

Figure 7. Average Price Per Pack of Cigarettes in Convenience Stores, Florida and Remaining U.S., Weekly 2008



Note: All prices have been adjusted for inflation (2008 dollars).

Figure 8. Average Price Per Pack of Cigarettes for Premium and Discount Brands in Convenience Stores, Florida and Remaining United States, Weekly 2008

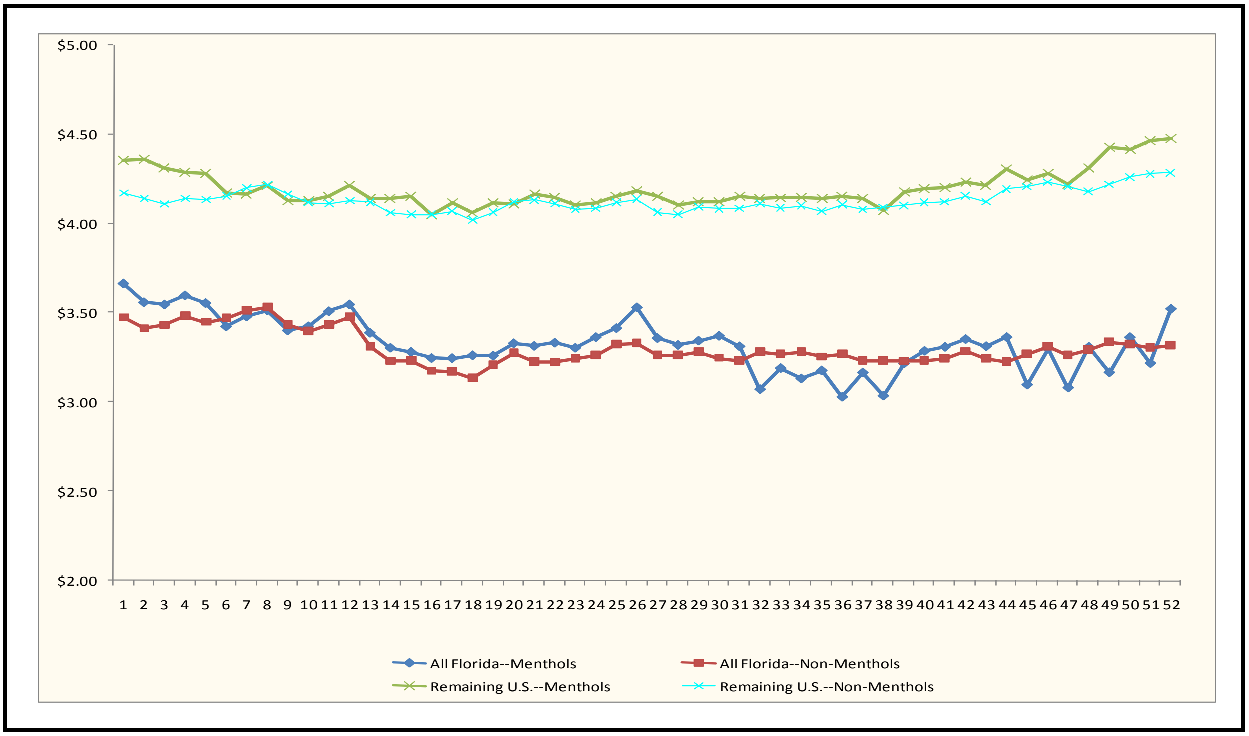


Note: All prices are adjusted for inflation (2008 dollars).

Figure 8 presents trends in premium and discount cigarette prices in convenience stores in Florida and the remaining U.S. in 2008. The figure shows that prices for both premium and discount cigarettes are less in Florida compared to the remaining U.S., and premium cigarettes cost approximately 50¢ more per pack than discount cigarettes in both Florida and the remaining U.S. Similar trends (not shown) are seen in supermarkets.

Figure 9 shows the trend in prices for menthol and non-menthol cigarettes in convenience stores in Florida and the remaining U.S. in 2008. In general, menthol and non-menthol cigarettes cost nearly the same, while the figure shows once again that Florida has lower cigarette prices compared to the rest of the country. Menthol prices also appear to be somewhat more variable than menthol prices in the rest of the U.S., and non-menthol cigarettes overall.

Figure 9. Average Price Per Pack for Menthol and Non-Menthol Cigarettes in Convenience Stores, Florida and Remaining U.S., Weekly 2008



Note: All prices have been adjusted for inflation (2008 dollars).

Promotions

In this section we present trends in the proportion of cigarette sales in supermarkets and convenience stores that are promoted. In the Nielsen data, two types of price discounts are counted as a promotion. The first are buy-one-pack, get-one-pack free (BOGO) types of deals, and the second are price reductions (e.g., 75¢ off per pack). Both of these promotions must be associated with a UPC to be captured in the data. This means that the promoted sales measure does not capture price reductions such as buy downs that are applied to cigarette packs but not identified with a UPC. Therefore, the promoted sales measures presented below undercount the full extent of cigarette promotions.

Figure 10 shows the 11-year trend in promoted cigarette sales in supermarkets in Florida and the remaining U.S. From 1998 through 2002, the trends are similar, marked especially by the spike in promoted sales during 2001 and 2002. Beginning in 2003, promoted sales in Florida are approximately one-half (in percentage terms) of promoted sales in the remaining U.S.

Figure 10. Percent of Sales Promoted in Supermarkets, Florida and the Remaining U.S., Quarterly 1998-2008

