increasing the number of adult nonsmokers by 250,000 per year. Since each adult smoker consumes about 500 packs per year, lost sales revenues would amount to an additional \$113 million per year.

In sum, FDA estimates that annual cigarette revenues would decline slowly over time; falling by \$143 million in the first year (while only teenagers are affected), by \$593 million in the fifth year, and by \$1.2 billion in the tenth year. The U.S. Bureau of the Census reports the value of 1992 cigarette shipments at \$28.8 billion. Thus, this regulation is projected to reduce revenues from cigarette sales by only 0.5 percent in the first year, 2.1 percent in the fifth year, and 4.0 percent in the tenth year following implementation. While these reductions are significant, the gradual phasing of the impacts would significantly dissipate any associated economic disruption. For example, data from a 1992 report on the contribution of the tobacco industry to the U.S. economy prepared by Price Waterhouse for the Tobacco Institute 52 implies that, over a 10-year period, a 4 percent reduction in sales would result in the displacement of about 1,000 jobs annually among warehousers, manufacturers, tobacco growers and wholesalers.

2. Vending Machine Operators

The proposed regulation would prohibit all vending machine sales of regulated tobacco products. In recent years, cigarette vending sales have dropped precipitously, due to numerous restrictive State and local ordinances. FDA does not have a definitive estimate of the intensity of this decline, but is aware of two industry surveys that confirm its importance. The Vending Times 48th Annual Census of the Industry 53 shows a 6 percent drop in the number of cigarette vending machines from 1992 to 1993, but a 39 percent decline since 1983. The total number of packs sold reportedly dropped almost 60 percent over this decade, from 2.7 billion to 1.1 billion. A second survey, the "1994 State of the Industry Report," *Automatic* Merchandiser (The Monthly Management Magazine for Professional Vending and OCS Operators) 54 found an even steeper recent decline; reporting that the projected number of cigarette vending machines fell from 250,425 in 1992 to 181,755 in 1993, a drop of over 27 percent. That survey shows operator revenues from cigarettes falling from \$835 million in 1992 to \$624 million in 1993, down 25 percent. While the impact of this one product area is significant for the vending operators, the report found that this sector currently generates about \$18 billion in total sales volume and explains that "Cigarettes, which have been on the downslide for several years, are fortunately only a small percentage (3.4 percent in 1993) of the total pie, thus the drop did not hurt total revenues significantly." The proposed prohibition of vending sales would require these firms to develop new markets to replace these sales revenues.

3. Advertising Sector

In their annual reports to the FTC, manufacturers of cigarettes and smokeless tobacco reported 1993 advertising and promotional/marketing expenditures of \$6.0 billion and \$119 million, respectively. Approximately \$1.9 billion (31 percent) of these outlays would be significantly impacted by the proposed rule as they are primarily directed to consumer advertising and promotion. Of the remaining outlays, about \$2.6 billion (43 percent) go to consumers as financial incentives to induce further sales (e.g., coupons, cents-off, buy-one-get one free, free samples), and \$1.6 billion (26 percent) to retailers to enhance the sale of their product. The affect on these expenditures would be much more modest.

FDA cannot reasonably forecast the future marketing strategies of tobacco manufacturers, but can foresee some fall in the approximately \$1.0 billion worth of current advertising that would be affected by the proposed "text only" requirement. (The "text only" restriction does not apply to publications where children comprise less than 15 percent of the readership or are fewer than 2 million.) The impact of these restrictions on the various advertising media and agencies is difficult to determine. For example, in response to Canada's recently imposed advertising ban, that country's billboard industry "quickly replaced \$20 million in lost cigarette revenues with ads for food, soap, toothpaste and beer." 55 "In 1971, network TV ad revenue dropped 6 percent without cigarette advertising * *, but by 1972 network TV * * had recouped its ad base." 56 Current advertising revenues affected by the restrictions on billboard advertising near schools and playgrounds are also likely to be replaced by advertising revenues for other products. Nevertheless, if the tobacco industry were to cut its advertising outlays by one-half of the "text only" categories, this dollar figure amounts to less than one-half of 1 percent of the reported \$131.3 billion spent on U.S. media advertising in 1992.57 FDA is also aware

that prohibiting the distribution of nontobacco specialty items bearing the name or logo of tobacco products would affect a substantial number of specialty manufacturers. In comments to the FTC,58 the Specialty Advertising Association International noted that it "represents 4,400 firms that manufacture or sell utilitarian objects imprinted with advertising * * predominantly small businesses." To the extent that these products include only a corporate name without brand association, they could remain marketable. However, it is likely that some of these firms would, at least initially, lose part of this \$760 million market and would experience shortterm costs while exploring other business options.

4. Retail Outlets

In addition to incurring the direct costs of compliance described above, some retail establishments may receive smaller promotional allowances (slotting fees) from manufacturers, following the prohibition of self-service displays and advertising imagery. Industry promotional allowances totaled about \$1.6 billion in 1993, or \$2,600 per outlet if spread evenly among the estimated 600,000 retail outlets currently selling tobacco products overthe-counter. It is likely that, notwithstanding these restrictions, manufacturers would continue to compete vigorously for the best display space available, so that few fees would be discontinued. For example, a recent Canadian study ⁵⁹ suggests that, "[i]n the absence of advertising and promotion outlets * * * the cigarette industry may be expected to provide greater incentives to retailers to provide more and better shelf space for their brands in order to provide availability to the buyer in the store." In addition, alternative opportunities for point of purchase (POP) advertising have climbed briskly, as POP experts "cite instore advertising as the fastest growing segment of the media industry.' Nevertheless, the agency is aware of at least one report indicating the "[l]oss of industry-paid slotting fees to some retail merchants because of the removal of self-service promotional tobacco displays, racks and kiosks." 61

5. Other Private Sectors

The Tobacco Institute's Price Waterhouse report ⁶² purports to measure the induced effect on the national economy of spending by the tobacco core and supplier sector employees and their families. It calculates that induced or multiplier effects result in 2.4 jobs for every 1 job