be small or transitory. For a small retail convenience store not currently complying with this proposal, the additional first year costs could reach \$320. For those convenience stores that already check customer identification, these costs fall to \$35. Moreover, the proposed rule would not produce significant economic problems at the national level, as the gradual displacement in tobacco-oriented sectors would be largely offset by increased output in other areas. Thus, pursuant to the Unfunded Mandates Act, FDA concludes that the substantial benefits of this regulation would greatly exceed the compliance costs that it would impose on the U.S. economy. In addition, the agency has considered other alternatives and determined that the current proposal is the least burdensome alternative that would meet the "Healthy People 2000" goals.

## B. Statement of Need for Proposed Action

The need for action stems from the agency's determination to ameliorate the enormous toll on the public health that is directly attributable to the consumption by adolescents of cigarettes and smokeless tobacco products. According to the nation's most knowledgeable health experts, tobacco use is the most important preventable cause of morbidity and premature mortality in the United States, accounting each year for over 400,000 deaths (approximately 20 percent of all deaths). Moreover, these morbidity and mortality burdens do not spare middle aged adults—with the average smoking-related death responsible for the loss of up to 15 lifeyears.1

In its guidelines for the preparation of Economic Impact Analyses, OMB asks that Federal regulatory agencies determine whether a market failure exists and if so, whether that market failure could be resolved by measures other than new Federal regulation. The basis for this request derives from standard economic welfare theory, which by assuming that each individual is the best judge of his/her own welfare, concludes that perfectly competitive private markets provide the most efficient use of societal resources. Accordingly, the lack of perfectly competitive private markets (market failure) is frequently used to justify the need for government intervention. Common causes of such market failures include monopoly power, inadequate information, and market externalities or spillover effects.

While FDA believes that various elements of market failure are relevant

to the problem of teenage tobacco addiction, the agency also believes that the proposed regulatory action could be justified even in the absence of a traditional market failure. As noted above, the implications of the market failure logic are rooted in a basic premise of the standard economic welfare model—that each individual is the best judge of his/her own welfare. However, FDA is convinced that this principle does not apply to children and adolescents. Even steadfast defenders of individual choice acknowledge the difficulty of applying the "market failure" criterion to non adults. Littlechild, for example, adds a footnote to the title of his chapter on "Smoking and Market Failure" to note that "[t]he economic analysis of market failure deals with choice by adults." FDA finds this statement consistent with its view that even if many children make rational choices,3 the agency's regulatory determinations must reflect the societal conviction that children under the age of legal consent cannot be assumed to act in their own best interest.4

In particular, FDA finds that the imagery used in industry advertising and promotional programs obscures adolescent perceptions of the significance of the associated health risks and the strength of the addictive power of tobacco products. The preceding sections of this preamble describe numerous studies on the shortcomings of the risk perceptions held by children. Although most youngsters acknowledge the existence of tobacco-related health risks, the abridged time horizons of youth make them exceptionally vulnerable to the powerful imagery advanced through targeted industry advertising and promotional campaigns. In effect, these conditions constitute an implicit market failure that has not been adequately remedied by government action.

Moreover, the agency does not view these results as inconsistent with the growing economic literature based on the Becker and Murphy models of "rational addiction." 5 Although several empirical studies have demonstrated that, for the general population, cigarette consumption is "rationally addictive" in the sense that current consumption is affected by both past and future consumption,6 Chaloupka notes that this "rationality" does not hold for younger or less educated persons, for whom past but not future consumption maintains a significant effect on current consumption. He concludes, "[t]he strong effects of past consumption and weak effects of future consumption among younger or less

educated individuals support the a priori expectation that these groups behave myopically." <sup>7</sup>

A further market failure would exist if the use of tobacco imposed external or spillover costs on nonusers. Many studies have attempted to calculate the societal costs of smoking, but few have addressed these externalities. The most detailed research on whether smokers pay their own way is the 1991 study by Manning, et al., "The Cost of Poor Health Habits," 8 which develops estimates of the present value of the lifetime external costs attributable to smoking. This study examines differences in costs of collectively financed programs for smokers and nonsmokers, while simultaneously controlling for other personal characteristics that could affect these costs (e.g., age, sex, income, education, and other health habits, etc.). The authors found that nonsmokers subsidize smokers' medical care, but smokers (who die at earlier ages) subsidize nonsmokers' pensions. On balance, they calculated that before accounting for excise taxes, smoking creates net external costs of about \$0.15 per pack of cigarettes in 1986 dollars (\$0.33 per pack adjusted to 1995 dollars by the medical services price index.) While acknowledging that these estimates ignored external costs associated with lives lost due to passive smoking, perinatal deaths due to smoking during pregnancy, and deaths and injuries caused by smoking-related fires, the authors concluded that there is no net externality, because the sum of all smoking-related externalities is probably less than the added payments imposed on smokers through current Federal and State cigarette excise taxes. A Congressional Research Service report to Congress examined estimates of the potential magnitude of the omitted costs and concurred with this finding.9

## C. Regulatory Benefits

## 1. Prevalence-Based Studies

The benefits of the proposed regulation include the costs that would be avoided by eliminating the adverse health effects associated with the consumption of tobacco products. Most research on the costs of smoking-related illness has concentrated on the medical costs and productivity losses associated with the prevalence of death and illness in a given year. These prevalence-based studies typically measure three components: (1) The contribution of smoking to annual levels of illness and death, (2) the direct costs of providing extra medical care, and (3) the indirect