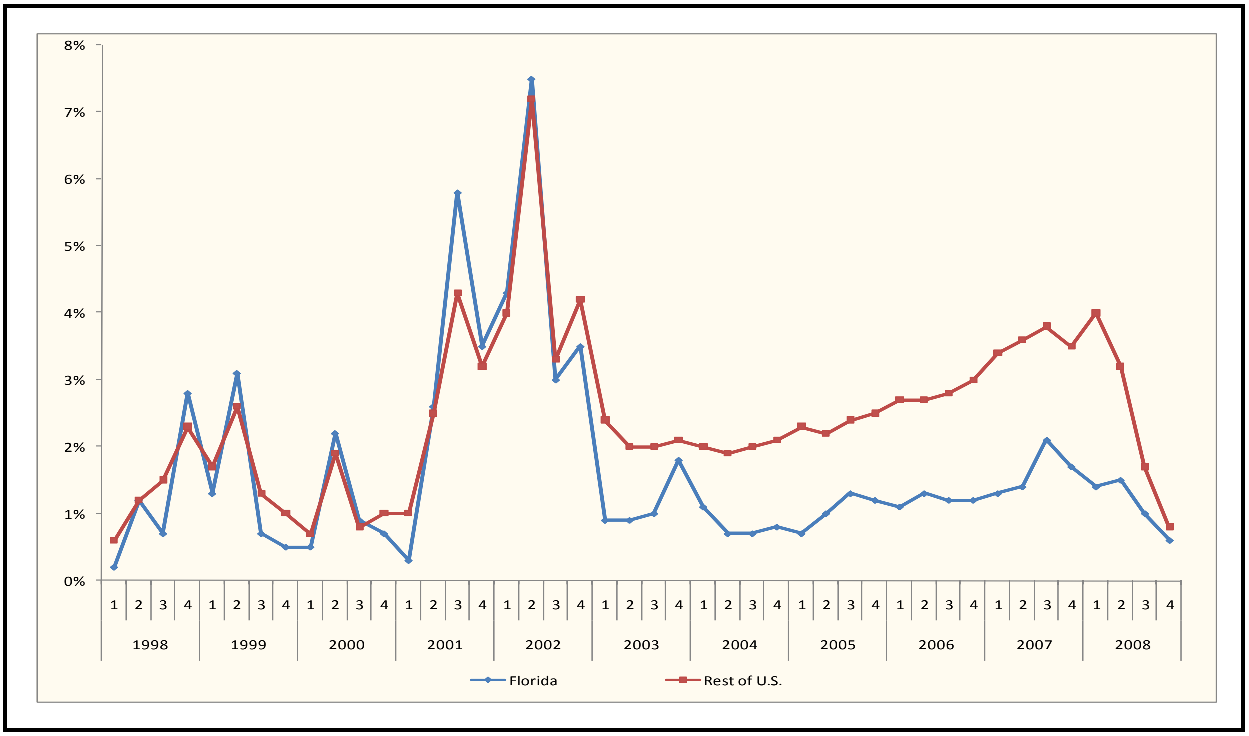


Figure 11 compares promoted cigarette sales in supermarkets and convenience stores in Florida and the rest of the U.S. in 2008. The figure suggests that promoted sales in convenience stores are generally higher than promoted sales in supermarkets, for both Florida and the remaining U.S. In 2008 in convenience stores, promoted sales averaged 5.8% of all sales in Florida, and 4.8% of all sales in the remaining U.S., with Florida having somewhat higher promoted sales in the last half of 2008 than the remaining U.S. The figure also suggests that promoted sales in convenience stores are much more volatile than are promoted sales in grocery markets, both in Florida and across the rest of the country.

Figures 12 and 13 show trends in promoted sales in Florida supermarkets and convenience stores (respectively) by market area in 2008. Together, the figures suggest the market area trends in convenience stores tend to follow each other more closely than do the corresponding trends in supermarkets, which implies tighter coordination of promotional activities across the state in convenience stores compared to supermarkets. Figures 12 and 13 also show a higher overall level of promoted sales in convenience stores in Florida, relative to supermarkets.

Figure 11. Percent of Sales Promoted in Supermarkets and Convenience Stores, Florida and the Remaining United States, Weekly 2008

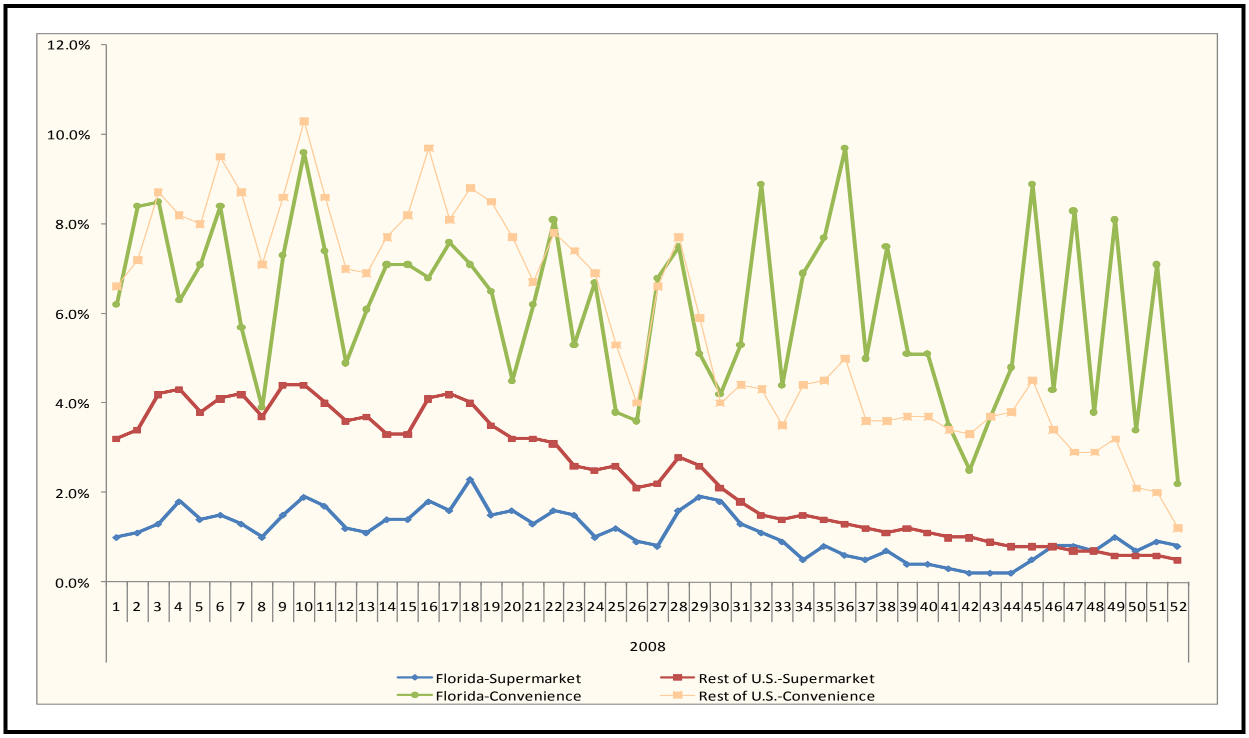


Figure 12. Percent of Sales Promoted in Supermarkets, Florida Market Areas, Weekly 2008

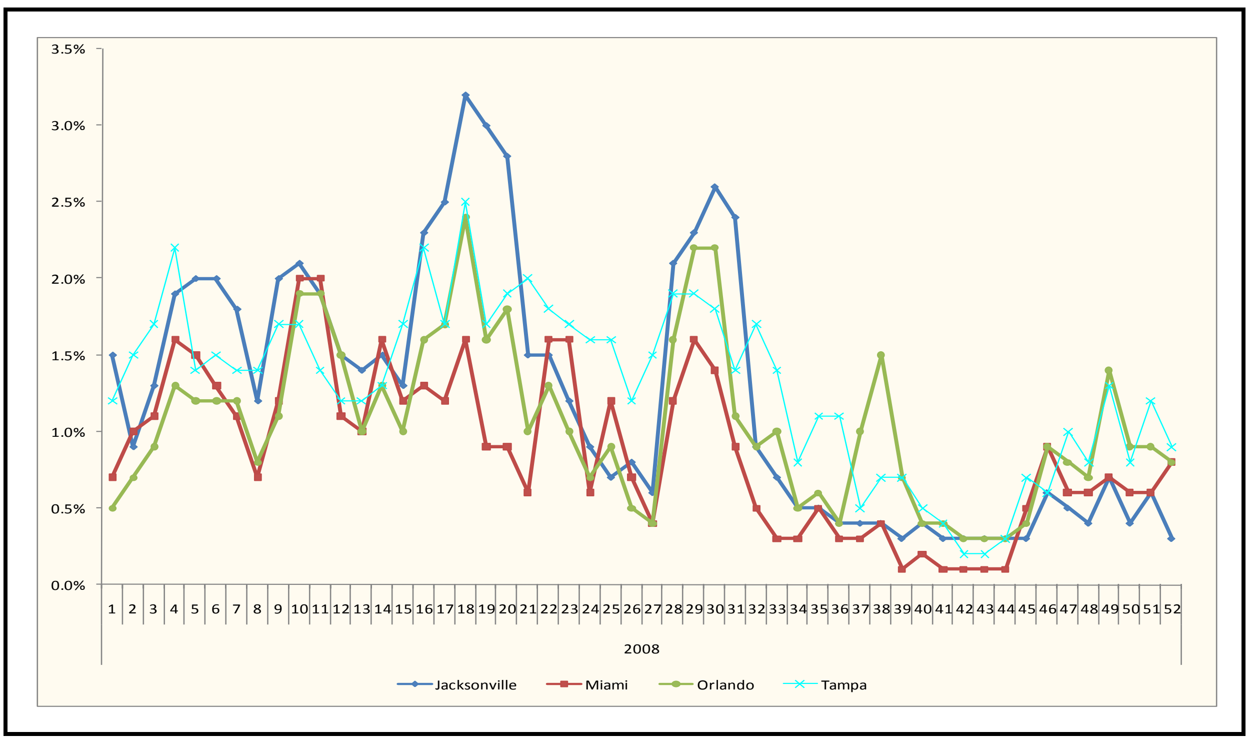


Figure 13. Percent of Sales Promoted in Convenience Stores, Florida Market Areas, Weekly 2008

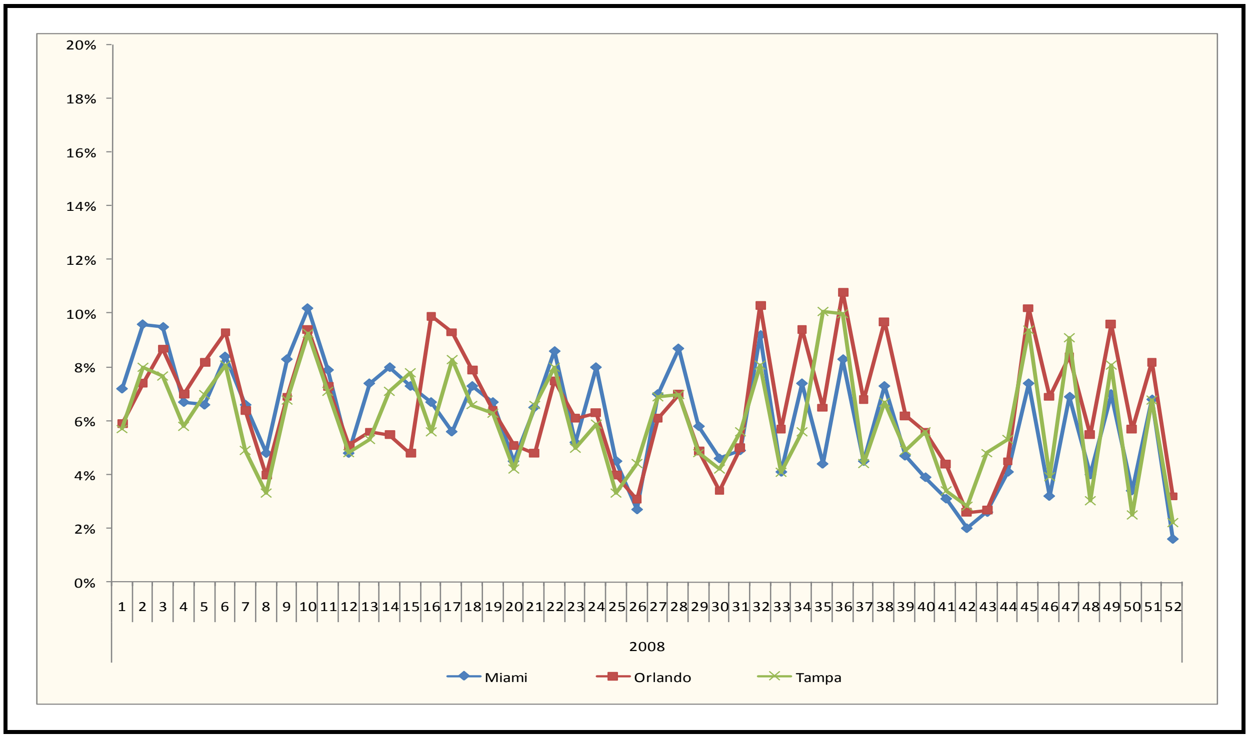
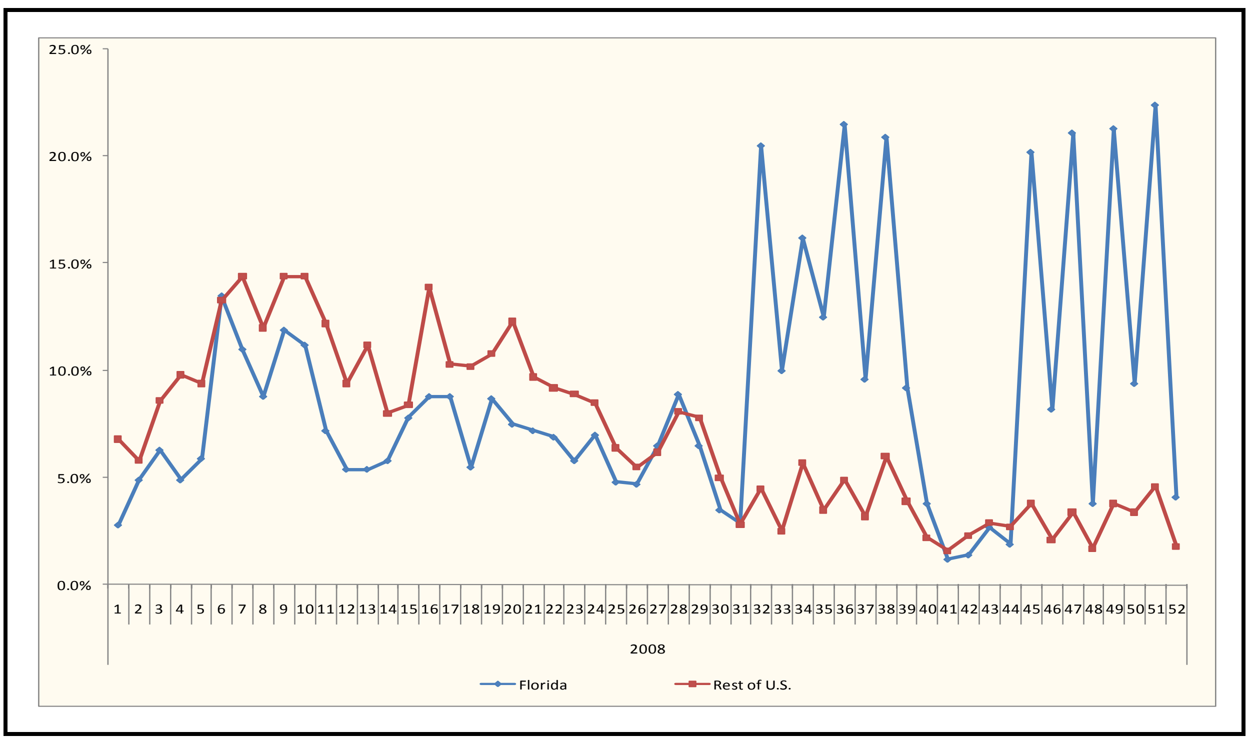


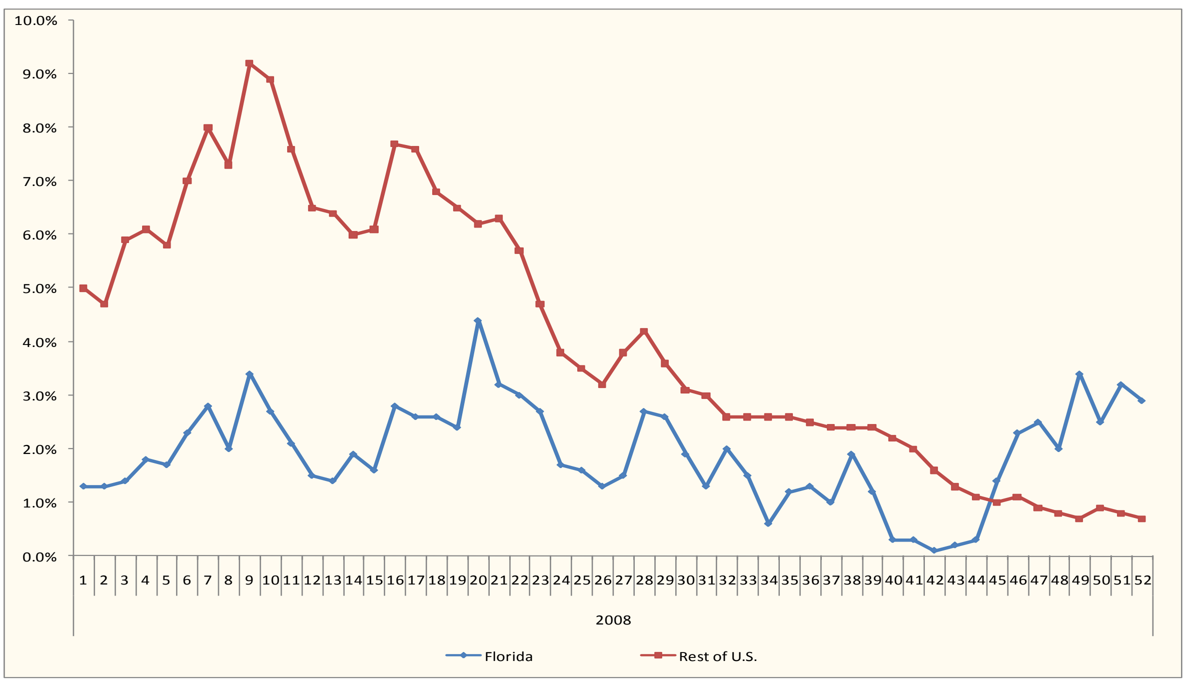
Figure 14. Percent of Menthol Cigarette Sales that were Promoted in Convenience Stores, Florida and Remaining U.S., Weekly 2008



Figures 14 and 15 show promoted sales of menthol cigarettes in convenience stores and supermarkets (respectively) in Florida and the remaining U.S. in 2008. The trend in menthol promoted sales in Florida convenience stores (Figure 14) is particularly striking, with large, almost regular, increases in promoted sales in the 3rd and 4th quarters of the year. Meanwhile, promoted menthol sales in Florida supermarkets (Figure 15) trended well below that in the remaining U.S. for most of the year, and did not exhibit the same saw-tooth pattern of heavy promotion.

The figures in this section suggest different patterns of cigarette promotion in supermarkets versus convenience stores in Florida. Convenience stores appear to have higher overall levels of promoted sales, to show more cohesiveness across market areas, and exhibit a greater variance from week to week. Promoted sales for menthol cigarettes in Florida convenience stores, in particular, appear to suggest an organized promotional campaign for menthols in the 3rd and 4th quarters of 2008.

Figure 15. Percent of Menthol Cigarette Sales that were Promoted in Supermarkets, Florida and Remaining U.S., Weekly 2008

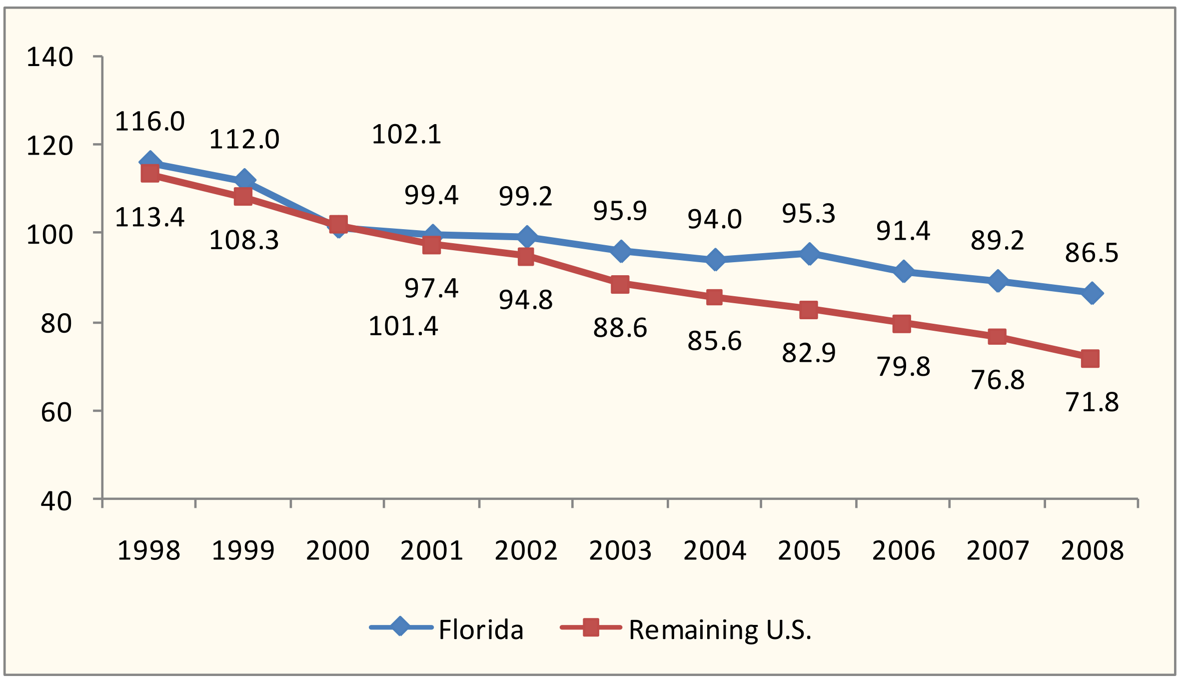


Sales and Market Share

Cigarette sales are a barometer of smoking in the population, and have steadily trended downward since the late 1970's (Orzechowski and Walker, 2008). Figure 16 shows tax-paid annual cigarette sales per person in Florida and the remaining U.S., reported in *The Tax Burden on Tobacco* (Orzechowski and Walker, 2008). In 1998, Floridians consumed 116 packs of cigarettes per person per year, just slightly more than the 113.4 packs per person per year consumed in the rest of the U.S. By 2008, annual tax paid sales in Florida had dropped to 86.5 packs per person, a decline of 25 percent. Over the same time period, tax-paid sales in the remaining U.S. dropped 37% to 71.8 packs per person per year.

Figure 17 shows the trend in quarterly per capita cigarette sales in supermarkets in Florida and the remaining U.S. from 1998 to 2008. Mirroring the trend in total tax-paid sales, the figure shows that sales in Florida supermarkets are higher than sales in supermarkets in the rest of the U.S. over the entire time period. Figure 18 shows weekly per capita sales in supermarkets by market area in Florida. Sales in the Tampa market are consistently higher than sales in the remaining three Florida market areas, a trend that repeats itself in Figure 19, which shows weekly per capita sales in convenience stores in Florida market areas and the remaining U.S.

Figure 16. Per Capita Annual Tax Paid Cigarette Sales, Florida and the Remaining U.S., 1998 – 2008



Note: Tax paid sales data is from *The Tax Burden on Tobacco (2008).*

Figure 17. Per Capita Quarterly Cigarette Sales in Supermarkets, Florida and Remaining U.S., Quarterly 1998-2008

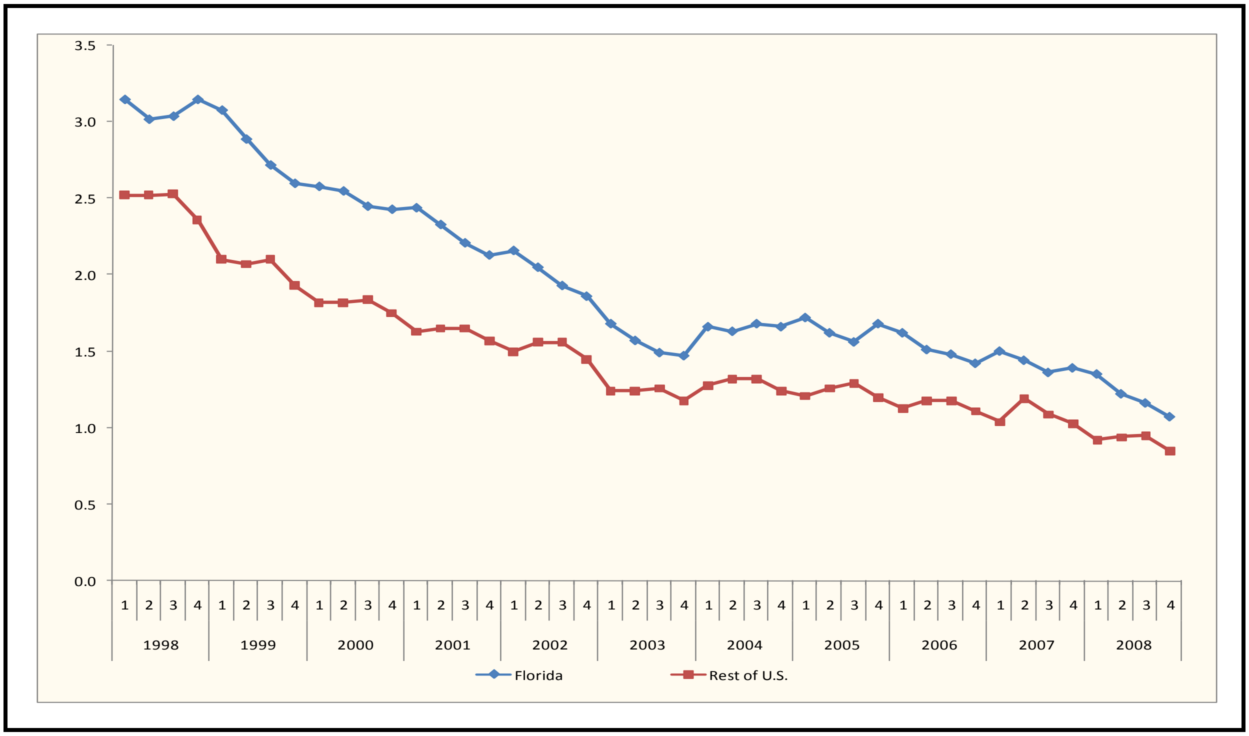


Figure 18. Per Capita Weekly Cigarette Sales in Supermarkets, Florida Market Areas, Weekly 2008

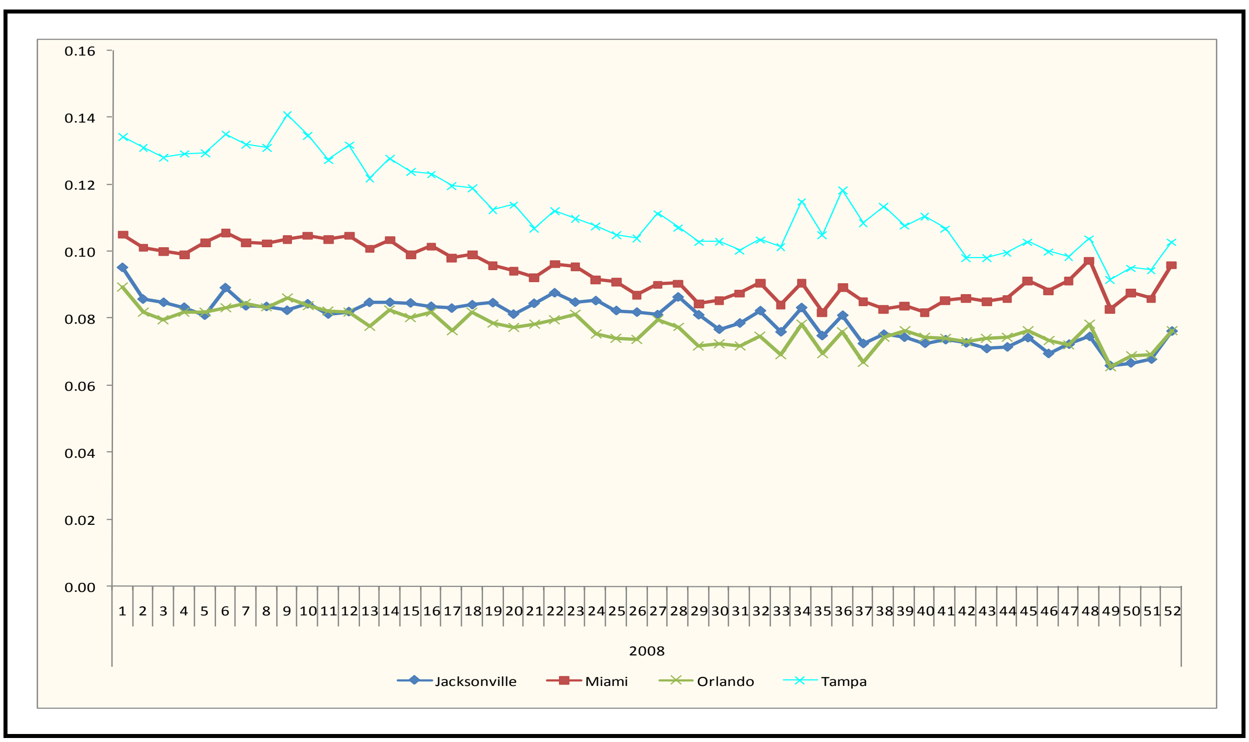
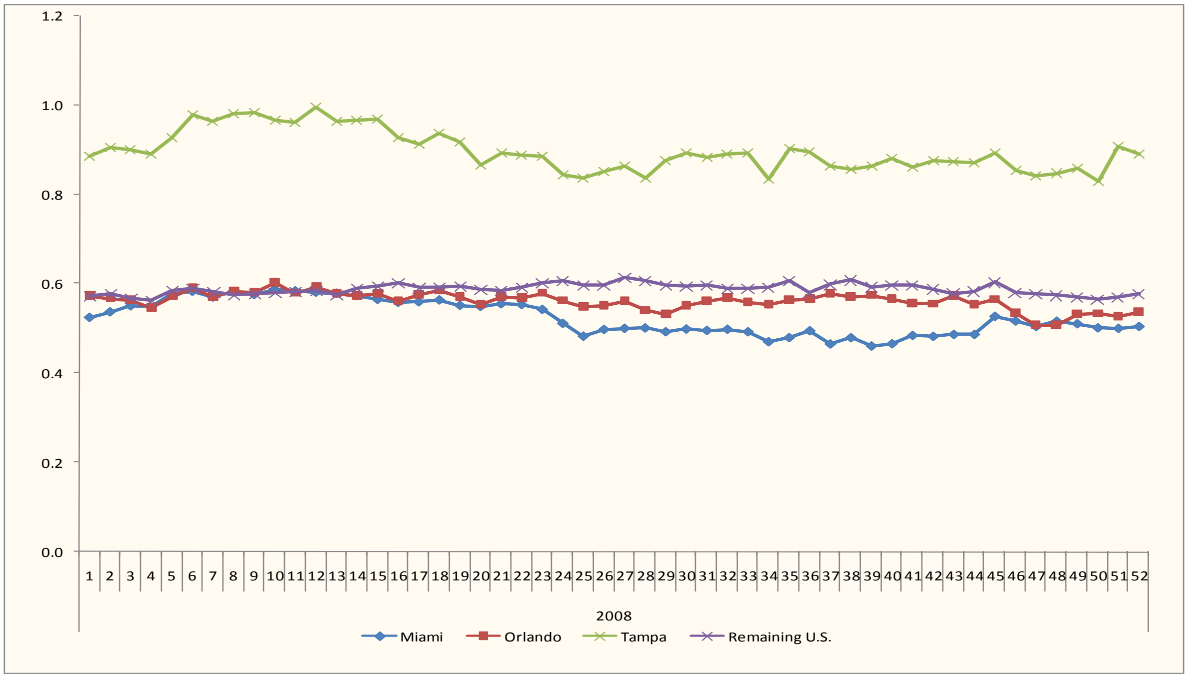


Figure 19. Per Capita Weekly Cigarette Sales in Convenience Stores, Florida Market Areas and Remaining U.S., Weekly 2008



Figures 18 and 19 reveal some differences between the trend and level in cigarette sales in Florida supermarkets and convenience stores in 2008. Sales in supermarkets declined much faster than sales in convenience stores, 16 percent versus 2 percent, respectively. Also, the level of sales in supermarkets are much lower than sales in convenience stores, at approximately 5 packs per person per year in supermarkets compared to 35 packs per person per year in convenience stores.

Figures 20 and 21 show that market share trends for premium brand cigarettes (e.g., Marlboro) in supermarkets and convenience stores in Florida are higher than in the remaining U.S. in 2008. This is most likely due to the fact that cigarette prices in Florida are lower than the average price in the remaining U.S., and so more smokers can afford to purchase premium brand cigarettes. Figures 20 and 21 also show that premium brand cigarettes constitute the majority of cigarette sales, and are higher on average in convenience stores (87 percent of sales), than in supermarkets (78 percent of sales).

Figures 22 and 23 show trends in carton sales (a carton contains 10 packs of cigarettes) in 2008 for supermarkets and convenience stores. Nearly 50 percent of all sales in supermarkets are cartons, and this is the same for Florida and the rest of the U.S., while approximately one-quarter of sales in Florida convenience stores are cartons, a bit higher than the 22 percent average in the remaining U.S.

Figure 20. Market Share of Premium Cigarettes in Supermarkets, Florida and Remaining U.S., Weekly 2008

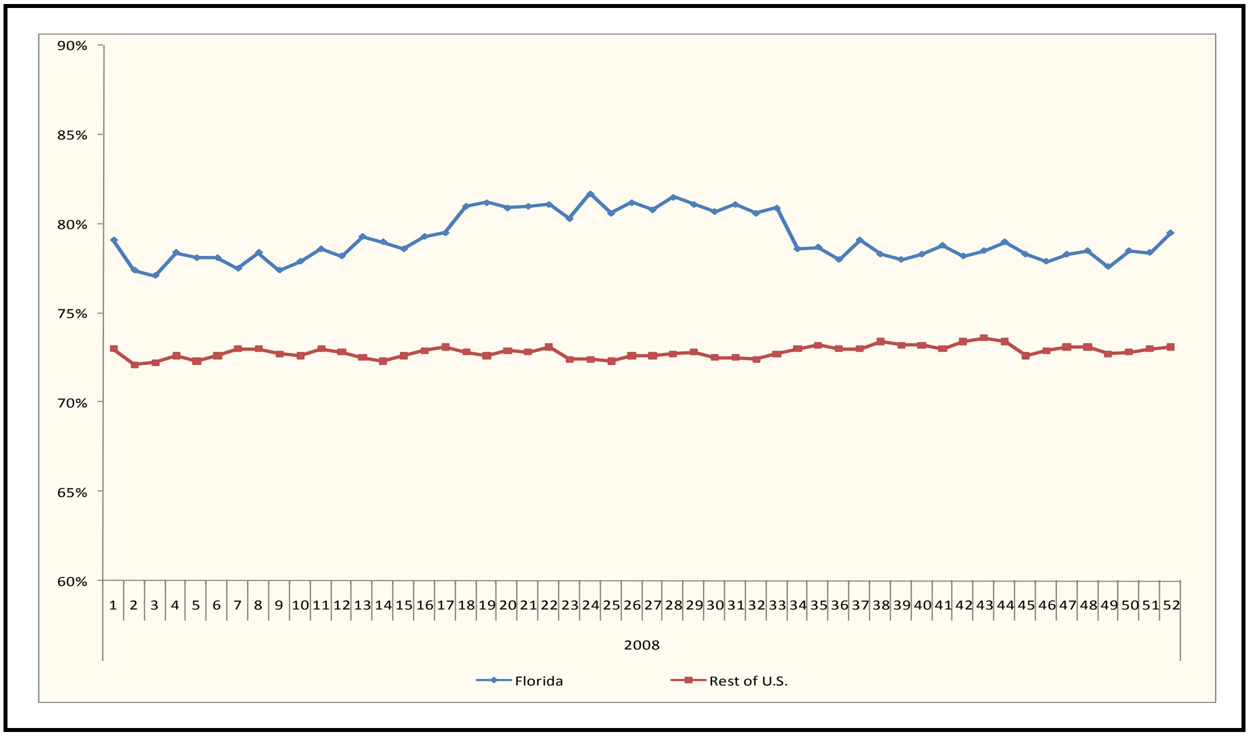


Figure 21. Market Share of Premium Cigarettes in Convenience Stores, Florida and Remaining U.S., Weekly 2008

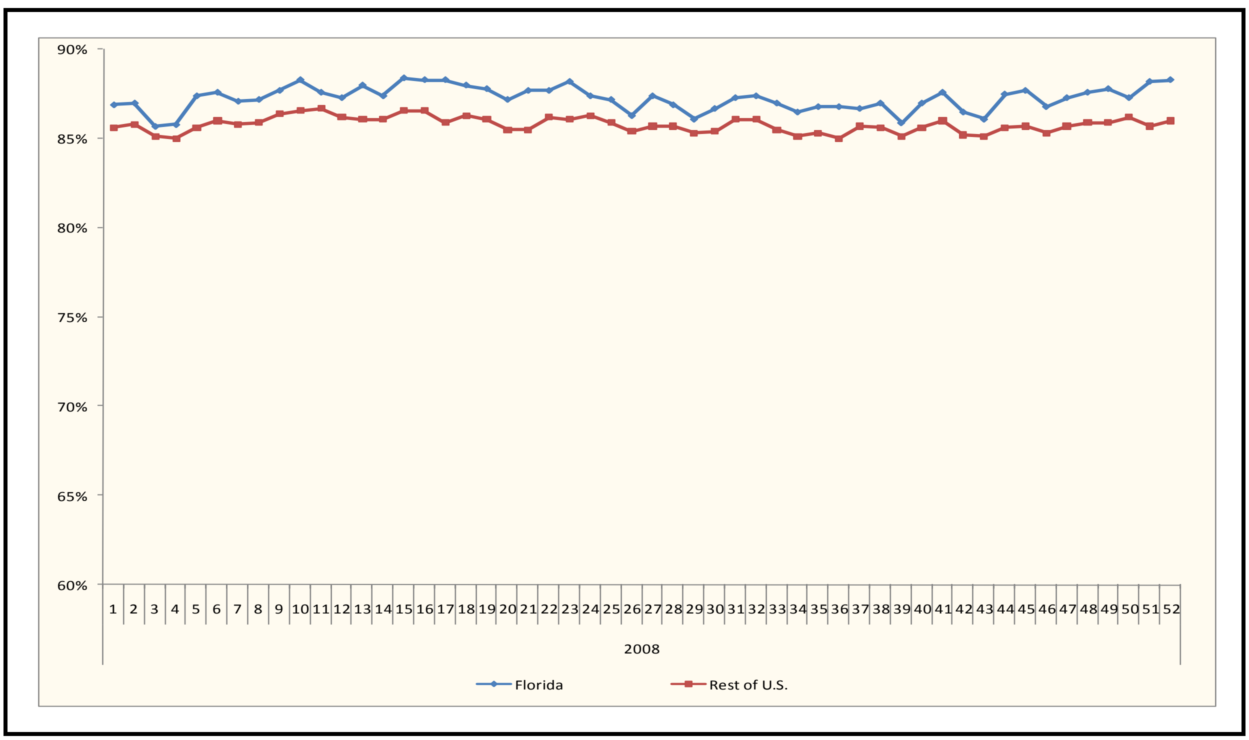


Figure 22. Market Share of Carton Sales in Supermarkets, Florida and Remaining U.S., Weekly 2008

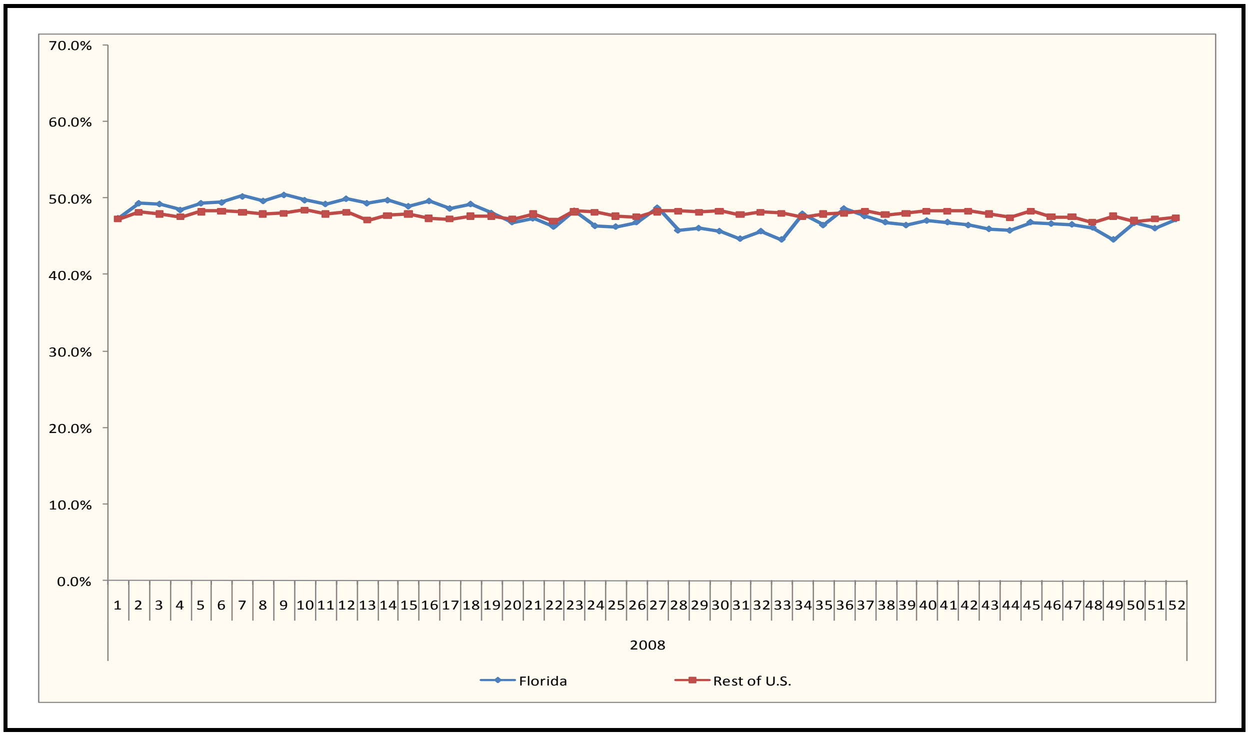
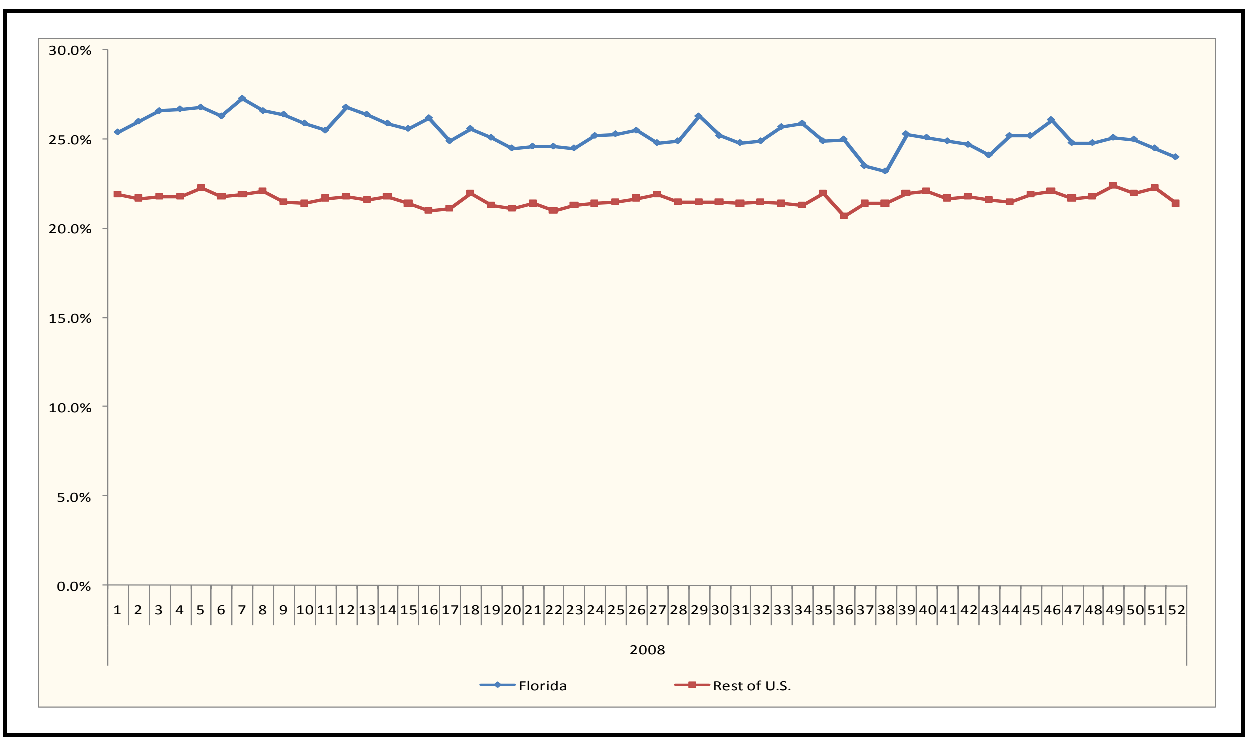


Figure 23. Market Share of Carton Sales in Convenience Stores, Florida and Remaining U.S., Weekly 2008



CONCLUSIONS

This report has summarized trends in cigarette prices, promotions, and sales in Florida and the remainder of the U.S. The results suggest the following conclusions:

- Cigarette prices in Florida were about $3.50 per pack in 2008, compared to $4.25 in the rest of the U.S. This is likely due to Florida's lower than average cigarette excise tax.
- Florida has lower cigarette prices compared to the remainder of the U.S. in every category we examined, including supermarkets, convenience stores, premium and brands, and menthol and non-menthol cigarettes.
- Florida has similar levels of promoted sales compared to the rest of the U.S. In 2008, approximately 6.2 percent of sales in Fl convenience stores were promoted vs. 5.8 percent in convenience stores in the rest of the U.S., while 1.1 percent of sales in Florida supermarkets were promoted, compared to 2.4 percent in the rest of the U.S.
- Promoted sales for menthol cigarettes in Florida convenience stores in 2008 displayed an unusually high level of promoted sales, suggestive of a coordinated marketing activity by one or more tobacco companies.
- Florida has higher per capita cigarette sales compared to the rest of the U.S., likely due to lower than average prices. In 2008, Florida supermarkets sold 4.92 packs per person compared to 3.8 packs per person in the rest of the U.S., and Florida convenience stores sold 34.7 packs per person, compared to 30.5 packs per person in the rest of the U.S.
- The Tampa market area appears to have the highest level of per capita sales among the Florida market areas.
- The market share for premium brand cigarettes is higher in Florida than in the remaining U.S., likely due to the lower than average cigarette prices in Florida.

This report is intended as a first look at retail scanner data trends in Florida. It is possible to look in more detail at various features of cigarette sales using the scanner data. For example, we can examine individual brands, or all the brands sold by a particular company; we can look at popular cigarette types such as light cigarettes; and we can look in detail at the kinds of promotions that are being offered. For example, we can differentiate the types of BOGO offers and the price discounts. We look forward to working with the Bureau of Tobacco Prevention Program to determine those items of most usefulness for surveillance and evaluation.

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